

Hab. e nodis culmi Poæ nemoralis erumpens pr. Andegavum Galliae (GUEPIN). — Pseudoperidia gracillima, in glomerulum 1 cm. diam. æquantem coacervata, 1 cm. et ultra longa, 150 µ. circ. cr.; corpuscula aut cellulæ solutæ oblongæ, 50 µ. longæ, ovoideæ vel piriformes, hyalinæ, quæ an ut sporæ habendæ sint dubium manet. Cum *Sarcorhopalo tubiformi* Rabenh. comparandum verisimiliterque formam teratologicam sistens.

SARCORHOPALUM Rabehn. in Botan. Zeitung 1851, p. 627 (Etym. *sarx* caro et *rhopalon*, clava). — Stroma carnosum, subcartilagineum, cylindricum v. clavariiforme, apice primitus rotundatum (clausum), demum truncatum, plus minus excavatum (quasi apertum), 4-6 mm. longum; sporæ (æcidioideæ) rotundæ v. sphæricæ, simplices, leves, paraphysibus immixtis, in massam grumosam conglobatæ.

1. **Sarcorhopalum tubiforme** Rabehn. in Botan. Zeitung 1851, p. 627. 2145
— Stromate cylindrico, sursum plus minus dilatato (tubiformi), interdum furcato-partito, fuscescente, luteo-pulverulento, pluribus cæspitosim connatis.

Hab. in frondibus *Aspidii curvifolii* pr. Nilgherries Indiæ. — Suadente cl. Montagne in Ann. Scienc. Nat. 1857, p. 149 videtur *Cronartio? gramineo* Mont. simillimum et forte meram formam monstruosam sistit.

2. Didymosporæ Sacc. et DE-TOXI.

PUCCINIA Pers. Tent. disp. meth. pag. 38, nec Micheli (Etym. a T. Puccini prof. florentino). — *Æcidia*, spermogonia et uredosporæ ut in *Uromycele*; teleutosporæ (saltem pro maxima parte) transverse uniseptatæ (rarissime biseptatæ), quoque loculo porum unum germin. gerente, pedicellatæ, in soros explanatos vel pulvinatos, pulverulentos initio epidermide tectos laxè congestæ; sporidiola ovoidea vel reniformia, plerumque hyalina.

Sectio A. EU-PUCCINIA Schroet.: Spermogonia, æcidia, uredosporæ et teleutosporæ in matrice viva evoluta; teleutosporæ post quietis periodum (haud in matrice viva) germinantes.

1. **AUTO-EUPUCCINIA** De Bary: Spermogonia, æcidia, uredo- et teleutosporæ in eadem matrice evoluta.

*Teleutosporarum episporium leve vel vix punctulatum.

1. **Puccinia Galii** (Pers.) Schwein. Syn. Carol. p. 73, Winter Die Pilze 2146

p. 210, Massal. Ured. Veron. p. 42, t. III, f. XVIII, 1-6, Schroet. Pilz. Schles. p. 314, *Puccinia Galiorum* Link Sp. II, p. 76, *Puccinia Asperulæ* Fuck. Symb. p. 56, *Puccinia difformis* Kunze Mycol. Heft. I, p. 71, *Puccinia punctata* Link Observ. II, p. 80, *Puccinia Valantiæ* Alb. et Schwein. Consp. p. 131 non Persoon, *Æcidium Galii* Pers. Syn. Fung. p. 207, *Cæoma Galii* Schlecht. Flor. Ber. p. 115, *Cæoma galiatum* Link Sp. II, p. 52, *Cæoma Galii* Link l. c. p. 21, *Uredo Galii* (Cast.) Berk. Outlin. p. 332 (sub *Trichobasi*), *Æcidium Valantiæ* West. in herb., *Uredo Vaillantiae* West. Bull. Ac. Roy. belg. t. 21, n. 8. — Spermogoniis in soros parvos congregatis, melleis, conoideo-prominulis; æcidiis orbicularibus, simplici vel multiplici serie in maculis circularibus dispositis; pseudoperidiis breviter cylindraceis, margine albo, lacerato; æcidiosporis globosis vel late ellipticis, aurantiaco-flavis, 16-23 μ . diam., levibus; uredosporis in soros minutos, rufo-brunneos vel castaneo-brunneos collectis, globosis, ellipsoideis vel ovato-attenuatis, 22-30 $\approx$ 17-23, aculeolatis, dilute brunneo-aurantiacis; teleutosporis in soros lineares vel suborbiculares congestis, clavatis, ellipticis vel oblongis basi in pedicellum longiusculum, crassum attenuatis, apicem versus dilatatis, 30-56 $\approx$ 14-24, levibus, brunneis, medio leniter constrictis; pedicello teleutosporam æquante vel longiore, brunneolo, persistente.

Hab. in foliis caulibusque Galii cruciati, G. veri, G. A. parines, G. uliginosi, G. palustris, G. borealis, G. silvatici, G. Molluginis, G. lucidi, G. silvestris, G. Schultesii, G. triflori, G. purpurei, *Asperulæ odoratæ* et *Asp. cynanchicæ*, *Rubiæ petiolaris*, in Italia, Gallia, Germania, Arduennis, Belgio, Britannia, Fennia, Austria, Helvetia, in America boreali et prope Minussinsk Sibiriae asiaticæ.

2. **Puccinia Asparagi** DC. Flor. Franc. II, p. 595, Winter Pie Pilze 2147 p. 201, Schroet. Pilz. Schles. p. 314, *Æcidium Asparagi* Lasch in Kl. Herb. myc. n. 1179, *Uredo Asparagi* Lasch in Bot. Zeit. 1848. p. 509. — Spermogoniis melleis, parce congregatis; æcidiis ad caules secus series longitudinales dispositis; pseudoperidiis globosis vel cylindraceo-explanatis, margine albido, lacerato; æcidiosporis rotundato-polygoniis, 15-28 μ . diam., subtiliter verruculosus, aurantiaco luteis, episporio hyalino; uredosporis in soros cinnamomeo-brunneos, epidermide diu tectos, plano-compressos collectis, globosis vel ellipticis, 20-30 $\approx$ 17-25, subtiliter echinulatis, pallide brunneis; teleutosporis in soros pulvinatos, ovoideos vel oblongos,

vel lineares, plus minus expansos, atro-brunneos, plerumque caulinos rarius epiphyllis congestis, ellipticis aut elongato-clavatis, basi rotundatis, medio leniter constrictis, apice dilatato-rotundatis, 35-52 $\approx$ 17-26, levibus, castaneo-brunneis, pedicello longiusculo, brunneolo vel hyalino, persistenti.

Hab. in caulibus, cladodiis foliisque *Asparagi officinalis*, in Italia, Gallia, Vogesis, Germania, Britannia, Arduennis, Hungaria, Austria, Suecia nec non prope Keren Abyssiniæ (PASSERINI).

3. **Puccinia Thesii** (Desv.) Chaill. in Duby Bot. Gall. II, pag. 889, 2148 Winter Die Pilze p. 202, Schroet. Pilz. Schles. p. 315, Massal. Ured. Veron. p. 37, t. III, f. XVII, 1-7, *Æcidium Thesii* Desv. in Journ. bot. II, p. 311, *Uredo Thesii* Duby Bot. Gall. II, p. 889, *Cæoma Thesii* Schlecht. Fl. Berol. II, p. 116, *Sphærotheca albescens* Desv. in Journ. bot. II, p. 113. — *Æcidialis* in parvos greges dispositis, melleis; *æcidii* foliiculis v. cauliculis, confertis; pseudoperidiis cylindræis, usque ad 750 μ . altis, margine erecto, albo, laciniato; *æcidiosporis* polygoniis, sublevibus, 17-26 $\approx$ 12-17, aurantiaco-rufulis; *uredosporis* in soros e rufo cinnamomeo-brunneos, orbiculares, diu epidermide tectos, irregulariter sparsos congestis, globosis vel rarius oblongis, 19-28 μ . diam., subtiliter confertimque granulosi, dilute brunneo-aurantiacis; *teleutosporis* in soros epivel hypophyllos vel epicaulinos, globosos vel lineares, sparsos, sæpe confluentes, epidermide lacerata cinctos, atro-brunneos congestis, ellipticis vel ovoideis, basi rotundatis, medio leniter constrictis, apice rotundatis, 28-50 $\approx$ 14-28, levibus, castaneo-brunneis, pedicello 30-80 μ . longo, persistenti, brunneolo.

Hab. in foliis caulibusque *Thesii linophylli*, *T. intermedi*, *T. montani*, *T. humifusi*, *T. ramosi*, *T. pratensis*, *T. alpini*, *T. ebracteati*, *T. rostrati*, in Italia, Gallia, Belgio, Britannia, Austria, Germania. — ***P. Passerinii** Schroet. Ber. Schles. Ges. 1876, p. 37: *teleutosporis* mox sejungentibus, pedicello brevi, episporio verrucis hemisphæricis instructo. In *Thesii* foliis in Italia.

4. **Puccinia Calthæ** Link Sp. II, p. 79, Winter Die Pilze pag. 216, 2149 Schroet. Pilz. Schles. p. 315, *Puccinia elongata* Schroet. in Cohn Beitr. III, p. 61. *Æcidium Calthæ* Grev. Fl. Edin. p. 446, Cooke Handbook n. 1614, *Cæoma Calthæ* Link Sp. II, p. 32, *Cæoma Ranunculacearum* Schlecht. Flor. Ber. II, p. 113, p. p. *Uredo Calthæ* Rabenh. Krypt. Fl. I, p. 5. — *Spermogoniis* in parvos greges dispositis, melleis; *æcidii* maculas orbiculares (in petiolis caulibusque

ellipticas) efformantibus; pseudoperidiis cylindraceo-explanatis, margine albido, laciniato; æcidiosporis angulato-subsphæroideis, 20-30 μ . diam., subtiliter verrucosis, aurantiacis; uredosporis in soros circulares, sparsos, minutos, fuscos, per epidermidem fissam erumpentes congestis, globosis vel ellipticis, spinulosis, 22-30 $\approx$ 17-25, castaneo-brunneis; teleutosporis in soros amphigenos, sparsos, erumpentes, orbiculares vel irregulariter rotundatos, convexos, minutos, obscure fuscos congestis, clavato-oblongis vel globoso-ellipsoideis, utrinque attenuatis, leniter medio constrictis, 30-50 $\approx$ 13-25, apice subverruculosis, ceterum levibus, castaneo-cinnamomeis, pedicello teleutosporam subæquante, persistenti, hyalinulo.

Hab. ad folia *Calthæ palustris*, in Italia, Belgio, Arduennis, Britannia, Germania, Fennia, pr. Patroschislowo, nec non in America boreali (PECK).

5. **Puccinia Helianthi** Schwein. Syn. Carol. pag. 73, Schroet. Pilz. 2150 Schles. pag. 315, *P. Helianthorum* Schwein. Syn. North Amer. Fungi p. 296. — Spermogoniis melleis, in parvos greges dispositis; æcidiis orbicularibus vel in maculas late expansas oblongas congregatis, confertis; pseudoperidiis cylindraceo-planis, margine albo, lacinulato; æcidiosporis aurantio-rufis; uredosporis in soros minutos, rotundatos, castaneo-brunneos congestis, globosis, breviter ellipticis vel ovatis, 22-26 $\approx$ 17-22, parce minuteque aculeolatis, episorio subhyalino; teleutosporis in soros subrotundos, prominentes, sparsos, subinde gregarios, atro-brunneos vel nigros congestis, oblongo-ellipsoideis vel ovatis, basi rotundatis, melio leniter constrictis, 38-50 $\approx$ 20-27, levibus, obscure castaneo-brunneis, pedicello hyalino, plus minus persistenti, æquali vel teleutospora longiore.

Hab. in foliis *Helianthi tuberosi*, heterophylli, divaricati, annui, californici, in Italia, Silesia, Suecia et America boreali. — Sec. cl. Winter hæc species cum *P. Tanacetii* DC. est conjungenda.

6. **Puccinia evadens** Harkn. New. Calif. Fungi p. 14, *Coleosporium* 2151 *Baccharidis* C. et H. in Grevillea IV, p. 7. — Spermogoniis minutis, ovatis, pallidis, æcidia præcedentibus; pseudoperidiis epicaulinis elongato-erumpentibus 1 cm. diam. aurantiis, pulverulentis; æcidiosporis concatenatis, demum liberis, ellipticis, subgranulatis 50 $\approx$ 20, flavis, levibus; uredosporis teleutosporis immixtis, globosis, flavis, levibus soris teleutosporiferis hypophyllis, paucis, solitariis, 0,2-1 mm. diam; pallide brunneis; teleutosporis oblongis

vel ovatis, aureo-flavis, medio constrictis, levibus, episporio vertice crassiusculo, intus granulosus vel oleosis, 55-60 $\approx$ 15-20, pedicello hyalino, firmo, teleutosporam subæquante.

Hab. in foliis, caulibus ramulisque vivis *Baccharidis* pilularis, San Francisco Californiæ.

7. **Puccinia obtusa** Schroet. in Abhand. Schles. Gesellsch. 1869, p. 13, 2152
 Pilz. Schles. p. 316, Winter Die Pilze p. 203. — Spermogoniis melleis, in greges plus minus late expansos dispositis; æcidiis in maculas orbiculares, (in nervis foliorum et petiolis elongatas) confertim dispositis; pseudoperidiis cylindraceo-explanatis, margine albo, laciniato; æcidiosporis irregularibus, subtiliter punctulatis, 17-26 μ . diam., aurantio-flavis; uredosporis in soros minutos, rotundatos, obscure brunneos, mox denudatos, plerumque solitarios congestis, globosis vel piriformibus, 19-28 μ . diam., aculeolatis, dilute brunneis; teleutosporis in soros rotundatos sæpius confluentes, atro-brunneos stipatis, ellipticis vel ovoideis, inferne apiceque rotundatis, medio leniter constrictis, 33-52 $\approx$ 18-30, levibus, cinnamomeo-brunneis, apice plerumque incrassatis, pedicello hyalino, deciduo, teleutosporam æquante vel longiore.

Hab. in foliis præcipue ad inferiorem paginam *Salviæ* verticillatæ, in Horto Patavino Italiæ, in Germania, Austria nec non in America boreali.

8. **Puccinia Gentianæ** (Strauss) Link Sp. II, p. 73, Winter Die Pilze 2153
 p. 205, Schroet. Pilz. Schles. pag. 316, *Uredo Gentianæ* Strauss
 Wetter. Annal. II, p. 102 (1811). — Spermogoniis melleis, in parvos greges dispositis; æcidiis orbicularibus vel in maculas oblongas distributis; pseudoperidiis explanato-cyathiformibus, margine albido, obtuse laciniato; æcidiosporis 16-23 $\approx$ 14-17, polygoniis, subtiliter verrucosis, aurantiacis; uredosporis in soros sparsos vel orbiculatim dispositos, minutos, primo epidermide vesiculosa tectos, dilute castaneo-brunneos congestis, ellipsoideis vel ovatis, 20-30 $\approx$ 17-24, aculeolatis, brunneolis; teleutosporis in soros parvos, atro-brunneos, epidermide primo bullata tectos, confertis, ellipticis v. ovoideis, utrinque late rotundatis, medio parum vel non constrictis, 28-38 $\approx$ 20-26, levibus, castaneo-brunneis, pedicello hyalino, molli, mox deciduo.

Hab. in foliis calycibusque *Gentianæ* acaulis, *G. cruciatæ*, *G. asclepiadæ*, *G. Pneumonanthes*, *G. Andrewsii*, *G. puberulæ*, *G. ciliatæ*, *G. firmæ*, *G. utriculosæ*, *G. ad-*

scendentis, in Italia, Gallia, Helvetia, Germania, in America boreali et pr. Minussinsk Sibiriae asiaticæ (Thümen).

9. **Puccinia Silenes** Schroet. in Thümen Myc. Univ. n. 635 (sub nomine *P. Behenis*), Pilz. Schles. p. 317, Winter Die Pilze p. 215, Massal. Ured. Veron. p. 44, t. III, f. XIX, 1-4, *Puccinia Lychnidearum* Fuck. Symb. p. 50, p. p., *Aecidium Behenis* DC. Flor. Franç. VI, p. 94, *Uredo Behenis* DC. l. c. p. 63, *Cæoma Behenis* Link Sp. II, p. 27. — Spermogoniis in parvos greges dispositis, melleis; æcidiis plerumque in greges (aut maculas viridulas flavasve) parvos, orbiculares, congestos distributis; pseudoperidiis minutissimis, breviter cylindraceis, margine albo, laciniato; æcidiosporis polygoniis, subtiliter granulatis, 17-26 $\approx$ 14-20, a urantiaco-flavis; uredosporis in soros minutos, sparsos vel orbiculatim distributos, cinnamomeo-brunneos, sæpe confluentes congestis, ellipticis v. ovoideis, 19-26 $\approx$ 17-22, aculeolatis, dilute brunneis; teleutosporis in soros maculiformes, parvos, sæpius confluentes, obscure brunneos congestis, ellipticis vel ovatis, utrinque rotundatis, medio vix constrictis, 25-40 $\approx$ 16-25, levibus, castaneo-brunneis, pedicello brevi, hyalino.

Hab. in foliis caulibusque vivis languidisve *Silenes inflatae*, nutantis et repentis et *Melandryi albi*, in Italia, Gallia, Belgio, Germania, Britannia et Helvetia nec non prope lacum Kyskul Sibiriae asiaticæ.

10. **Puccinia Porri** (Sow.) Wint. Die Pilze pag. 200, Schroet. Pilze Schles. p. 317, *Puccinia mixta* Fuck. Symb. pag. 58, *Puccinia Graminis* var. *Junci Alb.* et Schwein. Consp. p. 133, p. p. *Uredo Porri* Sow. Engl. Fungi t. 411, *Uredo ambigua* DC. Fl. Franç. VI, p. 64, *Uredo Alliorum* DC l. c. p. 82, p. p. *Uredo areolata* Rabenh. Krypt. Fl. I, p. 9, *Cæoma Scorodizon* Schlecht. Fl. Berol. II, p. 118, *Erysibe areolata* Wallr. — Æcidiis plerumque uniseriatis, orbiculatim in maculis circularibus v. oblongis dispositis, pseudoperidiis subcyathiformibus, margine albo, lacerato; æcidiosporis polygoniis, 19-28 μ . diam., subtiliter verrucosis, aurantiaco-flavis, episporio hyalino; uredosporis in soros minutos, rufescentes, sparsos v. plus minus regulariter secus series ellipticas v. lanceolatas distributos epidermideque bullato-rupta primo tectos congestis, globosis vel ellipsoideo-sphæroideis, subtilissime aculeolatis, 20-33 $\approx$ 18-27, dilute aurantiacis, episporio hyalino; teleutosporis in soros explanatos, dilutius epidermide tectos, fuscis maxima ex parte solitarios congestis, dimorphis, aliis eseptatis, obovatis, 25-36 $\approx$ 15-23, subsessilibus, fuscis, aliis uniseptatis, clavatis, 28-45 $\approx$ 20-26,

pedicellatis, castaneo-brunneolis, levibus, pedicello elongato, gracili, mox deciduo.

Hab. in foliis Allii Porri, A. fistulosi, A. Cepæ, A. Schœnoprasi, A. sibirici, A. palustris, A. acutanguli, A. sativi, A. Ophioscorodoni, A. rotundi, A. sphærocephali, A. Scorodoprasi, A. carinati, A. flavi, A. Stelleriani, in Italia, Germania, Fennia, Gallia et Britannia.

11. **Puccinia Cirsii-lanceolati** Schroet. Krypt. Fl. Schles., Pilze p. 317. 2156

— Æcidiis in parvos greges congestis; pseudoperidiis laxè connexis, late poculiformibus; æcidiosporis ellipticis, dilute aurantiaco-rufis, episporio subtiliter verrucoso hyalinoque prælitis; uredosporis in soros minutos, rotundatos, castaneo-brunneos congestis, globosis, ellipticis vel ovatis, 24-30 = 20-25, aculeolatis, brunneis, latere poris 3 germinationis instructis; teleutosporis in soros uredosporarum v. in soros proprios atro-brunneos congestis, ellipticis, deorsum rotundatis vel parum attenuatis, medio vix vel non constrictis, 33-42 = 22-26, episporio sordide castaneo-brunneo instructis, levibus.

Hab. in Cirsio lanceolato in Silesia Germaniæ. — Adest etiam *Puccinia* in Cirsio lanceolato et arvensi ex America boreali sub nomine *P. Cirsii* Lasch exhibita.

12. **Puccinia Prenanthis** (Pers.) Fuck. Symb. p. 45, Winter Die Pilze 2157

p. 208, Schroet. Pilz. Schles. p. 318, *Puccinia Hieracii* var. *b.* Mart. Fl. Mosq. p. 226 p. p., *Puccinia Chondrillæ* Corda Icon. IV, p. 15, *Æcidium Prenanthis* Pers. Syn. Fung. p. 208, *Uredo flosculosorum* Alb. et Schwein. Consp. p. 128, p. p. *Uredo maculosa* Strauss Wett. Annal. II, p. 101, *Cæoma formosum* Schlecht. Fl. Berol. II, p. 127, *Cæoma Compositarum* Link in Linn. Sp. plant. VI, 2, p. 50, p. p. *Uredo Prenanthis* Schum. Saell. p. 232, *Æcidium Lactucæ* Opiz Sezman p. 111, *Puccinia Cichorii* Bell. in Kickx Fl. Fland. II, p. 65, *Æcidium Taraxaci* K. et S. Myk. Heft. I, p. 85, *Uredo Cichorearum* DC. Fl. Fr. II, p. 229. — Spermogoniis in parvos greges dispositis, melleis, æcidiis in maculis orbicularibus vel lineari-elongatis, pseudoperidiis nullis; æcidiosporis irregulariter globosis vel polygoniis, rarius oblongis, pallide aurantiaco-flavis, verrucosis, 15-26 = 12-20; uredosporis in soros sparsos vel irregulariter aut orbiculatim distributos, minutos, plerumque rotundatos, dilute brunneolos, diu epidermide tectos congestis, globosis, 17-22 μ . diam., ochraceis, subtiliter aculeolatis, ad poros incrassatis; teleutosporis in soros parvos, rotundatos, ellipti-

cos vel lineares, diu epidermide tectos, demum nudos, atro-brunneos congestis, ellipticis vel ovoideo-oblongis, utrinque rotundatis vel sursum explanatis, medio leniter vel non constrictis, 26-44 $\approx$ 17-26, subtiliter muriculatis, brunneis, pedicello brevi, hyalino, gracillimo, deciduo.

Hab. in foliis *Prenanthis purpureæ*, *P. muralis*, *Lactucæ virosæ*, *L. Scariolæ*, *L. vimineæ*, *L. muralis*, *L. strictæ*, *L. sagittatæ*, *L. perennis*, *Mulgedii alpini*, *Chondrillæ junceæ*, *Hypochæridis glabræ*, *maculatæ*, *Cichorii Intybi*, *Taraxaci officinalis*, in Italia, Germania, Belgio, Austria, Helvetia, Bohemia, in Australia et Sibiria asiatica.

13. **Puccinia Lampsanæ** (Schultz.) Fuck. Symb. p. 53, Schroet. Pilz. 2158

Schles. p. 318, *Æcidium Lampsanæ* Schultz. Fl. Starg. p. 54. — Spermogoniis in greges parvos rotundatos v. lineares, elongatos confertis, melleis; æcidiis in maculis purpureis, orbicularibus v. linearibus, sæpe late expansis subconfertim distributis; pseudoperidiis explanatis, margine albo, plurilaciniato, reflexo; æcidiosporis ovatis, 17-20 $\approx$ 17, sublevibus, e rufo aurantiaco-flavis; uredosporis in sorulos rotundatos, castaneo-brunneos, sæpius confluentes congestis, plerumque globosis vel ellipticis vel ovatis, 17-22 $\approx$ 15-17, subtiliter aculeolatis, dilute brunneis; teleutosporis in soros minutos, sparsos, obscure brunneos congregatis, breviter ellipticis aut ovatis, utrinque rotundatis, medio non vel vix constrictis, 22-30 $\approx$ 17-22, subtilissime punctatis, castaneo-fuscidulis, pedicello hyalino, gracili.

Hab. in foliis *Lapsanæ communis* et *Crepididis paludosæ*, in Germania, Gallia, Belgio.

14. **Puccinia Crepidis** Schroet. Krypt. Fl. Schles. Pilze pag. 319. — 2159

Spermogoniis insimul confertis, per totam foliorum superficiem inter æcidia sparsis; æcidiis confertis, æque per totam paginam inferiorem (plerumque omnium foliorum plantæ matricis) expansis; pseudoperidiis explanatis, margine albo, sublevi; æcidiosporis globosis, 15-17 μ . diam., aurantiacis; uredosporis in soros rotundatos, minutos, cinnamomeo-brunneos congestis, globosis, ellipticis v. ovatis, 20-25 $\approx$ 16-20, aculeolatis, dilute brunneis; teleutosporis in soros parvos, diu epidermide tectos congestis, ellipsoideis vel ovoideis, utrinque rotundatis, medio parum vel non constrictis, 20-30 $\approx$ 17-22, subtilissime punctatis, castaneo-fuscidulis, pedicello hyalino, valde gracili.

Hab. in foliis *Crepididis virentis* et *Crepididis tectorum*

in Silesia Germaniæ. — Huc pertinere videtur *Puccinia Crepidis* Rostrup Svampe fra Finmarken p. 230 ex Finmarkia.

15. **Puccinia Crepidis-pygmææ** Gaillard in Bull. Soc. Myc. Fr. tom. 2160 III, p. 183. — Pseudoperidiis epiphyllis, rarius hypophyllis, cupuliformibus, margine dentatis, albis, in greges circulares, 4-5 mm. latos congestis; maculis hypophyllis, decoloratis; æcidiosporis globulosis vel angulatis, 16-18 μ . diam., striatis, hyalinis vel vix flavescens, guttulatis; soris uredosporiferis epiphyllis, sparsis, minutis, atro-brunneis, primo subepidermicis; uredosporis globosis, 19-21 μ . diam., brunneis, subtiliter echinulatis; soris teleutosporiferis epiphyllis, minutis, 1-2 mm. diam., atro-brunneis; teleutosporis obtusis vel mucronulatis, ovoideis, brunneis, ad septum constrictis, levibus, episporio ubique æquicrasso, 24-27 $\approx$ 18; pedicello brevissimo, hyalino.

Hab. in foliis *Crepidis pygmææ*, in M. Pyrenæis Galliæ. — «An satis a præcedente diversa?»

16. **Puccinia Œdipus** Cooke in Grevillea X, p. 126, *Æcidium Senecionis* Desm. forma *capensis* Cooke l. c. — *Æcidiiis* iis *P. conglomeratæ* similibus; soris uredosporiferis fuscis; uredosporis globosis, 38 μ . diam., læte brunneis, spinulosis; soris teleutosporiferis hypophyllis, sparsis, minimis, atris; teleutosporis ellipticis, castaneo-brunneis, sublevibus, ad medio constrictis, 50 $\approx$ 35, pedicello hyalino, subcrasso, 70 μ . longo fultis.

Hab. in foliis *Senecionis pandurifolii*, Inanda Nataliæ (Wood).

17. **Puccinia Epilobii** DC. Flor. Franc. VI, p. 61, Winter Die Pilze 2162 p. 214 (*P. Epilobii-tetragoni*), Schroet. Pilz. Schles. p. 319, *Puccinia pulverulenta* Grev. Fl. Edinb. p. 432 *Trichobasis Epilobii* Berk. Outl. p. 333 p. p., *Æcidium Epilobii* DC. Fl. Franc. II, p. 238. — Spermogoniis inter æcidia sparsis, melleis; æcidiiis per totam foliorum superficiem æque sparsis confertisque; pseudoperidiis explanatis, margine albo, obtusiusculo; æcidiosporis polygoniis, subtilissime verrucosis, 16-26 μ . diam., aurantiaco-flavis; uredosporis in soros rotundatos sæpius orbiculatim dispositos, castaneo-brunneos congestis, ellipticis vel ovoideis, 19-28 $\approx$ 14-24, aculeatis, dilute castaneis; teleutosporis in soros obscure brunneos, sæpius annulato-maculiformes congestis, uredosporis conformibus, utrinque rotundatis, medio leniter constrictis, 24-35 $\approx$ 16-20, levibus, brunneo-fusculis; pedicello gracili, hyalino, deciduo.

Hab. in foliis *Epilobii tetragoni*, alpini, montani,

hirsuti, angustifolii, glandulosi, rosei, palustris, parviflori, adnati, virgati, Fleischeri, organifolii etc. nec non Ænotheræ biennis, Isnardiæ alternifoliæ et Ludwigiae speciei, in Italia, Gallia, Britannia, Germania, Belgio, Austria, Helvetia, Arduennis, Nova Semlia, Scandinavia, America boreali et Sibiria asiatica.

18. **Puccinia Violæ** (Schum.) DC. Fl. Franc. VI, p. 92, Winter Die Pilze pag. 215, Schroet. Pilz. Schles. pag. 319, *Æcidium Violæ* Schum. Fl. Saell. II, p. 224, *Uredo Violarum* DC. l. c. p. 73, *Puccinia Violarum* Link Sp. II, p. 80, *Trichobasis Violarum* Lév., *Æcidium argentatum* Schultz. Fl. Starg. p. 454 p. p., *Cæoma rivosum* Link Observ. II, p. 27, *Æcidium Violarum* Desm. — Spermogoniis in parvos vel magnos greges dispositis, confertis, flavo-melleis; æcidiis in omnibus partibus viridibus plantæ nutricis, plagulas (in caulibus) usque ad 7 cm. longas, maculas (in foliis) flavescentes vesiculosas efformantibus; pseudoperidiis explanatis, margine albo, revolutis, lacinulatis; æcidiosporis verruculosus, subaurantiacis, 16-24 $\approx$ 10-18; uredosporis in soros hypophyllos, sparsos vel orbiculatim distributos, cinnamomeos aut fuscus, minutos, epidermide fissa cinctos congestis, subsphæroideis vel ellipticis, 21-26 $\approx$ 17-23, aculeolatis, fuscidulis; teleutosporis in soros hypophyllos, maculæ flavescenti gregatim insidentes, epidermide diu tectos, minutos, sordide fuscus, congestis, ellipticis vel oblongo-ovoideis, utrinque rotundatis, medio vix vel non constrictis, 20-35 $\approx$ 15-20, levibus, vertice apiculo verruciformi, hyalino ornatis, brunneis, pedicello plus minus evolutis, deciduis.

Hab. in caulibus, ramis, petiolis, foliis etc., *Violæ tricoloris, caninæ, silvaticæ, Patrini, arenariæ, odoratæ, pubescentis, pinnatæ, silvestris, hirtæ, collinæ, sciaphilæ, albæ, magellanicæ, stagninæ, strictæ, mirabilis, calcaratæ, sepincolæ, Rivinianæ et cornutæ, in Italia, Germania, Austria, Helvetia, Belgio, Gallia, Britannia, Fennia, in America boreali in Patagonia et in Sibiria asiatica.* — Cl. Karsten teleutosporas 32-42 $\approx$ 15-17 indicat.

19. **Puccinia Ferulæ** Rud. in Linnæa IV, p. 513, Winter Die Pilze p. 211, *Cæoma (Æcidium) cylindricum* Rud. l. c. p. 512, *Æcidium albidum* Bonord. forma *Ferulaginis-galbaniferæ* Speg. Dec. myc. n. 35, *Ceratitium crenulatum* Rabenh. in Bot. Zeitung. 1851, p. 452. *Æcidium Ferulæ* Rouss. et Dur. Fl. d'Algérie I, p. 306? — Pseudoperidiis confertis, longe seriatis, cylindræis, usque ad 1,5 mm. lon-

gis, albis, margine dentato aut crenulato, erecto; æcidiosporis rotundatis vel angulatis, 16-28 $\approx$ 10-20, pallide aurantio-flavis; soris utriusque formæ sparsis, oblongis aut ellipticis, epidermide vesiculosa, dein lacerata tectis; uredosporis plerumque piriformibus, rarius irregulariter rotundatis vel oblongis, 20-35 $\approx$ 14-23, levibus, flavis; teleutosporis ellipsoideis aut oblongatis, apice sive rotundatis et tum haud incrassatis, sive papilla lata, compressa præditis, medio vix vel haud constrictis, 28-45 $\approx$ 17-28, levibus, brunneis, pedicello longiusculo, crasso fultis.

Hab. in foliis petiolisque Ferularum imprimis Ferulaginis galbaniferæ, in Italia et Germania nec non in Algeria (TRABUT).

20. **Puccinia Bupleuri** (Opiz?) Rud. in Linnæa IV, p. 514, *Æcidium* 2165

Bupleuri Opiz Sezn. p. 111? sec. Fuckel, *Puccinia Bupleuri-falcati* Wint. Die Pilze p. 212 *Æcidium Falcarice* var. *Bupleuri-falcati* DC. Flor. Franç. VI, p. 91. — Epiphylla vel caulicola; æcidiiis æqualiter per totam foliorum superficiem sparsis; pseudoperidiis cupulatis, margine albo, revolutis, lacinulatis; æcidiosporis polygoniis, 14-21 μ . diam., sublevibus, flavis; soris utriusque formæ sparsis vel orbiculariter dispositis, minutis, rotundatis aut irregularibus; uredosporis papillosis, irregulariter globosis, 17-23 μ . d., flavo-brunneis; teleutosporis late ellipticis aut oblongis, apice non vel paullulum incrassatis, plerumque utrinque rotundatis, medio levissime constrictis, 26-42 $\approx$ 17-30, levibus, brunneis, pedicello longo, deciduo instructis.

Hab. in foliis Bupleuri aristati, tenuissimi, Gerardi, falcati, stellati, longifolii et protracti, in Italia, Austria, Germania, Bohemia et Gallia nec non in America boreali (ad Osmorrhizam?), et Yunnan in regione sinensi (PATOILLARD). — «Forte specimina ad Osmorrhizam potius ad *P. Pimpinellæ* referenda videntur atque errore ut *P. Bupleuri* determinata».

21. **Puccinia Convolvuli** (Pers.) Cast. Obs. I, p. 16, Cat. pag. 202, 2166

Winter Die Pilze p. 204, *Uredo Betæ* var. *Convolvuli* Pers. Syn. p. 221, *Æcidium Calystegiae* Desm. in Ann. Scienc. nat. 1847, p. 14, *Æcidium dubium* Clint. in Peck 27 Rep. p. 104, *Uredo Convolvuli* Str. in Ann. Wett. II, p. 96, *Æcid. Convolvulacearum* Ces. in Klotzsch Herb. n. 1492, *Æcidium Convolvuli* Sacc. Mich. I, p. 12. — Spermogoniis minutis, innatis, paucis, subhyalinis; æcidiiis plus minus orbiculariter dispositis, hypophyllis, maculis parvis, distinctis vel confluentibus, brunneis vel purpurascens; pseu-

doperidiis cupulatis, minutis, confertis, margine albo, pluries laciniato, lato; æcidiosporis subglobosis vel angulatis, 16-26 μ . d., tuberculatis, pallide flavescentibus; soris uredosporiferis irregulariter aut secus orbem dispositis, sæpe confluentibus, mox nudis, brunneolis; uredosporis plerumque globosis, subinde ellipticis vel ovoideis, 21-30 $\approx$ 18-26, aculeatis, dilute brunneis; soris teleutosporiferis conformibus at diu epidermide grisea tectis sæpeque confluentibus; teleutosporis oblongis, oblongo-clavatis vel ellipsoideis, apice obtusis vel rotundatis et incrassatulis vel plus minus angustatis valdeque incrassatis, medio leniter constrictis, basi rotundatis vel in pedicellum attenuatis, 38-66 $\approx$ 20-30, levibus, obscure brunneis; mesosporis intermixtis, ut plurimum ovoideis, 26-35 $\approx$ 21-26, brunneis.

Hab. in foliis *Convolvuli arvensis* et *sepium*, in Italia, Gallia, Austria, Germania, Lusitania et America boreali. — Huc forte pertinet *Uromyces Calystegiae* (De Bary) Fuck. Symb. p. 63.

22. **Puccinia tuyutensis** Speg. Fungi Argentini pug. IV, n. 67, *Æcidium* 2167

tuyutense Speg. F. Arg. pug. IV, n. 99, *Uredo tuyutensis* Speg. l. c. — Caulibus et foliis infectis ex toto incrassato-carnosis, flavescentibus; pseudoperidiis hypophyllis v. cauliculis totum folium occupantibus, laxe gregariis primo tectis hemisphærico-prominulis, dein erumpentibus, margine libero, revoluta, fimbriatulo, albescente, (0,2-0,3 cm. diam.), contextu cellulis sphærico-angulosis, tunica crassa, peripherice dense et grosse radiatim striolata, hyalinis composito; æcidiosporis sphæroideis e mutua pressione obtuse angulosis, episporio hyalino, tenui, levi, protoplasmate granuloso, oleoso, aurantiaco foetis, 22-25 μ . diam; soris uredosporiferis illis status teleutosporici commixtis atque simillimis; uredosporis globosis v. ovoideis (22-24 μ .), episporio tenui vix sursum incrassato, levissimo, protoplasmate granuloso farctis, non v. 1-guttulatis, intense fuligineis; soris teleutosporiferis amphigenis vel cauliculis semper tectis, matrice immersis, applanatis, aterrimis (excrementa muscarum simulantibus) orbicularibus, minutis, 2-3 mm. diam., gregariis et sæpe confluentibus; teleutosporis ellipticis vel obovatis, sursum obtuse rotundatis, medio 1-septato-constrictis, episporio levissimo, ubique tenui, protoplasmate granuloso-farctis, 32-38 $\approx$ 22-28, intense fuligineis, pedicello parvulo, 15-20 $\approx$ 5, hyalino fultis.

Hab. ad folia caulesque viva *Evolvuli falcati*, ad ripas Lagunæ salsæ «Gran laguna de Luro» dictæ, Tuyù Americæ australis.

23. **Puccinia Adoxæ** Hedw. in DC. Flor. Franç. II, p. 220, Winter Die Pilze p. 211, Schroet. Pilze Schles. p. 320, *Æcidium albescens* Grev. Flor. Edinb. p. 444, *Puccinia Saxifragarum* Link in Linn. Sp. plant. VI, 2, p. 81, p. p., *Uredo Adoxæ* Auersw. in Klotzsch Herb. myc. n. 1187. — Spermogoniis inter *Æcidia* sparsis, melleo-flavis; æcidiiis per totam plantam æque sparsis expansisque, confertis; pseudoperidiis breviter cylindraceo-explanatis, albidis, margine pauci-lateque dentato; æcidiosporis polygoniis, granulosis, 15-22 μ . diam., aurantiaco-hyalinulis; uredosporis in soros parvos, sparsos, rotundatos, cinnamomeos, diu epidermide tectos congestis, difformibus, 20-32 $\approx$ 16-20, aculeolatis, dilute brunneis; teleutosporis soros minutos, rotundatos vel ellipticos, in foliis orbiculatim ordinatos, in caulibus seriatos efformantibus, ellipticis, ovatis vel subfusoideis, 30-45 $\approx$ 14-23, apice papillula elongata, pallidiori instructis, castaneo-brunneis, levibus.

Hab. in foliis, caulibus etc. *Adoxæ Moschatellinæ*, in Germania, Austria, Helvetia, Belgio et Britannia, nec non in America boreali.

24. **Puccinia Lagenophoræ** Cooke in Grevillea XIII, p. 6. — *Æcidiiis* epiphyllis, maculis nullis; pseudoperidiis sparsis, semiimmersis, lacerato-marginatis, albis; æcidiosporis globosis, 12 μ . diam.; soris uredosporiferis sparsis, minimis, pulverulentis, fuscis vel sequentibus immixtis; uredosporis globosis, 20 μ . diam., fuscis, episporio asperulo; soris teleutosporiferis epiphyllis, sparsis, atro-fuscis, subpulverulentis, teleutosporis clavatis, medio constrictis, fuscis, loculo supero obscuriore, obtuso, subgloboso, episporio incrassato, levi, loculo infero in pedicellum brevem attenuato, 40-45 $\approx$ 20.

Hab. in foliis vivis *Lagenophoræ Billardieri*, pr. Omeo Australiæ.

25. **Puccinia Primulæ** (DC.) Duby Bot. Gall. II, p. 89, Winter Die Pilze p. 203, *Uredo Primulæ* DC. Fl. Franç. VI, p. 68, *Æcidium Primulæ* DC. l. c. VI, p. 90, *Cæoma Primularum* Link Sp. II, p. 12. — Pseudoperidiis hypophyllis, solitariis, sparsis vel aggregatis, urceolatis, albidis; æcidiosporis angulatis, 17-23 $\approx$ 12-18, verruculosus, flavescentibus; soris uredosporiferis tandem per epidermidem erumpentibus, aggregatis, suborbicularibus v. ellipsoideis, fuscis; uredosporis ovoideo-rotundatis, 19-22 μ . diam., aculeatis, pallide brunneis; soris teleutosporiferis hypophyllis, epidermide cinerescenti diu tectis, ut plurimum suborbicularibus, planis, solitariis, sparsis vel gregariis, subinde confluentibus, minutis, atro-fuscis; teleutosporis

ovoideo-ellipsoideis, ad septum plus minus constrictis, flavis, subsessilibus 22-30 $\approx$ 15-18 levibus, brunneis, apice late incrassatis.

Hab. in foliis petiolisque *Primularum*, in *Primula sibirica*, *acauli*, *elatiore*, *officinali*, *grandiflora*, in Gallia, Belgio, Britannia, Helvetia, Germania et Fennia.

26. **Puccinia Cephalandræ** Thüm. in Flora 1876, p. 425, *Uredo do-* 2171
lichospora Kalchbr. mscr., *Uredo Cephalandræ* Thüm. l. c., *Æcidium Cephalandræ* Cooke in Grevillea XIII, pag. 6. — *Æcidii*s hypophyllis; maculis orbicularibus, 1-3 mm. diam. fuscis; pseudo-peridiis (4-6 vix ultra), albidis, semiimmersis, leniter fimbriatis, *æcidiosporis* flavidis; soris mesosporiferis hypophyllis, sparsis, liberis, parvis, orbiculatis, detergibilibus, ferrugineis, epidermide cinctis; uredosporis piriformibus vel ellipsoideis, utrinque subacutatis angustatisve vel raro vertice rotundatis, simplicibus, 36-42 $\approx$ 18-26, episporio levi subcrasso, dilute griseo-fuscidis; soris teleutosporiferis hypophyllis, sparsis, applanatis, orbiculatis, umbrinis, liberis; teleutosporis ovatis vel ellipsoideis, medio obsolete constrictis, vertice non incrassato sed apiculato, apiculo pallide fuscescente, 8 μ . longo, episporio tenui, levi, in constrictionibus crassiore, granuloso, pedicellatis, pedicello tenui, curvato v. recto, hyalino, longitudine teleutosporam æquante v. longiore, usque ad 52 μ . longo, impellucidis, fuscis, 42-45 (sine apice pedicelloque) $\approx$ 36; paraphysibus nullis; uredosporis ovato-oblongis in iisdem soris, 45 $\approx$ 20, levibus.

Hab. in foliis vivis fructibusque *Cephalandræ* quinquelobæ et palmatæ, ad latera montis « Boschberg » et pr. Somerset East Africæ australis (MAC OWAN) et ad Natal (WOOD).

27. **Puccinia Swertię** Winter Die Pilze pag. 205, *Æcidium Swer-* 2172
tice Opiz Seznam, pag. 111. — *Æcidii*s irregulariter aggregatis, in macula flavescente insidentibus, urceolatis, margine erecto, leniter dentato; *æcidiosporis* angulatis, 19-28 μ . diam., verrucosis, flavis; soris utriusque formæ in maculis flavo-pallidis insidentibus, rotundatis vel irregularibus, sparsis vel orbiculariter dispositis, simul confluentibus, diu tectis, atro-brunneis; uredosporis rotundatis, 19-26 μ . diam., subtiliter punctatis, dilute brunneis; teleutosporis ellipsoideis, raro oblongis, utrinque rotundatis, apice haud incrassatis, 30-48 $\approx$ 20-30, levibus, castaneo-brunneis, pedicello longiusculo deciduo.

Hab. in foliis *Swertię* perennis, in Germania et Bohemia

Dubium manet, suadente cl. Winter, an huc revera *Æcidium* prædictum pertineat.

28. **Puccinia Aristolochiæ** (DC.) Wint. Die Pilze p. 201, *Uredo Ari-* 2173
stolochiæ DC. Flor. Franç. VI, p. 67, *Puccinia Aristolochiarum*
 Corda Icon. Fungi IV, p. 16, t. 4, f. 56, *Æcidium Aristolochiæ*
 Rabenh. DC. Fl. n. 146, *Cæoma Aristolochiæ* Schlecht. in Lin-
 næa I, pag. 610, *Cæoma Aristolochiatum* Link Sp. II, pag. 43.
 — *Æcidiis* plerumque æque diffusis, rarius ad nervos folii con-
 gestis; pseudoperidiis hemisphæricis, albidis, apice osculo minuto,
 rotundato apertis; æcidiosporis polygoniis, subrotundatis, $30 \approx 17$ -
 23, verrucosis, flavis; soris uredosporiferis minutis, rotundatis vel
 oblongis, sparsis, mox nudis; uredosporis irregulariter globosis,
 24-26 μ . diam., levibus, flavescentibus; soris teleutosporiferis si-
 milibus, sparsis vel orbiculatim dispositis, diu tectis; teleutosporis
 plerumque breviter ellipticis, raro oblongis, utrinque rotundatis vel
 ad pedicellum attenuatis, medio vix constrictis, apice non vel paul-
 lum incrassatis, $30-44 \approx 19-28$, castaneo-brunneis, levibus, pedicel-
 lo brevi, deciduo suffultis.

Hab. in foliis caulibusque *Aristolochiæ rotundæ*, *Cle-*
matitis et *pallidæ*, in Italia, Gallia et Germania.

29. **Puccinia ægra** Grove in Journal of Botany 1883, p. 274. *Æci-* 2174
dium depauperans Vize in Gard. Chron. 1876, pag. 175 et 361,
 f. 72, On *Æcid. depauperans* p. 437 cum tabula. — Maculis nullis;
 pseudoperidiis sparsis, primo rotundatis, demum oblongis (in cau-
 libus parallelis), margine revoluti, albo; æcidiosporis globosis vel
 oblongis, angulatis, $17-21 \approx 14-16$, levibus, aurantio-flavis; soris
 uredosporiferis numerosis, punctiformibus, amphigenis, macula fla-
 va, majuscula, sparsis vel gregariis, rotundatis, convexulis, epi-
 dermide argenteo-nitente, persistenti tectis; uredosporis ellipticis
 vel obovatis, 28-30 μ . circ. longis, subtiliter echinulatis, brunneis;
 soris teleutosporiferis conformibus; teleutosporis ellipticis, oblon-
 gis vel rotundatis, valde irregularibus, basi apiceque rotundatis
 vel angustatis, subinde truncatis, haud constrictis, $22-30 \approx 18-24$,
 levibus, obscure brunneis.

Hab. in foliis caulibusque *Violarum imprimis V. cornutæ*,
 in Britannia.

30. **Puccinia Myrsiphylli** (Thüm.) Wint. in Flora 1884, n. 14, *Uredo* 2175
Myrsiphylli Thüm. in Flora 1877, p. 410, *Æcidium Myrsiphylli*
 Kalchbr. mscr. — Pseudoperidiis hypophyllis, maculæ flavæ insiden-
 tibus, circinatim congestis, semiimmersis, urceolatis, margine subin-

tegro; soris uredosporiferis hypophyllis, sparsis, pro maxima parte solitariis, mediis, tectis, concavis, dilute flavidis, in macula magna, indeterminata, exarida straminea; uredosporis magnis, ellipsoideis, episporio subcrasso, granuloso, inæquali, $34-40 \simeq 26-30$, pallidissime luteis; paraphysibus nullis; soris teleutosporiferis cauliculis, tectis, demum epidermidem longitudinaliter rumpentibus at semper ab ea velatis, strias longas, confluentes, atro-cinereas efformantibus; teleutosporis oblongis vel oblongo-cuneatis, apice plus minusve incrassatis, rotundatis, acuminatis truncatisve, levibus, $43-70 \simeq 17-28$, fuscis, pedicello brevi, fragili, hyalino vel pallide fusciscenti suffultis; paraphysibus numerosis, cylindraceis, fuscis, arcte cohærentibus et stroma quasi formantibus.

Hab. in foliis caulibusque vivis *Myrsiphylli* falciformis et medioloidis, prope Somerset East et Port Natal Africæ.

31. **Puccinia Cookei** De-Toni, *Puccinia Tabernæmontanæ* Cooke in 2176
Grevillea X, p. 125, vix Berk. et Broome. — *Æcidiis* hypophyllis, orbicularibus; pseudoperidiis circinatis, arcte apertis (vix maturis); uredosporis magnis, ellipticis ovatisve, pallidis, $40-42 \simeq 30$, episporio asperulo donatis; soris teleutosporiferis pallidis; teleutosporis ellipticis, medio valde constrictis, sublevibus, $45-48 \simeq 30$, breviter pedicellatis.

Hab. in foliis *Tabernæmontanæ* ventricosæ, Inanda Africæ (Wood).

32. **Puccinia Thunbergiæ** Cooke in *Grevillea* X, pag. 125, *Æcidium* 2177
Thunbergiæ Cooke l. c. — *Æcidiis* hypophyllis, in maculis orbicularibus congestis; pseudoperidiis semiimmersis, fimbriatis; uredosporis subglobosis, fuscis, $18-20 \mu$. diam., episporio sublevi; soris teleutosporiferis compactis, convexis, rugosis, purpureo-fuscis; teleutosporis elongato-ellipticis, $42 \simeq 18$, supra apiculatis, pallide-flavidis, episporio levi, tenui, ad apicem incrassato.

Hab. in foliis *Thunbergiæ* natalensis, ad Inanda Africæ (Wood).

33. **Puccinia Stobææ** Mac Owan in *Grevillea* XI, p. 23, *Æcidium* 2178
Stobææ Kalchbr. et Cooke in *Grevillea* — Pseudoperidiis elongatis (3-5) in greges congestis, albis, margine fimbriato-laceratis; æcidiosporis hyalinis, subglobosis, $28-30 \mu$. diam.; soris hypophyllis, sub tomento araneoso folii latentibus, demum etiam amphigenis sparsis v. in acervos irregulares confluentibus, atro-fuscis; uredosporis globosis, $15-18 \mu$. diam., echinulatis; teleutosporis el-

lipsoideis, medio leviter constrictis, fuscis, pedicello teleutosporæ æquilongo.

Hab. in foliis Stobææ membranifoliæ et *S. speciosæ*, ad P. Natal et Somerset East Africae. — *Pucciniæ Hieracii* Mart. affinis. Pseudoperidia *Ræsteliae laceratæ* similia, nivea.

** Teleutosporarum episporium verrucosum v. distincte punctatum v. subreticulatum.

34. **Puccinia Pimpinellæ** (Strauss) Link Sp. II, p. 77, Winter Die 2179

Pilze p. 212, Schroet. Pilz. Schles. p. 321, *Æcidium Pimpinellæ* Kirchn. in Lotos 1856, p. 180, *Uredo Pimpinellæ* Strauss Wett. Ann. II, p. 102. *Cæoma Umbelliferarum* Schlecht. Fl. Berol. II, p. 115 (sec. Winter), *Puccinia reticulata* De Bary in Rabenh. Fungi Europæi, *Puccinia Chærophylli* Purt. Brit. Plantz III, n. 1553, *Puccinia Myrrhis* Schwein. Syn. North Amer. Fungi p. 296, *Puccinia Sileris* Voss in Verhandl. Gesellsch. Wien 1876, p. 120, *Puccinia Heraclei* Grev. Scott. Crypt. Fl. t. 42, *Trichobasis Heraclei* Lév. in Berk. Engl. Fl. V, pag. 380, *Æcidium* et *Uredo Chærophylli* Kirchn. l. c. p. 180, *Puccinia Osmorrhizæ* C. et P. in XXIX Rep. St. Mus. pag. 73. — Spermogoniis in parvos greges dispositis, melleis; æcidiis in foliis in maculis orbicularibus, in caulibus in maculis oblongis dispositis, distantibus; pseudoperidiis irregulariter rotundatis vel oblongis, usque ad 750 μ . longis, bulato-inflatulis, margine albo, lacerato, non vel vix revolutis; æcidiosporis polygoniis, subtiliter verrucosis, flavescentibus, 18-35 $\approx$ 16-23; uredosporis in soros sparsos, erumpentes, convexos, minutos, cinnamomeo-fuscos congestis, sphæroideo-ovoideis, 23-32 $\approx$ 18-24, aculeatis, brevissime pedicellatis, dilute brunneis; teleutosporis in soros hypophyllos vel caulicolas, sparsos, erumpentes, subcirculares, maculiformes, convexos, minutos, atro-fuscos congestis, ellipsoideis vel ovatis, medio vix constrictis, utrinque rotundatis, 26-35 $\approx$ 17-26, episporio reticulato, brunneolis, pedicello longiusculo, gracili, deciduo, hyalinulo.

Hab. in foliis caulibusque Pimpinellæ magnæ, Saxifragæ, nigræ, Triniæ vulgaris, Athamanthæ cretensis, Osterici palustris, Angelicæ silvestris (?), Tommasiniæ verticillaris, Heraclei Spondylii, Sileris trilobi, Anthrisci silvestri, Chærophylli bulbosi, aromatici, temuli, aurei, silvestris, Myrrhis odoratæ, Osmorrhizæ longistylis et brevistylis, in Italia, Germania, Austria,

Belgio, Britannia, Fennia, in America boreali. — Forma **Eryngii** DC. Encycl. VIII, p. 249 (*Puccinia*) Winter Pilze p. 213: teleutosporis sæpius oblongis, longissime pedicellatis, usque ad $50 \approx 28$. In *Eryngio campestri* in Germania et Belgio.

35. **Puccinia Menthæ** Pers. Syn. Fung. p. 227, Winter Die Pilze p. 204, 2180 Schroet. Pilz. Schles. p. 321, *Æcidium Menthæ* DC. Flor. Franc. IV, p. 95, *Uredo Calaminthæ* Str. Wett. Ann. II, p. 95, *Uredo Labiatarum* DC. Fl. Franc. VI, p. 72, *Uredo Clinopodii* Rab. Handb. p. 10, *Uredo Menthæ* Pers. Syn. p. 220, *Puccinia Clinopodii* DC. loc. cit. pag. 57, *Trichobasis Labiatarum* Lév. in D' Orb. Dict. Clem. V, 12, p. 785, *Puccinia Calaminthæ* Fuck. Symb. Myc. I, p. 56. — Spermogoniis vel in parvos greges dispositis vel sparsis, mel-leis; æcidiis in caulibus foliisque subiculo incrassato insidentibus maculasque purpureo-rufas efformantibus, bullato-inflatis, sparsis vel aggregatis; pseudoperidiis magnis, planis, laxè adhærentibus; æcidiosporis laxis, angulato-ellipsoideis, verruculosis, dilute flavis, usque ad 40μ . longis, $17-26 \mu$. diam.; uredosporis in soros spar-sos, epidermide rupta cinctos, orbiculares vel subrotundatos, pla-niusculos, flavido-fuscos congestis, ellipticis vel ovoideis, utrinque rotundatis, aculeatis, $17-28 \approx 14-19$, dilute brunneis, episporio ochra-ceo; teleutosporis soros hypophyllos, rarius caulicolas, sparsos aut aggregatos, subinde confluentes, orbiculares, minutos, atro-fuscos efformantibus, ellipsoideis vel breviter cylindraceis, utrinque ro-tundatis, medio vix constrictis, vertice leniter incrassatis, $26-35 \approx 19-23$, verruculosis, apice papilla lata, pallidiori vel achroa in-structis, obscure brunneis, pedicello sporâ longiori, hyalino, gracili.

Hab. in foliis caulibusque Labiatarum, imprimis *Menthæ* rotundifoliæ, silvestris, piperitæ, aquaticæ, acutifo-liæ, arvensis, austriacæ, nepetoidis, sativæ, lanceola-tæ, viridis, *Thymi vulgaris*, *Saturejæ hortensis*, *Ca-laminthæ* *Acini* et *C. Clinopodii*, *C. officinalis*, alpi-næ, glandifloræ, *Nepetæ* *cyanæ*, *Cunilæ* *marianæ*, *Mo-nardæ* *fistulosæ*, *Hedeomatis* *pulegioidis*, in Italia, Ger-mania, Helvetia, Austria, Belgio, Britannia, Gallia, Lusitania, Fen-nia, America boreali, prope Minussinsk Sibiricæ asiaticæ et prope Somerset East Africæ australis. — Forma **americana** Burrill. Pa-rasitic Fungi of Illinois pag. 191: teleutosporis echinulatis $21-27 \mu$. diam. In foliis *Menthæ* *canadensis*, *Cunilæ* *marianæ*, *Pycnanthemipilosi*, *P. lanceolati*, *P. linifolii*, *Monar-dæ* *fistulosæ*, *M. punctatæ*, *M. Bradburianæ*, *Blephi-*

liæ hirsutæ, Hedeomatis pulegioidis et cujusdam Ruel-
liæ in America boreali.

36. **Puccinia Soldanellæ** (DC.) Fuck. Symb. myc. III, App. 14, Wint. 2181
Pilze p. 202, *Cæoma Soldanellatum* Link Sp. II, p. 46, *Æcidium*
Soldanellæ Hornsch. in Rabenh. DC. Fl. p. 18, *Uredo Soldanellæ* DC.
Fl. Franç. VI, p. 85, *Æcidium Soldanellæ* Sacc. Mich. I, p. 158.
— Spermogoniis punctiformibus, gregariis; sporulis oblongis, trunca-
tis, $4 \approx 3$; æcidiis æqualiter sparsis; pseudoperidiis breviter cylin-
draceis, urceolatis vel conoideis, margine paullulum laciniato, revo-
luto; æcidiosporis polygoniis, $20-26 \approx 17-20$, granulatis, aurantia-
co-flavis; soris communibus epiphyllis, minutis, gregariis, fuscis,
epidermide lacerata cinctis; uredosporis rotundato-ovoideis vel el-
lipticis, $20-32 \approx 19-30$, aculeatis, brunneis; teleutosporis ovatis,
utrinque attenuatis vel antice obtusioribus vel irregulariter in la-
tere apiculatis, breviter pedicellatis, medio parum constrictis, sub-
tilissime reticulatis, fuscis.

Hab. in foliis Soldanellæ alpinæ, montanæ, pusillæ
et minimæ, in Italia, Gallia, Britannia, Helvetia et Germania.

37. **Puccinia Saniculæ** Grev. Fl. Edinb. p. 431, Winter Die Pilze 2182
p. 213, *Æcidium Saniculæ* Carm. Cooke Handb. n. 1625. — Æci-
diis in maculis purpureo-rufis, convexis insidentibus, in greges ro-
tundatos vel elongatos dispositis, lineari- vel orbiculariter ordina-
tis; pseudoperidiis poculiformibus, margine albo, lacerato, revolu-
to; æcidiosporis angulatis, $19-27 \mu$. diam., subtiliter verruculosus,
hyalinis; soris uredosporiferis sparsis, minutis, punctiformibus,
hemisphæricis, demum dehiscentibus, pallide-fuscis; uredosporis
obovatis globosisque, spinulosus fuscis, $23-44 \approx 17-26$; soris teleu-
tosporiferis conformibus sed obscurioribus, nitidis, demum dehi-
scentibus; teleutosporis ovatis, breviter pedicellatis, medio plus
minusve constrictis, subtilissime reticulatis, fuscis, $26-45 \approx 17-26$.

Hab. in foliis (amphigena) petiolisque Saniculæ europææ,
in Britannia, Germania et America boreali.

38. **Puccinia Thuemeniana** Voss in Œsterr. bot. Zeitschr. 1877, p. 404, 2183
Winter Die Pilze p. 214, *Æcidium involvens* Voss l. c. 1876,
p. 362. — Æcidiis gregariis, rarissime solitariis, in maculis infla-
tis, rufo-tinctis insidentibus; pseudoperidiis hemisphæricis, margine
albo, lacerato; æcidiosporis angulatis, $23-35 \approx 14-20$, aurantiaco-
flavis; soris uredosporiferis hypophyllis, minutis, rotundatis vel
ellipsoideis, dilute brunneis, solitariis; uredosporis globosis, epi-
sporio sublevi, luteo-fusco, $24-32 \mu$. diam.; soris amphigenis, in

folio minutis, in ramis usque ad 1 cm. latis, nudis, atris; teleutosporis globoso-ellipticis, medio parum constrictis, 29-36 $\approx$ 24-29, cellulis inferioribus brevioribus, sursum sensim applanatis, vertice non incrassatis, spadiceis, verruculosis, pedicello hyalino, 58-73 μ . longo, basi parum incrassato.

Hab. in foliis ramulisque vivis *Myricariæ germanicæ*, in Tyrolia.

39. **Puccinia montana** Fuck. Symb. Myc. II, p. 14, Winter Die Pilze 2184 p. 207. — *Æcidii* in maculis discoloribus, hypophyllis dense aggregatis; pseudoperidiis majusculis, margine crassiusculo, multilacerato, sordido; *acidiosporis* ochraceis, subglobosis, 17-22 μ . diam., levibus; soris uredosporiferis hypophyllis, elongatis, sæpe confluentibus, amœne ferrugineis; uredosporis globosis vel ovato-globosis, levibus vel subtilissime aculeolatis, uni-magni-guttulatis, brevissime pedicellatis, 26-37 $\approx$ 19-28, aurantiaco-flavis; soris teleutosporiferis ellipticis, sparsis, atro-fuscis; teleutosporis ovatis, medio parum vel non constrictis, antice minute apiculatis vel raro obtusis, pedicello brevi, oblique inserto, 35-50 $\approx$ 21-30, verruculosis, castaneo-brunneis.

Hab. in foliis *Centaureæ montanæ* et *phrygiæ*, in Helvetia, Tyrolia, Italia, Jura et Belgio.

40. **Puccinia Popowii** Cooke in Grevillea X, p. 126. — Pseudoperidiis in maculis orbicularibus aggregatis, reliquis exoletis; uredosporis subglobosis, fuscis, levibus, 20 $\approx$ 18, cum teleutosporis immixtis; soris teleutosporiferis hypophyllis, minutissimis, mox confluentibus, purpureo-brunneis, pulverulentis, in maculis orbicularibus congestis; teleutosporis ellipticis, arcte constrictis, utrinque rotundatis, fuscis, 20-28 $\approx$ 16-18, episporio verruculoso.

Hab. in foliis *Popowii caffræ*, ad Inanda Africae (Wood).

41. **Puccinia opulenta** Speg. Fungi argentini pugillus I, p. 170, n. 36, 2186 *Æcidium Ipomeæ* Speg. Fungi Argentini pugillus I, pag. 173, n. 52. — *Æcidii* hypophyllis, gregariis, maculæ discolori pallescenti immarginatæ insidentibus; pseudoperidiis 4-15 compactiuscule confertis, primo tectis, globulosis, dein erumpenti-poculiformibus, 300-600 μ . lat., contextu e cellulis poly(5-6-)goniis e centro radiatim striatulis composito, margine recto, albido-hyalino, integro vel vix crenulato, parum exserto; epithecio luteo-aurantiaco; *acidiosporis* subsphæroideis vel elongatis, mutua pressione obtuse angulatis, 21-24 μ . diam., levibus, hyalinis, protoplasmate flavo-aurantiaco repletis; soris epiphyllis, *æcidii* semper contraposi-

tis, suborbicularibus, atris, subpulverulentis, primo tectis, dein epidermide fissa cinctis, 1-3 mm. d.; uredosporis teleutosporis immixtis, ovoideis vel subpiriformibus, crassiuscule tunicatis, 20-22 $\approx$ 15-18, muriculato-asperulis, præcipue in parte superiore, fulvo-flavescentibus; teleutosporis ellipticis, medio uniseptatis, vix constrictis, episporio robusto apice crasso et in mucronem obtusum pellucidum producto, subopace atro-fuligineis, loculis subæqualibus, granuloso-farctis, 55-60 $\approx$ 25-28, hyalino-asperulis (?), pedicello hyalino, apice infuscato, basi incrassato, 120-130 $\approx$ 5-10 suffultis.

Hab. in foliis vivis *Ipomeæ purpureæ* et *megapotamiæ* pr. la Roca el Riachuelo et Cordoba in Republica Argentina nec non *Jacquemontiae* cujusdam ad Kenbebry (SPEGAZZINI), Americæ australis. — Exemplaria e Cordoba præbent teleutosporas episporio pulchre ac laxè rugoso-verrucoso. Adest forma æcidiospora ex regione Guaranitica ita descripta ab auctore Speg. Fungi Guaranitici I, n. 155: maculis nullis vel vix manifestis, expallentibus, indeterminatis; pseudoperidiis hinc inde compactiusculis 4-15 aggregatis, hypophyllis, membranaceis contextu parenchymatico-loricato e cellulis ex elliptico obtusissime hexagonis, 15-20 $\approx$ 13-15, crasse tunicatis, grosse radiatimque rugosis hyalinis composito; æcidiosporis ellipticis sæpe e mutua pressione angulosis, 18-20 $\approx$ 13-16, crassiuscule tunicatis episporio dense at minutissime papuloso-asperulo, subhyalinis. In foliis vivis *Ipomeæ* cujusdam in dumetis prope Guarapí.

42. **Puccinia mirabilissima** Peck in Botan. Gazette 1881, pag. 226, 2187

Tracy et Gall. in Botan. Gazette 1888, p. 126. — Maculis læte purpureis 3-4 mm. diam., leniter incrassatulis, pseudoperidiis hypogæis, longis, pallide flavis, margine grosse laceratis; æcidiosporis subglobosis, 15-20 μ . diam., tuberculatis; maculis parvis, punctiformibus vel majusculis subrotundisque, superne atris vel atro-brunneis; soris hypophyllis, paucis, minutis, pallide rufescenti-brunneis; uredosporis subglobosis, obovatis vel piriformibus, obtusis, minutissime rugulosis, 22-33 $\approx$ 20-23, pedicello hyalino, dein deciduo; teleutosporis immixtis, ellipticis, obtusis, ad septum constrictis, subtiliter rugosis, 30-32 $\approx$ 22-25, pedicello longissimo hyalino fultis.

Hab. in foliis vivis languidisve *Berberidis repentis*, Utah Americæ borealis (JONES). — Pedicelli teleutosporæ 2-3-plo longiores; sori in maculis usque ad 6 insidentes.

43. **Puccinia afra** Winter in Hedwigia 1887, p. 36. — Pseudoperi- 2188

ridiis ad sepala pedunculosque incrassatos et valde curvatos seu tortuosos dense gregariis, subcylindræis, late apertis margine valde prominulo profundeque inciso, laciniis plus minusve recurvis seu suberectis, pallide aurantiacis; æcidiosporis rotundatis seu ellipsoideis, angulatis et irregularibus, 29-34 μ . diam. vel usque ad 48 μ . longis, 21-24 μ . latis, minutissime verrucosis, intense aurantiacis; soris amphigenis rarius sepala incolentibus, sparsis v. gregariis, minutis, rotundatis ellipticisve, sæpe parum angulato-irregularibus, interdum confluentibus, erumpentibus et valde prominulis, at ab epidermidis fissæ fragmentis cinctis, pulverulentis, circ. 0,5 mm. latis; uredosporis oblongis, deorsum plerumque parum attenuatis, utrinque rotundatis, fusco-luteis, episporio subcrasso, aculeis minutis dense præcipue verticem versus obsito, ad basim plerumque levi præditis, pedicello sublongo, crasso, hyalino fultis, 52-66 $\approx$ 20-28; teleutosporis ellipsoidis, apice cuspidatis, plerumque apiculo conoideo coronatis, basi rotundatis, 40-55 $\approx$ 24-27, episporio crasso, amœne badio, dense grossequè verrucoso donatis, pedicello longo, crasso, supra medium vesiculoso inflato et hic eros-crenato, ceterum æqualiter cylindrico, hyalino fultis.

Hab. in foliis sepalisque *Lycii* Afri, in Africa australiori (MAC OWAN). — «Ab aliis *Pucciniis* in *Lycii* speciebus vigentibus, uti sunt *Puccinia Lycii* Kalchbr., *Puccinia tumidipes* Peck et *Puccinia globosipes* Peck, caute dignoscenda».

44. **Puccinia? Rhynchosia** Kalchbr. et Cooke in Grevillea XI. p. 24, 2189

Uromyces? Rhynchosia Cooke in Grevillea XI, p. 24, *Æcidium Rhynchosia* Cooke l. c. *Uredo Rhynchosia* Kalchbr. l. c. — *Æcidii* hypophyllis; pseudoperidiis sparsis, immersis, margine libero, albo; æcidiosporis luteis; soris uredosporiferis hypophyllis, segetis regularis instar folii paginam inferiorem occupantibus, punctiformibus, rufis; uredosporis globosis, 22 $\approx$ 20, fuscidulis; teleutosporis non visis.

Hab. in foliis *Rhynchosia* sp., *Eryosematis saligni* et *Flemingia* sp., ad P. Natal Africae. — «Vix hujus sectionis».

45. **Puccinia Zopfi** Wint. in Hedwigia 1880, p. 39, Die Pilze p. 216, 2190

Puccinia calthæcola Schroet. in Cohn Beitr. III, p. 61. — *Æcidii* et uredosporis ut in *P. Calthæ*; teleutosporis ellipticis vel oblongis, medio leniter constrictis, basi rotundatis vel paullum attenuatis, apice incrassatis, 35-60 $\approx$ 20-35, subtiliter verrucosis, castaneo-brunneis, pedicello longiusculo, crasso suffultis.

Hab. in foliis *Calthæ palustris*, in Helvetia, Austria et Germania.

- II. HETERO-PUCCINIA Schroet. Germinatio sporidiolorum haud in planta te-
leutosporarum nutrice sed in matrice diversa in qua æcidiola et æcidia
evolvuntur.

* Sori uredosporiferi rufo-ferrugini.

1. Paraphyses nullæ.

46. **Puccinia graminis** Pers. Disp. Fung. p. 39, t. 3. f. 3, Winter Die 2191
Pilze p. 217, Schroet. Pilz. Schles. p. 322, *Lycoperdon poculi-
forme* Jacq. Coll. I, pag. 122, *Æcidium Berberidis* Gmel. in L.
Syst. Nat. II, p. 1473, *Cæoma berberidatum* Link Sp. II, p. 57,
Uredo linearis a. frumenti Lamb. in Act. Soc. Linn. 4, p. 193,
Uredo culmorum Schum. Pl. Saell. II, p. 233?, *Uredo frumenti*
Sow. Engl. Fungi t. 140, *Æcidium lineare* Gmel. l. c. *Lycoper-
don lineare* Schrank Fl. Bavar. II, pag. 669, *Puccinia linearis*
Roehl Fl. germ. III, p. 132, *P. cerealis* Mart. Flor. Mosq. p. 227,
Erysibe linearis Wallr. Fl. Crypt. Germ. II, p. 194, *Puccinia
poculiformis* (Jacq.) Wettst. in Verhand. K. K. Zool. bot. Gesellsch.
in Wien 1888. — Spermogoniis in parvos greges dispositis, mel-
leis; æcidiis subiculo incrassato, fusco, insidentibus maculasque
oblongas vel orbiculares, 2-5 mm. latas efformantibus, confertis,
epidermide bullato-vesiculosa cinctis; pseudoperidiis cylindraceis,
demum elabentibus, margine albo, erecto, patulo, tenuissime cre-
nulato aut denticulato; æcidiosporis polygono-sphæroideis, 14-26
µ. diam., levibus, subaurantiacis; uredosporis in soros ellipsoi-
deos, elongatos vel lineares, erumpentes, flavo-fuscos aut ferrugi-
neos, sæpe confluentes congestis, ut plurimum ellipsoideis, rarius
clavatis, 24-45 ≈ 14-21, pedicellatis, aculeatis, flavescentibus; te-
leutosporis soros elongatos v. lineares, liberos, subatratos, longiu-
sculos, crustaceos, sæpius confluentes, mox nudos efformantibus, cla-
vatis vel oblongo-fusoideis, apice rotundatis vel acuminatis, obtu-
sis, basi in pedicellum angustatis, 34-60 ≈ 12-22, levibus, ad se-
ptum constrictis, dilute fusco-flavis, episporio basi usque ad 10 µ.
crasso, pedicello persistenti, elongato, usque ad 60 µ. longo, flavo-
brunneo.

Hab. æcidiola et æcidia in foliis, pedunculis, fructibus Berbe-
ridis vulgaris, Nembertii carolinæ, canadensis, ari-
statae, altaicæ etc. nec non Mahoniæ Aquifolii, uredospo-
ræ et teleutosporæ in foliis, culmis, vaginis etc. Graminacea-

rum in primis Secales, Tritici, Lolii, Anthoxanthi, Alopecuri, Airæ, Brizæ, Arrhenatheri, Poæ, Dactylidis, Bromi, Elymi, Andropogi, Phragmitis, Hordei, Dulichii, Bryzopyri, Phlei, Avenæ, Festucæ, Agropyri, Agrostidis, in Italia, Austria, Germania, Suecia, Helvetia, Britannia, Fennia, Belgio, in America boreali, in Sibiria asiatica, Plata, et in Queenslandia atque Nova Zelandia.

47. **Puccinia coronata** Corda Icon. Fung. I, p. 6, t. II, f. 96, Winter 2192

Die Pilze p. 218, Schroet. Pilz. Schles. p. 323, *Æcidium Rhamni* Gmel. in L. Syst. Nat. II, p. 1462, *Æcidium crassum* Pers. Syn. Fung. p. 208, *Æcidium elongatum* Link Sp. II, p. 63, *Æcidium Frangulæ* Schum. Fl. Saell. II, pag. 225, *Æcidium Cathartici* Schum. l. c. *Æcidium poculiforme* Wallr. Fl. Crypt. Germ. p. 257, non alior. *Æcidium irregulare* DC. Fl. Franç. II, p. 245, *Puccinia sertata* Preuss Hoyersw. n. 11 et in Sturm. DC. Fl. t. 3, *Solenodonta Flotowii* Rabenh. in Herb. mycol. I, n. 1395, *Puccinia Rhamni* (Gmel.) Wettst. in Verhand. Wien 1888. — Spermogoniis melleis, in parvos greges dispositis; æcidiis secus maculas flavo-fuscas subeffusas, 2-10 et ultra cm. longas efformantibus; pseudoperidiis primo conoideis, dein cylindraceis, margine patulo, erecto, tenuissime crenulato vel denticulato, albo; æcidiosporis polygoniis, 17-26 = 13-21, verruculosus, aurantiacis; uredosporis in soros lanceolatos vel lineares, sæpius confluentes, ferrugineos, sparsos vel seriatos congestis, irregulariter globosis, ellipticis vel ovatis, 19-28 = 16-21, aculeolatis, aurantiaco-flavis, 3-4 poros gerentibus, paraphysibus nullis; teleutosporis soros oblongos aut lineares, sæpius confluentes, diu tectos, atro-fuscos, sparsos vel in series aut lineas orbiculares dispositos efformantibus, clavatis, apice applanatis dentibusque acutis, obscurioribus, stellato-radiatis coronatis, ad septum vix vel leniter constrictis, 35-60 = 12-21, levibus, dilute brunneis, pedicello brevi, crassiusculo.

Hab. æcidiola et æcidia in foliis pedunculis, petiolis, calycibus fructibusque immaturis Rhamni cathartici, Frangulæ, alpinæ, saxatilis, prinoidis, uredosporæ et teleutosporæ in foliis graminacearum plurimarum in primis generis Alopecuri, Calamagrostidis, Phalaridis, Avenæ, Bromi, Festucæ, Airæ, Agrostidis, Lolii, Holci, Hordei, Arrhenatheri, Arundinis, Agropyri, in Italia, Gallia, Britannia, Helvetia, Austria, Germania, Belgio, Lusitania, Fennia, in America boreali et New Mexico nec non pr. Somerset East Africae australis,

— Relationem inter formam æcidiosporam et teleutosporam detexit cl. De Bary.

48. **Puccinia sessilis** Schneid. in Schroet. Brand. und Rostpilze Schles. 2193
 siens p. 19, Winter Die Pilze p. 222, Schroet. Pilz. Schles. p. 324, *Æcidium Allii-ursini* Pers. Syn. Fung. p. 210, *Cæoma alliatum* Link in L. Sp. plant. VI, 2, pag. 43. — Spermogoniis in parvos greges dispositis, melleis; sporulis minutis; æcidiis ut plurimum dispositis secus simplicem aut duplicem seriem maculasque flavescentes efformantibus; pseudoperidiis explanatis, margine albo, denticulato; æcidiosporis polygoniis, 17-26 $\approx$ 13-19, levibus, aurantia-co-flavis; uredosporis in soros minutos, oblongos, sparsos, flavescentes congestis, globosis vel ellipsoideis, aculeatis, 20-28 $\approx$ 20-23, dilute flavis, paraphysibus nullis; teleutosporis soros elongato-lineares, confluentes, epidermide tectos, atro-fuscos efformantibus, clavato-truncatis vel oblongis, apice leniter incrassatis, obtusis, basi attenuatis, 28-42 $\approx$ 16-12, levibus, pallidissime flavis, apice obscurioribus, medio non vel paullulum constrictis, pedicello brevissimo, subnullo.

Hab. æcidiola et æcidia in foliis Allii ursini, ured. et teleutosporæ in foliis Phalaridis arundinaceæ, in Italia, Belgio, Britannia, Austria, Germania. — Relationem inter formas æcid. et teleut. detexit et comprobavit cl. Winter. Huc forte pertinet *Puccinia linearis* Rob. in Ann. Sciec. nat. IV, t. 4, p. 126. Winter hanc speciem ad *P. Baryi* ducit.

2. Paraphyses præsentés.

49. **Puccinia Rubigo-vera** (DC.) Wint. Die Pilze pag. 217, Schroet. 2194
 Pilz. Schles. p. 325, *Æcidium Asperifolii* Pers. Syn. Fung. p. 208, *Uredo Rubigo-vera* DC. Flor. Franç. VI, p. 83, *Cæoma Asperifolii* Schlecht. *Cæoma Boragineatum* Link in L. Sp. plant. VI, 2, p. 83, *Æcidium Lycopsidis* Desv. Observ. I, p. 97, *Æcidium Symphyti* Thüm. in Œst. bot. Zeits. 1876, p. 15, *Æcidium Lithospermi* Thüm. l. c. 1879, n. 11, *Cæoma Rubigo* Link Sp. II. p. 4, *Puccinia straminis* Fuck. Enum. p. 2, Symb. pag. 59, *Puccinia striiformis* Westend. 4 Not. pag. 10, *Æcidium Pulmonarie* Thüm. l. c. *Trichobasis Rubigo-vera* Lév., *Puccinia Asperifolii* (Pers.) Wettst. in Verhand. Zool. bot. Ges. in Wien 1885, n. 158. — Spermogoniis in greges parvos vel magnos, remotos dispositis, melleo-flavis; æcidiis heteroicis, distantibus, maculas orbiculares v. oblongas, 1 cm. et ultra longas efformantibus; pseudoperidiis urceo-

lato-explanatis, latis, margine revoluta dentato, albido; æcidiosporis polygoniis, verrucosis, aurantiacis, 18-28 μ . diam.; uredosporis in soros ellipticos, oblongos vel lineares, confluentes lateque expansos, erumpentes, liberos, ferrugineos congestis, globosis vel ellipsoideis vel ovatis, 20-32 $\approx$ 17-24, aculeatis, pedicellatis, aurantiaco-rufis, paraphysibus nullis intermixtis; teleutosporis in soros exiguos, ellipticos vel lineares, sæpius confluentes, atros, diu epidermide tectos congestis, oblongatis vel clavatis, medio vix constrictis, apice deplanatis vel ut plurimum lateraliter apiculatis, basi attenuatis, 26-80 $\approx$ 16-24, levibus, castaneo-brunneis, pedicello brevissimo, subnullo, persistenti; paraphysibus brunneolis.

Hab. æcidiola et æcidia in foliis Borraginacearum nonnullarum e. g. Anchusæ officinalis et arvensis, Pulmonariæ officinalis et mollis, Symphyti officinalis et tuberosi, Borraginis officinalis, Cynoglossi officinalis, Lycopsidis arvensis, Nonneæ pullæ, Cerinthæ minoris et alpinæ, Echii vulgaris, Lithospermi arvensis; uredosp. et teleutosp. in foliis culmisque graminacearum nonnullarum imprimis Alopecuri, Agrostidis, Polypogonis, Calamagrostidis, Tritici, Secales, Holci, Avenæ, Bromi, Milii, Kœleriae, Triseti, Scleriae, Festucae, Elymi, Laguri, in Italia, Belgio, Gallia, Bohemia, Moravia, Austria, Germania, Britannia, Fennia, Arduennis, in America boreali et australi, in insula Ceylon et Sibiria asiatica. — Var. **simplex** Körn. in Land. u. Forstw. Zeitung 1865, n. 50, *Puccinia Hordei* Fuck. Symb. Nachtr. II, pag. 16, *Puccinia anomala* Rostr. in Thüm. Myc. Univ. n. 831: soris teleutosporas eseptatas tantum v. uniseptatis immixtas gerentibus; uredosporis ovoideo-globosis 22-28 $\approx$ 20-23, levibus, aurantiacis; teleutosporis oblongis clavatisve, eseptatis 32-36 $\approx$ 18-28, septatis 40-50 $\approx$ 20, levibus, fuscis. In foliis, culmis vaginisque Hordei murini, distichi, vulgaris, Zeocritonis, tetracanthi, in Germania et ad Skärup in Fionia Daniæ.

50. **Puccinia Poarum** Nielsen in Botanisk Tidsskrift III. Reihe, Bd. 2195 2, p. 26, et seq. *Lycoperdon epiphyllum* L. Sp. plant. II, p. 1655, *Æcidium Tussilaginis* Gmel. in L. Syst. Nat. II, p. 1473, *Æcidium Compositarum* Mart. Erl. pag. 314 et auct. p. p. *Cœoma Compositarum* Link in L. Sp. plant. VI, 2, p. 50, p. p. *Æcidium Tussilaginis* Sacc. Myc. Ven. n. 993 (sub *Myxosporio*), *Puccinia epiphylla* (L.) Wettst. in Verhand. Wien 1885. — Sper-

mogoniis maculæ epiphyllæ, initio aurantiacæ, tandem nigricanti insidentibus; spermogoniis immerso-prominulis, initio croceis; sporulis ovoideis, $9-10 \approx 8$, granulosi, hyalinis, in basidiis filiformibus fasciculatis catenulatim impositis; æcidiis heteroicis plerumque in maculis orbicularibus, 1-2 cm. latis, rufis vel flavidulis, remotis insidentibus; pseudoperidiis cylindræo-explanatis, margine albo, revoluti, dentati; æcidiosporis polygoniis, verruculosis, $18-24 \approx 15-18$, aurantiaco-flavis; uredosporis in soros rotundatos, ellipticos vel lineares, sparsos vel aggregatos, ferrugineos vel aurantiaco-fulvos congestis, sphericis vel ellipsoideis, verrucosis, $20-30 \mu$. diam., aurantiaco-rufis, paraphysibus capitatis, numerosis, intricatis intermixtis; teleutosporis soros exiguos vel majusculos, sparsos v. orbiculatim dispositos, epidermide tectos, atro-fuscos efformantibus, ellipticis vel subclavatis, apice incrassatis obscurioribusque, $35-50 \approx 15-24$, obscure brunneis, levibus, pedicello brevissimo, persistenti, plerumque brunneolo.

Hab. æcidiola et æcidia in foliis Tussilaginis Farfaræ Adenostylis bifrontis et Petasitidis vulgaris, P. officinalis, P. albæ; uredosporæ et teleutosporæ in foliis culmisque Poæ Chaixi, P. nemoralis, P. annuæ, P. pratensis, P. trivialis, in Britannia, Italia, Germania, Austria, Helvetia, Belgio, Fennia, Lapponia nec non in Sibiria asiatica. — Sec. cl. Schroeter æcidia et formæ perfectæ simul in Petasitide alba vivere possunt. Relationem inter *Æcidium Tussilaginis* et *Pucciniam Poarum* detexit Nielsen.

** Sori uredosporiferi brunnei.

51. **Puccinia Caricis** (Schum.) Rebent. Fl. Neom. pag. 356, Winter 2196 Die Pilze p. 222, Schroet. Pilz. Schles. p. 327, *Æcidium Urticæ* Schum. Fl. Saell. II, p. 223, *Uredo Caricis* Schum. l. c. II, p. 231, *Uredo pseudo-cyperî* Rab. Krypt. Fl. I, p. 13, *Cæoma pseudo-cyperî* Link Sp. II, p. 6, *Puccinia Striola* Link. l. c. p. 68, p. p. *Puccinia caricina* DC. Flor. Franç. VI, p. 60, *Puccinia Punctum* Fuck. Fungi Rhen. 324, 325 non Link, *Trichobasis caricina* Berk. — Spermogoniis in parvos vel magnos greges dispositis, melles; sporulis ellipsoideis, $4-5 \approx 2$, flavescentibus; æcidiis secus simplicem v. duplicem serim suborbiculatim dispositis maculasque flavidas, rufescentes v. rufo-purpureas efformantibus, hypophyllis v. cauliculis; pseudoperidiis cupuliformibus, explanatis, latis, margine albedo, lacero-denticulato, reflexo; æcidiosporis polygoniis, minutissime

verrucosis, 16-26 $\approx$ 12-20, aurantiacis; uredosporis in soros orbiculares et ellipsoideos vel oblongos, epidermide fissa cinctos, brunneos, sæpe confluentes congestis, ellipsoideis vel ovoideis, 17-35 $\approx$ 17-26, aculeatis, flavo-brunneis, breviter pedicellatis, paraphysibus nullis; teleutosporis in soros hypophyllos vel culmicolas, vulgo elongatos, erumpentes, epidermide fissa cinctos, atro-fuscos vel nigricantes congestis, clavato-oblongis, apice valde incrassatis, obtusis vel rotundatis vel explanatis, medio constrictulis, basi in pedicellum angustatis, 30-45, rarius 70 $\approx$ 42-20, levibus, brunneis, pedicello 20 $\approx$ 6-12, rigido, flavescente, persistenti.

Hab. æcidia et æcidiola in foliis *Urticæ* dioicæ, *U. cannabinæ*, *U. piluliferæ*, *U. urentis*; ured. et teleutosp. in pagina superiori foliorum culmisque *Caricis pseudocyperi*, *strictæ*, *hirtæ*, *ripariæ*, *acutiformis*, *paniculatæ*, *acutæ*, *vesicariæ*, *crinitæ*, *filiformis*, *paludosæ*, *pilosæ* nec non *Marisci cylindrici* et *Dulichii spathacei*, in Italia, Gallia, Belgio, Fennia, Lapponia, Britannia, Arduennis, in America boreali et in Sibiria asiatica. — Cl. Magnus relationes inter status hujus speciei experimentis detexit.

52. **Puccinia Schœleriana** Plowr. et Magn. in Hedwigia 1886, p. 39. 2197

Æcidium Jacobææ Grev. Fl. Edinb. p. 445. — Spermogoniis in maculis flavis, epiphyllis, æcidiis contraposis; æcidiis secus orbem dispositis, plerumque hypophyllis; pseudoperidiis margine reflexo, crenato, albidis; æcidiosporis rotundatis, polygoniis, subtiliter echinulatis, 15-20 μ . diam., flavis; soris uredosporiferis elongatis vel rotundatis, plerumque hypophyllis, mox nudis, in maculis flavis discoloribus; uredosporis subglobosis vel ovoideis, 25-30 $\approx$ 14-20, episorio ruguloso, flavescenti-brunneis; soris teleutosporiferis erumpentibus, oblongis aut elongatis, magnis, subatris, hypophyllis, epidermide rupta cinctis; teleutosporis medio leniter constrictis, loculo superiori subgloboso, ovato vel superne attenuato, vertice valde incrassato, rotundato vel acuminato, loculo inferiori subcu-neato, sæpe pallidiore, levibus, 60-80 $\approx$ 15-20, brunneis.

Hab. spermogonia et æcidia in foliis *Senecionis Jacobææ*; uredosporæ et teleutosporæ in foliis *Caricis arenariæ*, in Britannia. — Mihi videtur *P. silvaticæ* Schroet peraffinis.

53. **Puccinia silvatica** Schroet. in Cohn Beitr. III, p. 68, Pilz. Schles. 2198

p. 328, Winter Die Pilze p. 223, *Æcidium Taraxaci* Schm. et Kunze Myk. Hefte I, p. 85 sec Winter, *Cecoma Compositarum* Link Sp. II, p. 50, p. p. — Spermogoniis in parvos greges dispositis, flavo-mel-

leis; æcidiis plerumque in maculis rotundatis, flavis vel violascentibus vel oblongis, pluriseriatis, latiusculis, epidermide bullata tectis; pseudoperidiis breviter poculiformibus, margine albo, revolutis, lacinulatis; æcidiosporis polygoniis 14-21 μ . diam., levibus, aurantiacis; uredosporis in soros exiguos, ellipticos aut lineares, sordide brunneos, sparsos congestis, globosis, ellipticis vel ovoideis, 22-26 $\approx$ 15-22, aculeatis, dilute brunneis; teleutosporis soros acervuliformes, atro-fuscos, exiguos, rotundatos efformantibus, clavatis, apice valde incrassatis, medio constrictulis, basi in pedicellum angustatis, 30-55 $\approx$ 12-20, levibus, castaneis, pedicello 4-7 μ . crasso, persistenti, teleutosporam æquante vel eâ brevior.

Hab. æcidiola et æcidia in foliis *Taraxaci officinalis* et *Senecionis nemorensis*; ured. et teleutosporæ in foliis vivis languidisque plurimarum specierum *Caricis*, in Italia, Austria, Germania, et pr. Minussinsk Sibiriae asiaticæ.

54. **Puccinia tenuistipes** Rostr. in Hedwigia 1887, p. 180, Schroet. 2199

Pilz. Schles. pag. 329 nec Opiz. — Spermogoniis in parvos greges dispositis, amœne melleis; æcidiis plerumque maculas orbiculares vel oblongas, remotiusculas efformantibus; pseudoperidiis brevibus, margine albo, lacerato; æcidiosporis aurantiacis; uredosporis in soros exiguos, sordide brunneos congestis, ellipticis vel ovoideis, 20-26 $\approx$ 15-22, aculeatis, episporio brunneo, subhyalinis; teleutosporis in soros parvos, rotundatos, pulvinatos congestis, clavatis, plerumque 40-48 $\approx$ 11-15, loculo inferiori angustiori, medio subconstrictis, apice rotundatis aut acuminatis, levibus, pedicello, teleutosporam subæquante, pallidiori.

Hab. æcidiola et æcidia ad *Centauream Jaceam*, uredosp. et teleutosporæ ad *Caricem muricatum*, in Silesia Germaniæ. — *Pucciniæ silvaticæ* Schroet. valde proxima et forte ab ea non satis distincta.

55. **Puccinia Limosæ** Magnus in Tagebl. Nat. Vers. zu Münch. 1887, 2200

p. 199, Winter Pilze p. 223, Schroet. Pilz. Schles. p. 329, *Cavoma Lysimachiae* Schlecht. Fl. Ber. II, p. 113, *Æcidium Lysimachiae* Wallr. Beitr. I, p. 252. — Spermogoniis maculiformibus, aurantio-rufis; æcidiis plerumque orbiculatim dispositis, rarius irregulariter sparsis; pseudoperidiis explanatis, margine albo, revolutis, pluridentatis; æcidiosporis angulatis, 16-23 μ . diam., aurantiaco-flavis; uredosporis in soros sparsos v. seriatis, ellipticos v. lineares, exiguos, sæpius confluentes, pallide brunneos congestis, globosis aut ellipsoideis, 17-24 μ . diam., aculeatis, concoloribus; teleutosporis in

soros pulvinatos, minutissimos, rotundatos, ellipticos vel lineares atro-brunneos coalitis, clavatis, 30-45 $\approx$ 12-20, apice valde incrassatis, obtusis, rotundatis vel acuminato-conoideis, basi angustatis, medio constrictulis, levibus, brunneis, pedicello longiusculo, persistenti.

Hab. æcidia et æcidola in *Lysimachia vulgaris* et *L. thyrsiflora*; ured. et teleutosporæ in *Carice limosa*, in Germania. — Relationem inter *Æcidium* et *Pucciniam* experimentis detexit cl. P. Magnus.

56. **Puccinia Dioicæ** Magnus in Tagebl. der Naturf. Vers. zu München 2201 1877, p. 200, Winter Die Pilz. p. 182, Schroet. Pilz. Schles. p. 329, *Æcidium Cirsii* DC. Flor. Franç. VI, p. 94. — Spermogoniis melles, in parvos greges dispositis; æcidiis juxta circulos simplices vel concentricos distributis, remotiusculis, in maculis usque ad 5 mm. latis insidentibus; pseudoperidiis brevibus, explanatis, margine albo, crenulato; æcidiosporis usque ad 25 μ . latis, aurantiacis; uredosporis ut in *Puccinia Caricis* globosis, ellipticis v. ovoideis, usque ad 25 μ . longis, aculeatis, episporio dilute brunneo, hyalinulis; teleutosporis in soros latos, rotundatos, atros, pulvinatos, compactos congestis, clavatis, 35-54, rarius 70 $\approx$ 12-20, levibus, dilute flavo-brunneis, medio plus minus constrictis, apice rotundatis vel acuminatis, pedicello persistenti usque ad 40 μ . longo.

Hab. æcidola et æcidia in foliis *Cirsii oleracei*, cani, palustris, tatarici, *Saussureæ serratæ* et *Serratulæ coronatæ*; uredosp. et teleutosporæ in foliis culmisque *Caricum* imprimis *Caricis dioicæ*, et *Davallianæ*, in Germania et pr. Minussinsk Sibiriae Asiaticæ. — Relationem inter *Æcidium Cirsii* et *Pucciniam dioicæ* detexit et comprobavit cl. Rostrup.

57. **Puccinia obscura** Schroet. in Passer. Funghi parm. p. 256, n. 640, 2202 Pilz. Schles. p. 330, Winter Die Pilze p. 183, *Æcidium Bellidis* Thüm. Fung. austr. n. 635. — Spermogoniis maculiformibus; æcidiis poculiformibus, in annulos 0,5-1,5 mm. latos dispositis, subinde per totam superficiem foliorum sparsis; pseudoperidiis confertis, pallide flavis, margine levi, albido; æcidiosporis globosis vel rotundato-ovoideis, ex aurantiaco hyalinulis; uredosporis in soros ellipticos v. lineares, diu tectos, sparsos vel nullo ordine congregatos, flavo-brunneolos congestis, globosis aut ellipticis, 19-26 $\approx$ 17-20, aculeatis, episporio brunneo, contextu hyalinulo; teleutosporis soros ellipsoideos v. oblongos, pulvinatos, mox nudos, atrofuscos efformantibus, obovato-clavatis, partim unicellularibus, par-

tim (numerosioribus) 30-45 $\approx$ 14-20, apice incrassatis obtuseque papillatis, medio constrictulis, levibus, brunneis; pedicello tereti, 18 $\approx$ 5, hyalino.

Hab. æcidiola et æcidia in foliis petiolisque vivis Bellidis perennis; ured. et teleutosporæ in foliis calamisque Luzulæ campestris, multifloræ, pallescentis, silvaticæ, pilosæ, maximæ, in Italia, Bohemia, Austria et Germania. — Huc forte spectat *Æcidium Compositarum* var. *Bellidis* Westend. Herb. Crypt. belg. n. 836. Relationem inter *Æcidium* et *Pucciniam* comprobavit cl. Plowright.

58. **Puccinia Vulpinæ** Schroet. in Rabenh. Fungi Europ. n. 1886, Pilz. 2203

Schles. p. 330, Winter Die Pilze p. 182. — Spermogoniis in parvos greges dispositis, aurantiaco-rufis; æcidiis orbiculatim dispositis; pseudoperidiis breviter cylindraceis, margine albo, denticulato; æcidiosporis aurantiacis; uredosporis in soros ellipticos v. lineares, exiguos, dilute flavidos, sparsos congestis, globosis, ellipticis aut ovoideis, 22-28 $\approx$ 16-22, aculeatis, pallide brunneis, guttulis oleosis, rufescentibus fartis; teleutosporis soros ellipticos vel lineares, diutius tectos, parvos efficientibus, clavatis vel subfusoideis, 40-70 $\approx$ 12-17, apice rotundatis vel acuminatis, medio parum constrictis, dilute flavo-brunneis, pedicello brevi suffultis.

Hab. æcidiola et æcidia in Chrysanthemo Tanaceto; ured. et teleutosporæ in Carice vulpina, in Silesia Germaniæ.

59. **Puccinia Phragmitis** (Schum.) Körn. in Hedw. 1876, pag. 179, 2204

Winter Die Pilze p. 179, Schroet. Pilz. Schles. p. 331, *Uredo Phragmitis* Schum. Fl. Saell. II, p. 231, *Puccinia arundinacea* Hedw. in DC. Fl. Franc. V, p. 59, *Puccinia Striola* Schlecht. Fl. Berol. II, p. 131 non Link, *Uredo Striola* Strauss in Wett. Ann. II, p. 105, *Puccinia Arundinaricæ* Schwein. Syn. Carol. n. 487, *Æcidium rubellum* Gmel. Syst. II, p. 1473, *Æcidium Rumicis* Schlecht. Fl. Berol. II, p. 114, *Uredo arundinacea* Houel in Act. Lill. 1828, p. 36 c. icone. — Spermogoniis numerosis, in greges rotundatos dispositis, albis; æcidiis ut plurimum in maculis rufo-marginatis orbicularibus insidentibus, remotis; pseudoperidiis explanatis margine denticulatis; æcidiosporis 16-26 μ . latis, hyalinulis; uredosporis in soros oblongos, fuscis, sæpius confluentes congestis, ellipticis vel late ovatis, 26-35 $\approx$ 15-22, verrucosis, episporio brunneo, contentu achroo, paraphysibus nullis intermixtis; teleutosporis in soros amphigenos, erumpentes, apertos, valde elevatos, pulvinatos, oblongos vel lineares, plerumque magnos confluentesque,

atro-fuscos congestis, ellipticis vel oblongo-subfusoides, 40-75 $\approx$ 16-26, medio constrictis, apice incrassato-conoideis, levibus, obscure flavo-brunneis; pedicello longissimo, 100-200 μ . gracili, hyalino, sursum flavescente, sæpe flexuoso, persistente.

Hab. æcidiola et æcidia in foliis vivis Rumicis obtusifolii, crispi, Hydrolapathi, alpini, Acetosæ, cordifolii et Eckloniani nec non Rhei Rhapontici; ured. et teleutosporæ in foliis culmisque, rarius in vaginis Phragmitis communis, Arundinis Donacis, Spartinae cynosuroidis, Andropogi furcati et scoparii, in Italia, Gallia, Helvetia, Germania, Britannia, Belgio, in America boreali, in Sibiria asiatica, in Africa australi. — Relationes metageneticas primum indicavit Winter; at nexum *Æcidii rubelli* cum *P. Phragmit.* experimentis comprobavit cl. Plowright.

60. **Puccinia Magnusiana** Körn. in Hedwigia 1876, pag. 179, Winter 2205
Die Pilze p. 221, Schroet. Pilz. Schles. p. 332, *Puccinia Phragmitis* Tul. in Ann. Scienc. Nat. IV, ser. 2, p. 184 nec Körn. *Lecythæa Phragmit.* Oudem. in Ned. Kruidk. Archief XXV, 1, p. 260. — Spermogoniis æcidiisque haud bene cognitis, *Uromycetis Dactylidis* similibus; uredosporis in soros exiguos, ellipticos, flavescentes congestis, ellipsoideis, v. ovoideis, 21-35 $\approx$ 12-20, aculeolatis, aurantiaco-flavis, paraphysibus clavatis intermixtis; teleutosporis in soros parvos, punctiformes vel striiformes, sæpe confluentes, atro-fusculos, pulvinulatos congestis, clavato-oblongis, apice valde incrassatis, rotundatis aut truncatis, 30-55 $\approx$ 15-26, medio vix vel non constrictis, castaneo-brunneis, pedicello brevi, rarius teleutosporam æquante.

Hab. ured. et teleutosporæ in foliis vaginisque Phragmitis communis, in Italia, Gallia, Austria, Helvetia, Germania et Britannia. — Statum æcidiosporum nonnulli auctores *Æcidium Ranunculi-repentis* suspicantur. « Cfr. *Pucciniam perplexantem* Plowr. ».

61. **Puccinia Moliniæ** Tul. in Ann. Scienc. Nat. 1854, p. 141, Winter 2206
Die Pilze p. 219, Schroet. Pilz. Schles. p. 332, *Cæoma (Æcidium) amœnum* Rud. in Linnæa IV, pag. 511, *Æcidium Orchidearum* Desmaz. Cat. plant. omis. p. 26. — Spermogoniis in parvos greges congregatis, melleis; æcidiis hypophyllis, plerumque orbiculatim dispositis; pseudoperidiis explanato-poculiformibus, margine albido, revolutis, lacinulatis; æcidiosporis polygoniis, verruculosis, 17-26 $\approx$ 15-21, aurantiaco-flavis; uredosporis in soros lanceolatis vel li-

neares, sæpe confluentes, subtectos, sordide castaneos congestis, globosis vel breviter ellipticis, 20-28 $\approx$ 20-22, aculeatis, brunneolis; teleutosporis in soros pulvinatos, crassos, latos, ut plurimum late expansos, atro-brunneos confertis, ellipsoideis, non vel vix medio constrictis, utrinque regulariter rotundatis, 30-56 $\approx$ 20-26, obscure castaneo-brunneis, levibus, pedicello persistenti, usque ad 100 μ . longo, flavido.

Hab. æcidiola et æcidia in foliis Orchidearum e. g. Orchidis latifoliæ et militaris, Platantheræ bifoliæ, Listeræ ovatæ; ured. et teleutosporæ in foliis, culmis paniculisque Moliniæ cæruleæ, in Italia, Gallia, Belgio, Britannia et Germania. — Relationes metageneticas detexit experimento cl. Rostrup.

62. **Puccinia perplexans** Plowr. on the Live Hist. of cert. Brit. heteroecians Ured. p. 164. et in Hedwigia 1886, p. 38, *Æcidium Ranunculi-acris* auct. — *Æcidiosporis* globosis, 20-25 μ . diam., obscure brunneis; soris uredosporiferis ellipticis elongatis v. linearibus, amphigenis, præcipue epiphyllis, subinde confluentibus, mox nudis; uredosporis subglobosis, ovoideis v. subovatis, 30-35 $\approx$ 20-25, subtiliter echinulatis, flavo-aureis, paraphysibus subinde capitatis immixtis; soris teleutosporiferis minutis, punctiformibus at plerumque elongato-linearibus v. elongato-ovatis, epidermide tectis, atris, sæpe gregariis subindeque confluentibus; teleutosporis forma et magnitudine variis, loculo superiori rotundato, truncato vel attenuato, sæpe obliquo, loculo inferiori plerumque subcuneato brunneis, levibus, medio non vel vix constrictis, 40-60 $\approx$ 10-12, episporio sæpe conspicue granulato.

Hab. æcidia in Ranunculo acri; sori in foliis Alopecuri pratensis, Avenæ elatioris et Poæ cujusdam pr. King's Lynn Britanniae. — «Cfr. *Pucc. Magnusianam* Körn.».

63. **Puccinia Sesleriæ** Reich. in Verhandl. Zool. bot. Gesellsch. in Wien 1877, p. 842, Winter Die Pilze p. 221. — *Æcidiis* in maculis rotundatis vel elongatis, brunneolis, more flavidis insidentibus, irregulariter gregariis aut orbiculariter dispositis; pseudoperidiis cylindraceis, usque ad 1 mm. longis, albis, margine parum lacinulato; æcidiosporis angulatis, 30 $\approx$ 15-20, subtiliter verrucosis, aurantiaco-flavis; uredosporis globosis, 15-18 μ . diam., episporio crasso aculeato tectis, flavis; soris teleutosporiferis linearibus; teleutosporis clavatis, apice rotundatis, medio subconstrictis, 25-30 $\approx$ 18-21,

subtiliter granulatis, obscure brunneis, pedicello longo, persistenti suffultis.

Hab. æcidia in foliis *Rhamni saxatilis*; uredosporæ et teleutosporæ in foliis *Sesleriae cæruleæ* in Austria.

Sectio B. BRACHYPUCCINIA Schroet. Spermogonia, uredo- et teleutosporæ in eadem matrice evoluta; æcidia haud evoluta.

64. **Puccinia suaveolens** (Pers.) Rostr. in Forhandl. skand. naturf. 11, 2209 möde i Kjoben. 1874, Winter Die Pilze p. 189, Schroet. Pilz. Schles. p. 333, *Uredo suaveolens* Pers. Observ. II, p. 24, *Uredo Serratulæ* Schum. Pl. Saell. II, p. 231, *Uredo Cyani* DC. Syn. plant. p. 47, *Uredo punctiformis* Strauss in Wett. Ann. II, p. 103, *Cæoma oblegens* Link Observ. II, p. 27, *Sphæronema Cirsii* Lasch in Kl. Herb. myc. n. 1069, *Æcidium Cirsii* Sacc. in Michelia, *Trichobasis Suaveolens* Lév. Cfr. Cooke M. F. tab. VII, f. 151, 153, De Bary Brandpilze t. III, f. 1-4. — Spermogoniis confertis, totam foliorum superficiem obtegentibus, grati odoris, intense melleis; uredosporis in soros hypophyllos, suborbiculares, fere planos, sparsos, demum confluentes, interdum paginam inferiorem totam occupantes, epidermide lacerata cinctos, fuscos vel in soros exiguos, solitarios vel aggregatos, atro-brunneos congestis, sphæroideis, 21-28 $\approx$ 20-23, aculeatis, dilute brunneis, guttulis oleosis rufescentibus farctis; teleutosporis in soros conformes congestis, ellipticis vel ovoideis, apice hemisphærice rotundatis, medio vix constrictis, basi elliptico-attenuatis, 26-42 $\approx$ 17-24, punctulatis, amœne brunneis; pedicello mox deciduo, 4-5 μ . longo, gracili, hyalino.

Hab. in foliis *Cirsii arvensis*, in Italia, Gallia, Belgio, Austria, Helvetia, Germania, Fennia nec non in silvis mont. pr. flumen Irba Sibiriae. — Forma **Cyani** Wint. l. c. p. 190: a typo differt uredosporis majoribus subtilissime verrucosis et teleutosporis plerumque late ellipticis, obscure castaneo-brunneis, usque ad 32 μ . latis. In foliis *Centaureæ Cyani*, in Germania et Gallia.

65. **Puccinia Hieracii** (Schum.) Mart. Fl. Mosq. p. 226, Schroet. Pilz. 2210 Schles. p. 333, *Æcidium Compositarum* Mart. Erlang. p. 314, p. p. *Æcidium Centaureæ* DC. Fl. Franç. II, p. 241, *Æcidium Rostrupii* Thüm. in Bot. Tidsskr. III, 2, 1877. *Uredo Hieracii* Schum. Fl. Saell. II, p. 232, *Uredo flosculosorum* Alb. et Schwein. Consp. Nisk. n. 362, *Cæoma ephialtes* Schlecht. Flor. Berol. II, p. 126, *Uredo Cichoracearum* DC. l. c. p. 229, *Puccinia Centaureæ* Mart. et

P. Cnici Mart. Fl. Mosq. p. 226, *Puccinia variabilis* Grev. Scott. Crypt. t. 75, *Puccinia Compositarum* Schlecht. Fl. Berol II, p. 133, ex parte *Puccinia Bardanæ* Corda Icon. IV, p. 15, t. 5, f. 63, *Puccinia Hypochæridis* Oudem. in Nederl. Kruidk. Arch. II, ser. 1, p. 175, *Puccinia vulgaris* Bonord. Coniom. pag. 50, *Puccinia flosculosorum* Roehl Fl. germ. III, pag. 131, Winter Die Pilze p. 206, *P. Echinopsis* DC. l. c. VI, p. 59, *Puccinia Calcitrapæ* DC. Fl. Franc. II, p. 221, *P. hysterioides* Corda Icon. I, p. 6, t. II, f. 94, *Puccinia Cyani* Pass. *Pucc. Lappæ* Cast. Cat. p. 201. — Spermogoniis in parvos greges dispositis, flavo-melleis; æcidiis nullo ordine v. orbiculatim distributis, maculis purpurascens; pseudoperidiis minutis, flavescentibus, poculiformi-explanatis, margine albo, lato, denticulato; æcidiosporis angulato-sphæroideis, $30 \approx 16-23$, dilute aurantiaco-flavis, levibus vel subtiliter verrucosis; uredosporis soros amphigenos, rotundatos, sparsos vel aggregatos, minutos, fuscos efficientibus, globosis vel breviter ellipticis, $17-32 \approx 16-26$, aculeatis, 2-3 poros gerentibus, castaneo-brunneis; teleutosporis in soros conformes congestis, ellipticis vel ovoideis, apice hemisphærice rotundatis, deorsum plerumque attenuatis, medio non constrictis, punctis subtilibus ornatis, $24-45 \approx 17-28$, brunneis; pedicello gracili, mox deciduo, hyalino, longiusculo.

Hab. in foliis caulibusque Compositarum imprimis Carolinæ, Cirsii, Taraxaci, Centauræ, Chrysanthemi, Conoclinii, Crepidis, Lappæ, Leontodontis, Hieracii, Lenzeæ, Cardui, Serratulæ, Cichorii, Picridis, Scorzonæræ, Hypochæridis, Achyrophori, in Italia, Belgio, Lusitania, Britannia, Helvetia, Austria, Germania, Fennia, Gallia, in Americæ fœderatæ et Sibiriae asiaticæ regionibus variis. — Huc pertinent verisimiliter, suadente quoque cl. Winter, *Puccinia Syngenesiarum* Link Sp. II, p. 74 et *Puccinia Cirsii* Lasch in Rabenh. F. E. n. 89.

66. ***Puccinia bullata*** (Pers.) Schroet. Pilz. Schles. p. 335 nec Schwein., 2211 Winter Die Pilze p. 191, *Uredo bullata* Pers. Observ. I, p. 98, *Bullaria Umbelliferarum* DC. Fl. Franc. II, p. 226, *Uredo Athamantæ* DC. l. c. p. 228, *Uredo Cynapii* DC. Encycl. VIII, p. 226. *Uredo Conii* et *nitida* Strauss in Wett. Ann. II, p. 96, *Uredo muricella* Rabenh. Krypt. Fl. I, p. 6 p. p. *Puccinia Æthusæ* Mart. Fl. Mosq. p. 225, *P. bullaria* Link in L. Sp. plant. VI, 2, p. 78, *P. Apii* Corda Icon. VI, p. 30, *P. Anethi* et *P. Silai* Fuck. Symb. p. 51 et 53, *P. rubiginosa* Schroet. Brand. u. Rostpilze p. 19,

Æcidium Æthusæ Kirchn. in Lotos 1856, p. 180?, *P. Umbelliferarum* DC. l. c. VI, p. 58, *Pucc. Physospermi* Pass.? — Spermogoniis melleis, in parvos greges rotundatos dispositis; soris utriusque formæ sine maculis vel in maculis pallidis, flavidis aut brunneolis insidentibus, plerumque minutis, irregulariter rotundatis, in petiolis caulibusque majoribus, ellipticis vel oblongis, rarius linearibus, sæpe confluentibus, ut plurimum sparsis, subinde orbiculatim dispositis; uredosporis irregulariter rotundatis aut ellipticis, apice incrassatis, $23-38 \approx 20-26$, aculeatis, ochraceo-brunneis, latere 2 poros gerentibus breviter pedicellatis; teleutosporis difformibus, ad septum leniter constrictis, utrinque rotundatis v. pedicellum versus, rarius apicem versus angustatis, apice incrassatis, $30-56 \approx 17-28$, levibus, brunneis; pedicello deciduo, gracili, longiusculo.

Hab. in foliis, petiolis caulibusque Umbelliferarum variarum gen. Conii, Apii, Petroselini, Æthusæ, Cnidii, Silai, Selini, Peucedani, Archangelicæ, Imperatoriæ, Anethi, Seselis, Libanotidis, Thysselini, Laserpitii Physospermi et Ferulaginis, in Italia, Belgio, Gallia, Britannia, Bohemia, Germania et Fennia, in America boreali, Australia. — «An, suadente cl. Karsten, hujus speciei status æcidiosporus *Æcidium Æthusæ* Kirchn. in Lotos 1856, p. 180 sistit?» Pseudoperidia folia petiolosque incolentia, subiculo incrassato flavescenti insidentia, congesta, subrotunda vel compressa, margine subintegro prominulo, alba, exigua; æcidiosporæ albidæ. In Bohemia et in Cerefolio silvestri in Fennia.

67. **Puccinia Oreoselini** (Strauss) Körn. in Hedwigia 1877, p. 2, Winter 2212 Die Pilze p. 191, Schroet. Pilz. Schles. pag. 335, *Uredo Oreoselini* Strauss in Wett. Ann. II, p. 87, *Puccinia Peucedani* Körn. in Hedwigia 1877, p. 17, *Uredo muricella* Rabenh. Krypt. Fl. I, p. 6 p. p. — Spermogoniis in bullis lividis numerosis, melleis; soris ured. et teleut. formæ duplicis sive ut spermogoniis in bullis insidentibus, late expansis, primo cinnamomeis, dein obscurioribus, demum atris, sive exiguis, sparsis; uredosporis ovato-oblongis, $23-40 \approx 19-24$, aculeatis, flavo-brunneis; teleutosporis ellipticis vel clavulatis, medio subconstrictis, apice rotundatis, basi angustatis, verrucosis, $30-45 \approx 17-23$, castaneo-brunneis; pedicello gracili, non deciduo.

Hab. in foliis petiolisque Peucedani Oreoselini, Cervariæ, alsatici et Seselis colorati, in Italia, pr. Arnes Galliæ (GANDOGGER), Austria et Germania.

Sectio C. HEMIPUCCINIA Schroet. Uredo- et teleutosporæ in eadem matrice evolutæ; spermogonia et æcidia ignota.

1. In Dicotyledoneis parasiticæ.

a) Teleutosporæ episporio levi vel vix superne punctulato præditæ v. quoad episporium dubiæ.

68. **Puccinia Polygoni** Pers. Syn. p. 227 (sub nom. *P. Polygoni-amphibii*) Schroet. Pilz. Schles. p. 336, *Puccinia Polygoni-Convolvuli* DC. Flor. Franç. VI, p. 61, *Puccinia Polygonorum* Schlecht. Fl. Berol. II, p. 132, *Puccinia Amphibii* Fuck. Symb. II Nachtr. p. 15, *Puccinia Polygoni-pensylvanici* Schwein. Syn. Fung. Carol. p. 72, n. 488, *Uredo Betæ* var. *Convolvuli* Alb. et Schwein. Consp. p. 132, *Puccinia Amphibii* Fuck. Symb. II, p. 15, *Trichobasis Polygonorum* Lév. in Rav. F. A. n. 43. — Uredosporis in soros parvos, primo ochraceos, dein castaneo-fuscidulos, rotundatos, sæpe orbiculatim dispositos, maculiformes congestis, globosis, ellipticis vel ovoideis, 20-30 $\approx$ 15-23, ochraceis, spinulosis; teleutosporis in soros atro-fuscos, diu epidermide tectos, convexos, confertos congestis, clavatis, apice rotundatis v. obtusis, medio paululum constrictis, 30-55 $\approx$ 15-22, loculo superiori plerumque latiore, levibus, castaneo-brunneis, pedicello persistenti, crassiusculo, teleutosporam æquante vel breviusculo.

Hab. in foliis, caulibus vaginisque *Polygoni amphibii*, *lappathifolii*, *Convolvuli*, *dumetorum*, *virginiani*, *acris*, *alpini* et *pensylvanici*, in Italia, Gallia, Lusitania, Belgio, Austria, Bohemia, Helvetia, Germania, Neerlandia, Fennia, Britannia, in America boreali et prope Minussinsk Sibiricæ asiaticæ. — ***P. Lysimachicæ** Karst. Myc. Fenn. p. 27; soris uredosporiferis hypophyllis, plerumque suborbicularibus, sparsis vel subconfertis, fuscis; uredosporis sphæroideis, 20-26 μ . diam.; soris teleutosporiferis hypophyllis, confertis, confluentibus, suborbicularibus, atro-fuscis; teleutosporis clavato-ellipsoideis, ad septum vix constrictis, flavis, pedicello brevi, flavo instructis. In foliis *Lysimachicæ* in Fennia.

69. **Puccinia Rumicis-scutati** (DC.) Wint. Die Pilze p. 187, Massal. 2214
Ured. Veron. t. III, f. XVI, 1-4, *Uredo Rumicis-scutati* DC. Encycl. VIII, p. 223, *Puccinia Rumicis* (Belynk) Westend. III Notice n. 96, *Puccinia pedunculata* Schroet. in 42. Jahresb. Schles. Gesellsch. 1875, p. 117. — Soris utriusque formæ sparsis v. secus

orbem dispositis, irregulariter rotundatis vel (in petiolis caulibusque) elongatis, epidermide lacerata cinctis, fuscis; uredosporis plerumque ellipsoideis aut ovoideis, rarius globosis vel oblongis, 26-40 $\approx$ 20-28, aculeatis, flavo-brunneis; teleutosporis oblongis vel clavatis, medio paullo vel non constrictis, apice incrassatis, rotundatis aut subattenuatis, basi in pedicellum angustatis, 38-56 $\approx$ 16-28, fuscidulis, pedicello longo, persistenti, brunneo,

Hab. in foliis, petiolis caulibusque Rumicis scutati, in Italia, Austria, Helvetia, Belgio, Gallia et Germania.

70. **Puccinia Tanaceti** DC. Fl. Franc. II, p. 222, Winter Die Pilze 2215 p. 209, Schroet. Pilz. Schles. p. 336, *Puccinia Absinthii* DC. Encycl. VIII, p. 245, *Cæoma Artemisiæ* Link in L. Sp. plant. VI, 2, pag. 49, *Puccinia Discoidearum* Link l. c. p. 72 p. p., *Cæoma phæum* Bonord. Coniom. p. 9, *Puccinia Pyrethri* Rabenh. in Kl. H. M. n. 1990, *P. Artemisiæ* Fuck. F. Rhen. n. 350, *Uredo Artemisiæ* Rabenh. Handb. pag. 111, *Puccinia Artemisiarum* Duby Bot. Gall. II, pag. 888, *Uredo minuta* Dietr. in Blicke Ostreepr. p. 21 sec. Karsten., *P. Dracunculi* Auersw. in Kl. Herb. myc. n. 1488. — Uredosporis in soros hypophyllos, sparsos, erumpentes, orbiculares, planos, exiguos, fuscidulos congestis, ellipticis vel ovatis, 19-35 $\approx$ 16-25, muricato-aculeolatis, ochraceis; teleutosporis in soros amphigenos, subatros, pulvinatos, erumpentes, orbiculares, sparsos confluentesve congestis, ellipticis vel clavatis, apice valde incrassatis, loculis subæqualibus, ad septum constrictis, 32-60 $\approx$ 17-28, levibus vel apice punctulatis, castaneo-brunneis, pedicello hyalino, usque ad 100 μ . longo præditis.

Hab. in foliis, petiolis caulibusque Tanaceti vulgaris, Carlinæ vulgaris, Chrysanthemi corymbosi, Artemisiæ maritimæ, Absinthii, vulgaris, Dracunculi, Abrotani, borealis, macranthæ, glaucæ, monogynæ et frigidæ, in Italia, Gallia, Britannia, Belgio, Austria, Germania et Fennia nec non prope Minussinsk Sibiriae asiaticæ.

71. **Puccinia Stachydis** DC. Flor. Franc. II, p. 595, Winter Die Pilze 2216 pag. 188. — Soris utriusque formæ minutis, rotundato-pulvinatis, in maculis expansis, violaceis vel sordide brunneis insidentibus; uredosporis globosis vel breviter ellipticis, 21-26 $\approx$ 19-26, aculeatis, brunneis; teleutosporis oblongis vel ellipsoideis, medio haud vel paullulum constrictis, deorsum subangustatis, rarius rotundatis, apice valde incrassatis, rotundatis aut plus minus conoideis, 35-52 $\approx$ 16-28, levibus, castaneo-brunneis, pedicello longo suffultis.

Hab. in foliis, caulibus calycibusque *Stachydis rectæ*, pr. Vittorio alibique in Italia boreali, in Gallia et Germania.

72. **Puccinia Sonchi** Rob. et Desmaz. in Ann. Scienc. Nat. 1849, III, 2217 sér., 11, p. 274, Winter Die Pilze p. 189. — Soris uredosporiferis primo epidermide bullato-vesiculosa obtectis, dein ab ea cupulariformi-cinctis, rotundato-pulvinatis, sparsis vel nullo ordine aggregatis, brunneis; uredosporis globosis, ovatis, ellipticis aut oblongis, 25-35 $\approx$ 16-21, verrucosis, episporio crasso, hyalino, contentu flavo-oleagineo; soris teleutosporiferis magis compactis, rotundato-pulvinatis, in caule elongatis, sæpe confluentibus, sparsis v. secus orbem dispositis aut irregulariter aggregatis, atris, paraphysibus apice clavatis, 40-60 $\approx$ 25, brunneis; teleutosporis ellipsoideis vel oblongis, medio constrictulis, basi rotundatis vel in pedicellum angustatis, apice paullulum incrassatis rotundatisque, 30-60 $\approx$ 19-30, levibus, pallide brunneis, pedicello breviusculo, 8-10 $\approx$ 8, persistenti fultis; mesosporis (unilocularibus) numerosis, conformibus, usque ad 50 μ . longis.

Hab. in foliis Sonchorum e. g. *Sonchi arvensis*, in Italia, Gallia et Germania.

73. **Puccinia Acetosæ** (Schum.) Körn. in Hedwigia 1876, pag. 184, 2218 Winter Die Pilze p. 187, Schroet. Pilz. Schles. p. 339, *Uredo Acetosæ* Schum. Saell. II, p. 231, *Puccinia Rumicis* Lasch in Rabenh. Fungi Europ. n. 496. — Soris utriusque formæ sparsis, in foliis minutis, irregulariter rotundatis, in caulibus petiolisque oblongis, mox denudatis; uredosporis globosis, ellipticis vel piriformibus, 24-30 $\approx$ 20-25, aculeatis, brunneolis; teleutosporis oblongis vel subclavatis, medio constrictis, apice rotundato-marginatis, 30-45 $\approx$ 20-25, subverruculosis, castaneo-brunneis, pedicello hyalino, longiusculo, gracili, deciduo.

Hab. in foliis *Rumicis Acetosæ*, arifolii, *Acetosellæ*, in Helvetia, Italia et Germania.

74. **Puccinia Bistortæ** (Strauss) DC. Flor. Franç. VI, p. 61, Winter 2219 Die Pilze p. 186, Schroet. Pilz. Schles. p. 339, Massal. Ured. Veron. pag. 31, t. III, f. XV, 1-2, *Uredo (Polygoni var.) Bistortæ* Strauss in Wett. Ann. II, p. 103 p. max. p., *Uredo Bistortarum* DC. l. c. p. 67, *Puccinia Polygoni-vivipari* Karst. Enum. Fung. Lapp. p. 221, *Puccinia papillosa* Schroet. in Johans. Bot. Sect. Nat. Stud. Upsala pag. 3959. — Uredosporis in soros sparsos, minutos, rotundatos, ochraceos congestis, globosis vel breviter ellipsoideis, 20-25 $\approx$ 18-20, aculeolatis, episporio flavo, contentu hya-

linulo; teleutosporis in soros minutissimos, sparsos, sæpe confluentes, rotundatos, planos, primo tectos, dein epidermide lacerata tinctos, fuscis congestis, ellipticis vel ovatis, medio parum vel non constrictis, $24-38 \approx 15-24$, apice non incrassatis, levibus, brunneis, pedicello gracili, hyalino, brevi.

Hab. in foliis *Polygoni Bistortæ* et *Pol. vivipari*, in Italia, Austria, Helvetia, Germania, Fennia, Lapponia, Gallia, Britannia nec non prope Montem Borus.

75. **Puccinia mammillata** Schroet. Krypt. Fl. Schles. Pilze pag. 340. 2220

— Uredosporis in soros minutos, ochraceos, rotundatos congestis, ellipticis vel globosis, $22-26 \approx 20-22$, flavescentibus, aculeatis; teleutosporis in maculis parvis, atro-brunneis congestis, ovatis vel clavatis, apice rotundatis vel subacuminatis, apiculo verruciformi, obtuso, hyalino auctis, medio parum vel haud constrictis, basi plerumque paullulum angustatis, $28-38 \approx 16-21$, amœne castaneo-brunneis, pedicello gracili, hyalino.

Hab. in foliis *Polygoni Bistortæ*, in Silesia Germaniæ. — Teleutosporarum loculum inferius lateraliter apiculos verruciformes præbet.

76. **Puccinia argentata** (Schultz) Winter Die Pilze p. 194, Schroet. 2221

Pilz. Schles. pag. 340, *Aecidium argentatum* Schultz. Prodr. Fl. Stargdard. p. 454, *Cæoma Impatientis* Link Handb. III, p. 439, *Puccinia Nolitangere* Corda Icones IV, p. 16, t. V, f. 57, *Puccinia papillata* Bonord. in Rabenh. F. E. n. 297, *Uredo Impatientis* Rabenh. Handb. n. 35. — Uredosporis in soros ochraceos vel dilute cinnamomeos, parvos congestis, globulosis vel ellipsoideis, $16-20 \approx 14-16$, asperulis dilutissime flavis, longiuscule pedicellatis; teleutosporis soros castaneo-brunneos, maculiformes, sæpius confluentes efformantibus, ellipticis, ovatis vel subclavatis, medio subconstrictis, apice rotundatis vel attenuatis, apiculis hyalinis vertice lateribusque ornatis, $25-35 \approx 12-20$, brunneis, granulosus, levibus, pedicello brevi, gracillimo, hyalino.

Hab. in foliis *Impatientis*, *Nolitangere* et *fulvæ*, in Italia, Britannia, Belgio, Arduennis, Austria, Bohemia, Germania et in America boreali. — Sec. cl. Saccardo teleutosporæ subinde germinant filamentaque varie ramulosa sporidiolophora tota hyalina proferunt.

77. **Puccinia helvetica** Schroet. in Rabenh. Fungi Europæi n. 1766, 2222

Winter Die Pilze p. 190, *Puccinia Rubiæ* Fuck. Symb. Nachtr. II, p. 14 (matrice errata). — Soris uredosporiferis sparsis v. secus

orbem dispositis, plerumque amphigenis, mox denudatis; uredosporis irregulariter globosis vel ellipticis, 20-30 $\approx$ 20-24, aculeatis, dilute brunneis; soris teleutosporiferis similibus at diu epidermide grisea tectis, sordide brunneis; teleutosporis ellipsoideis vel oblongis, medio vix vel haud constrictis, apice incrassatis, 26-40 $\approx$ 17-26, levibus, brunneis.

Hab. in foliis *Asperulæ taurinæ*, prope M. Generoso Italiae (M. PENZIG) et in Germania.

78. **Puccinia granularis** Kalchbr. et Cooke in Grevillea XI, pag. 22, 2223

Uredo Pelargonii Thüm. in Myc. univ. n. 955. — Soris hypophyllis, gregariis, concentrice dispositis, mediis, planis, primo epidermide tectis, rufo-fuscis, in macula indeterminata, vix expallescens; uredosporis aut solitariis aut concatenatis, catenulis quadri-sex-sporis, rectis, globosis vel ellipticis, sæpe basi verticeque apicibus minimis impositis, episporio tenui, levi vel granulato, 12-25 $\approx$ 9-15, fuscidulis; teleutosporis immixtis ellipticis, utrinque attenuatis, supra subpapillatis, læte brunneis, medio leviter constrictis, levibus, 40 $\approx$ 20, pedicello brevioribus.

Hab. in foliis vivis *Pelargonii alchemilloidis*, in dumetis ad pedem montis « Boschberg » prope Somerset-East, Promont. Bonæ Spei nec non ad P. Natal Africae.

79. **Puccinia Cerasi** (Béreng.) Cast. Obs. I, pag. 13, Cat. pl. Mars. 2224

pag. 199, Winter Die Pilze pag. 193, *Mycogone Cerasi* Béreng. in Atti Congr. Milano 1844, p. 475. — Soris utriusque formæ irregulariter rotundatis aut ellipticis, sæpius confluentibus in maculis diversi coloris insidentibus, diu epidermide circumcinctis; uredosporis globulosis, oblongis vel ellipsoideis, rarius etiam piriformibus, 17-30 $\approx$ 15-20, flavidis; teleutosporis oblongis, longiuscule pedicellatis, medio constrictulis, apice non vel vix incrassatis, plerumque rotundatis, rarius angustatis, 30-45 $\approx$ 15-20, levibus, fere hyalinis.

Hab. in foliis *Pruni Cerasi* et *Amygdali Persicæ*, in Italia, Austria, Gallia et Germania. — Huc forte pertinet *Uredo Castagnei* Rav.

80. **Puccinia Gundeliæ** Cooke in Grevillea IX, pag. 14. — Amphige- 2225

na; soris orbicularibus, sparsis, brunneis; uredosporis globosis, fuscis, granulatis, 28-30 μ . diam.; teleutosporis immixtis late ellipsoideis vel difformibus, 32-35 $\approx$ 20, levibus, pedicellis brevissimis.

Hab. in foliis *Gundeliæ Tournefortii*, Kurdistan Asiae.

81. **Puccinia Kuhnii** Schwein. N. Amer. Fungi p. 296, Burrill Fungi

of Illinois pag. 181. — *Amphigena*; soris non prominentibus nec compactis, superficie rugosa inæquali; uredosporis immixtis, subglobosis aut oblongis, 27-30 $\approx$ 16-27, echinulatis, flavo-brunneis; teleutosporis uniformibus, apice rotundatis, latis, apiculo brevissimo, hyalino auctis, deorsum subinde latere loculi inferioris papillula simili instructis, 44 $\approx$ 30, levibus, fuscis, pedicello usque ad 90 μ . longo.

Hab. in foliis *Kuhniæ eupatorioidis*, in Pensylvania et Illinois Americæ borealis.

82. **Puccinia Hydrocotyles** (Mont.) Cooke in Grevillea IX, pag. 14, 2226

Cæoma Hydrocotyles Link Sp. II, pag. 22, *Uredo Hydrocotyles* Mont. Prodr. J. Fern. n. 59 et Fl. Chil. VIII, p. 50, Winter Die Pilze p. 255. — Soris hypophyllis, subrotundis, sparsis confluentibusque fusco-brunneis, epidermide rupta cinctis; uredosporis globosis, 24-35 $\approx$ 19-26, tandem brunneis, asperis, granuloso-farctis; teleutosporis ellipticis, leniter constrictis, brunneis, 30-40 $\approx$ 20-25, episporio levi, pedicellis elongatis.

Hab. in foliis *Hydrocotyles vulgaris*, modestæ et forte bonariensis in Chili (BERTERO), ad Fontainebleau Galliæ (ROUSSEL et MONTAGNE), Epping Forest Britanniae, in Germania, in Santos America boreali, Brasilia et Republica Argentina.

83. **Puccinia caulicola** Tracy et Gall. in Journ. of Mycology 1888, 2227

p. 20, non *Puccinia caulicola* Niessl, nec Spreng. nec Schneid. — Soris uredosporiferis hypophyllis, minutissimis, folii superficiem totam obtegentibus; uredosporis subglobosis, 20-22 $\approx$ 15-17, rugulosis, episporio crasso, læte brunneis, plerumque vacuolis 1-2, plus minus prominulis instructis; soris teleutosporiferis cauliculis, sparsis, plerumque elongatis, atris; teleutosporis ovatis, non constrictis, 35-40 $\approx$ 25-27, vertice valde incrassatis, subhyalinis, levibus, pedicello fere hyalino, longissimo fultis.

Hab. in foliis caulibusque *Salviæ lanceolatae*, Colorado Americæ borealis (TRACY et EVANS).

84. **Puccinia nuda** Ell. et Everh. in Journal of Mycology 1887, p. 57. 2228

— Soris amphigenis, sparsis gregariisve, rotundatis, atris, circ. 1 mm. diam., folio circa soros pallide flavescente; teleutosporis oblongo-ellipticis vel oblongo-clavatis, leniter ad septum constrictis, vertice incrassatis, papilla obliqua, subhyalina, distincta auctis, 35-45 $\approx$ 19-22, levibus, primo pallidis demum fuscis, pedicello 90-115 μ . longo; uredosporis paucis, globosis, 25-30 μ . diam., levibus vel sublevibus, epedicellatis immixtis.

Hab. in foliis *Arnicae foliosæ*, Washington Terr. America borealis (SUKSDORF). — Adsunt etiam mesosporæ vel teleutosporæ septo destitutæ obovatae, $25 \approx 22$, longe pedicellatae. A *P. arnicali* Peck toto cœlo diversa.

85. **Puccinia Oxyriæ** Fuck. Symb. myc. pag. 14, Winter Die Pilze 2220 pag. 186. — Soris uredosporiferis hypo-epiphyllisque, greges formantibus, minutis, plerumque oblongis, erumpentibus, in macula læte purpurea, fuscis; uredosporis perfecte globosis vel piriformibus, $23-30 \approx 20-26$, subtiliter spinulosis; soris teleutosporiferis demum in iisdem foliis petiolisque natis, plerumque elongatis, gregariis, in macula purpurea, per epidermidem longitudinaliter fissam erumpentibus, atro-fuscis; teleutosporis oblongo-ovatis, utrinque plus minusve rotundatis, vertice quandoque parum apiculatis, breviter pedicellatis, medio constrictis, $30-46 \approx 17-25$, levibus, fuscis.

Hab. in foliis, petiolis rachidibusque *Oxyriæ digynæ*, prope S. Moritz in Engadina et in Germania.

86. **Puccinia Heterophyllæ** Cooke in Grevillea IX, pag. 14. — Hypo- 2230 phylla vel amphigena; soris applanatis, suborbicularibus, brunneis, pulverulentis, dense gregariis; uredosporis globosis, levibus, pallide fuscis, $20-22 \mu$. diam.; teleutosporis in soris immixtis, obscurioribus, ellipticis, vix constrictis, brunneis, $30-32 \approx 20$, levibus, pedicello brevissimo fultis.

Hab. in foliis *Serratulæ heterophyllæ*, Kurdistan Asiæ.

87. **Puccinia Proserpinaceæ** Farlow in Proc. Amer. Acad. Arts and 2231 Scienc. vol. XVIII, p. 80, Burrill Paras. Fungi of Illinois p. 179. — Amphigena at plerumque tantum hypophylla; soris utriusque formæ rotundatis, sparsis vel irregulariter aggregatis, subinde confluentibus, raro nudis, castaneo-brunneis, uredosporiferis epidermidis ruptæ fragmentis tectis, teleutosporiferis demum griseis; uredosporis obovatis, $24-30 \approx 15-21$, echinulatis, dilute cinnamomeis; teleutosporis oblongis, subinde angustatis, sensim plerumque ad septum constrictis, apice incrassatis et rotundatis vel echinatis, $35-52 \approx 15-31$, levibus, pallide brunneis; pedicello subhyalino, dimidiam teleutosporam subæquante.

Hab. in foliis *Proserpinaceæ palustris*, in America boreali.

88. **Puccinia deformans** Winter in Flora 1884, n. 14. — Soris ure- 2232 dosporiferis magnis, dense gregariis, ramulos juniores sæpeque foliorum superficiem longe lateque obtegentibus et plus minus deformantibus, epidermide mox fissa diu velatis, aureo-fulvis, primo

ellipticis, demum sæpe confluentibus elongatisque, 0,5-3 mm. longis; uredosporis ellipticis, elliptico-oblongis vel piriformibus, 26-40 $\approx$ 19-24, echinulatis, aureis; soris teleutosporiferis similibus immixtis; teleutosporis oblongis vel oblongo-subclavatis, medio parum constrictis, episporio toto æquali vel ad apicem perparum incrassato, vertice interdum paullulum apiculatis, basim versus rotundatis vel subattenuatis, 35-56 $\approx$ 19-28, levibus, amcæne badiis, pedicello longo crassoque, hyalino, in aqua diffuente, usque 20 μ . incrassato suffultis.

Hab. in foliis caulibusque vivis Montiniæ acris, prope Caput Bonæ Spei Africæ australis (Mac OWAN). — Spermogonia cum soris uredosporiferis immixta, numerosissima, præcipue foliicola, punctiformia.

89. **Puccinia Psidii** Winter in Hedwigia 1884, p. 171. — Soris uredosporiferis plerumque in maculis rotundatis seu irregularibus fuscis, nigro-cinctis, circ. 3-5 mm. latis, sæpe confluentibus, amphigenis gregariis, rarius supra foliorum totam paginam sparsis minutis, erumpentibus, demum denudatis et ab epidermide fissa cinctis, pallidis; uredosporis subglobosis ovatisve, episporio tenui, densissime tenuissimeque echinulato, hyalinis, 19 μ . diam. vel 23 $\approx$ 16, aurantiacis; soris teleutosporiferis cum uredosporiferis mixtis, minutissimis, punctiformibus, gregariis; teleutosporis ovato-oblongis, medio parum constrictis, vertice non incrassatis, episporio tenui, levi, pallidissime luteolo instructis, 31-33 $\approx$ 18, pedicello haud persistenti, hyalino fultis. 2233

Hab. in foliis vivis Psidii pomiferi, prope S. Francisco in Brasilia Americæ australis (E. ULE).

90. **Puccinia Castagnei** Thüm. Quelq. esp. champ. Fr. n. 1, *Puccinia Apii-graveolentis* Cast. Observ. I, pag. 14, Cat. plant. Mars. I, pag. 200. — Soris amphigenis, magnis, bullatis, primo epidermide cinereo-vesiculoso-tectis, demum liberis, obscure spadiceis; teleutosporis irregulariter clavatis, sæpe incurvis, medio constrictis, apice rotundatis, basi non vel paullo in pedicellum angustatis, episporio densissime punctulato, tenui, 36-46 $\approx$ 18-24, fuscis; pedicello brevi, cito caduco vel evanido; uredosporis immixtis, globosis vel irregulariter ovoideis, episporio subcrasso, punctulato et minute echinulato, 28-34 μ . diam., fuscidulis. 2234

Hab. in foliis vivis Apii graveolentis, prope Marseille (CASTAGNE) et prope Lyon Galliæ (J. THERRY). — A *Puccinia Apii* Corda Icon. Fung. VI, p. 3, t. 1, f. 11, valde differt teleutosporis

punctulatis, majoribus, irregularibus, curvatis, pedicello tenui et caduco; uredosporis majoribus et echinulatis.

91. **Puccinia Harknessi** Vize in Grevillea VII, pag. 11, Ellis North 2235
Amer. Fungi n. 1446. — Soris parvis, oblongis, fuscis, demum erumpentibus epidermide cinctis, stipite parvo fultis; teleutosporis oblongis, brunneis, in medio pæne æqualiter septatis, $50 \approx 25$, sublevibus.

Hab. in ramulis *Lygodesmiæ* in altitudine Sierræ Nevadæ Californiæ (HARKNESS). — « In eodem soro, in specimine in herbario Saccardiano asservato, adsunt uredosporæ sphæroideæ, 25-30 μ . diam., flavescentes, subtiliter echinulatæ ».

92. **Puccinia persica** Wettst. in Hedwigia 1887, pag. 115. — Soris 2236
magnis, convexis, orbicularibus, atro-fuscis, pulveraceis, gregariis vel solitariis, sæpe confluentibus; uredosporis subglobosis vel ovatis, $25 \approx 20$, pallide fuscis, episporio aspero, plerumque apice valde incrassato; teleutosporis ovatis v. obovato-clavatis, $35-45 \approx 21-31$, fuscis, apice rotundatis, medio parum vel haud constrictis, episporio tenuissime aspero, apice nonnumquam incrassato donatis, a pedicello tenui, hyalino mox solutis.

Hab. in foliis vivis *Centaureæ carduiiformis*, in Persia.

93. **Puccinia Schileana** Speg. Fung. Argentini II, p. 12, n. 31, *Uredo* 2237
Schileana Speg. l. c. p. 15, n. 43. — Hypophylla, rarissime epiphylla, maculis nullis; soris uredosporiferis pallide ochraceis; uredosporis subglobosis, 20-22 μ . diam., fulvo-fuligineis, levibus; soris teleutosporiferis sparsis, aterrimis, orbicularibus v. elongatis, compactiusculis, 0,5-2 mm. diam.; teleutosporis ellipticis vel ovoideis, crassis, utrinque obtusissime rotundatis, medio uniseptatis non vel vix constrictis, $30-35 \approx 24-26$, episporio levi, crassiusculo, apice pallidiore atque incrassato, loculis uniguttulatis, interne fuligineis, pedicello cylindraceo, $30-35 \approx 5-8$, hyalino.

Hab. in foliis vivis *Ximenesiæ micropteræ*, prope Buenos Ayres in Republica Argentina Amer. australis (M. SCHILEO).

94. **Puccinia Spegazziniana** De-Toni, *Puccinia Verbesinæ* Speg. Fungi 2238
Arg. II, p. 12 non Schwein., *Uredo Verbesinæ* Speg. Fungi Arg. II, n. 44 et verisimiliter etiam *Uredo affinis* Speg. l. c. pag. 15, n. 47. — Hypophylla; maculis nullis vel epiphyllis, pallescentibus, indeterminatis; soris hinc inde densiuscule sparsis, minutis, 500-750 μ . diam.; teleutosporis elongato-clavatis, levibus, medio septato-constrictis, $60-80 \approx 25-30$, saturate fuligineis, episporio apice crassissimo, loculis non v. uniguttulatis, pedicello hyalino, $60 \approx 10$,

cylindraceo; uredosporis in soros pallide fuligineos congestis, globosis, 30-35 μ . diam., ochraceo-fuligineis, pedicello cylindraceo, 50-60 $\approx$ 5-8, donatis.

Hab. in foliis vivis ~~Verbesinæ~~ ^{aspilinae} montevidensis, prope la Boca del Riachuelo in Republica Argentina (Dott. O. SCHNYDER).

95. **Puccinia Pentanisiæ** Cooke in Grevillea X, pag. 125. — Soris 2239
uredosporiferis sparsis, pulverulentis, fuscis; uredosporis ovalibus fuscis, leniter asperulis, 30 $\approx$ 25; soris teleutosporiferis hypophyllis, atris, mox confluentibus, pulverulentis; teleutosporis ellipticis, medio constrictis, castaneis, sublevibus, 35 $\approx$ 25, pedicello abbreviato, lateraliter producto.

Hab. in foliis Pentanisiæ variabilis, ad Natal Africae (Wood). — A *Puccinia lateripede* B. et C., cui similis, valde distincta.

96. **Puccinia Kalchbrenneri** De-Toni, *Puccinia Helichrysi* Kalchbr. 2240
et Cooke in Grevillea IX, p. 21, nec Rabenh., *Uredo Lepisclinis* Thüm. — Soris uredosporiferis amphigenis, sparsis vel subgregariis, mediis, primo tectis, convexis, firmis, postremo liberis, disciformibus, concavis, ochraceis; uredosporis difformi-rotundis v. irregulariter globosis, vertice plerumque minute obtuso-acutato, intus granulosus, episporio subcrasso, heterogeneo, 20-24 μ . diam., dilute fusco-cinereis; teleutosporis lanceolatis, uniseptatis, constrictis, atro-fuscis, 40-55 $\approx$ 15-18, episporio levi, pedicello evanido.

Hab. in foliis vivis Helichrysi nudifolii et petiolati, prope Somerset-East, Promont. Bonæ Spei (P. MAC OWAN) et ad Natal Africae (Wood).

b) Teleutosporæ episporio verrucoso, foveolato, papillato v. punctato, præditæ.

97. **Puccinia Berkeleyi** Pass. in Hedwigia 1873, p. 143, *Puccinia* 2241
Vincæ Berk. Engl. Fl. V, p. 364 non Castagne, *Uredo Vincæ* DC. Flor. Franç. VI, p. 70, *Trichobasis Vincæ* Cooke M. F. t. 6, t. 130-131. — Soris uredosporiferis hypophyllis quandoque spermogoniis intermixtis et tum valde irregularibus, sæpe confluentibus, nudis, sæpe vero in maculis rotundatis, atro-fuscis sparsim insidentibus, diu tectis, pallide brunneis; uredosporis globosis, ellipticis vel ovoideis, 20-40 $\approx$ 17-26, aculeatis, pallide brunneis; soris teleutosporiferis minutis, irregularibus, epidermide cinctis, obscure brunneis, sparsis aut circinatis, hypophyllis, maculis sæpe griseis, atro-marginatis; teleutosporis ellipticis vel oblongis, vix vel haud

constrictis, basi rotundatis vel angustatis, apice obtuse papillatis, 35-54 $\approx$ 19-26, ochraceis, verrucosis, pedicello deciduo, brevi instructis.

Hab. in foliis Vincæ majoris, minoris, mediæ et herbaceæ, in Italia, Gallia, Britannia, Lusitania et Germania.

98. **Puccinia tinctoria** Speg. Fungi Guaranitici I, n. 119, *Uredo* 2242

tinctoria Speg. Fungi Guaranitici I, n. 150. — Maculis sorisque uredosporiferis teleutosporiferis similibus; uredosporis globoso-obovatis, 25-30 $\approx$ 22-24, episporio pro ratione crassiusculo, præcipue ad verticem, ubique minutissimo (vix perspicue) granuloso-asperulo, protoplasmate guttulado, nubiloso fæctis, pallide fulvis; maculis nullis vel vix manifestis, amphigenis, indeterminatis, majusculis et pallescentibus; soris teleutosporiferis hypo-rarius epiphyllis, minutis, 200-500 μ . diam., plus minusve laxè sparsis vel gregariis, primo tectis, dein erumpentibus, cinnamomeis; teleutosporis ellipticis vel elliptico-subobovatis, 40 $\approx$ 25-28, utrinque eximie rotundatis, medio 1-septatis at vix constrictis, episporio ubique subæquicrasso, minute laxèque verruculoso-asperulo, primo fulvidis, loculis grosse 1-guttulatis, dein subopace fuligineo-cinnamomeis, pedicello mediocri, 50 $\approx$ 5, hyalino vel vix apice fuscescente.

Hab. in foliis vivis Eupatorii tinctorii, in montuosis Cordillere de Peribebuy Amer. austr.

99. **Puccinia tuberculata** Speg. Fungi Argentini pug. II, n. 28 non 2243

Körn., *Uredo tuberculata* Speg. F. Arg. pug. I, n. 44. — Soris uredosporiferis amphigenis, sine macula, hinc inde sparsis, cinnamomeis, pulverulentis; uredosporis subsphæroideis ubique episporio tenui spinuloso-tuberculatis, 17-30 μ . diam., fulvo-fuligineis; soris teleutosporiferis amphigenis, macula nulla, hinc inde sparsis orbicularibus, $\frac{1}{2}$ -1 mill. d., atro-cinnamomeis, pulverulentis; teleutosporis ellipticis vel ovatis, loculo infero minore, utrinque rotundatis, 55-60 $\approx$ 25-30, medio septatis, vix constrictis, ubique tuberculato-muricatis, loculis uniguttulatis, saturate fuligineis, episporio ubique æquali, pedicello longiusculo, hyalino, 60-65 $\approx$ 8-10.

Hab. ad folia viva Lantanæ Camaræ, prope la Recoleta in Republica Argentina Americæ australis.

100. **Puccinia Carthami** Corda Icon. Fung. I, pag. 15, tab. 4, fig. 52, 2244

Schroet. Pilz. Schles. pag. 340. — Uredosporis in soros castaneo-brunneos, rotundatos congestis, ellipticis vel ovatis, 22-28 $\approx$ 16-20, dilute castaneis, aculeatis, teleutosporis in maculis atro-brunneis insidentibus, ellipsoideis vel ovatis, apice hemisphærice rotundatis,

medio parum vel haud constrictis, basi rotundatis vel subangustatis, 28-35-39 $\approx$ 21-26, punctatis, amœne castaneo-brunneis, pedicello gracili, hyalino.

Hab. in foliis Carthami tinctorii, in Silesia et Bohemia.

101. **Puccinia Diotidis** Pat. et Roum. Fungi Gallici n. 3637, Rev. 2245
Myc. 1886, pag. 88. — Uredosporis oblongis, 30-32 $\approx$ 24-37; teleutosporis hyalinis, echinulatis.

Hab. in foliis vivis Diotidis candidissimæ, in sabulosis prope Pembron (Loire-inf.) Galliæ (PATOILLARD).

102. **Puccinia Endiviæ** Pass. in Hedwigia 1873, p. 113. — Uredo- 2246
sporis globosis, echinulato-scabris; teleutosporis pedicello longissimo fultis.

Hab. in Cichoria Endivia Italia boreali. — A *P. Hieracii* et *Prenanthis* notis allatis vix differre videtur.

103. **Puccinia arnicalis** Peck in Botanical Gazette 1881, pag. 227. 2247
— Maculis pallidis vel nullis, soris amphigenis, confertis vel confluentibus, rufo-brunneis; uredosporis subglobosis, 20-30 μ . diam., 1-2-nucleatis, subtiliter rugulosis, rufo-brunneis; teleutosporis uredosporis intermixtis, obovatis vel ellipticis, obtusis, paullulum constrictis, rugulosis, 30-45 $\approx$ 20-24, concoloribus, pedicello brevissimo, hyalino instructis.

Hab. in foliis vivis Arnicæ cordifoliæ, Colorado in America boreali.

104. **Puccinia Balsamitæ** (Strauss) Rabenh. D.C. Fl. n. 228, Schroet. 2248
Pilz. Schles. p. 340, *Uredo Balsamitæ* Strauss in Wett. Ann. II, p. 106, *Puccinia Discoidearum* Link Sp. II, p. 72, p. p., *Uredo Tanaceti-Balsamitæ* DC. Encycl. VIII, p. 224, *Puccinia Tanaceti-Balsamitæ* Winter Pilze p. 191. — Uredosporis in soros cinnamomeo-brunneos, mox nudos, sæpe orbiculatim dispositos congestis, ellipticis vel ovatis, 20-35 $\approx$ 20-24, aculeatis, castaneis; teleutosporis in soros diu tectos, atro-fuscos, rotundatos, parvos congestis, elliptico-oblongis, 35-60 $\approx$ 24-36, medio haud v. parum constrictis, apice incrassato-marginatis, basi rotundatis, verrucoso-punctulatis, brunneis, pedicello hyalino, plus minus elongato, deciduo.

Hab. in foliis Tanaceti Balsamitæ, in Italia, Austria, Germania, Gallia (GANDOGGER).

105. **Puccinia Cicutæ** Lasch in Klotzsch Herb. viv. myc. n. 787, Schroet. 2249
Pilz. Schles. p. 341, *Puccinia Cicutæ-majoris* Winter Die Pilze p. 192, *Uredo Cynapii* var. *Cicutæ majoris* DC. Fl. Franc. p. 72.
— Uredosporis in soros hypophyllos, cinnamomeos, sparsos, me-

dios, liberos, planos, orbiculatos congestis, ovatis vel ellipticis, 17-30 $\approx$ 17-21, dilute fuscis, subtiliter aculeolatis; teleutosporis soros minutos, hypophyllos, atro-brunneos, sparsos, liberos, planos efformantibus, oblongo-ellipsoideis vel ovatis, utrinque subrotundatis vel deorsum angustatis, medio parum constrictis, 28-40 $\approx$ 10-28, verrucosis, fuscis; paraphysibus nullis; pedicello gracili, hyalino, longiusculo, deciduo.

Hab. in foliis *Cicutæ virosæ*, in Germania, Gallia et prope Minussinsk in Sibiria asiatica.

106. **Puccinia Heideri** Wettst. in Verhandl. Zool. bot. Gesellsch. in 2250

Wien, 1885, p. 543. — Soris parvis, 0,3-1 mm. latis, orbicularibus, fusco-atris, gregariis vel solitariis dispersis, rarius confluentibus, plagulas majores efformantibus, epidermidem mox dissolventibus, pulveraceis; uredosporis globosis vel ovato-globosis, 25-31 $\approx$ 18, pallide fuscis, episporio tenui, echinato; teleutosporis ovatis v. obovatis, fuscis, apice obtusissime rotundatis v. deorsum angustatis medio parum constrictis, apice non incrassatis, episporio ubique æquicrasso, verruculoso, 25-37 $\approx$ 12-26, pedicello longo, tenui, centrali vel parum excentrico, hyalino, mox deciduo fultis.

Hab. in foliis vivis *Campanulæ barbatae*, in Styria.

107. **Puccinia Anthrisci** Thüm. Contr. myc. austr. III, n. 74. — Ure. 2251

dosporis aut teleutosporis immixtis aut in soros proprios congestis, irregulariter globosis, episporio æquali, tenui, levi, pallide fuscidulis, 12-24 μ . diam.; teleutosporis in soris hypophyllis, plus minusve solitariis, applanatis, liberis, pulverulentis, fuscis sed cito expallescentibus, subparvis, ovoideis vel ellipticis, medio leniter constrictulis, interdum in pedicellum brevem, caducum, hyalinum angustatis sed plerumque æqualibus, episporio densissime subreticulato, tenui, æquali, fuscis, 28-34 $\approx$ 19-23.

Hab. ad folia viva *Anthrisci silvestris* et speciei indeterminatæ, in silvis subalpinis, in Neerlandia, Pommerania, Boemia, Austria nec non in Sibiria asiatica.

108. **Puccinia Pruni** Pers. Syn. Fung. p. 226 (sub nom. *P. Pruni-* 2252

spinosæ) Schroet. Pilz. Schles. p. 341, Winter Die Pilze p. 193, *Uredo Prunastri* DC. Fl. Franç. VI, p. 85, *Puccinia Salicum Prunorum* Link Sp. II, p. 82, *Puccinia discolor* Fuck. Symb. p. 50, *Tricobasis Rhamni* Cooke in Seem. Journ. II, p. 344, *Tricobasis Pruni-spinosæ* Lév. *Uredo Pruni* West. Exs. n. 569, *Puccinia gemella* Hedw. Fungi ined. t. 10, *Uromyces Amygdali* Pass. in Erb. critt. ital., *Uredo Pruni* Mont. Syll. n. 1166 vix Cast.

— Uredosporis in soros minutos, hypophyllos, orbiculares, confluentes, cinnamomeo-brunneos, primo tectos, dein nudos congestis, globosis vel ovoideo-oblongis, $10-35 \approx 10-18$, spinulosis, subsessilibus, apice plerumque incrassatis, conoideo-angustatis, flavo-brunneis, paraphysibus numerosis immixtis; teleutosporis soros hypophyllos, sparsos vel confluentes, planos, brunneo-fuscos, epidermide cinctos efformantibus, oblongis, e loculis duobus globosis compositis, inferiori plerumque minori, $28-45 \approx 17-24$, verrucoso-aculeatis, brunneis, pedicello brevi, hyalino, deciduo, paraphysibus numerosis, brunneis.

Hab. in foliis Pruni spinosæ, Amygdali, domesticæ, insititiæ, virginianæ, americanæ, Armeniacæ, vulgaris, serotinæ, in Italia, Gallia, Belgio, Britannia, Austria, Helvetia, Germania, in insulis Canariis et in America boreali.

109. **Puccinia lateripes** Berk. et Rav. in Grevillea III, p. 52, Burrill Fungi of Illinois p. 189. — Amphigena, plerumque epiphylla, maculis flavis vel nullis; soris plerumque minutis, rotundatis vel angulatis, sparsis vel gregariis; uredosporis subglobosis, $21-24 \approx 16-21$, echinulatis; teleutosporis late ovatis, leniter constrictis, loculis subæqualibus, utrinque rotundatis, $25-32 \approx 20-22$, rugulosis; pedicello longo, flexuoso, laterali, hyalino suffultis. 2253

Hab. in foliis vivis Ruelliae ciliosæ et strepentis, in America boreali. — Uredosporæ teleutosporis immixtæ etiam caulicolæ: in *Ruellia ciliosa* uredosporæ sunt globosæ, 22μ . diam., teleutosporæ $30-32 \approx 21-22$, pedicello usque 36μ . longo, in *Ruellia strepenti* uredosporæ sunt subglobosæ, $21 \approx 16-18$, teleutosporæ $25-28 \approx 19-21$, pedicello usque ad 75μ . longo (BURRILL).

110. **Puccinia Troximontis** Peck in Botanical Gazette 1881, p. 227. — Maculis pallidis vel obsoletis; soris utriusque formæ amphigenis, sparsis, rufo-brunneis vel atro-brunneis; uredosporis subglobosis, minute rugosis, $20-30 \mu$. diam., rufo-brunneis; teleutosporis subellipticis, obtusis, vix constrictis, subtiliter rugulosis, $26-35 \approx 20-23$, atro-brunneis, pedicello brevi, hyalino suffultis. 2254

Hab. in foliis vivis Troximontis cuspidati, Utah Americæ borealis (JONES).

111. **Puccinia Medusa** Speg. Fungi Guaranitici I, n. 114, *Uredo Medusa* Speg. Fungi Guaranitici I, n. 142. — Maculis amphigenis, epiphyllis, mediocribus, $2-2,5$ mm. diam., centro arescenti-griseis, ambitu zona irregulari fusca vel nigricante limitatis, hypophyllis indeterminatis, pallescentibus; soris uredosporiferis teleutosporife- 2255

ris immixtis, hypophyllis, compactis, pulvinatis, testaceis; uredosporis obovatis vel subturbinatis, 20-26 $\approx$ 17-19, antice truncatis vel obtusissime rotundatis, apice vel a medio verrucis majusculis, densis, rectis, obtusis ornatis, episporio crassiusculo præcipue ad verticem, sæpius grosse uniguttulatis, nubiloso-farctis, pallide melleo-fuligineis; soris teleutosporiferis pulvinatis 1-1,5 mm. diam., centro macularum insidentibus, sæpius hypophyllis, compactis, duris, testaceis; teleutosporis obscure fuligineo-cinnamomeis, elliptico-obovatis, 27-30 $\approx$ 20, utrinque truncato-rotundatis vel depressis, episporio crasso, præcipue vertice loculi superi valide incrassato ac grosse subdenseque verrucoso-hirto, ceterum levi v. vix ruguloso, pedicello mediocri, crassiusculo, 10 $\approx$ 5, hyalino, deorsum parum attenuato, basi sæpe lobulato-appendiculato.

Hab. in foliis vivis *Pithecoctenii clematidei*, in silvis prope Villa Rica Americæ australis.

112. **Puccinia Conoclinii** Seymour in Burrill Parass. Fungi of Illinois 2256 p. 182. — Plerumque hypophylla; maculis parvis, purpureis, sæpe in areas latas confluentibus, demum expallescentibus; soris sparsis vel gregariis, rarius confluentibus, uredosporiferis cinnamomeo-brunneis, teleutosporiferis sordide rufescenti-brunneis; uredosporis subglobosis vel ovoideis, 18-27 μ . diam., echinulatis; teleutosporis late ovoideis, leniter constrictis, apicibus rotundatis, 32-42 $\approx$ 27, verrucosis, episporio crasso præditis, pedicello firmo, subhyalino, teleutospora triplo longiore.

Hab. in foliis *Conoclinii cælestini*, Illinois Amer. bor. — Huc, teste Burrill, pertinere videtur *Puccinia Centaureæ* DC. in Berk. Grevillea III, p. 53.

113. **Puccinia insueta** Winter in Hedwigia 1887, pag. 27. — Soris 2257 amphigenis, sparsis vel gregariis, in maculis irregularibus, indeterminatis, luteolis v. fuscidulis, sæpe confluentibus, interdum folii magnas partes occupantibus nidulantibus, minutis, rotundatis vel ellipticis sæpeque angulatis, haud raro 2-3 confluentibus, vix 500 μ . latis, initio ab epidermide inflata velatis, mox autem denudatis, pulverulentis, uredosporiferis longius ab epidermide tectis, flavidulis; uredosporis subglobosis vel late ellipticis, 32-37 μ . diam. vel (in aqua) usque ad 44 μ . longis, episporio crassissimo pallide luteolo, in aqua valde turgescenti, aculeis validis obsito, pedicello fragili fultis; teleutosporis late ellipsoideis, utrinque late rotundatis, medio septatis et parum constrictis, 40-48 $\approx$ 27-35, fuscis,

opacis, dense verrucosis, pedicello laterali, sublongo, ad apicem vesiculoso-inflato, hyalino fultis.

Hab. ad folia viva Malpighiaceæ cujusdam, prope S. Francisco Brasilæ (ULE).

114. **Puccinia Ellisii** De-Toni, *Puccinia Angelicæ* Ell. et Everh. in 2258
Bull. Washb. Laborat. 1884, pag. 3 nec Fuckel. — Soris parvis, 0,5-1,6 mm., obscure brunneis, mox nudis, irregulariter sparsis, hypophyllis, folium circa se flavescens efficientibus; uredosporis subglobosis vel ovatis, 30-35 $\approx$ 24-30, episporio subtiliter ruguloso verticeque incrassatulo; pedicello valido, 50-70 $\approx$ 5-7, mox deciduo; teleutosporis laxè congestis, ellipticis vel ovoideis, 35-40 $\approx$ 20-25, leniter constrictis, loculo superiore plerumque latiore, episporio verrucoso.

Hab. in foliis Angelicæ genuflexæ, Falcon Valley Amer. bor. (SUKSDORF). — Teleutosporæ et uredosporæ in eodem soro immixtæ.

115. **Puccinia Orbicula** P. et C. in 30 Rep. St. Mus. pag. 53. — So- 2259
ris uredosporiferis circinatis, cinnamomeo-ochraceis, maculis parvis, orbicularibus, flavescentibus, subinde purpureo-tinctis; uredosporis subglobosis 20-25 μ . diam.; soris teleutosporiferis circinatis, sæpe secus orbem singulum ad maculæ marginem dispositis, atro-brunneis; teleutosporis late ellipticis, 32-38 $\approx$ 20-25, rugulosis.

Hab. in petiolis paginaque inferiore foliorum Nabali et Solidaginis, Buffalo et Center Amer. bor.

116. **Puccinia Lycii** Kalchbr. in Grevillea XI, p. 21. — Soris amphi- 2260
genis, sparsis v. in maculis congregatis, apertis, planiusculis; uredosporis sphæroideis, 16 $\approx$ 18, flavidis; teleutosporis ellipticis, utrinque rotundatis, 30 $\approx$ 24, opacis, fuscis, episporio granulato, pedicello æquilongo aut longiore.

Hab. in foliis Lycii tubulosi, prope Somerset East Africae australis (MAC-OWAN).

c) Teleutosporæ quoad episporii superficiem incertæ

117. **Puccinia Œnotheræ** Vize in Grevillea V, pag. 109, Ell. et Ev. 2261
N. Amer. Fungi n. 1060 et 1858. — Macula nulla; soris rotundatis, nec confluentibus; teleutosporis brunneis, oblongis, constrictis, pedicellatis.

Hab. in Œnothera densiflora, in California (HARKNESS) et Œn. Fremontii Kansas (KELLERMANN) in America boreali. —

Exstant etiam uredosporæ immixtæ globosæ, flavescentes, subtiliter echinulatæ.

118. **Puccinia carbonacea** Kalchbr. et Cooke in Grevillea XI, p. 24. 2262

— Soris uredosporiferis hypophyllis, in acervulos rudes confluentibus, nigricantibus; uredosporis subglobosis, 18 μ . diam., flavofuscis; teleutosporis in iisdem soris, breviter ovatis, 24 $\approx$ 20, medio constrictis, breviter pedicellatis, fuscis.

Hab. in foliis *Abutili* cujusdam nec non *Sidæ rhombifoliæ* ad P. Natal Africae (MAC OWAN). — Dissepimentum in plerisque ita obsoletum, ut *Uromycetem* mentiantur.

119. **Puccinia macropoda** Speg. Fungi Argentini pugillus II, n. 34, 2263

Uredo striolata Speg. F. Arg. I, n. 50 et II, 45. — Amphigena, sæpius epiphylla vel caulogena, macula nulla; soris teleutosporiferis compactis, suborbicularibus vel elongatis, 1-4 $\approx$ 1 mm., atris, erumpentibus, compactiusculis; teleutosporis elliptico-ovatis, utrinque obtuse rotundatis, medio uniseptato-constrictis, opace fuligineis, episporio apice crassiusculo, 60 $\approx$ 30, pedicello hyalino basim versus attenuato, 100 $\approx$ 8-10; soris uredosporiferis amphigenis, cinnamomeis, diu epidermide cinerescenti tectis, minutis, subrotundis v. elongatis; maculis discoideis 1 mm. latis, exaridis, margine bene determinato, candido-translucidis, soris et areola flavo-pallescenti, indeterminata coronatis, dein difformibus, candido-translucidis, magnis 2-6 mm., raro nullis; uredosporis subsphæroideis vel ellipsoideo-ovoideis, episporio crassiusculo transversim conferte ruguloso-striolato, idcirco peripherice crenulato-dentatis, 20-38 μ . diam., fulvo-fuligineis.

Hab. in foliis caulibusque *Iresines celosioideis* rarius, in Republica Argentina Americæ australis.

120. **Puccinia Plantaginis** West. in Bull. acad. roy. Belg. 2 serie, 2264

tome XI, n. 6. — Soris hypophyllis, brunneo-atris, solitariis vel confluentibus, rotundatis, explanatis, minutissimis, epidermide rum-pente denudatis; uredosporis centralibus, rufescentibus, globosis; teleutosporis piriformibus v. ovoideis, pedicello brevissimo.

Hab. in foliis *Plantaginis lanceolatæ*, in Belgio.

121. **Puccinia Picridis** Haszl. Brand. und Rostp. Ungarns in Akad. 2265

wiss. Ung. 1877. — Soris uredosporiferis irregularibus, globosis, linearibus, subinde ramosis, brunneis; uredosporis globosis, oblongis v. ellipticis, epedicellatis, levibus; soris teleutosporiferis immixtis, atro-brunneis; teleutosporis ellipticis v. utrinque acutiusculis, pedicello brevissimo fultis.

Hab. in foliis *Picridis*, in Hungaria.

122. **Puccinia Bergii** Speg. Fungi Argentini pug. I, n. 30. — Hypo- 2266
phylla, macula nulla; soris sparsis v. secus orbem dispositis, ro-
tundatis vel oblongis, $\frac{1}{3}$ mm. diam., compactiusculis, primo tectis,
dein erumpentibus, epidermide fissa cinctis, cinnamomeis; uredosporis
immixtis, globosis vel irregulariter elongatis, 18-24 μ . diam.,
rufo-melleis, præcipue sursum verruculosus, episporio tenui; teleutosporis
cylindraneo-clavatis, medio 1-septato-constrictis, 60-85 $\approx$
18-20, episporio ubique tenui, apice rotundatis, loculis granuloso-
fartis, pallide melleis, pedicello hyalino, 30 $\approx$ 5, paraphysibus
nullis.

Hab. in foliis vivis *Adesmiæ punctatæ*, Uruguay Amer.
austr. (BERG).

123. **Puccinia Gilbertii** Speg. Fungi Arg. II, n. 14, *Uredo Gilbertii* 2267
Speg. F. Arg. II, p. 15, n. 46. — Hypophylla, maculis nullis;
soris minutissimis, 300-500 μ . diam., hinc inde circinatim densius-
cule sparsis, fulvo-fuligineis; teleutosporis ellipticis, utrinque obtu-
sissime rotundatis, medio septatis, non vel vix constrictis, 40-45
 $\approx$ 20, episporio tenui etiam apici, fuligineo-ochraceis, loculis non
vel 1-guttulatis, pedicello cylindraneo, 35 $\approx$ 5, hyalino; soris ure-
dosporiferis fulvis; uredosporis globosis, 20-25 μ . diam., hyalino-
flavescentibus, papilloso-granulosis.

Hab. in foliis vivis *Hyptidis fasciculatæ*, Uruguay et Pa-
storéo de Caaguazú in America australi.

124. **Puccinia æthiopica** Kalchbr. et Cooke in Grevillea XI, p. 22. 2268
— Soris uredosporiferis hypophyllis, gregariis, apertis, planiuscu-
lis, fuscis; uredosporis sphæroideis, rarius subellipsoideis, 18 $\approx$ 20
 μ . d., echinulatis, flavis; soris teleutosporiferis hypophyllis, dense
disseminatis, apertis, planis, atro-fuscis; teleutosporis breviter ova-
tis vel subglobosis, 28-30 $\approx$ 24-26, ad septum vix constrictis, lo-
culis æqualibus utrinque obtusissimis, fuscis, vix diaphanis; pedi-
cello hyalino flexuoso, teleutosporam longitudine superante.

Hab. in foliis *Stachydis grandifoliæ* et *æthiopicæ*
nec non *Leonotidis ovatæ*, ad Port Natal et in Africa australi.
— A *Puccinia Stachydis* DC. differt soris atro-brunneis nec fer-
rugineis teleutosporisque robustioribus obscurioribus, pedicello mul-
to longiore instructis.

125. **Puccinia Vernoniæ** Cooke in Grevillea X, pag. 126. — Hypo- 2269
phylla; soris sparsis, fuscis, in tomento nidulantibus; uredosporis
subglobosis, leniter granulatis, pallide-fuscis, 16-20 μ . diam.;

teleutosporis uredosporis immixtis, clavatis, nec perfecte evolutis.

Hab. in foliis *Vernoniæ* cujusdam, ad Nataliæ (Wood).

126. **Puccinia tumidipes** Peck in Bull. Torr. Bot. Club Vol. XII, n. 4, 2270
p. 34, t. XLIX, f. 3-8. — Soris uredosporiferis in foliis distinctis, minutis, amphigenis epidermide rupta cinctis, rufo-brunneis vel rubiginosis; uredosporis ovatis, ellipticis vel oblongo-ovatis, utrinque asperulis, $35-40 \approx 25-28$; maculis nullis; soris teleutosporiferis amphigenis, inæqualibus, epidermide rupta velatis, nigris; teleutosporis ellipticis vel oblongo-ellipticis, non vel vix septo constrictis, $50-62 \approx 28-35$, pedicello hyalino, inflato, teleutosporæ longitudinem æquante præditis.

Hab. in foliis vivis *Lycii Andersonii*, Arizona Amer. bor.

127. **Puccinia Brickellæ** Peck in Bull. Torr. Bot. Club Vol. XII, n. 4, 2271
p. 34. — Maculis nullis; soris uredosporiferis congestis, sæpe concentrice dispositis, epidermide velatis, demum ejusdem reliquiis obvallatis, rufo-brunneis; uredosporis subglobosis, late ovatis v. oblongo-ovatis, sæpe uninucleatis, $30-40 \approx 23-26$; soris teleutosporiferis conformibus; teleutosporis uredosporis commixtis, ellipticis vel oblongo-ellipticis, non vel vix septo constrictis, $50-62 \approx 35-40$; pedicellis teleutosporarum longitudinem æquantibus vel superantibus.

Hab. in foliis vivis *Brickellæ*, Arizona Amer. bor. (Jones).

128. **Puccinia Pachycarpi** Kalchbr. et Cooke in Grevillea XI, p. 23. 2272
— Soris uredosporiferis amphigenis, sparsis, solitariis vel confluentibus, primo epidermide tectis, pulvinatis, rufo-fuscis; uredosporis ovato-globosis, $18-20 \mu$. diam., episporio crasso, ruguloso; teleutosporis in iisdem soris, oblongo-clavatis, medio constrictis, loculo inferiore in pedicellum longissimum angustatis, sine pedicello ad 60μ . longis.

Hab. in foliis vivis *Pachycarpi grandiflori*, prope Somerset East et Port Nataliæ.

129. **Puccinia Gilii** Ell. et Harkn. New Calif. Fungi p. 14. — Ure- 2273
dosporis globosis, levibus, pallide brunneis; soris solitariis, ovatis aut oblongis, $0,5-1$ mm. diam.; teleutosporis oblongis, leniter constrictis, rufo-brunneis, loculo supero obscuriore, episporio vertice apiculato incrassatulo, $54 \approx 21$, pedicello 2-3-plo teleutosporâ longiore, hyalino.

Hab. in foliis *Gilii ciliatæ*, ad M. Diablo in California America borealis.

130. **Puccinia Trochomeriæ** Cooke in Grevillea X, p. 125. — Ure- 2274

dosporis ovalibus, brunneis, $22 \approx 18$, episporio granulato; soris teleutosporiferis hypophyllis, sparsis, mox erumpentibus, denique epidermide cinctis, atro-fuscis; teleutosporis ellipticis, medio constrictis, castaneis, $48 \approx 40$, pedicello elongato, 70 μ . longo, incrassato, hyalino.

Hab. in foliis *Trochomeriæ sagittatæ*, ad Inanda, Natal in Africa (Woon).

2. Species in Monocotyledoneis parasiticæ.

a) Teleutosporæ episporio levi præditæ vel quoad episporium dubiæ.

131. **Puccinia Allii** (DC.) Rud. in Linnæa IV, pag. 392, Winter Die 2275
Pilze p. 184, *Xyloma? Allii* DC. Flor. Franc. VI, p. 156, *Puccinia Alliorum* Corda Icon. Fung. IV, p. 12, *Uredo Alliorum* DC. l. c. p. 82 pro parte. — Soris uredosporiferis ellipticis aut lanceolatis, epidermide lacerato-laciniata cinctis, sparsis vel numerose confertis confluentibusque; uredosporis irregulariter rotundato-ellipsoideis, obovatis v. oblongis, $22-30 \approx 17-23$, verrucosis, flavis; soris teleutosporiferis irregulariter rotundatis v. ellipticis, dein oblongis, sparsis vel in greges ellipsoideos aut lanceolato-oblongos plerumque circa sorum uredosporiferum centram ordinatis, sæpe confluentibus, epidermide grisea, atra obtectis; paraphysibus numerosis, crassis, brunneis; teleutosporis diversiformibus, plerumque clavato-oblongatis, medio parum constrictis, apice valde incrassatis, rotundatis, angustatis vel acutatis, $35-80 \approx 17-30$, pedicello brevi, tenui suffultis.

Hab. in foliis *Allii oleracei*, multiflori et sativi, in Italia, Gallia, Germania, Græcia. — A *Puccinia Porri* certe dignoscenda. Forte eadem species est *Puccinia Allii* Cast. Cat. p. 201 ita descripta: P. caulina, epi- et hypophylla; maculis confluentibus; soris magnis, nigris; teleutosporis oblongis constrictis, flavescentibus, pedicello brevi sæpe recurvo hyalino. In *Allio Ampelopraso* in Gallia.

132. **Puccinia angustata** Peck XXV Rep. of St. Bot. p. 123, Burrill 2276
Parasitic Fungi of Illinois p. 196. — Hypophylla; soris utriusque formæ oblongis v. linearibus, sæpe secus lineas elongatas parallelas vel confluentes dispositis, atris, primo epidermide tectis, dein erumpentibus epidermideque cinctis; uredosporis subglobosis aut ellipticis, echinulatis, $21-30 \approx 16-21$; teleutosporis angustis, clavatis vel oblongo-clavatis, medio constrictis, apice obtusis acuminatisve, basi

attenuatis, 45-60 $\approx$ 15-21, pedicello colorato, plerumque teleuto-sporâ brevior.

Hab. in foliis vivis subemortuisve Scirpi atro-virentis, silvatici et eriophori nec non Junci cujusdam indeterminati, in America boreali.

133. **Puccinia tomipara** Trel. in Journal of Mycology I, pag. 14. — 2277

Soris uredosporiferis parvis, rotundatis vel leniter elongatis, epiphyllis; uredosporis ut plurimum globosis, subinde ruguloso-verrucosis, 22-26 μ . diam., pallide flavis; soris teleutosporiferis compactis, atris, diu epidermide tectis, rotundatis vel elongatulis, plerumque circ. 2 mm. diam.; teleutosporis irregulariter oblongis, sessilibus, vertice haud incrassatis, 35-43 $\approx$ 13-22, 2-6-locularibus, sæpe tomiparis, episporio tenui, pallide castaneo-brunneis.

Hab. in foliis Bromi verisimiliter ciliati, in America boreali. — *P. triarticulata* (B. et C.) similis, ad genus *Phragmidium* quodammodo vergens. In teleutosporis septum superius est frequenter obliquum et non raro verticale.

134. **Puccinia flaccida** B. et Br. Ceylan Fungi n. 821, Burrill Fungi 2278

of Illinois p. 202. — Amphigena; soris parvis, oblongis vel linearibus, sæpe confluentibus, demum emergentibus, ferrugineis; uredosporis subglobosis, 25 μ . diam., echinulatis, cinnamomeis; teleutosporis 10 μ . longis, flaccidis, pedicello 22 μ . longo hyalino, obtusis, medio contractis; mesosporis 30-40 μ . longis, clavatis, cinnamomeis.

Hab. in foliis Panici Cruris-galli, pr. Peradenya in insula Ceylon et Illinois Amer. bor. — A *Puccinia graminis* præcipue teleutosporis flaccidis differt.

135. **Puccinia Eleocharidis** Arthur Prelim. List of Iowa Ured. p. 156, 2279

n. 34. — Uredosporis polygono-globosis vel ovoideis, flavis, 18-30 $\approx$ 18-24, subtiliter sparseque verrucosis; soris teleutosporiferis subrotundatis, sparsis, fere atris, diu epidermide demum fissa tectis; teleutosporis oblongo-cuneatis, leniter vel non constrictis, 45-54 $\approx$ 16-20, brunneis vel atro-brunneis, vertice valde vel non incrassato, oblique subtruncato, basi cuneata vel leniter inflata, pedicello crasso, brevissimo.

Hab. in foliis Eleocharidis intermediæ et palustris, Iowa Americæ borealis.

136. **Puccinia Elymi** Westend. in Bull. Brux. 1851, p. 408, *Uredo* 2280

Elymi West. l. c. p. 405. — Soris uredosporiferis hypophyllis, rufescentibus, demum flavescentibus, elongatis, ellipticis, epidermidis

longitudinaliter fissæ fragmentis tectis; uredosporis globosis vel ovoideis, sessilibus vel breviter pedicellatis; soris teleutosporiferis epiphyllis brunneis, dein subatris, elongatis, explanatis, plerumque tectis, dein epidermide fissa subdenudatis; teleutosporis fusiformibus, medio transverse 1-septatis, pedicello brevi, crasso, hyalino fultis.

Hab. in foliis Elymi arenarii, prope Ostende in Belgio (LANDZWEERT).

137. **Puccinia purpurea** Cooke in Grevillea V, pag. 15. — *Amphigena*; maculis læte purpureis; soris irregularibus, 3-6-congestis, atro-brunneis; uredosporis ovatis, $35 \approx 25-30$, levibus, brunneis; teleutosporis elongato-ovatis, brunneis, superne hemisphæricis, inferne obconoideis, longe stipitatis, $40-45 \approx 22-25$. 2281

Hab. in foliis Sorghi vulgaris, in India orientali (HOBSON) et foliis Zeæ in Africa australi.

138. **Puccinia Kraussiana** Cooke in Grevillea X, pag. 126. — *Uredosporis* ovatis, pallide fuscis, $35-40 \approx 23-25$, leniter asperulis, immixtis; soris teleutosporiferis hypophyllis, sparsis, orbicularibus, convexis, compactis, purpureo-brunneis; teleutosporis congestis, sublanceolatis, obtusis, mutua pressione difformibus, pallidis, $65-70 \approx 25$, pedicello crassissimo, infra attenuato, $90 \approx 15-18$. 2282

Hab. in foliis Smilacis Kraussianæ, Natali Africae (WOOD).

139. **Puccinia Aletridis** B. et C. North Amer. Fungi n. 543, Burrill *Fungi of Illinois* pag. 194. — *Amphigena*; soris uredosporiferis prominulis, pulverulentis, cinnamomeis; uredosporis subglobosis vel ovatis, $21-27 \approx 18-24$, echinulatis; maculis nullis; teleutosporis in soros sparsos congestis, clavatis vel ellipticis, abrupte constrictis, subfusiformibus, apice papilliformi, episporio membranis concentricis insigni, $30-50 \approx 18-21$, pedicello hyalino, teleutosporam subæquante vel paululo longiore. 2283

Hab. in foliis subsiccis Aletridis aureæ et farinosæ, in Carolina infer., Wisconsin, Massachusetts et Indiana, Amer. bor.

140. **Puccinia Iridis** (DC.) Wallr. in Rabenh. Krypt. Fl. n. 211, Winter Die Pilze p. 184, Schroet. Pilz. Schles. p. 337, *Uredo Iridis* DC. Encycl. VIII, p. 224, *Puccinia truncata* Berk. et Br. in Ann. Nat. Hist. n. 754, *Uredo limbata* b. Rabenh. l. c. I, p. 12, *Puccinia crassivertex* Thüm. in Myc. univ. n. 546. — *Uredosporis* in soros confertos, hypophyllos, tectos, dein liberos, ferrugineo-fuscidulos, parvulos, orbiculares congestis, ellipticis vel ovoideis, $20-35 \approx 16-26$, aculeatis, ochraceis, 3 poros incrassatos gerentibus; 2284

teleutosporis in soros hypophyllos, striiformes, liberos, atros, exiguos congestis, clavatis, apice rotundato vel obtusiusculo vel acuminato, medio constrictis, $30-55 \approx 14-22$, levibus, dilute fuscis, pedicello $12 \approx 5$, rarius longiore, hyalino.

Hab. in foliis Iridis foetidissimæ, graminifoliæ, Syrsynchii, fumosæ, ruthenicæ, germanicæ, pumilæ, Pseudo-acori, gramineæ, in Italia, Gallia, Arduennis, Britannia, Helvetia, Germania nec non in Sibiria asiatica (THÜMEN) et in regione sinensi (PATOILLARD).

141. **Puccinia oblongata** (Link) Winter Die Pilze p. 183, Schroet. 2285
 Pilz. Schles. p. 337, *Cæoma oblongatum* Link Observ. II, p. 27, *Puccinia Luzulæ* Lib. Exsicc. I, n. 94, *Uredo macrospora* Desm. Crypt. II, n. 401, *Trichobasis oblongata* Berk. Outl. p. 208, Cooke M. F. t. VII, f. 158, 159, *Uredo oblongata* Grev. Sc. crypt. Fl. t. 12, *Uromyces oblongatus* Fisch. in Fungi Europ. n. 2370. — Uredosporis in soros ovato-ellipticos, ferrugineos, in macula bullata, minuta, purpurascente insidentes, epidermide lacerata tectos congestis, oblongo-ovatis vel clavulatis, rarius ellipsoideis, plerumque $30-42 \approx 12-18$, rarius $23-30 \approx 17-20$, flavis, levibus, apice tantum aculeolatis; teleutosporis soros epi- vel hypophyllos, ellipticos vel lineares, atro-brunneos, epidermide lacerata cinctos maculasque plus minus rufescentes efficientes efformantibus, clavatis, $40-80 \approx 16-24$, apice rotundatis, medio constrictis, episporio levi, brunneolo, apice usque ad 27 μ . incrassato, concentrice striato præditis, contentu rufescente, pedicello crassiusculo, brevi.

Hab. in foliis Luzulæ pilosæ, vernalis, campestris, maximæ, in Italia, Arduennis, Belgio, Britannia, Germania, Austria et Helvetia.

142. **Puccinia Junci** (Strauss) Winter Die Pilze p. 171, Schroet. Pilz. 2286
 Schles. p. 338, *Uredo Junci* Strauss in Wett. Ann. II, p. 105, *Puccinia littoralis* Rostr. in Thümen. Myc. univ. n. 327. — Uredosporis in soros ferrugineos, ellipticos, plerumque in maculis rotundatis sitos congestis, globosis, ellipticis vel ovatis, plerumque $20-28 \approx 15-20$, episporio dilute brunneo, aculeolato, sæpe sublevi; teleutosporis soros oblongos, convexos, atro-fuscos, sæpe confluentes efformantibus, clavatis vel subfusoides, plerumque $35-60 \approx 16-23$, sursum explanatis vel acuminatis, medio parum vel haud constrictis, episporio dilute brunneo, levi, apice valide (usque ad 8 μ .) incrassato, pedicello brunneolo, usque ad 50 μ . longo, glabro.

Hab. in foliis culmisque Junci Leersii, conglomerati,

compressi et Gerardi, sociâ sæpe *Darlucâ Filo*, in Germania nec non ad littora marina ins. Fioniæ ad Bjornemose Daniæ et in America boreali.

143. **Puccinia cancellata** Sacc. et Roum. in Rev. Myc. 1881, p. 26, 2287

Uredo cancellata Dur. et Mont. Fl. Alger. I, p. 314, Syll. n. 1169. — Soris subcutaneis, majusculis, elongatis, dein rimose dehiscentibus, obscure cinnamomeis; teleutosporis constricto-didymis utrinque rotundatis truncatisve, 30-35 $\approx$ 20-22, episporio apice leniter incrassato, ochraceo-cinnamomeis, pedicello brevi, 18-20 $\approx$ 5, hyalino sæpe deciduo suffultis; uredosporis commixtis ellipsoideis vel subglobosis, 35-40 $\approx$ 25-28, pallide ochraceis, hyalino-stipitellatis, parce tuberculosus.

Hab. in calamis Junci acuti, in Algeria.

144. **Puccinia Scirpi** DC. Fl. Franç. II, pag. 223, Winter Die Pilze 2288

pag. 182, Schroet. Pilz. Schles. pag. 338, *Uredo scirpina* West. 7.^e Notice n. 38, *Puccinia Junci* Mart. Fl. Mosq. pag. 227 pro parte. — Uredosporis in soros oblongos, ellipticos vel lineares, epidermide bullata, dein longitudinaliter fissa, diu tectos, sæpe confluentes, sparsos vel seriatos, ferrugineos congestis, plerumque ovatis, rarius subglobosis, 19-32 $\approx$ 12-24, aculeatis, dilute brunneis; teleutosporis in soros ovales vel sublineares, brunneos, dein nigrescentes, minutos, epidermide fissa cinctos congestis, clavato-oblongis, apice explanatis vel angustato-acuminatis, medio plerumque haud constrictis, 30-60 $\approx$ 10-20, episporio dilute brunneo, levi, apice circ. 5 μ . crasso, obscuriori, pedicello flavescente, 25-40 μ . longo; teleutosporis unilocularibus plus minus frequenter intermixtis, 32-40 μ . longis.

Hab. in calamis foliisque Scirpi lacustris, in Italia, Belgio, Gallia et Germania.

145. **Puccinia Sorghi** Schwein. North Amer. Fungi p. 295, n. 2910 2289

(1831), Schroet. Pilz. Schles. p. 338 (1887), *Puccinia Maydis* Bérèng. in Atti VI Riun. scienz. ital. in Milano p. 475 (1844), Garrov. e Pirotta Rugg. gran. ture. p. 6 cum tabula (1875), *Uredo Zeæ* Desmaz. in Ann. Scienc. Nat. 1840 p. 182, *Puccinia arundinacea* var. *Maydis* Cast. Catal. I, p. 199 (1845), *Puccinia Zeæ* Bérèng. in Klotzsch Herb. viv. myc. Cent. XVI, Suppl. (1845), *Ruggine del grano Turco* Carradori in Giorn. fis. Pavia vol. VIII (1815) non *Uredo Maydis* DC. nec *Cæoma Zeæ* Link. — Soris uredosporiferis amphigenis, numerosis, ellipticis vel sphaericis, sparsis vel approximatis, hinc inde confluentibus, convexiusculis, mox ex

epidermide bullata longitudinaliter fissa erumpentibus, brunneo-rufescentibus; uredosporis globosis, ellipticis vel ovatis, $23-30 \approx 22-26$, leniter verruculosus, interdum guttulis oleosis faretis, primo lutescentibus, demum rufo-brunneis, pedicello brevi cylindraceo, hyalino fultis, paraphysibus subnullis; soris teleutosporiferis forma variis, plerumque linearibus vel oblongis sat prominulis, amphigenis, sub epidermide albidis, dein (ea rupta), convexiusculis, superficialibus, aterrimis; teleutosporis ovato-oblongis vel clavatis, obtusis, medio constrictis, loculo superiore interdum leniter acuminato, episporio crasso, pro ætate sordide lutescentibus, dein fuscis, tandem subatris, $28-45 \approx 12-17$, levibus, pedicello elongato, circ. 5μ . cr., cylindraceo, persistente, superne incrassatulo fultis; paraphysibus nullis.

Hab. in foliis, vaginis, culmis etc. Zeæ Maydis et Sorghi, in Italia, Gallia, Austria, Germania, Lusitania, America boreali et australi, prope Somerset East Africae australis. — Sec. Winter Die Pilze p. 181 uredosporæ $23-38 \approx 20-26$, teleutosporæ $30-52 \approx 16-24$.

146. **Puccinia Baryi** (Berk. et Br.) Winter Die Pilze p. 178, Schroet. ²²⁹⁰ Pilz. Schles. p. 338, *Epitea Baryi* Berk. et Br. in Ann. Nat. Hist. 1854, n. 755, *Puccinia Brachypodii* Otth. in Mitth. Nat. Gesellsch. in Bern, 1861, pag. 81, *Lecythea Baryi* Berk. Outlines pag. 334, Cooke Handb. n. 1694. — Uredosporis in soros ferrugineos, minutos sed secus series lineares ordinatos congestis, globosis vel ovatis, $17-25 \approx 15-18$, aurantiacis, aculeolatis, paraphysibus apice globoso-inflatis, usque ad 33 longis intermixtis; teleutosporis soros lineares, diu tectos, atro-fuscos efformantibus, ellipsoideis vel clavatis, apice explanatis vel acutiusculis, medio parum vel non constrictis, $26-35 \approx 27-24$, episporio fuscidulo, levi, apice crassiusculo et obscuriori, pedicello brevissimo, sæpe subnullo.

Hab. in foliis vaginisque Brachypodii silvatici, gracilis et pinnati, in agro Veneto Italiae, in Austria, Helvetia, Britannia et Germania et Bambusæ Thouarsii prope Peradenya in insula Ceylon.

147. **Puccinia longissima** Schroet. in Cohn Beitr. III, pag. 70, Pilz. ²²⁹¹ Schles. pag. 339, Winter Die Pilze pag. 170, *P. paraphysaria* Bagnis Monogr. Pucc. p. 75 (ex parte), fig. 323-324. — Uredosporis non evolutis; teleutosporis in soros latos, crassos, pulvinatos, atro-brunneos, sæpe confluentes, mox nudos, lanceolatos vel lineares congestis, clavatis vel subfusoides, $50-110 \approx 13-25$, loculo inferiori longiore, angustiori, loculo superiori elliptico vel oblon-

go, obtuso, rotundato vel conoideo, medio plus minus constrictis, brunneis, levibus, apice crassiusculis obscurioribusque, pedicello brunneolo, brevi, paraphysibus nullis.

Hab. in *Koeleria cristata* in Silesia Germaniæ (SCHROETER) et *Koeleria Berythriæ* in Ægypto (BARBEY). — Uredosporis ignotis, species videtur ad hanc sectionem pertinere.

148. **Puccinia Stipæ** Arthur Prelim. List of Jowa Uromyces p. 160, 2292 n. 60. — Soris uredosporiferis oblongis, minutis, plerumque epiphyllis, flavescentibus, inconspicuis, diu tectis; uredosporis rotundatis, oblongis seu ovatis, 20-30 $\approx$ 15-20, flavis, subtiliter rugulosis vel subinde echinulatis; soris teleutosporiferis oblongis vel oblongo-ovatis, medio valde constrictis, 42-56 $\approx$ 18-25, levibus, brunneis, vertice incrassato quandoque tenui, rotundato vel obtuso, raro acuto, basi obtusa vel subinde angustato, pedicello leniter colorato, teleutosporâ 2-3-plo longiore.

Hab. in foliis *Stipæ Spartææ*, Jowa Americæ borealis.

149. **Puccinia Kalchbrenneriana** De-Toni, *Puccinia Ornithogali* 2293 Kalchbr. in *Grevillea* IX, p. 21 nec Hazsl. — Sparsa; soris ellipticis, tectis, demum elongato-fissuratis, fuscis; uredosporis ellipticis, levibus, pallidis, 20-22 $\approx$ 18; teleutosporis ellipticis, uniseptatis, constrictis, fuscis; episporio levi; pedicellis teleutosporis æquilongis.

Hab. in *Ornithogalo*, in Africa australi. — Adest etiam species homonyma ab Hazslynki Magyar. Krypt. Viran. p. 12 quæ cum hac forte identica est.

150. **Puccinia Smilacis** Schwein. Syn. Carol. p. 494, Burrill Fungi 2294 of Illinois p. 195, *Uredo Smilacis* Schwein. l. c. p. 471. — Hypophylla; maculis minutis, numerosis, lateritio-rufis; soris sparsis vel irregulariter circinatis, punctiformibus aut elongatis, epidermide rupta cinctis, paraphysibus brevibus immixtis; uredosporis ovatis, leniter echinulatis, 21-27 μ . diam., pallidis, pedicellis fragilibus fultis; teleutosporis late ellipticis, constrictis, loculo superiori rotundato vel obtuse acutato, 36-42 $\approx$ 21, levibus, sordide coloratis, pedicello colorato, crasso longiusculo.

Hab. in foliis *Smilacis rotundifoliæ*, glaucæ, pumilæ et hispidæ, in Carolina infer., Pensylvania, Shelter Island et Illinois Americæ borealis. — Sec. Peck viget etiam in *Lilio canadensi*.

151. **Puccinia Cynodontis** Desmaz. Exsicc. III, n. 655, Winter Die 2295 Pilze p. 180. — Soris uredosporiferis minutis, ellipticis vel oblon-

gis, ochraceo-umbrinis, sparsis aut seriatis; uredosporis irregulariter globosis aut breviter ellipticis, 19-28 μ . diam., concoloribus, subtilissime granulatis, sublevibus, pedicello brevissimo instructis; soris teleutosporiferis ellipsoideis, oblongis vel linearibus, sparsis vel seriatis sæpeque confluentibus, pulvinulatis, atris; teleutosporis plerumque ellipsoideis vel oblongis, loculo superiore ut plurimum longiori, apice incrassatis, rarius rotundatis, plerumque apiculo conoideo auctis, deorsum rotundatis aut angustatis, medio parum constrictis, 30-60 $\approx$ 15-25, levibus, brunneis.

Hab. in foliis vaginisque *Cynodontis Dactyli*, in Gallia, Austria et Germania passim.

152. **Puccinia Cesatii** Schroet. in Cohn Beitr. III, p. 70, Winter Die Pilze p. 180, *Uredo (Podocystis) Andropogonis* Ces. in Klotzsch Herb. myc. I, n. 1997. — Soris utriusque formæ ellipticis, oblongis vel elongatis, crasse pulvinatis, sæpe confluentibus, mox denudatis; uredosporis globosis vel irregulariter rotundatis, rarius breviter ellipticis, 23-33 μ . diam., subtiliter verrucosis, obscure brunneis; teleutosporis late ellipsoideis, utrinque rotundatis, apice valde incrassatis, medio leniter constrictis, 30-40 $\approx$ 22-30, levibus, brunneo-fuscis, pedicello longiusculo, persistenti, sæpe brunneolo instructis.

Hab. in foliis *Andropogonis Ischæmi* et *hirti*, in Italia, Lusitania, Helvetia, Austria et Germania. — Sæpe cum teleutosporis 1-septatis teleutosporæ nonnullæ uniloculares seu mesosporæ immixtæ reperiuntur.

153. **Puccinia australis** Körn. in Thümen F. austr. n. 842, non Spe-gazz., Winter Die Pilze p. 179. — Soris uredosporiferis linearibus, angustatis; uredosporis globosis vel piriformibus, aculeatis, levibus, 15-13 $\approx$ 14-17, pulchre aurantiacis, stipite nullo; soris teleutosporiferis ellipticis vel elongato-ellipticis, apertis, exsertis, nigris; teleutosporis fuscis, ellipticis vel breviter ellipticis, medio vix vel non constrictis, apice paullo incrassatis, obtusis vel in acumen breve obtusum sensim productis, basi subrotundatis, 28-45 $\approx$ 17-24, levibus, pedicello gracili, subhyalino vel læte fuscescente, teleutosporis longiore vel eas æquante.

Hab. in foliorum pagina inferiore et vaginis *Moliniaë serotinaë* vivæ, vix florentis, prope Bozen in Tyrolia.

154. **Puccinia caricicola** Fuck. Symb. II. Nachtr. p. 16, Winter Die Pilze p. 182. — Soris uredosporiferis rotundatis vel linearibus, seriatis vel sparsis, minutis, erumpentibus, fuscis; uredosporis obovatis, breviter pedicellatis, 19-28 $\approx$ 15-20, asperis, fuscis; soris te-

leutosporiferis plerumque in foliis aridis, evolutis sparsis, hemisphaericis, atro-fuscis; mesosporis in pedicello hyalino ovatis irregularibusque, antice apiculatis obtusisve et episporio incrassato, obscuriore, $23-40 \approx 15-19$, fuscis, levibus; teleutosporis multo paucioribus sed semper præsentibus, breviter pedicellatis, oblongo-ovatis, basi angustatis, apice obtusis, ad septum parum constrictis, $30-45 \approx 15-20$, levibus, fuscis.

Hab. in foliis culmisque Caricis supinæ, in Rhenogovia Germaniæ.

155. **Puccinia microsora** Körn. in Fuck. Symb. myc. II, p. 14, Winter 2299

Die Pilze p. 181. — Soris uredosporiferis parvis ellipticis aut linearibus, sparsis, flavis; uredosporis globosis, piriformibus vel ellipsoideis, $24-35 \approx 19-26$, subtiliter aculeatis, flavescentibus; soris teleutosporiferis minimis, subseriatim dispositis, exsertis, suborbicularibus v. breviter ellipticis, epidermide demum parum fissa obtectis; teleutosporis difformibus, aliis rarioribus Pucciniæ modo septatis, ellipticis, $35-60 \approx 12-17$, medio paullo constrictis, apice plerumque acutis et parum vel vix incrassatis, episporio tenui levi, fuscescenti-hyalinis, pedicello brevi vel perbrevis ipsis multo breviori insidentibus; aliis (mesosporis) plurimis, Uromycetis modo simplicibus, obovatis vel clavatis, $35-60 \approx 17-26$, obtusis, apice vix vel non incrassatis, levibus, fuscis, in pedicellum hyalinum gracilem mesosporam circiter æquantem angustatis.

Hab. in foliis Caricis vesicariæ, in Germania. — « Præcedenti peraffinis ».

156. **Puccinia emaculata** Schwein. North Amer. Fungi n. 2912, p. 295, 2300

Burrill Fungi of Illinois p. 201. — Epiphylla, rarius hypophylla; soris parvis, prominulis, numerosis, irregulariter sparsis vel gregariis, raro confluentibus, atris, erumpentibus, diu epidermide lacerata cinctis; uredosporis subglobosis, $15-24 \mu$. diam., echinulatis; teleutosporis ellipticis vel late clavatis, leniter constrictis, apice incrassatis obtuseque acutatis aut rotundatis, deorsum angustatis, $30-48 \approx 15-21$, levibus, fuscidulis, pedicello colorato, longiusculo.

Hab. in foliis Tricuspidis seslerioidis, Eragrostidis pectinacæ et nonnullorum Panicorum, in America boreali.

157. **Puccinia Cypripedii** Arthur Prelim. List of Iowa Uredineæ, 2301

p. 156, n. 32. — Soris uredosporiferis rotundatis, explanatis, hypophyllis, sparsis, brunneis, nudis, epidermide lacerata cinctis; uredosporis rotundatis vel ellipsoideis, $17-22 \approx 14-18$, obscure brunneis, sparse echinulatis; soris teleutosporiferis hypophyllis, sparsis,

rotundatis, atris, nitidis, epidermide lacerata vix cinctis; teleutosporis oblongis vel oblongo-obovatis, $30-42 \approx 16-18$, levibus, medio constrictis, episporio tenuiusculo instructis, vertice valde incrassatis, $6-10 \mu$. cr., explanatis, rotundatis vel obtusis vel rarius acutis, pedicello teleutosporam subæquante, gracili.

Hab. in foliis Cypripedii pubescentis, Decorah Jowa Americæ borealis.

158. **Puccinia Windsoræ** Schwein. North Amer. Fungi p. 295, Burrill Fungi of Illinois p. 197. — Hypophylla, subinde epiphylla; soris parvis, leniter elevatis, irregulariter sparsis, numerosissimis, linearibus vel oblongis, subnudis; uredosporis subglobosis vel obovatis, $18-24 \mu$. diam., echinulatis, obscure brunneis; teleutosporis late ellipticis vel obovatis, leniter vel haud constrictis, apice obtuse rotundatis, $27-39 \approx 18-21$, levibus, pedicello valide colorato, teleutosporam æquante vel eâ brevior.

Hab. in foliis Muehlenbergiæ et Windsoræ quinquedentatæ, in America boreali.

159. **Puccinia Sporoboli** Arthur Prelim. List of Jowa Ured. p. 159, n. 58. — Uredosporis rotundatis, $24-28 \mu$. diam., flavis, subtiliter rugulosis; soris teleutosporiferis folii- vel cauliculis, oblongis aut linearibus, brunneo-atris, mox nudis, epidermidis fragmentis vix cinctis; teleutosporis oblongis vel oblongo-clavatis, $28-45 \approx 15-21$, medio vix vel non constrictis, levibus, obscure brunneis, vertice incrassato, semicirculari vel obtuso, basi acuta sæpius obtusa, pedicello valido, colorato, teleutosporâ plerumque longiore.

Hab. in foliis caulibusque Sporoboli heterolepis, Jowa Americæ borealis. — Adsunt quoque teleutosporæ uniloculares seu mesosporæ oblongo-clavatæ v. oblongo-fusiformes v. obovatæ, $18-24 \approx 14-18$.

160. **Puccinia Wurmbeæ** Cooke et Masee in Grevillea XVI, p. 74. — Soris elongatis, bullatis, atro-fuscis; uredosporis ellipticis, granulatis, fuscis, $25-28 \approx 15-18$; teleutosporis clavatis, uni-septatis, leniter medio constrictis, loculo superiori convexo truncato, obscuriori, loculo inferiori triquetro, deorsum in pedicellum hyalinum attenuato, episporio levi, $60-70 \approx 20-25$.

Hab. in foliis Wurmbeæ dioicæ, ad Beltana Australiæ (Dom. RICHARDS).

161. **Puccinia Andropogonis** Schwein. N. Amer. Fungi n. 2911, p. 295, Burrill Fungi of Illinois p. 202. — Hypophylla; soris majusculis, numerosis, ellipticis, dense aggregatis, clavatis, obtusis, fuscis, epi-

dermide dein lacerata cinctis; uredosporis subglobosis, 21-30 μ . d., echinulatis, crassiuscule tunicatis; teleutosporis obovatis aut ellipticis vel clavatis, leniter medio constrictis, apice ut plurimum incrassatis, obtuse rotundatis aut subinde breviter acutatis, 30-45 μ = 15-22, levibus, fuscis; pedicello plus minus colorato, elongato.

Hab. in foliis *Andropogonis furcati* et *scoparii*, in America boreali. — Teste Farlow, huc spectare videtur *Puccinia Ellisiana* Thüm. in Myc. Univ. n. 1336.

162. **Puccinia Anthoxanthi** Fuck. Symb. II. Nachtr. p. 15, Winter 2306

Die Pilze p. 180. — Soris uredosporiferis mox nudis, ellipticis vel linearibus, flavo-ferrugineis; uredosporis plerumque ovatis obovatisque, raro magis elongatis, 20-30 μ = 14-19, flavescentibus, pedicello nullo, subtilissime spinulosis; soris teleutosporiferis sparsis, minutis, mox nudis, brunneis, ellipticis vel linearibus; teleutosporis ovatis seu oblongo-clavatis, medio constrictis, antice obtusis, obscurioribus, rare obtuse apiculatis, basi rotundatis, pedicello cylindraceo, abrupte inserto, raro parum attenuatis, sine pedicello, 26-42 μ = 16-21, brunneis, levibus.

Hab. in foliis vaginisque *Anthoxanthi odorati*, prope Æstrich in Rhenogovia Germaniæ.

b) Teleutosporæ episporio verrucoso vel papillato præditæ.

163. **Puccinia Veratri** Niessl in Verhandl. Zool. bot. Gesellsch. in 2307

Wien 1859, p. 177, Winter Die Pilze p. 184. — Maculis indeterminatis, flavescentibus; soris utriusque formæ parvis, brunneis, nudis, sparsis; uredosporis globosis aut ellipsoideis, 19-30 μ = 17-23, aculeatis, pallide brunneis; teleutosporis oblongis, medio profunde constrictis, basi rotundatis vel in pedicellum angustatis, apice vix incrassatis, rotundatis vel subattenuatis, loculis facile secedentibus, 25-50 μ = 15-26, verrucosis, brunneis, pedicello deciduo, breviusculo, hyalino.

Hab. in foliis vivis *Veratri albi* et *Veratri viridis*, in Gallia, Helvetia, Austria et Germania, prope Buffalo et in California Americæ borealis nec non in Sibiria asiatica.

164. **Puccinia gibberosa** Lagerh. in Bericht. der Deutsch. botan. Ge- 2308

sellschaft 1888, pag. 126 cum icone. — Soris uredosporiferis in pagina superiore foliorum solitariis vel secus strias dispositis, non confluentibus, paraphysibus præditis; uredosporis globosis vel ovato-globosis, 28-30 μ , diam., episporio pallide fusco, echinulato et poris circiter 8 (ad 10?) præditis, aureis; soris teleutosporiferis

hypophyllis, nigris, parvis, epidermide tectis; teleutosporis cuneiformibus vel oblongo-cylindricis, 40-63 $\approx$ 12-18, medio non vel levissime constrictis, apice attenuatis vel obtusis, ad basim attenuatis vel rarius rotundatis, episporio fusco ad apicem teleutosporarum incrassato et papillis fuscis 1-4 prædito; pedicello brevi, pallide fusco, 6 μ . longo, haud deciduo.

Hab. in foliis vivis Festucae silvaticæ, prope Freiburg in Br. in Germania.

165. **Puccinia oblecta** Peck in Burrill Fungi of Illinois p. 196. — 2309

Amphigena et caulina; soris sparsis vel irregulariter aggregatis, sæpe confertis, oblongis vel plus minus circularibus, diu tectis, leniter elevatis, atris; uredosporis ellipticis vel obovato-oblongis, 21-30 $\approx$ 15-20, subtiliter echinulatis; teleutosporis ellipticis, constrictulis, obtusis vel obtuse acutiusculis, 45-60 $\approx$ 18-20, subinde septatis, levibus, pedicello colorato, brevi, teleutosporam dimidiam subæquante.

Hab. in foliis caulibusque Scirpi validi et pungentis, in America boreali.

166. **Puccinia Asphodeli** Duby Bot. Gall. II, p. 891, Bagnis Monogr. 2310

tab. IV, fig. 136, *Uredo Asphodeli* DC. Fl. Fr. VI, *Cutomyces Asphodeli* Thüm. Contr. Fl. Lusit. p. 12, n. 64. — Amphigena; maculis violaceo-fuscis; soris prominulis, rufo-fuscis, orbiculis ovatisve, sparsis, solitariis aut hinc inde aggregatis, epidermide rupta cinctis; teleutosporis magnis, ovato-sphæricis, 50-55 $\approx$ 40-42, ovatisve obtusis, tenuissime punctulatis, medio vix constrictis, pedicello brevissimo vel subnullo; uredosporis globosis, 45 μ . diam., tenuissime granulosi, dilute flavidi.

Hab. in foliis vivis Asphodeli cerasiferi et ramosi, in Sardinia (Doct. MARCUCCI), Lusitania (THUEMEN) et Gallia (DUBY).

Sectio D. PUCCINIOPSIS Schroet. Spermogonia, æcidia et teleutosporæ in eadem matrice evolutæ; uredosporæ haud evolutæ (rarius singulæ incurvæ teleutosporis immixtæ). — Hæc sectio videtur magis quam aliæ fictilia.

167. **Puccinia Sii-Falcarie** (Pers.) Schroet. Pilz. Schles. pag. 341, 2311

Æcidium Sii-Falcarie Pers. Syn. Fung. p. 212, *Æcidium Falcarie* DC. Fl. Franc. VI, p. 91, *Uredo Falcarie* Spr. Syst. IV, p. 573, *Cæoma falcariatum* Link Sp. II, p. 53, *Cæoma Falcarie* Schlecht. Fl. Berol. II, pag. 116, *Puccinia Falcarie* Fuck. Symb. Myc. p. 52. — Spermogoniis æqualiter per totam foliorum superficiem expansis, subdistantibus, sæpius omnia folia radicalia

unius plantæ infestantibus, melleis; æcidiis ut spermogoniis dispositis, pseudoperidiis explanatis, margine albo, dentato, deciduo; æcidiosporis polygoniis, $14-28 \approx 12-20$, subtiliter punctatis, aurantiaco-rufis; teleutosporis in soros rotundatos vel irregulares, sæpius confluentes, diu epidermide tectos, castaneo-brunneos congestis, ellipticis vel ovatis, plerumque utrinque rotundatis v. basi angustatis, medio parum vel haud constrictis, $30-45 \approx 18-26$, levibus, brunneis, pedicello gracili, brevi, deciduo, hyalino.

Hab. in foliis caulibusque *Falcarie Rivini*, *F. vulgaris* et *Pimpinellæ magnæ* (æcidia), in Austria, Germania, Gallia et Belgio.

168. **Puccinia Bunii** (DC.) Wint. Die Pilze p. 197, *Æcidium Bunii* 2312

DC. Synops. p. 51, *Puccinia Bulbocastani* Fuck. Symb. p. 52. — *Æcidiis* confertis; pseudoperidiis breviter cylindraceis, margine albedo, profunde laciniato, erecto vel extrorsum revolutis; æcidiosporis polygoniis, $26 \approx 15-20$, subtiliter verrucosis, flavo-aurantiacis; soris teleutosporiferis rotundatis aut ellipticis, in petiolis elongatis, sæpius confluentibus, atro-fuscis, sparsis v. per paucos aggregatis, diu epidermide vesiculosa tectis; teleutosporis ellipsoideis vel oblongis, non raro clavatis vel utrinque rotundatis, medio non vel parum constrictis, breviter pedicellatis, $26-44 \approx 15-23$, subtiliter punctatis, fuscidulis.

Hab. in foliis petiolisque *Cari Bulbocastani* et *Pimpinellæ Saxifragæ*, in Helvetia, Britannia, Germania et Gallia nec non in foliis *Athamanthæ cretensis* et *Laserpitii Sileris* in Italia boreali.

169. **Puccinia conglomerata** (Strauss) Schm. et Kunze Crypt. exs. 2313

n. 191, Winter Die Pilze p. 195, Schroet. Pilz. Schles. pag. 342, *Uredo conglomerata* Strauss in Wett. Ann. II, p. 100, *Puccinia Syngenesiarum* Link Sp. II, pag. 74, p. p., *P. expansa* Link l. c. p. 75?, *Æcidium Senecionis* Desmaz. in Ann. Scienc. Nat. 1836, pag. 243, *Puccinia Senecionis* Libert Crypt. Ard. exsicc. n. 92. — *Æcidiis* in maculis brunneolis, sæpe nigro-marginatis insidentibus, in greges sine ordine dispositis; pseudoperidiis latis, explanatis, albidis, margine irregulariter laciniato; æcidiosporis rotundato-angulatis, $15-20 \mu$ diam., sublevibus, aurantiacis; teleutosporis in soros gregarios, circinatos, minutos, punctiformes, convexos, subatros, epidermide medio introflexa perforataque tectos congestis, ellipticis vel ovatis, utrinque rotundatis vel attenuatis, apice plerumque papilla latiuscula, hyalina vel pallida ornatis, 24-

52 $\approx$ 14-26, levibus, castaneo-brunneis; pedicello brevissimo, gracillimo, mox deciduo, hyalino.

Hab. in foliis vivis petiolisque Homogynes alpinæ, Adenostylis albifrontis et alpinæ, Senecionis cordati, nemorensis, aquatici, sarracenici (dubie) et Cacaliæ hastatæ, in Italia, Arduennis, Austria, Helvetia, Germania et Britannia nec non prope Minussinsk Sibiriae asiaticæ.

170. **Puccinia Liliacearum** Duby Botan. Gall. II, p. 891, Winter Die 2314

Pilze p. 194, Schroet. Pilz. Schles. p. 342. — Spermogoniis numerosis, præsertim ad apices foliorum, flavo-melleis, conoideis; æcidiis plerumque sparsis vel nullis, profunde immersis, margine tantum prominulis; æcidiosporis rotundato-angulatis, subglobosis, rarius ellipsoideis, 16-23 $\approx$ 14-17, aurantiacis; soris teleutosporiferis in apicibus foliorum flavidis vel flavo-maculatis, sæpius exsiccatis congestis, hemisphæricis, diu tectis, epidermide longitudinaliter rimulosa subdenudatis; teleutosporis oblongis, vix vel haud constrictis, apice rotundatis, non incrassatis vel angustatis apiculatisque, deorsum in pedicellum angustatis, 40-70 $\approx$ 22-35, levibus, pallide brunneis; pedicello longiusculo, crasso, hyalino.

Hab. in foliis Ornithogali pyrenaici, umbellati, nutantis, nec non Endymionis nutantis et Gageæ luteæ, in Gallia, Austria, Germania et Italia. — Var. **Rossiana** Sacc. in Michelia. A typo differt soris plerumque crassioribus, sæpius erumpentibus sed imprimis teleutosporis vertice acute hyalino-apiculatis, 50-55 $\approx$ 25-27, dilute cinnamomeis, stipite 30-40 $\approx$ 10, hyalino. In foliis Scillæ bifoliæ in alpinis prope Possagno agri veneti in Italia (ART. Rossi).

171. **Puccinia Tragopogonis** (Pers.) Corda Icon. Fung. V, p. 50, t. II, 2315

f. 11, Winter Die Pilze p. 209, Schroet. Pilz. Schles. p. 342, *Æcidium Tragopogonis* Pers. Syn. p. 211, *Uredo Scorzonerae* Schum. Pl. Saell. II, pag. 229, *Puccinia Podospermi* DC. Fl. Franc. II, p. 595, *Æcidium Cichoracearum* DC. l. c. p. 239, *Uredo Hysterium* Strauss in Wett. Ann. II, pag. 102, *Puccinia Hysterium* Roehl in D. Flor. III, p. 131, *Puccinia cincta* Bonord. Coniom. p. 52, *Æcidium Tragopogonis* Sacc. in Michelia 1877, *Cæoma Cichoracearum* Schlecht. Fl. Berol. II, pag. 116, *Cæoma Tragopogonatum* Link Sp. II, pag. 50. — Spermogoniis per totam foliorum superficiem expansis, subremotis, melleis; sporulis ovoideis, 4 $\approx$ 3, hyalinis; æcidiis ut spermogoniis dispositis, rotundatis aut oblongis, primo conoideis, dein poculiformibus, margi-

ne albo, inæquali, lacero, revoluti; æcidiosporis coacervatis rufescentibus, singulis angulatis, $35 \approx 18-27$, verrucosis, aurantiacis, episporio hyalino; teleutosporis in soros gregarios, rotundatos, epidermide diu cinctos, punctiformes, atro-fuscos congestis, ellipticis vel subglobosis, utrinque rotundatis, medio subconstrictis, apice non incrassatis, $26-48 \approx 20-38$, verrucosis, fuscis; pedicello hyalino, gracili, deciduo, brevi.

Hab. in foliis *Tragopogonis porrifolii*, *pratensis*, *orientalis*, *floccosi*, *Scorzoneræ austriacæ*, *humilis*, *Podospermi Jacquini* et *laciniati*, *Galasiæ villosæ*, in Italia, Gallia, Austria, Helvetia, Germania, Bohemia, Belgio, Fennia, Britannia.

172. **Puccinia fusca** Relhan Fl. Cantabr. Suppl. II, (1793), Winter 2316

Die Pilze p. 199, Schroet. Pilz. Schles. p. 343, *Æcidium fuscum* Sow. Engl. Fungi t. 53, *Æcidium Anemones* Pers. Syn. Fung. p. 226, *Æcidium leucospermum* DC. Fl. Franç. II, p. 239, *Uredo quincunæ* Strauss in Wett. Ann. II, p. 99, *Æcidium leucosporum* Wallr. Fl. Crypt. Germ. n. 1758, *Lycoperdon Anemones* Pult. Hoffm. Germ. t. 11, f. 1, *Uredo leucosperma* Spr. Syst. IV, p. 573, *Cæoma leucospermum* Schlecht. Fl. Berol. II, p. 116, *Puccinia Anemones* Pers. Obs. II, t. 6, f. 5. — Spermogoniis æcidiisque æqualiter per folia distributis, totam plerumque plantam, quæ expallescit, infestantibus; spermogoniis explanatis, albidis; pseudoperidiis breviter cylindraceo-explanatis, albis, margine profunde inciso et revoluti; æcidiosporis angulatis, $27 \approx 16-22$, levibus, hyalinis; teleutosporis in soros æque sparsos vel ad margines numerosiores, minutos, rotundatos vel ellipsoideos, sæpe confluentes, mox nudos, atro-brunneos congestis, e 2 loculis subglobosis, raro ellipticis efformatis, apice rotundatis, medio profunde constrictis, raro haud constrictis, $30-50 \approx 16-24$, verrucosis, brunneis; pedicello circ. ad 18 μ . longo.

Hab. in foliis ramulisque vivis *Anemones nemorosæ*, *ranunculoidis*, *vernalis*, *Pulsatillæ*, *pratensis*, *silvestris*, *trifoliæ*, in Italia, Gallia, Belgio, Britannia, Fennia, Austria, Helvetia, Germania, in America boreali et pr. Minussinsk in Sibiria asiatica. — «Huc forte pertinet *Æcidium punctatum* Pers.».

173. **Puccinia Valerianæ** Carest. in Erb. Critt. Ital. ser. I, n. 500, 2317

Winter Die Pilze p. 196, *Æcidium Centranthi* Thüm. in Verz. Schles. bot. Tauschverein 1874? — *Æcidiis* confertis, cupulatis,

marginis lato, albo, lacerato, revolutis; æcidiosporis polygoniis, 14-19 μ . diam., subtiliter verrucosis, aurantiacis; soris teleutosporiferis parvis, plerumque ellipticis, sæpius confluentibus, pulvinulos magnos, nudos efformantibus; teleutosporis irregularibus, oblongis, fusoides aut clavatis, basi angustatis, apice paulum incrassatis, raro rotundatis, plerumque subconoideo-attenuatis, medio non vel leniter constrictis, 40-60 $\approx$ 20-35, levibus, castaneo-brunneis; pedicello longiusculo, deciduo fultis.

Hab. in foliis vivis languidisve et petiolis *Valerianæ* officinalis et *Centranthi Calcitrapæ*, in Italia et Germania.

— «Forte huc pertinet *Uredo Valerianæ* Desm. non DC.»

174. **Puccinia Trollii** Karst. Enum. Fung. Lapp. or. p. 221 (1866), 2318

Winter Die Pilze p. 198, *Puccinia Lycoctoni* Fuck. var. *Trollii* Körn. in Hedw. 1877, p. 18, *Puccinia Lycoctoni* Fuck. Symb. III, p. 11. — Æcidiis in greges rotundatos confertim dispositis, cylindratis, margine albido, denticulato; æcidiosporis angulatis, 16-28 $\approx$ 14-20, verruculosis, aurantiaco-flavis; soris hypophyllis, rarius petiolicolis, per epidermidem fissam erumpentibus, solitariis vel per paucos aggregatis, orbicularibus vel oblongatis, fuscis; teleutosporis ellipsoideo- vel obovoideo-oblongatis, levibus, vertice incrassatis et in apicem latiore productis, brevissime pedicellatis vel sessilibus, ad septum haud vel paululum constrictis, loculis subæqualibus, flavis, facillime deciduis, 25-53 $\approx$ 16-26.

Hab. in foliis, petiolis caulibusque *Aconiti Lycoctoni* et *Trollii* europæi, in Italia, Helvetia et Lapponia rossica juxta mare glaciale.

175. **Puccinia Calochorti** Peck in Botanical Gazette 1881, p. 228. — 2319

Maculis atris vel nullis; æcidiis homoicis; pseudoperidiis confertis, brevibus, congestis; æcidiosporis subglobosis vel angulatis, circ. 20 μ . latis, flavis vel aurantiacis; soris teleutosporiferis sparsis vel confertis, ovatis aut oblongis, atris; teleutosporis ellipsoideis, obtusis, medio leniter constrictis, 35-40 $\approx$ 25, rugulosis, pedicello brevi instructis.

Hab. in foliis vivis *Calochorti Nuttallii*, Utah in America boreali (JONES). — *P. Lojkianæ* proxima, a qua teleutosporis minoribus, minus verrucosis et obtusioribus distinguitur.

176. **Puccinia Smyrnii** Biv. Bernh. Manip. plant. Sic. (1816), Corda 2320

Icon. (1840), IV, f. 67, *Puccinia Torquati* Pass. in Giorn. bot. Ital. III (1871), n. 2, *Æcidium Smyrnii* Bagnis in Thümen Myc. univ. n. 153. — Pseudoperidiis sparsis, minutis, breviter elevatis in

macula flavescenti, margine sublaceris; æcidiosporis oblongis vel globosis, minimis; maculis obsoletis; soris teleutosporiferis hypophyllis, magnis, solitariis, sparsis, brunneis; teleutosporis ovatis, 40-45 $\approx$ 25, obtusis, grosse tuberculatis, leniter constrictis, ochraceo-fuligineis; pedicello brevi suffultis.

Hab. in foliis Smyrni Olusatrici, in Gallia, Bohemia (?), Italia et Britannia.

177. **Puccinia Bellidiastri** (Unger) Winter Die Pilze p. 196, *Æcidium* 2321

Bellidiastri Unger Exanth. p. 109. — *Æcidii* hypophyllis, in parvos greges nullo ordine aut secus orbes dispositis; maculis purpurascentibus; pseudoperidiis explanato-cupulatis, margine dentato, albedo; æcidiosporis angulatis, 14-20 μ . diam., aurantio-flavis; soris teleutosporiferis minutis, rotundatis v. ellipticis, convexo-pulvinatis, diu epidermide obtectis, in greges irregulares congestis; teleutosporis plerumque oblongis, raro ellipsoideis, apice more conoideo-angustatis et valde incrassatis, medio constrictis, 30-45 $\approx$ 16-24, levibus, obscure castaneo-brunneis.

Hab. in foliis petiolisque *Bellidiastri* Michellii, in Germania.

178. **Puccinia Ipomeæ** Cooke in Rav. Amer. Fungi n. 792, *Æcidium* 2322

Ipomeæ-panduranæ Schwein. Syn. Carol. p. 69, n. 454, *Æcidium Ipomeæ* Thüm. an Spegazz.? — *Æcidii* maximis, bullatis, supra impressis, albis; pseudoperidiis flexuosis, majoribus, elevatis, rima ruptis, pulvere cinereo-rutilo; æcidiosporis minutis, oblongis; soris teleutosporiferis epiphyllis secus circulos supra æcidia efformatis vel hypophyllis cum æcidiiis vetustis immixtis, atro-fuscis, pulverulentis; teleutosporis elliptico-fusiformibus, magnis, medio constrictis, leniter asperulis, atro-fuscis, 50-60 $\approx$ 20-30; pedicello crasso, elongato, hyalino 60 $\approx$ 10 fultis.

Hab. in foliis *Ipomeæ panduranæ* et *trichocarpæ*, *Batatas paniculatæ*, Darien, Georgia (RAVENEL) aliisque locis Americæ borealis, Natali Africæ (WOOD). — Verisimiliter huc pertinet *Æcidium Ipomeæ* Thüm. F. Afr. n. 107, vix Spegazz.: sparsum, submagnum; pseudoperidiis primo tectis, dein margine levi apertis, flavo-brunneis vel ochroleucis, parvis, subelevatis; æcidiosporis globosis v. polygoniis, episporio crasso, levi, 18-24 μ . diam., hyalinis. In foliis vivis nec non in capsulis immaturis maturisque *Ipomeæ argyreodis* prope Klyn Visch Rivier juxta Somerset-East, Promont. Bonæ Spei (MAC-OWAN).

179. **Puccinia asperior** Ell. et Everh. in Bull. Washb. Laborat. 1884, 2323
p. 3. — Pseudoperidiis hemisphæricis vel e pressione subangulatis, 500-750 μ . diam., margine fere erecto subtiliterque dentato; æcidiosporis subglobosis, 20-22 μ . diam. aut 25-35 μ 15-18, aurantiacis; soris teleutosporiferis atris, subpulvinatis, suborbiculatis v. leniter oblongis, circ. 1 mm. diam., initio epidermide tectis; teleutosporis ellipsoideis, obtusis, utrinque rotundatis, vix ad septum constrictis, 25-35 μ 19-23, episporio verrucoso vertice paullum incrassato; pedicello, ut videtur, brevissimo, deciduo.

Hab. in petiolis foliisque *Ferulæ dissolutæ*, in Terr. Washington Amer. bor. (SUKSDORF). — A *P. Jonesii* Peck teleutosporis verrucosis præcipue distincta.

180. **Puccinia Plectranthi** Thüm. in Flora 1875, pag. 378, Cooke in 2324
Grevillea X, p. 126. — Pseudoperidiis in maculis orbicularibus, decoloratis congestis, semiimmersis, margine albo-fimbriatis; æcidiosporis flavidis; soris teutosporiferis hypophyllis, sparsis, fuscis; teleutosporis subclavatis, medio constrictis, loculo superiore apice incrassato, obtuso, loculo inferiore ovoideo, 56 μ 15, flavescentibus, pedicello hyalino, curvato, 19 μ . longo.

Hab. in foliis vivis *Plectranthi laxiflori* in silvis ad pedem montis «Boschberg» pr. Somerset East (MAC-OWAN), nec non ad Port Natal (Wood) Africae australis.

181. **Puccinia carniolica** Voss Ein. Kennt. Rostpilze in Öest. bot. 2325
Zeit. 1885, *Æcidium Peucedani* Voss in Öest. bot. Zeit. 1885. — Pseudoperidiis plerumque hypophyllis, sparsis, minutis, margine albo dilacerato, disco luteo; æcidiosporis plus minusve globosis, ellipsoideis v. polygoniis, episporio levi, intus luteis, 20 μ . diam. v. 24-26 μ 15; soris teleutosporis pulvinatis, hypophyllis, etiam in petiolo longitudinaliter dispositis, epidermide tectis (semper?), nigris; teleutosporis irregularibus aut cuneatis vel clavatis oblongisve vel polyhedris, vertice truncatis, rotundatis vel apiculatis, incrassatis, medio paullulo constrictis, basi in pedicellum angustatis, episporio levi, fuscis, 49-53 μ 20-24 (sine pedicello).

Hab. in foliis et petiolis vivis *Peucedani Schottii*, in *Carniola* Austriae.

182. **Puccinia intermixta** Peck in Botanical Gazete 1879, p. 218. — 2326
Maculis nullis; soris teleutosporiferis numerosis, sparsis, sæpe æcidio intermixtis, amphigenis, sordide rufescenti-brunneis; teleutosporis oblongo-ellipticis, obtusis, ad septum leniter constrictis, 35-40 μ 20-23; pedicello brevissimo vel subnullo.

Hab. in foliis *Ivæ axillaris*, ad Green River in Terr. Wyoming Amer. bor. (JONES). — «*Æcidii descriptio haud nota*».

183. **Puccinia Jonesii** Peck in Botan. Gazette 1881, p. 226. — Ma- 2327
culis pallidis, indeterminatis; pseudoperidiis brevibus, confertis, late margine dentatis crenulatisque; æcidiosporis subglobosis, 20-25 μ . latis, aurantiaco-flavis; soris teleutosporiferis plerumque hypophyllis, raro paucis epiphyllis, sparsis, primo epidermide tectis, dein nudis, subpulverulentis, atris; teleutosporis ellipticis vel oblongo-ellipticis, obtusis, substriatis, vix medio constrictis, 30-40 $\approx$ 20-23, subtiliter rugulosis, pedicello brevissimo fultis.

Hab. in foliis vivis *Ferulæ multifidæ* et *Peucedani simplicis*, Utah Americæ borealis (JONES). — «Cum *Puccinia Ferulæ* Rud. et *asperiori* E. et E. comparanda».

184. **Puccinia melanconioides** Ell. et Harkn. New Calif. Fungi p. 7. 2328
— *Æcidii* amphigenis; pseudoperidiis sparsis, in maculis vel ad margines secus orbem interruptum dispositis; soris teleutosporiferis rotundatis, sparsis, initio tectis, dein cinctis; teleutosporis late ellipticis, leniter constrictis, 28-50 $\approx$ 16-28, obscure brunneis, dense coacervatis.

Hab. in pagina plerumque superiori foliorum vivorum *Dodecatheontis Meadiæ*, in California Americæ borealis. — Habitus *Melanconii*, *Pucciniae Primulæ* affinis at teleutosporis majoribus obscurioribusque distincta.

185. **Puccinia Macrorrhynchi** Rabenh. in F. Europæi n. 2387. — Pseu- 2329
doperidiis margine revoluto subtiliter denticulato-fisso; æcidiosporis ovato-globosis, 12-18 (plerumque 15) μ . diam., luteis vel luteolis, episporio levi, subcrasso, hyalino; teleutosporis oblongis, 40 $\approx$ 20, medio plus minus constrictis, luteo-fuscis vel subbadiis, loculo superiori globoso v. depresso-globoso, inferiori subrhomboido vel cuneato, in pedicellum attenuato, episporio levi, tenui, tum vertice, tum basi æquali.

Hab. in foliis *Macrorrhynchi aspleniifolii*, in India orientali.

186. **Puccinia Mariæ-Wilsoni** Clinton in Peck 25 Rep. of Stat. Bot. 2330
p. 115, Burrill Fungi of Illinois p. 174, *Cœoma* (*Æcidium*) *Claytonianum* Schwein. N. Amer. Fungi p. 294, n. 2892. — Spermogoniis inter æcidia sparsis; æcidiiis amphigenis, regulariter sparsis, sæpe confertim gregariis; pseudoperidiis latiusculis, laciniatis, margine subrevolutis; æcidiosporis subglobosis, 15-18 μ . d., episporio tenui, subtiliter echinulato donatis, aurantiacis; soris teleutospori-

feris hypophyllis, raro amphigenis, irregulariter sparsis vel aggregatis, subelevatis, primo epidermide tectis, demum ab ea rupta cinctis, rufo-brunneis; teleutosporis irregularibus, plerumque ellipsoideis, vix constrictis, apice obtuso breviter papillulatis, episporio crasso, subtiliter tuberculato instructis, 30-48 $\approx$ 21-27; pedicello brevi, fragili, hyalino.

Hab. in foliis Claytoniæ virginicæ et carolinianæ, in Carolina inf. (SCHWEINITZ), Montreal (D. MACLAGAN), Buffalo (CLINTON), Knowersville (PECK), et Illinois (BURRILL) in America boreali.

187. **Puccinia Mac-Owani** Winter in Hedwigia 1885, p. 255, *Æcidium truncatum* Kalchbr. mscr. — Pseudoperidiis in maculis pallide luteolis, in pagina superiore foliorum fuscis, late luteo cinctis, indeterminatis, rotundatis irregularibusve, sæpe confluentibus insidentibus, magnitudine variis, hypophyllis, solitariis vel 2 usque circ. 10 laxe gregariis vel cæspitosis, albidis, longe tubulosis, 1-2 mm. altis, primitus clausis, demum apertis, margine erecto, parce et irregulariter sed subprofunde incisis, laciniis interdum revolutis; cellulis pseudoperidii densissime minuteque verruculosis; æcidiosporis angulato-rotundatis, 23-32 μ . diam., verruculis subvalidis obtusis obsitis, hyalinis (an semper?); soris teleutosporiferis hypophyllis, æcidiis immixtis, in maculis similibus sparsis, rotundatis irregularibusve minutis, 0,25-1 mm. latis, pallide fuscis, pulveraceis, non compactis, superficialibus; teleutosporis elongatis, late fusiformibus, utrinque attenuatis, medio constrictis, vertice incrassatis, 60-90 $\approx$ 19-25, levibus, pallide luteo-fuscidulis; pedicello longo subpersistente hyalino suffultis, jam in planta adhuc viva germinantibus.

Hab. in foliis vivis Helichrysi petiolati, in M. Boschberg. pr. Somerset East Africae australis (MAC OWAN).

188. **Puccinia Physalidis** Peck in Botanical Gazette 1879, p. 218, *Æcidium Solani* Mont. Syll. Crypt. n. 1146 Burrill Parasitic Fungi of Illinois p. 285. — Spermogoniis numerosissimis, hypophyllis, sparsis vel in greges late extensos dispositis, sociis vel non cum æcidiis, latiusculis, flavo-melleis; æcidiis hypophyllis sparsis, macula nulla; pseudoperidiis sparsis aut gregariis, subtus convexis, supra urceolatis, margine subduplicato integris; æcidiosporis primo concatenatis, polygoniis tandem sphaericis, flavescentibus, 15-21 $\approx$ 13-15, minute tuberculatis; soris teleutosporiferis numerosis, macula nulla, sæpius confluentibus, totam paginam inferiorem folii occupantibus, rufo-brunneis; teleutosporis ellipticis vel oblongo-el-

lipticis, subinde irregularibus, leniter ad septum constrictis, 30-40 $\approx$ 20-25; pedicello hyalino teleutosporam longit. subæquante fultis.

Hab. æcidia et spermogonia in foliis Solani pinnatifolii et Physalidis viscosæ, sori in foliis Physalidis viscosæ, in Illinois, Colorado Amer. bor., in Chili Amer. austr. et in Himalaya Indiæ.

189. **Puccinia Podophylli** Schwein. Syn. Fungi North Carol. p. 72, 2333

n. 489, Burrill Fungi of Illinois p. 173, *Puccinia aculeata* Schwein. Syn. Carol. n. 489, *Æcidium Podophylli* Schwein. Syn. Carol. n. 435, *Puccinia aculeata* Link Sp. II, pag. 79? — Hypophylla; maculis indeterminatis, latiusculis, subconfluentibus, flavis; spermogoniis minutis, sparsis, æcidiis oppositis; æcidiis dense confertis; pseudoperidiis brevissimis, margine profunde numeroseque laciniatis revolutoque fragilissimis; æcidiosporis subglobosis vel ellipsoideis, 16-27 μ . diam., episporio tenui instructis, subtiliter tuberculatis, sublateritiis; soris teleutosporiferis amphigenis vel cauliculis, parvis, rotundatis, plerumque plus minus confluentibus, flavis aut brunneis; teleutosporis ovoideis vel oblongis, rarius obovatis, obtusis, vix constrictis, deorsum ut plurimum attenuatis, 38-48 $\approx$ 20-27, spinulosi, pedicello brevissimo v. subnullo, fugaci, gracili instructis.

Hab. in foliis caulibusque Podophylli peltati, Ohio, Carolina inf., Pennsylvania, New York et Illinois in America boreali.

190. **Puccinia subcircinata** Ell. et Everh. North Amer. Fungi n. 1840 2334

et in Journ. of Mycology 1887, pag. 56. — Æcidiis gregariis, plerumque soris teleutosporiferis cinctis, ut plurimum hypophyllis, circ. 500 μ . diam., margine dentato, patenti; æcidiosporis globosis, 12-15 μ . diam. aut subellipticis, 20 $\approx$ 12-15, vel subangulatis irregularibusve; soris teleutosporiferis hypophyllis, circa æcidia annulum efficientibus vel etiam plus minus sparsis etiamque petiolicolis, subhemisphæricis, plumbeis, circ. 500 μ . diam.; teleutosporis ellipticis, vix constrictis, plerumque utrinque rotundatis, vertice vix incrassatis, subtiliter granulato-verruculosis, 22-30 $\approx$ 16-20, breviter pedicellatis.

Hab. in foliis vivis Senecionis triangularis, ad M. Paddo Washington Terr. in America boreali (SUKSDORF).

191. **Puccinia Symphoricarpi** Harkn. New. Calif. Fungi p. 15. — 2335

Æcidiis teleutosporas præcedentibus, hypophyllis, secus orbes circulares 8-20 aggregatis, maculis obscure brunneis vel discoloribus insidentibus; pseudoperidiis æquilongis ac latis; æcidiosporis aurantiacis; soris teleutosporiferis parvis, aggregatis, epidermide tectis,

1-3 mm. diam., maculis irregularibus, brunneis; teleutosporis oblongis, constrictis, $50-60 \approx 15-17$, superne obscurioribus, levibus, episporio sursum crassiore, demum subinde oblique 1-digitatis; pedicello concolori, teleutospora sesquilingiore.

Hab. in foliis vivis *Symphoricarpi mollis*, Tamalpais in America boreali.

192. **Puccinia tenuis** Burrill Parasitic Fungi of Illinois p. 181, *Æcidium tenue* Schwein. North Americ. Fungi n. 2889. — *Æcidii* hypophyllis, raro etiam epiphyllis, in greges subirregulares dispositis vel sparsis; pseudoperidiis minutissimis, brevibus, subelevatis, margine angustato irregulariter lacerato recurvatoque; æcidiosporis subglobosis, $14-18 \mu$. diam., subtilissime tuberculatis, pallidis; soris teleutosporiferis hypophyllis, maculis parvis, sæpe confluentibus, more flavis (centro late nigrescente) insidentibus, subinde sparsis, plerumque confluentibus, effusis, leniter convexis, epidermide tectis, sordide griseo-atris; teleutosporis oblongo-clavatis, leniter constrictis, $40 \approx 15$, ut plurimum angulatis vel acuminatis, pedicello hyalino vel vix colorato, dimidiam teleutosporam subæquante fultis.

Hab. in foliis *Eupatorii ageratoidis* in America boreali.

193. **Puccinia aucta** Berk et Müll. in Linn. Journ. XIII, p. 173, 2337 Cooke in Grevillea XI, p. 98, *Æcidium microstomum* Berk. Linn. Journ. XIII, p. 173, *Æcidium Lobeliæ* Thüm. in Grevillea IV, p. 75, Mycoth. Univ. n. 321. — Pseudoperidiis rotundatis vel ovatis, dense gregariis, folia petiolaque fere tota occupantibus, ampullaceis, primo epidermide tectis, demum liberis, margine crassiusculo, levi, elato, ochraceis; æcidiosporis irregulariter globosis vel varie rotundatis, $18-22 \mu$. diam. episporio punctulato, levi, pallide ochraceis; soris teleutosporiferis hypophyllis, nervo medio utrinque consitis, bullatis, epidermide dein fracta cinctis; teleutosporis pedicellatis, elongatis, pallidis, demum biseptatis.

Hab. in foliis *Lobeliæ ancipitis*, pedunculatæ et platycalycis, in Victoria et Australia meridionali.

194. **Puccinia Tragiæ** Cooke in Grevillea X, p. 125. — Epiphylla vel 2338 amphigena; æcidiiis minimis; pseudoperidiis 5-6 congestis, albis, elongatis, marginato-dentatis; æcidiosporis globosis, aurantio-flavis; soris teleutosporiferis pulverulentis, purpureo-fuscis; teleutosporis ellipticis, medio costrictis, castaneis, $50 \approx 28$; pedicello elongato, hyalino, infra attenuato, 70μ . longo.

Hab. in foliis *Tragiæ*, ad Inanda Natal in Africa (Wood).

Sectio E. MICROPUCCINIA Schroet. Teleutosporæ tantum evolutæ, haud in matrice viva sed post longam pausam in planta emortua germinantes.

195. **Puccinia Betonicæ** (Alb. et Schwein.) DC. Fl. Franç. VI, p. 57, 2339
 Winter Die Pilze p. 172, Schroet. Pilz. Schles. p. 343, *Puccinia Anemones* var. *Betonicæ* Alb. et Schwein. Consp. p. 131, *Dicæoma Betonicæ* Nees Syst. p. 16, t. 1, f. 11, *Lycoperdon epiphyllum* Aubry Fl. Morb. p. 22, *Uredo Betonicæ* Strauss in Wett. Ann. II, p. 99. *Puccinia Vossii* Körn. in Rabenh. Fungi Europæi n. 1294, Winter Die Pilze p. 173. — Teleutosporis in soros hypophyllos, minutos, aurantiaco-rufos, aggregatos, sæpius ad nervos foliorum constipatos, epidermide lacerata cinctos congestis, late ellipticis v. ovatis, 27-45 $\approx$ 15-24, levibus, apice rotundatis, apiculo verruciformi-compresso, dilute brunneo auctis, medio leniter vel non constrictis, brunneo-flavescentibus, pedicello hyalino, deciduo, gracili, breviusculo.

Hab. in foliis, rarius in petiolis *Betonicæ* officinalis et *Stachydis rectæ*, in Italia, Belgio, Gallia, Britannia, Helvetia et Germania.

196. **Puccinia Campanulæ** Carmich. in Sm. Fl. Brit. V, p. 365, Winter 2340
 Die Pilze p. 173, Schroet. Pilz. Schles. p. 344, Cooke Handb. n. 1479. — Teleutosporis in soros magnos, irregulares, confertos, diu epidermide tectos, demum ab ea cinctos, castaneo-brunneos congestis, oblongis vel ovatis, apice rotundatis vel obtuse acuminatis, apiculo verruciformi plerumque brunneolo, rarius hyalino auctis, medio leniter constrictis, 26-45 $\approx$ 12-21, levibus, flavo-brunneis; pedicello brevi, deciduo, gracili, hyalino.

Hab. in foliis præcipue radicalibus *Campanulæ Rapunculi* et *Jasiones montanæ*, in Britannia, Belgio et Germania.

197. **Puccinia Schneideri** Schroet. in Schneid. Herb. Schles. Pilze 2341
 fasc. IX, Pilz. Schles. p. 344. *Puccinia caulicola* Schneider in 48. Jahresb. Schles. Ges. 1870, p. 120, Winter Die Pilze p. 195 non Nees, nec Tracy et Gall., nec Spreng. — Teleutosporis in soros parvos, atro-brunneos, pulveraceos diu epidermide bullata tectos congestis, ellipticis, utrinque rotundatis, apice incrassatis, 24-33 $\approx$ 15-23, medio plus minus constrictis, levibus amœne, castaneo-brunneis; pedicello gracillimo, hyalino, longiusculo.

Hab. in foliis, petiolis caulibusque *Thymi Chamædryos* et *Serpylli*, in Helvetia, Suecia et Germania. — Forte huc pertinet *Acidium Thymi* Fuck. Symb. p. 376, ita descriptum: pseudope-

ridiis hemisphæricis, demum laceratis, sparsis, albidis, æcidiosporis majusculis, rotundatis, 18-19 μ . diam., fuscis. ».

198. **Puccinia Ægopodii** (Schum.) Link Sp. II, p. 77, Winter Die 2342
Pilze p. 174, Schroet. Pilz. Schles p. 344, *Uredo Ægopodii* Schum.
Pl. Saell. II, p. 233, *Puccinia difformis* Bonord. Con. p. 50, t. III,
f. 39, *Uredo bullata* Alb. et Schwein. Consp. p. 129 (sec. Winter).
— Teleutosporis in soros amphigenos, aggregatos, confluentes, maculæ lividæ insidentes, fusco-atros, primo flavo-melleos congestis, ovoideo-oblongis vel subclavatis, apice rotundatis vel attenuatis, apiculo obtuso, verruciformi, hyalino ornatis, medio non vel vix constrictis, basi plerumque angustatis, 28-40 $\approx$ 15-25, brunneis; pedicello cylindraceo, hyalino, evanescenti, longiusculo.

Hab. in foliis, petiolis, raro in caulibus Ægopodii Podagrariæ, Astrantiæ majoris et Imperatoriæ Ostruthii, in Italia, Belgio, Arduennis, Britannia, Austria, Helvetia, Germania, Hungaria, Neerlandia et Fennia australi.

199. **Puccinia asarina** Kunze in Kunze et Schm. Mykol. Heft. I, p. 70, 2343
Winter Die Pilze p. 172, Schroet. Pilz. Schles. p. 344, *Puccinia Asari* Link Sp. II, p. 68. — Teleutosporis in soros parvos, amphigenos, subglobosos, confertos vel circinatos, demum confluentes, epidermide rupta subvelatos, massam plerumque latam, rotundatam, convexam, pulveraceam efformantes congestis, ellipticis v. ovoideis, apice attenuatis, apiculis hyalinis vel dilute coloratis auctis, medio leniter constrictis, 30-45 $\approx$ 15-24, levibus, brunneo-flavis; pedicello longiusculo, deciduo, hyalino.

Hab. in foliis Asari europæi, in Italia, Helvetia, Austria, Hungaria, Germania et Britannia nec non in California Americæ borealis.

200. **Puccinia Saxifragæ** Schlecht. Flor. Berol. II, p. 134 (*P. Saxifragarum*) 2344
Winter Die Pilze p. 174, Schroet. Pilz. Schles. p. 345, *P. inquinans* Wallr. Fl. Crypt. Germ. II, p. 218. — Teleutosporis in soros parvos, primo melleo-marginatos, dein sordide castaneos vel atro-fuscos demumque sæpe confluentes, pulveraceos, mox nudos congestis, ellipticis v. ovoideis, medio subconstrictis, apice rotundatis vel attenuatis, apiculis verruciformibus vel conicis, dilutioribus auctis, deorsum angustatis, 26-45 $\approx$ 15-20, levibus, longitudinaliter striis tenuibus ornatis, flavo-brunneis; pedicello longiusculo, deciduo, gracili.

Hab. in foliis Saxifragæ granulatae, Aizoonis, mutatae, aizoidis, rotundifoliae, longifoliae, nivalis, hieracifo-

liæ in Germania Britannia et Adventbay Spitzberg (KARSTEN). — «An huc pertinet *Puccinia curtipes* Howe in foliis *Saxifragæ pensylvanicæ* in America boreali?»

201. **Puccinia Ribis** DC. Flor. Franç. II, p. 221, Schroet. Pilz. Schles. 2345 p. 345, *Puccinia granulata* De Bary in Rabenh. Herb. Myc. II, n. 499. — Teleutosporis in soros rotundatos, maculiformes, flavo-cinctos, orbiculatim dispositos, castaneo-brunneos congestis, ellipsoideis, utrinque rotundatis, apice incrassato-explanatis, medio leniter vel haud constrictis, 22-30 = 16-21, verrucoso-punctulatis, amœne castaneo-brunneis; pedicello brevi.

Hab. in foliis *Ribis rubri*, *Grossulariæ*, *nigri*, *alpini* et *petræi*, in Gallia, Belgio, Germania et Fennia. — Cl. Winter huc refert *Æcidium rubellum* var. *Grossulariæ* Gmel. in L. Syst. Nat. II, p. 1473, at, suadente cl. Schroeter, forma hæc æcidiospora haud omnino certa ad aliud locum referenda videtur. Sec. cl. Karsten, ut stat. uredosp., ad hanc speciem forte *Uredo Ribesii* Link Sp. II, p. 28 p. p., *U. confluens* Alb. et Schwein. Consp. n. 339, *Uredo circinalis* Strauss in Am. Wett. II, p. 208 et *Cœoma Ribesii* Fuck. Symb. p. 42 pertinere viderentur.

202. **Puccinia Virgaureæ** (DC.) Libert Crypt. Arduenn. IV, n. 393, 2346 Winter Die Pilze p. 173, *Xyloma Virgaureæ* DC. Syn. n. 821, *Puccinia Succisæ* Kunze et Schm. Mykol. Hefte I, p. 72, *Asteroma atratum* Chev. Flor. paris I, p. 449 (sec. Rabenhorst), *Puccinia minutula* Peck in 25 Rep. of Stat. bot. p. 117. *Xyloma Solidaginis* Fr. Obs. I, p. 199. — Soris teleutosporiferis minutissimis, punctiformibus, subnitentibus, atris, in maculis flavis centro sæpius purpureo v. brunneo tinctis insidentibus, convexis, secus series elongatas et ramosas, plerumque stellatas dispositis, hypophyllis v. petiolicolis; teleutosporis oblongis, clavatis vel fusoideis, non vel parum constrictis, deorsum angustatis, apice rotundatis vel obtusiusculis, 30-55 = 12-20, levibus, flavo-brunneis, basi dilutioribus, pedicello longiusculo, colorato fultis; paraphysibus brunneis.

Hab. in foliis petiolisque *Solidaginis Virgaureæ* et altissimæ, in Italia, Gallia, Belgio, Arduennis, Britannia et prope M. Catskill in America boreali.

203. **Puccinia Tulipæ** Schroet. in 53. Jahresb. Schles. Gesellsch. 1875 2347 p. 117, *Puccinia fallaciosa* Thüm. in Oesterr. botan. Zeitschr. 1876, n. 6. — Soris teleutosporiferis minutis, rotundatis vel ellipticis, amphigenis, dense gregariis, dein confluentibus, atro-brunneis, primo epidermide tectis, demum liberis; teleutosporis late ovalibus

vel late ellipsoideis, utrinque rotundatis, medio vix constrictis, raro ad basim subangulatis, episporio crasso, vertice incrassato, dense verruculoso, (verrucis minimis), fuscis, pedicellatis, 30-44 $\approx$ 21-32; pedicello caduco, hyalino, 10 $\approx$ 5; paraphysibus nullis.

Hab. in foliis vivis Tulipæ Gesnerianæ, pr. Wien Austriæ (J. WALLNER) et pr. Breslau Germaniæ (SCHROETER). — Huc pertinet *Puccinia Prostii* Duby in Thüm. F. austr. n. 374 et H. M. œc. n. 78.

204. **Puccinia scandica** Johans. Bot. Sekt. Nat. Stud. Upsala in Botan. 2348

Centralblatt 1886, p. 395. — Soris teleutosporiferis hypophyllis, confertis, rotundatis, mox denudatis, rufescenti-brunneis, epidermide lacerata, haud distincte cupulata cinctis; teleutosporis clavatis vel oblongis, apice incrassatulis vel acutatis, medio constrictis, basi in pedicellum deciduum angustatis, 27-35 $\approx$ 13-16, episporio verruculis punctiformibus, apicem versus subdistinctis obsito instructis.

Hab. in foliis Epilobii anagallidifolii (Epil. alpini), in Jämtlandia.

205. **Puccinia rubefaciens** Johans. Bot. Sekt. Nat. Stud. Upsala in 2349

Botanisches Centralblatt 1886, pag. 394. — Soris teleutosporiferis majusculis, rotundatis vel oblongis, tantum hypophyllis, raro cauliculis mox denudatis, epidermide irregulariter lacerata diu cinctis, atro-brunneis, maculas epiphyllas læte rufas, flavo-marginatas vel dein expallescentes efformantibus; teleutosporis clavatis v. oblongis 30-53 $\approx$ 14-22, basi in pedicellum breviusculum, persistentem plerumque angustatis, apice valde incrassatis more rotundatis, medio constrictis, levibus, dilute brunneis, vertice obscurioribus.

Hab. in foliis caulibusque Galii borealis, pr. Are in Jämtlandia (JOHANSON) et pr. Tronfield Norvegiæ (HENNING).

206. **Puccinia Thalictri** Chev. Flor. Paris I, p. 417, Winter Die Pilze 2350

p. 177, *Puccinia tuberculata* Körn. in-Fuck. Symb. Nachtr. III, p. 11 non Spegazz. — Soris hypophyllis, dense confertis, per totam fere folii superficiem sparsis, minutis, rotundatis aut ellipticis, mox nudis, sordide brunneis; teleutosporis e loculis duobus constrictione profunda distinctis efformatis, loculo inferiori globoso, elliptico, ovato vel clavato, superiore plerumque rotundato, rarius elliptico utroque verrucis acutis obsitis, insimul 26-52 $\approx$ 17-26, obscure brunneis, pedicello longo, deciduo.

Hab. in foliis Thalictri minoris, cornuti, elati, aquilegiifolii, Jacquini et flavi, in Belgio, Gallia, Germania, America boreali et Sibiria asiatica. — Incertum adhuc manet an

huc pertineat ut forma æcidiospora *Æcidium Ranunculacearum* DC. var. *Thalictri* (Grev.) h. e. *Æcidium Sommerfeltii* Johans.

207. **Puccinia Sedi** Körn. in Winter Die Pilze p. 175. — Soris teleu- 2351
 tosporiferis irregulariter rotundatis, diu epidermide tectis vel circumvelatis, remotiusculis, atro-brunneis; teleutosporis irregularibus, clavatis aut linearibus, medio subconstrictis, 40-90 $\approx$ 17-24, deorsum cuneatis, apice incrassatis, obscurioribus, obtusis, rotundatis v. paullulum attenuatis, sæpius lateraliter apiculatis, levibus, brunneis; pedicello brevi, persistenti.

Hab. in foliis Sedi elegantis, in Germania.

208. **Puccinia Morthieri** Körn. in Hedwigia 1877, p. 19, Winter Die 2352
 Pilze p. 175, Massal. Ured. Veron. p. 28, t. II, f. XIV, 1-3, *Puccinia Geranii* Fuck. Symb. myc. p. 51 non Corda nec Lév. — Soris teleutosporiferis hypophyllis, densissime consociatis, in parte folii superiori maculam sanguineam efformantibus, primo epidermide cinctis; teleutosporis oblongis, medio constrictis, apice valde incrassatis, loculo inferiori sæpe basim versus paullo attenuato, 40-65 $\approx$ 17-24, levibus, saturate fuscis; pedicello teleutosporam æquantem, fuscidulo vel fere hyalino.

Hab. in foliis Geranii silvatici et macrorrhizi, in agro veneto Italiæ, in Austria, Helvetia et Germania nec non pr. Minussinsk in Sibiria asiatica.

209. **Puccinia Galanthi** Unger Exanth. p. 88, 182, 234, 247, Winter 2353
 Die Pilze p. 172. — Soris teleutosporiferis in maculis pallidis insidentibus, sæpius confluentibus, amphigenis; teleutosporis plicato-striatis, 27-34 $\approx$ 17-22, loculo inferiore rotundato, breviter pedicellato, loculo superiore, episporio apice incrassato, rufescenti-brunneis; pedicello hyalino.

Hab. in foliis Galanthi nivalis, in Austria. — « Forte *Puccinia Schroeteri* Pass. hujus formam sistit. »

210. **Puccinia Lojkaiana** Thüm. in Œster. bot. Zeitschrift 1876, p. 183. 2354
 Winter Die Pilze p. 171, Cocconi e Morini Enum. fung. Bologna III Cent. p. 8, t. I, f. 1-2, *Puccinia trechispora* Pass. mscr. — Soris amphigenis, longe seriatis, epidermide tectis, plumbeis, nunquam demum erumpentibus, tum atris; teleutosporis plus minusve ovoideis, utrinque rotundatis, vertice raro minime acutato, non incrassato, medio vix constrictis, episporio tenui, granuloso vel verruculoso, pedicellatis, 40-65 $\approx$ 22-35, fuscis; pedicello caduco, hyalino, 8 μ . longo; paraphysibus nullis.

Hab. ad folia viva Ornithogali umbellati et chloran-

thi, in Italia in hortis pr. Parma (PASSERINI) et pr. Botzen Tyroliaë (HAUSMANN); in Hungaria pr. Buda Pesth (LOJKA).

211. **Puccinia Geranii-silvatici** Karst. Enum. Fung. Lapp. or. p. 220, 2355
 Winter Die Pilze p. 175, *Puccinia semireticulata* Fuck. Symb. myc. et *P. Fuckelii* Körn. in Hedw. 1877, pag. 20. — Soris teleutosporiferis hypophyllis, primo membrana cinerea, nitida, tenuissima tectis, sæpe, præcipue in nervis, confluentibus, fuscis; teleutosporis sphæroideo-ellipsoideis, utrinque rotundatis, ad septum haud vel vix constrictis, loculo superiori tuberculato, inferiori fere levi paullo minori, fuscis, facile secedentibus, 20-38 $\approx$ 14-22; pedicello brevi.

Hab. in foliis petiolisque Geranii silvatici, in regionibus Lapponiæ borealibus non infrequenter nec non S. Moritz in Engadina sup. et in Rhenogovia Germaniæ. — Potissimum nervos sequitur maculamque flavescentem in pagina folii superiori efficit.

212. **Puccinia Fergussonii** Berk. et Br. in Ann. Nat. Hist. 1875, n. 2356
 1465, Winter Die Pilze pag. 176, *Puccinia nidificans* Magnus in Hedwigia 1875, p. 20. — Soris teleutosporiferis in maculis flavo-pallidis, rotundatis insidentibus, numerosis, minutis, irregulariter vel secus orbes dispositis, punctiformibus, diu epidermide tectis; teleutosporis oblongis, plerumque utrinque attenuatis, medio parum constrictis, apice incrassato-conoideis, 20-30 $\approx$ 13-20, levibus, flavo-brunneis, pedicello brevi, deciduo suffultis.

Hab. in foliis Violæ palustris et epipsilæ, in Britannia et Germania. — Var. **Hastatæ** (Cooke), *Puccinia hastata* Cooke in Grevillea III, p. 179. Amphigena; soris sparsis, pulverulentis, atro-brunneis; teleutosporis ellipticis, leniter constrictis, levibus, 35-40 $\approx$ 20-25, breviter pedicellatis; uredosporis globosis, levibus, 29-22. Ad folia Violæ hastatæ, Maine U. S. in Amer. bor.

213. **Puccinia enormis** Fuck. Symb. Myc. Nachtr. III, p. 12, Winter Die Pilze p. 174. — Soris teleutosporiferis in caulibus, petiolis et foliorum nervis primariis, evolutis, $\frac{1}{2}$ mm. diam. æquantibus, hemisphæricis, demum erumpentibus, fuscis, secus strias parallelas, densas, longissimas (60 mm. et ultra), fere totum caulem etc. occupantes seriatis; teleutosporis valde irregularibus, levissimis, ovatis, 28-45 $\approx$ 14-24, medio vix constrictis, basim versus plerumque obliquis, parum attenuatis, breviter pedicellatis, antice plus minusve apiculatis, rectis vel obliquis, gibbosis, quandoque biseptatis, fuscis.

Hab. in caulibus, petiolis et nervis foliorum Chærophylli aurei (C. Villarsii), prope S. Moritz in Engadina superiori.

214. **Puccinia Drabæ** Rud. in Linnæa IV, p. 115, Winter Die Pilze 2358 p. 177 vix Haszl. — Soris teleutosporiferis ellipticis vel oblongis, sæpius confluentibus, diu epidermide demum in fragmenta majuscula lacerata tectis; teleutosporis plerumque ellipticis aut oblongis, medio vix constrictis, apice haud incrassatis, rotundatis, 26-35 $\approx$ 16-21, verrucosis, brunneis, pedicello longiusculo, deciduo suffultis.

Hab. in pedunculis, pedicellis et siliquis recentibus *Drabæ aizoidis*, in Germania australi.

215. **Puccinia Dentariæ** (Alb. et Schwein.) Fuck. Symb. Myc. App. I, 2359 p. 7, Winter Die Pilze p. 177, *Uredo Dentariæ* Alb. et Schwein. Consp. p. 129, *Cæoma Dentariæ* Link Sp. II, pag. 24. — Soris teleutosporiferis inflationes vesiculosas, usque ad 25 mm. longas, sæpe confluentes, diu epidermide grisea tectas demumque maculatas efformantibus; teleutosporis oblongis, rarius ellipticis, medio paululum constrictis, 30-40 $\approx$ 14-18, apice incrassatulis, rotundatis v. subangustatis breviterque conoideis, udis levibus, siccis tenuiter longestriatis, primo hyalinis, dein flavo-brunneis, pedicello longiusculo, deciduo suffultis.

Hab. in foliis, petiolis caulibusque, *Dentariæ bulbiferæ* et *enneaphyllæ*, in Germania passim et Nova Semlia. — Forte huc pertinet species homonyma a cl. Haszliniski in Ung. wiss Akad. von Budapest (1877), descripta in *Dentariæ glandulosæ* foliis.

216. **Puccinia Atragenes** Haussm. in Erb. Critt. Ital. n. 550 non Fuckel, Winter Die Pilze p. 178, *Puccinia Haussmanni* Niessl Beitr. p. 10. — Soris teleutosporiferis in maculis flavescentibus vel brunneolis insidentibus, irregulariter rotundatis vel ellipticis, 2-3 mm. latis, gregariis, confluentibus, mox nudis, pulveraceis, fuscis; teleutosporis plerumque oblongis, medio parum vel non constrictis, basi plerumque rotundatis, apice papilla brevi, lata, pallida auctis, 35-60 $\approx$ 18-32, fuscis, pedicello persistenti, 80-120 μ . longo, hyalino instructis.

Hab. in foliis vivis *Atragenes alpinæ*, pr. Botzen Tyroliae.

Sectio F. LEPTOPUCCINIA Schroet. Teleutosporæ tantum notæ, plerumque in soros pulvinatos, firmos congestæ, jam in matrice viva germinantes. Sori sæpe sporidiolis albidis vel rufescentibus maculati.

217. **Puccinia Arenariæ** (Schum.) Schroet. Pilz. Schles. p. 345, Winter Die Pilze p. 169 excl. synonym. *Uredo Arenariæ* Schum. Pl. Saell. II, p. 232, *Puccinia Dianthi* DC. Flor. Franç. II, p. 220,

Uredo verrucosa Strauss in Wett. Ann. II, pag. 107, *Puccinia Saginæ* Kunze et Schm. Exsicc. n. 221, *P. Stellaris* Duby Botan. Gall. II, pag. 887, *P. Lychnidearum* Link Obs. II, pag. 25, p. p. *P. Mœhringis*, *P. Agrostemmis* Fuck. Symb. Myc. p. 50 et 51, *P. Arenariæ-serpyllifoliæ* DC. Flor. Franç. VI, p. 55, *Puccinia fasciata* Bonord. Con. und Crypt. p. 52 p. p. *P. Caryophylllearum* Wallr. Fl. Crypt. Germ. n. 1688, *P. Cerastii* Wallr. mscr. — Teleutosporis in soros rotundatos, pulvinatos, sæpe orbiculatim dispositos vel in crustas elongatas confluentes, primo pallide brunneos, dein atro-brunneos, ob sporidiola numerosa griseo-pulveraceos congestis, fusoides vel clavatis, apice rotundatis vel conoideo-incrassatis, medio leniter constrictis, basi angustatis, $30-50 \approx 10-20$, ochraceo-brunneis, levibus; pedicello hyalino, teleutosporam æquante vel eâ longiori, $60-85 \mu$. longo, persistente.

Hab. in foliis caulibusque Caryophyllacearum gen. Tunicae, Dianthi, Saponariae, Melandryi, Agrostemmis, Saginæ, Alsines, Mœhringis, Arenariæ, Stellaris, Cerastii, Malachii, in Italia, Gallia, Belgio, Austria, Helvetia, Germania, Britannia, Lusitania, Fennia nec non in America boreali et pr. Minussinsk in Sibiria asiatica.

218. **Puccinia Corrigiolæ** Chev. Flor. Paris I, p. 420, Schroet. Pilz. 2362 Schles. p. 346. — Teleutosporis in soros minutos, rotundatos, liberos, 1-2 mm. latos, primo flavos, dein brunneos congestis, fusoides vel clavatis, apice rotundatis vel acutiusculis, deorsum cuneatis, opacis, $41,5 \approx 15$, loculo superiori plerumque longiore et latiore, brunneis; pedicello hyalino, usque ad 90μ . longo.

Hab. in foliis Corrigiolæ littoralis, pr. Paris Gallis, in Belgio et in Silesia Germaniæ.

219. **Puccinia Herniariæ** Unger Ueber den Einfl. etc. (1836) Kirchn. 2363 in Lotos 1856, p. 182?, Schroet. Pilz. Schles p. 346 vix Montagne — Teleutosporis in soros determinatos, pulvinatos, primo rufo-brunneos, dein obscure brunneos congestis, fusoides, $33-44 \approx 12-15$, apice rotundatis vel acutiusculis, medio leniter constrictis, levibus, episporio ochraceo vel dilute brunneolo, apice incrassatulo, contentu achroo; pedicello hyalino, teleutosporam æquante vel eâ brevior.

Hab. in foliis Herniariæ glabræ et hirsutæ, in Germania et Bohemia (?).

220. **Puccinia Spergulæ** DC. Flor. Franç. II, p. 219, Schroet. Pilz. 2364 Schles. p. 346. — Teleutosporis in soros determinatos, pulvinatos,

rotundatos vel elongatos, primo rufescenti-brunneos, dein subatros congestis, fusoides aut clavatis, apice acutiusculis vel rotundatis, medio leniter constrictis, basi angustatis, 31-50 $\approx$ 11-15, loculis æquilatis, episporio levi, dilute brunneo, contentu rufescente; pedicello 32-60 μ . longo, hyalino, persistente.

Hab. in foliis *Spergulae arvensis*, pentandræ et vernalis, in Gallia, Fennia et Germania.

221. **Puccinia Chrysosplenii** Grev. in Sm. Engl. Fl. V, p. 367, Winter Die Pilze p. 167, Schroet. Pilz. Schles. p. 347. — Teleutosporis in soros plerumque minutos, sparsos vel confluentes, dilute cinnamomeos, pulvinatos, rotundatos vel ellipticos, sæpe in macula orbiculari insidentes congestis, clavatis v. fusoides, apice rotundatis vel acutiusculis, medio leniter constrictis, margine subundulatis, 25-45 $\approx$ 10-15, episporio tenuissimo, levi, dilute flavido, pedicello hyalino, valde elongato. 2365

Hab. in pagina inferiori foliorum *Chrysosplenii* oppositifolii et alternifolii, in Britannia et Germania.

222. **Puccinia Veronicæ** (Schum.) Winter Die Pilze p. 166, Schroet. Pilz. Schles. p. 347, *Uredo Veronicæ* Schum. Pl. Saell. II, p. 228. — Teleutosporis in soros hypophyllos, sparsos vel subgregarios, orbiculares, elevatos, obscure fuscus, primo flavo-melleos congestis, fusoides-oblongis, utrinque attenuatis, medio constrictis, 25-50 $\approx$ 14-25, levibus, flavo-brunneis; pedicello hyalino, usque ad 60 longo instructis. 2366

Hab. in foliis *Veronicæ urticifoliae*, montanæ, officinalis, longifoliae, spicatae, alpinæ et *Pæderotæ*, *Ageriæ*, in Italia, Gallia, Belgio, Helvetia, Britannia, Germania et Lapponia rossica. — Forma **persistens** Körn. in Hedwigia 1877, pag. 1, *Puccinia Veronicarum* DC. Fl. Franc. II, p. 594, Schroet. Pilz. Schles. p. 348. A typo recedit soris semper pulvinatis, compactis. Cum specie. — Forma **fragilipes** Winter Die Pilze p. 166. Soris mox denudatis, pulveraceis. Cum specie.

223. **Puccinia Valantiæ** Pers. Observ. Myc. II, pag. 25, Winter Die Pilze p. 167, Schroet. Pilz. Schles. p. 347, Massal. Ured. veron. p. 25, t. II, f. XII, 1-3, *Puccinia Stellatarum* Duby Bot. Gall. II, p. 888, *P. Galii-cruciati* Duby l. c. p. 890, *P. heterochroa* Rob. et Desm. in Ann. Scienc. Nat. 1850, p. 108, *P. Galii-verni* Ces. in Erb. Critt. It. I, n. 99, *P. acuminata* Fuck. Symb. p. 55 non Peck. — Teleutosporis in soros crassiusculos, pulvinatos, minutos, subrotundatos, sparsos aut in plagulas longas latasque con-

fluentes, primo flavescentes, dein castaneo-brunneos, demum griseo-fuscos congestis, plerumque fusoido-oblongis, medio subconstrictis, utrinque attenuatis, 35-65 $\approx$ 12-18, levibus, pallide brunneis, pedicello usque ad 80 μ . longo, persistenti, hyalino.

Hab. in foliis Galii cruciati, verni, saxatilis, veri, silvatici, Molluginis et uliginosi, in Italia, Gallia, Fionia, Germania, Britannia et in silvis prope Bolschaja-Juga in Sibiria asiatica (THÜMEN).

224. **Puccinia Malvacearum** Mont. in Gay Hist. fis. y polit. de Chile 2368 VIII, p. 43, Syll. n. 1159, Winter Die Pilze p. 168, Schroet. Pilz. Schles. p. 347. — Hypophylla, confertim sparsa; teleutosporis in soros hemisphæricos, primo epidermide persistente centro velatos, ambitu nudos, rufos, subtus umbilicatos dense congestis, ovoideo-oblongis, 35-75 $\approx$ 12-26, fuscis, levibus, medio subconstrictis, obtuse acuminatis, longissime pedicellatis; pedicello hyalino, usque ad 120 μ . longo.

Hab. in foliis Althææ officinalis, roseæ, multifloræ, narbonensis, Modiolæ geraniifoliæ, Anodæ cujusdam, Malvæ rotundifoliæ, parvifloræ, silvestris, nicæensis, neglectæ et maritimæ, Malopes grandifloræ, Sidæ rhombifoliæ, in Italia, Helvetia, Germania, Gallia, Lusitania, prope Somerset East Africae australis, in Uruguay, Rep. Argentina, Brasilia, Chile et Patagonia Americae australis, pr. Melbourne Australiae in America boreali. — Var. **ayajuchensis** Speg. F. Arg. Pug. n. 63 bis. Maculis nullis; foliis ad soros superne non vel parce bulloso-umbilicatos; soris hypophyllis, magnitudine ludentibus (0,2-1 mm. diam.), solitariis vel sæpius densissime gregariis, orbiculariter dispositis circa centram majorem, compactis, non vel vix pruinulosis, atro-cinnamomeis; teleutosporis obovato-ellipticis, 35-45 $\approx$ 18-24, medio 1-septato-constrictis, episporio levissimo, apice incrassato, loculis non vel guttulatis, intense cinnamomeis vel fuligineo-fulvis, pedicello longiusculo 80-120 $\approx$ 5-10 hyalino, fultis. In foliis Abutili peduncularis in montuosis «Sierra Chica» pr. S. José (DR. HIERONYMUS) ac Sidæ sulphureæ prope Ayajuche (DR. BERG) in America australi.

225. **Puccinia Circææ** Pers. Disp. meth. pag. 39, Winter Die Pilze 2369 p. 168, Schroet. Pilz. Schles. pag. 348. — Teleutosporis in soros minutos, hypophyllos, pulvinatos, determinatos, primo flavidos, dein brunneolos denumque subatros, sæpe orbiculariter dispositos et in caulibus sæpe crustiformi-confluentes congestis, fusoides, apice

plerumque obtusiusculis, 23-40 $\approx$ 9-14, flavescentibus, medio paululum constrictis; pedicello longiusculo, crasso.

Hab. in foliis caulibusque *Circææ* lutetianæ, alpinæ, intermediæ, socio sæpe *Æcidio Circææ*, in Italia, Gallia, Britannia, Helvetia, Belgio, Germania, America boreali. — «An huc *Æcidium Circææ* Ces. in Kl. Herb. myc. II, n. 372?»

226. **Puccinia Asteris** Duby Botan. Gall. II, pag. 888, Winter Die Pilze p. 167, Schroet. Pilze Schles. p. 349, *Puccinia Millefolii* Fuck. Symb. myc. pag. 55, *Puccinia Tripolii* Wall. Fl. Germ. p. 223, B. et Br. Brit. Fungi n. 1467, *Puccinia Doronici* Niessl Beitr. p. 9, *Puccinia Ptarmicæ* Karst. Myc. Fenn. IV, pag. 41, *Puccinia Gerardi* Peck in 25 Rep. p. 118. — Teleutosporis in soros orbiculares oblongosve, convexos, minutos, diu tectos, pulvinatos, atro-fuscos, gregarios, in macula pallida concentrice circulos efformantes, sæpe confluentes congestis, oblongis vel clavatis, 35-55 $\approx$ 14-28, sursum late et sæpe oblique apiculatis, fuscis, parum constrictis; pedicello usque ad 50 μ . longo, dilute fuscidulo vel hyalino.

Hab. in foliis *Asteris* alpini, Amelli, cordifolii, simplicis, acuminati, Shortii, sagittifolii, miseri, Novæ-Angliæ, Tripolii, macrophylli, Artemisiæ austriacæ, campestris, Calimeris altaicæ, Achilleæ Ptarmicæ, Clavennæ, Millefolii, Doronici austriaci, Cirsii oleracei, Centaureæ montanæ, Scabiosæ et maculosæ, in Italia, Germania, Hungaria, Fennia, Transylvania, Belgio, Britannia et America boreali nec non pr. Minussinsk Sibiricæ asiaticæ. — Huc verisimiliter pertinent *Æcidium Doronici* Tausch. in Rabenh. F. E. II, n. 2192 et *Puccinia purpurascens* Cooke et Peck.

227. **Puccinia Anemones-virginianæ** Schwein. Syn. Fung. Carol. p. 46, Winter Die Pilze p. 170, Schroet. Pilz. Schles. pag. 349, Massal. Ured. Veron. p. 27, t. II, f. XIII, 1-4, *Puccinia solida* Schwein. Syn. N. Amer. Fungi p. 296 nec Berkeley, *Puccinia Atragenes* Fuck. Symb. myc. pag. 49 non Haussm., *Puccinia compacta* De Bary in Botan. Zeitung 1858, p. 83, *Puccinia De-Baryana* Thüm. in Flora 1875, p. 364. — Teleutosporis in soros densos, duros, plerumque bullatos, 1-3 mm. latos, atro-brunneos, tectos, orbiculares, rugulosos, parallele confertos congestis, cuneatis vel oblongo-clavatis, constrictis, 35-65 $\approx$ 10-20, apice sensim obtuso-angustatis, crassis, episporio levi, brunneo, sursum usque ad 10 μ . crasso, ob-

scuriori; pedicello breviusculo, crasso; paraphysibus brunneis intermixtis.

Hab. in foliis *Anemones cylindricæ*, *montanæ*, *alpinæ*, *silvestris*, *pennsylvanicæ*, *virginianæ* et *Atrages alpinæ*, in Italia, Austria, Hungaria, Helvetia, Germania, America boreali et Sibiria asiatica.

228. **Puccinia Buxi** DC. Flor. Franç. VI, p. 60, Winter Die Pilze 2372
pag. 164. — Soris teleutosporiferis hemisphærico-pulvinatis, mox nudis, amphigenis, sparsis, brunneo-fuscis, macula plerumque nulla; teleutosporis oblongis v. oblongo-clavatis, constrictis, apice incrassatis obtusisque, loculo inferiori subovoideo vel cuneiformi plerumque longiore, 55-90 $\approx$ 20-35, levibus, amœne cinnamomeis; pedicello subæquilongo, hyalino fultis.

Hab. in foliis *Buxi sempervirentis*, in Italia, Gallia, Helvetia, Germania, Belgio, Britannia et Lusitania. — Maculæ nullæ vel flavo-brunneolæ.

229. **Puccinia Thlaspeos** Schub. Flora Dresd. II, p. 254, Winter Die Pilze 2373
p. 170. — Soris rotundato-pulvinatis, compactis, dilute brunneis, æque per totam paginam inferiorem foliorum sparsis crustamque plerumque efformantibus; teleutosporis oblongis vel lanceolato-fusoideis, medio leniter constrictis, apice incrassatis, plus minus attenuatis vel rotundatis, 28-50 $\approx$ 14-20, levibus, flavo-brunneis; pedicello longiusculo fultis.

Hab. in foliis *Thlaspeos alpestris* et *montani*, *Arabis hirsutæ*, in Austria, Gallia, Helvetia et Germania.

230. **Puccinia Glechomatis** DC. Encycl. VIII, p. 245, Schroet. Pilz. 2374
Schles. p. 349, *Æcidium verrucosum* Schultz. Fl. Starg. p. 452, *Puccinia verrucosa* Link. Observ. II, p. 29, Winter Die Pilze p. 166, *Puccinia affinis* Hedw. Fung. ined. t. 9, *Dicæoma verrucosum* Nees Fungi t. I, f. 12, *Puccinia Hyssopi* Schwein. Amer. n. 2944, *Puccinia Salvice-glutinosa* Ces. in Sacc. Myc. ven. n. 130, *Puccinia Salvice* Unger Infl. Bod. p. 218. — Teleutosporis in soros hypophyllos, sparsos vel orbiculariter dispositos, rotundatos, pulvinatos, primo melleos, dein castaneos demumque subatros congestis, ellipticis, ovatis vel fusoideis, apice papilla subverruciformi, obtusa, 8-11 μ . alta, sæpe laterali auctis, basi rotundatis vel parum attenuatis, medio vix vel non constrictis; pedicello hyalino, plerumque teleutosporâ longiori.

Hab. in foliis, petiolis caulibusque *Glechomatis hederaceæ* nec non *Salviæ glutinosæ*, *Hyssopi scrophulariifolii* et

Lophanthi nepetoidis, in Italia, Gallia, Belgio, Austria, Germania nec non pr. Minussinsk in Sibiria asiatica (THÜMEN), ad Port Natal Africæ (WOOD) et in America boreali (SCHWEINITZ).

231. **Puccinia grisea** (Strauss) Wint. Die Pilze p. 165, Massal. Ured. 2375
Veron. p. 24, t. II, f. IX, 1-2, *Uredo grisea* Strauss in Wett. Ann. II, p. 107, *Puccinia Globulariæ* DC. Flor. Franç. VI, p. 55. — Soris teleutosporiferis in maculis brunneolis vel atro-brunneis insidentibus, raro solitariis, plerumque confertiusculis et in greges dilute brunneos rotundatis congestis; teleutosporis oblongo-fusoides vel lineari-lanceolatis, utrinque angustatis, apice valide incrassatis, plus minus conoideis, rarius rotundatis, medio subconstrictis, 35-60 $\approx$ 12-20, levibus, pallide flavo-brunneolis.

Hab. in foliis *Globulariæ* vulgaris, cordifoliæ et nudicaulis, in Italia, Belgio, Gallia et Germania.

232. **Puccinia annularis** (Strauss) Wint. Die Pilze p. 165, Massal. 2376
Ured. Veron. p. 24, t. II, f. X, 1-3, *Uredo annularis* Strauss in Wett. Ann. II, p. 106, *Puccinia Scorodoniæ* Link Sp. II, p. 72, *Puccinia Chamædryos* Ces. in Klotzsch Herb. myc. I, n. 1991, *Puccinia Teucrii* Fuck. Symb. p. 56, non Biv. Bernh. — Soris teleutosporiferis primo minutis, rotundatis vel oblongis, epidermide tectis, circa unum centralem circulariter secus unam v. plures series dispositis, dein nudis, confluentibus, pulvinulum plerumque rotundatum efformantibus, hypophyllis, brunneis, maculis obsoletis vel brunneo-flavidis; teleutosporis plerumque oblongis, raro ellipticis, medio constrictis, apice incrassatis, rotundatis, subinde obtusis, plerumque plus minus attenuatis, basi rotundatis aut angustatis, 30-50 $\approx$ 15-21, levibus, pallidissime flavo-brunneis; pedicello longissimo, persistenti, hyalino.

Hab. in foliis *Teucrii* *Scorodoniæ* et *Chamædryos*, in Italia, Austria, Arduennis, Belgio, Germania et Britannia.

233. **Puccinia aurea** Wint. in Flora 1884, n. 14. — Soris in maculis 2377
pallidis, lutescentibus, demum fuscescentibus, indeterminatis, irregularibus, sæpe confluentibus insidentibus amphigenis, sparsis gregariisve, minutis, punctiformibus, superficialibus, rotundatis, compactiusculis, luteo-fulvis, demum griseo-pulverulentis; teleutosporis oblongis v. fusiformibus utrinque attenuatis, apice valde incrassatis et plus minus conicis, 35-55 $\approx$ 14-21, levibus, dilute luteis, episporio tenui, pedicello æquali, persistente, circ. 8 μ . crasso, hyalino fultis.

Hab. in foliis vivis *Monadeniæ rufescentis*, pr. Capetown Africae australis (P. MAC OWAN).

Species quoad sectionem dubiæ.

1. In Dicotyledoneis vigentes.

* Teleutosporæ episporio levi (rarissime subruguloso) donatæ vel quoad episporium dubiæ.

234. **Puccinia stromatica** Berk. et Curt. North Amer. Fungi n. 547. 2378
— Soris effusis, rubiginosis; teleutosporis levibus, brevibus, utrinque obtusis; pedicello longo, flexuoso.

Hab. in caulibus *Clematidis*, Alabama Amer. bor. (PETERS).

235. **Puccinia insidiosa** Berk. in Hook. Journ. bot. 1854, p. 208, Dec. 2379
of Fungi n. 470. — Hypophylla; teleutosporis elongatis, clavatis, apiculo obtuso præditis, episporio crasso, extus obscuriori; pedicello longo, hyalino, flexuoso.

Hab. inter *Uredinem Clematidis* in foliis *Clematidis* nuntantis, Paras Nath Indiæ orientalis (Dr. HOOKER). — « An revera *Uredinis Clematidis* status teleutosporus? »

236. **Puccinia rhytismoides** Johans. Bot. Lekt. Nat. Stud. Upsala in 2380
Botanisches Centralblatt pag. 394. — Soris hypophyllis, rotundatis, cauliculis et petioliculis, magnis elongatisque, atris v. atro-brunneis, subnitidis, parum convexis, nunquam inflationes efficientibus; teleutosporis brevissime pedicellatis, anguste clavatis vel fere linearibus, rarius fusoides vel irregularibus, vertice incrassatis, obtusis vel rotundatis, nonnumquam acutatis, medio sæpius constrictis, 33-67 $\approx$ 6,5-14, levibus, brunneis; paraphysibus brunneis immixtis, stroma atrum efformantibus.

Hab. in foliis caulibusque *Thalictri alpini*, in Jämtlandia et (JOHANSON) Härjedalen nec non pr. Tronfield Norvegiæ (HENNING).

237. **Puccinia Schelliana** Thüm. in N. Giorn. botan. ital. 1880, p. 197. 2381
— Soris hypophyllis, postremo amphigenis, magnis, applanatis, pulveraceis, epidermide dilacerata et arescente cinctis et pro parte tectis, inquinantibus, obscure spadiceis vel fere fusco-atris; teleutosporis clavatis aut ovatis, medio non vel vix constrictis, vertice basique subangustatis, loculo superiori plerumque majori, episporio tenui, æquali, levi, 38-50 $\approx$ 10-24; pedicello hyalino, brevissimo, caduco.

Hab. in foliis vivis *Anemones narcissifloræ*, pr. Orenburg. — A. *Puccinia Anemones* Pers. forma et magnitudine teleutosporarum, defectu tuberculorum episporii etc., toto cœlo diversa.

238. **Puccinia ustalis** Berk. in Hook. Journ. bot. 1854, pag. 207, 2382
Dec. n. 469. — Hypophylla, maculis pallidis; soris magnis, sub-orbicularibus, depressis, fuscis, sparsis, margine obscurioribus, quasi innatis; teleutosporis elongatis, oblongis, superne attenuatis obtusisque, sæpe apice obliquis, pallide-fuscis, pedicello breviusculo fultis.

Hab. in foliis *Ranunculi pulchelli*, Momay Samdong in India orientali alt. 5000 M. et ultra (Dr. HOOKER).

239. **Puccinia Martianoffiana** Thüm. Pilzfl. Sibir. n. 40. — Soris hy- 2383
pophyllis, dense gregariis, primo tectis, demum liberis, fuscis, sæpe confluentibus, in macula expallescenti insidentibus; teleutosporis irregulariter ovoideis, vertice truncato, basi rotundatis, medio non vel leniter constrictis, fuscis, pedicello brevissimo, hyalino, caduco fultis, $28 \approx 18$, impellucidis.

Hab. in foliis vivis *Pæoniæ anomalæ*, sociâ sæpe *Septoriâ Martianoffianâ* Thüm., in pratis silvaticis prope lacum Kysykul Sibiricæ asiaticæ.

240. **Puccinia antarctica** Speg. Fungi Fuegiani p. 47, n. 132. — Soris 2384
hypophyllis, dense gregariis sæpeque confluentibus, 300-500 μ . diam., discoideis, compactiusculis, pulvinatulis, atro-fuligineis; teleutosporis ellipticis v. vix subelavulatis, tenuissime tunicatis, levissimis, antice sæpius rotundatis vel obtusissime subacutatis, medio parce constrictis, postice rotundatis vel vix attenuatis, $50-55 \approx 25-30$, saturate cinnamomeis, pedicello mediocri, crassiusculo, $40-50 \approx 5$, hyalino fultis.

Hab. ad folia viva *Berberidis*, in scopulosis New Year Island Patagoniæ. — Ex auctore dubium manet, num hæc species typum Montagneanum (*P. Berberidis*) sistat.

241. **Puccinia Berberidis** Mont. Syll. Crypt. n. 1158, Speg. F. Arg. 2385
IV, n. 59. — Maculis indeterminatis, nullis vel epiphyllis ac fulvescentibus; soris 0,5-1 mm. latis, hypophyllis, solitariis v. 2-5 gregario-confluentibus, compactis, rufis, pseudo-peridiis æcidii circumdatis, subtus planis; teleutosporis fasciculatis, anguste oblongis vel cylindraceo-subfusiformibus, $70-85 \approx 12-15$, medio 1-septatis, non v. vix constrictis, utrinque attenuato-rotundatis, episporio levissimo, incrassatulo, pallide melleis; pedicello longissimo, $150-200 \approx 10$, hyalino v. apice vix fuscescente.

Hab. in foliis vivis *Berberidis glaucæ* et spinulosæ in Chili (GAY) et in Republica Argentina (SPEGAZZINI) socio sæpe *Æcidio Berberidis* (?), quod forte metagenetice connexum.

242. **Puccinia Brandegei** Peck in Botan. Gazette 1882, p. 44. — Ma- 2386
culis nullis; soris amphigenis vel caulicolis, sæpe confluentibus,
rufo-brunneis, caules petiolaque torquentibus; teleutosporis subel-
lipticis, 26-35 μ 20-25, levibus, pedicello brevi suffultis.

Hab. in foliis vivis caulibusque *Corydalis Brandegei*, Co-
lorado Amer. bor. (T. S. BRANDEGEE).

243. **Puccinia Cheiranthi** Ell. et Everh. in Botanical Gazette X, 1885, 2387
p. 364. — Soris hemisphæricis, brunneis, nudis, 500-570 μ . diam.,
amphigenis, dense sparsis, plerumque haud confluentibus; teleuto-
sporis clavatis vel oblongis, læte brunneis, ad septum constrictis,
35-53 μ 15-22, loculis subæqualibus vel superiori latiori breviori-
que, levibus vel superne grosse rugulosis, apice sæpe laceratis,
pedicello persistenti, valido, longiusculo fultis.

Hab. in foliis *Cheiranthi pygmæi*, Grinnell Land Amer.
bor. (GREELY).

244. **Puccinia Hazslinskyi** De-Toni, *Puccinia Drabæ* Hazsl. Ung. 2388
Rostp. und Brandp. 1877 non Rudolphi. — Soris linearibus vel li-
neari-lanceolatis, atro-brunneis; teleutosporis oblongis, levibus, pe-
dicellatis, loculis æqualibus globosis, 40-42 μ . longis; pedicello hya-
lino, 40-85 μ . longo.

Hab. in caulibus *Drabæ Aizoonis*, in Hungaria. — «An
eadem ac species Rudolphiana, teleutosporis tantum levibus (an?)
diversa.

245. **Puccinia Vuilleminii** De-Toni, *Puccinia Thlaspidis* Vuill. in Bull. 2389
Soc. Bot. Fr. tom. XXXII, (1885), pag. 184 nec Schub. — Soris
hypophyllis, mox erumpentibus, expansis; teleutosporis episporio
crasso, levi, haud mucronato instructis, vix constrictis; pedicello
teleutosporam subæquante fultis, arcte matrici adnatis ibique ger-
minantibus.

Hab. in foliis *Thlaspeos alpestris*, Vosges Galliae. — Ad
Chrysomyxam quodammodo vergit.

246. **Puccinia aberrans** Peck in Botanical Gazette 1879, p. 217, Ellis 2390
et Everh. North Amer. Fungi n. 1834. — Maculis nullis; soris
teleutosporiferis amphigenis, plerumque confluentibus, sordide rufo-
brunneis; teleutosporis oblongis vel oblongo-clavatis, obtusis vel
obtuse acutiusculis, 40-60 μ 20-25, medio constrictis, levibus, sub-
inde biseptatis episporio ad verticem explanatum incrassato; pe-
dicello brevi vel obsoleto.

Hab. in foliis *Smelowskiae calycinae*, Alta, Mont. Wa-
sath, Utah in America boreali (M. E. JONES), et in foliis Arabi-

dis **Lyallii**, M. Paddo 2300 m. alt. Amer. bor. (SUKSDORF). — Teleutosporis sæpe biseptatis ad genus *Phragmidium* vergit.

247. **Puccinia Lepidii** Thüm. in Hedwigia 1882, p. 190. — Soris hy- 2391
pophyllis, sparsis, parvis, verrucoso-hemisphæricis, induratis, spadiceis, in macula vaga, exhausta, ochroleuca insidentibus; teleutosporis clavatis, curvis, medio constrictis, utrinque subobtusato-atenuatis, dilute fuscidulis, episporio levi, tenui sed vertice paullo incrassato, $35 \approx 15-17$; pedicello cylindrico, æquali, hyalino, curvato, $50 \approx 2$.

Hab. in foliis vivis *Lepidii latifolii*, prope Minussinsk Sibiriae asiaticæ.

248. **Puccinia Iberidis** Duby Botan. Gall. II, p. 887. — Amphigena; 2392
soris fuscis, minutis, convexis, orbicularibus, annulatim digestis, confertis, confluentibus in greges sparsos aggregatosque epidermide rupta demum oblitterata cinctis; teleutosporis oblongo-ellipticis, medio constrictis, loculo inferiore turbinato-globoso, superiore obtuso, pedicello filiformi, elongato fultis.

Hab. in foliis *Iberidis sempervirentis*, in M. Pyrenæis Galliae (REQUIEN).

249. **Puccinia rostrata** Cooke in Grevillea IV, pag. 116, *Puccinia* 2393
Cruciferarum Cooke in Grevillea III, p. 75 non Rudolphi. — Hypophylla, sparsa vel circinatim congesta; soris irregularibus, pulverulentis, vinoso-brunneis; teleutosporis ellipticis, brunneis, constrictulis; pedicello deciduo, brevi instructis, sursum apiculatis.

Hab. in foliis nonnullarum *Cruciferarum*, Himalaya Asiæ.

— «An a *Puccinia Cruciferarum* Rud. diversa?»

250. **Puccinia Barbareæ** Cooke in Grevillea VIII, p. 34. — Grega- 2394
ria, amphigena; soris rotundatis, atris, epidermide cinctis; teleutosporis late lanceolatis, forte constrictis, læte brunneis, levibus, $50 \approx 16$, episporio supra incrassatis; pedicellis hyalinis, subpersistentibus.

Hab. in foliis *Cruciferarum* imprimis *Barbareæ*, socio *Æcidio Barbareæ* quod forte metagenetice connexum est, Oregon (Dr. LYALL).

251. **Puccinia alpina** Fuck. Symb. myc. II. Nachtr. p. 13, Winter 2395
Die Pilze p. 176. — Soris folia et caules incolentibus, aggregatis, confluentibus, valde prominentibus, cuticula tenuissima, grisea, nitida, demum lacerata tectis, pro ratione maximis, fuscis; teleutosporis fusoideo-ellipsoideis, ad septum haud vel vix constrictis,

antice aut obtuse apiculatis aut obtusis, levibus, flavis, 30-52 = 17-23; pedicello hyalino, brevi.

Hab. in foliis caulibusque vivis *Violæ bifloræ*, in Italia, Helvetia, Germania et Lapponia rossica.

252. **Puccinia Pyrolæ** Cooke in Peck 25 Rep. St. Mus. p. 119, n. 28, 2396

Ellis North. Amer. Fungi n. 1039. — Hypophylla; maculis pallidis vel dilute albido-flavis, subinde brunneo- v. purpureo-margi- natis; soris gregariis, epidermide rupta cinctis, subcircinatis, sæpe confertis, atris; teleutosporis ellipticis vel obovatis, obtusis, leni- ter constrictis, 32-40 = 15-18, episporio vertice conoideo-incrassa- to, levi; pedicello subhyalino, plerumque teleutosporam subæquante.

Hab. in foliis, petiolis caulibusque *Polygalæ paucifoliæ*, in America boreali. — «An potius *Puccinia Polygalæ* nuncu- panda?; an matrix male indicata?».

253. **Puccinia pulvinulata** Rud. in Linnæa IV (1829), p. 115, *Pucci-* 2397

nia alsophila Sacc. in Michelia I, p. 241, Mycoth. Ven. n. 1130.

— Maculis nullis; soris subrotundis, pulvinulatis, compactis, hy- pophyllis, solitariis, nigricantibus; teleutosporis oblongis, subinæ- qualiter constrictis, arcte conglutinatis, atro-fuligineis, 2-nucleatis, 40-45 = 25, pedicello longo, 80-90 = 5-6, fragilissimo, hyalino fultis.

Hab. in pagina inferiore *Frankeniæ pulverulentæ*, in Eu- ropa australiori; Venetiis (CHIAMENTI). — Sori 4-7 mm. longi, 3 mm. crassi.

254. **Puccinia Tremandræ** Berk. Fungi of Ceylon n. 819. — Maculis 2398

nullis; soris sparsis, hypophyllis, ferrugineis; teleutosporis pallidis, elongatis, apiculatis.

Hab. in foliis *Tremandræ oppositifoliæ*, in insula Cey- lon (W. H. HARVEY).

255. **Puccinia obliqua** B. et C. Fungi of Cuba n. 590. — Soris sine 2399

ordine sparsis hemisphæricis brunneis cuticula *Physari* cujusdam ad instar subiridescenti diu tectis; teleutosporis obovatis, obtusissi- mis, e pedicello laterali obliquo oriundis, pallidissimis.

Hab. in foliis plantæ cujusdam ex *Alsineis*. in insula Cuba.

256. **Puccinia Sherardiana** Körn. in Hedwigia 1877, p. 29. — Soris 2400

teleutosporiferis dicrois, hypophyllis, parvis, aggregatis, orbiculari- bus, apertis fusco-nigris; teleutosporis persistentibus, ovatis vel breviter obovatis, apice rotundatis, levibus, obscure fuscis, episporio crasso vertice paullo crassiore; pedicello lato, hyalino, teleutospora pluries longiore.

Hab. in foliis *Malvæ Sherardianæ*, in Armenia.

257. **Puccinia Malvastri** Peck in Bull. Torr. Bot. Club vol. XII, n. 4, 2401 pag. 35. — Maculis evanescentibus; soris congestis, confluentibus, amphigenis, obscure rufo-brunneis, compactis, prominulis; teleutosporis oblongo-ellipticis, leniter constrictis, levibus, obtusis v. raro obtuse acutis, $47-62 \approx 23-30$; pedicello teleutosporam longitudine plerumque superante duplo quadruplove longiore, hyalino.

Hab. in foliis Malvastri, Arizona Amer. bor. (JONES). — A *P. Malvacearum* soris obscurioribus, magnitudine teleutosporarum pedicellis sæpe longioribus differt.

258. **Puccinia lobata** B. et C. North American Fungi n. 550. — Te. 2402 leutosporis longe pedicellatis, demum mitriformibus, episporio hyalino, crasso.

Hab. in Sida lepidota, Texas in Amer. bor. (WRIGHT).

259. **Puccinia heterospora** B. et C. Journ. Linn. Soc. X, pag. 356, 2403

Uromyces pulcherrimus Berk. et Curt. North Amer. Fungi n. 565,

Uromyces Thwaitesii B. et Br. Fungi of Ceylon n. 824. — Maculis determinatis, purpureis v. lutescentibus; soris minutis, hypophyllis, mox nudis, in glomerulos orbiculares congestis, brunneis; teleutosporis elongatis v. subglobosis, levibus, $15-27 \mu$ diam., sensim vertice incrassatis, primo continuis, demum biseptatis; pedicello hyalino, gracili, deorsum angustato, teleutosporâ 3-4-plo longiore.

Hab. in foliis Sidæ spinosæ, humilis, hirsutæ et Abutili texensis, in America boreali, insula Ceylon et Port Natal Africæ.

260. **Puccinia Abutili** B. et Br. Ceylon Fungi n. 816. — Maculis effusis, amphigenis, luteis vel nullis; soris latis, nigris, cuticula scariosa circumdatis; teleutosporis brevibus obovatis, $35 \approx 20$, obtusissimis levibus; pedicello brevi fultis.

Hab. in foliis Abutili graveolentis, Kandy in insula Ceylon. — A *P. malvacea* diversa.

261. **Puccinia Arechavaletæ** Speg. Fungi Argentini pug. IV, n. 57, 2405

F. Guaranitici n. 108. — Maculis nullis; soris innato-prominulis, hemisphæricis, sæpius minutis, concentrice dispositis ac non rarius confluentibus glomerulumque unicum, orbicularem efformantibus, quandoque amphigenis quandoque hypophyllis tantum, folia late occupantibus; teleutosporis polymorphis, subsphæroideis v. obovatis, $18-28 \approx 15-18$, quandoque bilocularibus quandoque unilocularibus, loculis non v. 1-guttulatis, episporio crassiusculo, apice incrassatulo protoplasmate dense granuloso, vivide fulvis.

Hab. ad folia viva Cardiospermi velutini, prope Monte-

video et prope Quilmes nec non Cupaniæ prope Villa Rica in America australi. — In speciminibus guaraniticis teleutosporæ fere omnes uromycetiformes, pucciniiformes rarissimæ et tandem fungillus melius ad genus *Uromycetem* adscribendus videtur; teleutosporæ obovatæ, 18-22 μ . diam., sæpius subtruncato-rotundatæ, varie truncatæ, præcipue ad verticem obscure cinnamomeæ, pedicello exili, prælongo, 50-65 $\approx$ 2,5-4, hyalino fultæ.

262. **Puccinia Acerum** Link Sp. II, p. 80, Winter Die Pilze p. 224, ²⁴⁰⁶
P. bullata Link Obs. II, p. 29. — Soris sparsis, subrotundis, epidermide bullata, nitente, centro rumpente tectis; teleutosporis brunneis, ovatis.

Hab. ad folia Aceris Pseudo-Platani, dasycarpi etc. in Germania.

263. **Puccinia kirghisica** Thüm. in N. Giorn. botan. ital. 1880, p. 197. ²⁴⁰⁷
 — Soris hypophyllis, gregariis, parvulis, punctiformibus, epidermide tectis, induratis, elevatis, purpureis in macula indistincta, non marginata, ochracea, hypophylla, in pagina superiore purpurea; teleutosporis fasciculatis, longe ellipticis, medio constrictis, in pedicellum angustatis, fuscis, vertice incrassato subacutatoque, 42-50 $\approx$ 20; pedicello longissimo, arcuatulo, hyalino, 60-70 $\approx$ 6-8.

Hab. ad folia viva Geranii pratensis, Tirlandsk Orenburg.
 — Differt a *Puccinia Geranii* Corda et *Puccinia Morthierii* Körnicke characteribus notatis.

264. **Puccinia Leveilleana** De-Toni, *Puccinia Geranii* Lév. in Ann. ²⁴⁰⁸
 Scienc. Nat. 1846, p. 270 vix Corda nec Fuckel. — Soris hypophyllis, convexis, minutis, fuscis, secus orbem dispositis, primo tectis, dein nudis; teleutosporis ovatis, ad septum non constrictis, abbreviato-obtusis, levibus, opacis, pedicello brevi suffultis.

Hab. in foliis Geranii dissecti (?), in Chili Amer. Austr. (Gay). — Maculae orbiculares, brunneæ. — A *P. Geranii* Corda vix teleutosporis medio non constrictis pedicelloque brevi fultis distincta.

265. **Puccinia Geranii** Corda Icon. IV, p. 12, t. 4, f. 36 non Fuckel ²⁴⁰⁹
 vix Lév., Winter Die Pilze p. 224, vix *Trichobasis Geranii* Berk. — Maculis nullis; soris minutis, atris, solitariis aut sparsis; teleutosporis oblongis, medio constrictis, apice incrassatis aut conoideo-attenuatis, levibus, flavescenti-brunneis; pedicello longo, crasso.

Hab. in foliis Geranii Robertiani, in Bohemia.

266. **Puccinia Pilocarpi** Cooke in Grev. IX (1880) p. 11, *Puccinia* ²⁴¹⁰
Parodii Speg. Fungi Argentini pug. III, pag. 32. — Maculis epiphyllis, griseo-aridis, valide determinatis, subconcavis, sori magni-

tudine; soris amphigenis, sparsis, orbicularibus compactis, duris, erumpentibus ac epidermide fissa cinctis, pulvinato-prominulis, applanatis. majusculis 2-5 mm. diam., obscure fusco-ferrugineis uredosporis nullis; teleutosporis levibus, ellipticis, antice acutiusculis, subtruncato-rotundatis, episporio non v. vix incrassato, deorsum attenuato-rotundatis, medio 1-septato-constrictis, $62-68 \approx 20$, ochraceo-fuligineis, loculis non v. 1 guttulatis, in pedicello prælongo, 100-120 $\approx$ 5-8 cylindraceo, fusco acrogenis, paraphysibus filiformibus, 150-200 $\approx$ 3-4 obvallatis.

Hab. in foliis vivis *Pilocarpi pinnati* et *Selloani*, Paraguay (Cl. D. PARODI) et in Algeria (TRABUT). — Var. **minor** Speg. Fungi Guaranitici I, n. 117. Maculis epiphyllis, 1-1,5 mm. diam. vix fuscescentibus sed parenchymate profunde impresso-bullosa; soris hypophyllis pugillus, 1-3 mm. diam., orbicularibus, applanato-pulvinatis, compactissimis, duris, fuligineo-cinnamomeis, nudis; teleutosporis ellipticis vel obovatis, 40 $\approx$ 15-18, apice plus minus attenuatis ac obtusatis, episporio crassiusculo sæpius pervio, medio parce constrictis, levibus, fulvo-cinnamomeis, pedicello 120-150 $\approx$ 2-6 gracili, hyalino apice dilute fulvescente fultis; paraphysibus nullis. In foliis vivis plantæ cujusdam arborescentis in silvis ad ripas fluminis Pirayû Americæ australis.

267. **Puccinia Tecleæ** Pass. in N. Giorn. bot. ital. VII, p. 184, t. 4, 2411 f. 3, Martelli Flor. Bogos p. 135. — Soris hypophyllis, in macula exarida fusco-limitata, ad *Cucurbitariæ* modum aggregatis, prominentibus, epidermide rupta cinctis, atris; teleutosporis oblongis, utrinque subrotundatis, medio constrictis, loculo inferiore sublongiore, pedicello excluso 16-20 $\approx$ 5-6, rubiginosis; pedicello concolore pallidiore translucido tenui, longitudine admodum varia teleutosporam duplo vel triplo plerumque superante.

Hab. in foliis *Tecleæ nobilis*, pr. Keren in Abyssinia Africæ.

268. **Puccinia Mesnieriana** Thüm. in Myc. univ. n. 834, Contrib. fl. Lusit. p. 11, n. 58. — Soris amphigenis, plerumque hypophyllis, sæpe marginalibus et petiolicolis, sparsis, orbiculato-elevatis, verruciformibus, induratis, epidermide tectis, dein erumpentibus, sine macula v. in pagina superiore maculam nigro-violaceam formantibus nitido-atris; teleutosporis fasciculatis, longe-clavatis, medio constrictis, loculo superiori oblique quadrangulo, 15 μ . crasso apice imposito, obtuso, sæpe subcoronato ut in *P. coronata*, loculo inferiori duplo longiore, basi angustato, 12 μ . crasso, episporio levi, tenui, vertice subincrassato, 50 μ . longo; pedicello basi verticeque

dilatato, medio angustato, $35 \approx 2-4$, hyalino, fuscis; paraphysibus nullis.

Hab. ad folia viva Rhamni Alaterni, pr. Coimbra Lusitaniae (P. G. MESNIER).

269. **Puccinia digitata** Ell. et Harkn. New. Calif. Fungi p. 7. — 2413

Hypophylla; soris rotundatis, 1.4 mm. diam., solitariis, obscure brunneis, prominulis, epidermide rupta cinctis; teleutosporis clavatis, loculo superiori rufo-brunneo, inferiori longiori pallido, episporio sursum incrassatulo processusque 1-7 digitatos gerente, $45-54 \approx 15-18$; pedicello tertiam teleutosporae partem aequante, valido, persistente.

Hab. in foliis vivis Rhamni crocei, in California Americae borealis. — A *Puccinia coronata* soris amplioribus valde prominentibus praecipue differt.

270. **Puccinia neurophila** Grognot Crypt. cell. p. 154 (*P. nerviphila*). 2414

— Amphigena sed praecipue hypophylla; soris pallide brunneis, *P. Veratri* similibus, diu tectis, secus nervos primarios praesertim dispositis.

Hab. in foliis Trifoliorum, Saone-et-Loire Galliae — Species maxime dubia.

271. **Puccinia Arachidis** Speg. F. Guaran. pug. I, n. 107. — Maculis 2415

nullis v. vix manifestis, parvulis, indeterminatis, fuscescentibus; soris hypophyllis, rarissime epiphyllis, minutis, $200-350 \mu$. diam., plus minus dense gregariis vel sparsis, hemisphaerico-prominulis, primo epidermide tenuissima velatis, dein nudis, laxe granulosi, ferrugineis; teleutosporis ellipticis vel obovatis, $38-42 \approx 14-16$, sursum obtuse rotundatis vel acutatis ibique crassiuscule tunicatis, medio 1-septatis, parum constrictis, deorsum leniter attenuato-truncatis, fulvellis, levissimis, intus nubilosis, pedicello longiusculo, gracili, $50-60 \approx 4-5$, hyalino suffultis.

Hab. in foliis vivis Arachidis hypogaeae, in silva subvirginea Caa-guazù Amer. austr.

272. **Puccinia simplex** Peck 34 Rep. of St. Mus. p. 41. — Maculis 2416

parvis, orbicularibus, sparsis, brunneis vel griseo-brunneis, margine purpureis; soris hypophyllis, hemisphaericis vel depressis, compactis, centro maculae plerumque singulis, obscure brunneis; teleutosporis fragilibus, oblongo clavatis, ad septum leniter constrictis, $40-50 \approx 10-13$, pallide brunneis, pedicello brevissimo fultis.

Hab. in foliis vivis plantae cujusdam verisimiliter Gei, Albany Americae borealis.

273. **Puccinia Waldsteiniae** Curt. North American Fungi n. 551. — 2417

Maculis parvis, roseis; soris magnis ut plurimum solitariis; teleutosporis oblongis vel oblongo-clavatis, constrictis, loculo superiori latiore, $34-50 \approx 12-16$, levibus, granuloso-farctis, sursum incrassatis, obtusissimis, pedicello fusco, teleutosporam subæquante fultis.

Hab. in foliis Waldsteiniae fragarioidis, Fort Edward, Portville et New York in America boreali (Howe) et Waldsteiniae geoidis Buczacz in Galicia (KRUPA).

274. **Puccinia Peckiana** Howe in Peck 25 Rep. p. 114, Burrill Fungi 2418 of Illinois p. 178, *Puccinia tripustulata* Peck l. c. pag. 113. —

Hypophylla; soris parvis, sparsis, plus minus numerosis, subinde confluentibus, pulveraceis, cinnamomeo-brunneis, maculis minutis, angulatis, distinctis, flavis, rarius nullis; teleutosporis (uno latere visis) plus minus angulatis (altero) ellipsoideis, haud constrictis, loculo superiori triangulari, apiculo minuto, hyalino, obtuse rotundato instructo, loculo inferiori e latere viso subquadrangulati, 2 projectionibus basi instructo, una pedicello adnata, altera apiculiformi, $36-45 \approx 22-27$, pedicello brevi vel obsoleto, fragili, recedente, hyalino instructis.

Hab. in foliis Rubi villosi, strigosi et R. occidentalis, in America boreali.

275. **Puccinia gigantea** Karst. Mycologia Fennica p. 42 n. 31. — 2419

Soris in caulibus compactis, sparsis, per epidermidem erumpentibus eaque fissa cinctis, crassissimis, elevatis, rugosis, obscure fuscis, vulgo oblongatis, 1 cm. usque longis, circiter 4 mm. latis, in foliis suborbicularibus liberis, rugosis v. levibus multo minoribus; teleutosporis fusosideo-elongatis, vertice valde incrassatis, ad septum constrictis, deorsum in pedicellum, teleutosporam æquantem, attenuatis, subflavis, levibus, $43-55 \approx 10-14$.

Hab. in caulibus emortuis Epilobii angustifolii, in Lapponia rossica.

276. **Puccinia Gayophyti** Peck in Botan. Gazette 1882, p. 56. — Ma- 2420

culis nullis; soris minutis, sparsis, amphigenis, rufo-brunneis; teleutosporis obovatis vel fere ellipticis, plerumque ad septum constrictis, obtusis, $30-40 \approx 20-25$, levibus, pedicello brevi, hyalino suffultis.

Hab. in foliis vivis Gayophyti, California (JONES, PRINGLE).

277. **Puccinia Boisduvaliae** Peck in Botan. Gazette 1882, p. 45. — 2421

Maculis indeterminatis, flavescentibus, sæpe rubro vel brunneo tinctis; soris paucis, sparsis, amphigenis, brunneis; teleutosporis ob-

ovatis vel oblongo-ellipticis, obtusis, ad septum leniter constrictis, $85-40 \approx 20-24$, levibus, pedicello brevi, hyalino fultis.

Hab. in foliis vivis Boisduvaliæ Torreyi, Santa Cruz Californiæ (JONES).

278. **Puccinia Jussiei** Speg. Fungi argentini Pugillus IV, n. 62. — 2422

Maculis epiphyllis, parvulis, 1-2 mm. diam., violaceo-purpurascens; soris hypophyllis, pulvinulo incrassato, aurantiaco-purpurascens insidentibus, minutis, 2-3 mm. diam., compactis, cinnamomeis; teleutosporis cylindræo-subclavatis, $35-50 \approx 20$, medio 1-septatis, ad septum plus minusve constrictis, episporio hyalino, levissimo ad apicem loculi superioris incrassato sæpeque in umbonem centram v. excentricum producto, basi loculi inferioris truncati tenuissimo, protoplasmate granuloso, intense castaneo-fulvo, loculis 1-guttulatis, pedicello crasso, $50-60 \approx 10-12$, hyalino, apice non v. vix fusciscente fultis.

Hab. ad folia viva Jussiei longifoliæ, socio *Æcidio Jussiei* Speg., in paludibus æstuarii, Ensenada, in Republica Argentina.

279. **Puccinia Umbilici** Guep. in Duby Bot. Gall. p. 890, Cooke Hand- 2423

book n. 1504, F. Brit. n. 132. — Maculis pallidis; soris rotundatis, convexis, compactis, primo tectis, demum in maculas orbiculares, magnas confluentibus; teleutosporis subglobosis, granuloso farctis, haud constrictis, levibus, breviter pedicellatis, loculis subæqualibus, depressis, plerumque $28-32 \approx 18-20$, subinde hyalino-apiculatis.

Hab. in foliis Umbilici pendulini, in Gallia, Belgio et Britannia.

280. **Puccinia exanthematica** Mac-Owan in Grevillea XI, p. 24. — 2424

Soris hypophyllis, distinctis, maculæ latæ, disciformi, carneo-purpureæ insidentibus, circinantibus, primum aurantiis, demum ochraceis; teleutosporis cylindricis, $24 \approx 16$; pedicello æquilongo, flavido, episporio crassiusculo, levi.

Hab. in foliis Crassulæ cujusdam, ad Somerset East Africae australis.

281. **Puccinia Blyttii** De-Toni, *Puccinia Rhodiolæ* Blytt Bidrag 2425

Norg. Soparter in Christ. Vidensk. Selsk. Forhandl. 1882, n. 5 nec B. et Br. — Soris atro-brunneis, confluentibus, hypophyllis et cauliculis; teleutosporis $24-35 \approx 16-19$, non verrucosis, vertice tantum paullulum incrassatis, postice rotundatis; pedicello deciduo, teleutosporam dimidiam æquante.

Hab. in foliis caulibusque Rhodiolæ roseæ, in Norvegia.

282. **Puccinia Rhodiolæ** B. et Br. Ann. Nat. Hist. n. 468, Cooke Handb. 2426
n. 1505 nec Blytt. — Maculis orbicularibus, brunneis; soris minutis, confertis; teleutosporis breviter pedicellatis, loculis depressis, subinde spurie subdivisis.

Hab. in foliis Sedi Rhodiolæ, in Britannia. — Propter teleutosporas subinde spurie pluriseptulatas ad *Endophyllum* vergit.

283. **Puccinia Claytoniæ** Thüm. Pilzfl. Sibir. num. 183. — Soris hy. 2427
pophyllis v. raro etiam amphigenis, sparsis, mediis, primum tectis, demum liberis et cuticula disrumpenti cinctis, badiis, in macula pallida, indeterminata; teleutosporis late ellipsoideis vel oblongo-ovatis, sessilibus, vertice rotundatis basi minime subacutatis, medio non constrictis, homogeneis, pallide fuscis, episporio levi, tenuissimo, 24-28 $\approx$ 18-21 paraphysibus nullis.

Hab. ad folia viva Claytoniæ arcticæ, in montibus Sajanensibus Sibiriae asiaticæ.

284. **Puccinia pulchella** Peck 25 Rep. p. 111, Thüm. Mycoth. Univ. 2428
n. 544. — Epiphylla; maculis flavis vel flavo-virentibus, orbicularibus, raro confluentibus; soris parvis, circinatis, subinde confluentibus, atro-brunneis; teleutosporis 25-33 $\approx$ 15, levibus, brunneis, vix constrictis, elliptico-oblongis, loculis subæqualibus, episporio ubique æquicrasso; pedicello brevi, hyalino.

Hab. in foliis Ribis prostrati, North Elba Amer. borealis. — Sori plerumque secus orbes binos concentricos dispositi. Maculæ 3-3,5 mm. diam.

285. **Puccinia spreta** Peck in 29 Rep. St. Muss. p. 67, *Puccinia* 2429
Tiarellæ Peck in 25 Rep. St. Mus. pag. 115 nec Berk. et Curt. Burrill Parasitic Fungi of Illinois p. 178. — Amphigena; maculis brunneis vel rufescenti-brunneis, sæpius flavo-marginatis; soris sparsis, prominulis, rufescenti-brunneis, subinde confluentibus; teleutosporis subellipticis vel oblongis, ad septum leniter constrictis, subacuminatis, 21-35 $\approx$ 12-18, levibus, episporio tenuiusculo, pedicello gracili, hyalino, plus minus longo fultis.

Hab. in foliis Mitellæ diphyllæ et nudæ nec non Tiarellæ cordifoliæ, in America boreali. — «Cum *Puccinia Tiarellæ* et *P. Saxifragarum* comparanda».

286. **Puccinia Tiarellæ** Berk. et Curt. North Amer. Fungi n. 549 2430
nec Peck. — Maculis pallidis; soris magnis, rufis; teleutosporis clavatis apice papilla acutis, 5 μ . longis, obtusis, pedicello brevi fultis.

Hab. in foliis Tiarellæ, Canadâ (Poe). — *Pucciniæ spretæ*

Peck subaffinis at teleutosporis minutissimis (an revera?) statim dignoscenda. «An teleutosporæ potius 50 μ . longæ?»

287. **Puccinia congregata** Ell. et Harkn. New Calif. Fungi p. 6. — 2431

Hypophylla, maculam efformans; soris dense congestis, maculæ brunneæ medio insidentibus, 4-6 mm. latis; teleutosporis oblongis, leniter constrictis, apice subhyalino-apiculatis, 38-45 $\approx$ 13-15.

Hab. in foliis vivis Heuckeræ micranthæ et Mitellæ nudæ in California et Lacu Nipigon Amer. bor. — *Pucciniæ Tia-rellæ* B. et C. et *P. spretæ* Peck proxima.

288. **Puccinia? Loranthi** Speg. Fungi guaranitici I, n. 111. — Ma. 2432

culis nullis; soris amphigenis, sparsis vel hinc inde laxè gregariis, pulviniformibus, 1-2 mm. diam., subcrenulatis, compactis, sordide fusco-testaceis; teleutosporis dense constipatis, subclavato-cylindraceis, fere bacillaribus, apice obtuse rotundatis, postice truncatis, 70-75 $\approx$ 12-14, medio 1-septatis, non constrictis, episporio tenui ubique æquicrasso, levi, protoplasmate granuloso-nubiloso, pallidissime fulvis vel hyalino-chlorinis, pedicello brevissimo, crasso, 20 $\approx$ 10, hyalino, facillime deciduo fultis.

Hab. ad folia Loranthi cujusdam, in silvis prope Paraguari Amer. australis. — Species externa facie vere puccinioidea, forma teleutosporarum tamen anomala, ergo nonnihil dubia.

289. **Puccinia Astantiæ** Berk. et Curt. North Amer. Fungi n. 545. 2433

— Hypophylla; maculis flavis; soris rubiginosis; teleutosporis 32-33 μ . longis, acutis.

Hab. in foliis Astantiæ, Canada in Amer. bor.

290. **Puccinia Pimpinellarum** Rabenh. in Hedwigia 1871, p. 19. — 2434

Teleutosporis oblongis, 38 $\approx$ 25, amœne brunneis, utroque polo perfecte rotundatis, levibus, glabris, ad dissepimentum haud constrictis, pedicello elongato, hyalino suffultis.

Hab. in Pimpinella puberula, prope Buschir in Persia. — A *Puccinia Pimpinellæ* dignoscenda.

291. **Puccinia Cryptotæniæ** Peck in 23 Rep. of Stat. Bot. p. 114. — 2435

Hypophylla; maculis parvis, pallidis aut flavescentibus, subinde purpureo-tinctis confluentibusque; soris minutis, subcircinatim dispositis, demum confluentibus, primo tectis, dein epidermide disrupta cinctis, rufo-brunneis; teleutosporis subellipticis, leniter constrictis, minute umbilicatis vel apiculatis, 26-40 $\approx$ 15, pedicello brevissimo suffultis.

Hab. in foliis petiolisque Cryptotæniæ canadensis, prope Greenbush in America boreali.

292. **Puccinia Angelicæ** (Schum.) Fuck. Symb. myc. p. 52 nec E. et 2436
Ev., *Uredo Angelicæ* Schum. Pl. Saell. II, p. 233. — Soris hypophyllis, orbicularibus, plerumque secus nervos in series confluentibus, epidermide lacerata cinctis, fuscis; teleutosporis ovoideo-ellipsoideis, irregularibus, ad septum leviter constrictis, flavis, 30-40 $\approx$ 18-26.

Hab. in foliis Angelicæ silvestris, in Rhenogovia Germaniæ, Neerlandia, Arduennis et Fennia. — *Pucciniæ Ellisii* De-Toni peraffinis, nisi identica. «An huc *Æcidium Angelicæ* Rostrup.»

293. **Puccinia porphyrogenita** Curt. in Thüm. Mycoth. Univ. n. 545, 2437
Puccinia acuminata Peck 23 Rep. of St. Bot. p. 119 nec alior. — Hypophylla; maculis orbicularibus, purpureis vel rufo-brunneis; soris magnis, sparsis vel confluentibus, compactis, prominulis, epidermide rupta velatis, atris; teleutosporis oblongis, medio constrictis loculis inæqualibus, 45-62 $\approx$ 15-18, apice obtuse acuminatis, levibus; pedicello colorato, sporam plerumque æquante.

Hab. in foliis Corni canadensis, Sandlake, M. Adirondack et North Elba nec non in California Americæ borealis. — *Pucciniæ Waldsteinicæ* affinis.

294. **Puccinia spongiosa** B. et Br. Fungi of Ceylon n. 820. — Soris 2438
magnis crassis; teleutosporis subellipticis, obtusissimis, uniseptatis, nec medio contractis.

Hab. in foliis Stylocorynes Weberi, in insula Ceylon.

295. **Puccinia Galopinæ** Cooke in Grevillea X, p. 124. — Hypophylla; 2439
soris compactis, densis, purpureo-brunneis, convexis; teleutosporis congestis, elongato-fusiformibus, lateraliter compressis, hyalinis, fusco-tinctis, 50 $\approx$ 9, episporio tenui; pedicello brevi.

Hab. in foliis Galopinæ asperæ, ad Inanda, Natal Africae (Wood).

296. **Puccinia Spermacocis** B. et C. North Amer. Fungi n. 548. — 2440
Hypophylla; maculis flavis, orbicularibus, parvis; soris rubiginosis; teleutosporis brevibus, levibus, utrinque obtusis, pedicello hyalino brevioribus.

Hab. in foliis Spermacoces glabræ, Alabama Americæ borealis (PETERS).

297. **Puccinia clandestina** Carm. in Sm. Engl. Flor. V, p. 365, Cooke 2441
Handbook n. 1480. — Maculis flavescentibus; soris minutissimis, distinctis, numerose gregariis, obscure brunneis, epidermide eva-

nescente denudatis; teleutosporis oblongis, lenissime constrictis, pedicellatis.

Hab. in foliis Scabiosæ succisæ raro in Britannia.

298. **Puccinia Spegazzinii** De-Toni, *Puccinia australis* Speg. Fungi 2442

Argentini Pug. II, n. 33, non Körn. Fungi Guaranitici I, n. 109. — Hypophylla; maculis epiphyllis, orbicularibus, concavis, fulvescentibus, subdeterminatis; soris hinc inde dense glomerulatis, compactis, 1-3 mm. diam., tumidis, fulvo-fuligineis; teleutosporis elongato-subclavatis, 50-65 $\approx$ 15-18, superne attenuato-rotundatis, medio septatis, vix constrictis, deorsum leniter in pedicellum desinentibus, episporio tenui vix apice crassiore, granuloso-farctis; pedicello hyalino, 40-60 $\approx$ 8-10.

Hab. ad folia viva Mikaniæ scandentis var. periplocifoliæ, ad la Boca del Riachuelo, (O. SCHNYDER), nec non Mikaniæ cordifoliæ, in dumetis silvæ Caà-guazù et S. Barbara pr. Villa Rica in America australi.

299. **Puccinia Nardosmiæ** Ell. et Everh. in Journal of Mycology 1885, 2443

p. 85. — Soris numerosis, hypophyllis, purpureo-brunneis, subconcentrice secus greges circulares circ. 4 mm. latos dispositis, mox nudis; teleutosporis ellipticis vel oblongis, sæpe uno latere magis prominentibus, vix medio constrictis, 25-30 $\approx$ 15-20, sæpius sursum angustatis, episporio levi, vertice incrassato, papilla subhyalina aucto; pedicello teleutosporam subæquante, fragili facileque deciduo.

Hab. in foliis Nardosmiæ (Petasitidis) palmatæ prope Red Rock in Lacu superiori Amer. bor.

300. **Puccinia Printziæ** Thüm. in Mycoth. univ. n. 742. — Soris hy- 2444

pophyllis, sparsis, maximis, confluentibus vel compositis, elevatis, suborbiculatis, verruciformibus, firmis, spadiceo-castaneis, in macula expallescenti, pagina superiore luteo-fusca, concava; teleutosporis clavatis, vertice obtuso-acutatis, medio constrictis, longe pedicellatis, 68-72 μ . longis, loculo superiore 20-22 μ . crass., loculo inferiore 16-18 μ . crass., fragilibus, dilute fuscis, episporio levi, subcrasso, vertice incrassato; pedicello subrecto vel vix curvato, utrinque subincrassato, 25 $\approx$ 5-8.

Hab. in foliis vivis Printziæ Huttoni, in silvis elatioribus montis «Boschberg» pr. Somerset-East, Promont. Bonæ Spei Africæ australis (P. MAC OWAN).

301. **Puccinia æcidiiformis** Thüm. in Flora 1875, p. 378. — Soris 2445

teleutosporiferis hypophyllis, gregariis vel sparsis, ochraceis, dein

expallescentibus; teleutosporis ovoideis, leniter constrictis, obtusis, pallide flavis, $54-58 \approx 30$; pedicello hyalino, recto, caduco, 6 μ . longo.

Hab. in foliis vivis *Nidorellæ mespilifoliæ*, ad pedem montis Boschberg prope Somerset East Africae (MAC OWAN). — Fungillus *Æcidii* habitu.

302. **Puccinia doloris** Speg. Fungi Argentini Pug. IV, n. 61. — Ma- 2446
culis parvulis, amphigenis, pallentibus; soris hypophyllis, sæpius areolatim circa centralem majorem dispositis, minutis, 2-3 mm. diam. pulvinato-prominulis, compactis, amœnæ cinnamomeis; teleutosporis elongato-subclavatis, centro 1-septato-constrictis, episporio levissimo in vertice loculi superioris valde incrassato sæpeque in umbonem producto, $45-50 \approx 15-16$, protoplasmate granuloso fœtis, loculis 1-guttulatis, dilute fuligineis, pedicello hyalino, $30 \approx 57$, apice fuscescente suffultis.

Hab. in foliis vivis *Erigerontis bonariensis*?, in sepi-
bus prope Dolores in Republica Argentina.

303. **Puccinia Grindeliæ** Peck in Bot. Gazette 1879, p. 127. — Maculis 2447
pallidis, orbicularibus, 2-7 mm. diam. metientibus, subinde confluentibus; soris amphigenis, minutis, confertis, atris vel atro-brunneis; teleutosporis oblongis, obtusis vel obtuse acutatis, profunde ad septum constrictis, $40-50 \approx 20-25$, nonnullis aseptatis, pedicello hyalino, teleutosporam subæquante fultis.

Hab. in foliis radicalibus *Grindeliæ squarrosæ* rarius, Colorado Amer. bor.

304. **Puccinia variolans** Harkn. New Calif. Fungi pag. 15. — Soris 2448
solitariis, ovatis, obscure brunneis, 1 mm. longis; teleutosporis oblongis vel clavatis, constrictis, brunneis, $40-70 \approx 18-24$, levibus, episporio sursum incrassato; pedicello hyalino, 1-2-plo teleutosporâ longiore.

Hab. in foliis ramulisque *Tetradymiaë canescentis*, in California ad M. Davidson 2300 m. circ. alt.

305. **Puccinia Leucanthemi** Pass. in Hedwigia 1874, p. 47. — Am- 2449
phigena; maculis obsoletis; soris subrotundis vel elongatis, primo tectis, rubiginosis, dein epidermide fissa cinctis, rufo-fuscis, velutinis; teleutosporis elongatis, flavidis, ad septum constrictis, apice plus minusve acuminato-rostratis, interdum trilocularibus, pedicello longiusculo, hyalino fultis.

Hab. in foliis *Leucanthemi vulgaris*, locis humidis um-
brosis pr. Parma Italiae borealis (PASSERINI). — A *P. Tanacetii* colore teleutosporarumque forma differre videtur.

306. **Puccinia Verbesinæ** Schwein. Syn. Carol. pag. 73, n. 496, vix 2450

Spegazz. — Soris punctiformibus, sparsis, atro-fuscis, epidermide haud cinctis; teleutosporis ovatis, apice angustioribus, pedicello brevi, loculis æqualibus.

Hab. in foliis vivis Verbesinæ Siegesbeckiæ, in Carolina inferiori Amer. bor. — A *Puccinia Spegazziniana* De-Toni quæ in Verbesinæ foliis viget, forma teleutosporarum pedicellique brevitate diversa.

307. **Puccinia Silphii** Schwein. N. Am. Fungi p. 296, Burrill Paras. 2451

Fung. of Illin. p. 184. — Hypophylla; maculis minutulis, purpureis, numerosis, sparsis, concavis; soris valde prominentibus, verruciformibus, compactis, sordide griseo-brunneis; teleutosporis irregularibus, oblongo-clavatis, distincte angulatim acuminatis, $40 \approx 13$, episporio tenui, levibus, pedicello firmo, colorato, teleutosporam subæquante.

Hab. in foliis nec non in caulibus Silphii terebenthinacei, integrifolii, persoliati et trifoliati, in Carolina inferiori et Illinois Americæ borealis.

308. **Puccinia Viguiereæ** Peck in Bull. Torr. Bot. Club vol. XII, n. 4. 2452

p. 35. — Soris numerosis, prominulis, amphigenis, nigrescentibus; teleutosporis ovatis vel late ellipticis, obtusis, leniter septo constrictis, pedicello hyalino teleutosporarum longitudinem superante præditis, $40-50 \approx 28-30$.

Hab. in foliis Viguiereæ, New Mexico (Jones). — *Puccinia Helianthi* Schwein. et *P. variolanti* Harkn. proxima at teleutosporis latioribus distincta.

309. **Puccinia Heliopsidis** Schwein. Syn. Carol. pag. 72, n. 493. — 2453

Majuscula, irregularis, aggregata, epidermide cincta, spadicea; teleutosporis ovatis, elongatis, loculis æqualibus, longe pedicellatis.

Hab. in foliis subsiccis Heliopsidis et Vernoniæ, in Carolina Amer. bor.

310. **Puccinia africana** Cooke in Grevillea VIII, p. 74. — Postulis 2454

compactis, minimis, in soris circinantibus; teleutosporis clavatis v. fusiformibus, constrictis, fuscis, $50 \approx 15$, episporio supra incrassato; pedicellis hyalinis, persistentibus.

Hab. in foliis Spilanthæ africanæ, Natal Afr. austr. — Uredosporæ adhuc ignotæ.

311. **Puccinia Xanthii** Schwein. Syn. Carol. pag. 500, Burrill Paras. 2455

Fungi of Illinois p. 184. — Hypophylla; soris parvis, in maculis plerumque inæqualibus, flavescens, subinde confluentibus, centro

purpureis vel brunneis insidentibus gregariisve, minutis, confertis, subinde circinatis, atro-brunneis; teleutosporis oblongis, leniter constrictis, apice incrassatulo, rotundato vel acutiusculo, $36-50 \approx 15-21$, levibus, pedicello subcolorato, teleutosporam dimidiam subæquante.

Hab. in foliis *Xanthii strumarum* et *Ambrosiæ trifidæ*, in Carolina inf. et sup., Illinois, New York et Pennsylvania Americæ borealis.

312. **Puccinia Helichrysi** Rabenh. Krypt. Fl. I, pag. 26, Winter Die 2456
Pilze pag. 225, non Kalchbr. et Cooke. — Teleutosporis obovatis, obtusis, apiculatis, medio sensim constrictis, longiuscule pedicellatis, dilute brunneis in soros punctiformes, atro-brunneos congestis.

Hab. in foliis *Helichrysi chrysanthi*, in Germania.

313. **Puccinia investita** Schwein. Syn. North Amer. Fungi n. 2932. 2457
Peck 25 Rep. p. 117. — Hypophylla; maculis flavis vel nullis; soris minutis, subrotundis, sparsis vel gregariis, atro-brunneis vel atris; teleutosporis oblongis, fuscis, leniter constrictis, obtusis vel acutiusculis, $40-50 \approx 20$, pedicello hyalino, teleutospora dimidio brevior.

Hab. in foliis caulibusque *Gnaphalii polycephali* nonnullorumque aliorum, plurimis Americæ borealis locis. — Adest sæpe socium *Aecidium gnaphaliatum* Schwein.

314. **Puccinia Triptilii** Mont. in Corda Icones Fungorum VI, p. 3, t. I, 2458
f. 10, Mont. Syll. Crypt. n. 1160, — Hypophylla, subgregaria; soris hemisphæricis, fuscis; teleutosporis septatis, bicellulosis, medio (ad septum) constrictis, fuscis, nucleis cavis subplicatis, pedicellis longissimis, tenuibus, albis.

Hab. in foliis *Triptilii cordifolii*, in Chile Americæ australis (BERTERO).

315. **Puccinia Wettsteinii** De-Toni, *Puccinia Jurineæ* Wettst. in 2459
Hedwigia 1887, pag. 116 vix Cooke. — Soris foliiculis gregariis, $9,5-1,5$ mm. diam. magnis, orbicularibus, convexis, cauliculis confluentibus, $4-20$ mm. longis, latis, omnibus pulverulentis, atro-fuscis, initio epidermide tectis, mox erumpentibus liberisque; teleutosporis obovatis vel ovato-oblongis, apice rotundatis, $35-52 \approx 22-27$, medio parum vel non constrictis, episporio fusco, levi, apice incrassato septoque crasso fusco instructis, pedicello $70-80 \mu$. longo, tenui, hyalino fultis.

Hab. in foliis caulibusque vivis *Jurineæ macrocephalæ*, in Persia.

316. **Puccinia Jurineæ** Cooke in Grevillea IX, p. 14 vix Wetts. — 2460

Epiphylla; soris discoideis, atro-fuscis, sparsis; teleutosporis ellipticis, constrictis, læte brunneis, $50 \approx 30$, episporio levi; pedicellis gracilibus, hyalinis, elongatis, 80μ . longis.

Hab. in foliis Jurineæ ad Beg Dagħ. — Videtur eadem ac *Puccinia pulvinata* Rabenh.

317. **Puccinia vomica** Thüm. Pilzfl. Sibir. n. 701. — Soris hypophyll- 2461

lis, solitariis, maximis, vomiceformibus, oblongis vel orbiculatis, valde elevatis convexisve, epidermide lacerata subtectis, pro parte liberatis, duris, spadiceis; teleutosporis valde irregularibus, clavatis, vertice plerumque truncatis, raro subrotundato-truncatis sed semper maxime incrassatis, medio paullulum constrictulis, basi in pedicellum angustatis, fuscis, episporio levi, tenui (excl. vertice), $40-56 \approx 16-22$, pedicello longo, arcuato, sursum sensim dilatato, achroo, $20-45$ plerumque $38 \approx 2,5-10$.

Hab. in foliis vivis Saussureæ speciei indeterminatæ, in silvis alpinis montis Kerlygan Sibiricæ asiaticæ — A *Puccinia Saussureæ* Thüm. characteribus notatis valde differt.

318. **Puccinia Potentillæ** Schwein. Syn. Amer. bor. p. 297, n. 2945 2462

nec *Phragmidium Potentillæ* auct. — Soris minutis, hypophyllis, macula fere evanida; teleutosporis fuscis, demum nigris, prorumpentibus, breviter pedicellatis.

Hab. in foliis exoletis Potentillæ canadensis, pr. Bethlehem in Pennsylvania Americæ borealis.

319. **Puccinia Helenii** Schwein. Syn. Fung. Amer. bor. p. 296, n. 2928. 2463

— Maculis flavo-lutescentibus, expansis; soris pulvinatis, sparsis et invicem approximatis, convexis, primo brunneis, demum eleganter castaneis; teleutosporis compactis, majusculis.

Hab. in foliis Helenii autumnalis rarius, pr. Bethlehem in Pennsylvania Americæ borealis.

320. **Puccinia Saussureæ** Thüm. in Bull. Soc. Nat. Mosc. 1878, p. 214, 2464

n. 160. — Soris amphigenis, magnis, orbiculatis, liberis, inquinantibus, atro-fuscis, sine ordine dispositis et sine maculis; teleutosporis clavatis, vertice rotundatis, basi vix in pedicellum angustatis, fuscis, medio leniter v. non constrictis, episporio tenui, levi, $38-44 \mu$. longis, loculo superiori $24-27 \mu$. crasso, loculo inferiori $20-22 \mu$. crasso: sæpe in loculis utrisque nucleus magnus, pallidus adest; pedicello brevissimo, hyalino, caduco.

Hab. in foliis vivis Saussureæ glomeratæ, pr. lacum

Tagarskoje et pr. Minussinsk Sibiriae asiaticæ (N. MARTIANOFF).

— A *Puccinia Cirsii* DC. valde diversa.

321. **Puccinia Serratulæ** Thüm. Pilzfl. Sibir. n. 700. — Soris spar- 2455
sis, hypo-, raro etiam epiphyllis, magnis, verruciformibus, gibboso-
prominentibus, induratis, non pulveraceis, saturate spadiceis, in ma-
cula irregulari, straminea; teleutosporis longe clavatis, vertice sub-
acutatis, basi in pedicellum angustatis, medio constrictis, episporio
levi, tenui sed vertice maxime incrassato, pallide fuscidulis, 38-50
(sine pedicello), $\approx$ 15-16; pedicello hyalino, subrecto, sursum sensim
dilatato, 30 μ . long., basi 5 μ . crasso.

Hab. ad folia viva *Serratulæ* speciei indeterminatæ, in pra-
tis humidis prope fluv. Irba Sibiriae asiaticæ. — A *Puccinia*
Cirsii DC. et *P. obtegente* Tul. characteribus notatis toto cœlo
diversa. Fortasse *Æcidium Cirsii* DC. f. *Serratulæ* Thüm. in
Bull. Soc. Natur. Moscou 1878, p. 213, huc pertinet.

322. **Puccinia Centaureæ-asperæ** Cast. Observ. I, p. 18, Cat. p. 198. 2466
— Maculis nullis; soris atris, numerosis, subrotundis, amphigenis
caulinisque prominentibus; teleutosporis ovatis, obtusis, haud con-
strictis.

Hab. in foliis caulibusque *Pygmonis Acarnæ*, *Centaureæ asperæ* et *calcitrapæ*, *Cirsii tenuiflori* et *lan-
ceolati*, in Gallia. — A *P. Asteris* et *Tanaceti* defectu con-
strictionis teleutosporarum differre videtur. «An satis?».

323. **Puccinia Verruca** Thüm. in Revue Mycologique I, p. 9. — So- 2467
ris maximis, verruciformibus, hypophyllis, hemisphæricis, eximie fir-
mis, liberis, solitariis, semper fere marginalibus, brunneis; teleu-
tosporis fasciculatis, longe claviformibus, inæquilateralibus, medio
constrictis, loculo superiori vertice inæquali obtuso, 25 $\approx$ 14, locu-
lo inferiori in pedicellum angustato, 30-34 $\approx$ 8-9, episporio tenui
levi, dilute fuscis; pedicello longissimo, curvato, hyalino, 62 $\approx$ 8.

Hab. ad folia viva *Centaureæ napifoliæ*, in Ægypto su-
periori (Dr. KECK).

324. **Puccinia sclerotioides** Dur. in Fl. d'Algèr. I, p. 320. — Cau- 2468
licola; soris primo fusco-badiis, tandem nigris, inæqualibus, in tu-
bercule sclerotiformum concretis, subgelatinosis, plane nudis, sæpe
confluentibus; teleutosporis stipite subbrevioribus, arcte cohærenti-
bus, medio constrictis, ovoideis, loculis abbreviatis, subhemisphæri-
cis, episporio tenui.

Hab. ad caules vetustissimos humi jacentes jamque semiputri-
dos *Cirsii gigantei*, in præruptis prope Birmadreis in Algeria.

— Habitu *Sclerotium* vel *Sphæriam* caulicolam refert. A *Pucciniis* aliis in *Cirsio* vigentibus characteribus allatis dignoscenda dicitur.

325. **Puccinia subtectata** Rostr. in Thümen Myc. univ. n. 438. — Ma. 2469
 culis supra lutescentibus, violaceo-cinctis; soris hypophyllis, sparsis, tectis, orbicularibus, planis, atro-fuscis; teleutosporis ellipsoideis, levibus, episporio vertice conoideo-incrassato, utrinque obtusis, ad septum parum constrictis, $40-50 \approx 18-22$, pedicello crassissimo, $12-16 \mu$. crasso, teleutosporam æquante longiorive, dilute fuscis.

Hab. in foliis vivis *Cirsii heterophylli*, ad Jonstrup in ins. Fionia Daniæ nec non ad Tammela Fenniæ rarius.

326. **Puccinia Andersoni** B. et Br. Ann. N. H. n. 1464. — Maculis 2470
 epiphyllis, orbiculatis, margine brunneo cinctis; soris hypophyllis minutis, confertis; teleutosporis oblongis, medio constrictis, obtuse apiculatis, *P. Tanacetii* similibus, $40-45 \approx 18-20$, levibus, pedicello breviusculo, hyalino fultis.

Hab. in foliis *Cirsii heterophylli*, in Britannia.

327. **Puccinia melanosora** Speg. Fungi Argentini I, pag. 170, n. 35. 2471
 — Amphigena et caulicola, macula nulla vel pallide flavescente; soris minutis, rotundatis vel elongatis (caulicolis) primo epidermide tectis, dein ea fissa cinctis, atris; teleutosporis elliptico-ovatis, episporio tenui vix apice incrassato, vertice plus minus obtuse rotundatis, loculis subæqualibus, ad septum vix constrictis, granuloso-farctis, subinde 1-guttulatis, $42-47 \approx 25-30$, levibus, intense fulvo-ochraceis; pedicello hyalino, brevi et crasso, $10-12 \approx 5-7$, fultis.

Hab. in foliis caulibusque *Acicarphæ tribuloidis*, in Republica Argentina Americæ australis.

328. **Puccinia Pycnanthemi** Schwein. Syn. Amer. bor. Fung, p. 295, 2472
 n. 2920. — Maculis purpureis, minutis, persistentibus; soris parvis, fuscis; teleutosporis laxis, longe pedicellatis.

Hab. in *Pycnanthemoincano*, ad Bethlehem in Pennsylvania Americæ borealis.

329. **Puccinia Loti** Kirchn. in Lotos 1856, pag. 181. — Soris hypo- 2473
 phyllis, rotundatis; teleutosporis violaceis, episporio atro-brunneo præditis, globosis, pedicello brevissimo, sordide brunneo fultis.

Hab. in foliis *Loti corniculati* var. *villosi* pr. Kaplitz Bohemiæ. — Species dubia.

330. **Puccinia Rhododendri** Fuck. Symb. myc. p. 51 (excl. fung. ure- 2474
 dosporifero qui ad *Chrysomyxam* pertinet) Winter Die Pilze p. 225.

— Hypophylla; soris sparsis, orbicularibus, convexis, erumpentibus, atro-fuscis; teleutosporis ovatis, medio parum constrictis, brevissime pedicellatis, $26 \approx 18$, fuscis.

Hab. in foliis siccis *Rhododendri ferruginei*, in Tyrolia.

331. **Puccinia Echinopis** Haszl. Banat. Gomb. p. 43. — Teleutospo- 2475
ris ellipsoideis, medio valde constrictis, apice rotundatis, crasse truncatis, levibus, fuligineis, pedicello brevioribus.

Hab. in *Echinope banatico*, in Hungaria.

332. **Puccinia pulvinata** Rabenh. in Hedwigia 1871, p. 20 nec *Puc-* 2476
cinia pulvinulata Rudolphi. — Soris exacte pulvinatis, 2-4 mm. latis, sparsis, sæpius aggregatis, haud confluentibus, atro-fuscis; teleutosporis oblongis, utroque polo late rotundatis, loculo superiori et inferiori plerumque magnitudine æqualibus, $51-68 \approx 35-38$, ad septum vix constrictis, episporio crasso, læte brunneo, levi; pedicello sublongo, hyalino, apice (sub insertione) 10μ . crasso.

Hab. in *Echinope*, inter Kerkuk et Assyriam somalensem. — Forma **Jurineæ**. In *Jurinea cataonica* pr. Bagdagh. — «Hæc forma videtur cum *P. Wellsteini* De-Toni et *P. Jurineæ* Cooke comparanda, species vero cum *P. Echinopis* Haszl.»

333. **Puccinia maculosa** Schwein. in Burrill Paras. Fungi of Illinois 2477
p. 188. — Amphigena; soris sparsis vel regulariter circinatim dispositis, cinnamomeo-brunneis; teleutosporis clavato-oblongis, valde constrictis, loculo superiori latiori, apice incrassato, rotundato vel varie acutato, $30-45 \approx 15-18$, levibus, fragilibus, episporio tenui donatis; pedicello plerumque teleutospora breviori.

Hab. in foliis *Cynthiæ virginicæ*, in America boreali.

334. **Puccinia Urospermi** Thüm. in Myc. univ. n. 1127. — Soris am- 2478
phigenis, gregariis, interdum confluentibus, mediis, primo epidermide tectis, dein liberatis, atro-fuscis, subinquantibus; teleutosporis aut ellipticis aut ovoideo-globosis aut subglobosulis, medio non v. vix constrictis, vertice basique rotundatis, episporio levi, tenui, æquali, obscure fuscis, diaphanis, $32-38 \approx 24-28$, sessilibus vel brevissime pedicellatis.

Hab. ad folia viva *Urospermi Deleschampsii*, pr. Licata in ins. Sicilia (V. BELTRANI). — *P. Hieracii* Mart. teleutosporis minoribus modo ut $27-29 \mu$. long., $18-20 \mu$. crass., dilutioribus, *P. Tragopogonis* Corda teleutosporis episporio verruculoso-spinuloso valde differunt.

335. **Puccinia Pseudo-Sphæria** Mont. Syll. Crypt. n. 1154. — Granu- 2479
losa; soris minutis, hemisphæricis, confertis, raro confluentibus, ru-

fo-fuscis, demum epidermide rupta, apice denudatis; teleutosporis brunneis, oblongo-piriformibus, medio septatis, subconstrictis, localis inæqualibus, supremo majore, pedicello filiformi suffultis.

Hab. ad folia Sonchi radicati, in insulis Canariis (WEBB).

336. **Puccinia minussensis** Thüm. in Bull. Soc. Natur. Moscou 1878, 2480 p. 214. — Soris minutis, dense gregariis, hypophyllis, liberis, fuscis, orbiculatis, sæpe epidermide cinctis, sine macula; teleutosporis ovoideis, vertice rotundatis non incrassatis, medio septatis et plerumque non constrictis, fuscis, sæpe irregularibus, episporio tenuissimo, levi, basi in pedicellum caducum, brevissimum, hyalinum subangustatis, 26-30 $\approx$ 16-20.

Hab. ad folia viva Mulgedii sibirici, pr. Minussinsk Sibiriae asiat. (N. MARTIANOFF). — «An, suadente Winter, cum *Puccinia Hieracii* conjugenda?»

337. **Puccinia Kurdistanii** Cooke in Grevillea IV, p. 116. — Hypo- 2481 phylla; soris in maculis suborbicularibus, aggregatis; teleutosporis 50 $\approx$ 25, elongato-ellipticis, leniter constrictis, fuscis, breviter pedicellatis.

Hab. in foliis Taraxaci glauci, Kurdistan. — Sori ut in *P. glomerata* dispositi.

338. **Puccinia Hieracii-murorum** Cast. Obs. I, p. 19, Cat. pl. Mars. 2482 p. 198. — Maculis fuscescentibus, subrotundis; soris irregularibus, violaceo-nigris, margine epidermide rupta cinctis, amphigenis; teleutosporis aliis breviter, aliis longissime pedicellatis, ovatis, obtusis, subconstrictis.

Hab. in foliis Hieracii murorum, in Gallia. — «A *P. Hieracii* Mart. haud distincta mihi esse videtur».

339. **Puccinia argentina** Speg. Fungi Argentini pugillus I, n. 32, F. 2483 Patag. n. 78. — Hypophylla, rarius epiphylla vel caulicola, macula, raro contrapospita, albo-cinerea, glaucescente; soris hemisphaericis, creberrimis, congestis, ellipticis vel elongatis epidermide semper tectis (?), 4-8 $\approx$ 2-4 mm., cinnamomeis; teleutosporis elliptico-ovatis, aparaphysatis, elongatis, crassiuscule tunicatis, apice rotundato-subtruncatis vel obtuse rotundatis, 45-65 $\approx$ 18-25, localis subæqualibus, granuloso-farctis, pallide fulvis, pedicello crassiusculo, 20-30 $\approx$ 5-7, hyalino fultis.

Hab. in foliis caulibusque ~~Hieracii~~? cujusdam et Picrosiae longifoliae, in Rep. Argentina et Patagonia Americae australis.

340. **Puccinia cladophila** Peck in Botanical Gazette 1879, pag. 127. 2484 — Soris numerosis, cauliculis, orbicularibus, ellipticis vel oblon-

gis, subinde confluentibus, epidermide lacerata cinctis, atro-brunneis; teleutosporis subellipticis, constrictulis, obtusis, 30-36 $\approx$ 20-23, pedicello brevissimo fultis.

Hab. in caulibus *Stephanomeriæ minoris*, Colorado Americæ borealis.

341. **Puccinia solida** B. et C. Fungi of Cuba n. 594, non Schwein. — 2485

Soris circa unum majorem annulatis, ferrugineis; teleutosporis pallidissimis, compactis, elongatis, utrinque attenuatis apice obtusiusculis.

Hab. in foliis nonnullarum Compositarum, in insula Cuba.

342. **Puccinia microsperma** B. et C. North Amer. Fungi n. 557 (1873), 2486

Puccinia Lobeliæ Gerard in Peck 26 Rep. pag. 77 (1875). — Plerumque hypophylla; maculis roseis; soris minutis, sparsis v. confluentibus, cinnamomeo-brunneis; teleutosporis brevibus subfusiformibus, leniter medio constrictis, facile in duos loculos disjunctibus, 30-39 $\approx$ 15-18, levibus, pallidis; pedicello brevi vel obsoleto, valde fragili.

Hab. in foliis *Lobeliæ puberulæ* et *sylphiliticæ*, in Carolina inferiori et pr. Poughkeepsie nec non Illinois Amer. bor.

343. **Puccinia mesomegala** Berk. et Curt. North American Fungi 2487

n. 544, *Puccinia mesomegalis* B. et C. in Peck 25 Rep. St. Mus. p. 111. — Epiphylla vel amphigena; maculis orbicularibus vel ellipticis, subinde saturate marginatis, pallidis; soris circinantibus, epidermide rupta cinctis, medio majoribus, ferrugineis; teleutosporis oblongis, obtusis quandoque apiculo minuto auctis, levibus, 25-33 $\approx$ 15-19.

Hab. in foliis *Clintoniæ borealis*, N. Hampshire aliisque Amer. bor. locis (SPRAGUE).

344. **Puccinia Campanumæ** Pat. in Revue Mycologique 1886 october, 2488

p. 182. — Maculis hypophyllis, brunneis, subinde flavo marginatis; subiculo compacto, carnosio, crasso, epidermide haud cincto; teleutosporis oblongis, 33-46 $\approx$ 15-17, ad septum constrictis, levibus, brunneis, apice rostro rotundato auctis, pedicello hyalino, 50-66 $\approx$ 4-6 fultis.

Hab. in foliis *Campanumæ*, Yunnan in regione sinensi Asiæ (DELAVAY).

345. **Puccinia Ledi** Berk. et Curt. North American Fungi n. 552. — 2489

Maculis nullis; soris epiphyllis, minutis, pallidis, sæpe hysteriiformibus, irregularibus, congestis, epidermide tectis; teleutosporis ob-

longis, linearibus, subinde binis, pallidis; pedicellis elongatis, crassis, flexuosis.

Hab. in foliis *Ledi latifolii*, New Hampshire in America boreali (SPRAGUE).

346. **Puccinia Momordicæ** Kalchbr. et Cooke in Grev. XI, p. 24. — 2490

— Soris hypophyllis, sparsis, minutis, apertis, brunneis, folio absque macula insidentibus; teleutosporis ovatis, obtusis, medio haud constrictis, 35-40 $\approx$ 18-25, sordide brunneis, breviter pedicellatis, levibus vel reticulatis.

Hab. in foliis vivis *Momordicæ cordifoliæ*, ad Port Natal Africae.

347. **Puccinia Jasmini** DC. Fl. Franç. II, p. 219, Duby Botan. Gall. 2491

II, p. 888. — Maculis supra luteis; soris rufo-fuscis, minutis, semiglobosis, compactis, epidermide sæpe cinctis, in greges late effusos paginam totam interdum occupantes confluentibus, hypophyllis at interdum cauliculis; pedicello albido, filiformi, longissimo, rigidulo; teleutosporis levibus, subconstrictis, loculo inferiori turbinato, superiori ovato-rotundato, obtuso.

Hab. in foliis caulibusque *Jasmini fruticantis*, in Gallia et Algeria. — Adsunt subinde teleutosporæ biseptatæ.

348. **Puccinia exhauriens** Thüm. in Flora 1876, p. 425, Myc. Univ. 2492

n. 1034. — Soris hypophyllis, minutis, rotundatis, planis, sparsis, dein confluentibus, in macula non limitata, expallida, straminea, brunneis; teleutosporis valde variis, clavatis, ellipsoideo-clavatis aut fere ovatis, medio constrictis, episporio tenui, levi, vertice subincrassato, loculo inferiore subattenuato, loculo superiore oblongo-ovato, 40-50 $\approx$ 20-22, dilute griseis subdiaphanis; pedicello brevissimo, hyalino.

Hab. in foliis vivis *Jasmini tortuosi* prope Somerset East Africae australis (MAC OWAN et TUCK). — *Puccinia Jasmini* DC. in *Jasmino fruticante*, folia fere ex toto occupans, teleutosporis ovatis, episporio crassissimo, pedicello longo, brunneis, toto cælo diversa est.

349. **Puccinia Tabernæmontanæ** B. et Br. Fungi of Ceylon n. 817 2493

non Cooke. — Maculis flavis; soris minimis, hypophyllis, peritheciiformibus; teleutosporis obovatis, obtusissimis, brevibus, 40 μ . longis, levibus; pedicello brevi.

Hab. in foliis *Tabernæmontanæ dichotomæ*, Peradeniya in insula Ceylon.

350. **Puccinia Alyxiæ** Cooke et Massée in Grevillea XVI, p. 2. — 2494

Hypophylla; soris discoideis, compactis, atro-brunneis, (1-2 mm. diam.), epidermide rupta cinctis; teleutosporis subpiriformibus, medio constrictis, uniseptatis, flavidis, $50-70 \approx 20-25 \mu$., episporio crasso, levi, ad apicem hyalino-apiculato; pedicello crassiusculo, elongato, hyalino.

Hab. in foliis *Alyxiæ buxifoliæ*, Brighton, Victoria (F. CAMPBELL).

351. **Puccinia Vincæ** Cast. Observ. I, p. 21, Cat. pag. 202 non Berk. 2495
— Soris numerosis, rufo-subfuscis, ovatis rotundatisve, epidermide disrupta cinctis et etiam subtectis; teleutosporis fere ovoideis, breviter pedicellatis.

Hab. in foliis *Vincæ majoris*, prope Marseille Galliæ. — «Forte a *Puccinia Berkeleyi* Pass. haud distincta».

352. **Puccinia Balansæ** Speg. F. Guaran. pug. I, n. 110. — Maculis 2496
nullis vel epiphyllis, subparvis, indeterminatis, fuscescentibus; soris hypophyllis, minutis, compactis, in pulvinulos orbiculares (1-4 mm. diam.) confluentibus, prominulis, duriusculis, intense fuligineo-cinnamomeis; teleutosporis elliptico-obovatis, $24-26 \approx 12-14$, antice rotundato-obtusatis ibique episporio modice incrassato, medio 1-septatis, non vel vix constrictis, levissimis, granulosa farctis, pallide fulvis, pedicello longissimo, gracili, $120-150 \approx 1-2$, hyalino fultis.

Hab. in foliis vivis *Echitis fusiformis*, in silvis prope Guarapí Americæ australis.

353. **Puccinia Cynoctoni** Lév. in Ann. Scienc. Nat. 1846, p. 270. — 2497
Soris hypophyllis, gregariis, pulvinatis, fusco-nigricantibus, in macula pallida, brunnea, orbiculari insidentibus, convexis, punctiformibus; teleutosporis obtusis, levibus, pellucidis, pedicello longiusculo fultis.

Hab. in foliis *Cynoctoni pachyphylli*, in Chili Americæ australis.

354. **Puccinia Gonolobi** Rav. in Berk. et Curt. North Amer. Fungi 2498
n. 554, *Puccinia Cynanchi* Schwein. mscr. — Hypophylla; maculis flavis, soris circinantibus; teleutosporis brevibus, utrinque obtusis, medio constrictis; pedicellis basi sæpe incrassatis, obliquis.

Hab. in foliis *Gonolobi*, Santee Canal et Surinam.

355. **Puccinia Araujæ** Lév. in Ann. Scienc. Nat. Ser. III, 3, p. 69, 2499
Puccinia Schnyderi Speg. Fungi Argentini pugillus II, n. 35. — Hypophylla; maculis nullis vel epiphyllis, fulvo-fuscescentibus, parvulis, orbicularibus; soris sparsis, 2-5-confluenti-gregariis, he-

misphæricis, compactis, fulvo-fuligineis, 1-2 mm. diam.; teleutosporis elliptico-subfusoides, quandoque inæquilateralibus, medio septatis, non vel vix constrictis, episporio ubique tenui, 38-42 $\approx$ 14-16, pallide melleis; pedicello hyalino, cylindraceo, 40-50 $\approx$ 5.

Hab. ad folia viva Araujæ albentis, in Brasilia et in Republica Argentina Americæ australis nec non in foliis Sarco-stemmatidis Swartziani, in insula Cuba.

356. **Puccinia Halenizæ** Arth. et Holw. in Rep. Bot. Work in Minne- 2500
sota for 1886, Bull. 3, p. 30. — Soris irregulariter confluentibus, in greges indeterminatos dispositis, cauliculis vel epiphyllis, atris, nitidis, solidis, subtiliter papillosis, diu epidermide tectis; teleutosporis linearibus vel lineari-cuneatis, 42-52 $\approx$ 8-9, episporio tenui donatis, levibus brunneis, apice obscuriori, plerumque oblique truncato vel irregulariter acuminato, pedicello brevissimo, colorato fultis.

Hab. in foliis caulibusque Halenizæ deflexæ, ad lacum Vermillon Americæ borealis.

357. **Puccinia plumbaria** Peck in Botanical Gazette VI, pag. 228, 2501
Burrill Fung. of Illinois p. 191, *Puccinia Wilcoxiana* Thüm. in Myc. Univ. XXI, n. 32. — Amphigena; soris sparsis, foliiculis v. cauliculis, plus minus magnis, subinde confluentibus, epidermide plumbei coloris, dein nigrescente tectis, demum nudis et tum sordide rufo-brunneis et pulverulentis; teleutosporis irregularibus, latis, ovatis vel ellipticis, subconstrictis, apice more incrassatulis apiculatisque, 32-50 $\approx$ 21-25, levibus vel subtilissime rugulosis; pedicello brevissimo, hyalino, fragili, subinde lateraliter inserto.

Hab. in foliis vivis caulibusque Collomizæ gracilis, Phlogis longifoliæ et Gilizæ, in America boreali.

358. **Puccinia patagonica** Speg. Fungi Patagonici pag. 27, n. 80. — 2502
Soris tumidulis, irregulariter rotundato-elongatis, 1-5 mm. longis, 1-2 mm. latis crassisque, caules folia nec non inflorescentias ambientibus, primo epidermide tectis, dein nudis, compactis, duris, fere sclerotioideis, obscure castaneis vel fusco-rubiginosis; teleutosporis obovatis vel subclavatis, medio leniter constrictis, apice versiformibus (truncatis, rotundatis umbonatisve) ac crassissime tunicatis, deorsum cuneatis basique truncatis, 28-35 $\approx$ 12-15, levibus, pallide fulvis, pedicello hyalino, gracili, 25-35 $\approx$ 5, suffultis.

Hab. in foliis caulibusque Collomizæ ejusdam, in Patagonia Americæ australis. — A *P. Gilizæ* Farlow toto cælo diversa.

359. **Puccinia crassipes** B. et C. North American Fungi n. 553. — 2503

Hypophylla; maculis obsoletis; teleutosporis (pedicellis æquicrassis) brevibus, obtusis, medio constrictis, uninucleatis.

Hab. in foliis *Ipomææ trichocarpæ*, Santee Canal et Aiken Amer. borealis. — Teleutosporarum forma a *P. Convolvuli* satis distincta.

360. **Puccinia holosericea** Cooke in Grevillea X, p. 126. — Hypo- 2504
phylla; soris (5-8) in macula pallida insidentibus, compactis; teleutosporis sublanceolatis, pallidis, lateraliter compressis, $45 \approx 15$, pedicello abbreviato fultis.

Hab. in foliis *Ipomææ holosericeæ*, ad Inanda Africae (WOOD).

361. **Puccinia Dichondræ** Mont. in Gay Fl. Chil. vol. VIII, p. 46, 2505
vix Berk. — Maculis nullis; soris hypophyllis, punctiformibus, minutissimis, 70-100 μ . diam., erumpenti-superficialibus, subpulverulentis, densiuscule gregariis et sæpe totum folium occupantibus, intense cinnamomeis, pilis velatis ac difficile conspiciendis; teleutosporis clavulatis, medio constricto-1-septatis, episporio tenui, apice incrassato ac in mucronem hyalinum producto, $30-40 \approx 12-18$, protoplasmate granuloso, loculis 1-guttulatis, pallide fulvis, pedicello filiformi, $20 \approx 4$, hyalino fultis.

Hab. in foliis *Dichondræ repentis* et *sericeæ*, in Chile (GAY), in aridis prope el Parque de Palermo et prope el Médano blanco (Tuyù) in Republ. Argentina et Patagonia (SPEGAZZINI).

362. **Puccinia Berkeleyana** De-Toni, *Puccinia Dichondræ* Berk. Au- 2506
stralian Fungi n. 190 vix Mont. — Soris minutis, hypophyllis, rarius epiphyllis, sparsis, æcidiiformibus; teleutosporis 12-13 μ . long., breviter pedicellatis, ultimo loculo obtuse apiculato.

Hab. in foliis *Dichondræ*, in Australia.

363. **Puccinia Lithospermi** Trel. in Journal of Mycology vol. I, 2507
(1885), pag. 2. — Soris amphigenis, rotundatis, atris, mox nudis, sparsis, 0,3 mm. diam.; teleutosporis elongatis, superne plerumque attenuatis, valde constrictis, sursum saturate rufo-brunneis, deorsum pallidioribus, $32-45 \approx 20-23$, episporio tenui, vertice incrassato, subinde apiculo aucto; pedicello valido, teleutosporam subæquante.

Hab. in foliis *Lithospermi canescentis*, Manhattan Kansas Americæ borealis.

364. **Puccinia Nierembergiæ** Lév. in Ann. Scienc. Nat. 1846, p. 271. 2508
— Soris hypophyllis et epiphyllis, sparsis, applanatis, nigris, epi-

dermide lacerata cinctis; teleutosporis subglobosis, opacis, sub-
 atris, levibus, non constrictis, pedicello brevi, crasso suffultis.

Hab. in foliis Nierembergiæ, in Perù.

365. **Puccinia Solani** Cooke in Grevillea 1878, p. 61. — Soris atris, 2509
 minimis, linearibus, subtus tomento insidentibus; teleutosporis el-
 lipticis, leniter constrictis, levibus, fuscis, 35-60 $\approx$ 18-20; pedicello
 gracili, elongato, hyalino.

Hab. in caulibus, foliis petiolisque Solani et Chamæsarachæ nanæ, socio *Æcidio Solani*, Sutlej Valley Indiæ (COOKE),
 in California Americæ borealis (HARKNESS).

366. **Puccinia pampeana** Speg. Fungi argentini pugillus II, p. 14. — 2510
 Hypophylla vel caulicola, maculis nullis vel matrice tumefacta
 et pallescente; soris sparsis, 0,5-1 mm. latis, versiformibus, fusco-
 purpurascentibus, carnosio-compactiusculis; teleutosporis elliptico-
 ovoideis, medio septatis et vix constrictis, episporio levi, tenui
 apice parum incrassato donatis, 35-40 $\approx$ 18-20, fuligineo-lutescen-
 tibus, granuloso-farctis, pedicello cylindraceo, 40-50 $\approx$ 5-6, hyali-
 no suffultis.

Hab. in foliis caulibusque vivis Salpichroæ rhomboi-
 deæ, in pratis secus Rio de la Plata in Repub. Argentina et
 prope Bahia Blanca Patagoniæ. — Sec. cl. Spegazzini huc spectat
 ut status microuredosporicus *Uredinula pampeana* Speg. (Tuber-
 culina).

367. **Puccinia Atropæ** Mont. Canar. p. 88, Syll. n. 1153. — Soris 2511
 subrotundis, ovatis oblongisve, confluentibus, fusco-nigris, demum
 erumpentibus, epidermide cinctis; teleutosporis oblongis, crassis
 crasseque marginatis (episporio crasso), medio subconstricto-septa-
 tis, pedicello brevissimo fultis.

Hab. sub epidermide ramorum Atropæ aristatæ, in insulis
 Canariis (DESPRÉAUX).

368. **Puccinia Veronicæ-Anagallidis** Oudem. Contrib. fl. myc. p. 12 2512
 — Amphigena, præsertim vero paginam inferiorem foliorum oc-
 cupans; soris semiglobosis, solidiusculis, superficie pulverulentis,
 dense sparsis, fuscis, erumpentibus annuloque epidermoidali basi
 cinctis; teleutosporis e loculis duobus semiglobosis, æqualibus, non-
 numquam e partibus oblongis, inæqualibus compositis, utrinque ro-
 tundatis, medio modice constrictis, vertice ne vestigia quidem epi-
 sporii densati monstrantibus, levissimis, 35-47 $\approx$ 22-23, fuscis, pe-
 dicello 70 $\approx$ 4,5, hyalino fultis.

Hab. in foliis Veronicæ Anagallidis, pr. Wageningen Ne-

erlandiæ (J. D. KOBUS). — A *P. Veronicæ* differt forma teleutosporarum magis condensata et absentia apiculi.

369. **Puccinia Seymeriæ** Burrill Paras. Fungi of Illinois p. 188. — 2513

Hypophylla, etiam caulicola et calycicola; maculis determinatis, obscure coloratis; soris latiusculis, in orbes confertos subconfluentibus, sordide brunneis; teleutosporis ellipsoideis vel ovatis, leniter constrictis, apicibus obtuse rotundatis, episporio firmo instructis, $30-36 \approx 15-21$, levibus, brunneis; pedicello hyalino, lato, persistenti, teleutosporâ circiter duplo longiore.

Hab. in foliis, caulibus calycibusque *Seymeriæ* microphyllæ, Illinois in America boreali. — *P. Veronicæ* (Schum.) proxima.

370. **Puccinia Pentastemonum** Lév. in Ann. Scienc. nat. 1846, p. 271. 2514

— Soris hypophyllis, gregariis vel confluentibus, fuscis, epidermide cinctis, rotundatis, dense congestis expansisque, pulverulentis; teleutosporis ovatis, vix constrictis, levibus, subopacis, pedicello longissimo, tenui, hyalino suffultis.

Hab. in foliis *Pentastemonis*, in horto botanico parisiensi Galliæ. — «An a *Puccinia Pentastemonis* Peck distincta?».

371. **Puccinia Pentastemonis** Peck in Bull. Torr. Bot. Club Vol. XII, 2515

n. 4, p. 35. — Maculis nullis; soris amphigenis, inæqualibus, prominulis, nigris; teleutosporis ellipticis vel oblongo-ellipticis, $30-50 \approx 20-28$; pedicello hyalino, vulgo teleutosporâ longiori.

Hab. in foliis vivis *Pentastemonis* linarioidis, Arizona in America boreali (JONES). — «An huc *Æcidium Pentastemonis* Schwein.?».

372. **Puccinia Clintonii** Peck in 28 Rep. St. Mus. p. 61. — Maculis 2516

obliteratis; soris amphigenis, congestis vel sparsis; teleutosporis oblongis, $27-35 \mu$. longis, leniter medio constrictis.

Hab. in foliis *Pedicularis canadensis*, Goat Island Americæ borealis (CLINTON).

373. **Puccinia Pedicularis** Thüm. in Bull. Soc. Nat. Mosc. p. 216, 2517

n. 170. — Soris epiphyllis, maximis, gregariis, liberis, disciformibus, inquinantibus, epidermide expallescente cinctis, castaneo-fuscis, sine macula; teleutosporis plus minusve clavatis, vertice subobtusatis, basi angustatis, medio constrictis, homogeneis, pallide fuscis, episporio tenui, æquali, subundulato, pedicellis brevibus, conicis, sursum sensim acutatis, hyalinis, $30-33 \approx 14-16$, paraphysibus nullis.

Hab. ad folia viva *Pedicularis* speciei indeterminatæ, in alpinis montis «Borus».

374. **Puccinia Thwaitesii** Berk. Fungi of Ceylon n. 818. — Macu- 2518
lis flavis, hypophyllis; soris innumeris, minutissimis, brunneis, se-
cus plagas orbiculares dispositis; teleutosporis 36-38 μ . longis,
constrictis, pedicello elongato, 15 μ . longo suffultis.

Hab. in foliis *Justiciæ Gendarussæ*, pr. Peradenyia Ceylon.

375. **Puccinia bonariensis** Speg. Fungi Argentini I, n. 33. — Hypo- 2519
phylla, macula in epiphylo parvula, flavescente; soris secus orbem
circa unum centralem majorem dispositis, 1-2 mm. diam., pallide
rubiginosis, subinde pruinulosis, compactis; teleutosporis elliptico-
ovatis, ad septum plus minus constrictis, episporio tenui, vix apice
incrassato, quandoque vertice appendiculum subglobosum vel elon-
gatum, 10-12 μ . longum gerentibus, loculis subæqualibus granuloso-
fartis, pallidissime chlorino-rubiginosis, 45-50 $\approx$ 20-25, pedicello
15-25 $\approx$ 5-8, hyalino fultis.

(*Bostrychia Tweedii*) *Hab.* ad folia viva ~~*Labiate*~~ ^{*Scanthaceæ*} cujusdam, prope la Boca del Ria-
chuelo in Republica Argentina Amer. australis.

376. **Puccinia nigrescens** Peck in Botan. Gazette 1878, pag. 35 nec 2520
Kirchn. — Maculis nullis; soris subprominentibus, cauliculis, ob-
longis, atro-brunneis aut atris; teleutosporis ellipticis vel oblon-
gis, obtuse acutiusculis, leniter medio constrictis, 38-45 $\approx$ 20-25, le-
vibus; pedicello teleutosporâ 2-4-plo longiore, hyalino.

Hab. in caulibus ramisque *Salviæ lanceolatae*, in America
boreali. — Adest quoque species homonyma ex Bohemia h. e. *Puc-
cinia nigrescens* Kirchn. in Lotos 1856, pag. 181, cujus diagno-
sis brevis et imperfecta est.

377. **Puccinia Phlomidis** Thüm. in Bull. Soc. Nat. Mosc. 1878, p. 216. 2521
— Soris epiphyllis, dense gregariis, parvulis, primum epidermide
tectis, dein liberis, cuticula disrumpenti cinctis, fuscis, sine macula;
teleutosporis plus minusve ellipsoideis vel late ovatis, utrinque ro-
tundatis, loculis sæpe nucleatis, fuscidulis, medio vix constrictis,
subsessilibus vel cum pedicello brevissimo, hyalino, episporio tenui
levi, æquali, 30-35 $\approx$ 20-22, paraphysibus nullis.

Hab. ad folia viva *Phlomidis tuberosæ*, pr. Minussinsk
Siberiæ asiaticæ.

378. **Puccinia pallidissima** Speg. Fungi Argentini Pug. IV, n. 65. — 2522
Maculis nullis v. pallescentibus, indeterminatis, amphigenis; soris
hypophyllis, minutis, circa centralem majorem circinatim dispositis,
2-7 mm. latis, compactis, pallide fulvo-fuscis; teleutosporis elon-
gato-clavulatis v. obovato-clavatis, 35-45 $\approx$ 10-12, sursum obtuse
rotundatis v. late subtruncatis medio leniter constricto-uniseptatis,

pallidissime fulvo-hyalino episporio tenui-membranaceo, levissimo, pedicello gracili, hyalino, $49 \approx 4-5$ donatis.

Hab. ad folia viva *Stachydis arvensis*, in montuosis Sierra Chica prope S. José, Córdoba in Rep. Argentina (Dr. Hieronymus.) — Species a *P. Stachydis* DC. nonnihil recedens sed species *Pucciniarum* in *Labiatis* vigentes fere omnes valde affines.

379. **Puccinia Physostegiae** P. et C. in 29 Rep. St. Mus. p. 50. — 2523

Maculis nullis; soris sparsis, epiphyllis, parvis, rotundatis, epidermide lacerata cinctis, atro-brunneis; teleutosporis ellipticis, vix constrictis, $35-40 \approx 20-25$, pedicello brevi, gracili suffultis.

Hab. in foliis *Physostegiae virginianæ*, ad Strawberry Island (Clinton).

380. **Puccinia Teucrii** Biv. Bernh. Stirp. Sicul. (1815) cum icone nec 2524

Fuck. *Puccinia Beltraniana* Thüm. in Myc. univ. n. 734. — Soris hypophyllis, plus minusve orbiculatis, convexis, granulosis, induratis, semper tectis, sine macula, fuscis, in pagina superiore maculam concavam, orbiculatam, magnam, pallide fuscam formantibus; teleutosporis longe clavatis medio paullum constrictis, epidermide subtenui levi, vertice non vel vix incrassato, pedicellatis, dilute ochraceo-fuscis, lumine vix obscuriore, $36-44 \approx 16-18$; pedicellis longis, tenuibus, flexuosis, hyalinis, $60-80 \approx 4$, paraphysibus nullis.

Hab. in foliis vivis *Teucrii fruticantis*, Licata in ins. Sicilia (V. Beltrani). — Differt a *P. annulari* Wint., sporis brevioribus obscurioribus, minus constrictis, vertice vix incrassatis, pedicellis brevioribus et soris minoribus.

381. **Puccinia Lantanæ** Farlow Not. p. 83, Ellis North Amer. Fungi 2525

n. 1052. — Soris rotundis, nudis, mox pulvinatis, in greges irregulares congestis; teleutosporis in soro germinantibus, ovatis, obtusis, leniter ad septum constrictis, apice acutiusculo vel submucronulato, $26-38 \approx 19-26$, purpureo-brunneo, episporio tenui, levi, pedicello gracili fultis.

Hab. in foliis *Lantanæ odoratæ*, in ins. Bermuda (Farlow). — Teleutosporis immixtæ sunt sporæ continuæ, pedicellatæ, obovatæ vel irregulariter ellipticæ, $23-27 \approx 15,5-20$; sori a *Tuberculina persicina* (Ditm.) Sacc. infecti sunt, quæ colorem purpurascen-tem præbet.

382. **Puccinia elongata** Speg. Fungi Argentini I, n. 31. — Soris elon- 2526

gatis, 2-3 mm. longis, $500-800 \mu$. latis, erumpentibus, epidermide fissa cinctis, atro-cinnamomeis, compactiusculis; teleutosporis ap-raphysatis, elongatis, cylindraceo-clavatis, episporio crasso, præ-

cipue apicem versus ubi sæpius in cornum producto, 1-septato-constrictis, loculis granuloso-farctis, 1-guttulatis, superiori minore, 60-65 $\approx$ 12, pedicello 60-70 $\approx$ 3-5, hyalino fultis.

Hab. ad caules *Verbenæ litoralis*, prope la Boca del Riachuelo in Republica Argentina Americæ australis.

383. **Puccinia Dayi** Clinton in Peck 28 Rep. St. Mus. p. 60. — Ma- 2527
culis suborbicularibus, brunneis; soris prominentibus, sparsis vel confluentibus, brunneis; teleutosporis oblongo-clavatis, leniter ad septum constrictis, 36-58 μ . longis, pedicello leniter colorato, teleutosporam dimidiam æquante fultis.

Hab. in foliis *Lysimachiae ciliatæ*, Buffalo in Amer. bor. — *P. Gerardii* Peck similis, a qua colore obscuriori maculæ et sori distinguitur. — «An huc pertinet *Æcidium Lysimachiae*?»

384. **Puccinia? Dubyi** Müll. in Huet de Pavillon Descript. plant. mouv. 2528
des Pyrénées in Ann. Scienc. Nat. 1853, pag. 256. — Amphigena vel raro epiphylla, maculis nullis; soris rufo-fuscis, minutis, solitariis seu seriatim confluentibus, orbiculatis vel ovatis, planiusculis vel convexiusculis, epidermide bullata, mox rupta cinctis; pedicello subnullo vel brevissimo; teleutosporis ellipticis vel ovoideis, minutissimis, medio leviter constrictis, loculo superiore globoso interdum depresso, inferiore globoso obtuso vel in pedicellum circiter octuplo eo breviorum attenuato.

Hab. in foliis *Androsaces Lageri*, in M. Oo Pyrenæorum. (HUET DE PAVILLON).

385. **Puccinia sclerotioidea** Cooke in Grevillea VIII, p. 34 nec *Puc-* 2529
cinia sclerotioides Mont. — Amphigena; soris atro-purpureis, epidermide cinctis, compactis, durissimis; teleutosporis clavatis, constrictis, læte brunneis, episporio supra incrassato, 45 $\approx$ 15, pedicello persistenti, hyalino instructis.

Hab. in foliis forte *Statices*, in Columbia britannica (Dr. LYELL).

386. **Puccinia Montagnei** De-Toni, *Puccinia Herniariæ* Mont. in 2530
Ann. Scienc. Nat. 1856, p. 347 non Unger vix Kirchn. — Hypophylla; soris raris, rotundatis, depressis, fuscis, epidermide lacera-
rata cinctis; teleutosporis oblongis, medio constricto-bilocularibus, brunneis, loculis subæqualibus, crasse limbatis, sursum apiculo hyalino auctis, 50 $\approx$ 15, pedicello 90-100 μ . longo fultis.

Hab. in foliis *Herniariæ latifoliæ*, ad pagum Lanne in Montibus Pyrenæis (CASTAGNE). — Pustulæ 1 mm. circ. diam., convexæ, rarissimæ subtus vix extantes.

387. **Puccinia dissiliens** Cooke in Grevillea III, p. 75. — Hypophyll- 2531
la, sparsa; soris discoideis, convexis, compactis, sordide brunneis; teleutosporis e loculis 2 subconicis facile secedentibus inferiorique pedicello persistente fulto constitutis, ad septum constrictis, brunneis, pedicello longo, hyalino fultis.

Hab. in foliis Rumicis, Himalaya Asiæ.

388. **Puccinia ornata** Arth. et Holway in Rep. Bot. Work in Min- 2532
nesota for 1886, Bull. III, p. 30. — Soris hypophyllis, papilliformibus, prominulis, in macula læte rufo-purpurea, 5-10 mm. diam. circinatim dispositis vel sæpius gregem verruciformem in ejus centro efficientibus, brunneis; teleutosporis elongato-ovatis vel oblongis, 33-50 $\approx$ 15-22, levibus, brunneis, subinde medio constrictis, episporio tenuiusculo donatis, vertice obtusis vel rotundatis, basi rotundatis vel subinde attenuatis; pedicello crasso, leniter colorato, teleutosporâ usque ad duplo longiore.

Hab. in foliis Rumicis britannici (R. orbiculati), pr. lacum Vermilion Amer. bor.

390. **Puccinia Buchanani** De-Toni, *Puccinia Oxyriæ* Buch. White 2533
in Grevillea XI, p. 15, non Fuckel. — Teleutosporis pedicello brevi, hyalino incluso 60 μ . longis, loculis subglobosis, levibus.

Hab. in foliis Oxyriæ reniformis, prope Skye Britanniae.

391. **Puccinia sepulta** B. et C. North Pacif. Exped. n. 132. — Ma- 2534
culis orbicularibus, supra bullatis, brunneis, subtus concavis; soris congestis in massam uniformem, partim e pilis matricis celatis; teleutosporis obtusis, pedicellatis.

Hab. in foliis Fici?, Nicaragua Americæ centralis.

** Teleutosporæ episporio verrucoso vel ruguloso donatæ.

392. **Puccinia Ranunculi** Seymour in Burrill Paras. Fungi of Illinois 2535
p. 172. — Amphigena at plerumque epiphylla; soris irregulariter consociatis, sæpe confertis at parum confluentibus, areas latas occupantibus, subelevatis, circularibus, pulverulentis, fragmentis epidermidis laceratæ tectis, æcidiiformibus, cinnamomeo-brunneis; teleutosporis late ellipticis, vix vel non constrictis, apicibus rotundatis, raro apiculatis, 22-39 $\approx$ 18-24, subtiliter crassiusculeque tuberculatis, pedicello hyalino, brevi, fragili, subinde plus minus laterali suffultis.

Hab. in foliis Ranunculi repentis, prope Chicago Illinois Amer. bor. (J. C. ARTHUR).

393. **Puccinia gibberulosa** Schroet. Entwick. einger Rostp. p. 62. — 2536

Soris teleutosporiferis obscure castaneo-brunneis, 1-2 mm. latis, explanatis, pulverulentis, confluentibus; teleutosporis 35-45 $\approx$ 19-22, medio subconstrictis, vertice rotundatis v. subexplanatis, raro apiculo brunneo, minuto auctis, episporio subundulato, æqualiter pallideque castaneo-brunneo, subtiliter foveolato præditis, pedicello brevi, hyalino, mox deciduo fultis.

Hab. in foliis Ranunculi cujusdam alpini, in Montibus Pyrenæis Galliæ.

394. **Puccinia Cruciferarum** Rud. in Linnæa IV, p. 391 non Cooke, 2537

Winter Die Pilze p. 177, *Puccinia Cardamines* Niessl Beitr. p. 9. — Soris majusculis, rotundato-pulvinatis, mox denudatis, sparsis vel aggregatis, 1-8 mm. latis, longissime sæpe confluentibus; teleutosporis oblongis, apice incrassatis vel plerumque papilla lata, hyalina instructis, medio constrictis, 24-35 $\approx$ 10-17, verrucosis, dilute brunneis, pedicello longiusculo, hyalino, deciduo fultis.

Hab. in foliis Cardamines resedifoliæ et alpinæ nec non Hutchinsię brevicaulis et alpinæ, in Alpibus Tyrolensibus et Salisburgensibus nec non in Transylvania.

395. **Puccinia hysteriiformis** Peck in Botan. Gazette 1881, p. 276. 2538

— Maculis obsoletis; soris sparsis, latiusculis, oblongis, primo tectis, epidermide longitudinaliter rupta subdenudatis, atris; teleutosporis oblongis v. oblongo-clavatis, maculatis vel punctulatis, ad septum constrictis, 40-46 $\approx$ 20; pedicello plerumque teleutosporâ longiore.

Hab. in foliis Arenariæ vernæ, Utah Amer. bor. (JONES).

396. **Puccinia fragilis** Tracy et Gall. in Journ. of Mycology 1888, 2539

p. 20, — Amphigena; soris sparsis, diu epidermide demum irregulariter rupta tectis; teleutosporis late ovoideis, 30-34 $\approx$ 21-33, obscure brunneis, rugulosis, vertice rotundatis, obtusis, haud incrassatis, medio leniter constrictis, pedicello teleutosporâ dimidio brevior, hyalino, deciduo fultis.

Hab. in foliis Arenariæ pungentis, Reno, Nevada Americæ borealis (TRACY et EVANS).

397. **Puccinia Heteropteridis** Thüm. in Myc. Univ. n. 839, Spegazz. 2540

F. Arg. II, p. 12. — Macula nulla; soris epiphyllis, rarius amphigenis, sparsis vel gregariis et confluentibus, 1,5-2 mm. latis, primo tectis, dein epidermide disrumpenti cinctis, elevatis, orbiculatis, subhemisphæricis vel tuberculiformibus, primo luteo-fuscis, dein spadiceis demumque atris; teleutosporis ellipsoideis, vertice interdum subobtusato-acute, minime incrassato, medio septatis, sub-

pellucidis, episporio ubique minute tuberculato, tenui, pulchre spadiceis, 50-53 $\approx$ 25-28 pedicello longo, tenuissimo, flexuoso, sursum subdilatato, hyalinis v. apice sensim dilute fuligineis, 70-110 $\approx$ 4-10, basi incrassata atque mucro concolore vestita; paraphysibus nullis.

Hab. ad folia viva *Heteropteridis angustifoliæ* et glabræ, in Uruguay et Rep. Argentina Amer. austr.

398. **Puccinia Glycyrrhizæ** Rabenh. in Klotzsch Herb. myc. n. 1396. 2541
Bot. Zeit. 1850, pag. 438. — A *P. Leguminosarum* differt teleutosporis majoribus, verrucosis, subumbonatis.

Hab. in foliis *Glycyrrhizæ*, in Italia.

399. **Puccinia apophysata** Rabenh. in Flora 1850, p. 629. — Soris 2542
atro-brunneis, congestis; teleutosporis oblongis, utrinque rotundatis, medio constrictulis, verrucosis, brunneis; pedicello hyalino, apophysi crassiuscula, hyalina aucto.

Hab. in foliis *Ammi majoris* et *Smyrni*, prope Ancona, Chieti et Bitonto Italiæ. — « Cum *Puccinia Smyrni* Biv. Bernh. comparanda ».

400. **Puccinia Opoponacis** Ces. in Bull. Club Alp. ital. 1873, p. 150. — 2543
Soris spadiceis, difformibus, applanatis; teleutosporis cinnamomeis, brevissime pedicellatis, curtis, utrinque rotundatis, sæpius irregularibus, obiter constrictis, episporio scabriusculo, 40 $\approx$ 24.

Hab. in foliis *Opoponacis* in Italia.

401. **Puccinia Pringlei** Peck in Botanical Gazette 1881, p. 275. — 2544
Maculis parvis, suborbicularibus, purpurascens, hypophyllis; soris epiphyllis, raro hypophyllis, majusculis, compactiusculis, totam maculam occupantibus, atro-brunneis; teleutosporis oblongis vel subellipticis, leniter ad septum constrictis, obtusis vel subacutis, apice pallidioribus, 49-50 $\approx$ 20-24, verruculosis; pedicello hyalino, teleutospora dimidio brevior.

Hab. in foliis vivis *Viburni pauciflori*, Canada Amer. bor. (PRINGLE). — Maculæ 1-2 mm. latæ, sori plerumque singuli in quaque macula.

402. **Puccinia Linkii** Klotzsch in Linnæa 1833, pag. 490, t. XII. — 2545
Maculis orbicularibus, fusco-purpureis, subtus pallide purpureis; soris magnis, pulvinatis, rotundis, epidermide tectis; teleutosporis fuscescentibus, aculeatis, granuloso-farctis.

Hab. in foliis petiolisque *Viburni* in America boreali.

403. **Puccinia Achilleæ** Cooke in Grevillea IX, p. 13. — Epiphylla; 2546
soris discoideis, erumpentibus, purpureo-brunneis; teleutosporis

elongato-ellipticis, brunneis, constrictis, $50 \approx 25$, episporio leniter granulato; pedicellis hyalinis, elongatis, robustis.

Hab. in foliis *Achilleæ albicaulis*, Kurdistan. — Uredosporæ nondum visæ.

(1884) non *P. rugosa* Bill. (1871)!

404. **Puccinia rugosa** Speg. Fungi Guaranitici I, n. 118. — Macu- 2547

lis nullis vel vix manifestis, amphigenis, indeterminatis, pallenscentibus; soris epiphyllis, sparsis vel hinc inde 2-3 aggregatis, 0,5-1,5 mm. diam., primo tectis, dein erumpenti-nudis, pulverulento-compactiusculis, sordide cinnamomeis; teleutosporis ellipticis vel obovatis, $26-42 \approx 16-20$, apice sæpius late rotundatis, episporio ubique æqualiter crassiusculo, dense minuteque ruguloso, protoplasmate nubiloso-granuloso, vivide fulvo-cinnamomeis; pedicello hyalino, vix evoluta, $5 \approx 5$ vel fragilissimo ac mox evanido.

Hab. ad folia viva *Compositæ* (*Verbesinæ*?) cujusdam, in silvis pr. Paraguari Americæ australis.

405. **Puccinia Hydrophylli** Peck et C. in 30 Rep. St. Mus. p. 54. — 2548

Maculis flavis vel virescenti-flavis; soris parvis, congestis, subinde confluentibus, atro-brunneis; teleutosporis ellipticis, rugosis, leniter constrictis, $25 \approx 17-20$, pedicello brevissimo, hyalino suffultis.

Hab. in pagina superiori foliorum vivorum *Hydrophylli virginiani*, Buffalo Amer. bor. (CLINTON). — *Pucciniæ Menthæ* proxima.

406. **Puccinia paradoxopoda** Speg. Fungi Argentini Pug. IX, n. 66. — 2549

Soris maximis, ramulos foliaque fere tota ambientibus, erumpenti-superficialibus, crasse pulvinatis, compactis sed teneris, atro-cinnamomeis; teleutosporis ellipticis v. obovatis, sursum plus minusve rotundatis, medio 1-septato-constrictulis, intense cinnamomeis, episporio ubique fere subæquali, longitudinaliter ruguloso-striato $65-70 \approx 35$, pedicello maximo, inflato, hyalino, utrinque abrupte attenuato, inferne sæpe incurvo v. gyroso-contorto, $100-120 \approx 30$ suffultis.

Hab. in foliis ramulisque junioribus *Grabowskiæ obtusæ*, in montuosis provinciæ la Rioja in Rep. Argentina (Dr. HIERONYMUS).

— Species pulcherrima inter omnes adhuc cognitæ distinctissima.

407. **Puccinia globosipes** Peck in Bull. Torr. Bot. Club vol. XII, 2550

n. 4, p. 34, t. XLIX, f. 9-10. — Maculis nullis; soris minutis, rotundatis, prominulis, nigris; teleutosporis late ellipticis, rugulosis, non constrictis, opacis, $50-67 \approx 40-50$, pedicello subgloboso, inflato, hyalino, teleutosporæ longitudinem subæquante fultis.

Hab. in foliis vivis *Lycii californici*, California (M. E.

nunc
Puccinia
rotundata Speg.
Hedw. 36, p. 32 (1897)

JONES). — « Cum *Puccinia Lycii* Kalchbr. et *P. afra* Wint. comparanda ».

408. **Puccinia acrophila** Peck in Botanical Gazette 1881, pag. 227. 2551

— Maculis brunneis, subinde purpureo-tinctis; soris sparsis aut confertis, rufo-brunneis; teleutosporis obovatis vel ellipsoideis, medio constrictis, $26-32 \approx 20$, rugulosis aut verruculosis, pedicello brevi, hyalino instructis.

Hab. in foliis caulibusque *Synthyris pinnatifidæ*, Utah in Amer. bor. (JONES). — Sori plerumque apices segmentorum folii incolunt, unde nomen hujus speciei.

409. **Puccinia appendiculata** Wint. in Flora 1884, n. 14. — Soris hy- 2552

pophyllis, minutis at plerumque dense stipatis confluentibusque, laxis pulverulentis, atro-fuscis, macula nulla; teleutosporis ellipticis v. elliptico-oblongis, medio haud vel vix constrictis, amœne spadiceis, $44-52 \approx 26-32$, apice incrassatis, rotundatis, pallidioribus, episporio crasso verrucis majusculis, sparsis obsito, pedicello $60-70 \approx 7-9$, hyalino, appendiculis brevibus, apice lobatis incisisque obsito suffultis.

Hab. in foliis vivis *Bignoniaceæ* cujusdam, Mexico (E. KERBER).

410. **Puccinia Mertensiæ** Peck in Botanical Gazette 1881, p. 227. 2553

— Maculis nullis; soris amphigenis, rufescenti-brunneis, sparsis vel confertis; teleutosporis ellipticis, obtusis, leniter ad septum constrictis, $26-35 \approx 20-23$, rugosis vel verruculosis, pedicello brevi, hyalino suffultis.

Hab. in foliis vivis *Mertensiæ sibiricæ*, Colorado et Utah in America boreali.

B. In Monocotyledoneis vigentes.

* Teleutosporæ episporio levi donatæ vel quoad episporium dubiæ.

411. **Puccinia Sagittariæ** Rabenh. Krypt. Fl. I, pag. 23, Winter Die 2554

Pilze p. 225. — Teleutosporis subclavatis, 2-3-ocularibus, intense brunneis, glomerulos irregulares, rotundatos v. elongatos, subconvexos efficientibus; pedicello flavescenti-hyalino.

Hab. in foliis *Sagittariæ sagittifoliæ*, in Germania.

412. **Puccinia Sisyrinchii** Mont Syll. Crypt. n. 1157. — Amphigena; 2555

soris minutis, rotundis, convexis, sparsis aut gregariis spadiceis, epidermide breviter cinctis; teleutosporis polymorphis, episporio stratoso crasso, pedicello hyalino, mediocri.

Hab. in foliis *Sisyrinchii* cujusdam, in Chile (BERTERO).

413. **Puccinia Gladioli** Cast. Obs. II, p. 17, Cat. pl. Mars. pag. 199. 2556

— Hypophylla; maculis distinctis, fuscis, late effusis, oblongis, nervis foliorum sæpe limitantibus; soris confluentibus, totam maculam obtegentibus, epidermide evanescente; teleutosporis ovato-oblongis, $38 \approx 20$, episporio apice obtusiusculo incrassato, non constrictis, cinnamomeis levibus longiusculo, hyalino pedicellatis.

Hab. in foliis *Gladioli* segetum, *Ecklonii* et communis, in Gallia, Algeria et Caffraria.

414. **Puccinia splendens** Vize in *Grevillea* 1878, p. 11. — *Amphi-* 2557

gena; soris magnis densas maculas fibra cinctas formantibus; teleutosporis brunneis, medio vix constrictis, obtusis, $50 \approx 35$.

Hab. in foliis *Allii*, in California Americæ borealis.

415. **Puccinia Hemerocallidis** Thüm. Pilzfl. Sibir. n. 512. — Soris am- 2558

phigenis, parvulis, gregariis, epidermide primo longe diu tectis, postremo erumpentibus liberisve et cuticula arida basi cinctis, spadiceis; teleutosporis longe clavatis, medio constrictis, vertice late obtusatis incrassatisve et modo raro elongato-obtusiusculis, loculo inferiori in pedicellum angustato, dilute fuscidulo, loculo superiori fusco episporio tenui, levi, $60-64 \approx 20-15$; pedicello hyalino, interdum subarcuato, $20-26 \approx 6$.

Hab. in foliis vivis *Hemerocallidis flavæ*, in pratis pr. Minussinsk Sibiriae asiaticæ.

416. **Puccinia perforans** Mont. Syll. Crypt. n. 1156. — Hypophylla, 2559

sparsa; soris erumpentibus, sparsis, planiusculis, ambitu epidermide velatis, quasi seriatis, subtus circumscissis tandemque deciduis, folium perforatum relinquentibus; teleutosporis erectis, oblongo-obovatis, truncatis, breviter pedicellatis.

Hab. in foliis *Luzuriagæ* radicans in Chili (GAY).

417. **Puccinia nodosa** Ell. et Harkn. New Calif. Fungi p. 7. — So- 2560

ris linearibus, 1-3 mm. longis, solitariis vel gregariis; teleutosporis late oblongis vel suborbicularibus, constrictis, septo vix distincto, $36-42 \approx 22-28$; pedicello valido, teleutosporam æquante, hyalino, deciduo.

Hab. in foliis vivis *Brodiaëæ capitatae*, pr. Antioch in California Americæ borealis.

418. **Puccinia pachyderma** Wettst. in *Hedwigia* 1887, p. 115. — So- 2561

ris oblongis, convexis, fuscis, epidermidem rumpentibus, pulverulentis; teleutosporis obovatis vel ellipticis, $37-47 \approx 27-30$, medio haud constrictis, pallide fuscis, episporio valde incrassato, ubique æqui-

crasso, 5-6 μ . cr., ambitu leviter undulato donatis, pedicello hyalino, tenui fultis,

Hab. in foliis vivis *Gageæ caucasicæ* et *pusillæ*, in Persia.

419. **Puccinia Metanarthecii** Pat. in *Revue mycol.* 1886, p. 80. — 2562

Soris numerosis, hypophyllis, sparsis, rotundatis vel linearibus, atris v. brunneolis, epidermide tectis eaque disrupta cupulatum cinctis; teleutosporis 45-60 $\approx$ 16-18, rufescentibus, loculis cuneiformibus, ad septum plus minus constrictis, inferiori episporio tenui, superiori truncato vel apice rotundato, episporio vertice valde incrassato, pedicello usque ad 30 μ . longo, subhyalino fultis.

Hab. in foliis *Metanarthecii* luteo-viridis, pr. Niigata in Japonia orientali (FAURE).

420. **Puccinia Zygaeni** Trel. in *Journal of Mycology* I, p. 15. — Soris 2563

parvis, rotundatis, amphigenis; teleutosporis succineo-brunneis, apice saturatoribus, oblongis vel subinde clavatis, vertice incrassatis, rotundatis vel truncatis, raro acutis, 33-56 $\approx$ 16-20, plerumque 43 $\approx$ 17, pedicello hyalino, tenui suffultis.

Hab. in foliis *Zygaeni* glauci, in America boreali.

421. **Puccinia atro-puncta** Peck et C. in *Botan. Gazette* 1879, p. 171. 2564

— Maculis minutissimis, flavescentibus, medio plerumque brunneis; soris numerosis, parvis, leniter prominulis, atris; teleutosporis oblongo-clavatis, obtusis, medio constrictis, 40-50 $\approx$ 20-23, pedicello plerumque teleutospora breviori instructis.

Hab. in foliis vivis *Veratri Woodii*, Allenton et Jefferson C. Missouri in America boreali. — A *Puccinia Veratri* colore sororum et forma teleutosporarum distincta.

422. **Puccinia Rostkowiæ** Speg. *Fungi Fuegiani* p. 49, n. 135. — So- 2565

ris in macula fuscescente ac pallescenti-areolata insidentibus, culmos sæpe totos ambientibus, longitudinalibus vel transversis sæpeque confluentibus, dein epidermide coriacella atque crassiuscula hinc inde frustulatum eroso-evanescente tectis, vix prominulis, pallidissime fuscescentibus, magnitudinem ludentibus; teleutosporis ellipticis vel ovato-subclavulatis, 30-35 $\approx$ 16-20, antice rotundatis v. obtuse acutatis, modice tunicatis, medio parce constrictis, inferne subcoarctato-truncatis abrupteque in pedicellum hyalinum, 40 $\approx$ 5 productis, levissimis, pallide fulvescentibus, paraphysibus filiformibus, æquilongis, hyalinis, septatis parce obvallatis.

Hab. ad culmos vivos *Rostkowiæ grandifloræ*, in pratis uliginosis Staten Island Patagoniæ. — Species pulchella distinctissima sed difficillime conspicienda vel rarissima.

423. **Puccinia Eriophori** Thüm. Pilzfl. Sibir. n. 695. — Soris epi- 2566
phyllis, gregariis, submagnis, planis, longitudinaliter dispositis, sub-
pulveraceis, primo tectis sed demum liberis, saturate brunneis; te-
leutosporis longe clavatis, vertice basique angustatis, medio con-
strictis, episporio levi, subcrasso, vertice eximie crassissimo, lo-
culis duobus sæpe cum nucleis magnis, $50-55 \approx 22-24$, fuscis; pe-
dicello æquilongo, subrecto vel arcuatulo, sursum sensim dilatato,
 $50-60 \approx 10$, dilute fuscidulo; paraphysibus nullis.

Hab. ad folia emortua *Eriophori latifolii*, in humidis pr.
Ssamodourowka Sibiricæ asiaticæ.

424. **Puccinia Fuirenæ** Cooke in Grevillea VI, pag. 137, Rav. Fung. 2567
Amer. N. 54. — Soris ellipticis, atro-brunneis, compactis; teleu-
tosporis lanceolatis ad 15μ . latis, obtusis, rubro-brunneis; pedi-
cellis incrassatis, hyalinis.

Hab. in culmis *Fuirenæ squamosæ*, pr. Aiken in Carolina
inf. Americæ borealis.

425. **Puccinia conclusa** Thüm. Contr. Flor. Lusit. p. 10, n. 51. — 2568
Soris amphigenis, gregariis, maximis, semper epidermide tectis,
subpunctato-elevatis, ellipticis vel sæpe confluentibus, nitide fu-
sco-plumbeis, fusco subcinctis; teleutosporis clavatis, medio incras-
satis, sessilibus, vertice rotundatis, basi angustatis vel in pedicel-
lum acutatis, episporio levi, tenui, intus homogeneis, $60 \approx 20$, di-
lute fuscidulis; paraphysibus nullis.

Hab. ad folia caulesque viva aridave *Cyperii longi*, pr. Coim-
bra Lusitanicæ (MESNIER).

426. **Puccinia Punctum** Link in Corda Icones I, p. 6, t. II, f. 97. — 2569
Soris oblongis, punctiformibus, minutis, confertis, amphigenis, ru-
fo-fuscis, dein nigricantibus, epidermide cinctis; teleutosporis cla-
viformibus, valde constrictis, loculo superiori minori, aureo, infe-
riori obovato-attenuato, luteo, pedicello plus minus evoluto, hya-
lino, continuo fultis.

Hab. in foliis *Caricis* et *Cyperii*, in Germania. — «Forte
ad *P. Caricis* referenda. Sec. Lambotte viget etiam in foliis cau-
libusque Liliacearum et Iridearum in Belgio «An?»».

427. **Puccinia Campulosæ** Thüm. in B. Torrey B. Cl. 1878. — Soris 2570
amphigenis, oblongis, liberis, pulvinatis, aterrimis; teleutosporis
ovatis, utrinque obtuso-rotundatis, medio vix vel non constrictis,
longe pedicellatis, fuscis, $36-40 \mu$. longo; paraphysibus solitariis,
hyalinis, teleutosporam fere æquantibus.

Hab. in foliis vivis *Campulosæ monostachyæ*, (*Ctenii*

americani) in America septentr., sine loco (Dr. C. KECK). — A *P. graminis* Pers. toto cœlo diversa.

428. **Puccinia deformata** B. et C. Fungi of Ceylon n. 596. — Soris 2571
gregariis, demum confluentibus; teleutosporis ellipticis oblongisque,
obtusis, quandoque subapiculatis, e pedicello longo, laterali, obliquo
oriundis.

Hab. in *Olyra latifolia*, in insula Ceylon.

429. **Puccinia corticioides** B. et Br. Fungi of Challenger Exped. 2572
p. 52, n. 269. — Soris confluentibus, armeniacis; teleutosporis 20-
25 μ . longis, primo globosis, dein pellucidis, subellipticis, centro
demum contractis; pedicello 18-20 μ . longo.

Hab. in culmis Graminaceæ cujusdam, forte *Arundina-*
riæ, Kobê, Nippon. — Demum crustas flavescenti-armeniacas ef-
format, quæ formam *Corticii* exhibent.

430. **Puccinia Ellisiana** Thüm. in Bull. New-York Torrey Botan. 2573
Club. VI, p. 215. — Soris hypophyllis, gregariis, plus minusve
lineariformibus, seriatis, elevatis, atro-fuscis, liberis; teleutospo-
ris ellipsoideis v. subclavato-ellipticis, septatis, medio vix constri-
ctis, vertice rotundatis, incrassatis, apice rotundatis, a pedicello
separatis, episporio dissepimentoque crasso, obscuriore, 30-40 $\approx$
18-23 fuscis; pedicello subrecto, æquali, 18-22 μ . longo, pallidis-
sime fusco; paraphysibus nullis.

Hab. in foliis aridis *Andropogonis virginiani* Newfield,
N. J. Americæ borealis. — An, suadente cl. Farlow, a *Puccinia*
Andropogonis Schwein. distincta?

431. **Puccinia paliformis** Fuck. Symb. myc. p. 59, Winter Die Pilze 2574
p. 224. — Soris minutis, sparsis, orbicularibus, convexis, atro-fu-
scis; teleutosporis oblongis 23-52 $\approx$ 10-16, loculo superiori cum
appendiculo paliformi, obtuso acuminatove, magnitudine loculi ter-
minalis cum pedicello teleutosporam dimidiam æquanti, internodiis
constrictis, fuscis.

Hab. in foliis *Kœleriae cristatæ*, in Jura.

432. **Puccinia striatula** Peck in litt. *P. linearis* Peck in 25 Rep. 2575
New York State Museum p. 121, nec auctorum. — Amphigena;
soris angustissimis, profunde immersis, oblongis vel linearibus, pa-
rallelis, confertis, diu epidermide tectis, atris; teleutosporis oblon-
gis, leniter basim versus angustatis, non constrictis, obtusissimis
aut truncatis, 45 $\approx$ 60-15, pedicello brevissimo, colorato fultis.

Hab. in vaginis folisque vivis et emortuis *Calamagrosti-*
dis canadensis, Copake, New York et Watkins Amer. bor.

433. **Puccinia Zizaniæ** Schwein. Syn. Fung. Amer. bor. pag. 296, 2576
n. 2915. — Emaculata, minuta, primum tecta, demum lineatim
prorumpens epidermide circa soros persistente; soris elongatis, ab-
breviatis, atris, luce obversis fuscescentibus; teleutosporis laxis,
breviter pedicellatis, minutissimis.

Hab. in foliis dejectis *Zizaniæ*, prope Philadelphia Americæ
borealis.

434. **Puccinia Trabutii** Roum. et Sacc. in *Michelia* II, p. 307 et in 2577
Revue Mycologique 1880, p. 188. — Soris erumpentibus, compa-
ctis, 5-6 cm. longis, atro-cinnamomeis; teleutosporis oblongo-di-
dymis, utrinque rotundatis, $55-50 \approx 25$, vertice vix incrassatis, me-
dio modice constrictis, guttulatis, cinnamomeis; pedicello filiformi
prælongo, $110-120 \approx 5$, hyalino; uredosporis non visis.

Hab. in culmis *Phragmitis giganteæ*, prope nodos, in Al-
geria (TRABUT). — Toto habitu et loco a *Pucc. Phragmitis* et
Pucc. Magnusiana distinguenda.

435. **Puccinia triarticulata** Berk. et Curt. North Pacif. Exped. n. 130. 2578
— Soris oblongis, epidermide rimosa arcte inclusis; teleutosporis
elongatis, triarticulatis, breviter pedicellatis.

Hab. in foliis *Elymi mollis*, in fretu Behring Amer. bor.

** Teleutosporæ episporio verrucoso v. reticulato donatæ.

436. **Puccinia Schroeteri** Passer. in N. Giorn. botan. ital. VII, p. 255, 2579
Winter Die Pilze p. 172. — Soris macula fusco-violacea cinctis,
magnis, oblongis, solitariis v. pauci approximatis, epidermide tectis
v. cinctis; teleutosporis subellipticis, ex aureo castaneo-fuscis, $38-60$
 $\approx 24-27$, obscure reticulatis, utrinque rotundatis vel basi interdum
attenuatis, ad septum non vel vix constrictis, pedicello brevissimo,
crasso, hyalino, deciduo suffultis.

Hab. in foliis *Narcissi poetici* et speciei cujusdam indeter-
minatæ pr. Firenze Italiæ et in Germania.

437. **Puccinia Prostii** Moug. in Duby Botan. Gall. II, p. 891, Erb. 2580
critt. ital. Ser. II, n. 196. — Maculis nullis; soris oblongis subcon-
vexis, fuscis, amphigenis, sparsis confertisque, epidermide tectis, de-
mum eâ rimose rupta obvelatis; teleutosporis ellipsoideis, 1-septatis,
vix constrictis, $60-66 \approx 34-36$, ubique longiuscule hyalino-aculeatis,
cinnamomeis, pedicello hyalino suffultis.

Hab. in foliis *Tulipæ silvestris* et *Celsianæ* in agro ve-
neto Italiæ (G. BIZZOZERO) et in Gallia (PROST).

438. **Puccinia Ornithogali** Hazsl. Magyar. Krypt. Virany, 1878, p. 12. 2581

— Soris oblongis vel linearibus, diu epidermide tectis; teleutosporis elliptice utrinque rotundatis, brunneo-atris, loculis æqualibus subinde verrucosis, 50 μ . longis, pedicello tenuissimo, cylindraceo, hyalino, vix 20 μ . longo fultis.

Hab. in *Ornithogalo Borschiano*, pr. Budapest Hungariæ.

439. **Puccinia Scillæ** Link Cent. Ung. Pilze V, n. 417. — Soris te- 2582
leutosporiferis amphigenis, densis vel plus minus sparsis, epidermide diu tectis, denique vertice foramine minuto vel rima hiascentibus; teleutosporis medio non vel vix constrictis, vertice rotundatis vel attenuatis, non incrassatis, papilla plerumque hyalina, minuta apice auctis, deorsum in pedicellum contractis, verrucosis, subfuscis, 38-58 $\approx$ 24-28, pedicello plerumque brevi, crasso hyalino fultis.

Hab. in foliis *Scillæ bifoliæ*, ad Magyar-Ovarinum Hungariæ.

440. **Puccinia anachoreta** Ell. et Harkn. New Calif. Fungi p. 14. — 2583
Soris solitariis, ellipticis, 1-2 mm. longis, in maculis irregularibus, pallidis insidentibus; teleutosporis breviter oblongis, constrictis, 28-42 $\approx$ 20-24, subtiliter papillatis; pedicello teleutosporam subæquante, hyalino, deciduo.

Hab. in foliis vivis *Calochorti nudi* in California Americæ borealis.

441. **Puccinia phyllocladia** Cooke in Grevillea X, p. 125. — Epiphyl- 2584
la et caulina; soris suborbicularibus, demum confluentibus, pulverulentis, maculam pallidam efficientibus; teleutosporis globosis, nec constrictis, 30 $\approx$ 28, castaneis, vix granulatis; pedicello elongato, hyalino, 60 μ . longo.

Hab. in caulibus foliisque *Asparagi falcati*, ad Inanda, Natal in Africa (Wood). — A *Puccinia Asparagi* omnino diversa.

442. **Puccinia vexans** Farlow Not. Ell. Am. Fungi n. 1051, p. 82, *Uro-* 2585
myces Brandegei Peck in Bot. Gazette IV, p. 127. — Maculis nullis; soris sparsis, raro leniter confluentibus, prominentibus, orbicularibus, ellipticis aut oblongis atris; teleutosporis subglobosis v. late ellipticis 30-38 $\approx$ 19-24, levibus vel superne rugulosis; pedicello hyalino, plerumque teleutosporam æquante aut eâ longiore.

Hab. in foliis *Boutelouæ curtipendulæ*, Colorado Amer. borealis (BRANDEGEE). — Teleutosporæ (?) uniloculares obscure brunneæ, fere æquimagnæ, obovatæ, superne distincte papillatæ v. rugulosæ. «An huc *Uredo Boutelouæ* Arthur?».

443. **Puccinia sparsa** Cooke Handbook n. 1481. — Maculis obso- 2586

letis; soris amphigenis, paucis, sparsis, bullatis, diu epidermide tectis, inæqualibus, oblongis; teleutosporis ovatis, leniter constrictis, sordide brunneis, subtiliter tuberculatis, pedicello brevissimo, deciduo suffultis.

Hab. in foliis *Tragopogonis pratensis*, in Britannia. —
A *Puccinia Tragopogonis* Corda Icon. distincta.

Species in matrice ignota indicatæ.

444. **Puccinia plagiopus** Mont. Cuba p. 294, t. 11, f. 1, Syll. crypt. 2587
n. 1152. — Maculis nullis; soris hypophyllis, minutis, fuscis, ex
ambitu soluto pili-squamiformi, in processus vero subulatos ere-
cto-incurvos mutato exeuntibus; teleutosporis oblongis, æqualibus,
medio subconstrictis tandem fuscis, episporio crasso verrucoso,
pedicello hyalino, excentrico fultis.

Hab. in foliis coriaceis ignotis prope S. Marcos insulæ Cubæ
(RAMON DE LA SAGRA).

445. **Puccinia striata** Cooke in Grevillea 1878, p. 3. — Epiphylla; 2588
soris bullatis, pulverulentis, ovatis, purpureo-brunneis; teleutospo-
ris biglobosis, constrictis, asperulis, verrucis in lineas parallelas
dispositis, pedicello subobsoleto instructis.

Hab. in planta aquatica ignota in Africa (?).

446. **Puccinia suffulta** B. et C. North Amer. Fungi n. 556. — Ma- 2589
culis pallidis, orbicularibus; soris minutis; teleutosporis loculo in-
fero clavato et in pedicellum angustato supero, obovato subinde
apice papillato, episporio 3 stratis constituto tectis.

Hab. in foliis plantæ indeterminatæ ad Cotoosa Springs, in
Amer. boreali (RAVENEL).

447. **Puccinia congesta** B. et Br. Ceylon Fungi n. 815. — Maculis 2590
flavis, effusis, hypophyllis, late confluentibus; soris congestis; te-
leutosporis longe pedicellatis, fortiter constrictis, 50 μ . longis,
ferrugineis; pedicello usque ad 110 μ . longo.

Hab. in foliis ignotis ad Habgalla in insula Ceylon.

448. **Puccinia Doehmia** B. et C. North Pacif. Exped. n. 131. — So- 2591
ris oblongis; teleutosporis brevibus, obtusissimis, fuscis, pedicello
hyalino, laterali suffultis.

Hab. in foliis herbarum, in Nicaragua Americæ.

Species valde incertæ vel tantum nomine notæ.

449. **Puccinia Holbolli** (Hornem.) Rostrup Svampe fran Finmarken 2592
p. 230 (nomen). Cfr. «Flora danica».

Hab. in foliis *Erysimi hieracifolii*, Kaafjord Firmariæ.

450. **Puccinia Brassicæ** Mont. in Ann. Scienc. Nat. 1836, pag. 30, 2593
t. XII, f. 4.

Hab. in Brassica, prope Lyon Galliæ. — Ab ipso Montagne in Sylloge Cryptogamarum omissa.

451. **Puccinia Ervi** Opiz Seznam p. 139. 2594

Hab. in Ervo in Bohemia.

452. **Puccinia cylindrica** Opiz Beitr. p. 29. 2595

Hab. in Bohemia.

453. **Puccinia tumida** Grev. Fl. Edinb. p. 430. 2596

Hab. in Scotia. — A cl. Cooke in «Handbook» omissa.

454. **Puccinia Chrysophylli** Grev. in Sm. Engl. Fl. V, p. 367. 2597

Hab. in Anglia. — A cl. Cooke in «Handbook» omissa.

455. **Puccinia tenuistipes** Opiz Seznam p. 139, an Rostrup. 2598

Hab. in Bohemia.

UROPYXIS Schroet. in Hedwigia 1875, p. 165 (Etym. *oura* cauda et *pyxis*). — Teleutosporæ uniseptatæ, tegumento amplo, medio constricto, hyalino, haud diffuente obvolutæ; loculi singuli ad parietes laterales poros singulos symmetricè dispositos gerentes. Uredosporæ ovatæ, subtiliter echinulatæ vel subleves. — Genus inter *Pucciniam* et *Gymnosporangium* medium.

1. **Uropyxis Amorphæ** (Curt.) Schroet. in Hedwigia 1875, pag. 165, 2599

Puccinia Amorphæ Curt. North Americ. Fungi n. 555, Burrill Paras. Fung. Illin. p. 176. — Soris uredosporiferis plerumque epiphyllis, parvis, paucis; paraphysibus stipatis, clavatis, brunneis cinctis; uredosporis ovatis, 18-21 $\approx$ 12-15, subtiliter echinulatis; soris teleutosporiferis amphigenis, minutis, sparsis vel circinato-confluentibus, paraphysibus analogis instructis; maculis flavis; teleutosporis brevibus, obtusis, medio constrictis, episporio separabili echinulato involutis, 42-45 $\approx$ 24-30, pedicello fragili, hyalino auctis.

Hab. in foliis *Amorphæ fruticosæ* et canescentis, in Carolina infer. et Illinois, Minnesota, Wisconsin Americæ borealis (RAVENEL).

2. **Uropyxis Petalostemonis** (Farlow) De-Toni, *Puccinia Petaloste-* 2600

monis Farlow in Journ. of Mycology I, pag. 15. — Soris uredosporiferis rotundatis, brunneis, epidermide rupta pseudoperidii ad instar inflata cinctis; uredosporis ovoideis, 22 $\approx$ 20, sublevibus vel granulatis, pallide brunneis; soris teleutosporiferis similibus, atris; teleutosporis brunneis, late ellipticis, leniter constrictis, episporio

tenui, apice non incrassato, tunica gelatinosa cinctis, $33 \approx 20$; paraphysibus apice plerumque incurvis, pallide flavis.

Hab. in foliis *Petalostemonis*, in America boreali.

DIORCHIDIUM Kalchbr. in Grevillea XI, p. 26 (Etym. a *dis* duo et *orchis* testiculus). — Teleutosporæ echinatae v. leves, brunneae v. fuscescentes, didymæ testiculiformes loculis septo verticali connatis; pedicello communi in septum producto uredosporæ ovatae, brunneolæ.

2601

1. **Diorchidium Woodii** Kalchbr. et Cooke l. c. p. 26. — Soris hypophyllis, sparsis, liberis, planis, atris; teleutosporis binis, juxta se positis, ovatis, $20-24 \approx 16-18$, eximie echinulatis, brunneis; pedicello sursum incrassato, teleutosporâ duplo longiore.

Hab. in foliis vivis *Milletiæ caffræ*, ad P. Natal Africae. 2602

2. **Diorchidium binatum** (Berk. et Curt.) De-Toni, *Triphragmium binatum* Berk. et Curt. N. Pac. exp. n. 129. — Teleutosporis fuscis, bicellulosis, spinis emarginatis asperis; dissepimento verticali; membrana exteriori deglubente.

Hab. in foliis plantæ ignotæ sociâ *Lecythea peziziformi*, Nicaragua. 2603

3. **Diorchidium Tracyi** De-Toni, *Puccinia vertisepta* Tracy et Gall. in Journ. of Mycol. 1888, p. 21. — Soris utriusque formæ amphigenis, prominulis, atris, rotundatis; uredosporis ovatis, pallide brunneis, $23-25 \approx 20-22$, episporio crasso, ruguloso; teleutosporis globoso-compressis, septo verticali instructis, $34-35 \approx 28-30$, episporio crasso, grosse tuberculato, apice incrassato; pedicello longissimo, incurvo, hyalino.

Hab. in foliis *Salviæ ballotifloræ*, New Mexico Amer. bor.

4. **Diorchidium pallidum** Wint. in Grev. XV, p. 86. — Soris hypophyllis, sparsis gregariisve, macula indeterminata irregulari, mox parva, mox late effusa luteola insidentibus, minutissimis, punctiformibus: uredosporiferis rotundatis seu irregulariter parumque oblongatis, epidermide inflata, demum fissa longe velatis, fuscidulis; teleutosporiferis punctiformibus, hemisphaerico-pulvinatis, ceraceis, compactiusculis; uredosporis subglobosis v. ovoideis, dense echinulatis, luteolis, $18-20 \mu$. diam. vel usque 27μ . longis, $18-20 \mu$. cr.; teleutosporis ovato-cuneatis vel subellipticis, apicem versus parum attenuatis rotundatisque basi plerumque truncatis vel late rotundatis, luteolohyalinis, $28-29 \approx 12-14$, pedicello prælongo, lato, hyalino, persistente fultis.

2604

Hab. in foliis vivis languidisque plantæ cujusdam scadentis, in pr. S. Francisco Brasiliæ (ULE).

5. **Diorchidium leve** Sacc. et Bizz. in *Michelia* II, pag. 648. — Soris 2605 sparsis gregariisve, amphigenis, epidermide dein fissa velatis, atrocinnamomeis, exiguis, fere punctiformibus, 250 μ . d.; teleutosporis transverse ellipsoideis, apice truncato-emarginatis, longitudinaliter 1-septatis, tunica superne crassiore, cinnamomeis, levibus, 30-36 = 22-25; pedicello filiformi, hyalino, e septi basi oriente, 100-120 = 6.

Hab. in foliis languidis *Manisuris granularis* (e Graminaceis) in Brasilia. — A *Diorchidio Woodii*, *D. Tracyi* et *D. binato* præcipue teleutosporis levissimis nec asperis, recedit, a *D. pallido* teleut. majoribus, cinnamomeis etc.

GYMNOSPORANGIUM Hedwig f. in DC. Fl. Franc. II, p. 216 (1805), Schroet. Pilzfl. Schles. p. 356 (Etym. a *gymnos* nudus et *sporangium*), *Puccinia* Micheli Nova plantarum Genera (1729) nec Persoon, *Podisoma* Link Sp. II, p. 127. — Teleutosporæ in stratum magnum, a substrato discretum, gelatinosum confluentes, rarius stratum parvum, explanatum, convexum efformantes, transverse uniseptatæ, rarissime biseptatæ, loculis singulis poris germinationis plurimis (2 v. 4) præditis. — In speciebus adhuc cognitis extant spermogonia et æcidia in una, teleutosporæ in altera matrice. Uredosporæ haud evolutæ. — De hoc genere cfr. Farlowi et Thaxteri eximias monographias.

1. **Gymnosporangium clavariiforme** (Jacq.) Rees in Winter Die Pilze 2606 p. 233, Schroet. Pilz. Schles. p. 357, Kienitz-Gerloff in Botanische Zeitung 1888, t. VII, p. 389, *Tremella clavariiformis* Jacq. Collect. bot. II, p. 174, *Tr. digitata* Villars Hist. pl. Damph. III, p. 1007, *Tremella ligularis* Bull. Champ. p. 223, *Tremella juniperina* Wahlb. Fl. Suec. p. 994, *Æcidium Oxyacanthæ* Pers. Syn. p. 206, *Æcidium laceratum* Sow. Engl. Fung. t. 318, *Ræstelia lacerata* Mer. Fl. Par. p. 113, *Cæoma cylindrites* Link Sp. II, pag. 64, p. p., *Ræstelia carpophila* Bagnis in Thümen Myc. Univ. n. 1326, *Lycoperdon penicillatum* Müll. in Fl. Dan. t. 839, *Æcidium penicillatum* Pers. in Gmel. Syst. II, p. 1472, Winter Die Pilze p. 266, *Ræstelia penicillata* Fr. S. V. S. p. 510, *Ceratitium penicillatum* Rabenh. in Botan. Zeit. 1871, p. 452, *Ræstelia Oxyacanthæ* Link in Berl. Magaz. 1815, p. 29, *Podisoma Juniperi-communis* Fr. Syst. Myc. III, p. 508, *Æcidium Mali* Schum. Pl. Saell. p. 222? — Spermogoniis epiphyllis vel fructicolis, subiculis incras-

satis, subcroceis (iisdem ac pseudoperidiis) insidentibus, verruciformibus, erumpentibus; sporulis flavis, oblongatis; pseudoperidiis hypophyllis vel fructicolis, aggregatis, maculæ aurantiaco-luteæ insidentibus, juvenilibus lageniformibus, circ. 2,5 mm. longis, albidis demum cylindraceis et in filamenta reflexa usque ad basim fissis; æcidiosporis verrucosis, 22-45 $\approx$ 19-35, catenulatis, angulato-subsphæroideis, flavidis; soris gregariis v. sparsis, cartilagineo-pulposis, verticalibus, cylindraceis vel elongato-clavatis, compressis, apice sæpe semel bisve furcato-divisis subinde curvatis vel flexuosis, aurantiaco-luteis; teleutosporis oblongato-fusoideis, uniseptatis, ad septum haud constrictis, flavidis, longissime pedicellatis, 70-120 $\approx$ 14-20, 4 poris in quoque loculo instructis lanocarpæ.

Hab. æcidia et spermogonia in foliis fructibusque Cratægi Oxyacanthæ, punctatæ, Cruris galli, coccineæ, cordatæ, monogynæ, pyracanthæ, lobatæ, nigræ, melanocarpæ, nec non Piri Mali, angustifolii et Sorbi Ariæ; teleutosporæ in Junipero communi, in Italia, Dalmatia, Gallia, Belgio, Fennia, Hungaria, Britannia, Germania, Austria, America boreali. — Cl. Ærsted, jam anno 1867, experimentis demonstravit nexus metageneticos; Râthay vero in dubium posuit an etiam sporæ *G. juniperini* in Piro Malo æcidium proferant. Dubium est etiam an hunc pertineat *Æcidium penicillatum* Müll. in Sorbo Aria.

2. **Gymnosporangium juniperinum** (L.) Fr. Syst. Myc. III, p. 506, 2607 Winter Die Pilze p. 234, Schroet. Pilz. Schles. p. 358, *Tremella juniperina* L. Sp. plant. p. 1625, *Tremella auriformis* Hoffm. Veget. crypt. I, p. 31, t. 6, f. 4, *Tremella conica* Hedw. f. in DC. Encycl. VIII, p. 38, *Gymnosporangium aurantiacum* Chev. Fl. Paris. I, p. 424, *Gymnosporangium conicum* Reess Rostp. p. 74 *Podisoma foliicolum* Berk. in Sm. Engl. Fl. V, pag. 362, *Æcidium cornutum* Gmel. in L. Syst. nat. II, p. 1472, *Lycoperdon corniferum* Müll. in Fl. Dan. t. 838, *Cæoma cylindrites* Link Sp. II, p. 64 p. p., *Centridium Sorbi* Chev. Fl. Paris I, p. 383, *Ræstelia cornuta* Fr. S. V. S. p. 510, *Ceratitium cornutum* Rabenh. in Bot. Zeit. 1851, p. 452, *Podisoma Juniperi* Link. Sp. II, p. 127, *Lycoperdon corniculatum* Ehrenb. Pl. crypt. exs. dec. 20. — Spermogoniis epiphyllis, in parvos greges dispositis, maculæ flavæ vel aurantiacæ, majusculæ, rotundatæ impositis, conoideo-prominulis, aurantiaco-rufescentibus; pseudoperidiis hypophyllis, aggregatis, maculæ crocæ insidentibus, in tubulum cylindrico-elongatum, longissimum (usque ad 8 mm. longo, 1 circ. mm.

lato), porrectis, incurvis, albidis, demum flavescentibus v. rufescentibus, margine patulo, denticulato; æcidiosporis catenulatis, angulato-sphæroideis, fuscescenti-flavidis, $20-28 \approx 10-24$, subtiliter verrucosis, 6 poros gerentibus; soris teleutosporiferis simplicibus v. cæspitosis, gelatinoso-pulposis, primitus hemisphæricis v. conoideis, fulvis, dein jove favente, extumescens, orbiculatis, piriformibus etc., aureis tandemque plicato-collabentibus; teleutosporis ellipsoideis v. oblongatis, utrinque attenuatis, $40-75 \approx 17-27$, ad septum haud constrictis, fuscidulis longissime pedicellatis.

Hab. æcidia et spermogonia in foliis Sorbi Aucupariæ, hybridæ et torminalis nec non Aroniæ rotundifoliæ et Amelanchieris canadensis; teleutosporæ in Junipero communi et nana in Italia, Austria, Helvetia, Germania, Britannia, Belgio, Fennia et America boreali. — Extant quoque teleutosporæ flavæ, circ. $66 \approx 17$, episporio tenui instructæ. — Nexus primo declaravit cl. Cærsted anno 1866.

3. **Gymnosporangium Sabinæ** (Dicks.) Wint. Die Pilze p. 232, Schroet. 2608
 Pilz. Schles. p. 357, *Tremella Sabinæ* Dicks. Pl. crypt. brit. I, p. 14, *Tremella digitata* Hoffm. Veget. Crypt. I, p. 53, t. 7, f. 2, *Tremella fusca* DC. Encycl. VIII, p. 39, *Clavaria resinosorum* Gmel. in L. Syst. nat. II, p. 1443, *Puccinia Juniperi* Pers. Disp. p. 38, *Puccinia cristata* Schmid. Icon. III, p. 254, t. 66, *Lycoperdon cancellatum* Jacq. Fl. austr. I, p. 15, t. 17, *Ræstelium cancellatum* Rebent. Fl. Neom. p. 350, *Cæoma Ræstelites* Link in L. Sp. plant. VI, 2, p. 64, *Gymnosporangium fuscum* Cærst. non Gasp. — Spermogoniis aurantiaco-rufis, demum atris, conoideo-prominulis, in parvos greges congestis, maculis flavis vel rufescentibus, majusculis, rotundatis impositis, epiphyllis, rarius fructiculis vel ramiculis; sporulis minutis, aurantio-pallidis; æcidiis contraposis, bullas crassas, convexas, tuberculiformes efformantibus: flavescentibus numerosis, ventricosis, 2 mm. longis, 1-1,5 mm. latis; pseudoperidiis apice clausis, latere subcancellatis, dilute brunneis; æcidiosporis catenulatis, $22-44 \approx 17-26$, brunneis rotundato-polygoniis, verruculosis; soris teleutosporiferis irregulariter conoideis v. cylindræis, obtusis, subinde compressis v. subramosis, flavo-rufescentibus, gelatinosis, 8-10 mm. longis; teleutosporis ellipsoideis, $38-50 \approx 23-26$, medio vix v. non constrictis, castaneo-brunneis, in quoque loculo 4 poris instructis.

Hab. spermogonia et æcidia in foliis, ramis fructibusque Piri communis, tomentosæ et Michauxi; teleutosporæ in Juni-

pero Sabina, in Vogesis, Gallia, Germania, Austria, Britannia, Helvetia et America boreali. — Rees in Abh. Nat. Ges. zu Halle descripsit teleutosporas fusiformes, flavescentes, $55 \approx 18$. Cl. Ærsted (1865) experimentis demonstravit metagenesin inter duas formas (æcidium et teleutosporas).

4. **Gymnosporangium biseptatum** Ellis in Bull. Torr. bot. Club 1874, 2609 p. 46, *Ræstelia botryapites* Schwein. Syn. N. Am. Fungi p. 294, n. 2902, *Ræstelia Ellisii* Peck in Bull. Torrey bot. Club VI, n. 2? (ex ipso Peck). — Maculis epiphyllis, flavis, rubris brunneisve, projectionibus subicularibus cæspitosis v. sparsis, ovatis, subviridibus subflavisve, pseudoperidiis hypophyllis, cylindraceis, singulis v. paucis in singulis projectionum apicibus sitis, laciniis subspadiceis, linearibus, subflexuosis, levibus apice persistenter cohærentibus; æcidiosporis subglobosis, scabriusculis, subbrunneis, $15-18 \mu$. diam; soris teleutosporiferis erumpentibus, velutinis, subrufescenti-castaneis dein tremelloideo-gelatinosis, magnitudine pisi, haud distincte foliaceis ut in *G. Juniperi*; teleutosporis longe pedicellatis, plerumque biseptatis.

Hab. æcidia in foliis *Amelanchieris canadensis*; teleutosporæ in ramulis, qui tunc turgescunt, *Cupressi thuyoidis*, in America boreali. — Var. **follicolum** Farl. Gymnosp. p. 20. In foliis *Thujæ occidentalis* in America boreali.

5. **Gymnosporangium macropus** Link Sp. II, p. 127, Burrill Parasitic 2610 Fungi of Illinois p. 210, Farlow Gymn. U. S. p. 13, *Podisoma macropus* Wymann in Lond. Journ. bot. 1845 p. 315, t. 12, f. 6, *Gymnosporangium Juniperi-virginianæ* Schwein. Syn. Carol. p. 74, n. 504, *Podisoma Juniperi-virginianæ* Fr. Syst. Myc. III. p. 507, *Gymnosporangium virginianum* Spreng. Syst. IV, p. 562, *Æcidium pyratum* Schwein. Syn. N. Am. Fungi n. 2896, *Puccinia? macropus* Lév. in Ann. Scienc. Nat. 1845 p. 68. — Soris teleutosporiferis in cæspites globosos congestis, basi annulo epidermoidali cinctis, aurantiaco-flavis, cylindraceis, acuminatis, 1-2,5 cm. longis, demum elongatis; teleutosporis ovato-acutis, ad septum plerumque constrictis, vertice apiculo auctis, $46-60 \approx 15-20$; pseudoperidiis hypophyllis, creberrimis, subconcentricis, parum tantum elevatis, margine eleganter multifido-fimbriato, fimbriis rectis, nullo modo revolutis, divergentibus, pallidis, maculis epiphyllis, orbiculatis, rubris, ambitu ochraceis, centro nigrescentibus; æcidiosporis fuscis.

Hab. æcidia in foliis *Piri coronariæ*; teleut. in foliis ramulisque *Juniperi virginianæ*, in America boreali.

6. **Gymnosporangium clavipes** Cooke et Peck in Journ. Quekett 2511
 Micr. Club 1871, p. 258, Grevillea III, p. 189, *Gymnosporangium fuscum* Gasp. in Rend. Acad. Scienc. Nat. 1848 n. 41, non alior. *Tremella mesenteriformis* Brot. Fl. Lusit. II, p. 443, *Ræsielia aurantiaca* Peck in 25 Rep. p. 91, t. I, f. 10-12. — Pseudoperidiis profunde immersis, cylindraceis, fragilibus, mox laceratis, evanescentibus, albis; æcidiosporis subglobosis, aurantiaco-lateritiis, 25 μ . circ. diam., episporio crasso, hyalino tectis; soris plerumque parvis subrotundisque, subinde confluentibus, convexis, erumpentibus, aurantiacis; teleutosporis ellipticis, obtusis, 37-45 μ . longis, pedicello longo, hyalino, apice incrassatulo fultis.

Hab. æcidia in fructibus *Amelanchieris canadensis* et *Cratægi* specierum nonnullarum; teleutosporæ in ramulis vivis foliisque *Juniperi virginianæ* et *phœniceæ* in America boreali et Lusitania. — Cfr. Thaxter in Proc. Amer. Acad. 1886, pag. 264.

7. **Gymnosporangium speciosum** Peck in Botanical Gazette 1879, 2612
 pag. 217. — Erumpens; massas tuberculiformes vel oblongas, lateraliter compressas efformans, aurantiacum; teleutosporis magnis, ellipticis vel oblongis, 1-2-septatis, sæpe profunde ad septum constrictis, 50-75 $\approx$ 20-27, pedicello 7-8 μ . crasso fultis.

Hab. in cortice *Juniperi occidentalis*, Colorado Amer. bor. (BRANDEGEE).

8. **Gymnosporangium? guaraniticum** Speg. Fungi Guaranitici I, n. 106. 2613
 — Dense gregarium, verrucas plus minus evolutas, 0,3-5 mm., magnitudine, scruposas late ramulos foliaque ambientes efficiens, primo clausum dein irregulariter dehiscenti-perforatum, sordide virescenti-v. olivaceo-fuscum, epidermide tectum, intus irregulariter lacunoso-confluens, pulpa viscoso-mucedinea, aurantio-fulvescente ac pallide succinea, longe ac cirrose per ostiola protrudente fartum; teleutosporis muco fasciculatim immersis, elliptico-elongatis vel elongato-biconicis, 12-15, rarius 20 $\approx$ 3-3,5, medio haud constrictis, 1-pseudoseptatis, apice acutiuscule rotundatis, deorsum attenuato-truncatis, hyalinis, pedicello filiformi, 50-80 $\approx$ 1, concolore vel vix ima basi fuscescente suffultis.

Hab. ad ramulos nec non folia viva *Cupaniæ* speciei cujusdam, in silvis prope Guarapî Americæ australis. — «Forte huc pertinet ut status æcidiosporus *Ceratitium? guaraniticum* Speg. F. Guaranit. I, n. 157, in foliis vivis *Salviæ*, sociâ *Tuberculinâ guaraniticâ* Speg. l. c. n. 158».

*Falsum! Speg. p. 97
 ex Tuberculinâ mucidina*

3. Phragmosporæ Sacc. et DE-TONI.

PHRAGMIDIUM Link Sp. II, p. 84 (1824) (Etym. a *phragmos* septum).
Hamaspora Körn. in Hedwigia 1877, p. 22 p. parte. — Spermogonia explanata, orbicularia; æcidia (*Cæoma*) in acervos rotundatos, late expansos confluentesque disposita; æcidiosporæ catenulatæ; uredosporæ singulæ, ad apices hypharum evolutæ; teleutosporæ transverse 3-pluriseptatæ, superiori loculo 1 poro prædito, ceteris loculis 4 poris instructis. — Genus Rosaceas tantum incolens.

Sectio I. EUPHRAGMIDIUM. Teleutosporarum pedicellus rectus. — Cfr. *P. Tormentillæ*, *P. Rubi*, *P. Rubi-idæi*.

A. Pedicellus teleutosporarum ubique æquicrassus. — Species præcipue in Rosa, Potentilla, Poterio etc. vigentes.

1. **Phragmidium Fragariastr**i (DC.) Schroet. Pilz. Schles. pag. 351, 2614
*Puccinia Fragariastr*i DC. Fl. Franc. VI, p. 55, *Puccinia Fragariæ* DC. Encycl. VIII, p. 244, *Phragmidium Fragariæ* Wint. Die Pilze pag. 228 p. p., *Phragmidium granulatum* et *brevipes* Fuck. Symb. myc. p. 46. — Æcidiis in greges rotundatos at plerumque longe lateque expansos, aurantiaco-rufos dispositis, sæpe confluentibus; æcidiosporis in series congestis, globosis, ellipticis vel polyhedricis, 17-26 $\approx$ 12-20, episporio hyalino, verruculoso, contentu aurantiaco-rufescente, paraphysibus clavatis intermixtis; soris uredosporiferis aurantiacis, minutis, rotundatis, raro oblongis, sparsis, mox nudis, paraphysibus clavatis; uredosporis globosis, ellipticis aut ovoideis, 16-24 $\approx$ 12-20, aculeato-verrucosis, aurantiaco-flavis; soris teleutosporiferis castaneo vel atro-brunneis, sparsis, minutis, rotundatis; teleutosporis cylindraceis, sursum deorsumque rotundatis, 2-4-septatis, 45-70 $\approx$ 22-39, rufescentibus, sparse et præcipue superne hyalino-tuberculatis, subinde apiculatis, pedicello tereti, hyalino, 20-30 $\approx$ 10-12 fultis.

Hab. in foliis caulibusque Potentillæ albæ, Fragariastr*i*, micranthæ, in Italia, Helvetia, Austria, Germania, Gallia, Belgio et America boreali. — Huc pertinet, teste Burrill Paras. Fungi of Illinois p. 265. *P. triarticulatum* B. et C.

2. **Phragmidium Sanguisorbæ** (DC.) Schroet. Pilz. Schles. p. 352, 2615
Puccinia Sanguisorbæ DC. Fl. Franc. VI, p. 54, *Phragmidium Fragariæ* Wint. Die Pilze p. 228 p. p., *Cæoma Poterii* Schlecht. Fl. Berol. II, p. 125, *Erysibe Poterii* Wallr. Fl. Crypt. Germ. II,

n. 1643, *Phragmidium Poterii* Fuck. Symb. myc., *Uredo Poterii* Rabenh. Handb. p. 67, *Phragmidium mucronatum* var. *Sanguisorbæ* Wallr. l. c. p. 188, *Aregma acuminatum* Fr. Syst. Myc. III, p. 497, Cooke M. F. III, f. 32, *Lecythea Poterii* Lév. Cfr. Cooke M. F. t. III, f. 31, *Phragmidium acuminatum* Fr. Cooke Cfr. Handb. n. 1457. — *Æcidii*s et soris uredosporiferis fere ut in *P. Fragariastris*; soris teleutosporiferis hypophyllis, punctiformibus, atris; teleutosporis 3-4- (rarius 2-) septatis, 44-55 $\approx$ 20-22, cylindraceis apiceque rotundatis, 4-septatis, 66-70 μ . longis, plerumque apice acuminatis, obscure brunneis, levibus v. sparse verrucis obtusis instructis, pedicello usque ad 22 μ . longo, gracili fultis.

Hab. in foliis caulibusque *Poterii Sanguisorbæ* (*Sanguisorbæ minoris*) in Italia, Gallia, Belgio, Britannia, Germania.

3. **Phragmidium Potentillæ** (Pers.) Karst. Fung. Fenn. n. 94 et 593, 2616 Wint. Die Pilze p. 229, Schroet. Pilz. Schles. p. 352, *Uredo Potentillarum* DC. Flor. Franç. VI, p. 80 pr. p., *Lecythea Potentillarum* Lév. in Ann. Sc. Nat. VIII, p. 374, *Uredo globoso-aurantiaca* Bon. Con. u. Crypt. p. 31 pr. p. *Uredo obtusa* Strauss in Wett. Ann. II, p. 107, p. p., *Puccinia Potentillæ* Pers. Syn. Fung. p. 229, *Aregma obtusatum* Fr. Syst. Myc. III, p. 497, *Phragmidium obtusum* Schm. et Kunz. Exs. n. 312, Link Spec. Plant. II, p. 84, *P. apiculatum* Rabenh. Krypt. Fl. p. 32. — *Æcidii*s fere ut in *P. Fragariastris*; *æcidiosporis* in series breves congestis, globosis, ovatis vel ellipsoideis, 17-24 $\approx$ 14-19, aculeolatis; soris uredosporiferis suborbicularibus, sparsis vel gregariis, subinde confluentibus, subaurantiacis, minutis; uredosporis sphæroideis v. ovoideis vel sphæroideo-ellipsoideis, flavescentibus, aculeolatis, 17-24 $\approx$ 14-20, paraphysibus sursum dilatatis immixtis; soris teleutosporiferis hypophyllis, orbiculatis, subpulvinatis, atris, minutis; teleutosporis oblongatis, vulgo rectis, 2-6-septatis, plerumque 3-5-septatis, ad septa vix vel non constrictis, antice obtusissimis obtuseque apiculatis, deorsum leviter attenuatis, levibus, flavo-fuscis, 50-90 $\approx$ 20-26; pedicello duplo triplove longiori, 100-150 μ . longo, subæquali vel deorsum leviter incrassato et transverse ruguloso, hyalino.

Hab. in foliis *Potentillæ* argenteæ, strigosæ, bifurcæ, fragarioidis, multifidæ, pensylvanicæ, subacaulis, dasyphyllæ, latifoliæ, canescentis, *Weinmanniæ*, *arenariæ*, *vernæ*, *opacæ*, *aureæ*, *supinæ*, *rectæ*,

alpestris, cinereæ, in Italia, Gallia, Britannia, Austria, Germania, Fennia, Sibiria asiatica et America boreali.

4. **Phragmidium Tormentillæ** Fuck. Symb. pag. 46, Corda Ic. IV, 2617 pag. 21, tab. V, fig. 72, Schroet. Pilz. Schles. p. 352, *Phragmidium obtusum* (Strauss) Wint. Pilze pag. 229, *Uredo oblusa* Strauss in Wett. Ann. II, p. 107, p. p. — *Æcidiiis* ut in *P. Fragariastris*; soris uredosporiferis minutis, punctiformibus, aurantiorufis, pulverulentis, hypophyllis, mox nudis, sparsis; uredosporis globosis vel ovatis aut obovatis, 15-23 $\approx$ 14-20, sublevibus vel punctulato-aculeolatis, aurantiaco-flavis; soris teleutosporiferis minutis, orbicularibus, hemisphæricis, punctiformibus, hypophyllis, epidermide lacerata cinctis, castaneo-brunneis, sparsis; teleutosporis cylindraceo-oblongis, basi plerumque clavato-angustatis, apice plerumque obtusiusculis, 2-9-septatis (plerumque 4-7-septatis), 100-160 $\approx$ 16-28, levibus, aureo-fulvis, pedicello usque ad 100 μ . longo, hyalino, recto curvatove, æquali fultis.

Hab. in foliis *Potentillæ* mixtæ, rectæ, procumbentis, silvestris et *Tormentillæ*, in Italia, Austria, Germania, Belgio.

5. **Phragmidium speciosum** Fr. Syst. Myc. III, p. 496 (*Aregma*), Burrill 2618 Paras. Fungi of Illinois p. 206, *Seiridium marginatum* Schwein. nec Nees. — Soris erumpentibus, longe lateque effusis, mollibus, dense confertis, atris; teleutosporis 5-10 locularibus, moniliformi-cylindraceis, 60-90 $\approx$ 30, atris; pedicello sexies et ultra longiore, inferne hyalino, superne colorato.

Hab. in ramis emortuis, raro in petiolis, quæ bullata efficit, *Rosæ corymbiferæ*, in America boreali. — Maxime spectabile, est quasi *Xenodochus* teleutosporis longissime pedicellatis. Plagulae 1-2,5 cm. longæ lataeque, 2 mm. et ultra crassæ. Sec. Burrill loco citato sori griseo-atrî, crustiformes.

B. Pedicellus teleutosporarum deorsum claviformi-incrassatus. — Species præcipue in *Rubo* vigentes.

6. **Phragmidium violaceum** (Schultz.) Wint. Die Pilze p. 231, Schroet. 2619 Pilz. Schles. p. 353, *Puccinia violacea* Schultz. Prodr. Fl. Starg. p. 459, *Phragmidium asperum* Wallr. Fl. Crypt. germ. II, p. 188, *Uredo Vepris* Rob. in Desm. Fl. Crypt. I, n. 2122. — *Æcidiiis* in greges rotundatos, sæpe lineari v. orbiculariter dispositos, usque 1 cm. longos, aurantiaco-rufos, zona violacea limitatos congestis, paraphysibus sparsis; æcidiosporis breviter catenulatis, globosis vel

ellipticis, 12-30 $\approx$ 17-24, aurantiaco-pallidis, aculeolatis; soris uredosporiferis rotundatis, sæpe confluentibus, chromo-flavis, pulverulentis; uredosporis globosis, ellipticis vel ovoideis, 17-32 $\approx$ 15-24, aurantiaco-flavis, verrucoso-aculeolatis; soris teleutosporiferis crassiusculis, atris, firmulis, 2 mm. usque latis, sparsis, magnis; teleutosporis subcylindræis, apiculatis, 2-4-septatis (plerumque tri-septatis), 70-100 $\approx$ 25-35, opace brunneis, verrucis hyalinis, hemisphæricis, explanatis, irregularibus obsitis; pedicello inferne claviformi-incrassato, 95-120 μ . long., circ. 15 μ . crasso.

Hab. in foliis Rubi fruticosi, thyrsoidis, villicaulis, hirti, sancti, in Italia, Gallia, Austria, Helvetia, Germania, Belgio, Lusitania. — Maculæ magnæ, tum centro brunneæ margineque purpureo-violaceæ, tum ex toto purpureo-violaceæ. — «Forte specimina in *Rubo fruticoso* ad *Phragmidium Rubi* (Pers.) pertinent».

7. **Phragmidium Rubi** (Pers.) Wint. Die Pilze p. 230, Schroet. Pilz. 2620 Schles. p. 353, *Puccinia Rubi* Pers. Syn. Fung. p. 230, *Phragmidium incrassatum* Link Sp. II, p. 85, *Uredo Ruborum* DC. Fl. Fr. II, p. 234 p. p., *Phragmidium cylindricum* Bonord. Coniom. p. 60 c. ic., *Uredo Rubi-fruticosi* Pers. l. c. p. 213, *Uredo bulbosa* Strauss Wett. Ann. II, p. 108, *Aregma bulbosum* Fr. Syst. Myc. III, p. 497, *Phragmidium bulbosum* Schlecht. Fl. Berol. II, p. 140, *Phragmidium levigatum* Rabenh. in Flora 1880, p. 631, *Lecythea Ruborum* Lév., *Erysibe Ruborum* Wallr. Fl. Crypt. Germ. II, n. 1626, *Phragmidium granulatum* Rabenh. in Fl. 1850, p. 631, Herb. myc. n. 1288. — *Æcidiis* hypophyllis, aggregatis, sæpe confluentibus, elongatis, nervisequiis, aurantiacis; *æcidiosporis* angulato-sphæroideis, 18-22 μ . diam.; soris uredosporiferis sparsis vel aggregatis, suborbicularibus, flavis, minutis; uredosporis ellipsoideis vel angulato-subsphæroideis, sublevibus vel subtiliter aculeolatis, flavis, 17-32 $\approx$ 12-20; soris teleutosporiferis hypophyllis, orbicularibus, fusco-atris vel subatris, minutis; teleutosporis oblongatis, utrinque rotundatis, 2-7-septatis, plerumque 4-6-septatis, sparsim verrucosis, loculo terminali apiculo conoideo ornato, fusco-atris, subimpellucidis, 70-110 $\approx$ 25-35; pedicello infra incrassato, basi attenuato, latere impresso, albo-hyalino, recto vel curvato, 40-100 μ . longo, usque ad 15 μ . crasso.

Hab. in foliis Rubi fruticosi, villosi, cæsii, saxatilis, arctici et rarius Fragariæ vescae, in Italia, Belgio, Austria, Helvetia, Germania, Gallia, Britannia, Lapponia, Fennia et

America boreali. — Maculæ flavescentes vel brunneolæ, sæpe confluentes, rarius obsoletæ. Adest quoque in eadem matrice e Slavonia *Phragmidium fructigenum* Schulz. Œsterr. botan. Zeitschrift. 1875, pag. 319. — ***Phrag. microsorum** Sacc. M. V. n. 848 et in Michelia: soris minutis, gregariis, hypophyllis; teleutosporis oblongis cylindraceutisve, 70-90 $\approx$ 25-28, 3-4-septatis, superne asperulis, vertice mucronatis, fusco-cinnamomeis, pedicellis obclavatis teleutosporas subæquantibus; uredosporis globosis, muriculatis, flavis; paraphysibus intermixtis uncinatis, hyalinis. In foliis Rubi cæsii, in silva Montello Italiæ borealis et in Helvetia.

8. **Phragmidium Barnardii** Plowr. et Wint. in Rev. Myc. 1886, p. 208. 2621

— Soris uredosporiferis valde sparsis, hypophyllis, in foliorum pagina superiori maculas minutas, irregulares, rufas, sæpe area angustissima, indeterminata, flavida cinctas, circ. 0,5-1 mm. latas efficientibus, initio ab epidermide velatis, demum nudis, pulverulentis, flavidis; uredosporis globosis vel ellipsoideis, interdum ovoideis vel subpiriformibus, episporio subcrasso, hyalino, verruculoso præditis, guttulis oleosis, flavidis repletis, 17-18 μ . diam. aut 23-25 $\approx$ 16-18, paraphysibus clavatis, incurvis, hyalinis; soris teleutosporiferis sparsis, gregariis, hypophyllis, minutissimis, haud raro confluentibus, macula nulla, pulverulentis; teleutosporis cylindraceutis, æqualibus, vertice rotundatis et hic sæpe parum incrassatis, interdum immo apiculo conoideo, brevi, hyalino auctis, 6-9-septatis, ad septa constrictis, levibus, 60-115 $\approx$ 23-27, luteo-fusculis, pedicello prælongo, cylindraceuto vel parum inflato, hyalino, levi, usque 140 μ . longo, 10-18 μ . crasso suffultis.

Hab. in foliis vivis Rubi parvifolii, prope Melbourne Australiæ (BARNARD).

9. **Phragmidium subcorticium** (Schrank) Winter Die Pilze pag. 228, 2622

Schroet. Pilz. Schles. p. 353, *Lycoperdon subcorticium* Schrank in Hoppe's Bot. Taschb. 1793, pag. 68, *Uredo Rosæ* Pers. Disp. p. 13, *Puccinia mucronata* var. *Rosæ* Pers. l. c., *Uredo Rosæ-centifoliæ* Pers. Syn. Fung. p. 215, *Cæoma Rosæ* Schlecht. Flor. Ber. II, p. 120, *Lecythea Rosæ* Lév., *Uredo pinguis* DC. Fl. Franc. II, p. 235, *Uredo elevata* Schum. Pl. Saell. II, p. 229, *Erysibe Rosæ* Wallr. Fl. Crypt. Germ. II, n. 1525, *Cæoma Rosæ* Schlecht. Fl. Berol. II, p. 120, *Uredo miniata* Pers. Syn. p. 216, *Epitea miniata* Fr. Summ. Veg. p. 512, *Coleosporium miniatum* Bon. Con. p. 20, *Erannium miniatum* Bon. l. c. p. 17, *Puccinia mucronata* Schum. Enum. Saell. II, p. 235, *Phragmidium incrassatum*

Enfunda 26/9/1

a. *Rosarum* Rab. Krypt. Flor. I, p. 32, *Ph. oblongum* Bon. Con. u. Crypt. p. 60, *Ph. Rosarum* Fuck. Symb. myc. pag. 47, *Ph. mucronatum* Cooke Brit. Fungi II, pag. 490. — *Æcidiis* hypophyllis, effusis, forma variis, in nervis, petiolis caulibusque sæpe confluentibus, miniato-aureis, expallentibus, magnis; *æcidiosporis* angulato-sphæroideis vel angulato-ellipsoideis, episporio hyalino, protoplasmate aurantiaco fœtis, $17-28 \approx 12-20$, aculeolatis; soris uredosporiferis mox nudis, hypophyllis, sparsis vel confertis, maculæ expallenti insidentibus, orbicularibus, flavidis, exiguis; uredosporis forma variis, sphæroideis, ovoideis, angulato-sphæroideis, $17-32 \approx 12-24$, subtiliter aculeolatis; soris teleutosporiferis hypophyllis, sparsis, gregariis vel aggregatis, orbicularibus, atris, minutis; teleutosporis oblongatis, antice crassioribus, obtusis, apiculo conico, albo ornatis, basi leviter attenuatis, 3-8-septatis, punctato-verrucosis, obscure fuscis, subimpellucidis, $75-100 \approx 26-30$; pedicello teleutosporâ longiori, $100-120 \mu$. longo, in medio abrupte incrassato (usque ad 22μ . cr.), basi obtuso, latere impresso, hyalino.

Hab. in foliis *Rosæ* centifoliæ, cinnamomeæ, pimpinellifoliæ, tomentosæ, caninæ, coriifoliæ, rubiginosæ, gallicæ, volvatæ, blandæ, albæ, arvensis, turbinata, rubrifoliæ, collinæ, arvensis, dahuricæ, in Italia, Austria, Helvetia, Germania, Lusitania, Belgio, Gallia, Fennia, Britannia, America boreali, Sibiria asiatica et Africa australi.

10. **Phragmidium tuberculatum** J. Müller Rostp. der Rosa und Rubus 2623
in Berichte der Deutschen Botan. Gesellsch. 1886, III, 10, p. 391, Schroet. Pilz. Schles. p. 354. — Spermogoniis plerumque epiphyllis, *æcidiis* contrapositis, secus orbes dispositis; sporulis ellipsoideis, $2-3 \approx 1,6$; *æcidiis* greges orbiculares, 1 mm. latos, plerumque hypophyllos, formantibus paraphysibus sursum incrassatis immixtis; *æcidiosporis* catenulatis, ellipticis, raro globosis, plerumque $30 \approx 20$, verrucosis, episporio crassissimo; soris uredosporiferis et teleutosporiferis minutissimis; uredosporis $21-24 \approx 16-19$, grosse aculeolatis, aurantiaco-rufescentibus; teleutosporis 2-5-(plerumque 4-) septatis, apice subhemisphærice rotundatis, $54-81 \approx 27-35$, verrucula conica auctis, verrucosis, obscure brunneis, pedicello basi claviformi-in-crassato fultis.

Hab. in foliis *Rosæ* caninæ, in Silesia Germaniæ.

11. **Phragmidium fusiforme** Schroet. Brand. und Rostpilze Schles. 2624
p. 24, Pilz. Schles. p. 354, *Phragmidium Rosæ-alpinæ* (DC.) Wint. Die Pilze p. 227, Massal. Ured. Veron. p. 50, t. III, f. XX,

1-4, *Uredo pinguis* var. *Rosæ-alpinæ* DC. Fl. Franc. II, p. 235. — *Æcidiis* in foliis partim punctiformibus, circiter 150 μ . diam., partim majusculis rotundatis, valde convexis, in petiolis ramisque late expansis, pulvinatis; paraphysibus clavatis, hyalinis; *æcidiosporis* polygoniis, ellipticis vel ovatis, raro sphæroideis, 17-28 $\approx$ 14-20, aurantiaco-flavis, breviter aculeolatis, episporio hyalino; soris uredosporiferis minutis, rotundatis, punctiformibus, flavescentibus, maculis parvis, flavis, irregularibus, sine ordine gregarii-insidentibus; uredosporis globosis v. ellipticis, 14-22 μ . diam., flavis, subtiliter aculeolatis; soris teleutosporiferis minutissimis, sparsis, adpressis, sæpe confluentibus, atris; teleutosporis 6-12, (plerumque 10-11-) septatis, cylindraceo-fusoideis, apice mucrone hyalino, 10 μ . longo auctis, hyalino-asperulis, 90-110 $\approx$ 19-30, obscure brunneis, pedicello obclavato, teleutosporam subæquante, usque ad 20 μ . deorsum crasso, subhyalino fultis.

Hab. in foliis, ramis petiolisque *Rosæ alpinæ* et hujus hybridorum, in Italia, Gallia, Germania.

12. **Phragmidium bullatum** Westend. Bull. de Brux. 4 not. n. 44, Kickx 2625 Fl. Flandr. II, p. 69. — Epicaulinum; soris elongatis, pulvinatis, diu tectis, epidermide bullata dein irregulariter fissa erumpentibus; teleutosporis cylindraceis, 5-7-septatis, apice mucronatis, episporio ruguloso; pedicello hyalino, brevi, basi incrassatulo.

Hab. in ramulis *Rosæ caninæ*, in Belgio et Britannia. — A *Phragmidio specioso* Fr., quod etiam caules *Rosæ* incolat, toto coelo diversum dicitur. «An revera a præcedentibus distinctum?»

13. **Phragmidium Rubi-idæi** (DC.) Karst. Myc. Fenn. n. 4 et in Winter 2626 Die Pilze p. 231, Schroet. Pilz. Schles. p. 355, *Æcidium columellatum* Schum. Enum. plant. Saell. II, p. 226, *Lecythea gyrosa* Lév. Cfr. Cooke M. F. t. VIII, f. 162-164, *Aregma gracile* Sm. Engl. Fl. V, p. 358, Cooke l. c., t. III, f. 43, *Uredo gyrosa* Reb. Fl. neom. p. 356, t. III, f. 13, *Uredo Rubi-idæi* Pers. Obs. myc. II, p. 24, *Cæoma gyrosum* Schlecht. Flor. Ber. p. 121, *Erysibe gyrosa* Wallr. Fl. Crypt. Germ. II, n. 1163, *Puccinia Rubi-idæi* DC. Flor. Franc. V, p. 54, *Puccinia gracilis* Grev. Fl. Ed. p. 428, *Phragmidium gracile* Cooke Brit. Fung. II, p. 491, *Phragmidium intermedium* Eysenh. in Linnæa III, p. 109, Schroet. Brand. u. Rostp. p. 24, *Phragmidium effusum* Auersw. in Rab. Herb. myc. 1391, Fuck. Symb. myc. p. 47, *Phragmidium fructigenum* Schulz. in Œst. bot. Zeitschr. 1875, p. 319? — *Æcidiis* plerumque hypophyllis, raro petiolicolis vel cauliculis, in greges orbiculares medio profunde im-

pressos, chromo-flavos dispositis, in caulibus petiolisque pulvinulos oblongos efformantibus; æcidiosporis breviter catenulatis, globosis vel ellipticis, 20-28 μ . diam., aculeolatis, aurantiaco-flavis, paraphysibus clavatis, subconcoloribus; soris uredosporiferis epiphyllis, sparsis vel circinatim dispositis, suborbicularibus, flavis, minutis; uredosporis sphæroideis, ellipticis v. ovoides, 16-22 μ . diam., aculeatis, aurantiaco-flavescentibus; soris teleutosporiferis hypophyllis, orbicularibus, sparsis, atris, minutis; teleutosporis oblongatis vel elongatis, utrinque rotundatis aut loculo terminali conoideo-attenuato, vertice apiculatis, verrucosis, 5-10-septatis, (plerumque 6-8-septatis) atris, impellucidis, 90-140 $\approx$ 20-35; pedicello infra leviter incrassato, 17-20 μ . cr. latereque impresso, hyalino, recto v. curvato, 110-160 μ . longo.

Hab. in foliis, petiolis, fructibus caulibusque Rubi-idæi, odorati et strigosi, in Italia, Gallia, Belgio, Britannia, Arduennis, Austria, Helvetia, Germania, Fennia, Lapponia et America boreali.

14. **Phragmidium gracile** (Farl.) Arthur Prelim. List of Jowa Ure. 2627
dineæ p. 161, n. 68 nec Cooke, *Phragmidium incrassatum* Link var. *gracile* Farl. in Ellis North Amer. Fungi n. 282. — Æcidiiis rotundatis, minutis, sparsis, epiphyllis, mox nudis, flavis; æcidiosporis breviter catenulatis, rotundatis, oblongis, ellipticis ovalibusve subinde spathulatis, 16-24 $\approx$ 12-29, episporio crasso, inæquali, echinulato, paraphysibus gracilibus, claviformibus, incurvis, hyalinis; soris teleutosporiferis parvis, rotundatis, hypophyllis, sparsis vel laxe gregariis confluentibusque, atris; teleutosporis cylindraceis, verrucosis, obscure opaceque brunneis, 3-8-plerumque 6-8-septatis, 75-100 $\approx$ 30, apice abrupte in apiculum obtusum, hyalinum attenuatis; pedicello hyalino, crasso, deorsum inflato, teleutosporâ sesquolongiore.

Hab. in foliis Rubi strigosi, Decorah aliisque Americæ borealis locis. — Characteribus teleutosporarum ab affini *Phr. Rubi-idæi* distinctum videtur.

15. **Phragmidium? deglubens** (Berk. et Curt.) De-Toni, *Triphragmium* 2628
deglubens Berk. et Curt. North Americ. Fungi n. 559. — Soris sparsis, nigris, epidermide cinctis; teleutosporis ellipticis, pedicello crassiusculo, brevi fultis, horizontaliter biseptatis; membrana exterior eechinulata, deglubente.

Hab. in foliis plantæ cujusdam e Leguminosis (?), Texas Americæ borealis (WRIGHT). — «An, errore matricis, revera *Phragmidium?*»

16. **Phragmidium devastator** Sorok. Mat. fl. as. p. 21, t. I, f. 13-16, 2629
 Lagerheim in Botan. Notiser 1887, pag. 67. — Uredosporis polygoniis e roseo rufis, breviter pedicellatis, paraphysibus acuminatis immixtis; teleutosporis brunneo-cinnamomeis, papilla acuminata auctis, 3-4-septatis, plerumque $44 \approx 20$, pedicello longo, basi incrassato fultis.

Hab. ad apices ramulorum et in foliis Rosarum, in Asia centrali.

Sectio II. HAMASPORA Körn. Teleutosporarum pedicellus incurvus, elongatus.

17. **Phragmidium longissimum** Thüm. in Flora 1875, p. 379, Mycoth. 2630
 univ. n. 542, *Uredo lucida* Thüm. in Flora 1876, p. 570, Myc. univ. n. 1349. — Soris uredosporiferis hypophyllis, sparsis v. subgregariis vel etiam raro confluentibus, lucido-aurantiacis, liberis; uredosporis globosis vel ovoideo-globosis, levibus, reticulatis, 16 μ . diam., dilute flavidis, episporio crasso; soris teleutosporiferis hypophyllis, gregariis, pallide-ochraceis, cirrosis; teleutosporis longissimis, lineari-lanceolatis, 4-septatis, ad septa incrassatis, flavidis, apice acuto, hyalino, 200-240 $\approx$ 13-14; pedicello longissimo, hyalino, curvato, usque ad 100 μ . longo.

Hab. in foliis vivis Rubi rigidi, Promont. Bonæ Spei in Africa australi (P. MAC OWAN).

18. **Phragmidium Ellisii** (Berk.) Körn. in Hedwigia 1877, p. 22 (sub 2631
Hamaspora), *Gymnosporangium Ellisii* Berk. North Amer. Fungi n. 560 (sub *Podisomate*), *Ræstelia transformans* Ellis in Bull. Torr. Bot. Club V, p. 3, North Amer. Fungi n. 1088. — Filiforme, sparsum vel 2-3-gregarium, 2-5 mm. altum, siccum albidum, udum pallide aurantiacum; pseudoperidiis maculæ violacæ insidentibus, hypophyllis, læte aurantiacis, majusculis, solitariis; æcidiosporis angulatis, 16-20 μ . latis, inæqualibus, flavescentibus; teleutosporis 1-2-septatis, longissimis, fusiformibus, 95 μ . long.; pedicello flexuoso, longissimo.

Hab. æcidia in fructibus foliisque Piri arbutifoliæ, teleutosporæ in Cupresso thujoide, Newfield N. Jersey Americæ borealis. — Maculæ æcidiis contrapositæ purpurascentes.

XENODOCHUS Schlecht. in Linnæa 1826, p. 237 (Etym. *xenodochos* h. e. hospite suo (Uredine) exceptus). *Phragmidiopsis* Wint. Die Pilze p. 227 ut subgenus *Phragmidii*. — Æcidiosporæ catenula-

tæ; uredosporæ nullæ; teleutosporæ moniliformi-septatæ, loculis facile secedentibus, breviter pedicellatæ.

1. **Xenodochus carbonarius** Schlecht. in Linnæa 1826, p. 237, *Toru-* 2632
la carbonaria Corda Icon. Fung. III, p. 5, t. I, f. 15, *Phragmi-*
dium (*Phragmidiopsis*) *carbonarium* Wint. Die Pilze p. 227,
 Schroet. Pilz. Schles. p. 355. — *Æcidiis* in pulvinos læte minia-
 tos, (in petiolis) pustulas elongatas, (in laminis foliorum) soros
 rotundatos efformantes congestis; *æcidiosporis* breviter catenula-
 tis (3-4), globosis, ellipticis v. ovatis, 16-28 $\approx$ 15-20, episporio cras-
 so, hyalino, contextu aurantiaco-rufescente, verrucosis; paraphy-
 sibus clavatis, subconcoloribus; soris teleutosporiferis crassiusculis,
 pulvinatis vel pustuliformibus, rotundatis vel irregularibus, sæpe
 confluentibus, atro-carbonaceis; teleutosporis submoniliformibus,
 usque ad 22-ocularibus, ad septa constrictis, loculis globoso-com-
 pressis, terminali subverrucoso, ceteris levibus, loculis singulis 15-
 30 μ . diam., omnibus insimul usque ad 300 μ . longis, episporio
 obscure brunneo; pedicello brevissimo, persistenti, hyalino.

Hab. in caulibus, petiolis foliisque *Sanguisorbæ officina-*
lis et *carneæ*, in Germania, Arduennis, Belgio, Britannia, Bohe-
 mia, Sibiria asiatica.

COLEOSPORIUM Lév, in Ann. Scienc. Nat. 1847, p. 373 (Etym. *co-*
leos vagina et *spora*), *Peridermii* sp. auct. — Uredosporæ pri-
 mum in series moniliformes consociatæ, aurantiacæ vel flavæ, echi-
 nulatæ; teleutosporæ transverse 3-pluriseptatæ, in stratum planum,
 submucosum, aurantiacum v. flavum arcte coalitæ, jamque in planta
 viva rite evolutæ; sporidiola majuscula, in quoque sterigmate singula.

Sectio I. EUCOLEOSPORIUM Winter. *Æcidia*, uredosporæ et teleutosporæ
 evolutæ.

1. **Coleosporium Senecionis** (Pers.) Fries Summa Veg. Scand. p. 512, 2633
 Winter Die Pilze p. 248, Schroet. Die Pilze Schles. p. 368, *Uredo*
farinosa var. *Senecionis* Pers. Syn. Fung. p. 218, *Cæoma Sene-*
cionis Schlecht. Fl. Berol. II, p. 119, *Lycoperdon Pini* Willd. in
 Röm. et Ust. Mag. 1788, IV, p. 16, *Æcidium Pini* Pers. in Gmel.
 Syst. p. 1473, *Peridermium Pini* Wallr. Fl. Crypt. Germ. p. 262,
Trichobasis Senecionis Berk. in Cooke F. Br. exs. ed. II, n. 53,
Peridermium oblongisporum Fuck. Symb. p. 42, *Erysibe Sene-*
cionis Wallr. Fl. Crypt. Germ. II, p. 1609, *Uredo Pini* Spr. Syst.
 IV, p. 574, *Peridermium acicola* et *corticola* Rabenh. D. K. Fl.

p. 21, *Cæoma pineum* Link Sp. II, p. 66. — Spermogoniis sparsis, conoideo-planis, aurantiaco-rufis, sporulis albis, majusculis; æcidiis biformibus, aliis in acubus solitariis vel parce gregariis, pseudoperidiis usque ad 2,5 mm. longis, cylindraceis vel lateraliter compressis, apice irregulariter laciniatis, aliis in caulibus ramisque amplioribus, sæpe 6 mm. et ultra latis, sacculiformibus, demum laceratis, numerose aggregatis, pseudoperidiis albidis; æcidiosporis catenulatis, rotundatis, ovoideis v. oblongis, plerumque polygoniis usque ad 40 μ . longis, 17-28 μ . latis, verrucosis, subaurantiacis; soris uredosporiferis flavo-rufis, mox expallentibus, pulverulentis; uredosporis breviter catenulatis, mox sejungentibus, ellipticis ovoideis vel subcylindraceis, 20-40 = 14-26, verrucosis, aurantiacis; soris teleutosporiferis crustiformibus ceraceis, leniter convexis, primo flavo-rufis, dein sanguineis; teleutosporis cylindraceis vel cylindraceo-clavatis, usque ad 110 μ . longis, 17-35 μ . latis, apice explanatis, plerumque 4-locularibus, læte aurantiaco-rufis.

Hab. spermogonia et æcidia in acubus ramisque Pini silvestris, maritimæ, insignis, Mughii, Strobi, uncinatæ, nigricantis; uredosporæ et teleutosporæ in foliis Senecionis vulgaris, viscosi, silvatici, vernalis, Jacobææ, nemorensis, palustris, fluviatilis, Doriæ, pulchri, sarracenici, octoglossi, in Gallia, Italia, Belgio, Britannia, Lusitania, Bohemia, Neerlandia, Helvetia, Hungaria, Transylvania, pr. Ekaterinburg Rossicæ, in America boreali et Sibiria asiatica. — Var. **minus** B. et C. North Amer. Fungi n. 376: pseudoperidiis subcylindricis, brevibus, nec inflatis, ambientibus, innumeris. In *Ephedra antisiphilitica* et in *Abiete*, Texas et New York Americæ borealis.

Sectio II. HEMICOLEOSPORIUM Winter. Æcidia ignota; uredo- et teleutosporæ in eadem matrice evolutæ.

2. **Coleosporium Sonchi** (Pers.). Lév. in Ann. Scienc. Nat. 1487, p. 373, 2634 Tul. in Ann. Sc. Nat. 1854, t. 8, f. 1-3, Schroet. Pilz. pag. 368, *Uredo Sonchi-arvensis* Pes. Syn. Fung. p. 217, *Uredo tuberculosa*, *Sonchi-fulva*, *Tussilaginis* Schum. Pl. Saell. II, p. 229, *Uredo Petasitidis* DC. Fl. Fr. II, p. 236, *Coleosporium Petasitidis* et *Tussilaginis* Lév. loc. cit. *Uredo farinosa* var. *Senecionis* Alb. et Schwein. Consp. p. 124, p. p., *Uredo Cacaliæ-suaveolentis* Schm. et Kunze Exsicc. n. 93, *Uredo Inulæ* Kunze in Klotzsch-Rabenh. Herb. myc. I, n. 589, *Cæoma compransor* Schlecht. Fl. Berol.

II. p. 119, *Uredo Elephantopodis* Schwein. Syn. Carol. p. 70, n. 467, *Coleosporium Elephantopodis* (Schwein.) Thüm. *Cæoma nitidum* Link Sp. II, pag. 19, *Coleosporium Synantherarum* Fr. Summa Veg. Scand. p. 512, *Coleosporium Compositarum* Lév. pro parte *Coleosporium Inulæ* Rabenh. in Bot. Zeit. 1851, p. 455, *Eran-nium aureum* et *aurantiacum* Bonord. Coniom. p. 12, p. p. — Soris uredosporiferis flavo-rufis, mox expallentibus, pulverulentis, rotundato-ellipticis vel irregularibus, sæpe confluentibus, sparsis v. in parvos greges congestis; uredosporis in eodem soro difformibus, breviter catenulatis, mox sejungentibus, ovoideis vel cylindraceis, rarius oblongo-clavatis, sæpe angulatis, plerumque 20-26 = 14-18, verrucosis, aurantiaco-flavis; soris teleutosporiferis minutis, rotundatis vel oblongis, plerumque irregulariter explanato-convexis, flavo-rufis, demum subsanguineis, sparsis vel aggregatis sæpeque confluentibus; teleutosporis cylindraceis vel claviformibus, plerumque 4-ocularibus, apice explanatis, usque ad 70 μ . longis, plerumque 20-22 μ . latis, læte aurantiacis.

Hab. in foliis Asteris sagittifolii (?), Elephantopodis caroliniani, Silphii integrifolii, terebinthinacei, Sonchi oleracei, asperi, arvensis, palustris, fallacis, Mulgedii sibirici, Adenostyles Alliarie, alpinæ, albifrontis, Tussilaginis Farfaræ, Petasitidis officinalis, albæ, nivæ, spurie, Inulæ salicinæ, Helenii, ensifoliæ, hirtæ, Vaillantii, viscosæ, in Italia, Gallia, Belgio, Britannia, Austria, Helvetia, Fennia, Hungaria, Neerlandia, Germania, Amer. boreali et Sibiria asiatica. — * Forma **Carpesii** Sacc. In Carpesio in Italia bor. — Var. **Telekiæ** Thüm. F. austr. n. 850: uredosporis in soris fulvis vel aurantiacis, dein expallescentibus, in pagina foliorum inferiore; teleutosporis oblongo-ovatis, papillatis, similibus illis *Coleosporii Sonchi*, in soris compactis, minoribus, rubiginosis dispositis. Ad folia viva Telekiæ speciosæ, Transylvania in monte Valyé mare.

3. **Coleosporium? Cacaliæ** Magnin Misc. mycol. in Ann. Soc. Lyon. 2635 1873, p. 6. non *Uredo Cacaliæ* DC. — Hypophyllum, soris primo rotundatis, convexis, pulvinatis, dein apertis, subpulverulentis, dein ochraceo-rufescentibus, planiusculis expansisque subpolygonis; uredosporis cylindraceis; teleutosporis cylindraceo-elongatis.

Hab. in foliis Cacaliæ atriplicifoliæ, in Gallia.

4. **Coleosporium Campanulæ** (Pers.) Lév. in Ann. Scienc. nat. 1847, 2636 Winter Die Pilze p. 246, Schroet. Pilz. Schles. pag. 369, *Uredo*

Campanulæ Pers. Syn. Fung. p. 217, *Coleosporium Campanulacearum* Fr. S. V. S. p. 512. — Soris uredosporiferis hypophyllis, sparsis, rotundatis, pulverulentis, flavido-rufis, mox expallentibus; uredosporis breviter catenulatis, sphæroideis vel ovoideis, subinde angulatis aut ellipsoideis, 17-35 μ 12-28, echinulatis, flavo-aurantiacis; soris teleutosporiferis hypophyllis, crustiformibus, gregariis, sæpe confluentibus, irregularibus, primo flavescentibus, dein spadiceis vel sanguineis, demum nigrescentibus, leniter convexis; teleutosporis cylindraceis vel clavatis, plerumque 4-locularibus, usque ad 100 μ . longis, 18-30 μ . latis, levibus, aurantiacis.

Hab. in foliis *Campanulæ* specierum plurimarum, *Speculariæ* *Speculi*, *Phyteumatis* *spicati*, *Jasiones* *montanæ*, *Lobeliæ* *ocymoidis*, *Adenophoræ* *marsupifloræ*, *latifoliæ* et *tricuspidatæ*, in Italia, Belgio, Britannia, Austria, Helvetia, Germania, Fennia, Hungaria et Sibiria asiatica.

5. ***Coleosporium Euphrasiæ*** (Schum.) Wint. Die Pilze p. 246, Linh. 2637 F. Hung. n. 339, Schroet. Pilz. Schles. p. 370, *Uredo Euphrasiæ* Schum. Pl. Saell. II, p. 230, *Uredo Melampyri* Rebent. Fl. Neom. p. 355, *Uredo confluens* var. *Rhinanthi* Alb. et Schwein. Consp. pag. 122, *Uredo tremellosa* var. *Ringentium* Strauss in Wett. Ann. II, p. 90, *Uredo Rhinanthacearum* DC. in Encycl. VIII, p. 229, *Coleosporium Rhinanthacearum* Lév. Cfr. Tul. in Ann. Scienc. Nat. 1854, pag. 190, t. VII, f. 11, *Coleosporium Melampyri* Karst. Myc. Fenn. p. 62, *Coleosporium flavum* Bon. Coniom. p. 20, *Erannium aureum* Bonord. Coniom. p. 17 pro parte, *Erysibe Rhinanthacearum* Wallr. Fl. Crypt. Germ. II, n. 1630, pp. — Soris uredosporiferis hypophyllis, raro epiphyllis, sparsis vel gregariis, subinde confluentibus, rotundatis, ellipsoideis, oblongatis vel elongatis, flavis, expallentibus; uredosporis catenulatis, inæqualibus, angulato-sphæroideis vel angulato-subellipsoideis, verruculosis, flavidis, 20-85 μ 12-20 v. 18-24 μ . diam.; soris teleutosporis hypophyllis, aggregatis, confluentibus, aurantio-luteis, demum rufo-sanguineis, soris uredineis commixtis; teleutosporis oblongato-vel elongato-cuneatis, 3-septatis, ope mucii hyalini coalitis, usque ad 110 μ . longis, 20-27 μ . latis.

Hab. in foliis caulibusque *Melampyri*, *Euphrasiæ*, *Odontites*, *Rhinanthi*, *Alectorolophi*, *Pedicularis*, in Italia, Belgio, Gallia, Britannia, Helvetia, Austria, Germania, Fennia, Bohemia, Lapponia, Hungaria, Neerlandia.

6. ***Coleosporium Pulsatillæ*** (Strauss) Fr. Summa p. 512, Winter Die 2638

Pilze p. 248, *Uredo tremellosa* var. *Pulsatillæ* Strauss in Wett. Ann. II, pag. 89, *Uredo Pulsatillæ* Duby Bot. Gall. I, pag. 895, *Erysibe Pulsatillæ* Wallr. Fl. Crypt. Germ. II, n. 1635, *Uredo Delphinii* Wallr. mscr. — Soris utriusque formæ minutis, plerumque ellipticis vel irregularibus, sparsis, aurantiaco-flavis, maculis pallidis, flavescentibus; uredosporis rotundatis ellipticis vel oblongis, $17-38 \approx 14-22$, verruculosus, aurantiaco-flavescentibus; teleutosporis cylindraceo-clavatis, plerumque 4-ocularibus, usque ad 180μ . longis, $18-20 \mu$. latis.

Hab. in foliis *Anemones Pulsatillæ* et *A. pratensis*, in Austria, Germania et Sibiria asiatica.

7. **Coleosporium Cerinthes** Schroet. Pilz. Schles. pag. 370. — Soris 2639 uredosporiferis minutis, rotundatis, flavo-rufis, mox expallescens; uredosporis globosis, ellipticis vel ovoideis, $20-24 \approx 18-20$, episorio hyalino, granulato; teleutosporis in soros explanatos, flavo-rufescentes congestis.

Hab. in foliis *Cerinthes minoris*, in Silesia Germaniæ (R. UECHTRITZ). — Ulterius inquirendum.

8. **Coleosporium Ipomœæ** (Schwein.) Burrill Paras. Fungi of Illinois 2640 pag. 217, *Uredo Ipomœæ* Schwein. in Rav. F. Amer. n. 488. — Hypophyllum; maculis flavescentibus vel nullis; soris utriusque formæ minutis, sparsis vel irregulariter gregariis, circularibus, teleutosporiferis convexis, saturate rufo-aurantiacis; uredosporis irregulariter ovoideis, $26 \approx 18 \mu$. echinatis; teleutosporis oblongis v. subclavatis, conspicue 4-6-septatis, circ. $26 \approx 10$, loculis transverse latioribus.

Hab. in foliis *Ipomœæ Nil, lacunosæ, panduratæ*, in Illinois et Carolina inf. Americæ borealis.

Species minus notæ vel ulterius inquirendæ.

9. **Coleosporium apocynaceum** Cooke in Rav. Fung. Amer. n. 44, et in 2641 Hedwigia March. 1878, pag. 38. — Hypophyllum, flavum; soris sparsis, orbicularibus, epidermide tectis; teleutosporis (?) subglobosis, asperulis, in hyphis clavatis enatis dein constrictis, demum concatenatis, $30-35 \approx 25$, aurantiacis.

Hab. in foliis *Amsoniæ ciliatæ*, Aiken Carolinæ inferioris. «An huc *Uredo Amsoniæ*?».

10. **Coleosporium Vernoniæ** B. et C. North Americ. Fungi n. 569. 2642 — Maculis pallidis; soris teleutosporiferis parvis, sparsis, melleis; sporis ex obovato subfusiformibus, quadrilocularibus.

Hab. in foliis *Vernoniæ fasciculatæ* et verisimiliter *Rubi villosi* in Carolina inf. et Alabama Americæ borealis (BEAUMONT). — Teleutosporæ iis *Bactridii* similes. Teste Burrill *Parasitic Fungi of Illinois* p. 217 ad *C. Sonchi* pertinet.

11. **Coleosporium Solidaginis** (Schwein.) Thüm. in Bull. Torrey botan. 2643

Club VI, 1878, p. 216, *Uredo Solidaginis* Schwein. Syn. fung. Carol. p. 70, n. 472, *Cæoma asteratum* Schwz. Syn. N. Amer. Fungi p. 292, n. 2870, p. p. — Soris teleutosporiferis (?) hypo-, raro etiam epiphyllis, gregariis, pulveraceis, minutis, tandem confluentibus, inquinantibus, applanatis, fulvis; teleutosporis (?) in catenulas conjunctis, catenulis erectis, oculis (sporis?) plus minus ellipticis vel globoso-ellipsoideis, 24-30 $\approx$ 20, episporio distincto, crasso, granuloso-verruculoso, 2-3 μ . crasso, hyalino, nucleo flavo, utrinque rotundatis vel ad umbilicum applanatis.

Hab. in foliis *Solidaginis giganteæ*, *latifoliæ*, *albissimæ*, *neurifoliæ*, *canadensis*, *puberulæ*, *sempervirentis*, in America boreali (ENGELMANN, RAVENEL, ELLIS, PECK). — «Forte, suadentibus Winter et Burrill, cum *C. Sonchi* conjungenda species».

12. **Coleosporium detergibile** Thüm. in Flora 1875. — Soris hypophyll- 2644

lis, minutis, sparsis, pallide flavis, dein expallescens; teleutosporis plerumque reniformibus, irregularibus, episporio crasso, echinulato, 22-30 $\approx$ 14-19, flavescentibus.

Hab. in foliis *Psilostomæ ciliatæ*, ad Caput Bonæ Spei Africae australis.

13. **Coleosporium Fuchsiae** Cooke in Grevillea XIV, p. 129. — Epi- 2645

phyllum, maculis parvulis, ochraceo-fuscis, angulatis vel confluentibus; soris gregariis, erumpentibus, demum epidermide ruptâ cinctis; sporis (uredosporis?) ovalibus 30-40 $\approx$ 20-22, verrucosis, aurantio-fuscis.

Hab. in foliis vivis *Fuchsiae excorticatæ*, in Nova Zelandia (KIRK).

14. **Coleosporium guaraniticum** Speg. Fungi Guaranitici I, n. 125. — 2646

Maculis nullis vel epiphyllis, indeterminatis, expallentibus; soris hypophyllis, solitariis vel hinc inde irregulariter aggregatis, orbicularibus aut subellipticis, minutis, 200-450 μ . diam., primo epidermide tectis, dein lacero-erumpentibus, subpulverulentis, pallide fulvis vel albo-subaurantiacis; uredosporis ellipticis vel sphæroideo-angulatis, 20-25 $\approx$ 13-15, hyalinis, protoplasmate granuloso, chlorino vel dilute melleo fartis, catenulatis, episporio subcras-

siusculo, latere altero dense grosseque granuloso-verrucoso, altero levi.

Hab. in foliis vivis *Ipomœæ gossypioïdis*, in pratis uliginosis pr. Paraguari Americæ australis. — Species pulchella primo visa pro *Cystopodis* specie quadam facillime sumenda. « Uredosporæ quasi *Hemilejæ* ».

15. **Coleosporium? pallidulum** Speg. Fungi Guaranitici I, n. 126. — 2647

— Maculis amphigenis, irregularibus, angulosis, brunneis, subarescentibus, magnitudine ludentibus, 1-5 mm. diam.; soris hypophyllis, minutis, 100-150 μ . diam., pallide aureis v. albo-melleis, subhemisphæricis, in maculis dense aggregatis, primo tectis, dein erumpentibus; uredosporis elongato-ellipticis, 15-20 (rarius 25) $\approx$ 9-15, e mutua pressione irregularibus, sæpius utrinque subtruncatis, medio 1-septatis, non vel vix constrictis, loculis sæpe valde inæqualibus, hyalinis, nubiloso-farctis, episporio tenui, levi, dense congestis (catenulatis?).

Hab. ad folia viva *Malvacææ* cujusdam in arvis pr. Guarapi Americæ australis. — Species sporis bilocularibus (an binis ægre secedentibus?) dubiosa, habitu externo *Æcidium* vel *Æcidium* parvulum mox in mentem revocans.

16. **Coleosporium? paraguayense** Speg. Fungi Guaranitici I, n. 127. 2648

— Maculis nullis vel vix manifestis, pallescentibus, irregularibus, indeterminatis, epiphyllis; soris hypophyllis, hinc inde plus minusque laxè gregariis, subminutis, 250-350 μ . diam., pallide melleis vel albo-fulvis, prominulis, pulverulentis; uredosporis globosis vel subellipticis, e mutua pressione obtuse angulosis, 15 μ . diam., episporio subtenui, ubique æquicrasso ac dense majusculèque verrucoso-ruguloso, subhyalino, protoplasmate oleoso-nubiloso, flavido, dense congestis, prima ætate catenulatis.

Hab. ad folia viva *Compositæ* (*Verbesinæ*?) cujusdam, in silvaticis prope Guarapi Americæ australis. — Habitus *Uredinis* cujusdam; uredosporæ etiam *Uredini* similes at prima ætate catenulatæ.

17. **Coleosporium Saussureæ** Thüm. Pilzfl. Sibir. n. 718. — Soris 2649

uredosporiferis (?) hypophyllis, irregularibus, induratis, applanatis, confluentibus, magnis, aurantiacis, demum pulveraceis roseisque; uredosporis (?) irregulariter globosis v. ovoideis, compressis, breviter catenulatis, hyalinis vel pallidissime flavidis, episporio tuberculato, tenui, 18-24 μ . diam.

Hab. ad folia viva *Saussureæ* speciei indeterminatæ, in silvis alpinis montis Kerlygan Sibiriae asiaticæ.

18. **Coleosporium Viburni** Arthur Prelim. List of Jowa Uredineæ 2650
p. 163, n. 178. — Soris irregularibus primo pustuliformibus, dein explanatis, sparsis, hypophyllis vel gregariis, subinde in orbes coactis, aurantiaco-flavis; uredosporis subglobosis vel irregulariter oblongis, subtiliter crasseque verrucosis, 20-30 $\approx$ 18-25, pallide flavis; teleutosporis non visis.

Hab. in foliis *Viburni Lentaginis*, Charles City Jowa in America boreali.

19. **Coleosporium Safianoffianum** Thüm. Pilzfl. Sibir. n. 538. — Soris 2651
uredosporiferis (?) amphigenis sed plerumque hypophyllis, densissime gregariis, numerosissimis, submagnis, concavo-elevatis vel hemisphærico-verruciformibus, aurantiacis, subfirmis, postremo pertusis et applanatis; uredosporis (?) late ovoideis v. breve ellipticis, concatenatis in catenulis brevibus, quadri-septemsporis, dilute lutescentibus vel achrois, episporio subcrasso, echinulato, vertice basique incrassato et processu hyalino ornato, 32-38 $\approx$ 24-28.

Hab. ad folia viva *Aronici altaici*, in silvis subalpinis pr. fluvium Uss Sibiriae asiaticæ (SAFIANOFF).

20. **Coleosporium Aconiti** Thüm. in Myc. un. n. 1440. — Soris uredosporiferis (?) hypophyllis, gregariis, late effusis, magnis, plano-adpressis subfirmisve, luteo-aurantiacis, irregularibus; uredosporis (?) ellipsoideis v. globulosis, catenulatis in catenulis brevibus quadri-sexsporis, pallidissime luteolis vel plerumque achrois, episporio tenui vix subechinulato vel fere levi, 16-22 $\approx$ 14-18.

Hab. ad folia viva *Aconiti barbati*, pr. Minussinsk Sibiriae asiaticæ (N. MARTIANOFF).

21. **Coleosporium cimicifugatum** Thüm. in Bull. Soc. Natur. Moscou 2653
1878, p. 222, Myc. un. n. 1250. — Soris uredosporiferis (?) hypophyllis, gregariis, aurantiacis, firmis, sæpe confluentibus, planis, mediis in parte expallescente, in pagina superiore flavescente; uredosporis (?) ellipsoideis, concatenatis, utrinque rotundatis, pallide flavidis, 30 $\approx$ 20, catenulis plerumque tetrasporis; paraphysibus nullis.

Hab. ad folia viva *Cimicifugæ foetidæ*, pr. Minussinsk in Sibiria occidentali (MARTIANOFF).

22. **Coleosporium Madiæ** Cooke in Grev. VII, p. 102. — Læte auran- 2654
tium; soris epiphyllis, ovatis, erumpentibus; uredosporis (?) concatenatis, aurantiacis, globoso-compressis, levibus, 23 $\approx$ 18.

Hab. in foliis vivis *Madiæ Nuttalli*, Sierra Nevada.

23. **Coleosporium Ligulariæ** Thüm. in Bull. Soc. Natur. de Moscou 2655
1877, p. 140, Myc. univ. n. 1046. — Soris uredosporiferis (?) gregariis, hypophyllis, sæpe confluentibus, applanatis vel vix elevatis, rubris; uredosporis (?) 3-4 conjunctis, fere globosis sed compressis, 20-28 μ . crass., concatenatis, 80-85 μ . longitudine catenularum, episporio tenui, levi, terminalibus acutatis, pulchre ochraceo-flavis; paraphysibus nullis.

Hab. in foliis vivis *Ligulariæ sibiricæ*, Minussinsk Sibiricæ occidentalis (N. MARTIANOFF). — Hanc speciem cl. Winter cum *C. Sonchi* conjungit. «An, revera, ab hac specie sat diversa?»

24. **Coleosporium fuscum** Hazsl. Brand. und Rostp. Ungarns in Wiss. 2656
Akad, Ung. 1877 et in Just Bot. Jahresb. 1877, p. 71. — Soris minutis, hypophyllis, sparsis, brunneis; sporis breviter catenulatis, globosis vel polymorphis, levibus, 20-24 μ . diam. brunneis.

Hab. in foliis *Cytisi supini*, prope Nyiregyhaza (A. DIETZ) et pr. Wallendorf Hungariæ (KALCHBRENNER).

25. **Coleosporium Hedyotidis** Kalchbr. et Cooke in Grevillea IX, p. 21. 2657
— Epiphyllum, sparsum, aurantiacum; soris elongatis vel confluentibus; sporis concatenatis, ellipticis, utrinque truncatis, 20-30 $\approx$ 16, episporio granuloso donatis.

Hab. in foliis *Hedyotidis Amatymbicæ*, ad Natal Africae.

26. **Coleosporium Rubi** Ell. et Holw. in Ellis et Everh. North Ame- 2658
rican Fungi n. 1878. — Soris hinc inde gregariis confluentibusque, flavescenti-aurantiacis, minutis, hypophyllis; uredosporis catenulatis, globosis vel late ellipsoideis, 18-20 μ . latis, flavescentibus, subtiliter verruculosus, episporio hyalino, tenui.

Hab. in foliis *Rubi villosi*, Faulkland Del. Americae borealis (A. COMMONS). — «An *Phragmidii* cujusdam status uredosporus?»

CHRYSOMYXA Unger Beit. z. vergl. Pathologie p. 1 cum icone (Etym. *chrysos* aureus et *myxa* gelatina), *Blennorice* sp. Wallr. — Teutosporæ transverse pluriseptatæ, in seriem simplicem vel subinde ramosam, loculis inferioribus sterilibus (suffultoriis), in stratum flavo- v. sanguineo-rufescentem, explanatum v. leniter convexum, subceraceum, coalitæ; promycelium plerumque 4-septulatum, loculis singulis sporidiola solitaria sterigmatum ope gerentibus; uredosporæ ut in *Coleosporio*; æcidia ut in *Puccinia*.

A. EUCHRYSOMYXA De Bary, (*Melampsoropsis* Schroet.). *Æcidiosporæ*, *uredosporæ* et *teleutosporæ* cognitæ.

1. **Chrysomyxa Ledi** (Alb. et Schwein.) De Bary in Botan. Zeitung 2659 1879, p. 809, t. X, f. 7-8, Winter Die Pilze p. 251, Schroet. Pilz. Schles. p. 371, *Uredo Ledi* A. et S. Consp. p. 125, *Melampsoropsis Ledi* Schroet. olim, *Pucciniastrum Ledi* Karst. Myc. Fenn. IV, pag. 57, *Erysibe Ledi* Wallr. Fl. Crypt. Germ. II, n. 1620, *Æcidium abietinum* Alb. et Schw. l. c. p. 120 p. p. *Cæoma piceatum* Link Sp. II, p. 63 p. p., *Cæoma longiusculum* Lasch in Klotzsch-Rabenh. Herb. myc. I, n. 495, *Cæoma Ledi* Link Sp. pl. gen. p. 15, *Uredo ovoideo-aurantiaca* Bonord. Coniom. p. 32, *Uredo abietina* Spr. Syst. IV, p. 572. — Spermogoniis globosis, numerosis, aurantiaco-rufis, solitariis vel gregariis; æcidiis plerumque seriatis; pseudoperidiis margine albo, lacerato, cellulis biconcavo-explanatis; æcidiosporis globosis, ellipticis vel ovatis, 17-45 $\simeq$ 12-22, aurantiaco-rufis, verrucosis; soris uredosporiferis minutis, rotundatis vel majusculis, oblongis, punctiformibus, demum confluentibus, hypophyllis; maculis flavis vel sordide brunneis, epiphyllis; uredosporis rotundatis, ellipticis vel oblongo-piriformibus, subinde angulatis, 16-35 $\simeq$ 14-23, verrucosis, aurantiaco-flavescentibus; soris teleutosporiferis brunneo-vel sanguineo-rufis, explanatis, pustuliformibus, sparsis vel gregariis; teleutosporis oblongis, 70-90 $\simeq$ 13-15, levibus, aurantiacis; sporidiolis ovoideis, 11 $\simeq$ 7, aurantiaco-rufescentibus.

Hab. æcidia et spermogonia in Abietibus, uredosporæ et teleutosporæ in foliis Ledi palustris, in Germania, Fennia et Lapponia nec non in America boreali. — Cl. De Bary anno 1877 experimentis nexum metageneticum comprobavit.

2. **Chrysomyxa Rhododendri** (DC.) De Bary in Bot. Zeit. 1879, p. 809, 2660 t. X, f. 1-6, *Melampsoropsis Rhododendri* Schroet. Entw. ein. Rost. p. II, p. 57, *Uredo Rhododendri* DC. Fl. Franç. VI, p. 86, *Cæoma Rhododendri* Link Sp. II, p. 16, *Erysibe Rhododendri* Wallr. Fl. Crypt. Germ. II, n. 1622, Winter Die Pilze. p. 250, *Æcidium abietinum* Alb. et Schwein. Consp. p. 120 p. p., *Cæoma piceatum* Link. Sp. II, p. 62 p. parte. — Æcidiis in acubus flavo-maculatis uni-vel biseriatis; pseudoperidiis cylindraceis, margine irregulariter dentato, albis, usque ad 3 mm. longis; cellulis valde compressis; æcidiosporis rotundatis, ellipticis vel oblongis, 17-45 $\simeq$ 12-22, verruculosis, aurantiaco-flavis; soris uredosporife-

ris rotundatis vel oblongis, subinde angulatis, sparsis vel gregariis, maculis rufo-violaceis, flavis vel brunneo-rufis; uredosporis plerumque subpolygoniis, globosis vel oblongis, $17-28 \approx 15-22$, verrucosis, aurantiaco-flavis; soris teleutosporiferis similibus convexis, nullo ordine in greges magnos vel parvos, maculæ rufo-brunneæ impositos congestis, primo brunneo-rufis, dein aurantiaco-flavis; teleutosporis $10-14 \mu$. latis, sursum non dilatatis, obtuse rotundatis.

Hab. æcidia in acubus, Pini Abietis, uredosporæ et teleutosporæ in foliis Rhododendri ferruginei, dahurici et hirsuti, in Italia, Gallia, Germania, Sibiria asiatica.

B. HEMICHRYSOMYXA Winter. Uredosporæ et teleutosporæ adhuc tantum cognitæ, in eadem matrice evolutæ.

3. **Chrysomyxa Pirolæ** (DC.) Rostr. Myc. Notiz. pag. 126, Schroet. 2661
 Pilz. Schles. p. 372, *Æcidium?* *Pirolæ* DC. Fl. Franç. VI, p. 99, *Uredo pirolata* Körn. in Hedwigia 1877, p. 28, *Æcidium pirolatum* Schwein. Syn. North Amer. Fungi n. 2893, *Chrysomyxa pirolata* Wint. Die Pilze p. 250, F. E. n. 2622, Linhart. F. Hung. n. 340. — Soris uredosporiferis pulverulentis, minutis, rotundatis, mox epidermide rupta cinctis, plerumque æque per totam inferiorem folii paginam sparsis, flavo-rufescentibus, usque 1 mm. latis; uredosporis rotundatis vel oblongis, sæpe angulatis, $19-33 \approx 16-22$, verruculoso-punctulatis, aurantiaco-flavis, episporio hyalino; soris teleutosporiferis crustiformibus, minutis, rotundatis, explanatis, flavo-rufis, demum sanguineo-rufis, per totam superficiem folii inferiorem sparsis; teleutosporis $100-120 \approx 8$; sporidiolis globosis, $7-8 \mu$. diam.

Hab. in foliis *Pirolæ* rotundifoliæ, grandifloræ, minoris et secundæ, in Germania, Groënlandia, Hungaria, Gallia et America boreali.

4. **Chrysomyxa albida** Kühn in Schroet. Pilz. Schles. pag. 372. — 2662
 Soris uredosporiferis dilute citrinis, mox expallescentibus, minutis, punctiformibus, diu epidermide tectis; uredosporis globosis, ellipticis vel ovoideis, circ. 26μ . diam., hyalinis, subtiliter verruculosus; soris teleutosporis solitariis, albis vel flavidulis, plerumque crustas $250-500 \mu$. latas, explanatas efformantibus; teleutosporis, cellula suffultoria exclusa, $5-6-12$ -locularibus, simplicibus vel ramosis, episporio hyalino vertice levi vel subpunctulato, explanato vel acutiusculo, loculis singulis valde difformibus, $17-47 \approx 15-26$; sporidiolis globosis, $8,5-9,5 \mu$. diam.

Hab. in Rubo fruticoso, in Germania.

5. **Chrysomyxa Empetri** (Pers.) Rostr. F. Groënl. pag. 536, Schroet. 2663
 Pilz. Schles. p. 372, *Uredo Empetri* Pers. in Moug. et Nestl. Stirp.
 crypt. vogeso-rhen. n. 391, DC. Fl. Franç. VI, p. 87, *Thecopso-*
ra Empetri Karst. M. F. App. Link. Sp. II, p. 16, *Cæoma Em-*
petri Winter Die Pilze p. 25, *Erysibe Empetri* Wallr. Fl. Crypt.
 Germ. II, n. 1621. — Soris uredosporiferis hypophyllis, aurantia-
 co-rufis, primo epidermide bursiformi tectis clausisque, dein pul-
 verulentis; uredosporis ellipticis, ovatis vel piriformibus, sæpe sub-
 angulatis, 26-45 $\approx$ 17-32, verruculosus, aurantiaco-flavis, exteriori-
 bus insimul subcompressis, pseudoperidium laxum efficientibus.

Hab. in foliis Empetri nigri, in Germania, Groënlania, Fen-
 nia et Gallia. — Teleutosporæ adhuc ignotæ, tamen species hæc,
 suadente Schroeter, videtur hoc loco inserenda.

C. LEPTOCHRYSONYXA De Bary. Teleutosporæ tantum cognitæ, mox germi-
 nantes.

6. **Chrysomyxa Abietis** (Wallr.) Unger Beitr. zur vergl. Pathol. 2664
 p. 24 cum icone, Kunze F. sel. n. 53, Winter Die Pilze p. 249,
 Schroet. Pilz. Schles. p. 372, *Blennoria Abietis* Wallr. in Allgem.
 Forst. und Jagdzeit. 1834, n. 17, *Uredo epidermoidalis* Hartig
 in Verhand. Harzer Forstvereins 1864, pag. 61. — Soris teleuto-
 sporiferis (mycelio hybernante) linearibus, seriatis, ceraceis, fla-
 vescenti-rufis, maculæ flavidæ insidentibus; teleutosporis cylindra-
 ceis, sursum leniter clavato-incrassatis, sæpe ramosis, subinde sim-
 plicibus, usque ad 100 μ . longis, 9-12 μ . latis, usque ad 12-locu-
 laribus, episporio hyalino, plasmate aurantiaco-rufescente; spori-
 diolis globosis, 4-6 μ . diam., aurantiaco-rufis.

Hab. in acubus Abietis pectinatæ et Abiet. excelsæ,
 in Germania, Gallia et Bohemia. — Folia infecta flavo-maculata
 vel flavo-fasciata videntur.

PUCCINIASTRUM Otth. in Mitth. Bern. (1861), p. 72 (Etym. a *Puc-*
cinia). *Phragmospora* Magnus in Hedwigia (1875), p. 123, *Me-*
lampsoræ sp. auct. — Teleutosporæ extracellulares, longitudina-
 liter divisæ; uredosporæ pseudoperidio apice poro minuto pertuso
 inclusæ; ceterum fere ut in *Melampsora*.

1. **Pucciniastrum Epilobii** (Chaill.) Otth. in Mittheil. Bern 1861, p. 72, 2665
Melampsora pustulata (Pers.) Schroet. Pilz. Schles. p. 364, *Ure-*
do pustulata a Pers. Syn. pag. 219, *Cæoma Onagrarum* Link

Sp. II, pag. 29 p. p., *Melampsora Epilobii* Fuck. Symb. pag. 44, Wint. Die Pilze pag. 243, *Phragmospora Epilobii* Magnus in Hedwigia 1875, pag. 123, *Erysibe pustulata* Wallr. Fl. Crypt. Germ. II, n. 1618 saltem p. p. — Soris uredosporiferis hypophyllis, pseudoperidio hemisphærico apice pertuso tectis, pustuliformibus, flavo-rufis, mox expallescentibus, sparsis; uredosporis inæqualibus, angulato-sphæroideis vel ellipsoideo-sphæroideis, echinulatis, flavescentibus, $12-24 \approx 10-16$; soris teleutosporiferis crustiformibus, primo rufo-brunneis, epidermide tectis, planis, confluentibus, atrofusis; teleutosporis intercellularibus, raro uni-, plerumque 3-4-ocularibus, cylindraceis v. obovato-clavatis, usque ad 40μ . longis.

Hab. in foliis *Epilobii angustifolii*, *rosei*, *hirsuti*, *irrigati*, *palustris*, *spicati*, *montani*, *Dodonæi*, in Italia, Belgio, Arduennis, Austria, Hungaria, Helvetia, Germania, Gallia, Fennia, Britannia, America boreali.

2. **Pucciniastrum Œnotheræ** Gaillard in Bull. Soc. Myc. Fr. tom. III, 2666 1887, pag. 183. — Soris uredosporiferis hypo-, rarius epiphyllis, sparsis vel in macula brunneo-ferruginea gregariis; pseudoperidiis epidermide tectis, flavidis; uredosporis inæqualibus, subsphæricis vel angulatis e flavo pallide virescentibus, $33-36 \approx 24-27$, episorio hyalino, tenui, levissimo; teleutosporis non visis.

Hab. in foliis *Œnotheræ biennis*, in Gallia. — A *Pucciniastro Epilobii*, cui simile, uredosporis levissimis distinctum videtur.

3. **Pucciniastrum Circææ** (Schum.) Speg. Dec. myc. n. 65, *Melampsora Circææ* (Schum.) Thüm. in Myc. univ. n. 447, Wint. Die Pilze p. 243, Schroet. Pilz. Schles. p. 364, *Uredo Circææ* Schum. Pl. Saell. II, p. 228, *Cæoma Onagrarum* Link Sp. II, p. 29 p. p. — Soris uredosporiferis minutis, pustuliformibus, sparsis, rotundatis, flavo-rufis, sæpe late extensis; pseudoperidiis hemisphæricis, apice ostioliformi-apertis; uredosporis ellipticis vel ovoideis, $15-24 \approx 10-14$, aculeatis, aurantiaco-flavis; soris teleutosporiferis explanatis, confertis, sæpe confluentibus, minutis, explanatis, crustiformi-cereis, flavo-brunneis; teleutosporis 1-4-ocularibus, rotundato-polygoniis, intercellularibus, usque ad 30μ . longis et 26μ . latis, pallide brunneis, loculis cuboideis, breviter cylindraceis vel claviformibus.

Hab. in foliis *Circææ lutetianæ*, *intermediæ*, *alpinae*, in Italia, Gallia, Germania.

4. **Pucciniastrum Crotonis** (Burr.) De-Toni, *Melampsora Crotonis* 2668

Burrill Parasitic Fungi of Illinois p. 213, *Trichobasis Crotonis* Cooke in Grevillea VI, p. 137. — Amphigenum; soris uredosporiferis sparsis, prominulis, rotundatis, epidermide cinctis, minutis, subcinnamomeis; uredosporis obovatis, pedicellatis, verruculoso-aculeolatis, $18-30 \approx 15-21$; soris teleutosporiferis irregularibus, sparsis vel subinde confluentibus, leniter elevatis, rufo-brunneis; teleutosporis irregularibus, plerumque ellipticis vel oblongis, 1-2-pluri-ocularibus, levibus, granuloso-farctis, $30-42 \approx 11-15$, e pallido obscure brunneis.

Hab. in foliis *Crotonis capitati*, procumbentis, monanthogyni et *Crotonopsidis linearis*, in Illinois et California Americæ borealis.

5. **Pucciniastrum? Scleriæ** Pat. in Journ. de botanique I, (1887) p. 248. 2669

— Pseudoperidiis persistentibus, hypophyllis, minutissimis, flavis, distinctis, sparsis, aureola violacea folii contextum transcurrente et in opposita pagina maculam efficiente cinctis; uredosporis inæqualibus, ellipsoideis vel sphæricis, longe subtiliterque aculeolatis, flavis, pallidissimis, granuloso-farctis, $20-30 \approx 20$, paraphysibus nullis; teleutosporis haud visis.

Hab. in foliis *Scleriæ*, Gabon Africæ occidentalis (THOLLON). — Pseudoperidia 0,5-1 mm. diam.

THECOPSORA Magnus in Hedwigia 1875, p. 123 (Etym. *theca* capsula et *psora* scabies). *Melampsoræ* sp. auct. — Teleutosporæ intracellulares, longitudinaliter divisæ; uredosporæ in soros pustuliformes congestæ; ceterum ut in *Melampsora* et *Pucciniastro*.

1. **Thecopsora areolata** (Wallr.) Magnus in Hedwigia 1875, p. 123, 2670

Melapsora Padi Wint. Die Pilze p. 244, Schroet. Pilz. Schles. p. 365, *Uredo Padi* K. et S. Exsicc. n. 187, *Cæoma porphyrogenitum* Link Sp. II, p. 31, *Erysibe areolata* Wallr. Fl. Crypt. Germ. II, *Melampsora areolata* Fr. Summa p. 482, *Sclerotium areolatum* Fr. Syst. II, p. 263, *Ascospora pulverulenta* Riess in Klotzsch-Rabenh. Herb. myc. I, n. 1754, *Uredo porphyrogenita* Link Sp. II, p. 31, *Pucciniastrum areolatum* Otth. in Wartm. et Schenk Schw. Crypt. n. 521, *Cæoma Padi* Libert Crypt. Ard. n. 89. — Soris uredosporiferis maculæ purpurascenti insidentibus, sæpe lineis rectis (nervis matricis) definitis, aggregatis, hypophyllis, flavis, pseudoperidio hemisphærico irregulariter rupto et lacero; uredosporis sphæroideis vel ellipsoideis, vulgo angulatis, $15-23 \approx 10-16$, aculeatis, flavescentibus; soris teleutosporiferis epidermidi

innatis, epiphyllis, crustas irregulares, leniter convexas, subinde angulatas, primo brunneo-rufas, minutas, demum atro-brunneas confluentesque efficientibus; teleutosporis in cellulis epidermidis evolutis easque implentibus, rotundato-cuboideis, longitudinaliter septatis, 2-4-ocularibus, usque ad 30 μ . longis, brunneis, loculis prismatico-cylindraceis.

Hab. in foliis Pruni Padi et virginianæ, in Britannia, Austria, Helvetia, Germania, Gallia, Fennia, Belgio, Arduennis, Sibiria asiatica.

2. **Thecopsora Galii** (Link) De-Toni, *Melampsora Galii* Wint. Die Pilze p. 244, Schroet. Pilze Schles. p. 365 *Cæoma Galii* Link Sp. II, p. 21, *Melampsora guttata* Schroet. Brand. und Rostp. p. 26, *Uredo Sherardiae* Rostr. in Thüm. Mycoth. Univ. n. 1348. — Soris uredosporiferis minutis, hemisphæricis, pustuliformibus, flavo-rufis, sparsis vel gregariis, pseudoperidio hemisphærico, apice pertuso; uredosporis ellipticis vel ovoideis, 14-26 $\approx$ 11-17, aculeolatis, aurantiaco-flavis; soris teleutosporiferis irregularibus, maculas variæ magnitudinis efformantibus, in epidermidis cellulis evolutis easque implentibus, in crustas atras, minutas confluentibus; teleutosporis rotundato-cuboideis, plerumque septis longitudinalibus 4-ocularibus, usque ad 26 μ . longis.

Hab. in foliis Galii Molluginis, veri, Schulthesii, silvatici, uliginosi et Sherardiae arvensis, in Italia, Austria, Germania, Dania.

3. **Thecopsora Vacciniorum** (Link) Karst. Myc. Fenn. IV, p. 58, *Melampsora Vacciniorum* (Link) Schroet. Pilz. Schles p. 365, *Melampsora Vaccinii* (A. et S.) Wint. Die Pilze p. 244, *Uredo pustulata* var. *Vaccinii* Alb. et Schwein. Consp. p. 126, *Thecopsora myrtillina* Karst. Mycol. Fenn. IV, p. 59, *Cæoma Vacciniorum* Link Sp. II, p. 15, *Uredo Vacciniorum* DC. Fl. Franç. p. 85, *Æcidium Myrtilli* Schum. Pl. Saell. II, p. 224? — Soris uredosporiferis hypophyllis, pustuliformibus, maculæ flamenti-pallidæ, dein ferruginascenti vel subfuscæ insidentibus, solitariis vel plus minus aggregatis pseudoperidio innato-prominulo, demum poro minuto pertuso, flavido-ferruginascente tectis, minutis; uredosporis subsphæroideis vel subellipsoideis vel ovoideis, echinulatis 16-28 $\approx$ 11-20, aurantiacis; soris teleutosporiferis parum conspicuis in cellulis epidermidis evolutis easque complentibus, maculas flavas hypophyllas efficientibus, crustiformibus, brunneis, hypophyllis; te-

leutosporis rotundato-cuboideis, 14-17 μ . longis, pallide brunneis, septis longitudinalibus instructis.

Hab. in foliis *Vaccinii Vitis-idææ*, corymbosi, *Myrtilli*, *Oxycocci*, uliginosi, in Italia, Gallia, Austria, Germania, Belgio, Britannia, Fennia, Lapponia, Sibiria asiatica et America boreali.

4. **Thecopsora? Pirolæ** (Gmel.) Kart. Myc. Fenn. IV, p. 59, *Melampsora Pirolæ* (Gmel.) Schroet. Pilz. Schles. p. 366, *Æcidium Pirolæ* Gmel. in Linn. Syst. Nat. II, p. 1473, nec DC., *Uredo Pirolæ* Mart. Fl. Mosq. p. 229, Wint. Die Pilze p. 254, *Cæoma Pirolæ* Schlecht. Fl. Berol. II, p. 122, *Trichobasis Pirolæ* Berk. Outl. p. 332, Cooke Handb. n. 1584. — Soris uredosporiferis minutis, pustuliformibus, flavo-rufis, in greges parvos dispositis; pseudoperidiis hemisphæricis, apice ostiolo pertusis; uredosporis plerumque oblongis vel claviformibus, raro ellipticis v. ovatis, deorsum angustatis, 20-35 $\approx$ 12-20, aculeolatis, aurantiaco-flavescentibus. 2673

Hab. in foliis *Pirolæ unifloræ*, rotundifoliæ, chloranthæ, minoris, secundæ, mediæ, in Germania, Gallia, Rossia, Arduennis, Britannia, Fennia, Lapponia et America boreali. — Etsi teleutosporæ nondum cognitæ sint, verisimiliter uredosporæ sunt generi *Thecopsoræ* adscribendæ. Cfr. n. 2661.

CALYPTOSPORA Kühn in Hedwigia 1869, p. 81 (Etym. a *calypto* tego et *spora*) *Melampsoropsis* Wint. die Pilze p. 245 (ut subgenus *Melampsoræ*), non Schroet. — *Æcidiosporæ* catenulatæ, pseudoperidio persistenti inclusæ; uredosporæ nullæ; teleutosporæ intracellulares plerumque longitudinaliter 4-loculares, soros intense brunneos ætate protracta expallescences efformantes.

1. **Calyptospora Gæppertiana** J. Kühn in Hedwigia 1869, pag. 81, 2674
Schroet. Pilz. Schles. p. 367, *Melampsora Gæppertiana* Winter Die Pilze pag. 245 (*Melampsoropsis*), *Æcidium columnare* Alb. et Schwein. Consp. Nisk. p. 121, t. 5, f. 4, *Cæoma columnneum* Link Sp. II, p. 66, *Peridermium columnare* Kunze et Schm. D. Schw. n. 10. — Spermogoniis numerosis, conoideo-prominulis, flavo-melleis; æcidiiis secus series duas dispositis, in acuum pagina inferiore sitis; pseudoperidiis cylindræis, usque ad 3 mm. longis, albis, margine irregulariter denticulato; æcidiosporis globosis vel ellipsoideis, 16-22 $\approx$ 10-16, verrucosis, episporio hyalino, plasmate aurantiaco-rufescente; soris teleutosporiferis cauliculis vel ramiculis, late expansis, prima ætate læte brunneis, demum expallentibus; teleutosporis

cuboideo-globosis, septis longitudinalibus plerumque 4-ocularibus, usque ad 30 μ . longis, levibus, intracellularibus, brunneolis.

Hab. spermogonia et æcidia in acubus *Abietis albæ* et *canadensis*, teleutosporæ in caulibus ramisque *Vaccinii* *Vitis-Ideæ*, in Austria, Germania, Britannia, America boreali. — Ramuli caulesque *Vaccinii* a soris deformati sunt et ut plurimum elongato-inflati.

ENDOPHYLLUM Lév. in Bullet. philom. 1825, p. 233 (Etym. *endon* intus et *phyllon* folium). — Teleutosporæ catenulatæ, facile secedentes, pseudoperidio æcidiiformi inclusæ, ut teleut. *Pucciniæ* germinantes; sporidiola globosa v. ellipsoidea, aurantiaco-rufescentia.

1. **Endophyllum Sempervivi** (Alb. et Schwein.) De Bary Morphol. 2675 p. 304, Winter Die Pilze p. 252, Schroet. Pilz. Schles. p. 356, *Uredo Sempervivi* Alb. et Schwein. Consp. p. 126, *Endophyllum Persoonii* Lév. in Bull. philomat. 1825, p. 232, *Uredo Sedi* DC. Encycl. VIII, p. 225, p. parte. — Pseudoperidiis sparsis, hemisphæricis, deorsum roseis, sursum albis, plus minus extus lacunosus, sub epidermide pustuliformi-inflata demumque lacerata immersis; teleutosporis plerumque rotundatis vel obovatis, 25-35 $\approx$ 20-32, verruculosis, flavo-brunneis.

Hab. in foliis *Sempervivi* tectorum, montani, hirti, soboliferi nec non *Echeverię*, in Gallia, Belgio, Austria, Helvetia, Germania, Britannia.

2. **Endophyllum? Sedi** (DC.) Lév. in Bull. Philom. 1825, p. 232, Winter Die Pilze p. 252, *Uredo Sedi* DC. Fl. Franç. II, p. 227, p. parte, vix Cesati, Schroet. Pilzfl. Schles. p. 381. — Pseudoperidiis ut in *E. Sempervivi* De Bary at minori magnitudine, solitariis; cellulis subtiliter verrucosis; teleutosporis rotundato-polygoniis, 20-35 $\approx$ 16-24, subtiliter muriculatis, lutescentibus, episporio hyalinulo.

Hab. in foliis *Sedi* maximi, acris, reflexi, boloniensis, sexangularis, in Gallia et Germania. — Adest sæpe socia *Tuberculina persicina* (Ditm.) Sacc. Spermogonia sparsa, infossa, conoideo-prominula, mellea.

3. **Endophyllum Euphorbiæ-silvaticæ** (DC.) Winter Die Pilze p. 251, 2677 *Æcidium Euphorbiæ-silvaticæ* DC. Fl. Fr. II, p. 241. — Pseudoperidiis æque per totam inferiorem folii paginam sparsis, rotundatis vel ellipticis, cupulatis, margine albo, lacinulato, suberecto vel reflexo; teleutosporis polygoniis, 16-26 $\approx$ 12-18, subtiliter granulatis, aurantiaco-flavis.

Hab. in foliis *Euphorbiæ silvaticæ* et *amygdaloidis*, in Gallia et Germania. — Partes plantæ infectæ pallescentes, flavo-viridi coloratæ.

MILESIA White in Scot. Natur. IV, p. 162 (Etym. a cl. MILES). — Pseudoperidium minutum, incarcerationatum, endophyllum, reticulatum, basi inter cellulas matricis radicante; teleutosporæ (?) obovatæ, echinulatæ, ex ostiolo minuto demum copiose ejectæ.

1. **Milesia Polypodii** B. et White l. c. t. II, f. 5. — Hypophylla; pseudoperidiis sphæricis, minutis, pallidis, mammiformi-prominulis, dispersis; sporis albidis, obovatis, echinulatis. 2678

Hab. in foliis *Polypodii vulgaris*, Perthshire Britanniae.

2. **Milesia Polygoni** B. et White in Hedwigia 1878, p. 83. — Hypophylla; pseudoperidiis omnino infossis, reticulatis; sporis 30-40 μ . l. 2679

Hab. in foliis *Polygoni vivipari*, in Britannia. — «Etsi matrix tam diversa indicetur, forte ex lapsu calami, species eadem ac præcedens».

4. Dictyosporæ Sacc. et DE-TONI.

TRIPHFRAGMIUM Link Sp. II, (1824), p. 84 (Etym. a *tria* et *phragma* septum). — Teleutosporæ brunneæ, radiatim triloculares, locus inferior unus pedicello suffultus, superiores bini; loculi singuli unum porum germ. gerentes; uredosporæ globosæ, aurantiaco-rufescentes.

A. EUTRIPHFRAGMIUM Schroet. *Æcidia*, uredo- et teleutosporæ notæ.

1. **Triphragmium Ulmaricæ** (Schum.) Link Spec. II, p. 84, Winter 2680
Die Pilze p. 224, Schroet. Pilz. Schles. p. 350, *Uredo Ulmaricæ* Schum. Saell. II, pag. 227, *Coleosporium Spirææ* Karst. Enum. Fung. Lapp. or. p. 222, *Puccinia Ulmaricæ* Hedw. in DC. Flor. Franc. p. 56, *Uredo Spirææ* Sow. Engl. Fungi t. 398. — Spermogoniis hypophyllis, rotundato-explanatis, minutis, flavo-rufis, sporulis 6 μ . longis; æcidiis hypophyllis, nervisequiis, vulgo longissimis, epidermide mutata (pseudoperidio?) irregulariter fissa cinctis, mucosis, subaurantiacis; æcidiosporis angulato-sphæroideis, verruculosis, flavidis, 18-25 μ . diam.; soris uredosporiferis sæpius hypophyllis, solitariis vel spermogonia ambientibus, aurantiacis v. aurantio-ferrugineis, suborbicularibus, effusis, pulverulentis; uredosporis sphæroideis vel sphæroideo-ellipsoideis, primitus pedicellatis, episporio achroo, echinato, protoplasmate rubro-aurantiaco foetis, 18-30 $\approx$ 17-24; soris teleutosporiferis hypophyllis, suborbicularibus, primo

epidermide tectis, mox ea evanescente effusis, fuscis v. fusco-nigrescentibus; teleutosporis cordatis vel obovoideis, verrucosis, $35-50 \approx 26-35$, castaneo-brunneis, pedicello paullo longioribus.

Hab. in foliis *Spirææ Ulmariae* et *Ulmariæ pentapetalæ*, in Arduennis, Gallia, Britannia, Austria, Germania, Fennia te Sibiria asiatica.

B. HEMITRIPHAGMIUM Winter. Uredo- et teleutosporæ tantum cognitæ; æcidia ignota.

2. **Triphragmium Filipendulæ** (Lasch) Passer. in N. Giorn. botan. 2681
italiano VII, p. 252, *Uredo (Uromyces) Filipendulæ* Lasch in
Klotzsch-Rabenh. Herb. Myc. I, n. 580, Winter Die Pilze p. 226.
— Soris uredosporiferis sparsis, globuliformibus, epidermide tectis,
luteis, dein epidermide rupta cinctis, aurantiacis; uredosporis glo-
bosis vel ovatis, aurantiacis, stipitatis, usque ad 35μ . longis; soris
teleutosporiferis conformibus, fuscis, nitidis, dein atris, puerulen-
tis; teleutosporis gibboso-subglobosis, primo luteo-aurantiis, levibus,
pedicello hyalino, longiusculo, teleutosporam subæquante fultis,
usque ad 55μ . longis.

Hab. in pagina inferiore foliorum *Spirææ Filipendulæ*, in
Italia (PASSERINI), Britannia (CURREY) et Germania (LASCH). — A
Triphragmio Ulmariae teleutosporis levibus differt.

3. **Triphragmium Acaciæ** Cooke in Grevillea VIII, p. 94. — Amphige- 2682
num; soris brunneis, mediis, sparsis; teleutosporis ovatis, tricellu-
losis, $50-60 \approx 35-40$, atro-brunneis, episporio hyalino-spiculatis;
aculeis supra obtusis; pedicello hyalino, infra attenuato; uredospo-
ris subglobosis, fuscis, $23-28 \approx 20$, levibus.

Hab. in foliis *Acaciæ*, ad Belgaum Indiæ or. (J. HOBSON).

C. MICROTRIPHAGMIUM Winter. Teleutosporæ tantum cognitæ.

4. **Triphragmium echinatum** Lév. in Ann. Scienc. Nat. III, 9, p. 247, 2683
Schroet Pilz. Schles. p. 351. — Soris atris, plus minus elongatis,
sæpe late diffusis, pulverulentis, sæpe confluentibus, mox denudatis;
teleutosporis trigonis $26-33 \mu$. diam., aculei, $8-14 \mu$. longis, brun-
neis obsitis, obscure brunneis, pedicello hyalino, longiusculo, de-
ciduo.

Hab. in foliis, petiolis caulibusque Mei *Mutellinæ* et *athamantici*, in Gallia, Austria et Germania.

5. **Triphragmium Isopyri** Moug. Vog. n. 892. — Soris satis extensis, 2684
irregularibus, tumidulis, ob epidermidem velantem subcinereis, de-

nique erumpentibus, atris; teleutosporis obtuse trigonis, tricellularibus, sursum 2-ocularibus, attenuatis, 35-40 μ . diam., parce verruculosus, 3-nucleatis, opace fuligineis, pedicello cylindraceo, 15 $\approx$ 6-7, hyalino suffultis.

Hab. in pagina inferiore foliorum viventium *Isopyri thalictroidis*, in collibus Euganeis Italiæ borealis (Bizzozero) et in Gallia (Mougeot). — Folia affecta deformantur vel corrugantur infraque bullosa fiunt, quasi ab aliqua ustilagine invasa essent.

6. ***Triphragmium clavellosum*** Berk. in Gard. Chron. 1857, North 2685 Americ. Fungi n. 558, Ceyl. Fungi n. 823. — Soris in maculis orbicularibus congestis, epidermide cinctis, nigris; teleutosporis truncato-obovatis, biseptatis, septo superiore verticali, processibus apice incrassatis emarginatis asperis.

Hab. in foliis *Araliæ nudicaulis*, *Paratropæ terebinthinaceæ*, *Hederæ* et *Amygdaleaceæ* cujusdam, in America boreali et in insula Ceylon.

7. ***Triphragmium Thwaitesii*** B. et Br. Ceylon Fungi n. 822. — Teleutosporis globosis, processibus bifurcatis ornatis. 2686

Hab. in foliis *Hederæ Vahlîi*, ad Peradenya in insula Ceylon. — «An idem ac *T. clavellosum* Berk.?»

RAVENELIA Berk. in Gardeners' Chronicle 1853, pag. 211 (Etym. a cl. mycologo amer. H. W. RAVENEL), Parker Morphol. *Ravenelia glanduliformis* in Am. Acad. of arts and Sciences, 1886, VIII, p. 205, Cooke The genus *Ravenelia* in Journal. R. Micr. Society ser. I, vol. III, 1880, p. 384, pl. XI. — Teleutosporæ pluriloculares, transverse et longitudinaliter h. e. radiatim septatæ, basi cellulis hyalinis (cystoideis) plerumque instructæ, sessiles vel pedicellatæ; uredosporæ et æcidiosporæ nonnumquam evolutæ.

A. EU-RAVENELIA. Æcidiosporæ, uredosporæ et teleutosporæ evolutæ.

1. ***Ravenelia Hieronymi*** Speg. Fungi Argentini Pugillus IV, n. 78, 2687 *Æcidium Hieronymi* l. c. n. 93, *Uredo Hieronymi* l. c. n. 78. — Pseudoperidiis densiuscule gregariis vix basi matrici infossis, cylindraceo-tubulosis, longe exsertis, gracilibus, 1 mm. long., 2-3 mm. crass., facile deciduis, margine vix dilatato, integro vel rarius fissso, levissimis, albis, membranaceis, fragilibus, contextus cellulis hyalinis, tubularibus, irregularibus, 30-40 $\approx$ 12-15, tunica crassa superne seriebus subradiantibus tuberculorum minorum, lateraliter costis integris, verticalibus percursa composito; æcidiosporis

globosis vel e mutua pressione irregularibus, 20-25 μ . diam., episporio crasso, levi v. minutissime (subimperspicue) granuloso, hyalino, protoplasmate nubiloso, fulvello donatis; soris uredosp. late ramulos tumefactos ambientibus, dense gregariis, primo tectis, dein erumpentibus, minutis, 2-3 mm.; uredosporis obovatis v. obovato-subglobosis, sursum plus minusve rotundatis, deorsum truncatis, sessilibus, episporio antice incrassato, intense fuligineo, densissime minuteque verruculoso, postice tenuiore, palliore, levioze protoplasmate granuloso donatis; soris teleut. dense gregariis, ramos juniores parce deformatos late et sæpe totos ambientibus, hemisphæricis, 5-6 mm., pulveraceis, satupate cinnamomeis; teleutosporis hemisphæricis, vel globoso-sublenticularibus, 80-95 $\approx$ 70-75 e 50-60 loculis fertilibus, subcuboideis vel conico-subcuboideis, episporio tenui, levissimo, 20-22 $\approx$ 10-16, fuligineis compositis, sursum rotundatis, deorsum truncatis, inferne 10-14 cellulis appendicularibus globosis vel ovoideis, hyalinis, 20-25 μ . diam. ornatis, pedicello longiusculo sed mox fatiscente 10 μ . crass., hyalino v. pallidissime fuscescente suffultis.

Hab. in ramulis vivis *Acaciæ caveniæ* in montuosis «*Sierra Dhica*» prope S. José, Córdoba in Republica Argentina Americæ borealis (Dr. HIERONYMUS).

B. HEMI-RAVENELIA. Uredosporæ et teleutosporæ evolutæ; acidiosporæ ignotæ.

2. **Ravenelia glanduliformis** Berk. et Curt. North American Fungi 2688 n. 561, Cooke in Journ. of R. Micr. Soc. 1880, III, p. 385, t. XI, f. 1-2, Parker Morph. Raven. glandulif. t. I, f. 1-9, t. II, f. 10-14, *Ravenelia glandulosa* Berk. et Curt. mscr. — Teleutosporis uniformibus, stipitatis, 100-120 μ . diam., 5-6 cellulas in omni directione circ. præbentibus, cellulis singulis 20 μ . latis, deorsum hyalinis plicato-lobatis, sursum levibus, margine excedente; uredosporis ellipticis, muriculatis.

Hab. in foliis *Tephrosiæ spicatae*, hispidulæ, hispidæ et virginianæ, in Carolina inferiori et Georgia aliisque Americæ borealis locis.

3. **Ravenelia glabra** Kalchbr. et Cooke in Rabenh. Wint. F. E. n. 2689 2624 et Journal of R. Micr. Soc. 1880, III, p. 386, t. XI, f. 9-10, Parker. Morph. Raven. glandulif. t. II, f. 20. — Sparsa; capitulis magnis 150 μ . diam., superne convexis, subsessilibus; teleutosporis 20 μ . diam., levibus, læte brunneis; uredosporis ellipticis, verruculosi.

Hab. in foliis *Acaciæ* horridæ et *Calpurniæ* silvaticæ, ad Caput Bonæ Spei Africæ australis. — Verisimiliter huc pertinet *Ravenelia stictica* in foliis *Calpurniæ* silvaticæ ex Africa australi.

4. **Ravenelia stictica** Berk. et Br. Fungi of Ceylon n. 839, Cooke in Journ. of R. Micr. Soc. 1880, III, pag. 387, t. XI, f. 7, Parker Morph. *Ravenelia glanduliformis* t. II, f. 21. — Soris minutis, hypophyllis; teleutosporis s. capitulis sessilibus, 80-90 μ . diam., circ. 4 cellulas in omni directione præbentibus, pallidis, orbicularibus, cellulis cystoideis minutis, inconspicuis, extus breviter echinatis; uredosporis subglobosis, subtiliter papillatis. 2690

Hab. in foliis *Pongamiæ* glabræ et *Tephrosiæ* suberosæ, in insula Ceylon (BERKELEY et BROOME) nec non *Calpurniæ* silvaticæ ad Somerset East Africæ australis (MAC-OWAN).

5. **Ravenelia Hobsoni** Cooke in Journ. R. Micr. Soc. 1880, III, p. 386, tab. XI, f. 4-5, *Ravenelia stictica* Berk. et Br. in *Grevillea* V, p. 15. — Teleutosporis s. capitulis parvis, explanatis, 50-70 μ . diam., circiter 4 cellulas in quaque directione præbentibus, serie superiori et exteriori processibus spiniformibus hyalinis longitudine et crassitudine illos *R. aculeiferæ* simulantibus ornatis; uredosporis late ellipticis, subtiliter verruculosus. 2691

Hab. in foliis arboris cujusdam ignotæ in India orientali.

6. **Ravenelia minima** Cooke in *Grevillea* X, p. 128. — Uredosporis ellipticis, aurantio-flavidis, 23 $\approx$ 15, episporio asperato donatis; teleutosporis seu capitulis fuscis convexis, infra applanatis, 50 μ . diam., e cellulis 6-8 (rarius 10) compositis; episporio obtuse spinuloso. 2692

Hab. in *Albizzia fastigiata*, Inanda Natal Africæ (WOOD).

7. **Ravenelia verrucosa** Cooke et Ellis in Journal of Mycology 1887, p. 83 et in *Grevillea* XVI, pag. 112. — Hypophylla; uredosporis globosis, asperulis, luteis, 19 μ . diam.; teleutosporis in glomerulos hemisphæricos congestis 80 μ . diam.; teleutosporis (20) stipitatis, e cellulis 20 compositis, (cellulis cystoideis circ. 8), cuneatis, ad apicem asperulis, atro-fuscis, 20 μ . diam. 2693

Hab. in foliis *Lecaniæ* cujusdam, Mexico Americæ borealis (J. B. ELLIS). — A *Ravenelia stictica* differt teleutosporis v. capitulis stipitatis, cellulis cystoideis hyalinis amplioribus magisque conspicuis, verrucis minoribus.

C. MICRO-RAVENELIA. Teleutosporæ tantum cognitæ.

8. **Ravenelia indica** Berk. in Gardn. Chron. 1853, p. 132. B. et Br. 2694

Fungi of Ceylon n. 835, Cooke in Journ. of R. Micr. Soc. 1889, III, pag. 385, t. XI, f. 3, Parker Morph. Raven. glandulif. t. II, f. 17-19. — Teleutosporis, 32-100 μ . diam., longe hyalinoque pedicellatis; cellulis suffulcientibus processu filiformi semipercursis.

Hab. in leguminibus Bauhiniaë tomentosæ et Cassiaë Abrus, prope Bohar et Damboul in insula Ceylon. — Pedicellus gracilis superne appendices cystiformes elongatas, hyalinas secus orbem dispositas gerens.

9. **Ravenelia aculeifera** Berk. Fungi of Ceylon n. 837, Cooke in Journ. 2695 of R. Micr. Soc. 1880, III, p. 386, t. XI, f. 11. — Teleutosporis 100 μ . diam., sessilibus, e cellulis paucis (6-8) compactis, basi cellulis magnis, pellucidis suffultis; processibus brevibus spinuliformibus hyalinis e cellulis marginalibus demum radiantibus.

Hab. in foliis Megonemii enneaphylli, in insula Ceylon nec non arboris cujusdam ignotæ, in India orientali.

10. **Ravenelia sessilis** Berk. Fungi of Ceylon n. 836, Cooke in Journ. 2696 of R. Micr. Soc. 1880, III, p. 386, t. XI, f. 6, Parker Morph. Ravenelia glanduliformi t. II, f. 15-16, *Ravenelia glanduliformis* Rav. Exs. III, n. 72, non Berk. Intr. p. 305. — Teleutosporis sessilibus, convexis, subexplanatis, circ. 120 μ . diam., cellulis 6-8 circ. in omni directione præbentibus, subtus cellulis cystoideis pellucidis magnis suffultis.

Hab. in foliis Acaciaë Lebbek et Gleditschiaë, in insula Ceylon nec non in foliis Tephrosiaë, Aiken in Carolina inferiori Americaë borealis.

11. **Ravenelia Tephrosiaë** Kalchbr, in herb. Winters, Parker Morphol. 2697 Rav. gland. p, 217. — Pedicello composito; cellulis cystoideis ut in *Ravenelia glanduliformi* dispositis.

Hab. in Tephrosia macropoda (?), ad Natal Africaë.

12. **Ravenelia macrocystis** Berk. et Br. Fungi of Ceylon n. 838. — 2698 Teleutosporis v. capitulis convexis, 35-40 μ . diam., sessilibus e cellulis paucis, magnis, compactis, e mycelio radiante oriundis.

Hab. in foliis Cassiaë Toræ, ad Damboul in insula Ceylon.

UREDINEÆ INFERIORES

ÆCIDIOLUM Unger *) Cfr. Sacc. in Michelia (Etym. ab *Æcidio*), *sphaeronematis* sp. auct. nonnull. — Pseudoperiibecia plus minus promi-

*) Quoad *Æcidio*li species cum formis teleutosporis (*Puccinia*, *Uromycete*, *Chrysomyxa*, *Melampsora* etc.) jam descriptas et nunc omissas, cfr. repertorium secundum matrices et indicem specierum alphabeticum.

nula, more conoidea, flavo-mellea, demum subatra, quasi carbonacea; sporulae ovoideae v. bacillares, hyalinulae, minutissimae. — Status *Uredinearum* spermogonicus.

1. **Æcidium Hydrocotyles** Speg. Fungi Argentini pugillus IV, n. 100. 2699

— Maculis pallide flavescentibus, indeterminatis, 1-3 mm. diam., orbicularibus; spermogoniis hypophyllis, densiuscule gregariis, minutissimis, 80-90 μ . diam., aurantiacis, prominulis; sporulis ellipticis, utrinque obtusiuscule rotundatis, 5-8 $\times$ 2-3, hyalinis.

Hab. in foliis vivis *Hydrocotyles bonariensis*, in uliginosis herbosis, Parque de Palermo in Republica Argentina Americae australis. — « Verisimiliter *Pucciniae Hydrocotyles* status spermogonicus ».

2. **Æcidium minutellum** Speg. in *Michelia* I, p. 477. — Spermogo- 2700

niis primo subepidermicis, minutis, $\frac{1}{10}$ - $\frac{1}{8}$ mm. diam., gregariis, dein erumpentibus, laete aurantiacis; sporulis catenulatis, ellipticis vel ovoideis, rarius subsphaericis, hyalinis, 3-4 $\times$ 1-2, sterigmatibus crassiusculis, 45-50 $\times$ 1-2 $\frac{1}{2}$, subclavulatis, quandoque 1-2-septulatis, suffultis.

Hab. in foliis *Scorzonerae hispanicae*, sociâ *Pucciniâ Compositarum*, cujus videtur status spermogonicus, in Italia bor.

ÆCIDIDIUM Pers. *) in Gmel. Syst. p. 1472 (1791) Observ. myc. I, p. 97 (1796), Syn. Fund. pag. 204 (1701) (Etym. *æcis* plagula), *Æcidium* Lév. in D'Orbigny Dict. I, pag. 137 (1841). — Pseudoperidium cupulatum vel suburceolatum, rarius cylindraceum, plerumque pallide coloratum, marginem sæpius crenatum vel laciniatum revolutumque; sporae (æcidiosporae) globosae vel angulatae, continuæ, ut plurimum aurantiaco-flavae, catenulatae, leves vel verrucosae.

A. Species in Dicotyledoneis vigentes.

1. **Æcidium Clematidis** DC. Fl. Franç II, p. 243, Thüm. Mycoth. 2701

Univ. n. 1221, Winter Die Pilze p. 270, *Cæoma Vitalbatum* Link Sp. II, p. 54, *Cæoma (Æcidium) Clematitatum* Schwein. Syn. Amer. bor. p. 293, n. 2874. — Æcidiis hypophyllis vel cauliculis, sine ordine gregariis, in pustulis diverse efformatis evolutis; pseudoperidiis breviter cylindraceo-cupulatis, margine albo, lacerato, late revolutis; æcidiosporis angulatis, 19-27 μ . diam., verruculosis, aurantiaco-flavis.

*) Cfr. notam p. 773.

Hab. in foliis, petiolis, caulibus etc. *Clematidis rectæ*, *Flammulæ*, *angustifoliæ*, *virginianæ*, *Vitalbæ* et *Viticellæ*, in Gallia, Austria, Dalmatia, Hungaria, Germania, Italia, Belgio, America boreali et ad Columbia River (LYALL).

2. ***Æcidium otagense*** Linds. Lich. and Fungi of Otago p. 430, t. XXX, 2702 f. 61-74. — Deformans, habitu *Stictæ* cujusdam; pseudoperidiis primo papilliformibus obtectisque, dein apertis, urceolatis, exsertis, sparsis vel gregariis, flavescentibus, margine integro, subrevoluto; æcidiosporis minutis, globulosis, levibus, fuscidulis.

Hab. in foliis, pedunculis floribusque *Clematidis hexapetalæ*, in Nova Zelandia.

3. ***Æcidium Sommerfeltii*** Johanson Swampe fran Island p. 161, t. 29, 2703 f. 4 et in Bot. Centr. 1887, p. 258, *Cæoma Thalictri* Sommerf. Syst. Fl. Lappon. p. 230, *Æcidium Thalictri* Grev. Scott. Crypt. t. IV. Thüm. Mycoth. Univ. n. 1323, Schroet. Pilz. Schles. p. 377, *Æcidium Thalictri-flavi* (DC.) Winter Die Pilze p. 269, *Æcidium Ranunculacearum* var. *Thalictri-flavi* DC. Fl. Franc. VI, p. 97. — Spermogoniis secus parvos greges dispositis, flavescenti-rufis; æcidiis hypophyllis, in annulos plures v. singulos distantiusculos congestis, maculæ orbiculatæ, lividæ insidentibus, pseudoperidiis cylindræis, margine erecto, irregulariter subfimbriato, albido-flavis; æcidiosporis polygoniis, 17-38 $\approx$ 14-20, episporio hyalino, plasmate e flavo aurantiaco fartis.

Hab. in foliis petiolisque *Thalictri flavi*, minoris, cornuti, angustifolii, aquilegiifolii, Jacquini, petaloidis, majoris, alpini, in Gallia, Britannia, Dalmatia, Germania, Islandia, Grœnlandia, Lapponia, America boreali et Sibiria asiatica.

4. ***Æcidium urceolatum*** Cooke in Grevillea VII, p. 61. — Epiphyllum vel caulicolum, deformans; pseudoperidiis congestis, cylindrico-urceolatis, subsulphureis; æcidiosporis aurantiacis, ovatis, 25 μ . longis.

Hab. in foliis caulibusque *Thalictri*, quæ valde deformat, Kanawar Indiæ, 2300 m. circ. altis. — Ab *Æcidio Thalictri* æcidiosporis majoribus, colore formaque pseudoperidii præcipue differt.

5. ***Æcidium punctatum*** Pers. in Usteri Ann. Bot. 1796, 20, p. 135, 2705 Winter Die Pilze p. 269, Schrodt. Pilz. Schles. p. 380, *Æcidium quadrifidum* DC. Encycl. VIII, p. 235 sec. Winter. — Spermogoniis æqualiter per folia expansis, confertis, subhyalinis; æcidiis

hypophyllis, laxiusculis, pseudoperidiis plerumque cupulatis, margine crassiusculo, sæpius regulariter 4-plurifisso, dilute brunneolis; æcidiosporis polygoniis 16-23 μ . diam., levibus, e brunneo-flavo violaceis.

Hab. in foliis *Anemones ranunculoidis*, coronariæ nec non *Eranthidis hiemalis*, in Gallia, Italia, Germania, Belgio, Britannia.

6. ***Æcidium Hepaticæ*** Beck in Verhandl. Zool. bot. Ges. 1880, p. 27, 2706 Winter Die Pilze p. 269. — *Æcidiis* sine ordine in greges rotundatos ad maculas flavas, convexulas dispositis; pseudoperidiis breviter cylindraceis, margine albido, partito, vix revolutis; æcidiosporis angulatis, usque ad 28 μ . longis, 15-21 μ . diam., verruculosis, aurantiaco-flavis.

Hab. in *Anemone Hepatica*, in Austria.

7. ***Æcidium Ranunculacearum*** DC. Fl. Franç. VI, p. 97, p. p. Thüm. 2707 M. U. n. 229, 822, et 1639, Winter Die Pilze pag. 268. — *Spermogoniis* pseudoperidia præcedentibus vel contemporaneis, centrum orbiculi occupantibus; sporulis minutis; æcidiis hypophyllis, in maculis orbicularibus, ellipticis vel irregularibus sine ordine aggregatis, cupulatis, margine lacerato, revolutis; æcidiosporis angulatis, 17-28 $\approx$ 14-20, aurantiaco-flavis.

Hab. in foliis *Ranunculi Linguae*, *Cymbalariae*, *rivularis*, *inundati*, *abortivi*, *reptantis*, *auricomi*, *cassubici*, *acris*, *lenugiuosi*, *nemorosi* et *Philonotis*, in Gallia, Austria, Germania, Britannia, America boreali, Sibiria asiatica et Australia.

8. ***Æcidium Ranunculi*** Schwein. Syn. Carol. n. 440, Burrill Paras. 2708 Fungi of Illinois p. 222. — Plerumque hypophyllum, sine macula; pseudoperidiis pluries incisus margine recurvato; æcidiosporis subglobosis vel ellipsoideis, subtiliter echinulatis, 18-24 $\approx$ 15-21; spermogoniis numerosis, minutis, inter æcidia sparsis.

Hab. in foliis *Ranunculi abortivi*, in America boreali.

9. ***Æcidium Isopyri*** Schroet. Pilz. Schles. p. 378. — *Spermogoniis* 2709 flavo-melleis, secus parvos greges dispositis; æcidiis in annulos simplices v. concentricos, laxiusculos congestis; pseudoperidiis breviter cylindraceis; æcidiosporis globosis vel ellipsoideis, aurantiaco-rufis, episporio hyalino tectis.

Hab. in foliis *Isopyri*, in Silesia Germaniæ.

10. ***Æcidium Aquilegiæ*** Pers. Icon. pict. IV, p. 58, t. 23, f. 4, Winter 2710 Die Pilze p. 268, Schroet. Pilz. Schles. p. 378, *Æcidium Ranun-*

colacearum var. β . DC. Fl. Franc. VI, p. 97. — Spermogoniis in maculas parvas, rotundatas congestis, flavo-melleis; æcidiis in maculis rotundatas vel irregularibus, convexis, flavis, sæpe brunneo-violaceo limitatis impositis vel in plagulis oblongis, pulviniformibus; pseudoperidiis breviter cylindraceis, hypophyllis, subiculo incrassato insidentibus, aggregatim congestis; æcidiosporis aurantiacis, polygoniis, 16-30 $\approx$ 14-20, verruculosus.

Hab. in foliis *Aquilegiæ vulgaris*, *Hænkeanæ*, *atratae*, *pyrenaicæ*, glandulosæ, in Gallia, Helvetia, Germania, Fennia et pr. M. Kerlygan Sibiria.

11. ***Æcidium Aconiti-Napelli*** (DC.) Winter Die Pilze p. 268, *Æcidium* 2711
Ranunculacearum var. ζ . *Aconiti-Napelli* DC. Fl. Franc. VI, pag. 97. — *Æcidiis* summopere dense congestis, in maculis flavis demum brunneis sæpe convexis, pulvinatis vel pustuliformi-bullatis; pseudoperidiis cylindraceis, usque ad 500 μ . longis, margine revoluti, flavescenti, partito; æcidiosporis polygoniis, 20-32 μ . diam., aurantiaco-flavis.

Hab. in foliis *Aconiti Napelli* in Gallia, Germania et Hungaria.

12. ***Æcidium Actææ*** Opiz in Wallr. Fl. Crypt. Germ. II, pag. 252, 2712
 Winter Die Pilze p. 268, Schroet. Pilz. Schles. pag. 278, Burrill Parasit. Fungi of Illinois pag. 223, *Cæoma mamillatum Actææ* Sommerf. Fl. Lapp. pag. 230, n. 1510. — Spermogoniis in parvos greges dispositis, flavo-melleis; æcidiis sine ordine vel circinatim dispositis, maculis pallidis, demum centro subatris impositis; pseudoperidiis albidis, hypophyllis, aggregatim dispositis, prominulis, margine revoluti, denticulato, minutis; æcidiosporis pallidis vel flavescenti-pallidis, 17-30 $\approx$ 15-25, polygoniis, verruculosus.

Hab. in foliis *Actææ spicatae*, in Italia, Austria, Bokemia, Helvetia, Germania, Lapponia rossica et Illinois America borealis.

13. ***Æcidium cimicifugatum*** Schwein. Syn. of N. American Fungi 2713
 p. 293, n. 2876. — Maculis magnis, orbiculatis, luteis, bullatis; pseudoperidiis hypophyllis, concentricis, longissimis, cylindraceis, apice primo clausis, demum subfimbriatis; æcidiosporis ex aurantiaco hyalinis.

Hab. in foliis vivivis languidisve, *Cimicifugæ foetidæ* et racemosæ rarissime in America boreali et pr. Minussinsk Sibiria asiaticæ.

14. ***Æcidium Dicentrae*** Trel. in Journal of Mycology I, p. 15, Burrill 2714
 Parasit. Fungi of Illinois pag. 223, Ellis North American Fungi

n. 145. — *Spermogoniis* disciformibus, rufo-brunneis vel violaceis, minutis; *æcidiis* hypophyllis uniformiter distanterque per totam paginam sparsis, latiusculis; pseudoperidiis brevibus, pallide flavis, 3 mm. diam., margine regulariter plurilobato; cellulis granulatis, polygoniis, plus minus globosis, $18 \approx 15$; *æcidiosporis* subsphæricis vel polygoniis, $11-20 \approx 10-13$, episporio tenui, levibus, saturate aurantiacis.

Hab. in foliis *Dicentræ cucullariæ* et *Corydalis aureæ*, sociâ sæpe *Peronospora Corydalis*, Wiscosin Kansas et Illinois Americæ borealis.

15. *Æcidium magelanicum* Berk. in Hook. Fl. antarct. II, p. 450, 2715
Winter Die Pilze p. 267, Schroet. Pilz. Schles. p. 380, Linh. F. Hung. exs. n. 143, Rabenh. F. E. u. 2194. — *Æcidiis* plerumque per totam foliorum paginam inferiorem sparsis eamque subobtegentibus, demum in greges parvos vel magnos hinc illinc congestis; pseudoperidiis cylindraceis, albidis, margine erecto vel demum sabreflexo, inciso; *æcidiosporis* polygoniis, $20-40 \approx 16-24$, episporio hyalino, verruculoso, plasmate aurantiaco.

Hab. in foliis *Berberidis vulgaris*, in Hungaria, Austria, Germania et ad ora freti magelænici Americæ australioris.

16. *Æcidium graveolens* Shuttleworth in Bull. Soc. bot. Fr. 1877, 2716
p. 325. — Pseudoperidiis per totam foliorum superficiem sparsis brevibus, odore gravi donatis; maculis nullis; *æcidiosporis*....

Hab. in foliis *Berberidis vulgaris*, in Helvetia.

17. *Æcidium auriellum* Peck in Bull. Torrey bot. Club. 1883, p. 74, 2717
— Pseudoperidiis numerosis, brevibus, congestis, plerumque totam folii paginam inferiorem occupantibus, pallidis vel flavescentibus, margine integro vel subcrenulato; *æcidiosporis* subglobosis vel subellipticis, aureo-flavis, $20-25 \mu$. longis, plerumque 3 guttulis nitentibus flavis, majusculis intus fartis, episporio tenui.

Hab. in foliis vivis *Cheiranthi Menziesii*, Nevada Americæ borealis (JONES).

18. *Æcidium Nasturtii* Hazsl. Magyarh. Gombavir. e. 76. — Pseudoperidiis parvulis, maculæ obscuræ insidentibus, margine integro, tumefacto; *æcidiosporis* aurantiaceis, oblongis, circ. $20 \approx 17-18$, verruculosus.

Hab. in foliis *Nasturtii*, in Hungaria.

19. *Æcidium Barbareæ* DC. Fl. Franç. II, p. 244, Winter Die Pilze 2719
p. 267, *Cæoma Cruciferatum* Link Sp. II, p. 56. — *Æcidiis* sine ordine dense confertis, cupulatis, maculis fuscis insidentibus, mar-

magellanicum Berk. = *Hypophyllum*, totam faciem inferiorem occupans inque petiolis sparsum, micidiale epiphyllum, maculis rubellis, peridiis verruculatis elongatis, sporis pallidis irregulariter orbiculatis.
Hab. Strait of Magellanus: *Persea*; on *Berberis ilicifolia*: Capt. King.
Obs. Maculæ rubellæ, *Persea* plus minusve elongata, verruculata, totum lenticula contracta v. omnes cotyledoneas frangit totam superficiem inferiorem, verberantia plus minus in petiolis descendente; sporae pallidae (Bellus), in exemplaribus exsiccatis irregulariter subglobosis angulatis (in *Persea laevigata*!!)
Remissionem pauca peridia epiphylla sunt.

gine albido, paullulum v. haud revoluto, lacerato; æcidiosporis angulatis, 15-24 μ . diam., siccis dilute flavidis, verruculosis.

Hab. in foliis petiolisque *Barbareæ arcuatæ*, præcociis et vulgaris, in Gallia et Germania nec non ad Carlton et prope Plymouth Britanniae. — Forte cum *Puccinia Barbareæ* Cooke connexum.

20. ***Æcidium monoicum*** Peck New Species of Fungi in Botan. Gazette 1879. p. 230. — Maculis nullis; pseudoperidiis plerumque gregariis, paginam foliorum inferiorem fere ex toto occupantibus, pseudoperidiis subcylindræis; æcidiosporis subglobosis, 20-26 μ . diam., plerumque 1-3 nucleis nitentibus instructis, læte flavis; spermogoniis in foliis diversis eiusdem matricis.

Hab. in foliis *Arabidis retrofractæ*, Colorado Americæ borealis (BRANDEGEE).

21. ***Æcidium Drabæ*** Tracy et Gall. in Journ. of Mycology 1888, p. 21. — Hypophyllum; æcidiis per totam folii superficiem sparsis; pseudoperidiis læte flavis, majusculis, margine laceratis vel grosse fimbriatis, laciniis patentibus; æcidiosporis globosis vel ovatis, 24-28 = 18-21, e virescenti flavis, episporio crasso, levi donatis.

Hab. in foliis *Drabæ aureæ*, ad Colidge New Mexico. — «An *Pucciniæ Drabæ* Rud. status æcidiosporus?».

22. ***Æcidium Lepidli*** Tracy et Gall. in Journ. of Mycology 1888, p. 21. — Pseudoperidiis prominentibus, circinatis, brevibus, irregulariter laceratis, mox sæpe pulverulentis; æcidiosporis subglobosis, 12-14 μ . diam., episporio tenui donatis.

Hab. in foliis *Lepidii montani*, Utah Americæ borealis.

23. ***Æcidium isomerinum*** Peck in Bull. Torrey bot. Club 1783, p. 75. — Maculis pallidis, crassiusculis; pseudoperidiis amphigenis, brevibus, sparsis vel gregariis; æcidiosporis subglobosis, ovatis aut ellipticis, siccis albis, 20-25 μ . longis, episporio tenui.

Hab. in foliis vivis *Isomeris arboreæ*, San Diego Californiæ (JONES). — Sæpe fungus totum folium occupat quod manifeste incrassatur.

24. ***Æcidium palustre*** Mont. Plant. cell. nouv. n. 100 bis p. 373. — Epiphyllum epicaulinumque, macula nulla; pseudoperidiis seriatis, subsecundis (in foliis), ex ovoideo cylindræis vel conico-truncatis, helvolis, margine inflexo, laccato; æcidiosporis initio doliiformi-concatenatis, tandem solutis, sphaericis, flavidulis.

Hab. in foliis caulibusque *Polygalæ* cujusdam, in palustribus Brasiliæ occidentalis.

25. **Æcidium polygalinum** Peck in Bot. Gaz. VI, p. 275, Ellis N. Am. 2725
Fung. n. 1009. — Maculis flavis, indeterminatis, subinde totum folium occupantibus; pseudoperidiis hypophyllis, confertis vel sparsis, brevibus, margine crenulato, lacerato; æcidiosporis subglobosis, 20-26 μ . longis, albidis, udis forte aurantiacis.

Hab. in foliis vivis languidisve Polygalæ Senegæ, Michigan, Joma Amer. bor. (SPAULDING). — Adest sæpe socia *Septoria consocia*. Cfr. *A. palustre* Mont. in eadem matrice.

26. **Æcidium Proserpinacæ** B. et C. North Amer. Fungi n. 577. — 2726
Hypophyllum, sparsum; pseudoperidiis sparsis, margine radiatis; maculis nullis.

Hab. in foliis Proserpinacæ, Alabama Americæ borealis (BEAUMONT).

27. **Æcidium Mariæ-Wilsoni** Peck in 24 Rep. of Stat. Bot. pag. 92, 2727
Burrill Paras. Fungi of Illinois p. 223. — Hypophyllum; maculis parvis, determinatis, haud incrassatis, flavidis; pseudoperidiis minutis, breviter cylindræis, anguste marginatis, margine pluries lacerato et recurvato, subcircinatis; æcidiosporis subglobosis vel subinde angulatis, 11-15 μ . diam., episporio tenui, subtilissime tuberculato, aurantiacis; spermogoniis plerumque epiphyllis.

Hab. in foliis Violæ cucullatæ, in Amer. boreali. — « Vix forte a sequenti diversum ».

28. **Æcidium Petersii** B. et C. North Americ. Fungi n. 580. — Pseudoperidiis gregariis, cylindricis, e macula flava oriundis. 2728

Hab. in petiolis Violæ, Alabama Americæ borealis (PETERS).

29. **Æcidium Cerastii** Winter in Journal of Mycology I, 1885, p. 126. 2729
— Pseudoperidiis supra paginam foliorum inferiorem totam dense sparsis, interdum præcipue secus nervum primarium stipatis, sine macula sed folium totum decolorantibus, semiimmersis, patelliformibus, late apertis, margine crenulato incisoque, late recurvo, albis; æcidiosporis angulato-rotundatis, tenuissime verruculosis, aurantiacis, 17-22 μ . diam.

Hab. ad folia viva Cerastii nutantis, Missouri Amer. bor.

30. **Æcidium gregarium** Hazsl. Magyarh. Ueszökg. 1877, p. 71 et in 2730
Just Bot. Jahresb. 1877, p. 72. — Æcidiis sparsis, hypophyllis, subdistantibus, pseudoperidiis margine erecto, integro, subcupulato-depressis, fere clypeiformibus; æcidiosporis globosis, flavis; spermogoniis flavis, epiphyllis.

Hab. in foliis Silenes noctifloræ, prope Viszkove Slavoniæ (SCHULZER). — « An ab Æcidio *Pucciniæ Silenes* diversum? »

31. **Æcidium Otitis** Schlecht. in Botan. Zeitung 1852, p. 606. — Hy- 2731
pophyllum vel amphigenum; pseudoperidiis solitariis vel gregariis
primo pustuliformibus, dein cylindraceis, aurantiacis, apice plerum-
que 3-laciniatis, contextu e cellulis irregularibus, angulatis con-
stante; æcidiosporis subglobosis vel ovatis, læte aurantiacis, pellu-
cidis, 1-guttulatis.

Hab. in foliis *Silenes Otitis*, prope Halle Germaniæ.

32. **Æcidium sparsum** Hazsl. Magyarh. Ueszökgombai 1877, p. 81 et 2732
in Just Botan. Jahresb. 1877, p. 73. — *Æcidiis* sparsis, vix de-
colorantibus vel gregariis, in macula pallida; pseudoperidiis primo
globosis, dein cylindraceis, margine lacerato, subciliato, fragilibus
basimque tantum (in exoletis) relinquentibus; æcidiosporis globosis,
subhyalinis; spermogoniis minutis, flavis, epiphyllis, æcidiis con-
trapositis.

Hab. in foliis *Silenes viridifloræ*, pr. Losenez Hungariæ
(KUNSZT).

33. **Æcidium Hiptages** B. et Br. Fungi of Ceyl. n. 849. — Maculis 2733
ochraceis, orbicularibus, amphigenis; pseudoperidiis minutis, con-
gestis, peritheciiformibus.

Hab. in foliis *Hiptages*, Peradenya in insula Ceylon.

34. **Æcidium Cressæ** DC. Fl. Franc. V, p. 89, Duby Botan. Gall. II, 2734
p. 908, Thüm. Mycoth. Univ. n. 823. — Hypophyllum; pseudope-
ridiis sparsis, helvolis, totam paginam occupantibus, hemisphærico-
cupulatis, margine patulo, denticulato, demum circumscisso; æci-
diosporis flavis, dein fuscescentibus.

Hab. in foliis *Cressæ creticæ*, in littoribus maris Mediter-
ranei nec non pr. Damietta et in insula Cypro (BARBEY).

35. **Æcidium hypericatum** Schwein. Syn. North Amer. Fungi p. 293, 2735
n. 2883, *Æcidium Hyperici-frondosi* Schwein. Syn. Carol. p. 68,
n. 451. — Suborbiculare, aurantiacum; pseudoperidiis cylindraceis,
elevatis, siccis albis; æcidiosporis hyalinis, oblongis.

Hab. in foliis *Hyperici elliptici* et *frondosi*, in America
boreali. — Pulcherrimum, maculas minores at frequentes consti-
tuit, interdum fere expers coloris proprii.

36. **Æcidium Hypericorum** B. et C. North Americ. Fungi n. 581. — 2736
Hypophyllum; maculis nullis; pseudoperidiis paucis secus orbiculos
parvos dispositis.

Hab. in *Hyperico*?, Alabama Americæ borealis (PETERS). —

Ab *Æcidio hypericato* distinctum dicitur «An revera?»

37. **Æcidium hibisciatum** Schwein. Syn. North Americ. Fungi n. 2877, 2737

Burrill Parasitic Fungi of Illin. p. 224, Ell. et Everh. N. Am. Fungi n. 1830. — Hypophyllum; maculis plerumque paucis, magnis, crassiusculis, determinatis, confluentibus, brunneis, margine flavis; pseudoperidiis ut plurimum dense confertis, subinde irregulariter circinatis, subimmersis; æcidiosporis late ovatis, circ. $37 \approx 18$, flavescensibus laxè congestis.

Hab. in foliis Hibisci moschati et militaris, Alabama (PETERS), Illinois (BURRILL), aliisque Americæ borealis locis.

38. *Æcidium erythrobasis* B. et Br. Fungi of Ceyl. n. 846. — Maculis 2738
hypophyllis, rubris; pseudoperidiis cylindricis, brevibus laciniatis.

Hab. in foliis Hibisci eriocarpi, in ins. Ceylon.

39. *Æcidium Desmium* C. et Br. Fungi of Ceyl. n. 850. — Maculis 2739
nullis; pseudoperidiis primo peritheciiformibus, hypophyllis, inclusis, margine angusto; æcidiosporis oblongo-cuneatis, asperulis.

Hab. in foliis Gossypii, Peradenya in insula Ceylon.

40. *Æcidium odoratum* Wint. in Hedwigia 1887, p. 13. — Maculis 2740
nullis; pseudoperidiis numerosissimis, densissime confertis, foliorum paginam inferiorem ex toto fere obtegentibus, cylindræis, late apertis, margine inciso, erecto vel parum recurvo, hyalinis, e cellulis angulato-oblongis, dense rugulosis compositis; æcidiosporis angulato-subglobosis seu ellipsoideis, $16-21 \mu$. diam. vel usque ad 25μ . longis, $12,5-14 \mu$. latis, minutissime granulatis, oleo aurantiaco repletis.

Hab. in foliis vivis Sidæ intermediæ, ad Montevideo, Uruguay Americæ australis. — Odor gratus, fortis.

41. *Æcidium ræstelioides* Ell. et Everh. in Journal of Mycology 1885, 2741
p. 93. — Hypophyllum, maculis incrassatulis, flavescensibus, demum purpurascensibus insidens; æcidiis gregariis, subcircinatis, $15-40$ in greges dispositis, pseudoperidiis primo hemisphæricis, dein campanulatis vel breviter cylindræis, margine circiter sex-inciso, demumque in segmenta 1 mm. longa angusta ut in *Ræstelia lacerata* fisso; æcidiosporis pallidis, subglobosis, circiter 22μ . diam., episporio subtiliter striatulo, crassiusculo.

Hab. in foliis Sidalceæ, Washington Territ. in America boreali (M. M. SUKSDORF).

42. *Æcidium Callirhœes* Ell. et Kellerm. in Journal of Mycology 2742
1886, p. 4. — Hypophyllum, gregarium, $2,5-5 \text{ mm.}$ occupans; æcidiis primo tectis, demum nudis, pseudoperidiis cupulatis, pallidis, $300-350 \mu$. latis, margine subintegro; æcidiosporis subglobosis, pal-

lidis, 12-18 μ . diam.; spermogoniis centrum plagularum ab æcidiiis efformatarum occupantibus.

Hab. in foliis vivis *Callirhœes involucratae*, ad Manhattan Kansas Americæ borealis (KELLERMAN).

43. **Æcidium Modiolæ** Thüm. F. an Entre-Rios in Flora 80, n. 2. — 2743

Pustulis sparsis, amphigenis caulicolisque, magnis; pseudoperidiis longissime cylindricis, tenuibus, fere capilliformibus, sordide luteis, margine fimbriato penicillatoque; æcidiosporis globosis vel regulariter ellipsoideis, episporio 4 μ . crasso, hyalinis, homogeneis, episporio subdilutiore, 18-24 $\approx$ 16-20.

Hab. ad folia et caules *Modiolæ geranioidis*, Quinta del Colegio pr. Concepcion del Uruguay et Patagonia in Amer. austr.

44. **Æcidium Napææ** Arth. et Holw. Prelim. List of Jowa Uredineæ 2744

p. 166, n. 112. — Æcidiis in greges orbiculares congestis, hypophyllis, maculis flavis, parvis insidentibus; pseudoporidiis margine prominentibus, albidis, revolutis, lobis latis, parvis; æcidiosporis ex oblongo ovatis, subhyalinis, levibus vel (valde auctis) subtiliter hinc inde corrugatis, 16-22 $\approx$ 15-18.

Hab. in foliis *Napææ dioicæ*, Decorah Jowa Americæ borealis.

45. **Æcidium Pelargonii** Thüm. in Flora 1877, p. 411, Myc. univ. 2745

n. 1026. — Pseudoperidiis hypophyllis, dense gregariis, concentricè dispositis, parvis, in macula minima, expallescenti, dilute aurantiacis, margine sublacerato vel crenato, albo-luteo, crasso, elevato; æcidiosporis ellipticis vel subglobosis, 21-24 $\approx$ 18-22, episporio subgranuloso, vel obsolete verruculoso, subcrasso, hyalino, utrinque rotundatis, pallidissime flavidis, interdum catenulatis.

Hab. in foliis vivis *Pelargonii alchemilloidis*, sociâ sæpe *Uredine Pelargonii*, in dumetis ad pedem montis « Boschberg. » Africæ australis (Prof. P. MAC OWAN).

46. **Æcidium Lagena** Sorok. Mat. Fl. As. p. 23, t. 1, f. 9-12. — 2746

Pseudoperidiis gregariis, suburceolatis, margine leviter inciso-dentatis revolutisque, pallidis, circ. 1 mm. latis, cellulis contextus subhexagonis, hyalinis, punctulatis; æcidiosporis minutis, globosis, uniguttulatis, subtiliter aculeolatis, 4-6 μ . diam., dilute aurantiacis.

Hab. in foliis *Zygophylli*, quæ deformat, in Asia.

47. **Æcidium Oxalidis** Thüm. in Flora 1876, p. 425, Myc. un. n. 1226. 2747

— Pseudoperidiis hypophyllis, raro amphigenis, congestis, concentricè dispositis, prominentibus, rotundis, flavo-albescentibus, demum umbrinis, margine sublacero; æcidiosporis globosis, diaphanis, episporio levi, 24-28 μ . diam., decoloribus.

Hab. ad folia viva *Oxalidis* Bowei, in dumetis montis ad Somerset East. Africae australis (MAC OWAN). — Videtur cum *Uredine Oxalidis*. Lév. cognatum.

48. *Æcidium Pteleæ* B. et C. in Grevillea III, p. 61, Burrill Paras. 2748
Fungi of Illinois p. 225, Ell. et Everb. North Amer. Fungi n. 1819.
— Maculis pallide flavescentibus, hypophyllis, extrorsum bullatis; pseudoperidiis congestis, brevibus, cylindraceis, longiusculis, dein margine numerose profundeque incisis, valde recurvatis; æcidiosporis subglobosis vel ellipticis, 24-30 $\approx$ 21-25, tuberculatis.

Hab. in foliis *Pteleæ trifoliatæ*, Alabama (PETERS) Missouri (DEMETRIO) et Illinois (BURRILL) in America boreali.

49. *Æcidium Impatientis* Schwein. Syn. Fung. Carol. pag. 674, 442, 2749
Burrill Paras. Fungi of Illinois p. 224, *Æcidium Impatientatum*
Schwein. Syn. Amer. bor. n. 2880, Ell. N. Amer. Fungi n. 1001.
— Hypophyllum; maculis sæpe determinatis, purpureis, flavo-marginatis, sæpius effusis, in foliis vix incrassatis, in petiolis caulibusque inflatis; æcidiis subcircinatis vel irregulariter sparsis, pseudoperidiis brevibus, margine profunde grosseque fisso valde incurvato; æcidiosporis globosis vel ellipticis, episporio tenui, sublevi, subtiliter granuloso-farctis, 18-20 $\approx$ 15-18; spermogoniis in maculis epiphyllis centralibus gregariisque vel sparse amphigenis.

Hab. in foliis *Impatientis pallidæ*, in America boreali.

50. *Æcidium Xanthoxyli* Peck in Botanical Gazette VI, p. 275, Ellis 2750
N. Am. Fungi n. 1013. — Maculis suborbicularibus, flavo-viridulis; pseudoperidiis brevibus, hypophyllis, confertis; æcidiosporis subglobosis, 22-25 μ . diam., in sicco albidis, verisimiliter flavis vel aurantiacis.

Hab. in petiolis foliisque vivis *Xanthoxyli americani*, Iowa Americae borealis (E. W. HOLWAY).

51. *Æcidium splendens* Winter in Hedw. 1885, p. 156. — *Æcidiis* 2751
hypophyllis, rotundatis vel parum irregularibus, minutis, 1-2,5 mm. luteis, in macula indeterminata, luteola, in pagina foliorum superiore intensius colorata solitariis sparsisve; pseudoperidiis dense stipatis, breve cylindricis, albidis, margine erecto, fimbriato-crenulato, contextu e cellulis valde verrucosis, protoplasmate aurantiaco repletis, 20-35 μ . diam.; æcidiosporis rotundato-polygoniis, 20-28 $\approx$ 14-19, minutissime granulatis, aurantiacis.

Hab. in cotyledonibus vivis *Crotonis monanthogyni*, pr. Perryville Missouri Amer. borealis. — Forte, saudente ipso Win-

ter, idem ac *Æcidium Crotonopsidis* Burrill. Etiam proxima sunt *A. Tragice* Cooke et *A. detritum* Thüm.

52. **Æcidium pulcherrimum** Rav. in Berk. et Curt. North Americ. 2752
Fungi n. 583. — Pseudoperidiis niveis, cylindricis, totam superficiem occupantibus, obtusis, dein apertis nec radiatis.

Hab. in Berchemia in Carolina inf. Americæ borealis.

53. **Æcidium Discariæ** Cooke in Grevillea XIV, pag. 89. — Hypo- 2753
phyllum; maculis orbicularibus, fuscis; pseudoperidiis cupuliformibus, semiimmersis, congestis, margine fimbriato albo; æcidiosporis ovalibus, flavidis.

Hab. in foliis Discariæ ad Wellington, in Nova Zelandia (Kirk).

54. **Æcidium Cardiospermi** Cooke in Grevillea X, p. 124. — Hypo- 2754
phyllum; pseudoperidiis minimis, in maculis brunneis orbicularibus congestis, margine subintegro; æcidiosporis luteolis.

Hab. in foliis Cardiospermi microcarpi, Natali Africæ.

55. **Æcidium Æsculi** Ell. et Kellerm. in Bull. Torr. botan. Club 2755
1884, October, Ell. N. Am. Fungi n. 1429. — Æcidiis maculæ vix decoloratæ seu pallidiori insidentibus, secus nervos folii seriatim dispositis vel hinc inde circinato-gregariis; pseudoperidiis cupulatis, margine subintegro, flavescentibus; æcidiosporis globosis angulatisve, e flavo virentibus, episporio hyalino, æquali, levi, 18–22 μ . diam.

Hab. in foliis Æsculi glabræ, Kansas Americæ borealis.

56. **Æcidium fulgens** Hazsl. Magyarh. Uetzökg. 1876, pag. 81 et in 2756
Just Bot. Jahresb. 1877, p. 72. — Pseudoperidiis tubulosis, sursum ampliatis, albis, margine extrorsum revolutis, fimbriatulo, aurantiacis; æcidiosporis globosis, 21 μ . diam. vel oblongis seu ovoideis (inferioribus) 28–30 μ . longis, episporio crasso, pellucido; spermogoniis inter æcidia sparsis, obscure brunneis, demum subcalyculatis.

Hab. in caulibus, petiolis et foliis Cytisi austriaci, in Hungaria. — «Cum Æcidio Cytisi Voss comparandum».

57. **Æcidium australe** Berk. Fung. Zeyh. p. 16, t. XXI, f. 5, non 2757
Speg. — Amphigenum, totam superficiem occupans; pseudoperidiis elongatiusculis, margine dentato, laciniato, laciniis siccis, convolutis, cellulis laciniarum oblongis cohærentibus; æcidiosporis obovatis, subangulatis, levibus.

Hab. in foliis Melobii, Uitenhage.

58. **Æcidium Psoraleæ** Peck in Amer. Nat. VIII, pag. 215, Burrill 2758

Paras. Fungi of Illinois pag. 225, Ell. et Everh. N. Amer. Fungi n. 1818. — Plerumque hypophyllum; maculis nullis; æcidiis uniformiter distributis, pseudoperidiis brevibus, margine mox profunde inciso recurvatoque; æcidiosporis ellipticis, episporio crassiusculo donatis, dense tuberculatis, 18-24 $\approx$ 15-18, e brunneo flavescentibus; spermogoniis numerosis, inter æcidia sparsis, flavo-melleis.

Hab. in foliis *Psoraleæ floribundæ*, in America fœderata. — Ab *Æcidio Onobrychidis* Burr. diversum videtur.

59. **Æcidium Onobrychidis** Burrill Paras. Fungi of Illinois p. 225, 2759 Ell. et Everh. North Americ. Fungi n. 1826. — Hypophyllum; maculis distinctis v. confluentibus, sæpe effusis, flavescenti-brunneis; æcidiis subcircinatis, gregariis, pseudoperidiis brevibus, margine abrupte recurvo, grossiuscule fisso; æcidiosporis subglobosis vel ellipticis, episporio tenuiusculo, obtuse tuberculatis, 19-24 μ . diam.; spermogoniis in centro macularum gregariis, epiphyllis, minutis, rufescenti-brunneis.

Hab. in foliis *Psoraleæ Onobrychidis*, Illinois Americæ borealis (SEYMOUR).

60. **Æcidium Amorphæ** Cooke in Rav. Fung. Amer. n. 39 et in Grevillea VI, pag. 137. — Maculis epiphyllis, orbicularibus, fuscis; pseudoperidiis paucis, congestis; æcidiosporis ovalibus, 30 $\approx$ 20, leniter asperulis, luteis.

Hab. in foliis *Amorphæ*, Aiken in Carolina inf. Americæ borealis.

61. **Æcidium carneum** Nees in Funk Krypt. Gewächse n. 523, Winter Die Pilze p. 267, *Æcidium Phacæ-frigidæ* Wahlb. Fl. lappon. p. 525, *Æcidium Hippocrepidis* DC. Fl. Franç. VI, p. 96? — Æcidiis æque per totam folii paginam inferiorem sparsis; pseudoperidiis rotundatis vel late ambitu ovatis, hemisphærice prominulis, demum late apertis, margine primo integro introrsumque curvato, dein suberecto, hinc illinc lacerato, pallido, sordide rufescenti-albis; æcidiosporis polygoniis, siccis hyalinis, 14-19 μ . diam.

Hab. in foliis *Phacæ frigidæ* et *Oxytropidis campestris*, in Gallia et Germania.

62. **Æcidium Astragali** Thüm. in Mycoth. Univ. n. 1117. — Pseudoperidiis hypophyllis, dense gregariis, minutis, orbiculatis, dilute luteis, margine levi, subcrasso, integro, pallidiore; æcidiosporis irregulariter globosis vel rotundo-subpolygoniis, achrois (in speciminibus exsiccatis, an semper?), episporio levi, tenuissimo, plerumque 16 μ . diam.

Hab. in foliis vivis *Astragali melilotoidis*, in pratis montosis Sajanensibus Sibiriae asiaticae (MARTIANOFF).

63. ***Æcidium porosum*** Peck in Botan. Gazette 1878, pag. 34, Ellis 2763
North Americ. Fungi n. 1430. — Maculis nullis; pseudoperidiis confertis, infossis, latis, late dentatis, totam superiorem folii paginam occupantibus (quæ porosa videtur); æcidiosporis subangulatis, 20-25 μ . longis, aurantiacis.

Hab. in foliis vivis *Viciæ americanæ*, in America boreali.
— Ab *Æcidio albo* distinctum.

64. ***Æcidium umbilicatum*** B. et Br. Fungi of Ceylon n. 858. — Spar- 2764
sum; pseudoperidiis irregulariter ruptis demum umbilicatis; æcidiosporis levibus, globosis, 32-33 μ . diam.

Hab. in foliis *Phaseoli Grahamiani*, in insula Ceylon.
— Cuticula siccando contrahitur et radiata apparet.

65. ***Æcidium ornamentale*** Kalchbr. in Flora 1876, pag. 362, n. 39, 2765
Thümen, Mycoth. univ. n. 224. — Pseudoperidiis myriadeis, denso agmine totam ramulorum superficiem occupantibus, pallide carneis, concavis vel passim obconicis vel cylindrico-angulatis, margine sublaceris; æcidiosporis globoso-angulatis, aurantiaco-carneis. *Stat. acid. Ravenelia gla.*

Hab. in virgultis tenellis virentibus *Acaciæ horridæ*, ad pedem montis « Boschberg » prope Somerset-East, Promont. Bonæ Spei (P. MAC OWAN.) — ramulos circinatim detorquet; maxime insigne. « An *Raveneliæ* cujusdam status æcidiosporus? »

66. ***Æcidium inornatum*** Kalchbr. in Grevillea XI, p. 25. — *Æcidiis* 2766
hypophyllis, sparsis; pseudoperidiis prominulis, vix apertis, pallidis.

Hab. in foliis vivis *Acaciæ horridæ*, cum *Ravenelia glabra* K. et C., Somerset East Africae australis. (MAC OWAN.) — « An *Raveneliæ glabræ* status æcidiosporus? » *Æcid. ornamentale* K., ramulos *A. horridæ* occupat et detorquet, folia non tangit. In hac vero specie multo teneriore nec unquam elongata contrarium occurrit.

67. ***Æcidium leucostictum*** Berk. et Curt. in Grevillea III, p. 61, Bur- 2767
rill Paras. Fungi of Illinois p. 226, Ellis et Everh. North Amer. Fungi n. 1827. — Hypophyllum; maculis minutissimis, vix conspicuis, haud discoloribus; æcidiis minutissimis, irregulariter in parvos greges dispositis; pseudoperidiis brevibus, margine angusto, recurvo, pluries inciso; æcidiosporis subglobosis, 12-16 $\approx$ 11-12, subtiliter verruculosi.

Hab. in foliis *Lespedezæ procumbentis*, Illinois Americae borealis. — Forte var. *Æc. Orobi* sistit.

68. *Æcidium Oxytropidis* Thüm. Fung. it. Mongol. p. 66. — Pseudo- 2768
peridiis dense gregariis et plerumque folii paginam inferiorem totam occupantibus, numquam confluentibus, orbiculatis, paullo elevatis, aureo-flavis, margine subcrasso, integro, disco vix obscuriore; æcidiosporis globosis aut compresso-angulatis, episporio levi, subcrasso, intus plasmate homogeneo foëtis, hyalinis vel pallidissime flavescentibus, 20 μ . diam.

Hab. in *Oxytropidis* cujusdam floribus azureis pr. fluvium Ulei, affluentem lacus Kosogol ab occidente in Mongolia boreali (POTANIN).

69. *Æcidium resinicolum* (Rud.) Wint. in Flora 1884, n. 14, *Cæoma* 2769
resinicolum Rud. in Linnæa IV, p. 389, *Æcidium Rafniæ* Mac Owan mscr. — Pseudoperidiis in macula rotundata vel irregulari, flavida, demum arescendo fuliginea sordidaque amphigenis, dense gregariis, basi insculptis, longe cylindraceis, plerumque 5 mm. longis, demum ad basim laciniatis, albidis, contextu e cellulis oblongis angulatis, pallide aurantiacis, membrana valde crassa, rugosa præditis, 30-70 $\approx$ 17-26; æcidiosporis subglobosis v. late ellipsoideis densissime verruculosus, 22-32 μ . diam. aurantiacis.

Hab. in foliis, rarius in ramulis junioribus vivis *Rafniæ* amplexicaulis, pr. Capetown Africæ australis (MAC OWAN). — Var. **tumefaciens** Winter loc. cit.: a typo differt tumoribus magnis, usque 45 mm. diam. metientibus, lobatis, carnosus, ab *Æcidio* ad ramulos juniores genitis. In ramulis junioribus *Rafniæ* angulatae cum specie.

70. *Æcidium soleniiforme* Berk. Fl. Tasm. p. 270. — Maculis orbi- 2770
cularibus, fuscis; pseudoperidiis cylindricis, elongatis, candidis, apice laciniato-radiatis; æcidiosporis subangularibus, aurantiacis, 25-26 μ . diam.

Hab. in *Goodia latifolia*, in Tasmania (ARCHER). — Habitus *Æcidii Berberidis*.

71. *Æcidium Kellermannii* De-Toni, *Æcidium amphigenum* Ell. et 2771
Kellerm. in Journal of mycology 1886, p. 4, nec Hazsl. — Subiculo leniter incrassato, pallidiori; æcidiis in plagulas s. greges sub-orbiculares collectis, 2,5 cm. diam., primo tectis, dein erumpentibus; pseudoperidiis brevissimis, parvis, parce confertis, amphigenis, margine subdentatis; æcidiosporis subglobosis, 22-25 μ . diam., episporio crasso donatis.

Hab. in foliis *Baptisiæ leucophææ*, ad Manhattan Kansas Americæ borealis (KELLERMAN).

72. *Æcidium album* Clint. in Peck 26 Rep. St. Mus. p. 76, Ellis North 2772
Amer. Fungi n. 1431. — Maculis nullis; pseudoperidiis sparsis,
brevibus, albis, margine subintegro; æcidiosporis subglobosis, cir-
citer 20 μ . diam., hyalinulis.

Hab. in pagina inferiore foliorum *Viciæ americanæ*, Buf-
falo (CLINTON) et Nipigon River (ELLIS) Amer. bor.

73. *Æcidium Mespili* DC. Fl. Franç. VI, pag. 98, Winter Die Pilze 2773
p. 266, *Cæoma Cyldrutes* Link Sp. II, p. 64 pro parte, *Æci-
dium cornutum* var. *c* Rabenh. Krypt. Fl. I, p. 20, *Æcidium
Cotoneasteris* Körn. in Hedwigia 1877, p. 24. — *Æcidiis* in ma-
culis rotundatis vel irregularibus, superne flavidis, brunneis vel
rufis, flavo limitatis, centro pulvinato-inflatis insidentibus; pseudo-
peridiis cylindraceis vel cylindraceo-convexis, in lacinias angustas
fissis; æcidiosporis polygoniis, 19–24 μ . diam., subtilissime verru-
cosis, brunneis.

Hab. in foliis *Cotoneasteris vulgaris* et *Mespili ger-
manicæ*, in Gallia et Germania.

74. *Æcidium Nesææ* Gerard in Bull. Torrey Bot. Club IV, p. 47, 2774
Ellis North American Fungi n. 1015. — *Æcidiis* hypophyllis, ma-
culas epiphyllas contrapostas, purpurascenti-brunneas, margine
pallidiori determinatas efficientibus; pseudoperidiis gregariis, fla-
vescentibus, cupulatis, margine crenulato, subpulverulentis; æci-
diosporis e globoso angulatis, pallidis, sublevibus, 20–24 μ . diam.

Hab. in foliis caulibusque *Nesææ verticillatæ*, Poughkee-
psie (GERARD), Buffalo (CLINTON), Newfield (ELLIS) in America bo-
reali. — «Diagnosin erui ex speciminibus Ellisianis in herbario
Saccardiano asservatis».

75. *Æcidium Dissotidis* Cooke in Grevillea X, p. 124. — Hypophyl- 2775
lum; æcidiis rotundatis, parvulis; pseudoperidiis congestis, mini-
mis, vix prominulis, margine albido; æcidiosporis luteis.

Hab. in foliis *Dissotidis incanæ* et principis, in Africa
australi. — Cum *Uredine Dissotidis* Cooke forte connexum.

76. *Æcidium pallidum* Schneid. in 50. Jahresb. Schles. Ges. 1872, p. 71, 2776
Winter Die Pilze pag. 265. — Pseudoperidiis plerumque sparsis,
rarius gregariis, præcipue hypophyllis, brevibus, flavis, margine
subindivisis; æcidiosporis prima ætate flavidulis, dein hyalinis, ro-
tundato-angulatis.

Hab. in foliis *Lythri Salicariæ*, in Germania.

77. *Æcidium Œnothæræ* Mont. Fl. Chil. VIII, p. 37 non Peck. — Hy- 2777
pophyllum, macula nulla; pseudoperidiis confertim sparsis, ochra-

ceis, orbiculatis, minutis, cylindricis, margine circulari, reflexo, denticulato; æcidiosporis primo polyhedris, tandem sphaericis, pro ratione minimis, in sicco hyalinis, nucleo flavescente.

Hab. in foliis *Ænotheræ tenellæ*, loco La Quinta dicto reipub. Chilensis (BERTERO).

78. **Æcidium Peckii** De-Toni, *Æcidium Ænotheræ* Peck 23 Rep. of 2778
St. Mus. p. 60, Ellis N. Am. Fungi n. 1016, Burrill Paras. Fungi
of Illinois p. 227 non Montagne. — Hypophyllum vel sparse epi-
phyllum; maculis conspicuis, plerumque purpureis, vix incrassatis;
pseudoperidiis in greges circulares congestis, area centrali libera,
parva, brevibus, profunde margine incisus recurvatisque; æcidio-
sporibus subglobosis, episporio tenui, subtilissime tuberculatis, 15-
18 μ . diam., pallide aurantiacis; spermogoniis paucis, subinconspi-
cuis, epiphyllis, centro macularum insidentibus, flavo-melleis.

Hab. in foliis *Ænotheræ biennis*, Knowersville (PECK),
Jowa et Illinois (BURRILL) in America boreali. — Ab *Æc. Æno-*
theræ Mont. macularum præsentia distinctum videtur.

79. **Æcidium Jussieæ** Speg. F. Argent. I, n. 55, Dec. myc. Argent. n. 30. 2779
— Hypophyllum; macula epiphylla, obscure purpurascente; æci-
diis rotundatis, non vel areola indeterminata fusca vel purpura-
scente cinctis; pseudoperidiis 4-18 confertissime aggregatis, primo
tectis, dein erumpentibus, exsertiusculis, margine albido, irregulari-
ter minute lacero-dentato, reflexo, contextu cellulis pentagonis cen-
tro depressis ac radiatim striatis, 24-25 μ . diam., hyalinis effor-
mato, epithecio fulvo donatis; æcidiosporis subsphaerico-pentagonis,
15-20 μ . diam., hyalinis, levibus, crassiuscule tunicatis, protoplas-
mate granuloso-oleoso, fulvescente farctis.

Hab. in foliis vivis *Jussieæ longifoliæ*, in paludosis secus
Rio de la Plata in Rep. Argentina.

80. **Æcidium hydnoideum** B. et B. North Americ. Fungi n. 852, Thüm. 2780
Myc. n. 1120. — Maculis orbicularibus, rufulis; pseudoperidiis al-
bis, obtusis, circinantibus, sero apertis.

Hab. in foliis *Dircæ palustris*, Alabama (PETERS) et Alba-
ny (PECK) Americæ borealis.

81. **Æcidium gaurinum** Peck in Botanical Gazette 1879, pag. 218. — 2781
Pseudoperidiis amphigenis, numerosis, sparsis vel gregariis, ple-
rumque totam paginam inferiorem folii occupantibus, sparsis in
pagina superiore, brevibus; æcidiosporis subglobosis, 15-20 μ .
diam., flavis vel aurantiacis, 1-3 nucleos nitentes plerumque con-
tinentibus.

Hab. in foliis *Gauræ coccineæ*, Colorado Americæ borealis (M. E. JONES).

82. ***Æcidium Gayophyti*** Vize in Grevillea VII, p. 12, Ellis North Ame- 2782
rican Fungi n. 1426. — Hypophyllum; pseudoperidiis coccineis, irregulariter dispositis, gregariis v. solitariis, primo epidermide tectis, demum liberis; æcidiosporis irregulariter globosis vel polygoniis, 1-4 nucleis coccineis instructis.

Hab. in foliis *Gayophyti ramosissimi*, in California Americæ borealis (HARKNESS). — Verisimiliter, suadente cl. Ellis, idem ac *Æcidium Gayophyti* Billings in U. S. Survey of 40th parallel, vol. V, p. 144.

83. ***Æcidium Circææ*** Ces. in Rabenh. Herb. myc. n. 372, Thüm. Myc. 2783
Univ. n. 1222, Winter Die Pilze pag. 266, Schroet. Pilz. Schles. p. 379, *Cæoma epilobiatum* Link Sp. II, p. 59 p. p. — Spermogoniis in parvos greges dispositis, pallide flavo-rufis; æcidiis in orbes simplices vel plures concentricos, sublaxos congestis, maculis rotundatis vel irregularibus, sæpe confluentibus, brunneolis margineque pallide flavidis; pseudoperidiis cupulatis, margine albo-flavescente vel albido, lacinulato; æcidiosporis polygoniis, levibus, 12-16 μ . diam., dilute aurantiaco-rufis.

Hab. in foliis *Circææ lutetianæ*, alpinæ et intermediae, in Germania et Italia.

84. ***Æcidium Hydrangeæ*** Pat. in Revue Mycologique 1886, p. 82. — 2784
Æcidiis in greges circulares, hypophyllos dispositis, macula hypophylla flava, epiphyllâ brunneo-rufescente; pseudoperidiis tubulosis, rufescentibus, margine lacero-dentato; æcidiosporis rotundatis vel angulatis, 15-18 μ . diam., flavescentibus, striolatis; spermogoniis in centro gregis et epiphyllis, ore longe fimbriato; sporulis non visis.

Hab. in foliis *Hydrangeæ Davidii*, in Thibet orient. Asiæ (AB. DAVID).

85. ***Æcidium Parnassiæ*** (Schlecht.) Gravis in Duby Botan. Gall. II, 2785
p. 904, Winter Die Pilze p. 267, Schroet. Pilz. Schles. pag. 378, *Cæoma Parnassiæ* Schlecht. Fl. Berol. II, p. 113. — Spermogoniis flavo-melleis, parce gregariis; æcidiis secus greges annulatos plus minus distantes, in maculis parvis vel majusculis dimidiam vel totam folii inferiorem paginam occupantibus, dispositis; pseudoperidiis latiusculis, cupulatis, albido-flavis, margine lato, fisso, revolutato; æcidiosporis polygoniis, 14-17 μ . diam., episporio hyalino, verruculoso, plasmate aurantiaco.

Hab. in foliis *Parnassiæ palustris*, in Gallia, Germania, Britannia et Lapponia (LAGERHEIM). — Maculæ flavescences demum brunneæ.

86. **Æcidium Saxifragæ** Thüm. Pilzfl. Sibir. n. 505. — Hypophyllum 2786
vel raro petiolicolum, medium sparsum, orbiculatum subplanum; pseudoperidiis patelliformibus, luteis, margine subcrasso, integro, levi; æcidiosporis irregulariter globosis et interdum compressis, magnitudine valde varia, 20-34 μ . diam., pallidissime flavescens, intus granulosus, episporio subcrasso, levi vel vix plicatulo.

Hab. in foliis vivis *Saxifragæ sibiricæ*, in pratis subalpinis pr. Schunery Sibiricæ.

87. **Æcidium Grossulariæ** Schum. Pl. Saell. II, p. 223, Schroet. Pilz. 2787
Schles. p. 378, Thüm. Myc. Univ. n. 26 et 625, *Cæoma grossulariatum* Link. Sp. II, p. 59, *Æcidium Rumicis* var. *Grossulariæ* Pers. Syn. p. 207, *Æcidium rubellum* var. *Grossulariæ* Gmel. Syst. p. 1473. — Spermogoniis flavo-melleis, secus parvos greges dispositis; æcidiis plerumque pluriseriatis, annuliformibus, confertis, in maculis orbicularibus, sæpe vesiculosus, usque ad 1 cm. latis insidentibus; pseudoperidiis breviter cylindraceis, margine albo, lacinulato; æcidiosporis 10-20 μ . diam., aurantiaco-rufis, episporio hyalino vix ruguloso instructis.

Hab. in foliis, petiolis fructibusque subimmaturis *Ribis Grossulariæ*, alpini, rubri, nigri, aurei, rotundifolii, in Germania, Belgio, Lapponia (LAGERHEIM), Gallia, Helvetia, Dania, in America boreali et Sibiria asiatica.

88. **Æcidium gracilens** Peck in Botanical Gazette 1879, pag. 128. — 2788
Maculis crassiusculis, viridulis vel leniter discoloribus; pseudoperidiis hypophyllis, elongatis, gracilibus, rubro-rufescentibus, evacuatis albidis; æcidiosporis globosis, 23-25 μ . diam., aurantiaco-lateritiis, episporio crasso, hyalino tectis.

Hab. in foliis *Philadelphi microphylli*, Colorado Americæ borealis.

89. **Æcidium Pastinacæ** Rostrup in Thüm. Mycoth. Univ. n. 2027. — 2789
Hypophyllum, deformans, pustulas seu bullas efformans; pseudoperidiis confertis, urceolatis, margine rite denticulato, reflexo; æcidiosporis angulato-sphæroideis, 19-22 μ . diam., subaurantiacis.

Hab. in foliis *Pastinacæ sativæ*, ad littora marina prope Nyborg ins. Fionicæ Daniæ (ROSTRUP).

90. **Æcidium Sii-latifolii** (Fiedl.) Wint. Die Pilze p. 265, F. E. n. 2719. 2790
Æcidium Falcaricæ DC. var. *Sii-latifolii* Fiedler in Klotzsch-

Rabenh. Herb. myc. n. 1176. — *Æcidiis* in foliis irregulariter v. indistincte orbiculariter dispositis, in nervis petiolisque plerumque lineas elongatas, parallelas, plurimas efformantibus; pseudoperidiis, ut plurimum, cupulatis, margine albo, lacerato revolutoque; æcidiosporis angulatis, 17-30 μ . diam., dilute flavis.

Hab. in foliis petiolisque *Sii latifolii*, in Germania.

91. ***Æcidium Seselis*** Niessl in Verhandl. naturf. zu Brünn, 1865, p. 51, 2791

Winter Die Pilze p. 264. — *Æcidiis* in foliis plerumque secus greges irregulares, in petiolis secus strias parallelas, numerosas dispositis; pseudoperidiis primo poculiformibus, demum cylindraceis, usque ad 1 mm. longis, margine dentato, dein usque ad basim plurilacinatis; æcidiosporis sphæroideis, 20-30 μ . diam., grosse verrucosis, aurantiaco-flavis.

Hab. in foliis petiolisque *Seselis glauci* et *Laserpitii Sileris*, in Moravia. — Fungillus in foliis *Laserpitii* maculas flavas, amphigenas, irregulariter rotundatas vel oblongas, bullatas, in petiolis pustulas flavas, longiusculas efformat.

92. ***Æcidium Mei*** Schroet. Pilz. Schles. p. 379, *Æcidium Mei-atha-* 2792

mantici Schroet. olim *Æcidium Mei-Mutellinæ* Wint. Die Pilze p. 265. — *Æcidiis* ut plurimum in foliis irregulariter dispositis, in petiolis foliorumque nervis strias plures, parallelas efficientibus, subiculo flavescente, raro solitariis; pseudoperidiis plerumque elongato-, raro brevi-cylindraceis, usque ad 500 μ . longis, margine albo lacinulato, reflexo; æcidiosporis polygoniis, 17-26 μ . diam., episporio hyalino, plasmate subaurantiaco.

Hab. in foliis *Mei athamantici* et *Mutellinæ*, in Germania.

93. ***Æcidium Ferulæ*** Rouss. et Dur. in Fl. d'Algerie p. 305. — Am- 2793

phigenum et petiolicolum; maculis fusco-purpureis, effusis; pseudoperidiis e subiculo crasso protuberantibus, mamillosis, subseriatim dispositis, pallide flavis, urceolato-campanulatis, in lacinias elongatas, erectas productis, tandem nudis; æcidiosporis maximis, subglobosis vel ovoideis, rufo-aurantiacis.

Hab. in foliis petiolisque *Ferulæ communis* et *tingitanæ*, ad Alger (RousSEL) et Oran (DURIEU) in Africa bor. et in Sicilia (CUBONI). — Pseudoperidia uni- v. pluriseriata, interdum irregulariter conferta; *Æcidio Fœniculi* Cast. et *Æc. Bunii* DC. quodammodo affine. Verisimiliter *Pucciniæ Ferulæ* Rud. status æcidiosporus.

94. ***Æcidium Fœniculi*** Cast. Observ. I, p. 32, Cat. plant. Mar. p. 215. 2794

— Fructicolum; maculis flavis; pseudoperidiis confertis, minutis,

cylindraceis, distinctis, seriatis, apice albis margineque lacero-fimbriato; æcidiosporis rotundatis, fuscidulis.

Hab. ad fructus *Anethi Fœniculi*, pr. Marseille Galliæ.

95. *Æcidium Osmorrhizæ* Peck in 24 Rep. of Stat. bot. pag. 92. — 2795

Maculis flavescentibus; pseudoperidiis hypophyllis vel secus venas seriatim dispositis, leniter elevatis, margine subintegro, incurvo; æcidiosporis subglobosis, flavis, dein expallescentibus, circ. 25 μ . diam.; spermogoniis centralibus, hypophyllis.

Hab. in frondibus *Osmorrhizæ brevistylis*, North Greenbush Americæ borealis.

96. *Æcidium Libanotidis* Thüm. Pilzfl. Sibir. n. 687, Mycoth. Univ. 2796

n. 1715. — Pseudoperidiis hypophyllis, sparsis, semper orbiculatim dispositis, parvulis, longe diu clausis, margine dilacerato, pallide luteis, disco ochraceo; æcidiosporis plus minusve globosulis, interdum compressis, subhyalinis v. pallidissime luteolis, episporio crassissimo, subtilissime reticulato, 21-24 μ . diam.

Hab. ad folia viva *Libanotidis* speciei indeterminatæ v. potius *Phloiodocarpi dahurici*, in pratis pr. fluv. Irba et Minusinsk Sibiricæ.

97. *Æcidium albilabrum* Kalchbr. in Flora 1875, n. 31, Thüm. My- 2797

coth. Univ. n. 1627. — Pseudoperidiis innatis (in maculis fuscis) sparsis, margine regulari subintegro, albis; æcidiosporis primum concatenatis, subglobosis.

Hab. in foliis vivis *Alepideæ amatymbicæ* et *ciliaris* ad pedem montis Boschberg prope Somerset-East, Promont. Bonæ Spei, in Africa australi (P. Mac Owan).

98. *Æcidium Cussoniæ* Kalchbr. in Grevillea X, p. 123. — Amphige- 2798

num; maculis suborbicularibus, bullatis, pallidis; pseudoperidiis subcongestis, semi-immersis, concavis, ochraceis, margine albo-crenulatis; æcidiosporis aurantiacis.

Hab. in foliis *Cussoniæ spicatae*, ad Natal Africae.

99. *Æcidium Arechavaletæ* Speg. Fungi Argentini pug. IV, n. 88. — 2799

Pseudoperidiis laxè gregariis atque per totam matricem sæpius decolorato-tumefactam sparsis, primo globuloso-depressis, epidermide velatis dein erumpentibus, margine orbiculari v. suboblongato, 200-300 μ . diam., vix prominulo, margine crassiusculo, integro v. 3-4 fisso extusque reflexo, albo-flavescentibus; contextu e cellulis subtabulari-parallelopipedis, 30 $\approx$ 20, crasse tunicatis, margine radiatim minute et dense striolatis composito; æcidiosporis globosis v. e mu-

tua pressione angulatis, 24-26 μ . diam., episporio tenui, levissimo, protoplasmate dense et minute granuloso, hyalino-flavescentibus.

Hab. ad caules vivos Galii (an Rubiæ?) speciei cujusdam, pr. Montevideo Americæ australis (J. ARECHAVALETA).

100. **Æcidium Diodiæ** Burrill Paras. Fungi of Illinois p. 228. — Hy. 2800
pophyllum, cotyledones, rarius folia inferiora occupans; maculis distinctis, parvis, viridulo-brunneis; æcidiis paucis, in greges irregulares dispositis; pseudoperidiis minutis, brevibus, margine non vel vix recurvato; æcidiosporis subglobosis vel ellipsoideis, episporio tenuiusculo, verruculoso, 21-30 $\simeq$ 17-21; spermogoniis numerosiusculis, sparsis, epiphyllis.

Hab. in foliis, cotyledonibusque Diodiæ teretis, socio sæpe *Uromycete Spermacoces*, in America boreali. — Forte *Uromycetis Spermacoces* status æcidiosporus.

101. **Æcidium Vangueriæ** Cooke in Grevillea X, p. 124. — Sparsum 2801
vel irregulariter aggregatum, hypophyllum; pseudoperidiis semiimmersis, pallidis, margine albo-lacerato; æcidiosporis globosis, luteolis, 18 μ . diam., cellulis pseudoperidiorum elongato-hexagoniis, 26 $\simeq$ 18.

Hab. in foliis Vangueriæ infaustæ et latifoliæ, sociâ sæpe *Hemileiâ Woodii* K. et C., ad Natal Africæ.

102. **Æcidium Plectroniæ** Cooke in Grevillea X, p. 124. — Spermogoniis in eadem macula ac æcidiis, epiphyllis; æcidiis hypophyllis, 2802
rotundatis, in maculis orbicularibus, decoloratis nidulantibus; pseudoperidiis paucis, prominulis, margine subintegro, pallido; æcidiosporis luteis (?).

Hab. in foliis Plectroniæ Gueinzii, ad Natal Africæ.

103. **Æcidium Pavettæ** Berk. in Hook. Journ. 1853, p. 231. — Maculis 2803
orbicularibus, hypophyllis, nigris, tenuibus; pseudoperidiis sparsis, margine angusto.

Hab. in foliis Pavettæ indicæ, in insula Ceylon.

104. **Æcidium flavidum** B. et Br. Fungi of Ceylon n. 852. — Maculis 2804
effusis, flavidis, hypophyllis; æcidiis sparsis; pseudoperidiis margine crenatis, laceris.

Hab. in foliis Pavettæ indicæ, Peradeniya in ins. Ceylon.

— «An idem ac *Æcidium Pavettæ* Berk.?»

105. **Æcidium Houstoniatum** Schwein. N. Amer. Fungi p. 293, n. 2891, 2805
Burrill, Parasitic fungi of Illinois p. 229, Ell. North Am. F. n. 1422. — Hypophyllum; æcidiis sparsis per totum folium, minutis, brevissimis, margine angusto, recurvato, pluries laciniato; æcidiosporis glo-

bosis vel ellipticis, sæpe angulatis, 15-18 $\approx$ 12-15, subtiliter tuberculatis, subaurantiacis; spermogoniis numerosis, conspicuis, sparsis, hypophyllis, purpurascentibus.

Hab. in foliis pedunculisque *Houstoniæ cæruleæ* et longifoliæ, in Pennsylvania et Illinois Americæ borealis. — Maculæ subindistinctæ.

106. **Æcidium Sambuci** Schwein. Syn. Carol. p. 67, n. 441, Burrill 2806
Parasitic Fungi of Illinois p. 228, *Æcidium Sambuciatum* Schw. Syn. North Amer. Fungi p. 294, n. 2897, Ell. N. A. F. n. 1002. — Hypophyllum vel etiam caulicolum; maculis conspicuis, flavis, bullatis; æcidiis circinatis vel sæpius dense irregulariterque aggregatis; pseudoperidiis brevibus, margine fusco, profunde in ciso et recurvato; æcidiosporis subglobosis, episporio tenui, subtiliter tuberculatis, 18-21 μ . diam., aurantiaco-fulvis; decolorantibus; spermogoniis paucissimis, centro maculæ insidentibus.

Hab. in foliis caulibusque *Sambuci canadensis*, in Carolina, Pennsylvania (SCHWEINITZ), Alabama (PETERS) et Illinois (BURRILL) Americæ borealis. — Maculæ magnæ, 2,5-5 cm. latæ; pseudoperidia aurantiaca v. pallida.

107. **Æcidium Ceanothi** Ell. et Kellerm. in Bull. Torrey botanical 2807
Club 1884, October. Ellis N. Am. Fungi n. 1428. — Pseudoperidiis epiphyllis, cupulatis, flavescentibus, margine subintegro, quasi involuto, 0,5 mm. circ. diam; contextu cellulis subiade hexagoniis, margine eleganter striatulis, hyalinis; æcidiosporis e globoso angulatis, flavescentibus; episporio hyalino, æquali, 18-22 μ . diam.

Hab. in foliis *Ceanothi ovalis*, pr. Manhattan Kansas Americæ borealis.

108. **Æcidium lonicerinum** Thüm. Pilzfl. Sibir. n. 507. — Pseudoperi- 2808
diis hypophyllis, dense gregariis, cæspites orbiculatos formantibus, elevatis, tubiformibus, luteis, parvulis, margine crasso, crenulato; æcidiosporis plus minus globosis vel irregulariter compresso-ellipticis, pallide flavidis vel subhyalinis, episporio tenui, multipunctatulo vel subplicatulo, 29-32 μ . diam.

Hab. ad folia viva *Loniceræ* speciei indeterminatæ in subalpinetis pr. fluvium Uss Sibiricæ (SAFIANOFF). — Ab *Æcidio Loniceræ* Duby et *Æcidio Xylostei* Wallr. valde diversum.

109. **Æcidium Periclymeni** Schum. Enum. Pl. Sæll. II, p. 225, Winter 2809
Die Pilze p. 264, Schroet. Pilz. Schles. p. 379, *Æcidium Xylostei* Wallr. Fl. Crypt. germ. II, p. 256, *Cæoma xylosteatum* et *Periclymenatum* Link Sp. II, pag. 52 et 53, *Cæoma Loniceræ*

Schlecht. Fl. Berol. II, pag. 115, *Æcidium Lonicerae* Duby Bot. Gall. II, p. 906, *Æcidium Caprifoliacearum* DC. Fl. Franç. II, pag. 597, ex parte. — Spermogoniis in greges parvos dispositis, flavo-melleis; æcidiis hypophyllis, plurimis secus orbes v. irregulariter dispositis, sæpe confluentibus, folium totum vel ex parte obtegentibus, maculis rotundatis vel oblongis, flavescentibus, superne brunneolis; pseudoperidiis plus minus elongato-cylindræis, raro cupulatis, margine flavescente vel albido, irregulariter lacinulato, reflexo; æcidiosporis rotundatis, rarius oblongis, polygoniis, 16-28 μ . diam., subtiliter verrucosis, aurantiacis.

Hab. in foliis *Lonicerae Periclymeni*, *Xylostei*, nigræ, cæruleæ, alpigenæ, altaicæ, in Italia, Helvetia, Gallia, Belgio, Arduennis, Germania, Britannia et Sibiria asiatica.

110. ***Æcidium Rehderianum*** Magnus in Abhandl. Bot. Vereins d. Prov. 2810
vinz Brandenburg XXIX, p. 7. — Pseudoperidiis hypophyllis, in maculis irregularibus, flavis, determinatis, haud bullatis insidentibus, parum prominulis, flavidis, margine irregulariter rupto, subrevoluto; æcidiosporis ovatis vel irregulariter angulatis, 22,4-24,8 $\approx$ 17,4-18,6, episporio æqualiter subtiliterque granulato.

Hab. in foliis *Loasæ aurantiacæ*, in horto botanico Berlin et Jena Germaniæ (REHDER). — *Æcidio Convallariæ* subaffine.

111. ***Æcidium abundans*** Peck in Botanical Gazette 1878, p. 34, Ell. 2811
et Everh. North Amer. Fungi n. 1814. — Maculis flavis, numerosis, parvis, suborbicularibus, subinde confluentibus; pseudoperidiis paucis, hypophyllis, subcircinatis, pustulatis; æcidiosporis subglobosis, 25 μ . diam., aurantiacis; spermogoniis in eadem vel diversa macula dispositis.

Hab. in foliis vivis *Simphoricarpi oreophyllæ* et vulgaris in America boreali.

112. ***Æcidium Valerianellæ*** Biv. Bernh. Stirp. rar. Sic. IV, p. 28. — 2812
Hypophyllum vel rarius epiphyllum; pseudoperidiis numerosis, distinctis, albido-flavis, campanulatis, multifidis, laciniis revolutis, angustissimis; æcidiosporis globosis, aurantiacis.

Hab. in foliis *Valerianellæ campanulatæ*, in insula Sicilia (BIVONA-BENHARDI) et *V. eriocarpæ* pr. La Rochelle Galliæ (BRUNAUD). — Huc forte pertinet *Æcidium Fediæ-olitoria* Bals. et De Not. in Bibl. ital. 1831, et Klotzsch in Herb. myc. n. 1792.

113. ***Æcidium Cephalanthi*** Seym. in Botan. Gazette IX, p. 191, Burrill 2813
Paras. Fungi of Illinois p. 228, Ell. et Everh. North Americ. Fungi

n. 1817. — Hypophyllum; maculis distinctis, brunneis, vix incrassatis; æcidiis numerosis, irregulariter gregariis; pseudoperidiis brevibus, margine abrupte recurvato, subtiliter fisso; æcidiosporis subglobosis aut ellipticis, episporio crassissimo, reticulato-rugoso, 33-43 $\approx$ 28-36; spermogoniis epiphyllis, minutis, rufescenti-brunneis.

Hab. in foliis *Cephalanthi occidentalis*, Illinois (ARTHUR, HART) et Manhattan Kansas (KELLERMAN), Americæ borealis.

114. **Æcidium Scabiosæ** Dozy et Molkenb. Fl. Neerland. II, pag. 12. 2814

Winter Die Pilze p. 264. — Æcidiis hypophyllis, in maculis rotundatis v. irregularibus, brunneis, sine ordine secus parvos greges dispositis; pseudoperidiis viridulis, dein flavidis demumque pallascentibus, cupulatis, margine denticulato, nec reflexo; æcidiosporis angulatis, sphæroideis vel oblongis, 10-24 $\approx$ 12-18. flavescentibus.

Hab. in *Knautia silvatica* et *Scabiosa arvensi*, in Neerlandia, Belgio et Germania. — Verisimiliter huc pertinet *Æcidium Succisæ* Kirchn. in Lotos 1856, p. 180.

115. **Æcidium Compositarum** Mart. Fl. Erlang. p. 314, Winter. Die 2815

Pilze p. 264, Burrill. Paras. Fungi of Illinois *Cæoma Compositarum* Schlecht. Fl. Berol. II, pag. 114, p. p. — Formæ æcidiosporæ *Pucciniæ Hieracii* simillima. Hæc species valde variabilis in plures formas dividitur, ceterum ulterius inquirendas. — Var.

Taraxaci (K. et S.) Grev. Fl. Ed. pag. 444. Cfr. *Puccinia silvatica* Schroet. — Var. **Prenanthis** (Pers.) Wallr. Fl. Crypt. Germ.

n. 1773 a. Cfr. *Puccinia Prenanthis*. — Var. **Tussilaginis** (Pers.)

Cooke Handb. n. 1624 c Cfr. *Puccinia Poarum* Nielseu. — Var.

Lapsanæ (Schulz.) Purt. in Cooke Handb. n. 1624 e Cfr. *Puccinia Hieracii* Maat. — Var. **Eupatorii** (Schw.) Cfr. Burrill. l. c. p. 231:

hypophyllum, maculis distinctis, conspicuis, paucis, flavis; æcidiis irregulariter gregariis vel subinde circinatis, pseudoperidiis brevibus irregulariter fissis moderateque recurvatis, mox pulverulentis; æcidiosporis subglobosis, verruculosis 18-20 μ . diam.; spermogoniis numerosis, sparsis epiphyllis, flavo-melleis. In *Eupatorio perfoliato* in America boreali. — Var. **Silphii** Burrill l. c.: hypo- vel sæpe etiam epiphyllum, maculis distinctis, late sparsis, haud magnis, flavis; æcidiis irregulariter consociatis, parce gregariis profunde immersis, pseudoperidiis margine pluries inciso v. pulverulento, subrecurvato; æcidiosporis subglobosis, sæpe angulatis, 11-15 μ . diam., spermogonio subpaucis, conspicuis, rufescenti-brunneis, centralibus, amphigenis. In *Silphio integrifolio*, terebenthinaceo, laciniato in America boreali. — Var. **Am-**

brosiæ Burrill l. c.: maculis ut in var. *Eupatorii*; æcidiis haud dense gregariis, irregulariter in macula dispositis, aream vacuum centram relinquentibus; pseudoperidiis brevibus, haud profunde immersis, firmulis, margine fisso, latiusculo, eleganter curvato; æcidiosporis subglobosis, ut plurimum angulatis, levibus episporio firmo, 12-25 μ . diam.; spermogoniis paucis centralibus, amphigenis, rufo-brunnei s. In *Ambrosia trifida* in America bor. — Var. **Xanthii** Burrill l. c.: hypophyllum, rarius epiphyllum; maculis minusculis, distantibus, paullulum incrassatis, flavescentibus, sæpe purpureo-tinctis; æcidiis haud dense confertis, irregulariter sparsis vel subcircinatis, plerumque ambitu irregularibus; pseudoperidiis profunde immersis, prominulis, margine pulverulento, raro lobato incurvatoque; æcidiosporis subglobosis vel ellipticis sæpeque angulatis, episporio tenuiusculo, 15-18 μ . diam. verruculosus; spermogoniis paucis, centralibus, plerumque epiphyllis, minutis, flavescenti-brunneis. In *Xanthio strumario*, socia sæpe *Puccinia Xanthii* Schwein. cujus forte status æcidiosporus, in America boreali. — Var. **Helianthi** Burrill loc. cit. pag. 232: hypo- vel raro etiam epiphyllum; maculis distinctis vel confluentibus, ut plurimum flavis, subinde incrassatis; æcidiis subcircinatis, confertiussculis; pseudoperidiis brevibus, profunde immersis, primo firmis, dein pulverulentis; æcidiosporis subglobosis v. ellipsoideis, episporio tenui, subtiliter verruculosus; spermogoniis paucis centralibus, plerumque epiphyllis, inconspicuis, flavescenti-brunneis. In *Helianthi* speciebus variis in America boreali. *Æcidiosporæ* tunc 13-16 $\approx$ 12-14, tunc 20-24 $\approx$ 15-21. — Var. **Bidentis** Burrill l. c.: hypophyllum, rarius etiam epiphyllum, maculis latiusculis, effusis, sæpe confluentibus, purpureis, vix incrassatis; æcidiis sparsis, pseudoperidiis prominulis, abrupte marginatis revolutisque, firmis; æcidiosporis subglobosis, episporio tenui, verruculoso donatis, 15-17 μ . diam.; spermogoniis paucis et inconspicuis, plerumque centralibus, hypophyllis sæpeque omnino nullis. In *Bidente frondosa* in America boreali. — Var. **Lactuæ** Burrill l. c.: hypophyllum, maculis indeterminatis, conspicuis, incrassatis, purpureis dein brunneis; æcidiis ut plurimum confertis, aream centram vacuum relinquentibus; pseudoperidiis numerosis, brevibus, pluries irregulariter fissis lateque margine recurvatis vel pulverulentis; æcidiosporis angulatis, irregulariter subglobosis vel late ovalibus, episporio tenui, verruculoso donatis, 15-18 μ . diam.; spermogoniis subnume-

rosis, epiphyllis, majusculis, convexis, rufescenti-brunneis. In *Lactuca canadensi* in America boreali.

116. **Æcidium Mac-Owanianum** Thüm. in Flora 1875, pag. 380, Myc. 2816
univ. n. 426 et n. 1023. — *Æcidiis* hypophyllis, sparsis, minutis, in macula exarida, aurantiaco-roseis; *æcidiosporis* polygoniis vel irregulariter rotundatis, 15-22 μ . diam., flavescentibus, episporio crasso, levi.

Hab. ad folia viva *Conyzæ ivifoliæ* et pinnatilobæ, Promont. Bonæ Spei ad Sommerset-East (MAC OWAN et TUCK).

117. **Æcidium Ligulariæ** Thüm. in N. Giorn. botanico italiano 1880 2817
p. 196. — Pseudoperidiis hypophyllis, parvis, orbiculatim dense gregariis, pallide luteis, margine tenui, levi, in macula utrinque vix pallescenti; *æcidiosporis* globosis vel plerumque clavatis et ellipsoideis, irregularibus, episporio tenui, dense punctulato, 30-44 $\approx$ 22-26, hyalinis.

Hab. ad folia *Ligulariæ sibiricæ*, ad Karagaïsk Orenburg.

118. **Æcidium intermixtum** Peck in Botanical Gazette 1879, p. 231. 2818
— Pseudoperidiis sparsis, hypophyllis, brevibus; *æcidiosporis* subglobosis vel ellipsoideis, 20-30 μ . diam., aurantiacis.

Hab. in foliis *Ivæ axillaris*, ad Green River, Wyoming Territ. Amer. borealis (JONES). — Forte *Pucciniæ intermixtæ* status *æcidiosporus*.

119. **Æcidium Stobææ** Kalchbr. et Cooke in Grevillea VIII, p. 70. — 2819
Pseudoperidiis 3-5 in greges congestis, albis, margine fimbriato-lacerato; *æcidiosporis* subglobosis, hyalinis, 28-30 μ . diam., recentibus verisimiliter coloratis.

Hab. in foliis *Stobææ*, ad Natal Africae. — Pseudoperidia *Rœsteliae laceratæ* similia. *Pucciniæ Stobææ* Mac Owan probabiliter connexum.

120. **Æcidium Galatellæ** Thüm. in Mycoth. Univ. n. 534. — Hypo- 2 20
phyllum, dense gregarium, in macula rufo-brunnea, purpureo-marginata, indeterminata; pseudoperidiis elevatis, margine levi, flavidis, parvis; *æcidiosporis* globoso-polygoniis vel hexagoniis, episporio levi, crassiusculo, hyalino, nucleo fulvo, globoso, 14 μ . diam.

Hab. in foliis vivis *Galatellæ dahuricæ*, ad lac. Kysykul pr. Minussinsk Sibiriae occidentalis (MARTIANOFF).

121. **Æcidium crypticum** Kalchbr. et Cooke in Grevillea IX, p. 21. 2821
— Hypophyllum; pseudoperidiis paucis (5-6) secus circulum dispositis, intra tomentum nidulantibus; *æcidiosporis* subglobosis, levibus, aurantiacis, 12-14 μ . diam.

Hab. in foliis *Gerberæ*, ad Natal Africae.

122. **Æcidium Bigeloviae** Peck in Botanical Gazette 1878, p. 34. — 2822

Maculis crassiusculis, flavis; pseudoperidiis pustulatis, hemisphaericis, margine angusto apertis; æcidiosporis subglobosis, 25-32 μ . diam., flavis vel aurantiacis.

Hab. in caulibus foliisque vivis *Bigeloviae* *Douglasii*, in America boreali. — Ab *Æcidio hemisphaerico* maculis flavis æcidiosporisque majoribus distinctum.

123. **Æcidium Barkhausiae** Roum. in Revue Mycol. 1880, p. 203. — 2823

Amphigenum; pseudoperidiis rotundatis, albidis, margine sericeo parum recurvato, greges compactos densosque efformantibus; æcidiosporis globosis, aureis, episporio punctulato præditis.

Hab. in foliis *Barkhausiae* (*Crepididis*) fœtidæ, Villa Thuret Antibes in Gallia (CH. NAUDIN). — Ab *Æc. Crepididis* et *Rostrupi* caute distinguendum.

124. **Æcidium Bahiæ** Berk. et Curt. North American. Fungi n. 578. 2824

— Totam frondem deformans; pseudoperidiis gregariis, innumèris, radiatis.

Hab. in foliis *Bahiæ*, in America boreali.

125. **Æcidium amphigenum** Hazsl. Magyarhon Uetzökgombái es ragyái 2825

(1877) p. 81 et in Just Botan. Jahresb. 1877, p. 72 nec Ellis et Kellerm. — Æcidiis irregulariter sparsis, amphigenis; pseudoperidiis margine erecto, subtiliter crenulato, flavescentibus; æcidiosporis globosis, flavis, dein brunneis.

Hab. in foliis *Apargiæ Taraxaci*, in M. Tatricis. — Adsunt quoque spermogonia epiphylla, sporulas ex albido flavas foventia.

126. **Æcidium Homogynes** Schroet. Pilz. Schles. p. 379. — Spermogo- 2826

niis epiphyllis, flavo-melleis, secus greges parvos, rotundatos dispositis; æcidiis secus series annuliformes plerumque plurimas (maculis rotundatis sæpe confluentibus) dense confertis; pseudoperidiis breviter cylindraceis, margine albo, lacinulato; æcidiosporis 17-28 $\approx$ 15-20, subtiliter punctulatis, aurantio-rufis, episporio hyalino tectis.

Hab. in foliis *Homogynes alpinæ*, in Silesia Germaniæ.

127. **Æcidium erigeronatum** Schwein. Syn. North Amer. Fungi n. 2869, 2827

p. 292, Burrill Paras. Fungi of Illinois p. 229, Thüm. Mycoth. Univ. n. 151. — Hypophyllum; maculis ut plurimum distinctis, magnis, inflatis, flavis; æcidiis subcircinatis vel irregulariter gregariis; pseudoperidiis brevibus, elevatis, margine pluries fisso valde revolutato, fragilibus, more pulverulentis; æcidiosporis subglobosis, episporio tenui verruculoso donatis, 12-15 μ . diam., flavescentibus;

spermogoniis indistinctis, paucis, plerumque centraliter gregariis epiphyllisque, flavescentibus.

Hab. in foliis *Erigerontis* annui, canadensis, strigosi philadelphici et bellidifolii, in America boreali.

128. ***Æcidium Spegazzinii*** De-Toni, *Æcidium australe* Speg. Fungi 2828
Speg.
 guaranitici I, n. 154, non Berk. — Maculis quandoque nullis, quandoque amphigenis, latissimis ac fere totum folium occupantibus, indeterminatis, pallescentibus, medio sæpe subincrassatis; pseudoperidiis hypophyllis in plagulas majusculas, 3-8 mm. diam., subellipticas constipatis, minutis 150-180 μ d., flavidis, primo subglobosis, dein punctato-apertis, margine vix exserto, crenulato, albido, membranaceis, contextu parenchymatico-loricato, e cellulis obovatis v. elliptico-rhomboideis utrinque truncato-obtusatis. 18-20 $\approx$ 12-16, crasse tunicatis, dense minutissimeque granulosis, hyalinis composito; æcidiosporis subglobosis, e mutua pressione sæpius obtuse polygoniis, 14-17 $\approx$ 12-15, episporio crassiusculo levissimo, hyalino, protoplasmate nubiloso-granuloso, flavescenti fartis.

Hab. ad folia viva *Erigerontis* bonæerensis in uliginosis pr. Paraguari Americæ australis.

129. ***Æcidium Asterum*** Schwein. Syn. Carol. p. 67. n. 444, Burrill 2829
 Paras. Fungi of Illinois p. 230, *Æcidium Solidaginis* Schwein l. c., n. 446. — Hypophyllum; maculis plerumque distinctis, sæpe bullatis, flavis vel purpureis; æcidiis subcircinatis aut irregulariter gregariis; pseudoperidiis brevibus, margine profunde fisso recurvatoque, mox pulverulentis; æcidiosporis subglobosis, episporio tenui tuberculato donatis, 12-17 μ . diam.; spermogoniis subconspicuis, paucis, ut plurimum epiphyllis, flavescentibus.

Hab. in foliis *Asteris* et *Solidaginis*, in America boreali.

130. ***Æcidium Asteris*** Thüm. in Mycoth. Univ. n. 935. — Pseudoperidiis parvis, dense gregariis, in macula orbiculata, fusca, aurantiacis, margine levi, crasso, hypophyllis; æcidiosporis irregulariter ellipsoideis vel angulosis, verruculosis, verruculis minutis, episporio tenui, intus granulosus, hyalinus, 22 μ . diam. 2830

Hab. in pratis subalpinis ad *Asteris* alpini folia viva pr. Minussinsk Sibiriae asiaticæ (MARTIANOFF.) — «An revera idem ac *Æcidium Asterum* Schwein.?»

131. ***Æcidium Hualtatinum*** Speg. Fungi Fuegiani p. 52, n. 145. — 2831
 Pseudoperidiis dense 20-30 gregariis, glomerulos discoideos, 3-8 mm. diam., macula majusculæ, pallescenti, indeterminatæ insidentes efformantibus, hypophyllis, flavidulis, modice prominulis, cylindra-

ceis, margine pallescenti-laciniato donatis, cellulis contextus rhomboideo-tetragoniis haud vel vix loricatis, obtusissime angulatis, crasse tunicatis, $50-60 = 25-30$, dense rugoso-striatis, subhyalinis; æcidiosporis globosis, $26-34 \mu$. diam., e mutua pressione angulatis, crasse tunicatis, dense minutissimeque ruguloso-granulosis, pallide flavescentibus, granuloso-farctis.

Hab. ad folia viva Senecionis (hualtatae) etc., in uliginosis in Gabel Island Patagoniae. — Huc etiam *Æcidium Senecionis* Speg. (nec Desm.) in Fungi Argentini pug. I, n. 53, duendum.

132. *Æcidium sclerothecium* Speg. Fungi patagonici n. 99. — Pseudoperidiis laxe gregariis, subepidermicis, parce prominulis, diu clausis apice tandem lacero-dehiscentibus, coriaceis, duris, pallide albo-fuscescentibus, pulvere rufescente repletis, contextu grosse celluloso, flavescente, parum perspicuo subopaco; æcidiosporis globosis vel e mutua pressione irregulariter obtuseque angulatis, $25-30 = 20-25$, crassiuscule tunicatis, minutissime densissimeque papilloso-asperulis, ex hyalino fulvescentibus, granuloso-farctis. 2832

Hab. ad ramulos juniores vivos Senecionis patagonici, pr. Puerto Deserto in Patagonia Amer. australis. — Pars infecta incrassata, pallescenti-flavescent; pseudoperidia dura, facillime integra e matrice extrahenda et ovula elliptica 700μ . ad $1,5 \text{ mm}$. longa, 500μ . ad 1 mm . lata, levia, pallescentia mentiuntur.

133. *Æcidium paludosum* Pass. Funghi parmensi in Nuovo giorn. bot. ital. 1877, p. 267. — Amphigenum, pseudoperidiis minutis, margine lacero-dentato, expansis, in maculis flavicantibus aggregatis. 2833

Hab. in foliis Senecionis paludosi, in Italia boreali.

134. *Æcidium Senecionis-crispati* Schroet. Pilz. Schles. p. 379. — *Æcidii* confertis, in annulos concentricos dispositis, maculis usque ad 1 cm . et etiam ultra latis; pseudoperidiis explanatis, margine albo, fimbriatulo; æcidiosporis aurantiaco-rufis. 2834

Hab. in Senecione crispato var. rivulari, pr. Rybnik Silesiae in Germania.

135. *Æcidium Ptarmicæ* Schroet. in Rabenh. F. E. n. 1887, Winter Die Pilze pag. 263. — *Æcidii* confertis, pluriseriatis, in maculis usque ad 1 cm . longis; pseudoperidiis explanatis, margine lacerato, albido; æcidiosporis subglobosis, $15-20 \mu$. diam., levibus, aurantiaco-flavis. 2835

Hab. in *Achillea Ptarmica*, in Germania.

136. *Æcidium Leucanthemi* DC. Fl. Franç. VI, p. 94, Linhart F. Hung. 2836

exs. n. 46, Winter Die Pilze p. 263. — *Æcidiis* plerumque in maculis magnis, rotundatis aut irregularibus, epiphyllis, flavidis, sæpe rufo-violascenti conspurcatis sive secus orbes plurimos irregulares incompletosque, sive nullo ordine insidentibus; pseudoperidiis cupulatis, margine amœne inciso, late revoluti, flavescente; æcidiosporis polygoniis, 14–21 μ 10–17, aurantiaco-flavis.

Hab. in foliis *Chrysanthemi Leucanthemi* et montani, in Gallia, Germania, Hungaria et Italia.

137. ***Æcidium Martianoffianum*** Thüm. in Bull. d. l. soc. d. Nat. de Moscou 1877, p. 135, Myc. univ. n. 821. — Pseudoperidiis parvulis, dense gregariis, epiphyllis vel etiam caulicolis, elatis, orbiculatis, rubro-aurantiacis, margine levi, albo-flavo; æcidiosporis plus minus globosis vel globoso-ovoideis, basi verticeque cum processu semigloboso hyalino, episporio levi, tenui, dilute flavidis, subpellucidis, 20–22 μ . diam. 2837

Hab. in foliis caulibusque vivis *Artemisiæ glaucæ*, in campestribus arenosis, Minussinsk Sibiriae occidentalis.

138. ***Æcidium Dracunculi*** Thüm. in Mycoth. Univ. n. 1223. — Pseudoperidiis hypophyllis vel raro etiam amphigenis, in macula rubiginoso-fusca, indeterminata, non marginata, greges parvos formantibus densis, elevatis, magnis, pallide lutescentibus, margine subcrenulato, pallidiore; æcidiosporis globosis vel late ellipsoideis, achrois, episporio tenui, levi, 16–18 μ . diam. 2838

Hab. ad folia viva *Artemisiæ Dracunculi*, in ruderatis pr. Minussinsk Sibiriae occidentalis (N. MARTIANOFF). — Ab *Æcidio Martianoffiano* Thüm., forma pseudoperidiorum æcidiosporarumque et etiam magnitudinem toto cœlo diversum.

139. ***Æcidium gnaphaliatum*** Schwein. Syn. Amer. bor. p. 292, n. 2873. 2839
— Hypophyllum, in lana foliorum caulisque primo involutum; maculis plus minusve effusis, lutescentibus; pseudoperidiis tantum paucis sed dense approximatis, sæpissime etiam simplicibus, longissimis, candidissimis, cylindraceis, apice fimbriatis; æcidiosporis aurantiaco-luteis.

Hab. in foliis caulibusque *Gnaphalii polycephali*, pr. Bethlehem in Pennsylvania Americae borealis.

140. ***Æcidium Serratulæ*** Schroet. Pilz. Schles. p. 379. — *Spermogoniis* in parvos greges dispositis, flavo-melleis; æcidiis congestis, maculas usque ad 8 mm. latas, orbiculares vel elongatas efformantibus; pseudoperidiis explanatis, margine lacinulato, albido; æcidiosporis aurantiaco-rufis. 2840

Hab. in foliis *Serratulæ tinctoriæ*, in Silesia Germaniæ.

141. **Æcidium Rhagadioli** Pass. Funghi parmensis in N. Giorn. botan. ital. 1877, p. 267. — Amphigenum; pseudoperidiis minutis, folii paginam fere omnino tegentibus, margine lacero-dentato, reflexo. 2841

Hab. in foliis *Rhagadioli stellati*, in Italia boreali.

142. **Æcidium Sonchi** West. Bull. Acad. belg. II série t. II, n. 6, Exsicc. n. 1160. — Maculis elongatis, crassis, vinosis; pseudoperidiis ovatis, flavidulis secus series lineares dispositis, clausis vel apertis, margine inæqualibus; æcidiosporis globulosis, aureis. 2842

Hab. in foliis caulibusque *Sonchi oleracei*, palustris et littoralis, in Belgio, Fennia et Sibiria. — Quoad huc pertineat *Æc. Sonchi* Karst. Myc. Fenn. IV, p. 43, dubium manet.

143. **Æcidium minussense** Thüm. Pilzfl. Sibir. n. 157. — Pseudoperidiis hypophyllis, raro etiam in pagina superiore, sine macula, plerumque secus circulum dispositis v. orbiculatim nervos circumdantibus ochraceis, mediis, margine sublevi, concolori; æcidiosporis irregulariter globosis, episporio tenui, verruculoso, cum verruculis minimis multis, dilute flavescentibus, circ. 20-28 μ . diam. 2843

Hab. ad folia viva *Mulgedii* species indeterminatæ, pr. Minussinsk. Sibiriae. — *Æcidium Sonchi* West. Les crypt. d'après l. stat. nat. p. 74, species diversa est.

144. **Æcidium hemisphæricum** Peck in Botan. Gazette 1878, p. 34. — Pseudoperidiis prominulis, sparsis vel confertis hemisphæricis, anguste apertis; æcidiosporis subglobosis vel ellipsoideis, 20-25 μ . longis, aurantiacis, episporio crasso, hyalino tectis. 2844

Hab. in foliis caulibusque vivis *Mulgedii pulchelli*, in America boreali.

145. **Æcidium Cyani** DC. Fl. Franç. VI, p. 90, Winter Die Pilze p. 263, *Cæoma Cyanatum* Link Sp. II, p. 51. — *Æcidiis* æqualiter per totam inferiorem foliorum paginam sparsis, maculæ flavæ insidentibus; pseudoperidiis albidis, primo hemisphæricis, dein apice perforatis margineque demum revolutis lacinias latas 5-6 præbentibus; æcidiosporis primo albo-flavescentibus, dein subrufulis. 2845

Hab. in foliis *Centaureæ Cyani*, in Gallia et Germania.

146. **Æcidium Pratiæ** Speg. Fungi Fuegiani p. 53, n. 147. — Maculis nullis vel folium totum nonnihil pallescens ac incrassatum relinquens; pseudoperidiis laxè gregariis, primo globosis, dein scutellato-apertis, 300-500 μ . diam., vix prominulis, flavescenti-melleis, margine non vel vix exserto parcissime fisso vel laciniato; cellulis contextus polygoniis, 40-45 = 20-30, haud vel vix loricatis, crasse 2846

tunicatis, dense verrucosis; æcidiosporis globosis vel e mutua pressione angulatis, 20-25 $\approx$ 17-20, tenui tunicatis, levibus, granuloso-farctis, flavescentibus.

Hab. ad folia viva *Pratiæ* repentis, in herbosis prope Penguin rookery in Staten Island Patagoniæ.

147. **Æcidium Campanulæ** Gaillard in Bull. Soc. Myc. Fr. tom. IV, 2847 p. 184. — Pseudoperidiis haud gregariis, hypophyllis, sine ordine vel secus orbes dispositis, macula nulla, albidis; æcidiosporis rotundatis angulatisve, 28 $\approx$ 15, pallidissimis, episporio striatulo-plicato præditis.

Hab. in foliis *Campanulæ* rotundifoliæ, in M. Pyrenæis Galliæ.

148. **Æcidium Polemonii** Peck in Bot. Gazette 1879, p. 230, Ellis N. 2848 Am. Fung. n. 1008, Burrill Paras. Illin. p. 235. — Hypophyllum; maculis plerumque distinctis, suborbicularibus, pallide brunneis vel flavo-viridulis, sæpe confluentibus; æcidiis irregulariter gregariis, plerumque aream centram vacuum relinquentibus; pseudoperidiis brevibus, margine fisso recurvato; æcidiosporis subglobosis vel ellipsoideis subinde angulatis, episporio crasso, subtiliter ruguloso, 21-25 $\approx$ 18-21, læte aurantiacis; spermogoniis paucis, centralibus, amphigenis.

Hab. in foliis *Polemonii* reptantis et *Phlogis* pilosæ, in America boreali.

149. **Æcidium Ligustri** Strauss in Sturm D.C. Fl. III, p. 43, Winter 2849 Die Pilze p. 263, Thüm. Mycoth. Univ. n. 1628. — Æcidiis secus orbes pluriseriatis, irregulares, sæpe interruptos dispositis v. dense congestis gregesque rotundatos v. elongatos efformantibus; pseudoperidiis breviter cylindraceo-cupulatis, albis, margine primo erecto, demum expanso laceratoque; æcidiosporis angulatis, 16-21 $\approx$ 12-16, dense et subtiliter verruculosi, hyalini.

Hab. in *Ligustro* vulgari, in Germania.

150. **Æcidium Fraxini** Schwein. Syn. Carol. p. 66, n. 430, Burrill Paras. 2850 Fung. of Ill. pag. 236, Ellis North Americ. Fungi n. 222, *Ræstelia Fraxinites* Schwein. Syn. Amer. bor. — Spermogoniis numerosis, vix elevatis, epiphyllis, medio maculæ insidentibus; maculis determinatis, bullatis, sæpe purpurascentibus; æcidiis plus minus dense congestis, parvis vel numerosis, elongatis, cylindraceis, demum laceratis, tandem profunde laciniatis et reflexis; æcidiosporis ellipticis, episporio tenui, tuberculato instructis, 24-32 $\approx$ 21-24.

Hab. in foliis *Fraxini* americanæ et viridis, in Amer. bor.

151. *Æcidium Ligustici* Ell. et Everh. in Bull. Torrey bot. Club 1884, 2851 p. 73. — Pseudoperidiis minutis, margine angusto subintegro, in greges 2-3 mm. latos congestis, hypophyllis; æcidiosporis irregulariter globosis, 18-20 μ . diam., aurantiacis (?).

Hab. in foliis Ligustici scotici, in ins. Anticosti Americæ borealis (Prof. J. Macoun). — Maculæ epiphyllæ, æcidiis contrapositæ, pallide flavescentes.

152. *Æcidium Phillyreæ* DC. Fl. Franç. VI, p. 96, Erb. Critt. Ital. II, 2852 n. 691, Thüm. M. U. n. 1717, Winter Die Pilze p. 263. — Pseudoperidiis plerumque numerosis denseque confertis, margine subintegro, paullulum introrsum incurvo; æcidiosporis diversiformibus, sphæroideis, ellipticis vel oblongo-piriformibus, 18-35 = 14-20, verrucosis, aurantiaco-flavis.

Hab. in foliis caulibusque Phillyreæ mediæ et latifoliæ, in Italia, Gallia, Britannia et Germania. — Fungillus in foliis pustulas vesiculosas, rotundatas, in caulibus plagulas longas, crassiusculas efformat portionemque juvenilem plerumque deformat.

153. *Æcidium Chionanthi* B. et Br. Fungi of Ceyl. n. 857. — Cras- 2853 siusculum, congestum; pseudoperidiis incarceratis nec prominentibus, margine irregulari; æcidiosporis candidis, rugosis, 25 μ . diam.

Hab. in foliis Chionanthi, in insula Ceylon. — Pulvinuli crassiusculi, rufescentes.

154. *Æcidium ebenaceum* Mont. Syll. Crypt. n. 1151. — Hypophyl- 2854 lum; macula fuliginosa; pseudoperidiis gregariis, tandem dimidiatis, cupularibus, pallide helvolis (saltem in sicco), clinodio cellulari fultis, margine erecto integerrimo; æcidiosporis 8-12-concatenatis, e fundo paralleliter erectis, mox solutis, crassis, aurantiacis, intus granulosi, 30 μ . circiter diam.

Hab. in foliis Ebenaceæ cujusdam, ad Rio-Negro Americæ meridionalis (Spruce). — Pseudoperidia 500 μ . diam. æquantia, convexa, tandem aperta, ad dimidium folii immersa.

155. *Æcidium rhytismoideum* B. et Br. Fungi of Ceylon n. 855. — 2855 Maculis orbicularibus, rhytismoideis, 12 mm. et ultra latis, hypophyllis; pseudoperidiis e crusta nigra oriundis, sparsis, margine lobato, latiusculo, e cellulis penta- vel hexagoniis constante; æcidiosporis subglobosis, levibus, plus minus angulatis.

Hab. in foliis Diospyri, in insula Ceylon (G. H. K. Thwaites).

156. *Æcidium miliare* B. et Br. Fungi of Ceyl. n. 851. — Effusum; 2856 pseudoperidiis in pagina superiore minutis, peritheciiformibus, in

pagina inferiore cupuliformibus, margine elevato; æcidiosporis globosis, 20 μ . diam.

Hab. in foliis *Diospyri ovalifolii*, Damboul in insula Ceylon. — For. **cylindraceum** B. et Br. l. c. maculis pallidis vel nigrescentibus, irregularibus; pseudoperidiis in pagina superiore peritheciiformibus, in inferiore cylindricis, basi cuticula nigrificata cinctis; æcidiosporis angulatis, 22-23 μ . diam.

157. **Æcidium Apocyni** Schwein. Syn. Carol. pag. 68, n. 448, Ell. et 2857
Everh. North Amer. Fungi n. 1823, Burrill Paras. Illin. p. 236,
Cæoma (Æcidium) apocynatum Schwein. Syn. N. Am. F. n. 2865.
— Maculis tenuibus, orbicularibus, maximis, aurantiacis, subtus pallidis; pseudoperidiis secus circulos concentricos paucos dispositis, clausis, e luteo-badiis vel fuscescentibus, apertis margine lacero pallido; æcidiosporis simplicibus, subhyalinis.

Hab. in foliis *Apocyni cannabini*, in Carolina, Kansas et Illinois Americæ borealis.

158. **Æcidium ceraceum** B. et Br. Fungi of Ceyl. n. 847. — Macu- 2858
lis flavis; pseudoperidiis sparsis quandoque petiolos ambientibus, margine angusto, denticulato; æcidiosporis angulatis, 50 μ . longis, granulatis.

Hab. in foliis *Tabernæmontanæ dichotomæ*, in insula Ceylon.

159. **Æcidium Jamesianum** Peck in Bot. Gazette 1880, p. 34, Burrill 2859
Paras. Fungi of Illinois p. 236, Ellis North Americ. Fungi n. 1012.
— Amphigenum; maculis circularibus, distinctis, flavo-viridibus sæpeve confluentibus, subbullatis; æcidiis subcircinatis vel irregulariter aggregatis, brevibus; pseudoperidiis fragilibus, mox pulverulentis; æcidiosporis subglobosis vel ellipsoideis, episporio 5 μ . crasso, conspicue denseque tuberculato, 24-45 $\approx$ 21-36, plerumque 39 $\approx$ 30, aurantiacis; spermogoniis numerosis, sparsis vel concentricè dispositis, subatris.

Hab. in foliis, caulibus petiolisque (quæ destruit) *Asclepiadis Cornuti*, tuberosæ et *Jamesii*, New Mexico (BRANDEGEE), Iowa (HOLWAY) et Illinois (BURRILL) Americæ borealis.

160. **Æcidium Brandegei** Peck in Botanical Gazette 1878, p. 34. — 2860
Pseudoperidiis amphigenis, sparsis vel gregariis, subinde seriatim dispositis, elongatis; æcidiosporis subglobosis, 20-25 μ . diam., aurantiacis.

Hab. in foliis caulibusque vivis *Asclepiadis verticillatæ*, in Amer. bor. — Pseudoperidia *Æc. Sommerfeltii* simillima.

161. **Æcidium Anisotomes** Reichardt in Sitzungsber. K. Akad.-der 2861
Wissensch. 51. Band, I, p. 3 cum tabula (1865). — Pseudoperidiis
in caulibus, pedunculis fructibusque (numquam in foliis) subseria-
tim dispositis, rarius irregulariter confertis, pallide flavescentibus,
tubulosis vel subinfundibuliformibus, margine irregulariter crenu-
lato, integro vel in lobos breves, obtusos producto; cellulis con-
textus polyhedricis, tunica crassa donatis, margine eleganter strio-
latis; æcidiosporis concatenulatis, 20-25 μ . diam., subglobosis, pal-
lide aurantiacis, levibus.

Hab. in caulibus, pedunculis fructibusque *Anisotomes* geni-
culatæ (*Peucedani geniculati*), ad lacum Wanaka Novæ Zelandiæ
(Dr. JULIUS HAAST).

162. **Æcidium nummulare** Berk. Fungi of Ceylon n. 856. — Maculis 2862
flavis; pseudoperidiis in plagas orbiculares congestis, margine an-
gusto; æcidiosporis levibus.

Hab. in *Ceropegia Candelabro*, in insula Ceylon. — Pla-
gulæ 7-13 mm. latæ.

163. **Æcidium Limnanthemi** Thüm. in N. Giorn. botanico italiano 1880, 2863
p. 196. — Pseudoperidiis epiphyllis, parvis, gregariis, plerumque
orbiculariter dispositis, paullulum elevatis, luteis, margine vix conti-
nuo, sine macula; æcidiosporis plus minusve globosis sed plerum-
que valde irregularibus, episporio subcrasso, echinulato punctula-
toque, 20-28 μ . diam., hyalinis.

Hab. in foliis vivis *Limnanthemi nymphoidis*, ad Kyb-
scherva Orenburg. — «An *Æcidii Nymphoidis* DC. varietas?»

164. **Æcidium Nymphoidis** DC. Fl. Fr. II, p. 597, Pass. in Erb. Critt. 2864
Ital. II, n. 1066, Winter. Die Pilze p. 262, *Uredo hemisphærica*
Spr. Syst. p. 751, *Cæoma nymphoidatum* Link Sp. II, p. 48. —
Epiphyllum; æcidiis sine ordine in maculis rotundatis, concentrice
zonatis dispositis gregariisque, scutelliformibus, margine vix pro-
minulo, integro; æcidiosporis angulatis, 12-20 μ . diam., aurantia-
co-flavis.

Hab. in foliis *Limnanthemi nymphoidis* et forte etiam
Nymphææ albæ et *Nuphari lutei*, in Italia, Gallia et Ger-
mania.

165. **Æcidium Sweertiae** Opiz Seznam rostlin pag. 111, Winter Die 2865
Pilze p. 205 (sub *Puccinia*), Schroet. Pilz. Schles. p. 380. — Sper-
mogoniis in greges parvos, rotundatos dispositis, flavo-melleis;
æcidiis subdistantibus, in maculis orbicularibus vel elongatis insi-
dentibus; pseudoperidiis explanatis, margine inæqualiter dentato;

æcidiosporis polygoniis, 19-25 μ . diam., subtiliter punctulatis, aurantiaco-rufis, episporio hyalino tectis.

Hab. in foliis *Sweetiæ* perennis, in Germania et Bohemia.

166. **Æcidium Myosotidis** Burrill Parasitic Fungi of Illinois p. 234, 2866

Ellis et Everh. N. Amer. Fungi n. 1832. — Hypophyllum; æcidiis uniformiter distributis, sæpe dense gregariis, majusculis, subinde prominulis; pseudoperidiis margine lato, recurvo, grosse fisso; æcidiosporis subglobosis vel ellipticis, episporio crasso, conspicue tuberculatis, 18-22 = 15-18; spermogoniis numerosis, uniformiter amphigenis, rufescenti-flavis.

Hab. in foliis *Myosotidis* vernæ, Illinois Americæ borealis (SEYMOUR).

167. **Æcidium Lappulæ** Thüm. Pilzfl. Sibir. n. 510. — Hypophyllum, 2867

gregarium; pseudoperidiis mediis, subelevatis, aurantiaco-luteis, margine crasso, integro, toroso; æcidiosporis globosis vel subelliptico-globosulis, hyalinis vel pallidissime flavidis, 25-33 μ . diam., episporio subtiliter echinulato, subcrasso, æquali.

Hab. in foliis caulibusque vivis *Echinosperti* *Lappulæ*, in deserto pr. Minussinsk Sibiriae asiaticæ.

168. **Æcidium Onosmatis** Thüm. Beitr. fl. Sib. III-V, p. 8, Mycoth. 2868

Univ. n. 2026. — Pseudoperidiis dense gregariis, amphigenis et plerumque hypophyllis, pro ratione magnis, primo longe diu clausis conoideisve, demum apertis disciformibusque, margine declinato, levi, luteo-aurantiacis, in folio maculam distinctam non efformantibus; æcidiosporis plus minusve globosis vel interdum etiam late ellipsoideis, episporio tenui, levi, intus homogeneis, pallidissime luteis, 24-29 μ . diam.

Hab. in foliis vivis caulibusque *Onosmatis* *Gmelini* et simplicissimæ, in dejectis pr. Minussinsk Sibiriae asiaticæ.

169. **Æcidium Nonnæ** Thüm. in N. Giorn. botanico italiano 1880, 2869

p. 196. — Pseudoperidiis hypophyllis, densissime gregariis, numerosis, pro ratione parvis, flavis, margine vix crenulato, crasso, concolori; æcidiosporis aut globosis aut ovalibus, episporio densissime et subtilissime punctulato, tenui, 30-40 μ . diam., hyalinis vel pallidissime flavescensibus.

Hab. in foliis vivis *Nonnæ* pullæ, Alabataj Orenburg.

170. **Æcidium Hydrophylli** Peck in 26 Rep. St. Mus. p. 78, Burrill 2870

Paras. Fungi of Illinois p. 234. — Spermogoniis centralibus, epiphyllis, numerosis; æcidiis hypophyllis, subcircinatis; maculis parvis, paucis, flavis, pallide-viridi marginatis; pseudoperidiis brevi-

bus, margine profunde crenato, latiusculo, recurvato; æcidiosporis subglobosis, episporio tenui instructis, levibus v. sublevibus, 18-21 μ . diam., flavis vel aurantiacis.

Hab. in foliis *Hydrophylli canadensis* et appendiculati, M. Catskill et Illinois Americæ borealis.

171. **Æcidium Heliotropii** Tracy et Gall. in Journ. of Mycol. 1888, 2871 p. 21. — Amphigenum; maculis mediocribus, determinatis, purpurascentibus; pseudoperidiis pallide flavis, circinatis, magnis, longissimis, latit. 4-plo longioribus, margine integro vel sæpe lacerato; æcidiosporis subglobosis, 16-19 μ . diam., episporio tenui, subtiliter ruguloso donatis.

Hab. in foliis caulibusque *Heliotropii curassavici*, ad Albuquerque New Mexico. — «Videtur *A. biformi* identicum.»

172. **Æcidium biforme** Peck in Amer. Natur. 1875, p. 351. — Am. 2872 phigenum; pseudoperidiis confertis, aliis brevibus margine albo, subintegro, aliis elongatis, margine plus minus lacinulato; cellulis 5-6-goniis; æcidiosporis subglobosis, 17-20 μ . diam., aureo-flavis.

Hab. in foliis *Heliotropii curassavici*, Utah Americæ borealis.

173. **Æcidium Atropæ** Mont. Canar. p. 89, Syll. n. 1149. — Hypo-, 2873 rarius epiphyllum; maculis oblitteratis vel fuscis; pseudoperidiis in greges minutos orbiculares, vix 2 mm. latos, annulatim congestis, ex ochraceo albicantibus, cupulam minutam, acute marginatam et integram referentibus; æcidiosporis pallidis, globosis aut gigantinis.

Hab. ad folia *Atropæ aristatæ*, in insulis Canariis (WEBB).

174. **Æcidium Withaniæ** Thüm. Fungi austro-africani n. 90. — *Æci-* 2874 diis hypophyllis vel etiam cauliculis, sparsis, ochraceis; pseudoperidiis sæpe dense gregariis, subelevatis, confluentibus, flavidis, margine levi, rotundato; æcidiosporis globosis, pallidissime griseofuscis, episporio subcrasso, levi, 17-18 μ . diam.

Hab. in foliis caulibusque vivis *Withaniæ somniferæ*, in monte «Boschberg» pr. Somerset-East, Promont. Bonæ Spei Africæ australis (P. MAC OWAN).

175. **Æcidium pampeanum** Speg. Fungi Argentini pug. III, n. 51. — 2875 Pseudoperidiis dense sparsis, sæpe totum folium vel caulem occupantibus, matrice parum tumefacta ac pallescente innatis, biformibus, foliiculis hypophyllis, totis immersis, margine tantum exsertis, cauliculis, basi tantum matriçi insculptis, longe exsertis, $\frac{1}{2}$ -1 mm. long., $\frac{1}{2}$ - $\frac{1}{6}$ mm. crass., cylindraceis, aurantio-luteis, margine la-

cerato-crenulato, albido, reflexo, contextu cellulis irregulariter polygoniis efformato, epithecio vivide aurantiaco; æcidiosporis sphæroideis vel e mutua pressione angulatis, 18-20 μ . diam., hyalinis, protoplasmate granuloso, flavo fartis.

Hab. in foliis caulibusque *Salpichroæ rhomboideæ*, in pratis secus Rio de la Plata, cerca de la Chacarita in Republica Argentina.

176. **Æcidium Cestri** Mont. Prodr. J. Fern. n. 57, Syll. n. 1147, Speg. 2876

F. Argent. I, n. 57. — Hypophyllum; maculis epiphyllis, lutescentibus; pseudoperidiis in greges orbiculares circinatim congestis, pallide flavis, cupuliformibus, margine tenui integro vel crenulato-laciniato subinde usque ad basim fisso; æcidiosporis ovoideis, concoloribus, minute asperulis, 25-30 $\approx$ 23-24.

Hab. in foliis *Cestri Parqui*, in consortio *Uromycetis Cestri*, in insula Juan Fernandez nec non in Chili et agro bonaerensi Reip. Argentinae in America australi. — Pseudoperidia laxiuscule 12-40 gregaria, erumpentia, valde exserta (300-500 μ . circ.) margine prælongo, subcylindræo, 300 μ . ad 1 mm. long., membranaceo, albidohyalino, epithecio luteo-fulvescente donata; contextus cellulis lanciformibus, subliberis, basi tantum connexis, 45-60 $\approx$ 24-30, squamoso-imbricatis, crassiuscule tunicatis hyalinis efformatus; æcidiosporæ e mutua pressione 5-6-gonæ, tenui tunicatæ, guttulis 4-6 protoplasmaticis oleosis fætæ.

177. **Æcidium Cissi** Wint. in Hedwigia 1884, p. 168. — Pseudope- 2877

ridiis hypophyllis, maculis rotundatis seu irregularibus, luteis, demum fuscescentibus, sæpe area indeterminata atra cinctis, inordinate densissimeque insidentibus, patelliformibus, margine profunde incisis, laciniis late reflexis, albidis; cellulis contextus hyalinis, crasse tunicatis, angulatis; æcidiosporis rotundato-angulatis, 16-18 μ . diam., dense verruculosus, aurantiacis.

Hab. in foliis vivis *Cissi syciifolii*, prope S. Francisco in Brasilia (E. ULE).

178. **Æcidium solaninum** Speg. Fungi Argentini pug. IV, n. 96. — 2878

Pseudoperidiis densissime gregariis, ramulos foliaque late ambientibus ac incrassantibus nec non sæpe bulloso-gyrosa efficientibus, primo subglobosis tectis, dein erumpentibus, non vel vix exsertis, margine integro (400-500 μ . diam.), albis, membranaceo-carnosulo, contextu parenchymatico e cellulis tabulari-polygoniis, 30-35 μ . diam., tunica crassa irregulariter et grosse verrucosa, hyalinis composito; æcidiosporis globosis vel e mutua pressione obtuse angu-

latis, 18-20 μ . diam., episporio crasso radiatim a seriebus densis granulorum minutissimorum percursu, protoplasmate nubiloso, vix flavo-fulvo donatis.

Hab. in foliis caulibusque vivis *Acnisti parviflori*, in montosis «Sierra Chica» prope S. José Cordoba in Republica Argentina (Dr. Hieronymus).

179. ***Æcidium Plantaginis*** Ces. in Erb. Critt. ital. Ser. I, n. 247, Ell. 2879 et Everh. North Americ. Fungi n. 1829, Linh. F. Hung. n. 141, Sacc. M. V. n. 1144, Burrill Paras. fungi of Illinois p. 232. — Maculis plerumque parvis, sæpe effusis latisque; æcidiis circinatis vel laxe sparsis, amphigenis; pseudoperidiis breviter cylindraceis, vix vel haud margine recurvatis; æcidiosporis subglobosis vel ellipticis, 18-21 μ . diam., tuberculatis.

Hab. in foliis *Plantaginis lanceolatae* et *virginicae*, Conegliano (Spegazzini) et Oldenico (Malinverni) Italiae borealis, in Hungaria (Linhart), Illinois Americae borealis (Burrill). — Spermogonia rarissime reperiuntur, plerumque æcidia præcedunt maculisque insident.

180. ***Æcidium Melampyri*** Kunze et Schm. Exsicc. n. 165, Wint. Die 2880 Pilze pag. 262, *Cæoma Melampyratum* Link Sp. II, pag. 46. — Pseudoperidiis hypophyllis, albidis, in maculis irregularibus, purpureo-rufis, sine ordine v. orbiculariter in greges rotundatos vel diffformes dispositis, cupulatis, margine revoluti, pluries inciso; æcidiosporis polygoniis, siccis flavis, subtilissime punctulatis, 15-18 μ . diam.

Hab. in foliis *Melampyri nemorosi* et *pratensis*, in Germania.

181. ***Æcidium Collinsiae*** Ell. et Everh. in Bull. Washb. Laboratory 2881 1884, pag. 4. — Pseudoperidiis sparsis, pallidis, primo hemisphaericis, dein breviter cylindraceis, 250 μ . diam., margine tenui, pallido, recurvato profundeque dentato; æcidiosporis irregulariter globosis vel subangulatis, 18-20 μ . diam.

Hab. in foliis, bracteis calycibusque *Collinsiae parviflorae*, Falcon Valley Amer. bor. (Suksdorf). — *Æcidio houstoniato* Schwein. simile.

182. ***Æcidium Gerardiae*** Peck in 25 Rep. St. Mus. p. 92, Thüm. Myc. 2882 Univ. n. 1225. — Maculis parvis, subrotundatis, sparsis, flavescenti-viridibus; pseudoperidiis plerumque paucis (4-10) minutis, brevibus, margine granulato, dentibus reflexis patentibusque; æcidiosporis globulosis, 20 μ . diam., aurantiacis.

Hab. in foliis *Gerardiæ quercifoliæ*, quæ siccitate nigrescunt, maculis exceptis, in America boreali.

183. ***Æcidium Pentastemonis*** Schwein. Syn. Carol. p. 68, n. 499, Burrill 2883
Parasitic. Fungi of Illinois pag. 233, *Æcidium Pentastemoniatum* Schwein. Syn. Amer. bor. n. 2864, Ell. et Everh. North Americ. Fungi n. 1813. — Hypophyllum; maculis determinatis, purpureis, flavo-marginatis, plerumque parvis, subinde incrassatis; æcidiis gregariis; pseudoperidiis brevibus, margine profunde recurvato, inciso; æcidiosporis subglobosis, inconspicue tuberculatis, 18-21 μ . diam. luteo-fuscis; spermogoniis paucis, in macula centralibus amphigenisque.

Hab. in foliis *Pentastemonis pubescentis*, gracilis et hirsuti, in America boreali.

184. ***Æcidium Pedicularis*** Libosch. in Mém. de Moscou, V, p. 76, t. 5, 2884
f. 1, Fuckel F. rhen. n. 2695, Winter Die Pilze p. 262, Schroet. Pilz. Schles. p. 380, *Æcidium aurantiacum* Bon. Coniom. p. 42, *Cœoma Pedicularis* Schlecht. Fl. Berol. II, p. 113. — Spermogoniis secus parvos greges dispositis, flavo-melleis; æcidiis hypophyllis in greges rotundatos vel oblongatos congestis aut sine ordine confertis; pseudoperidiis cylindraceo-explanatis, margine albo, revolutato, lacinulato; æcidiosporis polygoniis, 14-28 $\approx$ 10-16, pallide aurantiaco-rufis.

Hab. in foliis, petiolis caulibusque *Pedicularis silvaticæ* et palustris, in Germania, Rossia, Fennia, Britannia, Belgio.

185. ***Æcidium Argyreæ*** B. et Br. Ceylon Fungi n. 848. — Maculis 2885
pallidis, amphigenis; pseudoperidiis sparsis, in pagina inferiore apertis, margine obsoleto; æcidiosporis angulatis.

Hab. in foliis *Argyreæ ellipticæ*, Peradeniya in insula Ceylon.

186. ***Æcidium Gilii*** Peck in Bot. Gazette 1879, p. 230, Ell. et Everh. 2886
North Americ. Fungi n. 1831. — Maculis pallide flavis; pseudoperidiis sparsis vel gregariis, brevibus, pustuliformibus, hypophyllis, raro etiam epiphyllis, anguste apertis; æcidiosporis angulatis vel subglobosis, 20-25 μ . diam., aurantiacis plerumque 1-3-nucleatis.

Hab. in foliis *Gilii Nuttalii* et gracilis, in altit. Utah (Jones) et Falcon Valley, Wash. Territory (Suksdorff) in America boreali,

187. ***Æcidium Veronicæ*** Berk. in herb. n. 5202, Cooke in Grevillea 2887
XI, p. 97. — Sparsum, semiimmersum, fimbriato-marginatum.

Hab. in *Veronica*, in Australia (MÜLLER). — Specimina vetusta, decolorata; æcidiosporæ dispersæ.

188. **Æcidium Lycopi** Gerard in Peck 26 Rep. of Stat. bot. Mus. 2888 p. 78, Burrill Paras. p. 234. — Hypophyllum; maculis circularibus, distinctis vel plus minus confluentibus, plus minus incrassatis, purpureo-brunneis vel flavescentibus; æcidiis plerumque in foliis circinnatis dispositis, in petiolis caulibusque irregulariter gregariis; pseudoperidiis brevibus, margine recurvo, crenato; æcidiosporis subglobosis, 15-19 μ . diam., episporio tenui, tuberculato, pallide flavis; spermogoniis paucis, centralibus, rufescenti-brunneis.

Hab. in foliis, caulibus petiolisque *Lycopi europæi*, in America boreali.

189. **Æcidium Salviæ** Haszl. Magyarh. Ueszökg. 1877, p. 81 et in Just 2889 Botan. Jahresb. 1877, p. 72. — Æcidiis confertiusculis, hypophyllis; pseudoperidiis prominulis, margine rotundato, erecto; æcidiosporis globosis, flavis; spermogoniis distinctis, plerumque in pagina folii superiore gregariis; sporulis flavescentibus.

Hab. in foliis inferioribus *Salviæ nutantis*, verisimiliter ex horto botanico Buda-Pest Hungariæ (SADLER).

190. **Æcidium Phlomidis** Thüm. in Bull. d. l. Soc. d. Natur. de Moscou 1877, p. 136, Myc. univ. n. 827. — Pseudoperidiis dense gregariis, hypophyllis, sæpe foliorum paginam totam occupantibus, minutis, flavidis, margine levi, orificiis minutis; æcidiosporis plus minus globosis, levibus, episporio subcrasso, hyalinis vel pallidissime flavidis, 20 μ . diam.

Hab. ad folia viva *Phlomidis tuberosi*, in herbosis pr. Minussinsk Sibiriae occid. (MARTIANOFF).

191. **Æcidium Glechomæ** Gaillard in Bull. Soc. Mycol. Fr. tom. III, 2891 p. 184. — Æcidiis hypophyllis, sparsis, orbicularibus, 3-5 mm. diam.; pseudoperidiis numerosis, congestis, margine integris, aureo-flavis; cellulis contextus polygoniis, striatulis, verruculosus, 23-30 μ . diam., flavescentibus; æcidiosporis subrotundatis, 16-20 μ . diam., flavidulis, levissimis.

Hab. in foliis *Glechomæ hederaceæ*, Vincennes Galliae. — Maculæ epiphyllæ nullæ.

192. **Æcidium Prunellæ** Wint. in Schroet. Pilz. Schles. p. 380. — 2892 Spermogoniis secus parvos greges dispositis, flavo-melleis; æcidiis secus annulos circulares, uni- v. pluriseriatis, subapproximatos, raro sparsos dispositis, plerumque maculæ flavescenti vel rufescenti in-

sidentibus; pseudoperidiis explanatis, margine lacinulato, albo; æcidiosporis 14-20 $\approx$ 10-17, episporio tenui tectis, hyalinulis.

Hab. in foliis *Prunellæ vulgaris*, in Germania.

193. ***Æcidium tucumanense*** Speg. Fungi Argentini pugillus IV, n. 98. 2893

— Pseudoperidiis densissime gregariis, late ramulos foliaque incrassata ac contorto-gyrosa occupantibus, primo tectis, dein erumpentibus, non v. parce exsertis, minutis (0,2-0,3 mm.), margine integro v. lacero-fimbriato, 35-45 $\approx$ 20-25 tenuiusculis, contextu e cellulis ellipticis v. rhomboideis, crasse tunicatis grosseque rugoso-verrucosis, hyalinis composito; æcidiosporis globosis vel ellipticis, 25-30 μ . diam., densissime muriculato-verruculosis, ex hyalino fusciscentibus.

Hab. in foliis caulibusque *Hyptidis spicatae*, in provincia Tucuman in Rep. Argentina (Dr. LORENTZ et HIERONYMUS).

194. ***Æcidium Phrymæ*** Halst. in Journal of Mycology 1886, p. 52. 2894

— Hypophyllum; maculis effusis, conspicuis, aurantiaco-flavis, haud incrassatulis, 1-3 cm. latis; æcidiis plerumque seriatis, subinde secus orbes distinctos dispositis; pseudoperidiis prominulis, margine modice incurvis; æcidiosporis globosis, 20-25 μ . diam., episporio tenui, sublevi præditis; spermogoniis indistinctis.

Hab. in foliis *Phrymæ leptostachyæ*, ad Spirit Lake, Jowa Americæ borealis. 1886

195. ***Æcidium Verbenæ*** Speg. F. Argent. I, n. 56, Dec. Argent. n. 33. 2895

— Hypophyllum vel caulicolum; æcidiis areola purpurea vel fusciscente, senectute griseo-candicante cinctis, foliiculis maculam etiam epiphyllam concolorem efficientibus; pseudoperidiis in foliis subinde sparsis subinde 4-8-confertis, in caulibus sæpius 6-14 compacte constipatis, erumpentibus, $\frac{1}{2}$ - $\frac{3}{7}$ mm., poculiformibus, parum exsertis, margine recto vel vix reflexo, integro, rarissime denticulato, epithecio lutescenti-aurantiaco donatis; contextu cellulis subrotundis, parum angulosis, centro depressis, margine striatis, 24-30 μ . diam., hyalinis efformato; æcidiosporis subsphæroideis, 20-22 μ . diam., mutua pressione obtuse hexagoniis, levibus, crassiuscule tunicatis, protoplasmate pauco, guttulado-oleoso, flavo-ferugineo gerentibus.

Hab. in foliis caulibusque *Verbenæ litoralis* secus Rio de la Plata et Riachuelo in America australi. — Speciminibus authenticis comparatis ab hac specie haud differt *Æcidium verbenicolum* Ell. et Kellerm. in Bull. Torrey botan. Club 1884, XI, October p. 114, Ellis North Americ. Fungi n. 1434 in foliis Ver-

benæ urticifoliæ et strictæ, ad Manhattan Kansas Americæ borealis.

196. *Æcidium effusum* Niessl in Hedwigia 1881, p. 150. — Effusum, 2896
hypophyllum; æcidiosporis ovatis vel subglobosis, 19-24 μ . diam.,
episporio spinuloso donatis.

Hab. in foliis Tectonæ grandis, in horto botanico Calcutta
Indiæ orientalis (KURZ).

197. *Æcidium circinatum* Wint. in Hedwigia 1884, p. 168. — Pseu- 2897
doperidiis plerumque in foliorum pagina inferiori, rarius etiam ad
petiola nervosque primarios, in macula rotundata seu irregulari,
fusco-purpurea, area lutea determinata cincta, subtus pallidiori
plerumque circinatum dispositis aut (ad petiolos) tuberculo subma-
gno forma varia inordinate insidentibus, cylindraceis, usque ad 500
 μ . altis, candidis, margine laciniato, reflexo, late apertis, demum
truncatis; cellulis contextus rotundato-angulatis, membrana crassa,
hyalina, dense sculpturata præditis; æcidiosporis rotundato-angu-
latis, 26-33 μ . diam., verrucosis, pallide luteis.

Hab. in foliis vivis Bignoniaceæ cujusdam adhuc indetermi-
natae, pr. S. Francisco Brasiliæ (E. ULE).

198. *Æcidium Acanthacearum* Cooke in Grevillea X, p. 124. — Hy- 2898
pophyllum vel amphigenum; æcidiis laxis, suborbicularibus, in ma-
culis decoloratis nidulantibus; pseudoperidiis sparsis, centro subcon-
gestis, subrigidis, margine pallidiore, serrulato; æcidiosporis luteis.

Hab. in foliis Calophanidis Burkei et Justiciæ cujus-
dam speciei ad Natal Africae.

199. *Æcidium Tweedianum* Speg. Fungi Argentini pugillus III, n. 52, 2899
Dec. argent. n. 32. — Æcidiis orbicularibus, hypophyllis rarius epi-
phyllis v. cauliculis, 1-4 mm. lat., maculam arido-pallescentem effi-
cientibus; pseudoperidiis 10-50 gregariis, concentrice dispositis, mi-
nutis ($\frac{1}{5}$ - $\frac{1}{6}$ mm.), primo elliptico-sphæroideis tectis, dein erum-
pentibus poculiformibus, contextu e cellulis elongatis, obtuse hexa-
goniis, 20-30 $\approx$ 12-15, peripherice radiatim striatulis composito, mar-
gine reflexo, albido sublacero-crenulato, epithecio lutescente dona-
tis; æcidiosporis catenulatis, sphæroideis, e mutua pressione angu-
latis, 18-20 μ . diam., hyalinis, protoplasmate granuloso, flavo-ful-
vescente repletis.

Hab. ad folia viva Diclipteræ Tweedianæ, en la Boca del
Riachuelo et cerca de la Recoleta Republicæ Argentinae.

200. *Æcidium Lysimachiae* (Schlecht.) Wallr. Fl. Crypt. germ. n. 1770, 2900
Burrill Paras. Fungi of Illinois pag. 233, *Cæoma Lysimachiae*

Schlecht. Fl. Berol. II, p. 113, *Cæoma lysimachiatum* Link Sp. II, p. 45. — Hypophyllum, etiam petiolicolum; maculis distinctis, flavescentibus, parce incrassatis, effusiusculis; æcidiis plerumque circinatis; pseudoperidiis laxè aggregatis, cupulatis, brevibus, margine recurvo angustissimo; æcidiosporis subglobosis, episporio tenui, conspicue tuberculato, 22-27 $\approx$ 21-24, pallide aurantiacis; spermogoniis paucis, centralibus, epiphyllis.

Hab. in foliis petiolisque *Lysimachiae thyrsifloræ*, quadrifoliæ, ciliatæ, in agro berolinensi Germaniæ (SCHLECHTEN-DAL), nec non pr. Poughkeepsie (GERARD) et Illinois (BURRILL) Americæ borealis.

201. **Æcidium Glaucis** Dozy et Molkenb. in Tijdschr. v. Natuur. Geschied. XII, p. 16, t. II, f. 1-3, Winter Die Pilze p. 262, Kunze F. sel. n. 51, Thüm. M. U. n. 1021. — Semiimmersum, hypophyllum; æcidiis sparsis vel nullo ordine dispositis, sæpe orbiculariter in greges plus minus magnos consociatis; pseudoperidiis viridulis, dein ex albido flavis, breviter cylindrico-cupulatis, margine albido, revolutò, sub4-lobato, lobis lacinulatis; æcidiosporis polygoniis, 16-24 $\approx$ 14-20, subtiliter granulatis, ex hyalino flavescentibus.

Hab. in foliis caulibusque *Glaucis maritimæ*, in Belgio, Dania et Germania. — Maculæ contrapositæ flavo-virescentes, dein rufo-brunneæ.

202. **Æcidium Phytolaccæ** Rabenh. in Flora 1850, p. 627. — *Æcidiis* hypophyllis, sparsis, secus folii costas sæpius excurrentibus; pseudoperidiis 8-15-gregariis, brevibus, cylindræis, margine incrassato, leviter lacerato et subrevolutò; æcidiosporis rotundato-ovatis subinde apiculatis, flavescentibus, subtiliter granulatis, episporio crassiusculo, æquali.

Hab. in foliis *Phytolaccæ decandræ*, inter Borghetto et Civita Castellana Italiæ (RABENHORST).

203. **Æcidium Rivinæ** B. et C. Fungi of Cuba n. 606. — Crassum, deformans; margine pseudoperidiorum subintegro; æcidiosporis obovatis, 30 μ . longis, sursum angulatis, echinulatis.

Hab. in racemis *Rivinæ octandræ*, in insula Cuba.

204. **Æcidium bonariense** Speg. Fungi Argentini pugillus I, n. 52. — Hypophyllum; æcidiis rotundatis, gregariis, maculæ pallescenti, sæpius centro folium perforanti insidentibus; pseudoperidiis concentricè dispositis, minutis, 500-600 μ ., 10-35 laxè confertis, primo tectis, globulosis, in utroque folii pagina prominulis, dein inferne erumpentibus, parum exsertis, poculiformibus, margine reflexo et

regulariter radiato-crenulato, albido, contextu cellulis pentagoniis, 18-20 μ . d., margine fere tantum striolatis, hyalinis efformato, epithecio luteo-fulvo donatis; æcidiosporis subsphæroideis, mutua pressione hexagoniis, 17-19 μ . d., hyalinis, crassiuscule tunicatis, levibus, protoplasmate flavo-fuligineo repletis.

Hab. in foliis vivis *Iresines celesioideis*, numquam sociâ *Uredine striolatâ*, in paludosis Riachuelo in Republica Argentina Amer. australis.

205. **Æcidium Chenopodii-fruticosi** DC. Fl. Franç. VI, p. 92, *Cæoma* 2905
chenopodiatum Link Sp. II, p. 45, *Uredo Chenopodii* Spr. Syst. IV, p. 574. — Amphigenum; pseudoperidiis subinde 7-8 gregariis, primum tuberculiformibus, convexis, subconicis, dein apertis cylindraceis, rectis, margine irregulariter incisis, superne fragilibus deciduisque basimque tantum cupulatam relinquentibus; æcidiosporis sphæricis, aurantiacis, dein exsiccatione subhyalinis.

Hab. in foliis *Chenopodii fruticosi*, pr. Montpellier Galliae (DE CANDOLLE) et Licata Siciliae (BELTRANI et PASSERINI).

206. **Æcidium Ellisii** Tracy et Gall. in Journ. of Mycol. 1888, p. 21. 2906
 — Amphigenum; maculis mediocribus; æcidiis secus orbes definitos dispositis, sæpe circinatis, magnis, epidermide rupta basi cinctis; pseudoperidiis læte aurantiaco-flavis, margine laceratis; æcidiosporis subglobosis, vacuolis numerosis præditis, episporio crasso, leniter ruguloso, 18-22 μ . diam.

Hab. in foliis *Chenopodii albi*, ad Albuquerque New Mexico. — « Cum *Æcidio Chenopodii-fruticosi* DC. comparandum ».

207. **Æcidium Obionis** Speg. Fungi Patagonici p. 31, n. 98. — Sæ- 2907
 pius hypophyllum, folia tota sæpeque ramulos occupans; pseudoperidiis densiuscule gregariis, primo tectis, hemisphærico-prominulis, dein erumpentibus, plus minusve exsertis, 200-500 μ . diam., flavescenti-albidis, margine lacero; contextu epithecii cellulis polygoniis, 20-25 μ . diam., crassissime tunicatis, dense rugoso-striatis, pallescentibus composito; æcidiosporis e globoso ovoideis, e mutua pressione sæpe angulatis, 20-22 $\approx$ 15-18, pallidissime fulvis, tenuissime tunicatis, granuloso-farctis.

Hab. ad folia viva *Obionis* cujusdam, in Patagonia Americæ australis. — Folia infecta non vel vix incrassatula, pallescentia.

208. **Æcidium Anisacanthi** Peck in Bull. Torrey bot. Club 1883, 2908
 p. 75. — Maculis nullis vel inconspicuis; pseudoperidiis amphigenis, elongatis, griseis rubroque maculatis, margine lacerato-crenatis; æcidiosporis variiformibus, ovatis, subglobosis, ellipticis, ob-

longis vel oblongo-piriformibus, subinde apice acutiusculis, flavis vel brunneis, 22-45 $\approx$ 20-24.

Hab. in folis vivis *Anisacanthi Thurberi*, Arizona Americæ borealis (PRINGLE).

209. *Æcidium Schoberiæ* Awd. in Willk. Flora 1852, p. 537. — Pseudoperidiis tubulosis, emergentibus, 4 mm. altis, margine radiatodentato, dentibus obtusis; contextu e cellulis irregulariter hexagoniis constante; æcidiosporis..... 2909

Hab. in foliis *Schoberiæ* fruticosæ, inter Alagon et Borja, in Aragonia inferiori.

210. *Æcidium Sarcobati* Peck in Botan Gazette VI, p. 240, Ellis et Evesh. North Amer. Fungi n. 1822, *Peridermium gracile* Ell. et Harkn. New Calif. Fungi p. 16 (1884). — Subiculo incrassatulo; pseudoperidiis usque ad 3 mm. longis, cylindraceis, apice crenatolaceratis, aurantiacis; contextu cellulis pentagoniis vel plerumque hexagoniis, guttulis oleosis fartis composito; æcidiosporis subglobosis, 16-24 μ . diam., in sicco albidis, udis aurantiacis. 2910

Hab. in foliis vivis *Sarcobati* vermiculati, Utah Americæ borealis (JONES) et New California (HARKNESS).

211. *Æcidium Bougainvilleæ* Speg. Fungi Argentini pugillus IV, n. 89. — Pseudoperidiis urceoliformibus, majusculis, 0,3-0,7 mm. d., in matrice tumefacta ac fuscescente (in sicco) insidentibus, densissime aggregatis, longiuscule exsertis, tenui membranaceis, margine rotundo frustulatim evanescente donatis, albis, contextu parenchymatico, cellulis tabularibus, subquadratis, 30-40 μ . diam., hyalinis, tunica crassa dense ac grosse granuloso-verrucosa donatis composito; æcidiosporis obovato-diformibus, 35-50 $\approx$ 20-30, antice quandoque acutatis quandoque late subtruncatis, episporio præcipue ad verticem crassissimo, dense minuteque granuloso-verruculoso, hyalino, protoplasmate nubiloso, fulvello fartis. 2911

Hab. in ramulis folisque vivis *Bougainvilleæ* stipitatae, in montuosis «Sierra Chica» pr. S. José, Córdoba Reip. Argentinae (Dr. HIERONYMUS.)

212. *Æcidium Suædæ* Thüm. Fungi Ægypt. ser. III, n. 53, Mycoth. Univ. n. 1922, non Spegazz. — Pseudoperidiis densis, longissime cylindraceis, pulchre aureo-fulvis, sursum sensim dilatatis, margine pallido, membranaceo, diaphano, crenulato-inciso; æcidiosporis globosis vel elliptico-globosis, episporio subcrasso, paullulum verruculoso, dilute flavidis, 21-24 μ . diam. 2912

Hab. in foliis vivis *Suædæ veræ*, in paludibus salsis pr. Salehieb, Wadi Tumilat, *Ægypti*.

213. ***Æcidium Saccardianum*** De-Toni *), *Æcidium Suædæ* Speg. Fungi 2913 patagonici p. 100 nec Thüm. — Maculis nullis; pseudoperidiis hinc inde 3-5-aggregatis, primo subglobosis, tecto-prominulis, dein erumpentibus, longe exsertis, cylindraceis, non vel vix rigidulis, margine frustulatim lacero donatis, pallide flavescentibus; cellulis contextus irregulariter polygoniis v. subrhombideis, 30-40 $\approx$ 20-30, crasse tunicatis, dense minuteque verruculosus, subhyalinis; æcidiosporis globosis vel e mutua pressione ovoideo-angulatis, 15-20 μ . diam., episporio tenui levi, protoplasmate granuloso farctis, ex hyalino flavescentibus.

Hab. in foliis vivis *Suædæ divaricatæ*, in Patagonia Americæ australis. — Folia infecta parum incrassatulo-decolorata; pseudoperidia 500 μ . ad 1,5 mm. longa, 400-500 μ . diam. — Ab *Æc. Suædæ* Thüm. æcidiosporis levibus, episporio tenui imprimis differre videtur.

214. ***Æcidium Urticæ*** Schwein. Syn. Am. bor. n. 2898 (*Cæoma urtica-tum*), Burrill Parasitic Fungi of Illinois p. 238 nec Schum. — Hypophyllum; maculis distinctis, brunneis, flavo-marginatis; æcidiis dense gregariis; pseudoperidiis brevibus, margine angusto abrupte revoluta subtiliterque inciso; æcidiosporis subglobosis, episporio tenuiusculo, sparse tuberculatis, 15-21 μ . diam.; spermogoniis minutis, sparsis, epiphyllis, rufescenti-brunneis.

Hab. in foliis *Urticæ* et *Cynoglossi amplexicaulis*, in America boreali. — Cfr. *Puccinia Caricis*, n. 2196.

215. ***Æcidium echinaceum*** Berk. in Hook. Journ. bot. 1854, p. 231. 2915 — Maculis pulvinatis, orbicularibus, oppositis, concavis, umbrinis; pseudoperidiis spiniformibus, rigidis, nitidis, serius apice laciniatis; æcidiosporis globosis, circ. 28 μ . diam., flavescentibus.

Hab. in pagina inferiori foliorum *Actinodaphnes molo-chinæ*, in insula Ceylon. — Maculæ 2-5 mm. latæ.

216. ***Æcidium Allenii*** Clinton in Peck 24, Rep. of St. Mus. p. 93, 2916 Ellis et Everh. North Americ. Fungi n. 1815. — Maculis latis, indeterminatis, flavescentibus; pseudoperidiis hypophyllis, elongatis, cylindraceis, albis, foliorum tomento subvelatis; æcidiosporis 25 μ . diam., subglobosis, aurantiaco-lateritiis.

*) Extantibus *Æ. Spegazzinii* et *Æ. Spegazziniano*, hanc speciem magistro meo illustrique mycologo P. A. SACCARDO dicatam volui.

Hab. in foliis *Shepherdia canadensis*, Buffalo (CLINTON) et Goat. Island. (CLARA CUMMINGS) Amer. bor. — Maculæ epiphyllæ.

217. *Æcidium Cookeanum* De-Toni, *Æcidium Lorantheri* Cooke in Gre-villea XIV, p. 13, vix Thüm.? — Gregarium, amphigenum; pseudo-peridiis emergentibus, elongatis, cylindraceis, margine lacerato; æcidiosporis angulariter subglobosis, aurantiacis, 20 μ . diam. 2917

Hab. in foliis *Loranthi*, in horto botanico Durban, Africae (WOOD). — Cellulæ pseudoperidii oblongæ, irregulares, 30 $\approx$ 20.

218. *Æcidium Lorantheri* Thüm. Fungi Entr. n. 27, p. 3 vix Cooke — 2918
Pustulis maximis, usque ad 1,5 cm. diam. tuberascentibus, ramuliculis, fabæformibus vel subglobosis vel hemisphæricis; pseudoperidiis densissime gregariis, magnis, cupuliformibus, flavidis, margine sublevi, erecto, tenui; æcidiosporis globosis vel ovoideo-globosis, magnis, episporio subcrasso, levi, hyalinis, 30-36 μ . diam.

Hab. in ramulis vivis *Loranthi uruguensis*, prope Santa Cándida, Entrerios Americæ australis.

219. *Æcidium Osyridis* Rabenh. Krypt. Fl. I, p. 19, Winter Die Pilze 2919
p. 262. — Pseudoperidiis cylindraceis, prominulis, dilute flavescen-tibus, margine inciso; æcidiosporis subconcoloribus.

Hab. in *Osyride alba*, in Germania et ad M. Gargano Italiae.

220. *Æcidium pustulatum* Curt. in Peck 23 Rep. of St. Bot. p. 60, Ellis 2920
N. Am. Fungi n. 224, Burrill Paras. Fungi of Illinois p. 237. — Hypophyllum; maculis parvis, e rufo flavescen-tibus, crassiusculis, sæpe superne concavis, inferne convexis; pseudoperidiis dense gre-gariis, brevibus, sæpe secus orbem centro vacuum dispositis, margine subtiliter inciso recurvatoque; æcidiosporis subglobosis, inconspi-cue tuberculatis, 16-21 μ . diam., pallide aurantiacis; spermogoniis paucis, flavescen-tibus, epiphyllis.

Hab. in foliis *Comandra umbellatæ*, in America boreali.

221. *Æcidium Hamiltoniæ* Thüm. in Bull. Torrey Bot. Club 1879, n. 3. 2921
— Hypophyllis, rarissime amphigenis, sparsis, irregularibus, in folio-rum pagina superiore maculam ferrugineam formantibus; pseudo-peridiis densis, dilute flavidis, parvis, cupuliformibus, margine cre-nulato, tenui; æcidiosporis polyhedris v. irregulariter ovoideis, di-lute flavescen-tibus vel hyalinis, episporio reticulato punctulatoque, tenui, 30-40 $\approx$ 16-22.

Hab. in foliis vivis *Hamiltoniæ umbellatæ*, St. Louis Americæ borealis.

222. *Æcidium Hippuridis* Kunze in Winter Die Pilze p. 265. — *Æci-* 2922
diis plerumque solitariis aut irregulariter sparsis, maculis nullis

vel pallidis, primo albidis, dein dilute flavescentibus; pseudoperidiis tubulosis, sursum subdilatis, flavo-albidis, margine subcrenulato; æcidiosporis globosis aut ovoideis, pellucidis, ex albido flavis.

Hab. in Hippuride vulgari, in Germania.

223. *Æcidium Euphorbiæ* Gmel. in L. Syst. nat. II, pag. 1473, p. p. 2923

Winter Die Pilze pag. 261, *Lycoperdon Euphorbiæ* Schrank Fl. Bav. II. p. 631. — Æcidiis plerumque per totum folium æqualiter sparsis, primo conoideis, dein urceolatis vel cupulatis, margine albo, lacerato, mox evanido; æcidiosporis polygoniis, usque ad 35 μ . longis, 19–26 μ . diam., subtiliter verrucosis, aurantiaco-flavis.

Hab. in foliis Euphorbiæ dulcis, verrucosæ, punctatæ, maculatæ, dentatæ, polygoniifoliæ, hypericifoliæ Gerardianæ, Esulæ, lucidæ, virgatæ, in Italia, Austria, Germania, Britannia, Amer. bor. et Ægypto. — «Sub hoc nomine fere omnia *Æcidia* ad *Euphorbias* vegetantia tradita sunt, quorum cyclis evolutionis nondum notus est». Spermogonia pseudoperidia præcedentia, in eodem vel diverso folio evoluta.

224. *Æcidium lobatum* Körn. in Hedwigia 1877, pag. 36, Wint. Die 2924

Pilze p. 261. — Æcidiis parum prominulis, margine in lacinias paucas (plerumque 4), latas, longissimas, albas, varie involutas, mox deciduas diviso; æcidiosporis sphæroideis, 17,5–19,5 $\approx$ 16–17,5, aurantiaco-flavis.

Hab. in Euphorbia Cyparissia, in Germania. — Plantam matricem eodem modo ut *Æcidium Euphorbiæ* (*Uromycetis Pisi*) deformat.

225. *Æcidium Pammelii* Trel. in Journ. of Mycol. I, p. 15, Ellis North 2925

Amer. Fungi n. 1427. — Maculis brunneis, orbicularibus vel ellipsoideis, subpustulatis, centro spermogonia gregaria gerentibus; æcidiis plerumque hypophyllis, concentrice dispositis, raro paucis epiphyllis; pseudoperidiis brevibus, albis, margine angusto circ. 10-lobo; cellulis contextus hyalinis, rugosis, subsphæroideis, 20–25 μ . diam.; æcidiosporis polygoniis, isodiametricis vel elongatis, 20–25 μ . diam., rufo-aurantiacis.

Hab. in foliis Euphorbiæ corollatæ, in America boreali.

226. *Æcidium detritum* Thüm. in Mycoth. univ. n. 1324. — Hypo- 2926

phyllum, sparsum, maculam fuscam in pagina foliorum superiore formans; pseudoperidiis primo cylindricis, margine sublevi, dilute lutescenti-albidis, parvis, postremo cito applanatis detritisve; æcidiosporis plus minusve ellipsoideis, utrinque rotundatis, episporio folliculoso, crasso, inæquali, hyalinis, homogeneis, 25–28 $\approx$ 18–20.

Hab. in foliis vivis *Phyllanthi Sellowiani* (vulgo Sarandi blanco) pr. Concepcion del Uruguay in America australi (P. G. LORENTZ).

227. **Æcidium Crotonopsidis** Burrill Parasitic Fungi of Illinois p. 237, 2927
Ellis et Everh. North Amer. Fungi n. 1824. — Hypophyllum, cotyledones, rarius caulem et folia inferiora occupans; maculis distinctis, obscure coloratis, cotyledonibus flavescentibus; æcidiiis parce numerosis, irregulariter gregariis; pseudoperidiis breviter cylindraceis, grosse fissis lateque margine patentibus, tenuibus at firmis; æcidiosporis irregularibus, ut plurimum ellipticis, episporio crassiusculo, verruculoso donatis, 15-18 $\approx$ 12-15; spermogoniis paucissimis, sparsis, epiphyllis.

Hab. in foliis, cotyledonibus etc. *Crotonopsidis linearis*, Illinois Americæ borealis (SEYMOUR).

228. **Æcidium tordillense** Speg. Fungi Argentini pug. IV, n. 97. — Ma- 2928
culis nullis v. foliis infectis incrassatulo-flavescentibus; pseudoperidiis hypophyllis, sæpe totum folium occupantibus, densiuscule gregariis primo subsphæricis, tectis, dein erumpentibus vix exsertis, margine latiusculo, integro, non v. vix reflexo, pallide flavo-fulvescentibus, contextu cellulis pulchre elongato-hexagoniis, acutiuscule angulatis, 20 $\approx$ 12-14, crassiuscule tunicatis, ubique verruculosis, granuloso-farctis, hyalinis composito; æcidiosporis globosis v. subelongatis, 12-15 $\approx$ 10-12, e mutua pressione angulatis, episporio tenui, levissimo, hyalino, protoplasmate parco, granuloso, vix flavescente repletis.

Hab. in foliis *Euphorbiæ serpentis*, ad ripas lacunæ subsalsæ del Rincon de Fierro, in silva Tordillo Amer. australis. — Facile cum *Uredine tordillensi* Speg. in eadem planta vigente metagenetice connexum.

229. **Æcidium Populi** Hornem. Fl. Dan. t. 1319, Wallr. Fl. Crypt. germ. 2929
n. 1774. — Pseudoperidiis dense congestis, hypophyllis, patiniformibus, macula rubro-lutea cinctis; æcidiosporis cæsiis.

Hab. ad *Populum tremulam* rarius saltem ex initiis in Dania et Germania. — «Vix hujus generis».

230. **Æcidium strobilinum** (Alb. et Schwein.) Reess Rostp. pag. 105, 2930
t. II, f. 7-10, Linhart F. Fung. exs. n. 45, Winter Die Pilze p. 260, Schroet. Pilz. Schles. p. 381, *Licea strobilina* Alb. et Schwein. Consp. p. 109, *Perichaena strobilina* Fr. S. M. III, p. 190, Corda Icon. Fung. V, p. 56, t. III, f. 30, *Phelonites strobilina* Fr. Summa Veg. scand. pag. 459. — Æcidiiis dense gregariis, numerosis,

plerumque superficiem internam squamarum fere ex toto obtegentibus, pallide cinnamomeis vel luride fuscis, hemisphæricis, ellipticis vel e mutua pressione polygoniis, usque ad 1 mm. diam.; pseudoperidiis brunneolis, circumscisso-dehiscentibus; æcidiosporis irregularibus, rotundatis vel ellipticis, rarius oblongis, 18-35 $\approx$ 16-22, episporio hyalino, plasmate sordide flavo-rufescente, dein expallescente fartis.

Hab. in strobilis *Abietis excelsæ*, in Helvetia, Austria, Germania, Britannia, Fennia, Hungaria, Bohemia, Suecia.

231. *Æcidium Balansæ* Cornu in Pat. Champ. Nouv. Calédonie p. 6, 2931 n. 84. — Pseudoperidiis magnis, 1 mm. diam., in folii contextu hypertrophico sparsis; æcidiosporis angulatis, echinatis, 40-46 $\approx$ 25-33, pallide flavescentibus; spermogoniis contraposis.

Hab. ad folia *Dammaraæ ovatæ*, in Nova Caledonia (BALANSA).

232. *Æcidium elatinum* Alb. et Schwein. Consp. p. 121, Winter Die 2932 Pilze p. 261, Schroet. Pilz. Schles. pag. 381, Linh. Fungi Hung. exs. n. 142, *Cæoma elatinum* Link Sp. II, p. 66, *Peridermium elatinum* Kunze et Schm. D. Schwämme n. 141. — Spermogoniis immersis, conoideo-prominulis, flavo-melleis; æcidiis hypophyllis, secus series 2 v. 1 dispositis, latis; pseudoperidiis albis, tunica circ. 500 μ . lata, irregulariter laceratis; æcidiosporis ellipsoideis vel polygoniis 16-30 $\approx$ 14-17, episporio hyalino, grosse verrucoso, plasmate aurantiaco-rufescente.

Hab. in acubus *Abietis albæ*, *balsameæ*, *pectinatæ* et *excelsæ*, quæ abbreviata, incrassata, flavo-viridula fragiliaque fiunt, in Germania, Belgio, Hungaria, Britannia, America boreali.

233. *Æcidium bermudianum* Farlow in Botanical Gazette 1887, p. 206. 2933 — Tuberculis perennantibus, globosis aut subreniformibus, juventute sæpius distincte lobatis, primo rufo-fusculis, dein obscurioribus, 7-12 mm. diam.; æcidiis minutis, 200-250 $\approx$ 200; pseudoperidii cellulis ovatis vel ellipsoideis 50 $\approx$ 38, ruguloso-sinuosis; æcidiosporis plerumque polygoniis, raro sphæroideis, 19-23 μ . diam., levibus v. leniter rugulosis, brunneis.

Hab. in ramulis *Juniperi Bermudianæ* et *J. virginianæ*, Bermuda (FARLOW).

234. *Æcidium fragiforme* Ces. Fungi Born. p. 26. — Pseudoperidiis 2934 margine acuto integro donatis; æcidiosporis (in sicco) hyalinis v. flavidulis, globosis, grosse nucleatis, episporio minutissime granulato, 40 μ . diam.

Hab. in pagina superiore folii coriacei, illa *Podocarpi latifolii* vel *Dammarae robustae* referentis, ad Sarawak in ins. Borneo. — Pustula pisi magnitudinem metiens.

235. *Æcidium Ephedrae* Speg. Fungi argentini pug. IV, n. 90. — 2935

Pseudoperidiis urceoliformibus, majusculis, 1,5 mm. diam., e matrice incrassatulo-carnosa et carneo-fuscescente subseriatim erumpentibus, candidis, longiuscule exsertis, involucri tenui membranaceo, albo-hyalino, contextu parenchymatico, cellulis magnis, oblongo-irregularibus, 60-80 $\approx$ 22-26, tunica crassa, grosse verrucosa donatis, composito, fragili, margine mox oblitterato fissoque; æcidiosporis globosis, e mutua pressione ellipticis v. irregulariter ovoideis, 25-40 $\approx$ 18-22, episporio hyalino densissime minuteque granuloso-verruculoso, protoplasmate fulvello, nubiloso donatis.

Hab. in ramulis vaginisque *Ephedrae Tweediana*e, in montuosis Sierra Famatima pr. Vallecito, provinciae la Rioja, in Amer. australi (Dr. Hieronymus).

236. *Æcidium myricatum* Schwein. Syn. N. Amer. Fungi pag. 294, 2936

n. 2894 (sub *Cæomate*), Ellis North Amer. Fungi n. 230. — Maculis valde intumescens, ex atro purpurascens, sparsis, variae formae et magnitudinis, sæpe angulatis; pseudoperidiis brevibus, subimmersis, sparsis vel subgregariis, late apertis, brunneis; æcidiosporis læte aurantiacis, subglobosis, 25-32 μ . diam.; spermogoniis epiphyllis.

Hab. in foliis petiolisque *Myricae ceriferæ*, New York (Torrey) Riverhead (Peck) Massachusetts (Farlow) et Newfield (Ellis) Americae borealis.

237. *Æcidium pseudo-columnare* Kühn in Hedwigia 1884, pag. 168, 2937

— Æcidiis hypophyllis, biseriatis, decolorantibus at non deformantibus; pseudoperidiis albidis, 0,5-2 mm. altis, margine irregulariter laceratis; æcidiosporis albidis, rotundatis, ovatis, elongato-ellipticis vel irregularibus, subinde obtuso-conoideis vel rotundatis, (in sectione trigonis), 22-37 $\approx$ 18-26, subtiliter verrucosis.

Hab. in acubus ligni brasiliensis «Blauen» pr. Badenweiler in Silva nigra.

B) Species in Monocotyledoneis vigentes.

238. *Æcidium Hydrocharidis* Rabenh. D. Krypt. Fl. p. 16, n. 155. — 2938

Pseudoperidiis vix infossis, margine crenulatis, orbiculariter dispositis; æcidiosporis rufescentibus.

Hab. in foliis *Hydrocharidis Morsus-Ranæ*, in Longobardia Italiae borealis.

239. *Æcidium Hartwegiæ* Thüm. in Flora 1877, p. 411, Myc. univ. 2939 n. 824, *Æcidium Chlorophyti* Mac Owan mscr. — Pseudoperidiis hypophyllis, dense gregariis, concentrice dispositis, in macula vix decolorata, luteis, parvis, margine sublevi, pallidiore, subasperato; æcidiosporis globoso-ellipticis, regularibus, episporio subcrasso, levi, hyalino, dilute flavidis, intus similaribus, 20-34 μ = 18-20.

Hab. in foliis vivis *Hartwegiæ elatæ* et *comosæ* (*Chlorophyti Sternbergiani*), in Africa australi (Mac Owan et Fuck).

240. *Æcidium Iridis* Gerard in Peck 24 Rep. of St. Bot. pag. 93, 2940 Thüm. Myc. univ. n. 1519. — Maculis ovalibus vel orbicularibus, flavis; pseudoperidiis amphigenis, brevibus, seriatis; æcidiosporis 20-25 μ . diam., aurantiacis; spermogoniis numerosis, centralibus, amphigenis.

Hab. in foliis *Iridis versicoloris*, ad Poughkeepsie (Gerard) et Buffalo (Clinton) Americae borealis.

241. *Æcidium tuberculatum* Ell. et Kell. in Journ. of Mycol. 1888, 2941 p. 26. — Amphigenum at copiosius hypophyllum, maculis nullis; æcidiis primo tuberculato-hemisphaericis, 500-750 μ . diam., confertis; pseudoperidiis cupulatis, margine leniter dentato; æcidiosporis subglobosis, 18-20 μ . diam., vel subellipticis, oblongis ovatisve, 20-27 μ = 18-23.

Hab. in foliis *Callirhœes involucratæ*, Rooks Co. Kansas Americae borealis (E. Bartholomew). — Ab *Æcidio Callirhœes* E. et K. omnino distinctum.

242. *Æcidium Crini* Kalchbr. in Grevillea XI, p. 26. — Pseudoperidiis amphigenis, plerumque hypophyllis, in maculis olivaceo-fuscis, 1 cm. et ultra latis, rotundis vel ellipticis, dense circinatim congestis, ochraceis, profunde urceolatis, margine reflexo, pulverulento, albo-crenulato; æcidiosporis....

Hab. in foliis vivis *Crini capensis* et *Cooperi* (?) ad P. Natal Africae. — Ab *Æcidio Orchidearum* habitu parum distinctum.

243. *Æcidium Leucoji* Bergam. Bals. et De Not. in Erb. Critt. ital. 2943 ser. II, n. 99 et in Bibl. ital. XLIV, n. 90, Linhart in Hedwigia 1883, p. 9, F. Hung. n. 48. — *Æcidiis* in foliis, caulibus pedicellisque greges magnitudine varios formantibus, circa spermogonia concentrice disperse dispositis; pseudoperidiis albis seu albo-flavis, orbiculatis, patelliformibus, margine reflexo, lobato; æcidiosporis polygoniis, rotundatis, verrucosis, aurantiacis, 16-31 μ = 15-24 μ .

Hab. ad folia viva *Leucoji* æstivi, Padova (SACCARDO) et Pavia (DE NOTARIS, PENZIG) Italiæ borealis nec non ad ripam fluminis *Leitha* Hungariæ (LINHART). — Exemplaria authentica speciei homonymæ a Linhart descriptæ, quæ in herbario Saccardiano vidi, cum speciminibus italicis perfecte congruunt ideoque diagnosin Linhartianam transcripsi.

244. *Æcidium capense* Berk. et Curt. Fungi of the North Pacif. Ex- 2944
ped. n. 141. — Maculis nullis; pseudoperidiis elongatis, cylindricis, apice dilatatis, dentatis.

Hab. in fructibus *Asparagi* vel plantæ cujusdam affinis, ad Caput Bonæ Spei Africæ australis.

245. *Æcidium Convallariæ* Schum. Enum. Pl. Saell. II, p. 224, Linh. 2945
F. Hung. exs. n. 139, Winter Die Pilze pag. 259, Schroet. Pilz. Schles. p. 380, *Æcidium Majanthæ* Schum. l. c. *Cæoma elegans* Schlecht. Fl. Berol. II, p. 115, *Cæoma polygonatum* Link Sp. II, p. 44, *Cæoma convallariatum* Link Sp. II, p. 42, *Æcidium flavum* Bon. Con. p. 43, p. p. — Spermogoniis numerosis, in area centrali maculæ insidentibus, obscure rufescenti-brunneis; maculis distinctis, plus minus confluentibus, flavo-citrinis, vix incrassatis; æcidiis laxè confertis, hypophyllis, irregularibus vel subcircinatis; pseudoperidiis cupulatis, margine laciniato-dentato, reflexo, albido, flavidis vel pallidis; æcidiosporis polygoniis, 15-30 = 14-22, subtiliter verruculosus, aurantiaco-rufis; spermogoniis secus parvos greges dispositis, numerosis, exiguis, conoideis, flavo-melleis.

Hab. in foliis aliisque partibus viridibus *Convallariæ* majalis, *Majanthemi* bifolii, *Polygonati* multiflori, biflori et verticillati, *Paridis* quadrifoliæ, *Lilii* canadensis, *Streptopti* amplexifolii, *Smilacinæ* stellatæ et racemosæ, in Belgio, Britannia, Germania, Hungaria, Fennia et America boreali.

246. *Æcidium Callixenis* Berk. in herb. n. 5163, Cooke in Grevillea 2946
XI, p. 97 (nomen).

Hab. in *Callixene* marginata, in ins. Falkland Australiæ.

247. *Æcidium Dioscoreæ* B. et Br. Fungi of Ceyl. n. 853. — Macu- 2947
lis rufis, amphigenis; pseudoperidiis peritheciiformibus, in pagina superiore sero ruptis.

Hab. in foliis *Dioscoreæ*, ad Peradeniya ins. Ceylon.

248. *Æcidium Trillii* Burrill Paras. Fungi of Illinois p. 238. — Hy- 2948
pophyllum; maculis distinctis vel subinde confluentibus, circularibus, effusis, flavescentibus; æcidiis circa aream centram circula-

rem vacuum dense aggregatis; pseudoperidiis brevibus, tenuibus fragilibusque, mox pulverulentis; æcidiosporis subglobosis, episporio tenuissimo, levibus, 19-24 μ . diam.; spermogoniis numerosissimis, prominulis, centralibus, amphigenis.

Hab. in foliis *Trillii recurvati*, Illinois Americæ borealis. — Ab *Æcidio Convallariæ* pseudoperidiis fragilioribus evanidisque æcidiosporis levibus episporio tenuissimo præditis differt.

249. **Æcidium macrosporum** Peck 23 Rep. St. Mus. p. 61. — Macu- 2949
lis parvis, orbicularibus, flavescentibus, haud incrassatis; pseudoperidiis elongatis, cylindraceis, paucis, secus orbes dispositis æcidiosporis subglobosis, 40-50 μ . diam., rugulosis, flavis vel dilute aurantiacis; spermogoniis numerosis, distinctis, epiphyllis.

Hab. in foliis *Smilacis rotundifoliæ*, Riverhead Amer. bor. — Ab *Æcidio Smilacis* Schwein. distinctum, *Æcidio hydnoi* deo B. et C. proximum.

250. **Æcidium Smilacis** Schwein. Syn. Fung. Carol. pag. 69, n. 452, 2950
Burrill Fung. Illin. p. 238. — Hypophyllum; maculis magnis, circularibus, subinde effusis, pallide flavescentibus, incrassatulis; æcidiis irregulariter sparsis gregariisve; pseudoperidiis brevibus, margine, lato recurvato, grossiuscule inciso; æcidiosporis irregularibus, plerumque angulatis, ellipticis aut oblongis, episporio crasso, conspicue tuberculatis, 18-22 $\approx$ 15-18; spermogoniis numerosiusculis, sparsis, plerumque epiphyllis, flavo-melleis.

Hab. in foliis *Smilacis herbacææ*, in America boreali.

251. **Æcidium Safianoffianum** Thüm. Pilzfl. Sibir. n. 506. — Pseudo- 2951
peridiis hypophyllis, breviter tubiformibus, postremo plus minusve corrugatis, dilute luteis, margine crassissimo, subcrenulato; æcidiosporis plus minusve globosulis v. subovoideis et plerumque compressis, hyalinis, homogeneis, episporio levi, tenuissimo donatis, 24-34 μ . diam.

Hab. in foliis vivis *Lilii Martagonis*, in subalpinis prope fluvium Uss Sibiricæ (SAFIANOFF).

252. **Æcidium scillinum** Dur. et Mont. Fl. Alg. I, p. 307, Syll. n. 1148. 2952
— Pseudoperidiis in folio vix decolorato sparsis, minutis, pallide flavis, subcompressis, margine aperto integris; æcidiosporis pedicellatis, initio concatenatis, demum solutis, sphaericis, flavis, episporio crasso, levi.

Hab. in foliis *Scillæ autumnalis*, circa La Calle Algeriæ (DURIEU).

253. **Æcidium Muscari** Linhart in Hedwigia 1883, p. 22 et F. Hung. 2953

exs. n. 49 et 138. — *Æcidiis* ad maculas flavidas vel pallidas secus plagulas elongatas plerumque sparsim vel lineari modo dispositis; pseudoperidiis margine introrsum vergenti, subintegro donatis; æcidiosporis rotundatis, ellipticis vel piriformibus, 19-32 = 15-20, verrucosis, aurantiacis.

Hab. ad folia viva *Muscari comosi*, in Hungaria.

254. *Æcidium alliicolum* Winter in Hedwigia 1885, pag. 260, F. E. 2954 n. 3317. — Pseudoperidiis dense stipatis, greges elongatos plerumque caulem ambientes sæpeque eum parum tumeficientes efformantibus, breviter cylindraceis, sursum sæpe parum dilatatis, margine crenato, subinciso, erecto vel parum recurvato, albidis, circ. 500 μ . altis; æcidiosporis rotundato-angulatis, 21-26 μ . diam., aurantiacis, minutissime denseque verruculosis.

Hab. in foliis scapisque vivis *Allii stellati*, in America boreali (C. H. DEMETRIO).

255. *Æcidium reticulatum* Thüm. Pilzfl. Sibir. n. 682. — Pseudoperidiis hypophyllis, gregariis, orbiculatim dispositis, pallide luteis, mediis, margine continuo, levi, applanatis; æcidiosporis valde irregularibus, plerumque polygoniis, numquam globosis et regularibus, dense reticulatis, episporio crassissimo, hyalinis, 16-32 μ . diam.

Hab. ad folia viva *Allii victorialis*, in silvis alpinis montis Kerlygan Sibiriae.

256. *Æcidium Asphodeli* Cast. Observ. I, pag. 34, Cat. plant. Mars. 2956 p. 216, Thüm. Mycoth. Univ. n. 1027. — Caulicolum et amphigenum; maculis pallidis; pseudoperidiis numerosis, approximatis, subelongatis, dilute flavis, apice albidis, margine lacero, extus fimbriatulo, villosa; æcidiosporis subglobosis, flavescenti-brunneis.

Hab. in foliis caulibusque *Asphodeli fistulosi*, pr. Marseille Galliae (CASTAGNE) et *Asphodeli tenuifolii*, sociâ sæpe *Pucciniâ Asphodeli*, in ins. Salamis Græciæ (HELDREICH).

257. *Æcidium Barbeyi* Roum. in Revue Mycologique 1881, n. 9, p. 25, 2957 *Oomyces Barbeyi* Roum. Revue mycol. 1880, p. 196 t. XV, f. 3. — Cellulis pseudoperidii angulatis, 20-25 μ . diam., punctulatis, subhyalinis; æcidiosporis globoso-inæqualibus, 18-20 μ . diam., subhyalinis, guttis 1-4 aureis foetis.

Hab. in caulibus et foliis vivis *Asphodeli fistulosi*, Palestina, Syria, Jericho et Asfaltide. — Cfr. *Pucciniam Asphodeli* Duby.

258. *Æcidium Uvulariæ* Schwein. Syn. Carol. p. 69, n. 453, *Cæoma* 2958 (*Æcidium*) *uvulariatum* Schwein. Syn. North Amer. Fungi p. 292,

n. 2858. — Orbiculare, candidum, tenue; pseudoperidiis secus circulos concentricos congestis, in ipso centro nullis; pulvere albo.

Hab. in foliis *Uvulariæ* perfoliatæ et sessilifoliæ, in America boreali. — Maculæ 6-7 mm. diam.

259. *Æcidium incarcerationum* B. et Br. Ann. N. H. n. 1469 et Rabenh. 2959 F. E. n. 1492. — *Æcidii* minutis, confertis, maculæ irregulari insidentibus; pseudoperidiis in parenchymate folii inclusis; *æcidiosporis* pallidis.

Hab. in foliis *Sagittariæ*, ad Bungay Britanniae (Stock). — Verisimiliter idem ac *Doassansia Sagittariæ* (West.) Fisch.

260. *Æcidium Ari* Desmaz. Catal. plant. omiss. 1823, p. 26, Oudem. 2960 F. Neerl. exsicc. n. 262, Cooke F. Brit. exs. n. 84, Wint. Die Pilze p. 260. — *Æcidii* in maculis flavidis vel pallidis, sine ordine v. orbiculariter secus greges plerumque rotundatos dispositis; pseudoperidiis cupulatis, flavo-pallidis, margine lacinulato, revolutis; *æcidiosporis* sphæroideo-angulatis, 16-24 $\approx$ 15-19, subtiliter verruculosus, aurantiaco-flavis.

Hab. in foliis *Ari* maculati et italici, in Gallia, Germania, Italia, Dania, Britannia, Belgio, Neerlandia nec non Rhode Island et Georgia Amer. bor. — Plerumque hypophyllum, maculæ contrapositæ.

261. *Æcidium aroideum* Cooke in Grevillea VIII, p. 71. — Pseudo- 2961 peridiis in cæspitibus congestis, parvulis, semiimmersis, margine leniter dentato; *æcidiosporis* subglobosis, levibus, 15-18 μ . diam., coloratis.

Hab. in foliis *Stylochitonis natalensis*, ad Natal Africae. — Ab *Æcidio Ari* distinctum videtur.

262. *Æcidium Dracontii* Schwein. Syn. N. Amer. Fungi p. 291, n. 2861 2962 (sub nom. *Æc. Dracontinati*) Cooke Handb. n. 1611. — Maculis pallidis, in folio (quod fere totum occupant) late extensis; pseudoperidiis magnis, sparsis, crebris, sine ordine in macula dispositis; *æcidiosporis* aurantiacis.

Hab. in foliis petiolisque *Ari* triphylli et *Arisæmæ Dracontii*, in America boreali.

263. *Æcidium Vignæ* Cooke in Grevillea VIII, p. 71. — Pseudoperi- 2963 diis sparsis, semiimmersis, margine albo dentatis; *æcidiosporis* levibus, subglobosis, 15-17 $\approx$ 20-22, coloratis.

Hab. in foliis *Vignæ marginatæ*, ad Natal Africae. — *Æcidiosporæ* probabiliter flavæ; pseudoperidia maximam folii partem stipulæque occupantia.

264. *Æcidium graminellum* Speg. Dec. Myc. Arg. n. 29, Fungi Ar- 2964
gentini pug. IV, n. 91. — Maculis nullis; pseudoperidiis amphi-
genis lineatim interrupte laxèque dispositis, primo subglobosis,
clausis, dein elongato-cylindræis, 0,5-0,7 mm. long. 0,15-0,25 mm.
crass., apice irregulariter ac frustulatim lacero-dehiscentibus, al-
bo-flavescentibus, tenui-membranaceis, contextu parenchymatico, e
cellulis subhexagoniis, elongatis, 30-40 = 15-20, hyalino-flavidis, le-
vibus composito; æcidiosporis sphæricis, 20-24 μ . diam., episporio
crassissimo dense ruguloso-striolato, protoplasmate amœne auran-
tiaco, grosse guttulado donatis.

Hab. ad folia viva *Stipæ* speciei cujusdam vulgatissimum pr.
Buenosayres in Rep. Argentina.

265. *Æcidium Rusbyi* Gerard in Bull. Torrey botan. Club. 1881, p. 34. 2965
— Hypophyllum; pseudoperidiis elongatis, gracilibus, cylindræis,
albidis, basi roseolis, margine dentato-fimbriato; æcidiosporis ob-
scure aurantiaco-flavis; spermogoniis circinatis, subiculo increas-
sato, purpureo-brunneo.

Hab. in foliis *Fendleræ rupicolæ*, New Mexico Amer. bor.
(H. H. RUSBY). — *Æcidia* plerumque series parallelas secus ner-
vos primarios efficientia.

C) Species in Equisetaceis vicens.

266. *Æcidium? Equiseti* DC. Fl. Franc. VI, p. 99. — Gregarium, su- 2966
pra articulos evolutum protrudensque; pseudoperidiis 4-5-congestis,
subcupulatis, peziziformibus, margine vix distincto, subdentato, fla-
vo-aurantiellis, materie compacto impletis.

Hab. in stipitibus *Equisetorum*, prope Neuchâtel Helvetiæ
(CHAILLET). — «An *Stictis* cujusdam status initialis?»

Species minus notæ vel quarum diagnosis mihi haud innotuit.

267. *Æcidium Stellaræ* Kirchn. in Lotos 1856, p. 180. — Hypophyl- 2967
lum; pseudoperidiis poculiformibus, margine lacerato donatis; æci-
diosporis dilute flavis, dein aurantiacis.

Hab. in foliis *Stellaræ gramineæ*, pr. Kaplitz Bohemiæ.

268. *Æcidium Æthusæ* Kirchn. in Lotos 1856, p. 180. — Amphige- 2968
num; maculis determinatis; pseudoperidiis poculiformibus, brun-
neis, margine lacerato, subrevoluto; æcidiosporis cinnamomeo-brun-
neis.

Hab. in foliis *Æthusæ Cynapii*, pr. Kaplitz Bohemiæ.

269. *Æcidium sarawacense* Ces. Mic. Born. p. 26. — Hypophyllum, 2969

effusum, sine macula (saltem in sicco); pseudoperidiis profundis margine denticulato; æcidiosporis hyalinis (in sicco), irregulariter oblongis, grosse nucleatis, levibus, $15 \approx 8$.

Hab. ad paginam inferiorem foliorum siccando nigrefactarum herbæ v. suffruticis non determinandi, ad Sarawak in insula Borneo.

270. **Æcidium cystoseiroides** Berk. Fl. Tasm. p. 270. — Pustulatum, 2970
folia deformans; pseudoperidiis immersis; æcidiosporis aurantiacis, subangulatis.

Hab. in foliis plantæ ignotæ in Tasmania.

271. **Æcidium Saxifragarum** Voss in Verhand. K. K. Zool. bot. Ge- 2971
sellsch. in Wien 1876, p. 132 (nomen).

Hab. in foliis Saxifragæ muscoides, in Austria inferiori.

272. **Æcidium Cymbonoti** Thüm. in Müll. Supp. Phyt. Austr. p. 96, 2972
Cooke in Grevillea XI, p. 97.

Hab. in foliis Cymbonoti, in Victoria.

273. **Æcidium Angelicæ** Rostr. Svamp. fra Finmarken p. 230. 2973

Hab. in foliis Angelicæ silvestris, Tromsö Norvegiæ. —
Forte pertinet ad *Pucciniam Angelicæ* Fuck.

RÆSTELIA Rebent. Fl. Neom. p. 330 (1804) (Etym. a cl. pharmaco-
pola Landsbergensi RÆSTEL.) *Cancellaria* Brongn. Dict. V, 33, p. 521
(1824) *Ceratitium*. Rabenh. — Pseudoperidium elongatum, plerum-
que cylindraceum v. conicum, mox sursum fimbriatum; sporæ (æci-
diosporæ) globosæ, continuæ, brunneæ vel aurantiacæ, catenulatæ.

1. **Ræstelia polita** Berk. in Berk. et Br. Fungi from Brisbane p. 67, 2974
n. 233, t. XV, f. 1-5, Australian Fungi n. 199. — Pseudoperi-
diis ochraceis, primo obtusis, cylindricis, politis, levibus vel subti-
liter tomentosis, margine angusto, candido, denticulato, contextu
cellulis angulatis, transverse striatis composito; æcidiosporis glo-
bosis, $7-7,5 \mu$. diam.

Hab. in ramulis Muehlenbeckiæ Cunninghamii et Jacksoniæ scopariæ, Bombamero Lake et Brisbane Australiæ.
— Primo habitu *Soleniam* referens; pseudoperidia e basi villosa,
crassa oriunda, vix 2 mm. alta.

2. **Ræstelia guaranitica** Speg. Fungi guaranitici I, n. 157 (sub *Cerati-* 2975
tio). — Maculis 1-2,5 mm. diam., quandoque pallescentibus inde-
terminatis, quandoque fuscescenti-subarescentibus determinatis, per
ætatem sæpius incrassatulis ac subbullosis; pseudoperidiis centro
macularum insidentibus, 5-15 subfasciculatim congestis, subcylindra-
ceis, $300-350 \approx 100-150$, longe exesertis, deorsums ubconfluentibus,

sursum liberis, divaricatulis, margine integro v. erosulo, longitudinaliter fissis, pallescentibus vel flavescenti-albis, membranaceis, contextu irregulariter elongato-hexagonio, cellulis 25-30 $\approx$ 10-20, radiatim rugulosis, subhyalinis; æcidiosporis globosis v. e mutua pressione subangulatis, 20-26 $\approx$ 16-20, episporio tenui, densissime minutissimeque granuloso-papilloso, hyalinis.

Hab. ad folia viva *Salviæ* cujusdam, in uliginosis pr. Carapeguà Americæ australis.

3. **Ræstelia Cydoniæ** (Lenorm.?) Thüm. Fung. Parenzo n. 278, *Æcidium Cydoniæ* Lenorm. in Duby Bot. gall. II, p. 903? — Pseudoperidiis longissimis usque 2 cm. longis, filiformi-cylindræis, e globo magno, fere libero, fusco, amphigeno oriundis, margine inæqualiter lacerato, erecto; maculis supra luteis, centro fuscescentibus; æcidiosporis globosis, luteis. 2976

Hab. in foliis vivis in fructibus immaturis et in ramulis vivis *Cydoniæ* vulgaris, in Gallia et pr. Parenzo Austriæ.

4. **Ræstelia hyalina** Cooke in Rav. Fung. Amer. n. 37 et in Hedwigia 1878, p. 38. — Epiphylla v. amphigena; maculis rufis; æcidiosporis convexis, brunneis; pseudoperidiis cylindrico-acuminatis, longitudinaliter et unilateraliter dehiscentibus; æcidiosporis globosis, 20-22 μ . diam., aurantiacis. 2977

Hab. in foliis *Cratægi*, in Carolina australi (RAVENEL). — «Verisimiliter cum *Gymnosporangio* quodam connexa».

5. **Ræstelia phæospora** Ces. Mic. Born. p. 26 (sub *Ceratitio*). — Sparsa; pseudoperidiis columnaribus pallide ochraceis, apice parum dilatatis erosis, pulverulentis, contextu granulati, basi cingulo quodam concolori limitata; æcidiosporis castaneis, globosis, opacis, centro subdiaphano, levibus, 14 μ . diam. 2978

Hab. ad caulem ignotæ stirpis, ad Sarawak in insula Borneo.

6. **Ræstelia interveniens** Peck in Bull. Torrey bot. Club. 1883, p. 74. — Maculis suborbicularibus, pallidis vel flavescentibus; pseudoperidiis hypophyllis, brevibus vel modice elongatis, albidis vel pallide flavidulis, laceratis et e basi subfissis, contextu cellulis crassis, ruguloso-striatis composito; æcidiosporis (in sicco) pallidissimis hyalinisve, subglobosis, 20-30 μ . diam., subtiliter rugulosis, episporio 4-6 μ . crasso; spermogoniis in eadem macula impositis, epiphyllis. 2979

Hab. in foliis vivis *Malvastri* *Thurberi* et forte *Erodii* cujusdam in California et Carolina Americæ borealis.

PERIDERMIIUM Lév. in Mém. Soc. Linn. de Paris 1826, IV, p. 212 (Etym. *peri* circa et *derma* cutis) Thümen Die Blasenrost Pilze der Coniferen in Mittheil. forstl. Versuchsw. Oesterr. II. heft, III, Wien 1880. — Pseudoperidia corticola, conigena v. foliicola, erumpentia, liberata, saccata vel tubuliformia, vertice lacerato dehiscencia; sporæ (æcidiosporæ) varie catenulatæ sed cito (post maturitatem) solitarie deciduæ, globosæ v. ellipticæ v. oblongo-polyhedricæ, aurantiaco-rufescentes, episporio semper plus minus regulariter verrucoso-reticulato; spermogonia (an semper?) truncato-conoidea. — Species vigentes in Coniferis.

1. **Peridermium piriforme** Peck in Bull. Torrey bot. Club vol. VI, 2980 1875, p. 13, Thüm. Monogr. pag. 311. — Pseudoperidiis magnis, usque 2,5 cm. diam., erumpentibus, gregariis et plerumque confluentibus, cuticula irregulariter lacerata, membranacea, pallida tectis, demum liberis, pulverulentis, pallide flavo-aurantiacis, applanato-compressis, cellulis contextus radiato-striatis; æcidiosporis obovatis, piriformibus vel ovoideo-oblongis, vertice dilatato-rotundatis, basi angustato-acutatis, 38-55 μ . diam., episporio crasso, minute denseque verruculoso, pallide luteis.

Hab. in ramulis vivis Pini cujusdam, in Georgia Americæ borealis (J. B. ELLIS).

2. **Peridermium coruscans** Fr. Summa Veget. Scand. p. 510, *Æcidium coruscans* Fr. in Phys. Sällsk. Arb. 1824, pag. 92, Reess Rostp. deutsch. Conif. p. 52. — Pseudoperidiis numerosis, semper fere longitudinaliter dispositis, primo clausis, ellipsoideis, dein membranaceis, elongatis, albidis, tubulosis, vertice divaricatis, pallide rubris; æcidiosporis plerumque globosis, subglobulosis v. subellipsoideis, regularibus, flavido-aureis, 30-35 $\approx$ 20-24, episporio tenui, obsolete at dense verruculoso donatis.

Hab. in foliis vivis Abietis excelsæ, in Germania, Suecia et Fennia. — Cfr. Bot. Zeit. 1879, p. 806,

3. **Peridermium Ephedræ** Cooke in Indian Forester III, part. 2, Thüm. 2982 Monogr. p. 323, *Peridermium Pini* var. *minor* Berk. et Curt. in Grevillea III, p. 39. — Pseudoperidiis densissime gregariis, numerosis, sine ordine dispositis, sæpe confluentibus, elongatis, plus minus utriculi-vel tubuliformibus, alutaceis (in sicco), vertice irregulariter crenulato rumpentibus; æcidiosporis globosis vel plerumque anguste ellipticis vel ovoideo-ellipticis, utrinque rotundatis, numquam acutatis, hyalinis (in sicco) 20-24 $\approx$ 16-20, episporio subtenui dense verruculoso donatis.

Hab. in ramulis squamisque Ephedræ antisiphyliticæ, in Carolina inferiori (RAVENEL) et Texas (WRIGHT).

4. **Peridermium conorum** Thüm. Monogr. pag. 313, *Æcidium conorum-Piceæ* Reess in Abhand. Nat. Ges. zu Halle XI, pag. 102, t. II, f. 1-4 non Peck, Winter Die Pilze p. 260, *Æcidium conorum-Abietis* Nees in Tag. 42. Vers. deutsch. Naturf. 1868, p. 189. — *Æcidii*s ambitu irregulariter rotundatis, circiter 4-6 mm. diam., parce numerosis, ad latus externum squamarum adhærentibus; pseudoperidiis irregulariter convexis, albis, stratis pluribus (brunneo-rufis) contextus squamarum more tectis; æcidiosporis oblongo-polyhedricis, circiter 24-33 $\approx$ 18-22, verrucosis areolatis aurantiaco-flavis.

Hab. in squamis conorum Pini Abietis (*Abietis pectinatae*), in Germania et Fennia.

5. **Peridermium orientale** Cooke in Indian Forester III, p. 91, Thüm. Monogr. pag. 317. — Pseudoperidiis solitariis v. sparsis, magnis, primo longe diu clausis et triquetris, demum vertice (ut videtur regulariter) disrumpentibus, utriculiformibus, pallide aurantiacoseis, postremo cuticula membranacea, expallida cinctis, sine macula in folio; æcidiosporis plerumque subglobosis vel late ellipsoideis vel oblongo-ellipticis, eximie regularibus, utrinque rotundatis, aurantiacis vel expallescentibus, 15-15 $\approx$ 10-12, episporio tenui, dense verruculoso donatis.

Hab. in acubus vivis Pini longifoliæ, pr. Annadale, Simla in India orientali 2000-2300 m. alt. (I. S. GAMBLE). — Verisimiliter ex errore in *Pino excelsa* indicatur ex eodem loco.

6. **Peridermium balsameum** Peck 27 Rep. pag. 104, t. II, f. 24-26, Burrill Paras. Fungi of Illinois p. 212, Thüm. Monogr. pag. 319. — Maculis indeterminatis, albidis vel pallide flavescentibus; pseudoperidiis subrotundatis, leniter prominulis, plerumque biseriatis, dense gregariis, primo integris, dein apice laceratis; æcidiosporis subglobosis vel oblongis, circiter 26-35 $\approx$ 22-25, rugulosis, albidis.

Hab. in foliis vivis et non deformatis *Abietis balsameæ*, ad M. Adirondack Americæ borealis (PECK).

7. **Peridermium Engelmannii** Thüm. Monogr. Periderm. p. 314, *Peridermium Conorum-Piceæ* Peck mscr. non Reess. — Pseudoperidiis sparsis vel subsolitariis, pallide luteis, primo clausis et convexis, demum liberis pulverulentisque, mediis et cuticula irregulariter lacerata cinctis; æcidiosporis eximie subglobosis vel late oblongis, raro ellipticis, utrinque rotundatis, dilute aureis et cito

expallescentibus, intus homogeneis, 36-42 $\approx$ 26-32, episporio subcrasso, densissime sed minute verruculoso, verrucis, hemisphæricis.

Hab. in conis maturis Pini Engelmannii, Colorado Americæ borealis (PECK).

8. **Peridermium Thomsoni** Berk. in Indian Forester III, p. 94, Thüm. 2987
Monogr. p. 320 (nomen) *Æcidium Thomsoni* Berk. in Gard. Chron. 1852, p. 627 cum icone.

Hab. in acubus Abietis Smithianæ, prope Mahasu, Simla, et Sikkim Himalaya in India orientali (I. S. GAMBLE).

9. **Peridermium Cerebrum** Peck 25 Rep. p. 91, Thüm. Monogr. p. 312. 2988
— Pseudoperidiis magnis, convexis, flavis, erumpentibus, dense gregariis, irregulariter confluentibus, circumvolutiones cerebriformes efformantibus, irregulariter ruptis, cellulis contextus granulatis margine radiato-striatis; æcidiosporis variabilibus, subglobosis, ovatis v. ellipticis, 24-33 $\approx$ 17-19, rugulosis, flavescentibus.

Hab. in truncis ramisque Pini rigidæ, Center (LINTNER) New York (PECK), New Jersey (ELLIS), Pensylvania et Distr. Columbia (SEAMOND) Americæ borealis. — Tubercula 1-5 cm. diam. naticulata, orculiformia, pallide aurantiaca, primo tecta dein libera efficit.

10. **Peridermium Strobi** Klebahn in Hedwigia 1888, p. 119. — *Æci-* 2988*
diosporis episporio verrucoso, magna ex parte omnino levi.

Hab. ad cortices Pini Strobi, in Germania.

11. **Peridermium Peckii** Thüm. Monogr. Periderm. p. 320. — Pseu. 2989
doperidiis densissime gregariis, mediis, sine ordine dispositis, suboblongo-utriculosis, pallide luteis, cuticula vertice irregulariter crenulato-dilacerata, membranacea, expallida, suboblonga in folii parte decolorata straminea; æcidiosporis aut globosis aut late ellipticoglobosis, utrinque rotundato-regularibus, pallide aurantiacis sed cito expallescentibus, 20-24 $\approx$ 14-19, episporio subcrasso, dense minutissimeque verruculoso donatis.

Hab. in acubus vivis Abietis canadensis, in America boreali (PECK). — *Peridermium decolorans* Peck 27 Rep. St. Mus. p. 104 videtur ad *Chrysomyxam* referendum.

12. **Peridermium filamentosum** Peck in Botan. Gazette 1879, p. 56. — 2990
Pseudoperidiis numerosis, irregulariter dispositis, erumpentibus, 6-9 mm. longis, 2-4 mm. latis, cylindraceis v. subcompressis, apice obtusis, membranaceis, vacuis albidis, filamentis longitudinalibus, concoloribus laxè intus percursis; æcidiosporis subglobosis, late ellipticis, oblongo-ovatis vel oblongo-ellipticis, flavo-aurantiacis, 25-32 $\approx$ 16-20, episporio crasso, subtiliter ruguloso donatis.

Hab. in ramulis vivis Pini ponderosæ, Arizona Americæ bor. (PRINGLE). — «An huic identicum est *P. Harknessi* Moore?»

13. **Peridermium Harknessi** Moore in Ell. et Harkn. New Calif. Fungi 2991 p. 17, Thüm. Monogr. Perid. p. 313. — Pseudoperidiis aggregatis, irregularibus, ramulos circumambientibus; æcidiosporis irregularibus, aurantiacis, demum albidis, 35–40 μ . d., subtilissime echinulatis.

Hab. in truncis ramulisque Pini ponderosæ, insignis, Sabinianæ et contortæ, in cacuminibus Sierra Nevada California Americæ borealis. — «Forte a *P. filamentoso* Peck haud diversum».

- ? **PERICLADIUM** Pass. in N. Giorn. botan. ital. VII, p. 185, Martelli Fl. Bogos. p. 136 (Etym. *peri* circa et *clados* ramus). — Pseudoperidium (?) coriaceo-suberosum, irregulariter subglobosum, perfecte clausum, tandem vertice fissum vel varie ruptum; sporæ (æcidiosporæ?) subglobosæ vel irregulares, liberæ (an primitus?). — Genus vix Uredineis affine; teste auct. forte *Trullulæ tropicæ* proximum.

2. **Pericladium Greviæ** Pass. in N. Giorn. botan. ital. VII, pag. 185, 2992 t. 4, f. 4. — Pseudoperidiis circa ramulos stipatis, subglobosis vel e mutua pressione angulosis aut a latere applanatis, extus badio-fuscis, ruguloso-furfuraceis; æcidiosporis (?) innumeris, globosis v. subangulatis, levibus, primo hyalinis, deinde fuliginoso-opacis, nucleatis, 4 μ . latis, striola laterali signatis.

Hab. circa ramulos vivos Greviæ (mollis?), quos longe obducit, ad Sciotel Abyssiniæ (O. BECCARI).

UREDIO Pers. *) in Usteri n. Ann. IX, p. 16 (1795), Syn. Fung. p. XV et 214 (1801). (Etym. ab *uro*) *Trichobasis* et *Lecythea* Lév. (1849) in D'Orbigny Dict. Class. XII, p. 785 pro maxima parte, *Pucciniola* March. in Linnæa V, litterat. p. 185, *Cæomatis*, *Coleosporii* et *Æcidii* sp. auct. nonnull. *Ascospora* Fuck. Symb. myc. II, App. p. 19, *Erysibe* Wallr. ex maxima parte. — Sori plerumque aurantiaco-flavi, subpulverulenti, superficiales vel erumpentes, pseudoperidio nullo; sporæ (uredosporæ) apice pedicelli solitariae. In hoc genere ad interim genus *Cæoma* Link in Berl. Magaz. III, p. 5 (1809), Sp. II, pag. 1 (1825), ut subgenus, includitur tantum sporis subcatenulatis, vix aliis characteribus ab *Uredine* diversum.

1. **Uredo Dissotidis** Cooke in Grevillea X, p. 124. — Maculis fuscis, 2993

*) Cfr. notam p. 772.

hypophyllis, orbicularibus; uredosporis subglobosis, fuscis, asperulis, 20 μ . diam.

Hab. in foliis *Dissotidis incanæ*, in Africa australi. — Cum *Æcidio Dissotidis* Cooke forte connexa.

2. **Uredo? æcidiiformis** Speg. Fungi Fuegiani p. 51, n. 143 nec Strauss. 2994

— Soris hypophyllis, melleis, hinc inde 3-8-aggregatis, maculæ pallescenti fusco-marginatæ 2-8 mm. diam. insidentibus, parvulis, conoideis, 300-500 μ . latis, parenchymati innatis, apice discoideo-apertis; pulvinatulis, subconfluentibus, pseudoperidio nullo; uredosporis ovato-elongatis vel subclavulatis, antice acutatis vel rotundatis, rarius truncatis, postice attenuatis, acutato-obtusatis, 50-60 $\simeq$ 20, episporio crassiusculo, minute denseque ruguloso donatis, ex hyalino pallidissime subfulvescentibus.

Hab. in foliis vivis *Berberidis ilicifoliæ*, in silvis prope Penguin rookery in Staten Isl. Americæ australioris. — In senectute folia perforata evadunt ob caducitatem macularum fungilliferarum. «An idem ac *Æcidium magelanicum* Berk.?»

3. **Uredo affinis** Speg. Fungi Argentini pugillus II, p. 15, n. 47, Dec. 2995

myc. Argent. n. 23. — Soris hypophyllis, maculam primo pallescentem, dein fusco-arescentem efficientibus, erumpentibus, pulverulentis, intense fuligineis, 0,5-1,5 mm. diam.; uredosporis ovoideo-trigonis, superne rotundato-truncatis, 22-24 $\simeq$ 20, pedicello hyalino, cylindraceo, 40-50 $\simeq$ 5 fultis.

Hab. in foliis vivis *Verbesinæ auriculatæ*, circa la Charita in Republica Argentina Americæ australis.

4. **Uredo Agrimonix** (DC.) Schroet. Pilz. Schles. p. 374, Rabenh. F. 2996

E. n. 2189, *Uredo Potentillarum* var. *Agrimonix-Eupatoriæ* DC. Fl. Franç. VI, p. 81, *Coleosporium ochraceum* Bonord. Coniomyc. p. 20, *Uredo Agrimonix-Eupatoriæ* Wint. Die Pilze p. 252, *Cæoma Agrimonix* Schwein. N. Am. Fungi p. 291, n. 2835, Burrill Paras. p. 220. — Soris primo pustuliformibus, pseudoperidio hemisphærico, tenui tectis, dein late apertis, flavo-rufis, sæpe confluentibus, hypophyllis; uredosporis globosis, ellipticis aut ovoideis, 15-23 $\simeq$ 11-17, breviter aculeatis, aurantiaco-rufescentibus.

Hab. in foliis *Agrimonix Eupatoriæ*, odoratæ, dauricæ, parvifloræ, pilosæ, in Italia, Austria, Germania, Gallia, Britannia, Hungaria, America boreali. — Forte ad *Melampsoræ* speciem quamdam pertinet.

5. **Uredo Alismatis** Thüm. Pilzfl. Sibir. n. 194. — Pustulas solitarias 2997

vel raro confluentes, sine ordine in nervo medio vel rarissime

etiam in pagina inferiore folii distributas, plumbeas, primo epidermide tectas, demum disrumpentes, ellipsoideas formans; uredosporis globosis vel ovoideo-globosis, episporio tenui, levi, fuscis, 30-45 μ . diam.

Hab. in foliis languidis *Alismatis Plantaginis*, sociâ *Doassansiâ Alismatis*, in aquosis prope Minussinsk Sibiriae asiaticae.

6. **Uredo alpestris** Schroet. in 53. Jahresb. Schles. Ges. 1875, p. 117, 2998

Winter Die Pilze p. 253, Thüm. Myc. Univ. n. 2040, *Puccinia alpina* Fuck. Symb. myc. II, p. 13, p. p. — Soris hypophyllis, minutis, hemisphaericis vel irregularibus, sparsis vel subgregariis saepeque confluentibus, flavo-ochraceis; uredosporis fusiformibus vel irregularibus inaequilateralibusque, medio plus minus ventricosis, vertice conico-apiculatis, 26-28 $\approx$ 8-12, dilute flavis, pedicello brevi.

Hab. in foliis *Violæ bifloræ*, in Helvetia, Germania et Lapponia rossica.

7. **Uredo angiosperma** Thüm. Symb. Myc. Austral. IV, n. 95. — So- 2999

ris amphigenis, magnis, plerumque secus orbem dispositis, semper epidermide dehiscente, subsoluta, lacerata et elevata tectis, pulveraceis, fuscis; uredosporis ovalibus vel ellipsoideis, vertice rotundatis, basi plerumque subangustatis, 45 $\approx$ 30, episporio levi, 5-7 μ . crasso, dilute fuscescentibus, intus irregulariter nucleolatis.

Hab. in foliis vivis Hackeæ, in Australia occidentali (F. DE MÜLLER).

8. **Uredo Anguillaræ** Cooke in Grevillea XIV, p. 11. — Amphigena; 3000

soris gregariis, ellipticis, bullatis, diu epidermide tectis; uredosporis globosis vel globoso-ovalibus, levibus, fuscis, episporio tenui, 20-22 $\approx$ 20, pedicello brevi, hyalino, deciduo.

Hab. in foliis *Anguillaræ dioicæ*, Guntawang Upper Macquarie River, Australiae (HAMILTON).

9. **Uredo Anodæ** Lév. in Ann. Scienc. Nat. 1845, p. 70. — Hypo- 3001

phylla; soris fusco-nigrescentibus, epidermide cinctis, orbiculatim confertis, maculae pallidae insidentibus; uredosporis ovatis, obtusis, pedicellatis, levibus.

Hab. in foliis *Anodæ hastatæ*, in Peruvia Americae australis. — Maculae flavescentes 3-6 mm. latae « An potius *Uromyces*? »

10. **Uredo antarctica** Speg. Fungi Fuegiani p. 51, n. 141 nec Ber- 3002

keley. — Maculis nullis vel minutissimis, amphigenis, fuscescentibus, indeterminatis; soris hypophyllis, plus minusve laxè gregariis, minutis, 300-500 μ . diam., diu epidermide tectis, fulvescentibus,

Uredo antarctica (Speg.) Speg. nuncupanda ab
U. antarctica Bk. (conf. IX p. 322!)

per ætatem deciduis ac folium perforatum relinquentibus; uredosporis globosis vel ovoideis, sæpe e mutua pressione angulatis, 20-24 $\approx$ 18-20, tenui tunicatis, granuloso-farctis, minutissime et subimperspicue papillulosis (?), hyalinis.

Hab. ad folia primaria (numquam in cotyledonibus) *Berberidis* cujusdam, prope Ushuvaja Americæ australioris.

11. **Uredo aperta** Winter in Hedwigia 1887, p. 24 (ad interim). — 3003

Soris sparsis vel subgregariis, plerumque hypophyllis, orbicularibus vel angulato-rotundatis, demum sæpe subirregularibus, 0,5-1 mm. latis, primo epidermide inflata velatis, demum erumpentibus et denudatis, fragmentis epidermidis ruptæ cinctis, late apertis, fere disciformibus, pallide flavidulis; uredosporis subglobosis vel late ovatis, dilutissime flavis, 19-25 μ . diam., dense minuteque verruculosus, pedicello fragili, hyalino suffultis.

Hab. in foliis vivis *Compositæ* cujusdam, prope S. Francisco Brasilæ (ULE).

12. **Uredo Artocarpi** B. et Br. Fungi of Ceylon n. 832. — Maculis 3004

fuscis; soris minutis, hypophyllis; uredosporis cuticula fusca incarcerationatis, ovatis, echinulatis.

Hab. in foliis *Artocarpi* *Lakoochæ*, in insula Ceylon.

13. **Uredo asperata** Berk. et Curt. North Pacif. Exped. n. 136. — 3005

Maculis obsoletis; soris sparsis gregariisque, hypophyllis; uredosporis oblongis vel fusiformibus, pallidis, granulatis.

Hab. in foliis *Xanthoxyli*, in insulis Bonin.

14. **Uredo aterrima** Thüm. in Flora 1878, p. 114. — Soris amphi- 3006

genis, gregariis, submagnis, quasi patelliformibus, primo epidermide tectis, demum cito liberis, concavis, pulveraceis, aterrimis; uredosporis exacte globosis, episporio levi, tenui, brunneis, 24-32 μ . diam.

Hab. ad folia viva *Ipomœæ argyreoidis*, sæpe socia *Æcidii Ipomœæ* Thüm., pr. Klyn Visch River juxta Somerset-East, Promont. Bonæ Spei Africæ australis (P. MAC-OWAN). — «Videtur forte cum *Æcidio Ipomœæ* Thüm. in Flora 1878, n. 23, p. 107, connexa atque (etsi sporæ sint aberrantes) *Uromycetis* speciem *U. sphæropleo* Cooke affinem sistens.

15. **Uredo? Avenæ** Cast. Obs. I, p. 25, Cat. pl. Mars. p. 208. — Ma- 3007

culis flavis, amphigenis, rotundatis vel oblongis; soris rotundatis vel elongatis, luteis, epidermide rupta subcinctis, secus nervos excurrentibus; uredosporis numerosis, sphæricis, maxima ex parte sessilibus.

Hab. in foliis *Arrhenatheri elatioris* et nonnullarum Graminacearum, prope Marseille Galliae.

16. **Uredo Azaleæ** Schwein. Syn. North Amer. Fungi p. 291, n. 2838, 3008
Ellis N. A. F. n. 1081, Rav. F. Car. n. 846, *Uredo minima* Schwein.
Syn. Carol. p. 70, n. 470. — Hypophylla; maculis oblitteratis; soris primum subconicis, minutis, aurantiacis, demum effusis; uredosporis minutissimis, decolorantibus et inæqualibus, piriformibus, nempe immixtis globosis.

Hab. in foliis *Azaleæ nudifloræ* et viscosæ, in America boreali.

17. **Uredo Baccharidis** Speg. Fungi Guaranitici I, n. 136, an Lévêil- 3009
lé in A. S. N. 1846, p. 269 (ex Chili). — Maculis nullis v. vix perspicuis, parvulis, amphigenis, pallescentibus; soris epiphyllis, sparsis vel hinc inde 2-3-aggregatis, mediocribus, 300-400 μ . diam., primo tectis, dein erumpentibus, pallide testaceis vel fulvescentibus; uredosporis globosis, ellipticis vel obovatis, 24-32 $\approx$ 18-24, episporio subtenui, laxe subgrosse verrucoso-hirto, nubiloso-farctis, ex hyalino dilutissime flavidis, pedicello nullo vel vix evoluto, hyalino.

Hab. in foliis vivis *Baccharidis* cujusdam, in campis prope Guarapí et Pirayú Americæ australis.

18. **Uredo Balsamitæ** Cooke in Grevillea VIII, p. 94. — Hypophylla; 3010
soris sparsis, oblongis, aurantiacis, epidermide hyalina cinctis; uredosporis ellipticis, asperulis, 25-30 $\approx$ 15, aureis.

Hab. in foliis *Impatientis rosmarinifoliæ*, in insula Ceylon (MORRIS).

19. **Uredo Balsamorrhizæ** Peck in Botanical Gazette 1881, pag. 276 3011
(*Trichobasis*). — Maculis indeterminatis, brunneolis; soris sparsis, subinde confluentibus, amphigenis, rufescenti-brunneis; uredosporis globosis vel subglobosis, 26-30 μ . longis, subtiliter rugulosis, 1-3 nucleos sæpe continentibus, pedicello uredosporam subæquante, mox deciduo.

Hab. in foliis vivis *Balsamorrhizæ macrophyllæ*, Utah Americæ borealis (JONES). — Forte *Uromycetis* seu *Pucciniæ* status uredosporifer.

20. **Uredo barbara** Speg. Fungi guaranitici I, n. 137. — Maculis nul- 3012
lis; soris epiphyllis, sparsis, orbicularibus, concentrice evolutis, 0,5-1,5 mm. diam., epidermide disrupta annulatim cinctis, testaceis; uredosporis globosis vel inferne leniter depressis, 24-28 $\approx$ 20-24, episporio crassissimo, hyalino, grosse laxissimeque papilloso, protoplasmate granuloso-nubiloso, aureo vel aurantiaco repletis.

Hab. ad folia viva Senecionis cujusdam, in silvaticis prope S. Barbara et Villa Rica Americæ australis.

21. **Uredo Bauhiniae** Berk. et Curt. Fungi North Pacif. Exped. n. 138. 3013
— Hypo-epiphylla; maculis obsoletis; uredosporis fuscis, subglobo-
bosis, echinulatis, membrana sæpe polyhedrico-contracta.

Hab. in foliis Bauhiniae, Nicaragua.

22. **Uredo Bellidis** Durieu et Mont. Syll. Crypt. n. 1170. — Amphi- 3014
gena; macula nulla; soris minutis, punctiformibus, tandem epider-
mide rupta cinctis, fuscis; uredosporis sessilibus, globosis, fuscis,
opacis, episporio minute papilloso.

Hab. in foliis Bellidis silvestris, circa Mascara Algeriæ (DURIEU).

23. **Uredo beticola** Bell. in Bull. Acad. Belg. II, t. XI, n. 6, West. 3015
Herb. crypt. Belg. n. 1170. — Soris majusculis, obscure coloratis;
uredosporis *Uromyc. Betæ* majoribus, pedicellatis, levibus.

Hab. in foliis et caulibus Betæ, socio *Urom. Betæ* (cui forte adscribenda), in Belgio.

24. **Uredo bonariensis** Speg. Fungi Argentini pugillus I, n. 40. — 3016
Amphigena; soris mediocribus, 0,5-1 mm. diam., rotundatis, hinc in-
de sparsis, areola flavescenti circumdatis, primo tectis, dein epi-
dermide fissa cinctis, cinnamomeis; uredosporis ovoideis vel sub-
sphæroideis, ochraceo-fuligineis, granuloso-farctis, tuberculato-mu-
ricatis, 30-35 μ . diam.

Hab. ad folia viva *Hydrocotyles bonariensis*, in Repu-
blica Argentina Americæ australis. — «An *U. Hydrocotyles* Mont.
f. *U. bonariensis* Gay Fl. Chil. VIII, p. 50 eadem?»

25. **Uredo Boutelouæ** Arth. Prelim. List of Iowa Uredineæ p. 164, 3017
n. 81. — Soris epiphyllis, maculæ flavæ insidentibus, minutis, flavis,
ellipticis vel oblongis, irregulariter sparsis, diu tectis, epidermide
rupta obsolete cinctis; uredosporis rotundatis, oblongis vel ellipti-
cis, raro ovatis, subtilissime sparseque echinulatis vel omnino le-
vibus, 20-30 $\approx$ 15-25, aurantiaco-flavis, episporio tenuissimo, pa-
raphysibus numerosis, gracilibus, clavatis, superne constrictis, pe-
dicello valido, crasso fultis, hyalinis, apice rotundatis ibique 13 μ .
crassis, 38-75 μ . longis.

Hab. in foliis *Boutelouæ racemosæ*, Iowa Americæ bo-
realis. — Verisimiliter *Uromycetis Brandegei* Peck status ure-
dosporus.

26. **Uredo Cannæ** Wint. in Hedwigia 1884, p. 172. — Soris ple- 3018
rumque hypophyllis, rarius etiam epiphyllis, sine maculis per to-

tam folii superficiem dense sparsis seu hinc inde gregariis, minutis, rotundatis v. ellipticis, interdum confluentibus, vix 0,5 mm. diam., pallide luteis, diu ab epidermide velatis, demum erumpentibus; uredosporis ovatis, piriformibus oblongisve, achrois (an semper?), 25-45 $\approx$ 16-23, echinulatis.

Hab. in foliis vivis Cannæ, pr. S. Paulo in Brasilia Americæ australis (ULE).

27. **Uredo? Camphorosmæ** Cast. Suppl. Cat. pl. Mars. p. 88. — Am- 3019
phigena, maculis nullis; soris orbicularibus, violaceis, epidermide rupta cinctis; uredosporis globosis, magnis, sessilibus, violaceis.

Hab. in foliis Camphorosmæ monspeliacæ, pr. Marseille Galliæ.

28. **Uredo Caraganæ** Thüm. Contrib. fl. myc. Lusit. III, n. 478, My- 3020
coth. Univ. n. 1641. — Soris hypophyllis, minutis, sparsis, liberis, planis, pulveraceis, ferrugineis, sine macula; uredosporis plus minusve globosis vel interdum oblongato-globosis, episporio levi, æquali sed vertice semper incrassato, plasmate subgrumuloso, fuscidulis, 20-24 μ . longis.

Hab. ad folia viva Caraganæ arborescentis, pr. Coimbra Lusitaniæ (MOLLER).

29. **Uredo Cassandræ** P. et C. in 30 Rep. St. Mus. p. 54. — Epi- 3021
phylla; maculis parvis, irregularibus, flavis vel castaneis; soris plerumque secus greges parvos confertis, ut plurimum angulatis v. irregularibus, epidermide disrupta cinctis; uredosporis ellipticis, ovatis vel subglobosis, 20-25 μ . longis, rugulosis, flavis.

Hab. in foliis vivis Cassandræ calyculatæ, Center, Sandlake aliisque Americæ borealis locis.

30. **Uredo Celmisiæ** Cooke in Grevillea XIV, p. 89. — Epiphylla; 3022
maculis oblitteratis; soris ellipticis, pallidis, epidermide diu clausâ, demum disrumpente; uredosporis ovalibus, subpellucidis, verruculosiss, 30-35 $\approx$ 20-22.

Hab. in foliis Celmisiæ coriaceæ, Arthur's Pass in Nova Zelandia (KIRK).

31. **Uredo Ciceris-arietini** Grog. Crypt. cell. p. 157. — Pustulis 3023
brunneolis, subvirescentibus, subnitentibus; uredosporis....

Hab. in foliis Ciceris arietini, Saone et Loire Galliæ.

32. **Uredo Cisneroana** Speg. Fungi guaranitici I, n. 130. — Maculis 3024
nullis vel vix manifestis, pallescentibus; soris epiphyllis, sparsis, subminutis, 250-300 μ . diam., pallide fulvis vel aureis, epidermide diu velatis ac parum conspicuis; uredosporis dense constipatis, elon-

gato-clavatis, 25-45 $\approx$ 18-22, antice plus minus acutatis vel obtusatis, deorsum validiuscule attenuatis, truncatis, episporio crassiusculo, laxe verruculoso-papilloso donatis, hyalino-fulvellis.

Hab. ad folia viva *Sapii aucuparii*, in dumetis pr. Guarapi Americæ australis. — Ex ipso auctore species forma sororum nec non uredosporarum fere sine dubio generi *Melampsoræ* adscribenda.

33. **Uredo citrina** Cooke in Grevillea VI, p. 138 (sub nomine *Uredinis citri*). — Epiphylla; soris minutis, flavis, epidermide cinctis; uredosporis subglobosis, ovatis v. leniter asperulis, luteis, 20-25 $\approx$ 15. 3025

Hab. in foliis *Macluræ aurantiacæ*, Aiken Carolinæ inferioris.

34. **Uredo Spegazzinii** De-Toni, *Uredo Commelinæ* Speg. Fungi Argentinæ I, n. 48, Dec. Argent. n. 24, nec Kalchbr. — Hypophylla, macula amphigena, pallescenti-ochracea; soris vivide fulvo-aurantiacis, 300-500 μ . diam., erumpentibus, pulverulentis, parum prominulis; uredosporis elliptico-ovoideis vel subsphæroideis, levibus, crassiuscule tunicatis, 30-35 μ . diam., granuloso-farctis, pluriguttulatis, pallide fulvo-aurantiacis. 3026

Hab. ad folia viva languidave *Commelinæ sulcatæ*, secus Rio de le Plata a la Recoleta in Republica Argentina.

35. **Uredo Commelinæ** Kalchbr. in Grevillea XI, p. 24 nec Spegazz. — Soris hypophyllis, secus greges oblongos congestis, ochraceo-fuscis; uredosporis variis, subglobosis, ovatis piriformibusve, 21 $\approx$ 15, pellucidis, glabris, flavidis. 3027

Hab. in foliis *Commelinæ* sp., ad P. Natal Africae.

36. **Uredo constellata** B. et C. Fung. North Pac. Exped. n. 139. — Maculis pallidis, oppositis nullis; soris minutis, tarde ruptis, constellatis; uredosporis argillaceis decolorantibus verrucoso-aculeatis. 3028

Hab. in foliis vivis plantæ ignotæ, ad Hong Kong Japoniæ.

37. **Uredo cristata** Speg. Fungi guaranitici I, n. 131. — Maculis vix manifestis, minutis, 1-2 mm. diam., indeterminatis, pallescentibus; soris amphigenis, sæpius epiphyllis, centro macularum insidentibus, solitariis vel paucis laxè gregariis, punctiformibus, 300-350 μ . d., compactiusculis, sordide pallideque ferrugineis; uredosporis obovato-lanceolatis, antice rotundatis, postice attenuato-truncatis, 45-47 $\approx$ 18-20, e latere compressiusculis, episporio margine cristam hyalinam, latiusculam, apice acutissime productam, denticulato-erosam, paullo supra basim exsurgentem efformante, levi donatis pallide fulvescentibus. 3029

Hab. ad folia viva Sapindaceæ cujusdam, prope Villa Rica Americæ australis. — Species pulcherrima distinctissima, cum nulla alia comparanda, facile status uredosporus cujusdam Melampsoræ.

38. **Uredo Cucubali** Desmaz. Pl. Crypt. Fr. (1855) et in Ann. Scienc. 3030
Nat. 1855, pag. 124. — Soris amphigenis, rufis, minutis, rotundatis, sparsis vel subgregariis, epidermide rupta, albida cinctis; uredosporis globosis, 20-25 μ . diam., semiopacis, asperulis, breviter pedicellatis.

Hab. in foliis Cucubali Behenis, Jersey ex insulis Normandiæ (ROBERGE).

39. **Uredo Cussoniæ** Cooke in Grevillea XVI, p. 70. — Hypophylla; 3031
soris minutis, hemisphæricis, demum fissuratis, pallide fuscis; uredosporis ellipticis, spinulosis, subhyalinis, demum fuscis, 25 $\approx$ 18.

Hab. in foliis Cussoniæ, ad Inanda Natali Africæ (WOOD).

40. **Uredo cyclogena** Speg. Fungi Argentini pugillus I, n. 45, Dec. 3032
myc. Argent. n. 21. — Hypo-, rarius epiphylla; soris secus orbem dispositis, areola flavescenti insimul circumdatis, majusculis, 2-3 mm. diam., vivide cinnamomeis; uredosporis ovoideis, rarius subsphæroideis, episporio tenui, levi, sursum parum incrassato atque vix minutissime tuberculato, primo hyalinis, dein roseo-fuligineis.

Hab. ad folia viva Cassiæ corymbosæ, pr. Boca del Riachuelo in Republica Argentina Americæ australis.

41. **Uredo domingensis** Berk. Fung. Doming. p. 9. — Hypophylla; 3033
maculis nullis; soris sparsis, orbicularibus, epidermide persistente cinctis; uredosporis obovatis, granulatis, pallidis.

Hab. in foliis probabil. Solanaceæ cujusdam, S. Domingo. —

42. **Uredo Dorymopsidis** Thüm. Contr. fl. Lusit. p. 11, n. 63. — So- 3034
ris amphigenis, parvulis, sparsis, liberis, orbiculatis, epidermide cinctis, fuscis; uredosporis exacte globosis, fuscidulis, episporio levi, subtenui, 30 μ . diam.

Hab. in foliis vivis Dorymopsidis Gerardi, in silvis montosis prope Bussaco Lusitaniæ (MESNIER). — Fortasse *Uromyctis* cujusdam status uredosporifer.

43. **Uredo exasperata** Cooke in Grevillea VII, p. 95 (*Trichobasis*). 3035
— Hypophylla; soris purpureo-brunneis, minimis, pulverulentis, hinc illinc confluentibus, epidermide cinctis; uredosporis ovato-globosis, supra papillato-asperulis, læte brunneis, 28 $\approx$ 20.

Hab. in foliis arboris ignotæ, Belgæ Indiæ (HOBSON).

44. **Uredo Ectadiopsidis** Cooke in Grevillea X, p. 128. — Hypophyl- 3036

la; soris in maculis suborbicularibus, pulverulentis, confluentibus; uredosporis globosis, levibus, flavidis, 18-20 μ . diam.

Hab. in foliis Ectadiopsidis oblongifoliæ, Inanda Africae australis (Wood).

45. **Uredo Ecteinanthi** Kalchbr. in Grevillea XI, p. 25. — Soris hy- 3037
pophyllis, sparsis, minutis, ochraceis; uredosporis ovato-rotundatis
et irregularibus, 30 $\approx$ 24, flavis, episporio levi.

Hab. in foliis Ecteinanthi prolixæ, Grahamstown (Mac-
OWAN).

46. **Uredo euphorbicola** B. et C. Cuban Fungi n. 598 (*Trichobasis*). 3038
— Soris sparsis, brunneolis, epidermide demum rupta; uredosporis
pallidis, obovatis, 12 μ . longis, echinulatis.

Hab. in foliis Euphorbiæ cujusdam, in insula Cuba.

47. **Uredo Evolvuli** Speg. Fungi Argentini pugillus IV, n. 74. — Ma- 3039
culis nullis vel tantum epiphyllis, minutis, fuscescenti-violaceis;
soris amphigenis v. cauliculis, erumpentibus, minutis, 300-400 μ . d.,
pulverulentis, pallide cinnamomeis; uredosporis sphæroideis v. ova-
tis, minute granuloso-papillulatis, præcipue superne crassiuscule
tunicatis, dilute fulvo-fuligineis, 20 $\approx$ 15-18.

Hab. in foliis languidis Evolvuli sericei, in aridis pr. Bel-
grano in Republica Argentina Americae australis.

48. **Uredo Facelidis** Speg. Dec. Myc. Arg. n. 22, Fungi Argentini 3040
pugillus IV, n. 76. — Maculis nullis; soris hypophyllis, sæpius so-
litariis, compactiusculis, hemisphærico-prominulis, fuligineo-rubigi-
nosis, 300-500 μ . diam.; uredosporis globosis, crassiuscule tunica-
tis, præcipue superne, levissimis, densissime granuloso-farctis, 20-
24 μ . diam., vivide aurantio-fuligineis.

Hab. ad folia, caules nec non bracteas florales Facelidis
apiculatæ, in aridis prope la Chacarita in Republica Argenti-
na Americae australis.

49. **Uredo Festucae** DC. Fl. Franç. VI, p. 82, Winter Die Pilze p. 225. 3041
— Soris minutis, oblongis, inter plicas paginæ superioris sitis; ure-
dosporis elongato-piriformibus, rufo-brunneis, dein atro-brunneis.

Hab. in foliis Festucae glaucae, in Gallia et Germania. —
Species valde dubia, forte Ustilaginea.

50. **Uredo Fici** Cast. Cat. pl. Mars. II, p. 87, Speg. F. Guaran. I, 3042
n. 132, *Uredo Ficus* Rav. in F. Am. exs. n. 485, Hoffm. Ind.
p. 146. — Uredosporis globoso-obovatis vel cuneatis vel obovoi-
deis, 18-85 $\approx$ 12-22, minutissime verruculosus, ex hyalino luteolis,
intus minute granulosus.

Hab. in pagina inferiore foliorum Fici Caricæ, Belluno (SPEGGAZZINI), Licata Siciliae (BELTRANI), in Carolina (RAVENEL), nec non pr. Villa Rica et Boca del Rachuelo Americae australis (SPEGGAZZINI), Alger (TRUBUT) et Ramleh (THÜMEN) Africae borealis. — Var. **guarapiensis** Speg. Fungi Guaranitici I, n. 133: maculis vix manifestis, amphigenis, indeterminatis, dilute pallescentibus; soris hypophyllis, numerosissimis, laxe gregariis, minutissimis, 50–80 μ . d., oculo nudo vix perspicuis, primo epidermide velatis, dein erumpentibus, flavescentibus; uredosporis globosis vel obovatis, 24–27 $\approx$ 20–24, episporio pro ratione tenui, ubique dense minuteque papilloso-verruculoso, subhyalinis vel dilutissime fulvis. In foliis vivis Fici ibapopy, in silvis prope Guarapi Americae australis.

51. **Uredo ficicola** Speg. Fungi Guaranitici I, n. 134. — Maculis 3043 hypophyllis, parvulis, 1–2 mm. diam., indeterminatis, parum manifestis, fuscescentibus; soris minutis, 150–180 μ . diam., solitariis vel 2–5 ad centrum macularum, aggregatis primo tectis dein erumpentibus, sordide fuscis; uredosporis globosis vel obovatis, 22–25 $\approx$ 18–20, episporio tenui, ubique dense valideque papilluloso-hirto, grosse guttulatis, fulvis.

Hab. ad folia viva Fici cujusdam, in silvis montosis pr. Peribebuy Americae australis.

52. **Uredo flavidula** Winter in Hedwigia 1885, p. 260. — Soris ple- 3044 rumque hypophyllis, folia juniora sæpe tota occupantibus, in foliis provectionibus maculiculis, dense gregariis, sæpe confluentibus, rotundatis, ellipsoideis vel irregularibus, minutis, primo epidermide albida velatis, demum erumpentibus epidermideque cinctis, pallide flavidulis; maculis sparsis v. confertis, sæpe confluentibus, fuscis, rotundato-irregularibus, indeterminatis usque ad 2 cm. latis; uredosporis subglobosis, piriformibus vel ellipsoideis, minutissime echinulatis, pallide flavidulis, 17–23 μ . diam. vel usque 28 μ . longis, 12–17,5 μ . latis.

Hab. in foliis vivis Myrtaceæ cujusdam pr. S. Francisco Brasiliæ (ULE).

53. **Uredo Frankeniae** Mont. Canar., p. 90, Syll. crypt. n. 1164, Thüm. 3045 Myc. Univ. n. 1934. — Hypophylla; soris hemisphaericis, epidermide sero disrumpente tectis; uredosporis fusco-brunneis, globosis, levibus.

Hab. in foliis Frankeniae pulverulentæ, in Canariis nec non pr. Sersena in Fajum Africae (DESPRÉAUX).

54. **Uredo gaurina** Peck in Botan. Gazette 1879, p. 218 (*Trichobasis*). 3046

— Soris paucis, sparsis, erumpentibus, obscure brunneis; uredosporis subglobosis vel ellipsoideis, 20-25 μ . longis, subtiliter rugulosis, plerumque nitentem sistenter continentibus.

Hab. in foliis *Gauræ coccineæ*, Colorado Americæ borealis (JONES).

55. **Uredo Glaucis** Rabenh. Krypt. Fl. I, p. 5, Winter Die Pilze 3047 p. 255. — Soris oblongis; uredosporis ellipticis, pedicello brevi donatis, rufo-brunneis, dein atro-brunneis.

Hab. in *Glaucе maritima*, in Germania. — Species per dubia.

56. **Uredo glumarum** Rob. in Desm. Exs. fasc. III, n. 1477, Kickx 3048 Fl. Fland. II, p. 89, *Trichobasis glumarum* Lév. in Cooke Handb. n. 1582. — Soris minutis, rotundatis, convexulis, sparsis, dein confluentibus, læte aurantiaco-flavis; uredosporis globulosis v. subovoideis, sessilibus, episporio levi instructis.

Hab. in glumis *Zeæ Maydis*, in Belgio et Britannia.

57. **Uredo Gnaphalii** Speg. Dec. Myc. Arg. n. 19, Fung. Argentini 3049 pugillus IV, n. 77, Dec. myc. Argent. n. 19. — Maculis amphigenis, orbicularibus, minutis, 1-3 mm. diam., superne subviolaceo-fuscescentibus, inferne pallescentibus ac sæpe deficientibus; soris hypophyllis, sparsis v. concentrice aggregatis, erumpentibus parvulis 200-500 μ . diam., subcompactiusculis, pallide cinnamomeis; uredosporis globosis, levissimis, dense granuloso-farctis, 18-22 μ . diam., obscure fuligineo-aurantiis.

Hab. ad folia viva *Gnaphalii americani*, prope la Charita in Republica Argentina Americæ australis.

58. **Uredo guarapiensis** Speg. Fungi guaranitici I, n. 139. — Maculis 3050 parum manifestis, quandoque subnullis, quandoque latissimis, obscure determinatis, fuscescentibus; soris epiphyllis, minutis, 150-250 μ . diam., albescentibus v. pallide flavescentibus, dense gregariis, æcidioli spermogonia simulantibus, primo hemisphæricis tectis, dein lacero-erumpentibus; uredosporis subglobosis vel obovatis, 16-26 μ = 13-20, antice obtuse rotundatis, postice subattenuato-truncatis, episporio subtenui, laxe grossequе papilluloso, subhyalinis.

Hab. ad folia viva *Rubiaceæ* cujusdam, in silvis pr. Guarapi Americæ australis. — Maculæ subpellucidæ sorique utrinque prominuli; species ob habitum mox distinguenda.

59. **Uredo Helianthellæ** Peck in Botan. Gazette 1882, p. 45 (*Tri-* 3051 *chobasis*). — Maculis pallide virescentibus; soris hypophyllis, numerosis, plerumque secus nervos congestis, rufescenti-brunneis; uredosporis globosis vel subglobosis, 30-35 μ . diam., uninucleatis.

Hab. in foliis vivis *Helianthellæ californicæ*, in California Americæ borealis (JONES).

60. **Uredo Helianthemi** Rabenh. in Flora 1850, p. 626. — Soris flavis, 3052
dein ferrugineis, hypophyllis; uredosporis rotundatis, dilute flavescenti-roseis, pallucidis, apiculo hyalino, episporio celluloso, nucleo granuloso, 18-20 μ . diam.

Hab. in foliis *Cisti* et *Helianthemi* imprimis *H. guttati*, Otranto et Gargano Italiæ.

61. **Uredo Helianthi** Schwein. Syn. Amer. bor. n. 291, n. 2828, (sub 3053
Cæomate) Speg. Fungi Argen. I, n. 46. — Maculis obliteratis; soris aggregatis, nudis, pulvinatis, densis, flavo-rubris, primo subsolidis, dein pulverulentis; uredosporis sphæroideis vel subsphæroideis, tenui tunicatis, muriculato-asperulis, granuloso-farctis, 1-2-guttulatis, 22-25 μ . diam., fulvo-ochraceis, pedicello hyalino, facillime secedente fultis.

Hab. in foliis vivis *Helianthi gigantei* et *Verbesinæ helianthoidis*, Bethlehem in Pennsylvania Amer. bor. (SCHWEINITZ) et in Republica Argentina Amer. australis (SPEGGAZZINI).

62. **Uredo Holmbergii** Speg. Fungi Argentini pugillus IV, n. 79. — 3054
Maculis nullis; soris hypophyllis, sparsis, minutulis, 200-300 μ . d., erumpentibus, pulverulentis, cinnamomeis; uredosporis obovatis, 22-25 = 18-20, amœne fulvis, episporio præcipue antice incrassatulo ac granuloso-muriculato, pedicello minuto, hyalino, mox secedente fultis.

Hab. in foliis vivis *Mitracarpi Sellowiani*, in uliginosis, Tigre (HOLMBERG), et Concordia del Uruguay (CISNEROS), in America australi.

63. **Uredo Holoschæni** Cast. Suppl. Cat. pl. Mars. p. 88. — Soris fla- 3055
vis, ovatis, epidermide subbullata, rumpente cinctis; uredosporis subrotundis, sessilibus.

Hab. in foliis *Scirpi Holoschæni*, sociâ sæpe *Darlucâ Filo* pr. Marseille Galliæ.

64. **Uredo Hydrangeæ** Berk. et Curt. Cat. p. 122 sine descriptione, 3056
Burrill Paras. Fungi of Illinois p. 219. — Hypophylla; maculis parvis, flavescentibus, plus minus confluentibus; soris minutis, sparsis; uredosporis obovatis, pedicellatis, 16-24 = 12-18, subtiliter tuberculatis.

Hab. in foliis *Hydrangeæ arborescentis*, in Amer. boreali.

65. **Uredo Hypœstis** Cooke in Grevillea X, p. 138 (*Trichobasis*). — 3057
Epiphylla; soris paucis, sparsis, fuscis, epidermide cinctis; ure-

dosporis subglobosis ovalibusve, 35-40 $\approx$ 32, fuscis, episporio spinuloso.

Hab. in foliis *Hypöestes aristatæ*, Inanda Natal (Wood).

66. **Uredo? Ilicis** Cast. Cat. pl. Mars. p. 209. — Hypophylla; maculis nullis; soris minutissimis, irregularibus, luteis; uredosporis magnis; globosis. 3058

Hab. in foliis *Quercus Ilicis*, pr. Marseille Galliae. — « Videtur *Uredini Quercus* Brondeau affinis ideoque verisimiliter generi *Melampsora* adscribenda ».

67. **Uredo involucrorum** Rabenh. Krypt. Fl. I, p. 7, Winter Die Pilze p. 255. — Soris rotundatis vel oblongis, mox denudatis; sporis plerumque ovatis, basi angustatis, brunneolis, demum sordide flavis. 3059

Hab. in involucris *Dipsaci pilosi* et *Knautiæ arvensis* in Germania. — Species dubia.

68. **Uredo Isiacæ** Thüm. in Grevillea VII, p. 50. — In foliis vaginisque soros maximos, latissime effusos, usque ad 6 cm. longos, et 1,5 cm. latos formans; soris ferrugineis, pulveraceis, primo tectis, demum liberis, inquinantibus; uredosporis ellipsoideis, utrinque æqui-rotundatis, episporio levi, crassissimo, dilute fuscidulis, 22-26 $\approx$ 16-20, episporio 5-6 μ . crasso. 3060

Hab. in foliis vaginisque vivis *Arundinis Isiacæ*, in piscina aquæ sulphuræ, ad Helnan pr. Cairo in Africa boreali.

69. **Uredo Janiphæ** Wint. in Grevillea XV, pag. 86 et in Hedwigia 1887, p. 167. — Soris solitariis gregariisve, plerumque hypo-, rarius etiam epiphyllis, sæpe ad petiolos ramulosque minores evolutis, ad folia maculis irregularibus rotundatisve, sæpe confluentibus, indeterminatis, fuligineis insidentibus, rotundatis vel angulatis, minutis, 0,5-1 mm. latis, ad nervos foliorum petiolos ramulosque juniores plus minusve elongatis, sæpe confluentibus, 5 mm. longis, primo ab epidermide pustulatim inflata, luteola velatis, mox autem nudis, applanatis, epidermidis fissæ fragmentis cinctis, pallide luteolis; uredosporis globosis vel ellipticis, interdum ovatis, dense minutissimeque aculeolatis, 28-29 $\approx$ 19-25, fuligineis. 3061

Hab. in foliis vivis *Jatrophæ Manihot*, in Brasilia (ULE).

70. **Uredo japonica** B. et C. North Pacif. Exped. n. 134. — Maculis orbicularibus; soris solitariis vel circinantibus; uredosporis ovatis, apiculo terminali hyalino; pedicello brevi, externa membrana evanescente. 3062

Hab. in foliis *Orchideaceæ*?, in Japonia.

71. **Uredo Jonesii** Peck Torr. Bot. Club, Vol. XII, n. 4, p. 36. — 3063
 Soris hypophyllis, numerosis, orbicularibus, compactis, nitidis, aurantiacis, epidermide rupta cinctis; uredosporis subglobosis, rugulosis, 23-28 μ . latis, luteo-fulvis, demum pallidioribus.

Hab. in foliis Ribis, New Mexico Amer. borealis (JONES).

72. **Uredo iridicola** Peck in 24 Rep. of Stat. bot. p. 89, t. III, f. 17- 3064
 19 (*Trichobasis*). — Soris amphigenis, rotundatis, ovalibus v. oblongis, raro linearibus, leniter elevatis, epidermidis ruptæ fragmentis cinctis; uredosporis globosis, 25 μ . diam., subtiliter echinulatis, brunneis.

Hab. in foliis vivis languidisve Iridis versicoloris, Sandlake Americæ borealis. — «An idem ac *U. Iridis* Schwein.?»

73. **Uredo Kleiniae** Mont. Syll. crypt. n. 1165. — Hypo-, rarius epi- 3065
 phylla; maculis nullis; soris sparsis confertisque, primo subrotundis, dein confluentibus, maximis, linearibus, flexuosis, aurantiacis, epidermide rupta, tandem involuta cinctis; uredosporis subglobosis, aurantiacis.

Hab. in utraque pagina foliorum Cacaliæ Kleiniae, Teneriffa (WEBB et BERTHELOT).

74. **Uredo lathyrella** Speg. Fungi Argentini pugillus IV, n. 80. — 3066
 Maculis nullis; soris sæpius hypophyllis, sparsis, erumpentibus, pulverulentis, 200-450 μ . diam., pallide fulvo-badiis; uredosporis sphaericis, 22-25 μ . diam. episporio levissimo, vix superne incrassatulo, protoplasmate granuloso, amœne fulvo-fuligineis.

Hab. ad folia viva Lathyri pubescentis, in arenosis maritimis prope Cabo Corrientes in America australi.

75. **Uredo ledicola** Peck 25 Rep. St. Mus. p. 90. — Epiphylla; ma- 3067
 culis parvis, determinatis, raro confluentibus, suborbicularibus, rufescenti-brunneis, obscure marginatis; soris subrotundatis vel irregularibus, epidermide rupta cinctis; uredosporis subglobosis, 30 μ . diam., aurantiacis, episporio ruguloso, hyalino, crasso donatis.

Hab. in foliis Ledi latifolii, in America boreali.

76. **Uredo Lupini** B. et C. F. North Pac. Exped. n. 137, Thüm. My- 3068
 coth. Univ. n. 852. — Hypo-epiphylla; maculis nullis; soris sparsis, irregularibus, epidermide rupta cinctis; uredosporis brunneolis, subglobosis, levibus.

Hab. in foliis Lupini, in California.

77. **Uredo Lynckii** Berk. in Gard. Chron. 1887, p. 25 (*Trichobasis*) 3069
 Berk. et Br. Ann. Nat. Hist. n. 1706. — Maculis parvis, pallidis,

sparsis, raro confluentibus; uredosporis flavis, obovatis, breviter pedicellatis, eximie echinulatis.

Hab. in foliis *Spiranthes* cujusdam exoticæ, in Britannia.

78. **Uredo Gynandrearum** Corda Icon. Fung. III, p. 3, t. 1, f. 9. 9. 3070

— Maculis pallidis, fusciscentibus, irregularibus, diffusis vel nullis; soris bullatis, ovalibus, irregulariter positis; uredosporis coffeeiformibus, ovalibus, episporio albo, hyalino, tenuissime verrucoso, nucleo albo vel fusco, 16-22 μ . diam.

Hab. in foliis *Orchideæ* cujusdam, in Amer. australi (FIEBER).

79. **Uredo Amsoniæ** Cooke in Ravenel Fungi Americani exsiccati 3071

n. 489 (*Trichobasis*). — Soris hypophyllis, pulvinatis, flavis, sparsis vel gregariis; uredosporis globosis, sublevibus, chlorinis, 18-22 μ . diam.

Hab. in foliis *Amsoniæ*, in Carolina australi.

80. **Uredo Andromedæ** Cooke in Ravenel Fungi Americani exsiccati 3072

n. 747. — Soris hypophyllis, maculæ rotundatæ, brunneolæ insidentibus, gregariis, brunneo-cinnamomeis, pulvinatis; uredosporis e globoso angulatis, 14-18 μ . diam., sublevibus, episporio hyalino, siccis chlorinis.

Hab. in foliis *Andromedæ* nitidæ, Darien in Georgia Americæ borealis.

81. **Uredo Macluræ** Speg. Fungi guaranitici I, n. 141. — Maculis 3073

nullis; soris hypophyllis, sparsis vel hinc inde parce laxèque aggregatis, minutis, 200-300 μ . diam., albido-flavescentibus; uredosporis limoniformi-ellipticis vel obovatis, 14-30 $\approx$ 10-18, utrinque obtusiuscule rotundatis, episporio tenuissimo, minute denseque papilluloso, nubiloso-farctis, fuscidulis vel chlorino-fulvellis.

Hab. ad folia viva *Macluræ* ucoræ, in silvis subvirgineis pr. Guarapi Amer. australis. — «Forte eadem ac *U. citrina* Cooke».

82. **Uredo macrosora** Peck in Botan. Gazette 1880, p. 35 (*Lecy-* 3074

thea). — Soris amphigenis, magnis, pulvinatis, flavis, epidermide rupta cinctis, sæpe gregariis vel confluentibus; uredosporis obovatis vel subglobosis, 15-20 μ . diam., rugulosis, paraphysibus levibus, capitatis, apice 25-28 μ . crasso.

Hab. in foliis vivis *Epilobii* tetragyni, Colorado Americæ borealis (BRANDEGE).

83. **Uredo macrosperma** Cooke in Grevillea VIII, pag. 71. — Hypo- 3075

phylla, sparsa; soris hemisphæricis, aurantiacis, demum pallescentibus; uredosporis sublanceolatis, utrinque obtusis, levibus, 45 $\approx$ 16-18.

Hab. in frondibus *Pteridis*, ad Natali Africae.

84. **Uredo malvicola** Speg. Fungi guaranitici I, n. 151. — Maculis 3076
nullis vel amphigenis, parum manifestis, parvulis, indeterminatis,
superne fuscescentibus, inferne pallescentibus; soris laxè gregariis
v. sparsis, hypophyllis, minutis, 120-150 μ . diam., pulverulentis,
lateritiis, ab indumento foliorum suboccultatis; uredosporis globo-
sis vel obovatis, 15-18 μ . diam., episporio modice incrassato, mi-
nute densissimeque papilloso, protoplasmate oleoso-guttulato far-
ctis, pallide fulvis.

Hab. in foliis vivis *Abutilonis* cujusdam, in dumetis collinis
Cerro Hu pr. Paraguari Americæ australis.

85. **Uredo Marrubii** Rabenh. in Flora 1850, p. 626. — Maculis so- 3077
risve irregulariter sparsis, læte aureis; uredosporis ovatis, ellipticis
vel angulatis, flavescentibus, 25 μ . diam., subtiliter granulatis.

Hab. in foliis *Marrubii*, in Italia.

86. **Uredo Microcelis** Mont. Syll. Crypt. n. 1167, l. c. pag. 91. — 3078
Amphigena; maculis orbicularibus diametro æquantibus brunneis;
soris punctiformibus, 1 mm. circ. d., epidermide primo tectis, tan-
dem apice rupto luteo-croceis; uredosporis conformibus, subglobosis.

Hab. in foliis *Statice macrophyllæ*, in Canariis (WEBB).

87. **Uredo Moreæ** Kalchbr. in Grevillea XI, p. 24. — Soris epiphyll- 3079
lis, ellipsoideis, rima longitudinali dehiscentibus, epidermide pal-
lide flava cinctis; uredosporis globosis, 18-20 μ . diam., flavo-fu-
scidulis.

Hab. in foliis vivis *Moreæ gracilis*, ad Somerset East
Africae australis.

88. **Uredo Muelleri** Schroet. Pilz. Schles. p. 375, *Uredo æcidiioides* 3080
I. Müll. in Bull. Soc. Bot. Fr. 1886, pag. 104, non DC. nec Peck.
— Amphigena; soris minutis, aureo-flavis, secus annulos 1 mm. la-
tos medio plerumque spermogonium gerentes confluentibus; uredo-
sporibus solitarie evolutis, plerumque globosis, 18,9 μ . diam., epispo-
rio subtiliter breviterque echinulato, aurantiaco-rufis.

Hab. in foliis *Rubi fruticosi*, in Silesia. — Sporulae ellipsoi-
deæ, circ. 2 μ . longæ.

89. **Uredo neurophila** Speg. Fungi guaranitici I, n. 143. — Maculis 3081
nullis vel parvulis, pallescentibus, indeterminatis; soris minutissi-
mis vix perspicuis, 50-60 μ . diam., hypophyllis, hinc inde densiuscule
gregariis, præcipue secus nervos tertiarios, maculam aurantiacam,
pulverulentam mentientibus; uredosporibus ellipticis vel globoso-ob-
ovatis, 15-18 μ . diam. $\approx$ 14-15, episporio præcipue antice valde incrassato.

ubique irregulariter ruguloso subpapilloso, protoplasmate nubiloso farctis, ex hyalino dilute fulvellis.

Hab. ad folia viva Myrtaceæ cujusdam, in silvaticis pr Villa Rica Americæ australis.

90. **Uredo Oxalidis** Lév. in Ann. Scienc. Nat. 1841, p. 240, Speg. F. 3082 Argent. II, n. 81, *Uredo Oxalidearum* Cooke in Grevillea X, p. 123. — Hypophylla; soris sparsis, punctiformibus, fuscis, epidermide rupta cinctis, macula albo-flavescente circumscriptis, pulverulentis; uredosporis globosis, levibus, nebulosis, centro subopacis, 15-20 μ . diam., pedicellatis.

Hab. in foliis Oxalidis strictæ, corniculatæ et Martianæ, prope Nivernum (LÉVEILLÉ), pr. Caracas (Dr. ERNST), et Buenos-Ayres Argentinae (SPEGAZZINI). — Sori minuti, 1-2 mm. d., uredosporæ crassiuscule tunicatæ, protoplasmate grosse granuloso, aureo foetæ. « Videtur *Æcidio Oxalidis* Thüm. cognata et potius generi *Uromyceti* adscribenda. »

91. **Uredo Oxytropidis** Peck in Botan. Gazette 1879, p. 218 (*Trichobasis*). — Maculis nullis; soris sparsis vel gregariis, amphigenis, rufescenti-brunneis; uredosporis obovatis vel late ellipticis, minute rugulosis, 25 $\approx$ 18.

Hab. in foliis Oxytropidis Lamberti, Colorado Americæ borealis (BRANDEGEE).

92. **Uredo Palmarum** Cooke in Grevillea V, p. 102, t. 86, f. 9 (*Trichobasis*). — Epiphylla; soris minutis, in maculis decoloratis, fuscis; uredosporis globosis, verrucosis, fuscis, 35-40 μ . diam., ad basim hyalino-apiculatis.

Hab. in foliis Cocos nuciferæ, Demerara Amer. australis.

93. **Uredo Pamparum** Speg. Fungi Argentini pugillus I, n. 51, Dec. 3085 Myc. Argent. n. 20. — Hypophylla, macula nulla; soris minutis, 200-350 μ . diam., prominulis, sparsis v. inordinate gregariis, pulverulentis, atro-ochraceis; uredosporis crassiuscule tunicatis, subsphæroideis, primo hyalinis, protoplasmate flavo-aurantiaco foetis dein fulvo-ochraceis, 20-26 μ . diam., non vel vix minutissime asperulis.

Hab. ad folia viva Rhynchosia, in Republica Argentina Americæ australis. — Forma **major**: *Uredo pamparum* Speg. F. Argent. IV, n. 82. Forma præsens nonnihil a typo differt soris prominulis, compactiusculis, majoribus, 0,5-1 mm. diam., diu epidermide cinerescenti tectis, dein erumpentibus, hypophyllis, atro-cinnamomeis; uredosporis sphæroideis, v. ovatis, 24-25 μ . diam. evidenter

sed minute papilloso-granulatis, crassiuscule tunicatis, saturate fulvo-fuligineis. Ad folia viva *Rhynchosia* speciei cujusdam majoris pr. Chacabuco (F. LYNCH-ARRIBALZAGA).

94. **Uredo paraguariensis** Speg. Fungi guaranitici I, n. 145. — Ma- 3086
culis amphigenis, suborbicularibus, definitis, subparvulis, 1-2 mm. diam., pallescentibus vel obscure virescentibus; soris hypophyllis, subminutis, 250-300 μ . diam., solitariis, centro macularum insidentibus, pallide fulvescentibus; uredosporis ellipticis vel e mutua pressione subirregularibus, utrinque late rotundato-subtruncatis, 20-24 $\approx$ 15-20, episporio tenui, ubique dense et minutissime (subimperspicue) rugoso-striatis, protoplasmate nubiloso farctis, subhyalinis.

Hab. ad folia viva *Monesia* cujusdam, in collinis Cerro Hu prope Paraguari in America australi.

95. **Uredo peribebuyensis** Speg. Fungi guaranitici I, n. 146. — Ma- 3087
culis vix manifestis, amphigenis, pallescentibus, indeterminatis; soris hypophyllis, rarissime epiphyllis, laxe gregariis, primo tectis, dein erumpentibus, pulchre aurantiacis vel pallide miniatis, submajusculis, 500 μ . ad 1 mm. diam., sæpeque confluentibus; uredosporis globosis vel globoso-obovatis, 18-24 $\approx$ 16-20, episporio pro ratione tenui, obscure subdenseque punctulato-asperulo, protoplasmate guttulato-oleoso farctis, aurantiacis, pedicello nullo v. brevissimo, crassiusculo, hyalino.

Hab. ad folia viva *Monniniæ* cujusdam, in montuosis Cordillera de Peribebuy Americæ australis.

96. **Uredo Petroselini** DC. Fl. Fr. II, p. 597, *Trichobasis Petroselini* Berk. Outl. p. 332, *Uredo æcidiiiformis* Grev. Fl. Ed. p. 441. — 3088
Maculis flavescentibus; soris subrotundatis vel ovalibus, confluentibus, amphigenis, epidermide demum rupta; uredosporis globosis vel subglobosis, subinde obsolete pedicellatis, pallide flavescentibus.

Hab. in foliis Umbelliferarum, imprimis *Smyrni*, Scandicis etc., in Gallia et Britannia. — Forte *Pucciniæ Smyrni* status uredosporus. «Cfr. etiam *Cæoma Ægopodii* Wint.».

97. **Uredo? peziziformis** Berk. et Curt. F. North Pacif. Exped. n. 140 3089
(*Lecythæa*). — Hypophylla; soris minutis, peziziformibus, extus albis, intus fuscis; uredosporis obovatis, echinulatis.

Hab. in foliis plantæ ignotæ, ad Nicaragua.

98. **Uredo Phillyreæ** Cooke F. brit. exsicc. I, n. 592, Thüm. Myc. 3090
Univ. n. 1142 et 1935, Winter Die Pilze p. 254, *Cæoma Phil-*

lyreæ Thüm. et Bagn. in Erb. Critt. It. II, n. 729. — Maculis rotundis, luteis; soris solitariis in maculæ centro seu gregariis secus circulos dispositis, aurantiacis, primo epidermide tectis, demum liberis; uredosporis obovato-globosis vel plerumque ellipticis, sublevibus, subtilissime spinulosis, epedicellatis, aurantiacis, 17-28 $\times$ 12-16, episporio subcrasso, hyalino.

Hab. in foliis vivis *Phillyreæ* mediæ, in Italia (BAGNIS), Britannia (COOKE, PLOWRIGHT), Germania (WINTER) et Algeria (TRABUT).

99. **Uredo Phyllariæ** Cast. Cat. pl. Mars. p. 210 (*U. Phillyreæ*?). — 3091

Hypophylla; maculis flavo-fuscis, late emarginatis; soris minimis, sparsis, flavo-aurantiacis; uredosporis magnis, globosis, sessilibus, dilute flavis.

Hab. in foliis *Phyllariæ* (?) angustifoliæ, prope Marseille Galliæ.

100. **Uredo planiuscula** Mont. Fl. Chil. VIII, pag. 51, Syll. Crypt. 3092

n. 1168. — Amphigena; macula nulla; soris sparsis, minutis, epidermide primo tectis, tandem denudatis, planiusculis, pallidis; uredosporis globosis, ochraceis, episporio crasso, levi præditis.

Hab. in foliis *Rumicis* indeterminati, in Chile Americæ australis (GAY).

101. **Uredo Plantaginis** B. et Br. in Grevillea 1881, p. 48. — Macu- 3093

lis pallidis; soris minutis, mox apice ruptis; uredosporis ellipticis, flavis.

Hab. in foliis *Plantaginis lanceolatae*, in Britannia.

102. **Uredo Poæ-sudeticæ** West. in Bull. Ac. Roy. Belg. II, t. XI, 3094

n. 6, Herb. crypt. belg. n. 1268 nec *Uredo Poæ* Rabenh. — Maculis pallide brunneolis vel vinosis, solitariis vel confluentibus elongatis; soris brunneis, elongatis, bullatis, epidermide longitudinaliter fissa subtectis; uredosporis brunneis, centralibus globulosis v. ovoideis, periphericis piriformibus, longe pedicellatis.

Hab. in foliis *Poæ sudeticæ*, Luxemburg (CRÉPIN), Belgio (WESTENDORP).

103. **Uredo Polygalæ** Kalchbr. in Grevillea XI, p. 25. — Soris hy- 3095

pophyllis, sparsis confluentibusve, subprominulis, primum epidermide tectis, ochraceis, maculæ flavæ innatis; uredosporis ovato-rotundis, 15-18 μ . diam., episporio crasso, levi, flavis.

Hab. in foliis vivis *Polygalæ Ohlendorffianæ*, pr. Somerset East Africae australis.

104. **Uredo Polypodii** (Pers.) DC. Fl. Franç. VI, p. 81, Winter Die 3096

Pilze p. 253, Schroet. Pilz. Schles. p. 374, *Uredo linearis* var. *Polypodii* Pers. Syn. Fung. p. 217, *Cæoma filicum* Link Sp. II, p. 36, *Uredo Aspidii* Poll. in Giorn. Fis. 9, p. 182, *Uredo Aspidiotus* Peck in 24 Rep. St. Mus. p. 88 (sec. Winter), *Uredo filicum* Desm. Exs. n. 530, *Pucciniastrum? Filicum* Karst. M. F. *Uredo globoso-flava* Bonord. Coniom. p. 31. — Soris rotundatis vel oblongis, primo epidermide bullata tectis, dein erumpenti-apertis confluentibusque, aurantiaco-rufis, hypophyllis; uredosporis ellipticis vel ovoideis, 24-28 $\approx$ 13-20, episporio hyalino, inæqualiter crasso, vertice punctulato, ceterum levi, intus aurantiaco-rufescentibus.

Hab. in frondibus *Phegopteridis* *Dryopteridis*, *Cystopteridis fragilis*, *Aspidii capensis*, *Adianti Capilliveneris*, *Scolopendrii officinarum*, in Britannia, Italia, Germania, Bohemia, Austria, Belgio, Fennia, America boreali et Africa australi. — Forte huc pertinet *Cæoma nervisequum* Thüm. et absque dubio *Erysibe Filicum* var. *macrospora* Wallr. Fl. Crypt. Germ. II, p. 206. Forma ***Phegopteris*** Wint. Die Pilze p. 253, *Protomyces filicinus* Niessl in Rabenh. F. E. n. 1659, *Pucciniastrum? Filicum* Speg. Dec. myc. n. 63 bis. — Uredosporis plerumque angulatis, 17-30 μ . longis, isodiametricis vel plus minus elongatis, vix punctulatis. In *Phegopteride* polypodioides, in Germania et Italia.

105. ***Uredo Pontederiæ*** Speg. Fungi Argentini pugillus I, n. 49, Dec. 3097 myc. Argent. n. 26. — Amphigena; maculis verticaliter ellipticis vel elliptico-elongatis, intense purpurascentibus; soris elongatis, primo tectis, dein erumpentibus, compactiusculis, 1-3 mm. longis, 0,5-1 mm. latis, fulvo-ochraceis; uredosporis subsphæroideis, episporio tenui, sæpe sursum incrassato, 28-30 μ . diam., granuloso-farctis vel uniguttulatis, fulvo-fuligineis.

Hab. ad folia *Pontederiæ sagittatæ*, in paludosis secus Rio de la Plata in Republica Argentina Americæ australis.

106. ***Uredo Pruni*** Cast. Obs. I, p. 27, Cat. pl. Mars. p. 212 vix Mont. 3098 — Maculis flavis, rotundatis, hypophyllis, subinde confluentibus; soris rotundatis, numerosis, minutis, albido-marginatis; uredosporis subovatis, sessilibus, raro pedicellatis, flavis.

Hab. in foliis *Pruni*, *Amygdali* etc., pr. Marseille Galliæ. — «Cfr. *Pucciniam Pruni* Pers. n. 2252».

107. ***Uredo punctoidea*** Cooke in Grevillea III, p. 75. — Hypophyll- 3099 la, secus greges irregulares a venis folii circumscriptos disposita;

soris minutis, punctiformibus, primo subhemisphæricis, dein sursum ruptis; uredosporis subglobosis vel ovatis, tuberculatis, aurantiacis.

Hab. in foliis pinnatis fruticis Leguminosæ cujusdam, ad Hymalaya Asiæ.

108. **Uredo Pycnostachydis** Kalchbr. in Grevillea XI, p. 25. — So- 3100
ris hypophyllis, sparsis, minutis, prominulis, dilute ochraceis; uredosporis sphæroideis et difformibus, 20-30 μ . diam. granulatis, flavidis.

Hab. in foliis Pycnostachydis reticulatæ, ad P. Natal, Inanda Africae.

109. **Uredo Rhagodiæ** Cooke et Massee in Grevillea XV, pag. 99. — 3101
Hypophylla; soris sparsis, bullatis, diu tectis, demum laceratis, fuscis, epidermide cinctis; uredosporis globoso-ovatis, levibus, flavescens, 20 $\approx$ 15.

Hab. in foliis Rhagodiæ Billardieri, in Australia (WATT).

110. **Uredo rhombica** Speg. Fungi guaranitici I, n. 149. — Maculis 3102
nullis vel parvis, indeterminatis, pallescentibus; soris hypophyllis, sparsis vel laxe usque ad 5 gregariis, minutis, 200-400 μ . diam., testaceis; uredosporis elliptico-limoniformibus vel elliptico-rhomboides, utrinque obtusiusculis, 25 $\approx$ 15-20, episporio antice satis incrassato, ubique dense minuteque verruculoso-hirto, intus grosse uniguttulatis, nubilosis, fulvis.

Hab. ad folia viva Astronii juglandifolii, in montanis Cordillera de Peribebuy Americæ australis.

111. **Uredo ribicola** C. et E. in Grevillea VI, p. 86. — Hypophylla; 3103
soris subglobosis, flaveolis, epidermide cinctis; uredosporis globosis, asperulis, 20-22 μ . diam.

Hab. in foliis Ribis, Rocky Mountains Amer. bor.

112. **Uredo Ruelliæ** B. et Br. Fungi of Ceylon n. 830. — Soris hy- 3104
pophyllis, sparsis, brunneis; uredosporis globosis, fortiter echinulatis, 25 μ . diam.

Hab. in foliis Ruelliæ prostratæ, in insula Ceylon.

113. **Uredo Scabies** Cooke in Grevillea XV, p. 18. — Epi- vel hy- 3105
pophylla; maculis bullatis, irregularibus, linea nigra cinctis; soris convexis, diu clausis, nitidis, demum fissis, in maculis sparsis vel concentricis dispositis; uredosporis ovalibus vel turbinatis, breviter pedicellatis, fuscis, episporio asperulo, 35-40 $\approx$ 28-30.

Hab. in foliis vivis Vanillæ, ad Antioquia in Columbia (C. PATIN).

114. **Uredo? Scirpi** Cast. Cat. pl. Mars. p. 214. — Amphigena; maculis flavescentibus; soris seriatim elongatis, atris, raro confluentibus, epidermide rupta cinctis; uredosporis ovato-prismaticis, longe stipitatis, brunneis. 3106

Hab. in foliis *Scirpi maritimi*, prope Marseille Galliae. — «Species perdubia, verisimiliter generi *Ustilagini* adscribenda».

115. **Uredo Scolopendrii** (Fuck.) Schroet. Pilz. Schles. p. 374, *Ascospora Scolopendrii* Fuck. Symb. myc. II App. p. 19, *Æcidium Scolopendrii* Oudem. sec. Schroet. l. c., *Uredo Polypodii* Wint. p. p. — Soris minutis, pustuliformibus, primo aquose albidis, dein candidis, in maculis irregulariter limitatis, brunneolis dispositis, hypophyllis, pseudoperidio hemisphærico, apice pertuso tectis; uredosporis ellipticis, ovatis v. clavatis, 30–38 μ 17–20, episporio hyalino ubique aculeolato donatis, intus hyalinis. 3107

Hab. in frondibus *Scolopendrii officinarum*, *Asplenii Rutæ-murariæ* et *Blechni*, in Germania et Neerlandia. — Forte *Melampsoræ* status uredosporus. Sec. Fuckel uredosporæ 48 μ 24.

116. **Uredo Sebastianæ** Wint. in Hedwigia 1887, pag. 12. — Soris plerumque hypophyllis, rarius etiam epiphyllis, haud raro ad petiolos ramulosque juniores, gregariis, sæpe confluentibus et folium totum occupantibus, magnis, primo rotundatis seu ellipsoideis, demum irregularibus flexuosis sinuosisque, ab initio epidermide vesiculose inflata velatis, mox autem erumpentibus et ab epidermidis fissæ laciniis cinctis, intense subaurantiaco-flavidis; uredosporis subglobosis seu irregulari-ellipsoideis vel ovatis, verruculis acutis, minutis dense obsitis, oleo flavido-aurantio repletis, 14–18 μ diam. vel usque ad 25 μ longis, 14–16 μ latis. 3108

Hab. in foliis, petiolis ramulisque junioribus vivis *Sebastianæ* cujusdam, prope Montevideo Uruguay Americæ australis (ARCHAULETA).

117. **Uredo sonchina** Thüm. in N. Giorn. botan. italiano p. 197. — Soris amphigenis, dense gregariis, parvis, subplanis, liberis, fuscis vel spadiceis, pulveraceis; uredosporis aut globoso-ovatis aut rotundato-ellipsoideis, episporio obsolete punctulato, tenui, 25–32 μ diam., fuscidulis; paraphysibus nullis. 3109

Hab. ad folia viva *Sonchi arvensis*, Ufa Orenburg.

118. **Uredo speciosa** Peck in Botan. Gazette 1878, p. 34 (*Lecythea*). — Maculis suborbicularibus, 2–5 mm. diam., flavis; soris paucis, gregariis, prominentibus, aurantiacis, hypophyllis; paraphysibus 3110

elongatis, incurvis, obtusis, subcylindraceis; uredosporis subglobosis ellipticisve 25-30 μ . longis, rugulosis, læte aurantiacis.

Hab. in foliis vivis Rubi deliciosi, in America boreali. — « Verisimiliter *Phragmidii* cujusdam status uredosporus ».

119. **Uredo Spyridii** Cooke et Massee in *Grevillea* XV, p. 99. — Hy. 3111
pophylla; soris sparsis, flavescentibus, pulverulentis; uredosporis subglobosis, pallide flavidis, asperulis, 20-25 μ . diam.

Hab. in foliis *Spyridii parvifolii*, in Australia (WATT).

120. **Uredo Statices** Berk. et Curt. North Pacific Exped. Fungi 3112
n. 135 vix Desm. — Hypo-epiphylla; soris amplis, concentricis, epidermide cinctis; uredosporis obtusissimis.

Hab. in foliis *Statices*, in California Amer. bor. — « Cfr. *Uromyctem Limonii* Lév. n. 1922 ».

121. **Uredo subneurophila** Speg. Fungi guaranitici I, n. 144. — Ma- 3113
culis nullis; soris hypophyllis, minutissimis ac vix perspicuis, 60-80 μ . diam., hinc inde densiuscule gregariis, præcipue secus nervos secundarios et tertiarios, maculas aurantiacas pulverulentas mentientibus; uredosporis globosis, 15-18 μ . diam., episporio hyalino, pro ratione tenui, laxe submajusculæ verruculoso, protoplasmate guttulato-oleoso, aureo vel luteo farctis.

Hab. ad folia viva *Psidii* cujusdam, in silvis montanis Cordillera de Peribebuy in America australi. — Species externa facie *U. neurophilæ* Speg. simillima.

122. **Uredo Symphyti** DC. Encycl. VIII, pag. 232, Rabenh. F. E. 3114
n. 2187, Winter Die Pilze p. 255, Schroet. Pilz. Schles. p. 374, *Trichobasis Symphyti* Lév. in Ann. Scienc. Nat. 1847, Cooke Handb. n. 1583, *Coleosporium Symphyti* Fuck. Kickx Fl. Fl. II, p. 88. — Soris minutis, numerosissimis, sparsis, dein confluentibus, rotundatis, epidermide rupta subcinctis, hypophyllis, aurantiaco-flavis; uredosporis rotundatis, ellipticis vel ovatis, aculeolatis, 22-35 $\approx$ 15-24, dilute aurantiaco-rufescentibus.

Hab. in foliis *Symphyti officinalis*, tuberosi, bulbosi et taurici, in Italia, Gallia, Britannia, Belgio, Austria, Hungaria, Neerlandia, Germania. — In caule folioque sæpius strias latiusculas efformat.

123. **Uredo Tephrosiæ** Rabenh. in Fungi Europæi n. 2375 (absque 3115
diagnosi).

Hab. in *Tephrosia purpurea*, in India orientali. — « An *Raveneliæ* cujusdam status uredosporus? »

124. **Uredo Tessariæ** Speg. Fungi Argentini pugillus IV, n. 85. — 3116

Soris ellipticis vel confluentibus, linearibus, 0,5-1,5 mm. long., 0,2-0,3 mm. lat., longitudinalibus, densiuscule sparsis, erumpentibus, non vel vix exserto-prominulis, fulvo-cinnamomeis; uredosporis globosis v. ellipticis, sursum plus minusve obtusatis, $32-38 \approx 24-25$, episporio antice sparse muriculato, vix incrassatulo, amoene fuligineis, pedicello mox diffluente, brevi suffultis.

Hab. in caulibus Tessariæ absinthioidis, in montuosis «Cordillera de la Rioja», prope la Vega del Jaguel Americæ australis (Dr. Hieronymus).

125. **Uredo Thermopsidis** Thüm. in Bull. Soc. Natur. de Moscou 1877, 3117 p. 139, Mycoth. univ. n. 1042. — Soris hypo- raro etiam epiphyllis, orbiculatis, sparsis, liberis, fuscis, epidermide circumdatis; uredosporis ovatis, nucleolatis, episporio tenui, levi, dilute fuscis, $22-25 \approx 18-20$, paraphysibus nullis.

Hab. ad folia viva Thermopsidis lanceolatæ, prope Minussinsk Sibiriae occidentalis (N. Martianoff).

126. **Uredo tordillensis** Speg. Fungi Argentini pugillus IV, n. 86. — 3118 Maculis nullis vel tantum epiphyllis, subcyaneo-fuscescentibus, minutis, indeterminatis; soris hypophyllis, primo epidermide tectis, dein erumpentibus eaque fissa cinctis, 0,3-0,5 mm. diam., plus minusve compactis, fulvo-lateritiis; uredosporis globosis vel ovoideis, $18-20 \mu$. diam., episporio crassiusculo ac minute verruculoso præcipue ad verticem, pulchre fulvo-fuligineis, pedicello longiusculo, mox secedenti, subclavulato, hyalino fultis.

Hab. in foliis Euphorbiæ hypericifoliæ et repentis, in provincia Tucuman et ad ripas lacunæ subsalsæ, Rincon de Fierro, Silva Tordillo Amer. australis (Dr. Lorentz et Hieronymus).

127. **Uredo Tropæoli** Desm. in Ann. Scienc. Nat. 1836, p. 243, Cooke 3119 Handb. n. 1578, West. Herb. belg. n. 839. — Hypophylla; maculis pallide flavescentibus; soris minutis, sparsis vel confluentibus; uredosporis ovoideis vel subglobosis, aurantiacis.

Hab. in foliis Tropæolorum, in Gallia, Belgio et Britannia.

128. **Uredo valenzueliana** Speg. Fungi guaranitici I, n. 152. — Ma- 3120 culis nullis vel parum manifestis, indeterminatis, pallescentibus sæpeque totum folium occupantibus; soris hypophyllis, laxe gregariis vel sparsis, minutis $250-300 \mu$. diam., tumidulis, primo tectis, dein erumpentibus, testaceo-fuscidulis; uredosporis globoso-obovatis vel e mutua pressione subirregularibus, $20-25 \approx 13-16$, episporio modicissime incrassato, levi vel vix superne laxè minutissimeque granuloso, nubiloso-farctis, pallide fulvo-melleis.

Hab. ad folia viva *Metastelmatis* diffusi, in dumetis inter Valenzuela et Paraguay Americæ australis. — Paraphyses periphericæ, elongato-subteretes, arcuato-incurvæ, apice subattenuato-rotundatæ, basi truncatæ, $20 \approx 7-8$, dense constipatæ, ex hyalino subchlorino-melleæ.

129. **Uredo Vitis** Thüm. Pilze des Weinstockes p. 182. — Soris hy- 3121
pophyllis, dense gregariis, nonnunquam in maculis fuscis sed plerumque sine maculis, in foliorum pagina superiore maculas parvas, stramineas formantibus, hemisphæricis, solitariis, numquam confluentibus, duris, pallide aurantiaco-flavis (tamen in speciminibus exsiccatis), minutis, solidis; uredosporis guttuliformibus aut globosis, 15μ . diam., aut ovatis, $20 \approx 14$, aut ellipsoideis, $22 \approx 12-15$, subpedicellatis, basi propagulatis, dilutissime lutescentibus, episporio levi, crasso, inæquali, plerumque vertice crassissimo.

Hab. in foliis vivis vel sublanguidis *Vitis* viniferæ, Aiken Carolinæ australis (H. W. RAVENEL).

130. **Uredo Wyethiæ** Peck in Botan. Gazette 1882, p. 45 (*Tricho-* 3122
basis). — Maculis nullis; soris punctiformibus, numerosis, plerumque totam inferiorem folii paginam occupantibus, rufescentibrunneis; uredosporis subglobosis lateve ellipticis, $30-40 \approx 20-30$.

Hab. in foliis vivis *Wyethiæ* angustifoliæ, Colorado Americæ borealis (BRANDEGEE).

131. **Uredo Zehneriæ** Thüm. Fungi austro-africani n. 83. — Soris 3123
hypophyllis, sparsis, interdum confluentibus, sæpe secus orbem dispositis, epidermide expallescente tectis, dein erumpentibus, mediis, planis, rufo-fuscis; uredosporis plus minusve globosis, plerumque basi subacuminatis, levibus, dilute brunneis, episporio tenui, 25μ . diam.

Hab. in foliis languidis *Zehneriæ* scabræ, juxta «Cookhuis Drift» Klyn Visch Rivier, Promont. Bonæ Spei Africæ australis (P. MAC-OWAN).

Subgenus *Cæoma* Link. Sporæ (uredosporæ?) subcatenulatæ.

132. **U. Cæoma Chelidonii** Schwein. Syn. Amer. bor. p. 291, n. 2851, 3124
Magnus in Hedwigia 1875, p. 20, Winter Die Pilze p. 259, Schroet. Pilz. Schles. p. 376. — Spermogoniis orbiculatis, planis, flavidis, secus parvos greges congestis; soris rotundatis, plerumque orbiculatim dispositis, flavo-rufis, epidermide lacerata cinctis, maculis pallidis, sæpe brunneo-marginatis; sporis globosis vel ellipticis, subangulatis, $16-23 \approx 12-20$, subtiliter punctatis, aurantiaco-flavis.

Hab. in foliis Chelidonii majoris, in Germania et prope New York Americæ borealis (SCHWEINITZ).

133. **U. Cæoma Fumariæ** Link Sp. II, p. 24, Winter Die Pilze pag. 259, 3125
 Schroet. Pilz. Schles. p. 376, *Uredo Fumariæ* Rabenh. D. Krypt. Fl. n. 54, *Uredo confluens Fumariæ* Kunze mscr. — Spermogoniis explanatis, orbiculatis, secus parvos greges dispositis, flavescentibus; soris plerumque irregularibus, explanatis, aurantiaco-rufescentibus, raro solitariis v. sine ordine sparsis, plerumque secus lineas ellipticas vel orbiculariter dispositis, sæpe confluentibus, maculis 1 cm. et ultra longis; sporis catenulatis, sphæroideis vel oblongis, subinde angulatis, 14-22 $\approx$ 10-17, subtiliter verrucosis, aurantiaco-rufis.

Hab. in Corydali cava, intermedia, fabacea, in Germania.

134. **U. Cæoma confluens** (Pers.) Schroet. Pilz. Schles. pag. 376, *Uredo* 3126
confluens Pers. et var. *Ribis alpini* Pers. Syn. pag. 214, *Cæoma Ribis-alpini* Wint. Die Pilze p. 258, *Cæoma Ribesii* Link Sp. II, pag. 28, p. p. — Spermogoniis explanatis, flavidis, orbiculatis, parce gregariis, soris rotundatis, ellipticis vel irregularibus, planis, solitariis vel sine ordine, sæpe orbiculariter in greges congestis, haud raro confluentibus, dilute aurantiacis; sporis catenulatis, rotundatis vel ellipticis, sæpe subangulatis, 16-30 $\approx$ 13-18, subtiliter denseque punctato-verrucosis, aurantiaco-rufulis.

Hab. in foliis Ribis Grossulariæ, alpini, rubri, nigri, atropurpurei, in Germania Sibiria asiatica.

135. **U. Cæoma Saxifragarum** (DC.) Schlecht. Fl. Berol. II, p. 121, 3127
 Schroet. Pilzfl. Schles. p. 375, *Uredo Saxifragarum* DC. Fl. Franç. VI, p. 87, Cooke Handb. n. 1568, *Cæoma Saxifragæ* Wint. Die Pilze p. 258, *Uredo polymorpha* var. *Saxifragæ* Strauss in Wett. Ann. II, pag. 87, *Erysibe polymorpha* var. *d.* Wallr. Fl. Crypt. Germ. II, p. 197. — Spermogoniis sparsis, flavidis, explanatis; soris minutis, orbiculatis vel ellipticis, solitariis vel per totam folii superficiem sparsis, subaurantiacis; sporis catenulatis, rotundatis, 17-28 μ . diam., subtiliter verrucosis, aurantiaco-flavis.

Hab. in foliis Saxifragæ aizoidis, moschatæ, granulatae, in Gallia, Austria, Germania, Britannia. — Forte *Melampsora vernalis* Niessl forma æcidiospora, suadente cl. Schroeter.

136. **U. Cæoma Laricis** (Westend.) Hartig Wicht. Krankh. der Wald- 3128
 bäume p. 93, Phil. et Plowr. in Grev. XIII, p. 73, Winter Die Pilze p. 256, *Uredo Laricis* West. 7 Notice n. 34. — Soris angustis,

500 μ . ad 5 mm. longis, maculæ flavæ insidentibus, epidermide lacerata, albida cinctis; sporis rotundatis vel ellipticis, sæpe subangulatis, 16-24 $\approx$ 12-17, subtiliter verrucosis, aurantiaco-flavis.

Hab. in Pino Laricio, in Belgio, Britannia et Germania. — Ad peripheriam sori exstant cellulæ numerosæ, clavatæ, subvacuæ. Spermogonia globosa.

137. **U. Cæoma Ligustri** (Rabenh.) Wint. Die Pilze p. 258, *Uredo Li-* 3129
gustri Rabenh. Krypt. Fl. I, p. 8. — Soris rotundatis vel irregularibus, plano-convexis, siccitate pallide flavido-brunneis, sine ordine vel circinatum in greges rotundatos maculæ flavescenti insidentes congestis, sæpe confluentibus; sporis rotundatis vel late ellipticis, plerumque leniter angulatis, 20-30 $\approx$ 17-23, subtilissime verruculosus, fere hyalinis.

Hab. in Ligustro vulgari, in Germania.

138. **U. Cæoma superficialis** Speg. Fungi guaranitici I, n. 129. — Ma- 3130
culis nullis; soris minutissimis, 50-60 μ . diam., densiuscule sparsis, pulvisculum pallide fulvescentem simulantibus, superficialibus; sporis globosis v. ovatis, 22-25 $\approx$ 20-24, episporio tenui, laxissime verruculoso-asperulo donatis, hyalinis vel vix fulvescentibus.

Hab. ad folia viva Blechni cujusdam in silvis prope Mbatobi Americæ australis.

139. **U. Cæoma mbatobiensis** Speg. Fungi guaranitici I, n. 128. — Ma- 3131
culis nullis; soris minutissimis, 50-80 μ . diam., hypophyllis, sparsis v. sæpius secus nervum primarium irregulariter laxèque aggregatis, pallidissime fulvis, subpulverulentis; sporis globosis vel subhemisphæricis (in sicco) majusculis, 15-28 μ . diam., episporio ubique crassissimo, 3-5 crasso, laxè verruculoso-papilluloso donatis, protoplasmate nubiloso fartis, ex hyalino perdilute fulvescentibus.

Hab. ad frondes languentes Pteridis? cujusdam, in nemorosis prope Mbatobi Americæ australis.

140. **U. Cæoma Ægopodii** (Rebent.) Winter Die Pilze p. 258, *Æci-* 3132
dium Ægopodii Rebent. Fl. Neom. pag. 353, *Uredo Petroselini* DC. Fl. Franc. II, p. 597? — Soris rotundatis, oblongis vel irregularibus, diu epidermide velatis, albidis, secus greges rotundatos, ellipticos vel irregulares seriatim ordinatis sæpeque confluentibus; sporis plerumque polygoniis, æque longis ac latis vel oblongis aut oblongo-clavatis, 17-35 $\approx$ 11-26, verrucosis, hyalinis.

Hab. in Ægopodio Podagraria et Chærophyllo aromatico, in Gallia et Germania.

141. **U. Cæoma Martianoffiana** Thüm. Pilzfl. Sibir. n. 198. — Soris hy- 3133

pophyllis, aut solitariis aut longe confluentibus, pustulatis, orbiculatis, elevatis, flavis vel aurantiacis, subfirmis, sine macula sed in pagina superiore maculam indeterminatam, fuscam formantibus; sporis irregularibus, aut ellipsoideis aut quadrangulis aut polyhedris, hyalinis, episporio tenui, verruculoso, verruculis minimis, gregariis, plerumque $25 \approx 20$.

Hab. in foliis vivis Delphinii intermedii, pr. Tajga Sibiriae occidentalis. — Fortasse melius *Coleosporii* species.

142. **U. Cæoma nitens** Schwein. Syn. Carol. p. 69, n. 458 (sub *Æcidio*) 3134
 Burrill Paras. Fungi of Illinois p. 220, *Cæoma* (*Æcidium*) *luminatum* Schwein. Syn. N. Am. Fungi p. 293, n. 2887, *Uredo luminata* Thüm. Pilzfl. Sibir. — Hypophyllum; soris irregularibus, explanatis, plerumque crassiuscule consociatis confluentibusque, plus minus folium obtegentibus læte, aurantiaco-flavis; sporis subglobosis, ellipticis vel oblongis, episporio tenui, subtiliter tuberculato donatis, $18-35 \approx 12-24$; spermogoniis sparsis, numerosis, flavis, plerumque epiphyllis.

Hab. in foliis Rubi saxatilis, occidentalis, villosi, canadensis, cuneifolii et strigosi, in America boreali et Sibiria asiatica. — Forte *Pucciniæ Peckianæ* cognatum.

143. **U. Cæoma Galanthi** (Unger?) Schroet. Pilz. Schles. p. 377, Winter 3135
 Die Pilze p. 256, *Uredo Galanthi* Unger Exanth. p. 88, 182, 234, 247 (1833), aptius *Uredo Galanthi* Kirch. in Lotos 1856, p. 169. — Spermogoniis explanatis, orbiculatis, flavescentibus, secus parvos greges dispositis; soris explanatis, sæpe confluentibus, ambitu ellipsoideis vel irregularibus, annulatim dispositis, flavo-aurantiacis; sporis subangulatis, globosis aut ellipticis, $14-26 \approx 10-22$, subtiliter verrucosis, e flavo aurantiaco-rufescentibus.

Hab. in Galantho nivali, in Germania et Bohemia meridionali.

144. **U. Cæoma Abietis-pectinatae** Reess in Abhandl. Nat. Ges. zu 3136
 Halle XI, p. 115, Winter Die Pilze p. 257 (sub *Caeomate*). — Soris rotundatis, secus series duas in inferiore acuum pagina dispositis, aurantiaco-flavis; sporis oblongo-polyhedricis v. ovatis, subpellucidis, $20-22 \approx 12-14$, verrucosis, flavis.

Hab. in acubus Pini Piceæ, in Germania. — « An potius *Peridermium* ? »

145. **U. Cæoma Ulmariae** Thüm. Pilzfl. Sibir. n. 197. — Soris plerum- 3137
 que nervos sequentibus, longis, fere pliciformibus, elevatis, magnis, pallide aurantiacis, hypophyllis, sine macula, sed in pagina superiore

maculam indeterminatam stramineam formans; sporis globosis, interdum fere catenulatis, hyalinis, episporio tenui, sublevi vel subundulato, circ. 20 μ . diam.

Hab. ad folia viva Spirææ Ulmariae, in silvis prope Tajga Sibiriae asiaticæ. — «An *Triphragmii Ulmariae* status æcidiosporus?»

146. **U. Cæoma nervisequa** Thüm. in Flora 1876, p. 412, Myc. univ. 3138 n. 1141 (*Caeoma*). — Soris hypophyllis, gregariis, semper internerviis, mediis, confluentibus, subfirmis, tectis, pro maxima parte seriatis, pallide ochraceo-luteis, in frondium pagina superiore maculam rufo-fuscam formantibus; sporis valde irregularibus, oblongis, ovatis, subglobosis, ellipticis sed semper plus minusve compressis, in catenulis rectis, longissimis, 8-20-sporis conjunctis, hyalinis, intus granulosus, episporio tenuissimo, levi, 20-22 = 16-18.

Hab. in frondibus vivis languidisve Cheilanthis hastatæ, Somerset East in silvis ad pedem montis Boschberg Africae australis (P. MAC OWAN). — Cfr. *Uredinem Polypodii* n. 3096.

147. **U. Cæoma Clematidis** Thüm. in Mycoth. Univ. n. 539. — Soris 3139 hypophyllis, aut solitariis aut gregariis, pallide flavidis, plus minus rotundatis, applanatis; sporis irregularibus, ovoideis, clavatis, fere quadrangulis vel etiam polygoniis, episporio tenui, granuloso, granulis minimis, hyalinis, pallidissime flavescentibus, diaphanis, 24-28 = 16-20.

Hab. in foliis vivis Clematidis brachiatae, ad pedem montis «Boschberg» prope Somerset-East, Promont. Bonæ Spei (P. MAC OWAN). — *Cæoma Vitalbatum* Link est *Æcidium Clematidis* DC.

148. **U. Cæoma Evonymi** (Gmel.) Schroet. Brand. und Rostp. p. 30, 3140 Pilze Schles. p. 375, Wint. Die Pilze p. 259, *Æcidium Evonymi* Gmel. in L. Syst. Nat. II, p. 1473, *Uredo Evonymi* Mart. Fl. Mosq. p. 230, p. p., *Cæoma Ribesii* Link Sp. II, p. 28 p. p. — Spermogoniis planis, orbiculatis, flavescentibus, secus parvos greges dispositis; soris 500 μ . ad 1 mm. latis, rotundatis v. irregularibus, planis, pallide aurantiacis, sine ordine vel orbiculariter dispositis, sæpe confluentibus; sporis catenulatis, globosis, ellipticis vel ovatis, 1728 = 12-24, subtiliter punctatis, pallide rufo-flavidis.

Hab. in foliis, petiolis ramulisque Evonymi europæi, verrucosi, latifolii, in Germania, Italia, Helvetia, Belgio, Russia. — Sori zonis latis, aurantiacis cincti.

149. **U. Cæoma pinitorqua** A. Br. in De Bary Monatsb. Berl. Akad. 3141

1863, p. 624, Winter Die Pilze p. 257 (sub *Cæomate*). — Soris ut plurimum linearibus, usque ad 2 cm. longis, diversæ magnitudinis, solitariis vel per plures congestis, aurantiaco-flavis; sporis rotundatis vel ovoideis, polygoniis, 15-20 μ . diam., verrucosis, pallide flavo-rufescentibus.

Hab. in Pino silvestri, in Germania.

150. **U. Cæoma Orchidis** (Mart.) Wint. Die Pilze p. 256, Schroet. Pilz. 3142

Schles. p. 377, *Uredo Orchidis* Mart. Fl. Mosq. p. 229, *Cæoma chrysoides* Schlecht. Fl. Berol. II, p. 118, *Cæoma Orchidum* Link Sp. II, p. 9, *Uredo confluens* var. *Orchidis* Alb. et Schwein. Consp. p. 122, n. 339, vix *Erisybe chrysoides* Wallr. Fl. Crypt. Germ. II, p. 195. — Spermogoniis orbiculatis, explanatis, flavescentibus, secus parvos greges dispositis; soris plerumque irregularibus, ellipticis, sæpe annulatim dispositis, flavido-rufis sæpeque confluentibus; sporis polygoniis, 16-26 $\approx$ 10-20, subtiliter punctatis, aurantiacis.

Hab. in Orchide militari, sambucina, latifolia, et *Gymnadenia conopea*, in Germania et Rossia.

151. **U. Cæoma Alliorum** Link Sp. II, p. 43, Schroet. Pilz. Schles. 3143

pag. 377, *Cæoma Allii-ursini* Wint. Die Pilze pag. 255, *Uredo confluens* var. *Allii-Ursini* DC. Fl. Franç. VI, pag. 86, *Erisybe areolata* Wallr. Fl. Crypt. Germ. II, pag. 203?? — Spermogoniis explanatis, flavescentibus, orbiculatis, secus parvos greges congestis; soris rotundatis vel irregulariter oblongis, sæpe tortis, solitariis vel gregariis sæpeque confluentibus, ad peripheriam massa sterili valde evoluta cinctis; sporis globosis vel ellipticis, 17-26 $\approx$ 10-20, subtiliter punctatis, pallide aurantiacis.

Hab. in Allio ursino, acutangulo, Porro, oleraceo, Cepa, fistuloso, vineali, in Germania, Gallia, Helvetia. — Cum *Melampsora populina*, sec. Schroeter, connexum.

152. **U. Cæoma Ari-italici** (Requ.) Rud. in Linnæa IV, p. 512 (*Cæoma* 3144

Ari), Winter Die Pilze pag. 256, *Uredo Ari-italici* (Requ.) Duby Bot. Gall. II, p. 899. — Hypophylla; soris plerumque irregularibus, explanatis, aurantiaco-flavescentibus, sine ordine vel orbiculariter dispositis, sæpe confluentibus; sporis rotundatis vel ellipticis, sæpe leniter angulatis, 16-30 $\approx$ 14-20, verruculosis, aurantio-flavis.

Hab. in foliis *Ari-italici* et *maculati*, in Gallia et Germania. — Maculæ late lutescenti-albidæ sparsæ.

153. **U. Cæoma Mercurialis** (Martius) Link Sp. II, p. 35, Pass. et Beltr. 3145

Fungi siculi novi n. 6, Schroet. Pilz. Schles. p. 376, *Cæoma Mercurialis-perennis* Wint. Die Pilze p. 257, *Uredo confluens* var. *Mer-*

curialis Mart. Prodr. Fl. Mosq. p. 229, *Uredo confluens* Schum. Pl. Saell. II, p. 227. — Spermogoniis orbiculatis, flavidis, explanatis, secus parvos greges congestis; soris hypophyllis, ellipticis vel elongato-linearibus, aurantiaco-rufis, sine ordine vel orbiculariter dispositis, sæpe confluentibus, numerosis; sporis ellipticis vel piri-formibus, sæpe subpolygoniis, 17-26 $\approx$ 8-17, subtiliter punctatis, aurantiacis.

Hab. in foliis *Mercurialis perennis* et annuæ, in Italia, Austria, Helvetia, Germania, Lusitania, Belgio, Rossia. — Maculæ sæpe 1-2 cm. longæ.

REPERTORIUM UREDINEARUM

SECUNDUM MATRICES

Obs. A. indicat *Æcidium*. — *Æ. Æcidium*. — C. *Calyptospora* — Ch. *Chrysomyxa*. — Co. *Coleosporium*. — Cr. *Cronartium*. — D. *Diorchidium*. — E. *Endophyllum*. — G. *Gymnosporangium*. — H. *Hemileja*. — M. *Melampsora*. — Me. *Melampsorella*. — Mi. *Milesia*. — P. *Pericladium*. — Pe. *Peridermium*. — Ph. *Phragmidium*. — Pu. *Puccinia*. — Pucc. *Pucciniastrum*. — R. *Ravenelia*. — Rœ. *Ræstelia*. — S. *Sarcorhopalum*. — T. *Thecopsora*. — Tr. *Triphragmium*. — U. *Uredo*. — Ur. *Uromyces*. — Uro. *Uropyxis*. — X. *Xenodochus*

Numeri 1921-1999 citantur 921-999; numeri 2000-3145 citantur 2000-3145.

- | | |
|--|--|
| Abies — Co. 233. — Ch. 2659, 2664, C. 2674. — A. 2930, 2932. — Pe. 2931, 2983, 2985, 2987, 2989. | Æsculus — A. 2755. |
| Abutilon — Ur. 2024, 2025, 2069. — Pu. 2403, 2404. — U. 3076. | Æthusa — Pu. 2211. — A. 2968. |
| Acacia — Ur. 980, 982, 2086. — M. 2125. — Tr. 2682. — R. 2687, 2689, 2696. — A. 2765, 2766. | Agrimonia — U. 2996. |
| Acer — Pu. 2406. | Agropyrum — Pu. 2191, 2192. |
| Achillea — Pu. 2370, 2546. — A. 2835. | Agrostemma — Pu. 2361. |
| Achyrophorus — Pu. 2210. | Agrostis — Pu. 2191, 2192, 2194. |
| Acicarpa — Pu. 2471. | Aira — Pu. 2191, 2192. |
| Acnista — A. 2878. | Albizzia — R. 2692. |
| Aconitum — Ur. 2000. — Pu. 2318. — Co. 2652. — A. 2711. | Albuca — Ur. 993. |
| Acorus — Ur. 2032. | Alchemilla — Ur. 971. |
| Actæa — A. 2712. | Alectorolophus — Co. 2637. |
| Actinodaphne — A. 2915. | Alepidea — A. 2797. |
| Adenophora — Co. 2636. | Aletris — Pu. 2283. |
| Adenostylis — Ur. 996. — Pu. 2195, 2313. — Co. 2634. | Alisma — U. 2997. |
| Adesmia — Pu. 2266. | Allium — Ur. 943, 974, 2002, 2006. — Pu. 2155, 2193, 2275, 2557. — A. 2954, 2955. — U. 3143. |
| Adiantum — U. 3096. | Alnus — M. 2128. |
| Adoxa — Pu. 2168. | Alopecurus — Pu. 2191, 2192, 2194, 2207. |
| Ægopodium — Pu. 2342. — U. 3132. | Ambrosia. — Pu. 2455. — A. 2815. |
| | Alsine — Pu. 2361, 2399. |
| | Althæa — Pu. 2368. |
| | Alyxia — Pu. 2494. |
| | Amelanchier — G. 2607, 2609, 2611. |

- Ammi — Pu. 2542.
 Amorpha — Uro. 2599. — A. 2760.
 Amsonia — Co. 2641. — U. 3071.
 Amygdaleaceæ — Fr. 2685.
 Amygdalus — Pu. 2224. — U. 3098.
 Anagyris — Ur. 989.
 Anchusa — Pu. 2194.
 Andromeda — U. 3072.
 Andropogon — Pu. 2191, 2204, 2296, 2305, 2573.
 Androsace — Pu. 2528.
 Anemone — Pu. 2316, 2371, 2381. — Co. 2638. — A. 2705, 2706.
 Anethum — Pu. 2211. — A. 2794.
 Angelica — Pu. 2258, 2436. — A. 2973.
 Anguillaria — U. 3000.
 Anisacanthus — A. 2908.
 Anisotome — A. 2861.
 Anoda — Pu. 2368. — U. 3001.
 Anthoxanthum — Pu. 2191, 2306.
 Anthriscus — Pu. 2179, 2251.
 Anthyllis — Ur. 966.
 Apargia — A. 2825.
 Apium — Pu. 2211, 2234.
 Apocynum — A. 2857.
 Aquilegia — A. 2710.
 Arabis — Pu. 2390. — A. 2720.
 Arachis — Pu. 2415.
 Aralia — Fr. 2685.
 Arauja — R. 2499.
 Archangelica — Pu. 2211.
 Arctostaphylos — M. 2121.
 Arenaria — Pu. 2361, 2538, 2539.
 Argyreia — A. 2885.
 Arisæma — Ur. 931. — A. 2962.
 Aristida — Ur. 2036.
 Aristolochia — Pu. 2173.
 Armeria — Ur. 922.
 Arnica — Pu. 2228, 2247.
 Aronia — G. 2607.
 Aronicum — Co. 2651.
 Arrhenatherum — Pu. 2191, 2192. — U. 3007.
 Artemisia — Pu. 2215, 2370. — A. 2837, 2838.
 Artocarpus — U. 3004.
 Arum — A. 2960, 2962. — U. 3144.
 Arundinaria — Pu. 2572.
 Arundo — Pu. 2192, 2204. — U. 3066.
 Asarum — Pu. 2343.
 Asclepias — Ur. 2058, 2095. — Cr. 2137. — A. 2859, 2860.
 Asparagus — Pu. 2147, 2584. — A. 2944.
 Asperula — Pu. 2146, 2222.
 Asphodelus — Pu. 2310. — A. 2956, 2957.
 Aspidium — S. 2144. — U. 3096.
 Asplenium — U. 3107.
 Aster — Pu. 2370. — Co. 2634. — A. 2829, 2830.
 Astragalus — Ur. 963, 2077. — A. 2762.
 Astrantia — Pu. 2342, 2433.
 Astronium — U. 3102.
 Athamanta — Pu. 2179, 2312.
 Atragene — Pu. 2360, 2371.
 Atropa — Pu. 2511. — A. 2873.
 Avena — Ur. 939. — Pu. 2191, 2192, 2194, 2207.
 Azalea — U. 3008.
 Baccharis — Pu. 2151. — U. 3009.
 Bahia — A. 2824.
 Balsamina — Cr. 2138.
 Balsamorhiza — U. 3011.
 Bambusa — Pu. 2290.
 Baptisia — A. 2771.
 Barbarea — Pu. 2394. — A. 2719.
 Borekhausia — A. 2823.
 Bassia — Ur. 2053.
 Batatas — Pu. 2322.
 Bauhinia — Ur. 2057. — R. 2694. — U. 3013.
 Bellidiastrum — Pu. 2321.
 Bellis — Pu. 2202. — U. 3014.
 Berberis — Ur. 2083. — Pu. 2187, 2191, 2384, 2385. — A. 2715, 2716. — U. 2994, 3002.
 Berchemia — A. 2752.
 Beta — Ur. 928. — U. 3015.
 Betonica — Pu. 2339.
 Betula — M. 2118.
 Bidens — A. 2815.
 Bigelovia — A. 2822.

- Bignoniaceæ — Pu. 2552. — A. 2897.
 Blainvillea — Ur. 2050.
 Blechnum — U. 3107, 3130.
 Blephilia — Pu. 2180.
 Boisduvalia — Pu. 2421.
 Borraginaceæ — Pu. 2194.
 Borrago — Pu. 2194.
 Borricchia — Ur. 2084.
 Bougainvillea — A. 2911.
 Bouteloua — Pu. 2585. — U. 3017.
 Bowlesia — Ur. 2040.
 Brachypodium — Ur. 939. — Pu. 2290.
 Brassica — Ur. 2094. — Pu. 2593.
 Brickellia — Pu. 2271.
 Briza — Pu. 2191.
 Brizopyrum — Ur. 939, 958. — Pu. 2191.
 Brodiaea — Ur. 2005. — Pu. 2560.
 Bromus — Pu. 2191, 2192, 2194, 2277.
 Bulbine — Ur. 2033.
 Buphthalmum — Ur. 940.
 Bupleurum — Pu. 2165.
 Buxus — Ur. 2096. — Pu. 2372.

 Cacalia — Ur. 996. — Pu. 2313. — Co. 2635. — U. 3065.
 Caladium — Ur. 931.
 Calamagrostis — Pu. 2192, 2194, 2575.
 Calamintha — Pu. 2180.
 Calandrina — Ur. 2009.
 Calimeris — Pu. 2370.
 Callirhoë — A. 2742, 2941.
 Callixene — A. 2946.
 Calocorthum — Pu. 2319, 2583.
 Calophanes — A. 2898.
 Calpurnia — R. 2689, 2690.
 Caltha — Pu. 2149, 2190.
 Campanula — Pu. 2250, 2340. — Co. 2636. — A. 2847.
 Campanumœa — Pu. 2488.
 Camphorosma — U. 3019.
 Campulosa — Pu. 2570.
 Canna — U. 3018.
 Canthium — H. 2104.
 Capparis — Cr. 2142.
 Caragana — Ur. 965. — U. 3020.
 Cardamine — Pu. 2537.
 Cardiospermum — Pu. 2405. — A. 2754.
 Carduus — Pu. 2210.
 Carex — Ur. 2027, 2090. — Pu. 2196, 2197, 2198, 2199, 2200, 2201, 2203, 2298, 2299, 2569.
 Carlina — Pu. 2210, 2215.
 Carpesium — Co. 2634.
 Carpinus — M. 2120.
 Carthamus — Pu. 2244.
 Carum — Pu. 2312.
 Caryophyllaceæ — Pu. 2361.
 Cassandra — U. 3021.
 Cassia — R. 2694, 2698. — U. 3032.
 Ceanothus — A. 2807.
 Celmisia — U. 3022.
 Centaurea — Pu. 2184, 2199, 2209, 2210, 2236, 2370, 2466, 2467. — A. 2845.
 Centranthus — Pu. 2317.
 Cephalandra — Pu. 2171.
 Cephalanthus — A. 2813.
 Cerastium — Me. 2135. — Pu. 2361. — A. 2729.
 Cerasus — M. 2134.
 Cerinthe — Pu. 2194. — Co. 2639.
 Ceropegia — A. 2862.
 Cestrum — Ur. 2093. — A. 2876.
 Chærophyllum — Pu. 2179, 2357. — U. 3132.
 Chamæsaracha — Pu. 2509.
 Cheilanthes — U. 3138.
 Cheiranthus — Pu. 2387. — A. 2717.
 Chelidonium — U. 3124.
 Chenopodium — Ur. 959. — A. 2905, 2906.
 Chiloglottis — Ur. 2071.
 Chionanthus — A. 2853.
 Chlorophytum — A. 2939.
 Chondrilla — Pu. 2157.
 Chorizanthes — Ur. 2089.
 Chrysanthemum — Pu. 2203, 2210, 2215. — A. 2836.
 Chrysophyllum — Pu. 2597.
 Chrysosplenium — Pu. 2365.
 Cicer — U. 3023.
 Cichorium — Pu. 2157, 2210, 2246.
 Cicuta — Pu. 2249.

Cimicifuga — Co. 2653. — A. 2713.
 Cirœa — Pu. 2369. — Pucc. 2667. —
 A. 2783.
 Cirsium — Pu. 2156, 2201, 2209, 2210,
 2370, 2466, 2468, 2469, 2470.
 Cissus — A. 2877.
 Cistus — U. 3052.
 Claytonia — Ur. 2092. — Pu. 2330,
 2427.
 Clematis — Pu. 2378, 2379. — A. 2701,
 2702. — U. 3139.
 Clintonia — Pu. 2487.
 Cluytia — Ur. 983.
 Cnidium — Pu. 2211.
 Cocos — U. 3084.
 Coffea — H. 2102.
 Collinsia — A. 2881.
 Collonia — Pu. 2501, 2502.
 Colutea — Ur. 965.
 Comandra — Cr. 2137. — A. 2920.
 Commelina — Ur. 2037. — U. 3026,
 3027.
 Compositæ — Ur. 2091. — Cr. 2142.
 — Pu. 2210, 2485, 2547. — Co.
 2648. — A. 2915. — U. 3003.
 Conium — Pu. 2211.
 Conoclinum — Pu. 2210, 2256.
 Convallaria — A. 2945.
 Convolvulus — Ur. 2054. — Pu. 2166.
 Conyza — A. 2816.
 Cornus — Pu. 2437.
 Corrigiola — Pu. 2362.
 Corydalis — Pu. 2386. — A. 2714. —
 U. 3125.
 Cotoneaster — A. 2773.
 Crassula — Pu. 2424.
 Cratægus — G. 2606, 2611. — Rœ.
 2977.
 Crepis — Pu. 2158, 2159, 2160, 2210.
 — A. 2823.
 Cressa — A. 2734.
 Crinum — A. 2942.
 Crocus — Ur. 2017.
 Croton — M. 2127. — Pucc. 2668. —
 A. 2751.
 Crotonopsis — Pucc. 2668. — A. 2927.
 Cruciferæ — Pu. 2393, 2394.

Cryptotænia — Pu. 2435.
 Ctenium — Pu. 2570.
 Cucubalus — Ur. 967. — U. 3030.
 Cunila — Pu. 2180.
 Cupania — Ur. 2020. — Pu. 2405. —
 G. 2613.
 Cupressus — G. 2609. — Ph. 2631.
 Cussonia — A. 2798. — U. 3031.
 Cydonia — Rœ. 2976.
 Cymbonotus — A. 2972.
 Cynanchum — M. 2115.
 Cynoctonum — Pu. 2497.
 Cynodon — Pu. 2295.
 Cynoglossum — Pu. 2194. — A. 2914.
 Cynthia — Pu. 2477.
 Cyperus — Pu. 2568, 2569.
 Cypridium — Pu. 2301.
 Cystopteris — U. 3096.
 Cytisus — Ur. 965, 2019. — Co. 2656.
 — A. 2756.
 Dactylis — Ur. 939. — Pu. 2191.
 Dammara — A. 2931, 2934.
 Delphinium — U. 3133.
 Dentaria — Pu. 2359.
 Desmodium — Ur. 979, 2079.
 Dianthus — Ur. 924, 949, 968, 2063.
 — Pu. 2361.
 Dicentra — A. 2714.
 Dichondra — Pu. 2505, 2506.
 Dieliptera — A. 2899.
 Diodia — Ur. 953. — A. 2800.
 Dioscorea — A. 2947.
 Diospyrus — A. 2855, 2856.
 Diotis — Pu. 2245.
 Dipsacus — U. 3059.
 Dirca — A. 2780.
 Discaria — A. 2753.
 Dissotis — A. 2775. — U. 2993.
 Dodecatheon — Pu. 2328.
 Dolichium — Ur. 2010.
 Doronicum — Pu. 2370.
 Dorymopsis — U. 3034.
 Draba — Pu. 2388. — A. 2721.
 Drupaceæ — Ur. 992.
 Dulichium — Pu. 2191, 2196.

- Ebenaceæ — A. 2854.
 Echeveria — E. 2675.
 Echinops — Pu. 2475, 2476.
 Echinosperrum — A. 2867.
 Echites — Pu. 2496.
 Echium — Pu. 2194.
 Ectadiopsis — U. 3036.
 Ecteinanthus — U. 3037.
 Eleocharis — Pu. 2279.
 Elodea — Ur. 935.
 Elymus — Ur. 957. — Pu. 2191, 2194, 2280, 2578.
 Empetrum — Ch. 2663.
 Endymion — Pu. 2314.
 Ephedra — Co. 2633. — A. 2935. — Pe. 2982.
 Epilobium — Pu. 2162, 2348, 2419, 2665. — U. 3074.
 Equisetum — A. 2966.
 Eragrostis — Pu. 2300.
 Eranthis — A. 2705.
 Erigeron — Pu. 2446. — A. 2827, 2828.
 Eriogonum — Ur. 933, 934.
 Eriophorum — Pu. 2566.
 Eriospermum — Ur. 987.
 Erodium — Ro. 2979.
 Ervum — Ur. 921. — Pu. 2594.
 Eryosema — Pu. 2189.
 Erysimum — Pu. 2592.
 Erythronium — Ur. 2006.
 Eucalyptus — M. 2132.
 Eupatorium — Pu. 2242, 2336. — A. 2815.
 Euphorbia — Ur. 941, 942, 970, 972, 981, 2030, 2047, 2049. — M. 2105. — E. 2677. — A. 2923, 2924, 2925, 2928. — U. 3038, 3118.
 Euphrasia — Co. 2637.
 Evolvulus — Pu. 2167. — U. 3039.
 Evonymus — U. 3140.
 Excæcaria — Ur. 2051.
 Faba — Ur. 921.
 Facelis — U. 3040.
 Falcaria — Pu. 2311.
 Fedia — A. 2812.
 Fendlera — A. 2965.
 Ferula — Pu. 2164, 2323, 2327. — A. 2793.
 Ferulago — Pu. 2164, 2211.
 Festuca — Ur. 2038, 2039. — Pu. 2191, 2192, 2194, 2308. — U. 3041.
 Ficus — Pu. 2534. — U. 3042, 3043.
 Flemingia — Pu. 2189.
 Fragaria — Ph. 2620.
 Frankenia — Pu. 2397. — U. 3045.
 Fraxinus — A. 2850.
 Fritillaria — Ur. 2006.
 Fuchsia — Co. 2645.
 Fuirena — Pu. 2567.
 Gagea — Ur. 2015. — Pu. 2314, 2561.
 Galactia — Ur. 926.
 Galanthus — Pu. 2353. — U. 3135.
 Galasia — Pu. 2315.
 Galatella — 2820.
 Galega — U. 965.
 Galium — Pu. 2146, 2349, 2367. — T. 2671. — A. 2799.
 Galopina — Pu. 2439.
 Gaura — A. 2781. — U. 3046.
 Gayophytum — Ur. 2021. — Pu. 2420. — A. 2782.
 Genista — Ur. 965.
 Gentiana — Cr. 2137, 2141. — Pu. 2153.
 Geranium — Ur. 927, 2062. — Pu. 2352, 2355, 2407, 2408, 2409.
 Gerardia — A. 2882.
 Gerbera — A. 2821.
 Geum — Pu. 2416.
 Gilia — Pu. 2273, 2501. — A. 2886.
 Gladiolus — Pu. 2556.
 Glaux — A. 2901. — U. 3047.
 Glechoma — Pu. 2374. — A. 2891.
 Gleditschia — R. 2696.
 Globularia — Pu. 2375.
 Glycyrrhiza — Pu. 2541.
 Gnaphalium — Pu. 2457. — A. 2839. — U. 3049.
 Gomphrena — Ur. 960.
 Gonolobus — Pu. 2498.
 Goodenia — Ur. 2100.
 Goodia — A. 2770.
 Gossypium — A. 2739.

- Grabowskia — Pu. 2549.
 Graminaceæ — Pu. 2191, 2572. — U. 3007.
 Grevia — P. 2992.
 Grindelia — Pu. 2447.
 Gundelia — Pu. 2225.
 Gymnadenia — U. 3142.
 Gypsophila — Ur. 949, 2055.
 Hackea — U. 2999.
 Halenia — Pu. 2500.
 Hamiltonia — A. 292i.
 Hartwegia — A. 2939.
 Hedeoma — Pu. 2180.
 Hedera — Tr. 2685, 2686.
 Hedyotis — Co. 2657.
 Hedysarum — Ur. 998, 999, 2008.
 Helenium — Pu. 2463.
 Helianthella — U. 3051.
 Helianthemum — U. 3052.
 Helianthus — Pu. 2150. — A. 2815. — U. 3053.
 Helichrysum — Ur. 936. — M. 2122. — Pu. 2240, 2331, 2456.
 Heliopsis — Pu. 2453.
 Heliotropium — A. 2871, 2872.
 Hemerocallis — Pu. 2558.
 Heracleum — Pu. 2179.
 Herniaria — Pu. 2363, 2530.
 Heteromorpha — Ur. 977, 2056.
 Heteropteris — Pu. 2540.
 Heuckera — Pu. 2431.
 Hibiscus — Ur. 2087. — A. 2737, 2738.
 Hieracium — Pu. 2210, 2482, 2483.
 Hippuris — A. 2922.
 Hiptage — A. 2733.
 Holcus — Pu. 2191, 2194.
 Homogyne — Pu. 2313. — A. 2826.
 Hordeum — Pu. 2191, 2192, 2194.
 Houstonia — A. 2805.
 Hutchinsia — Pu. 2537.
 Hydrangea — A. 2784. — U. 3056.
 Hydrocharis — A. 2938.
 Hydrocotyle — Pu. 2226. — Æ. 2699. — U. 3016.
 Hydrophyllum — Pu. 2548. — A. 2870.
 Hypericum — Ur. 935. — M. 2114. — A. 2735, 2736.
 Hypochaeris — Pu. 2157, 2210.
 Hypoëstes — U. 3057.
 Hypophyllum — Ur. 2085.
 Hypoxis — Ur. 978, 2011.
 Hyptis — Pu. 2267. — A. 2893.
 Hyssopus — Pu. 2374.
 Iberis — Pu. 2392.
 Impatiens — Pu. 2221. — A. 2749. — U. 3010.
 Imperatoria — Pu. 2211, 2342.
 Inula — Co. 2634.
 Ipomæa — Pu. 2186, 2322, 2503, 2504. — Co. 2640, 2646. — 3006.
 Iresine — Pu. 2263. — A. 2904.
 Iris — Pu. 2284. — A. 2940. — U. 3064.
 Isnardia — Pu. 2162.
 Isomeris — A. 2723.
 Isopyrum — Tr. 2684. — A. 2709.
 Iva — Pu. 2326. — A. 2818.
 Ixia — Ur. 956.
 Jacksonia — Rœ. 2974.
 Jaquemontia — Pu. 2186.
 Jasione — Pu. 2340. — Co. 2636.
 Jasminum — Ur. 2088. — Pu. 2491, 2494.
 Jatropha — U. 3061.
 Juniperus — G. 2606, 2607, 2608, 2610, 2611, 2612. — A. 2933.
 Jurinea — Pu. 2459, 2460, 2476.
 Jussiea — Pu. 2422. — A. 2779.
 Justicia — Pu. 2518. — A. 2898.
 Juncus — Ur. 940, 2022. — Pu. 2286, 2287.
 Knautia — A. 2814. — U. 3059.
 Koeleria — Pu. 2194, 2291, 2574.
 Kuhnia — Pu. 2225. bis.
 Labiatae — Pu. 2180, 2519.
 Lactuca — Pu. 2157. — A. 2815.
 Lagenophora — Pu. 2169.
 Lagurus — Pu. 2194.
 Lapeyrousia — Ur. 956.
 Lappa — Ur. 2070. — Pu. 2210.
 Lantana — Ur. 2023. — Pu. 2243, 2525.
 Lapsana — Pu. 2158.

- Laserpitium* — Pu. 2211, 2312. — A. 2791.
Lathyrus — Ur. 921, 941, 2001, 2073. — U. 3066.
Lecania — R. 2693.
Leersia — Ur. 984.
Ledum — Pu. 2489. — Ch. 2659. — U. 3067.
Leguminosæ — Ph. 2628. — U. 3099.
Lenzea — Pu. 2210.
Leonotis — Pu. 2268.
Leontodon — Pu. 2210.
Lepidium — Pu. 2391. — A. 2722.
Lepigonum — Ur. 948.
Lespedeza — Ur. 962, 2068. — A. 2767.
Leucanthemum — Pu. 2449.
Leucojum — A. 2943.
Libanotis — Pu. 2211. — A. 2796.
Ligularia — Co. 2655. — A. 2817.
Ligusticum — A. 2851.
Ligustrum — A. 2849. — U. 3129.
Lilium — Ur. 2006, 2048. — Pu. 2294. — A. 2945, 2951.
Limnanthemum — A. 2863, 2864.
Linum — M. 2107.
Liquidambar — M. 2116.
Lisianthus — M. 2123.
Listera — Pu. 2206.
Lithospermum — Pu. 2194, 2507.
Loasa — A. 2810.
Lobelia — Pu. 2337, 2486. — Co. 2636.
Lolium — Pu. 2191, 2192.
Lonicera — A. 2808, 2809.
Lophanthus — Pu. 2374.
Loranthus — Pu. 2432. — A. 2917, 2918.
Lotus — Ur. 942. — Pu. 2473.
Ludwigia — Pu. 2162.
Lupinus — Ur. 963, 966, 935, 2098. — U. 3068.
Luzula — Pu. 2202, 2285.
Luzuriaga — Pu. 2559.
Lycium — Pu. 2188, 2260, 2270, 2550.
Lycopsis — Pu. 2194.
Lycopus — A. 2888.
Lygodesmia — Pu. 2235.
Lysimachia — Pu. 2200, 2213, 2527. — A. 2900.
Lythrum — A. 2776.
Maclura — U. 3025, 3073.
Macrorrhynchum — Pu. 2329.
Madia — Co. 2654.
Mahonia — Pu. 2191.
Majanthemum — A. 2945.
Malachium — Pu. 2361.
Malope — Pu. 2368.
Malpighiaceæ — Pu. 2257.
Malva — Pu. 2368, 2400.
Malvaceæ — Co. 2647.
Malvastrum — Pu. 2401. — Ro. 2979.
Manisuris — D. 2605.
Mariscus — Pu. 2196.
Marrubium — U. 3077.
Medicago — Ur. 942.
Megonemium — R. 2695.
Melampyrum — Co. 2637. — 2880.
Melandryum — Ur. 967. — Pu. 2154. 2361.
Melanthera — Ur. 950, 951.
Melobium — A. 2757.
Mentha — Pu. 2180.
Mercurialis — U. 3145.
Mertensia — Pu. 2553.
Mespilus — A. 2773.
Metanarthecium — Pu. 2562.
Metastelma — U. 3120.
Meum — Tr. 2683. — A. 2792.
Microtis — Ur. 2066.
Mikania — Pu. 2442.
Milium — Pu. 2194.
Milletia — D. 2601.
Mimusops — Ur. 2067.
Mitella — Pu. 2429, 2431.
Mitracarpus — U. 3054.
Modiola — Pu. 2368. — A. 2743.
Mœhringia — Pu. 2361.
Mogiphanes — Ur. 2031.
Monnina — U. 3087.
Monocotyledoneæ — Ur. 2035.
Montinia — Pu. 2232.
Molinia — Pu. 2206, 2297.
Momordica — Pn. 2490.
Monadenia — Pu. 2377.
Monarda — Pu. 2180.

- Monesia — U. 3086.
 Morea — U. 3079.
 Mucuna — Ur. 2018.
 Muehlenbeckia — Ro. 2974.
 Muehlenbergia — 2302.
 Mulgedium — Pu. 2157. 2480. — Co. 2634. — A. 2843, 2844.
 Muscari — Ur. 2006, 2014. — A. 2953.
 Myosotis — A. 2866.
 Myrica — A. 2936.
 Myricaria — Pu. 2183.
 Myrrhis — Pu. 2179.
 Myrsiphyllum — Pu. 2175.
 Myrtaceæ U. 3044, 3081.

 Nabalus — Pu. 2259.
 Napæa — A. 2744.
 Narcissus — Pu. 2579.
 Nardosmia — Pu. 2443.
 Nasturtium — A. 2718.
 Nepeta — Pu. 2180.
 Nesæa — A. 2774.
 Nesodaphne — M. 2124.
 Nidorella — Pu. 2445.
 Nierembergia — Pu. 2508.
 Nonnea — Pu. 2194. — A. 2869.
 Nuphar — A. 2864.
 Nymphæa — A. 2864.

 Obione — A. 2907.
 Odontites — Co. 2637.
 Oenothera — Ur. 938, 2075. — Pu. 2162, 2261, 2666. — A. 2777, 2778.
 Olyra — Pu. 2571.
 Onobrychis — Ur. 963, 965.
 Ononis — Ur. 988, 2082.
 Onosma — A. 2868.
 Opoponax — Pu. 2543.
 Orchideæ — U. 3062, 3070.
 Orchis — Pu. 220. — U. 3142.
 Ornithogalum — Ur. 2015. — Pu. 2293. 2314, 2354, 2381.
 Orobus — Ur. 921.
 Osmorrhiza — Pu. 2165, 2179. — A. 2795.
 Ostericum — Pu. 2179.

 Osyris — A. 2919.
 Oxalis — A. 2747. U. 3082.
 Oxyria — Pu. 2229, 2533.
 Oxytropis — A. 2761, 2768. — U. 3083.

 Pachycarpus — Pu. 2272.
 Pæonia — Cr. 2139. — Pu. 2383.
 Panicum — Ur. 957, 2044, — Pu. 2278, 2300.
 Paratropia — Fr. 2685.
 Paris — A. 2945.
 Parnassia — Ur. 929. — A. 2785.
 Pastinaca — A. 2789.
 Pavetta — A. 2803, 2804.
 Pedicularis — Pu. 2516, 2517. — Co. 2637. — A. 2884.
 Pelargonium — Pn. 2223. — A. 2745.
 Peltandra — Ur. 931.
 Pentanisia — Pu. 2239.
 Pentastemon — Pd. 2514. 2515. — A. 2883.
 Petalostemon — Pu. 2600.
 Petasites — Pu. 2195, 2443. — Co. 2634.
 Petroselinum — Pu. 2211. — U. 3088.
 Peucedanum — Pu. 2211, 2212, 2325, 2327. — A. 2861.
 Phaca — Ur. 952. — A. 2761.
 Phalaris — Pu. 2192, 2193.
 Phaseolus — Ur. 926. — A. 2764.
 Phegopteris — U. 3096.
 Philadelphus A. 2788.
 Phillyrea — A. 2852. — U. 3090, 3091.
 Phleum — Pu. 2191.
 Phloiodocarpus — A. 2796.
 Phlomis — Pu. 2521. — 2890.
 Phlox — Pu. 2501. — A. 2848.
 Phragmites — Pu. 2191, 2204, 2205, 2577.
 Phryma — A. 2894.
 Phyllanthus — A. 2926.
 Physalis — Pu. 2332.
 Physospermum — Pu. 2211.
 Physostegia — Pu. 2523.
 Phyteuma — Ur. 2013. — Co. 2636.
 Phytolacca — A. 2902.
 Pieris — Pu. 2210, 2265.
 Pilocarpus — Pu. 2410.

Pimpinella — Pu. 2179, 2311, 2312, 2434.
 Pinus — Pe. 2980, 2983, 2984, 2986, 2988, 2988 * 2990, 2991. — Ch. 2660. — To. 2633. — U. 3128, 3136, 3141.
 Pirola — Ch. 2662. — T. 2673.
 Pirus — G. 2606, 2608, 2610. — Ph. 2531.
 Pistacia — Ur. 939. — M. 2131.
 Pisum — Ur. 941.
 Pithecoctenium — Pu. 2255.
 Plantago — Pu. 2264. — A. 2879. — U. 3093.
 Plathantera — Pu. 2206.
 Plectranthus — Pu. 2324.
 Plectronia — A. 2802.
 Poa — Ur. 939. — Cr. 2143, 2191, 2195, 2207, — U. 3094.
 Podocarpus — A. 2934.
 Podophyllum — Pu. 2333.
 Podospermum — Pu. 2315.
 Polemannia — Ur. 2064.
 Polemonium — A. 2848.
 Polygala — Pn. 2396. — A. 2724, 2725. — U. 3095.
 Polygonatum — A. 2945.
 Polygonum — Ur. 923, 2213, 2219, 2220. — Mi. 2679. ¹⁸³⁴⁻¹²⁵⁷
 Polypodium — Mi. 2678.
 Polypogon — Pu. 2194.
 Pongamia — R. 2690.
 Pontederia — U. 3097.
 Popowia — Pu. 2185.
 Populus — M. 2111, 2112, 2113. — A. 2929.
 Potentilla — Ur. 2098. — Pu. 2462. Ph. 2614, 2616, 2617.
 Poterium — Ph. 2615.
 Pratia — Ur. 2076. — A. 2846.
 Prenanthes — Pu. 2157.
 Primula — Ur. 2007, 2028, 2097. — Pu. 2170.
 Printzia — Pu. 2444.
 Proserpinaca — Pu. 2231. — A. 2726.
 Prunella — Ur. 937. — A. 2892.
 Prunus — Pu. 2224, 2252. — T. 2670. — U. 3098.

Pseudarthria — Ur. 2065.
 Psidium — Pu. 2233. — U. 3113.
 Psilostoma — Co. 2644.
 Psoralea — Ur. 2074. — A. 2758, 2759.
 Ptelea — A. 2748.
 Pteris — U. 3075, 3131.
 Pulicaria — Ur. 940.
 Pulmonaria — Pu. 2194.
 Pycnanthemum — Pu. 2180, 2472.
 Pycnostachys — U. 3100.
 Pycnomon — Pu. 2466.

 Quercus — M. 2126. — Cr. 2137. — U. 3058.

 Rafnia — A. 2769.
 Ranunculus — Ur. 939, 2016, 2046. — Pu. 2205, 2207, 2382, 2535, 2536. — A. 2707, 2708.
 Rhagadiolus — A. 2841.
 Rhagodia — U. 3001.
 Rhamnus — Pu. 2192, 2208, 2412, 2413.
 Rheum — Pu. 2204.
 Rhinanthus — Ur. 995. — Lo. 2637.
 Rhodiola — Pu. 2425, 2426.
 Rhododendrum — Pu. 2474. — Ce. 2660.
 Rhus — Ur. 969, 976, 2052.
 Rhynchosia — Pu. 2189. — U. 3085.
 Ribes — Cr. 2140. — Pu. 2345, 2428. — A. 2787. — U. 3063, 3103, 3126.
 Ricinus — Me 2136.
 Rivina — A. 2903.
 Rosa — Ph. 2618, 2622, 2623, 2624, 2625, 2629.
 Rostkowia — Pu. 2565.
 Rubia — Pu. 2146. — A. 2799.
 Rubiaceæ — U. 3050.
 Rubus — Pu. 2418. — Ph. 2619, 2620, 2621, 2626, 2627, 2630. — Co. 2642, 2658. — Ch. 2662. — U. 3080, 3110, 3134.
 Rudbeckia — Ur. 2078.
 Ruellia — Ur. 2059. — Pu. 2180, 2253. — U. 3104.
 Rumex — Ur. 923, 930, 946, 947. — Pu. 2104, 2204, 2218, 2531, 2532. — U. 3092.

Sagina — Pu. 2361.
 Sagittaria — Pu. 2554. — A. 2959.
 Salicornia — Ur. 932.
 Salix — M. 2106, 2108, 2109, 2110, 2129, 2130.
 Salpichroa — Pu. 2520. — A. 2875.
 Salsola — Ur. 932, 2041.
 Salvia — Pu. 2152, 2227, 2374, 2520.
 — D. 2603. — A. 2889. — Ro. 2975.
 Sambucus — A. 2806.
 Sanguisorba — Ph. 2615. — 2632.
 Sanicula — Ur. 2072. — Pu. 2182.
 Sapindaceæ — U. 3029.
 Sapium — Ur. 2051. — U. 3024.
 Saponaria — Pu. 2361.
 Sarcobatus — A. 2910.
 Sarcostemma — Pu. 2499.
 Sarothamnus — Ur. 965.
 Satureja — Pu. 2180.
 Saussurea — Pu. 2201, 2461, 2464. —
 Co. 2349.
 Saxifraga — M. 2117. — Pu. 2344. —
 A. 2786, 2971. — U. 3127.
 Scabiosa — Pu. 2441. — A. 2814.
 Scandix — U. 3088.
 Schanginia — Ur. 973.
 Schoberia — Ur. 959. — A. 2909.
 Scilla — Ur. 2006, 2014. — Pu. 2314,
 2582. — A. 2852.
 Scirpus — Ur. 940, 945, 990, 991. — Pu.
 2276, 2288, 2309. — U. 3055, 3106.
 Scleria — Pu. 2194. — Pucc. 2669.
 Scolopendrium — U. 3096, 3107.
 Scorzonera — Pu. 2210, 2315. — Æ.
 2700.
 Scrophularia — Ur. 995, 2034.
 Sebastiania — N. 3108.
 Secale — Pu. 2191, 2194.
 Sedum — Pu. 2350. — 2676.
 Selinum — Pu. 2211.
 Sellieria — Ur. 2100.
 Sempervivum — E. 2675.
 Senecio — Pu. 2161, 2197, 2198, 2313,
 2334. — Co. 2633. — A. 2831, 2832,
 2833, 2834. — U. 3012.
 Serratula — Pu. 2201, 2230, 2465. —
 A. 2840.

Seseli — Pu. 2211, 2212. — A. 2791.
 Sesleria — Pu. 2208.
 Seymeria — Pu. 2513.
 Shepherdia — A. 2916.
 Sherardia — T. 2671.
 Sida — Ur. 2026. — Pu. 2262, 2368,
 2402, 2403. — A. 2740.
 Sidalcea — A. 2741.
 Silaus — Pu. 2211.
 Silene — Ur. 924, 994. — Pu. 2154.
 A. 2730, 2731, 2732.
 Siler — Pu. 2179.
 Silphium — Pu. 2451. — Co. 2634. —
 A. 2811, 2815.
 Sisyrhynchium — Ur. 2060. — Pu.
 2555.
 Sium — A. 2790.
 Smelowskia — Pu. 2390.
 Smilacina — A. 2945.
 Smilax — Pu. 2282, 2294. — A. 2949,
 2950.
 Smirnum — R. 2320, 2542. — U. 3088.
 Solanaceæ — U. 3033.
 Solanum — Pu. 2332, 2509.
 Soldanella — Pu. 2181.
 Solidago — Ur. 2012. — Pu. 2259, 2346.
 — Co. 2643. — A. 2829.
 Sonchus — Pu. 2217, 2479. — Co. 2634.
 A. 2842. — U. 3109.
 Sophora — Ur. 2081.
 Sorbus — G. 2606, 2607. — M. 2119.
 Sorghum — Pu. 2281, 2289.
 Sparganium — Ur. 2042.
 Spartina — Ur. 961, 963. — Pu. 2204.
 Spergula — Pu. 2364.
 Specularia — Co. 2636.
 Spergularia — Ur. 948.
 Spermacoces — Ur. 953. — Pu. 2440.
 Spilanthus — Pu. 2454.
 Spiræa — Tr. 2680, 2681. — U. 3137.
 Spiranthes — U. 3069.
 Sporobolus — Pu. 2303.
 Spraguea — Ur. 986.
 Spyridium — U. 3111.
 Stachys — Pu. 2216, 2268, 2339, 2522.
 Statice — Ur. 922, 2003. — Pu. 2529.
 — U. 3078, 3112.

- Stellaria* — Ur. 948. — Me. 2135. — Pu. 2361. — A. 2967.
Stephanomeria — Pu. 2484.
Stipa — Ur. 985. — Pu. 2292. — A. 2964.
Stobea — Pu. 2178. — A. 2819.
Streptoptus — A. 2945.
Stylochyton — A. 2961.
Stylocoryne — Pu. 2438.
Suæda — A. 2912, 2913.
Sweetia — Pu. 2172. — A. 2865.
Synphiostenum — Ur. 2043.
Symphoricarpus — Pu. 2335. — A. 2811.
Synthyris — Pu. 2551.
Symphytum — Pu. 2194. — U. 3114.

Tabernæmontana — Pu. 2176, 2493. — A. 2858.
Tanacetum — Ur. 2045. — Pu. 2215, 2248.
Taraxacum — Pu. 2157, 2198, 2210, 2431.
Teclea — Pu. 2411.
Tectona — A. 2896.
Telekia — Co. 2634.
Tephrosia — R. 2668, 2690, 2696, 2697. — U. 3115.
Tessaria — U. 3116.
Tetradymia — Pu. 2448.
Teucrium — Pu. 2376, 2524.
Thalictrum — Pu. 2350, 2380. — A. 2703, 2704.
Thermopsis — U. 3117.
Thesium — Pu. 2148.
Thlaspi — Pu. 2373, 2389.
Thuja — G. 2609.
Thujopsis — Ur. 2101.
Thumbergia — Pu. 2177.
Thymus — Pu. 2180, 2341.
Thysselinum — Pu. 2211.
Tiarella — 2429, 2430.
Tragia — Pu. 2338.
Tragopogon — Pu. 2315, 2586.
Tremandra — Pu. 2398.
Trianosperma — Ur. 2029,
Tricuspis — Pu. 2300.

Trifolium — Ur. 925, 942, 997. — Pu. 2414.
Trillium — A. 2948.
Trinia — Pu. 2179.
Triptilium — Pu. 2458.
Trisetum — Pu. 2194.
Triticum — Pu. 2191, 2194.
Tritonia — Ur. 954.
Trochomeria — Pu. 2274.
Trollium — Pu. 2318.
Tropæolum — U. 3119.
Troximon — Pu. 2254.
Tulipa — Pu. 2347, 2580.
Tunica — Pu. 2361.
Tussilago — Pu. 2195. — Co. 2634.

Ulmaria — Tr. 2680.
Umbelliferæ — Pu. 2211. — U. 3088.
Umbilicus — Pu. 2423.
Urospermum — Pu. 2478.
Urtica — Pu. 2196. — 2914.
Uvularia — 2958.

Vaccinium — T. 2672. — C. 2674.
Valeriana — Ur. 929. — Pu. 2317.
Valerianella — A. 2812.
Vangueria — A. 2801.
Vanilla — U. 3105.
Veratrum — Ur. 944. — Pu. 2307, 2564.
Verbascum — Ur. 995.
Verbena — Pu. 2526. — A. 2895.
Verbesina — Pu. 2238, 2450, 2547. — Co. 2648. — U. 2995, 3053.
Vernonia — Pu. 2269, 2453. — Co. 2642.
Veronica — Pu. 2366, 2512. — A. 2887.
Viburnum — Pu. 2544, 2545. — Co. 2650.
Vicia — Ur. 921, 941. — A. 2763, 2772.
Vigna — A. 2963.
Viguiera. — Pu. 2452.
Vilfa — Ur. 2061.
Vinca — Pu. 2241, 2495.
Vincetoxicum — Cr. 2137.
Viola — Pu. 2163, 2174, 2356, 2395. — A. 2727, 2728. — U. 2998.
Viscaria — Ur. 968.
Vitis — U. 3121.

Waldsteinia — Pu. 2417.

Windsoria — Pu. 2302.

Withania — A. 2874.

Wurmbea — Pu. 2304.

Wyethia — U. 3122.

Xanthium — Pu. 2455. — A. 2815.

Xanthoxylum — A. 2750. — U. 3005.

Ximenesia — Pu. 2237.

Zea — Pu. 2289. — U. 3048.

Zehneria — U. 3123.

Zizania — Pu. 2576.

Zygadenus — Ur. 2004. — Pu. 2563.

Zygophyllum — Ur. 955. — A. 2746.

INDEX ALPHABETICUS

GENERUM

USTILAGINEARUM et UREDINEARUM

ADDITIS SECTIONIBUS GENERICIS

Æcidium	pag. 773	Entorrhiza	pag. 497
Æcidium	774	Entyloma	487
Calyptospora	766	Graphiola	522
Cerebella	523	Gymnosporangium	737
Chrysomyxa	759	Hemileja	585
A. <i>Euchrysomyxa</i> De Bary: Æcidiosporæ, uredosporæ et teleutosporæ cognitæ	760	Melampsora	586
B. <i>Hemichrysomyxa</i> Winter: Uredosporæ et teleutosporæ adhuc tantum cognitæ, in eadem matrice evolutæ.	761	Melampsorella	596
C. <i>Leptochrysomyxa</i> De Bary: Teleutosporæ tantum cognitæ, mox germinantes	762	Melanotænium	496
Cintractia	480	Milesia	768
Coleosporium	754	Pericladium	838
I. <i>Eucoleosporium</i> Winter: Æcidiosporæ, uredosporæ et teleutosporæ evolutæ	751	Peridermium	835
II. <i>Hemicoleosporium</i> Winter: Æcidiosporæ ignotæ; uredo- et teleutosporæ in eadem matrice evolutæ	752	Phragmidium	742
III. Species minus notæ vel ulterius inquirendæ	755	I. <i>Euphragmidium</i> : Teleutosporarum pedicellus rectus	742
Cronartium	597	II. <i>Hamasporea</i> Körn.: Teleutosporarum pedicellus incurvus, elongatus	750
Doassansia	502	Puccinia	600
Diorchidium	736	A. <i>Eupuccinia</i> Schroet.: Spermogonia, æcidia, uredosporæ et teleutosporæ in matrice viva evoluta; teleutosporæ post quietis periodum (haud in matrice viva) germinantes	600
Endophyllum	767	I. <i>Autopuccinia</i> De Bary: Spermogonia, æcidia, uredo- et teleutosporæ in eadem matrice evoluta	600
		* Teleutosporarum episporium leve vel vix punctulatum.	600

- ** Teleutosporarum episporium verrucosum vel distincte punctatum vel subreticulatum.** 616
- II. *Heteropuccinia* Schroet.:** Germinatio sporidiolorum haud in planta teleutosporarum matrice sed in matrice diversa, in qua vero spermogonia et æcidia evolvuntur. . . . 622
- * Sori uredosporiferi rufo-ferruginei.** 622
1. Paraphyses nullæ 622
2. Paraphyses præsentis 624
- ** Sori uredosporiferi brunnei.** 626
- B. *Brachypuccinia* Schroet.:** Spermogonia, uredo- et teleutosporæ in eadem matrice evolutæ; æcidia haud evoluta. . . . 633
- C. *Hemipuccinia* Schroet.:** Uredo- et teleutosporæ in eadem matrice evolutæ; spermogonia et æcidia ignota. . . . 631
1. In Dicotyledoneis parasiticæ. 636
- a. Teleutosporæ episporio levi v. vix superne punctulato præditæ 636
- b. Teleutosporæ episporio verrucoso, foveolato, papillato vel punctato præditæ 645
- c. Teleutosporæ quoad episporii superficiem incertæ 651
2. In Monocotyledoneis parasiticæ 655
- a. Teleutosporæ episporio levi præditæ vel quoad episporium dubiæ 655
- b. Teleutosporæ episporio verrucoso vel papillato præditæ. 665
- D. *Pucciniopsis* Schroet.:** Spermogonia, æcidia et teleutosporæ in eadem matrice evolutæ; uredosporæ haud evolutæ (rarior singulæ incurvæ [quasi paraphyses] teleutosporis immixtæ). . . . 666
- E. *Micropuccinia* Schroet.:** Teleutosporæ tantum evolutæ, haud in matrice viva sed post longam pausam in planta emortua germinantes 677
- F. *Leptopuccinia* Schroet.:** Teleutosporæ tantum notæ, plerumque in soros pulvinatos, firmos congestæ, jam in matrice viva germinantes 683
- G. Species quoad sectionem dubiæ 690**
1. In Dicotyledoneis vigentes. 690
- * Teleutosporæ episporio levi (rarissime subruguloso) donatæ v. quoad episporium dubiæ. 690
- ** Teleutosporæ episporio verrucoso vel ruguloso donatæ. 723
2. In Monocotyledoneis vigentes. 727
- * Teleutosporæ episporio levi donatæ vel quoad episporium dubiæ 727
- ** Teleutosporio episporio verrucoso v. reticulato donatæ. 732
- H. Species in matrice ignota descriptæ 734**
- I. Species valde incertæ seu tantum nomine notæ 734**
- Pucciniastrum 762**
- Ravenelia 770**
- A. *Euravenelia*: Æcidio-, uredo- et teleutosporæ evolutæ. 770
- B. *Hemiravenelia*: Uredo- et teleutosporæ evolutæ; æcidiosporæ ignotæ 771
- C. *Microravenelia*: Teleutosporæ tantum cognitæ 772
- Røestelia. . . . 833**
- Sarcorophalum 600**
- Schizonella 500**
- Schroeteria 500**
- Sorosporium 511**
- Sphacelotheca 499**
- Thecaphora 507**
- Thecopsora 764**
- Tilletia 481**
- A. Episporium reticulatum 481

B. Episporium leve, verrucosum, echinulatum, numquam reticulatum	484	b. Teleutosporæ punctulatae, verruculosæ vel lineolatae.	550
C. Species minus notæ.	487	c. Teleutosporæ quoad episporii superficiem incertæ	558
Tolyposporium	501	IV. <i>Uromycopsis</i> Schroet.: Spermogonia, æcidia et teleutosporæ in eadem matrice; uredosporæ nullæ	559
Triphragmium	768	a. Teleutosporæ leves vel quoad episporium incertæ	559
A. <i>Eutriphragmium</i> Schroet.: Æcidio-, uredo- et teleutosporæ notæ	768	b. Teleutosporæ punctulatae, lineolatae vel verrucosæ	564
B. <i>Hemitriphragmium</i> Winter: Uredo- et teleutosporæ tantum cognitæ; æcidia ignota	769	V. <i>Microuromyces</i> Schroet.: Teleutosporæ tantum notæ, post matricis mortem germinantes; pedicellus pro more deciduus.	566
C. <i>Microtriphragmium</i> Winter: Teleutosporæ tantum cognitæ.	769	a. Teleutosporæ leves	566
Tubercinia	507	b. Teleutosporæ verrucis vel striolis ornatae	568
Uredo	838	VI. <i>Leptouromyces</i> Schroet.: Teleutosporæ tantum notæ, in matrice adhuc viva germinantes; pedicellus plerumque persistens.	568
1. <i>Uredo</i> : Sporæ in apice pedicelli solitariae	838	VII. Species quoad sectionem ulterius inquirendæ	569
2. <i>Cæoma</i> : Sporæ subcatenulatae	863	a. Teleutosporæ episporio levi donatae	569
Urocystis	515	b. Teleutosporæ episporio granulato, verrucoso, striolato v. aculeolato donatae	575
Uromyces	531	c. Teleutosporæ quoad episporii superficiem incertæ	579
I. <i>Euromyces</i> Schroet.: In fungi cyclo evolutionis spermogonia, æcidia, uredo- et teleutosporæ observantur	531	Uropyxis	735
a. <i>Autouromyces</i> Schroet.: Omnes formæ in eadem matrice evolutæ	531	Ustilago	451
1. Teleutosporæ pedicello firmo, substrato arcte adnato fultæ.	531	A. Sporæ leves	451
2. Teleutosporæ pedicello gracili fultæ ideoque facile deciduæ	534	B. Sporæ granulatae, verrucosæ v. papillosæ, raro leviusculæ.	461
b. <i>Heterouromyces</i> Schroet.: Spermogonia et æcidia in una, uredosporæ et teleutosporæ in altera matrice	540	C. Sporæ aculeatae	470
II. <i>Brachyromyces</i> Schroet.: Spermogonia, uredo- et teleutosporæ adsunt; æcidia nulla.	543	D. Sporæ lineolis obsitæ	474
III. <i>Hemiouromyces</i> Schroet.: Spermogonia et æcidia ignota; uredo- et teleutosporæ in eadem matrice evolutæ	543	E. Species addendæ	479
a. Teleutosporæ leves.	543	F. Species minus notæ.	479
		G. Species aliæ incertæ, aliæ peridermatis degenerationes forte sistentes.	479
		Ustilagopsis	498
		Xenodochus	750

INDEX ALPHABETICUS

SPECIERUM

USTILAGINEARUM et UREDINEARUM

- aberrans* (Puccinia). 692.
abietina (Uredo). 760.
abietinum (Æcidium). 760.
Abietis (Chrysomyxa). 762.
Abietis-pectinatae (Uredo). 866.
Absinthii (Puccinia). 637.
abundans (Æcidium). 797.
Abutili (Puccinia). 695.
Acaciæ (Triphragmium). 769.
Acanthacearum (Æcidium). 817.
Acerum (Puccinia). 696.
Acetosæ (Puccinia). 638.
Acetosæ (Uromyces). 537.
Acherois (Uredo). 590.
Achilleæ (Puccinia). 725.
acicola (Peridermium). 751.
Aconiti (Coleosporium). 758.
Aconiti (Uromyces). 561.
Aconiti-Lycoctoni (Uromyces). 561.
Aconiti-Napelli (Æcidium). 777.
acrophila (Puccinia). 727.
Acteæ (Æcidium). 777.
aculeata (Puccinia). 675.
aculeata (Tilletia). 487.
aculeifera (Ravenelia). 773.
acuminata (Puccinia). 685, 703.
acuminatum (Aregma). 743.
acuminatum (Phragmidium). 743.
acuminatus (Uromyces). 549.
acutatus (Uromyces). 554.
Adoxæ (Puccinia). 612.
æcidiiformis (Erysibe). 590.
æcidiiformis (Puccinia). 704.
æcidiiformis (Uredo). 839.
æcidiiformis (Uredo). 564, 856.
æcidioides (Melampsora). 590.
æcidioides (Uredo). 854.
ægirinum (Cæoma), 590.
Ægopodii (Puccinia). 678.
Ægopodii (Uredo). 865.
ægra (Puccinia). 614.
ægyptiaca (Ustilago). 465.
Æsculi (Æcidium). 785.
æthiopica (Puccinia). 653.
Æthusæ (Æcidium). 832.
Æthusæ (Æcidium). 635.
Æthusæ (Puccinia). 644.
affinis (Puccinia). 688.
affinis (Thecaphora). 510.
affinis (Uredo). 839.
affinis (Uredo). 644.
affinis (Uromyces). 566.
afra (Puccinia). 620.
africana (Puccinia). 706.
Agrimoniæ (Uredo). 839.
Agrimoniæ-Eupatoriæ (Uredo). 839.
Agropyri (Urocystis). 516.
Agrostemmæ (Puccinia). 684.
albescens (Æcidium). 612.
albescens (Sphærotheca). 602.
albida (Chrysomyxa). 761.
albidum (Æcidium). 609.
albilabrum (Æcidium). 794.
Albucæ (Uromyces). 558.
album (Æcidium). 789.
Alchemillæ (Uromyces). 553.
Aletridis (Puccinia). 657.
Alismacearum (Entyloma). 503.
Alismacearum (Uredo). 503.
Alismatis (Doassansia). 503.
Alismatis (Uredo). 839.
Allenii (Æcidium). 821.
alliatum (Cæoma). 624.
Allii (Puccinia). 655.
alliicolum (Æcidium). 830.
Allii-ursini (Æcidium). 868.

- Allii-ursini* (*Cæoma*). 868.
Alliorum (*Puccinia*). 655.
Alliorum (*Uredo*). 868.
Alliorum (*Uredo*). 605, 655.
Alliorum (*Uromyces*). 559.
allochroum (*Cæoma*). 590.
Alni (*Melampsora*). 505.
Alopeeuri (*Urocystis*). 516.
alopecurivora (*Tilletia*). 487.
alpestris (*Uredo*). 840.
alpina (*Puccinia*). 693.
alpina (*Puccinia*). 840.
alpinus (*Uromyces*). 544.
alsophila (*Puccinia*). 694.
Alyxiæ (*Puccinia*). 714.
ambiens (*Uromyces*). 584.
ambiens (*Entyloma*). 496.
ambigua (*Uredo*). 605.
ambiguus (*Uromyces*). 543.
amœnum (*Cæoma*). 631.
americana (*Urocystis*). 520.
Ammophilæ (*Thecaphora*). 510.
Amorphæ (*Æcidium*). 786.
Amorphæ (*Uropyxis*). 735.
Amphibii (*Puccinia*). 636.
amphigenum (*Æcidium*). 801.
amphigenum (*Æcidium*). 788.
Amygdali (*Uromyces*). 648.
anachoreta (*Puccinia*). 733.
Anagyridis (*Uromyces*). 558.
Andersonii (*Puccinia*). 710.
Andromedæ (*Uredo*). 853.
Andropogonis (*Cerebella*). 523.
Andropogonis (*Puccinia*). 664.
Andropogonis (*Uredo*). 662.
Androsæmi (*Uredo*). 591.
Anemones (*Lycoperdon*). 669.
Anemones (*Puccinia*). 669.
Anemones (*Urocystis*). 518.
Anemones-virginianæ (*Puccinia*). 687.
Anethi (*Puccinia*). 634.
Angelicæ (*Æcidium*). 833.
Angelicæ (*Puccinia*). 703.
Angelicæ (*Puccinia*). 651.
angiosperma (*Uredo*). 840.
Anguillaræ (*Uredo*). 840.
angustata (*Puccinia*). 655.
Anisacanthi (*Æcidium*). 819.
Anisotomes (*Æcidium*). 809.
annularis (*Puccinia*). 689.
Anodæ (*Uredo*). 840.
anomala (*Puccinia*). 625.
anomala (*Ustilago*). 478.
antarctica (*Puccinia*). 691.
antarctica (*Uredo*). 840.
antarcticum (*Sorosporium*). 512.
antherarum (*Cæoma*). 474.
antherarum (*Erysibe*). 474.
antherarum (*Microbotryum*). 475.
antherarum (*Uredo*). 474.
antherarum (*Ustilago*). 474.
Anthoxanthi (*Puccinia*). 665.
Anthrisci (*Puccinia*). 648.
Anthyllidis (*Uromyces*). 551.
Anzianum (*Entyloma*). 494.
aperta (*Uredo*). 841.
apiculata (*Uredo*). 534, 542.
apiculatum (*Phragmidium*). 743.
apiculatum (*Cæoma*). 534.
apiculatus (*Uromyces*). 534.
Apii (*Puccinia*). 634.
Apii-graveolentis (*Puccinia*). 643.
apiosporus (*Uromyces*). 584.
apocynaceum (*Coleosporium*). 755.
apocynatum (*Cæoma*). 808.
Apocyni (*Æcidium*). 808.
apophysata (*Puccinia*). 725.
appendiculata (*Erysibe*). 531, 535.
appendiculata (*Puccinia*). 727.
appendiculatum (*Cæoma*). 531.
appendiculatus (*Uromyces*). 535.
appendiculatus (*Uromyces*). 531, 542.
Aquilegiæ (*Æcidium*). 776.
Arachidis (*Puccinia*). 698.
Araujæ (*Puccinia*). 715.
Ari (*Cæoma*). 868.
arctica (*Melampsora*). 595.
arctica (*Tilletia*). 486.
Arechavaletæ (*Æcidium*). 794.
Arechavaletæ (*Puccinia*). 695.
Arenariæ (*Puccinia*). 683.
Arenariæ-serpyllifoliæ (*Puccinia*). 684.
areolata (*Erysibe*). 605, 868.
areolata (*Thecopsora*). 764.
areolata (*Uredo*). 605.
argentata (*Puccinia*). 639.
argentatum (*Æcidium*). 609, 639.
argentina (*Puccinia*). 712.
argentina (*Uredo*). 548.
argentinum (*Sorosporium*). 513.
argentinus (*Uromyces*). 557.
Argyreæ (*Æcidium*). 814.
Amsoniæ (*Uredo*). 853.
Ari (*Æcidium*). 831.

- Ariæ (Melampsora). 592.
 Ari-italici (Uredo). 868.
arillata (Erysibe). 517, 519.
Ari-virginici (Cæoma). 537.
Ari-virginici (Uromyces). 537.
Ariscemæ (Uromyces). 538.
 Aristidæ (Uromyces). 573.
 Aristidæ (Ustilago). 462.
 Aristolochiæ (Puccinia). 614.
Aristolochiarum (Puccinia). 614.
aristolochiatum (Cæoma). 614.
 arizonicus (Uromyces). 538.
Armeriæ (Cæoma). 532.
Armeriæ (Erysibe). 532.
Armeriæ (Uredo). 532.
Armeriæ (Uromyces). 532.
 arnicalis (Puccinia). 647.
 aroideum (Æcidium). 831.
Artemisiæ (Cæoma). 637.
Artemisiæ (Puccinia). 637.
Artemisiæ (Uredo). 637.
Artemisiarum (Puccinia). 637.
 Artocarpi (Uredo). 841.
arundinacea (Uredo). 630.
arundinacea (Puccinia). 630.
Arundinariæ (Puccinia). 630.
Asari (Puccinia). 678.
 asarina (Puccinia). 678.
 Aschersoniana (Entorrhiza). 497.
 Aschersonii (Entyloma). 493.
 asclepiadeum (Cronartium). 597.
 Asclepiadis (Uromyces). 584.
 Asparagi (Puccinia). 601.
 asperata (Uredo). 841.
 asperifolia (Tilletia). 484.
Asperifolii (Æcidium). 624.
Asperifolii (Cæoma). 624.
Asperifolii (Puccinia). 624.
 asperior (Puccinia). 672.
Asperulæ (Puccinia). 601.
asperum (Phragmidium). 744.
 Asphodeli (Æcidium). 830.
 Asphodeli (Puccinia). 666.
Aspidii (Uredo). 858.
Aspidiotus (Uredo). 858.
asteratum (Cæoma). 756.
 Asteris (Æcidium). 802.
 Asteris (Puccinia). 687.
 Asterum (Æcidium). 802.
 Astragali (Æcidium). 786.
 Astragali (Sorosporium). 512.
 Astragali (Uromyces). 550.
 Astrantiæ (Puccinia). 702.
 aterrima (Thecaphora). 508.
 aterrima (Uredo). 841.
Athamantæ (Uredo). 634.
 Atragenes (Puccinia). 683.
Atragenes (Puccinia). 687.
atratum (Asteroma). 679.
 Atropæ (Æcidium). 811.
 Atropæ (Puccinia). 718.
 atropuncta (Puccinia). 729.
 atrum (Sorosporium). 513.
 aucta (Puccinia). 676.
aurantiaca (Ræstelia). 741.
 aurantiaca (Thecaphora). 510.
aurantiacum (Æcidium). 814.
aurantiacum (Erannium). 753.
aurantiacum (Erannium). 753.
aurantiacum (Gymnosporangium). 738.
 aurea (Puccinia). 689.
aureum (Erannium). 753, 754.
 auriellum (Æcidium). 778.
 auriformis (Tremella). 738.
 australe (Æcidium). 785.
australe (Æcidium). 802.
australe (Entyloma). 494.
 australis (Puccinia). 662.
australis (Puccinia). 704.
 australis (Ustilago). 457.
 austro-americana (Ustilago). 457.
 Avenæ (Tilletia). 487.
 Avenæ (Uredo). 841.
Aviculariæ (Æcidium). 533.
Aviculariæ (Puccinia). 533.
Aviculariæ (Uromyces). 533.
 axicola (Cintractia). 480.
 Azaleæ (Uredo). 842.
baccata (Erysibe). 464.
Baccharidis (Coleosporium). 603.
 Baccharidis (Uredo). 842.
 Bahiæ (Æcidium). 801.
 Balansæ (Æcidium). 825.
 Balansæ (Puccinia). 715.
 Balansæ (Ustilago). 468.
 balsameum (Peridermium). 836.
Balsamiferæ (Melampsora). 590.
 Balsamitæ (Cronartium). 598.
 Balsamitæ (Puccinia). 647.
 Balsamitæ (Uredo). 842.
 Balsamorhizæ (Uredo). 842.
 barbara (Uredo). 842.
 Barbareæ (Æcidium). 778.
 Barbareæ (Puccinia). 693.

- Barbeyi (*Æcidium*). 830.
Bardanæ (*Puccinia*). 634.
Barkhausiæ (*Æcidium*). 801.
Barnardii (*Phragmidium*). 746.
Baryi (*Puccinia*). 660.
Bauhiniæ (*Uredo*). 843.
Behenis (*Æcidium*). 605.
Behenis (*Cæoma*). 605.
Behenis (*Uredo*). 605.
Behenis (*Uromyces*). 559.
Bellidiastri (*Puccinia*). 671.
Bellidis (*Æcidium*). 629.
Bellidis (*Uredo*). 843.
Beltraniana (*Puccinia*). 721.
berberidatum (*Cæoma*). 622.
Berberidis (*Æcidium*). 622.
Berberidis (*Puccinia*). 691.
Bergii (*Puccinia*). 653.
Berkeleyana (*Puccinia*). 717.
Berkeleyana (*Thecaphora*). 508.
Berkeleyi (*Puccinia*). 645.
bermudianum (*Æcidium*). 825.
Besseyi (*Entyloma*). 494.
Betæ (*Uredo*). 636.
Betæ (*Uromyces*). 536.
beticola (*Uredo*). 843.
Betonicæ (*Puccinia*). 677.
Betonicæ (*Ustilago*). 476.
Betulæ (*Sclerotium*). 592.
betulina (*Melampsora*). 592.
bicolor (*Entyloma*). 488.
biforme (*Æcidium*). 811.
bifrons (*Æcidium*). 541, 561.
bifrons (*Uredo*). 544.
Bigeloviæ (*Æcidium*). 801.
Bigelowii (*Melampsora*). 595.
binatum (*Diorchidium*). 736.
biseptatum (*Gymnosporangium*). 740.
Bistortæ (*Puccinia*). 638.
Bistortarum (*Cæoma*). 499.
Bistortarum (*Uredo*). 638.
Bistortarum (*Ustilago*). 469.
Bizzozzerianum (*Entyloma*). 503.
Bizzozzerianus (*Protomyces*). 503.
Blainvilleæ (*Uromyces*). 576.
Blyttii (*Puccinia*). 700.
Boisduvaliæ (*Puccinia*). 699.
bonariense (*Æcidium*). 818.
bonariensis (*Puccinia*). 720.
bonariensis (*Uredo*). 843.
bonariensis (*Uromyces*). 548.
Boraginatum (*Cæoma*). 624.
borealis (*Uromyces*). 561.
botryapites (*Ræstelia*). 740.
Bougainvilleæ (*Æcidium*). 820.
Boutelouæ (*Uredo*). 843.
Brachypodii (*Puccinia*). 660.
Brandegei (*Æcidium*). 808.
Brandegei (*Puccinia*). 692.
Brandegei (*Uromyces*). 733.
Brassicæ (*Puccinia*). 735.
Brassicæ (*Uromyces*). 584.
brevipes (*Phragmidium*). 742.
brevipes (*Pileolaria*). 552.
Brickelliæ (*Puccinia*). 654.
Brizæ (*Tilletia*). 487.
Brodieæ (*Uromyces*). 563.
bromivora (*Ustilago*). 461.
Buchanami (*Puccinia*). 723.
Bulbinis (*Uromyces*). 572.
Bulbocastani (*Puccinia*). 667.
bulbosa (*Uredo*). 745.
bulbosum (*Aregma*). 745.
bulbosum (*Phragmidium*). 745.
bullaria (*Puccinia*). 634.
bullata (*Puccinia*). 634.
bullata (*Tilletia*). 469.
bullata (*Uredo*). 678.
bullata (*Ustilago*). 468.
bullata (*Ustilago*). 469.
bullatum (*Phragmidium*). 748.
bullatum (*Tolyposporium*). 502.
Bunii (*Puccinia*). 667.
Bupleuri (*Puccinia*). 610.
Bupleuri-falcati (*Puccinia*). 610.
Bursa (*Ustilago*). 473.
Buxi (*Puccinia*). 688.

Cacaliæ (*Coleosporium*). 753.
Cacaliæ (*Uromyces*). 560.
Cacaliæ-suaveolentis (*Uredo*). 752.
Caladii (*Uromyces*). 537.
Calamagrostidis (*Tilletia*). 485.
Calaminthæ (*Puccinia*). 617.
Calaminthæ (*Uredo*). 617.
Calcitrapæ (*Puccinia*). 634.
caledonicum (*Sorosporium*). 514.
Calendulæ (*Entyloma*). 492.
californicum (*Sorosporium*). 514.
Callirhoës (*Æcidium*). 782.
Callixenis (*Æcidium*). 828.
Calochorti (*Puccinia*). 670.
calospora (*Tilletia*). 483.
Calthæ (*Puccinia*). 602.

- Calystegiæ* (*Æcidium*). 610.
calthæcola (*Puccinia*). 621.
Campanulacearum (*Coleosporium*). 754.
Campanulæ (*Æcidium*). 806.
Campanulæ (*Coleosporium*). 753.
Campanulæ (*Puccinia*). 677.
Campanumæ (*Puccinia*). 713.
Camphorosmæ (*Uredo*). 844.
Campulosæ (*Puccinia*). 730.
cancellata (*Puccinia*). 659.
cancellata (*Ræstelia*). 739.
cancellatum (*Lycoperdon*). 739.
Candollei (*Ustilago*). 499.
canescens (*Entyloma*). 488.
Cannæ (*Uredo*). 843.
Canthii (*Uromyces*). 586.
capense (*Æcidium*). 828.
capensis (*Ustilago*). 478.
Capparidis (*Cronartium*). 599.
Caprearum (*Cæoma*). 587.
Caprearum (*Erysibe*). 587.
Caprearum (*Melampsora*). 587.
Caprearum (*Uredo*). 587.
Caprifoliacearum (*Æcidium*). 797.
capsularum (*Ustilago*). 508.
Caraganæ (*Uredo*). 844.
Carbo (*Uredo*). 454, 461.
Carbo-Maydis (*Uredo*). 472.
carbonacea (*Puccinia*). 652.
carbonarius (*Xenodochus*). 751.
carcinodes (*Urocystis*). 520.
Cardamines (*Puccinia*). 724.
Cardiospermi (*Æcidium*). 785.
Cardui (*Ustilago*). 477.
Cardui-acanthoidis (*Ustilago*). 477.
caricicola (*Puccinia*). 662.
caricina (*Puccinia*). 626.
caricina (*Trichobasis*). 626.
Caricis (*Puccinia*). 626.
Caricis (*Uromyces*). 583.
Caricis (*Ustilago*). 464.
Caries (*Tilletia*). 482.
Caries (*Uredo*). 481.
carneum (*Æcidium*). 786.
carniolica (*Puccinia*). 672.
Carphæ (*Ustilago*). 460.
Carpini (*Melampsora*). 593.
carpophila (*Ræstelia*). 737.
carpophila (*Uredo*). 464.
Carthami (*Puccinia*). 646.
Caryophyllacearum (*Cæoma*). 596.
Caryophyllacearum (*Melampsorella*). 596.
Caryophyllacearum (*Puccinia*). 684.
Caryophyllacearum (*Uredo*). 596.
caryophyllinus (*Uromyces*). 545.
Cassandræ (*Uredo*). 844.
Casparyana (*Entorrhiza*). 497.
Castagnei (*Melampsora*). 589.
Castagnei (*Puccinia*). 643.
Catabrosæ (*Entyloma*). 489.
Cathartici (*Æcidium*). 623.
caulicola (*Puccinia*). 641.
caulicola (*Puccinia*). 677.
caulium (*Melanotænium*). 497.
Ceanothi (*Æcidium*). 796.
cellulicola (*Entorrhiza*). 497.
Celmisiæ (*Uredo*). 844.
Centaureæ (*Æcidium*). 633.
Centaureæ (*Puccinia*). 633.
Centaureæ-asperæ (*Puccinia*). 709.
Centranthi (*Æcidium*). 669.
Centumnodii (*Uredo*). 533.
Cephalandræ (*Puccinia*). 613.
Cephalanthi (*Æcidium*). 797.
Cepulæ (*Urocystis*). 517.
ceraceum (*Æcidium*). 808.
Cerasi (*Melampsora*). 596.
Cerasi (*Puccinia*). 640.
Cerastii (*Æcidium*). 780.
Cerastii (*Melampsora*). 596.
Cerastii (*Melampsorella*). 596.
Cerastii (*Puccinia*). 684.
cerealis (*Puccinia*). 622.
cerebrina (*Tilletia*). 483.
Cerebrum (*Peridermium*). 837.
Cerinthæ (*Coleosporium*). 755.
Cesatii (*Puccinia*). 662.
Cesatii (*Sorosporium*). 507.
Cesatii (*Ustilago*). 474.
Cestri (*Æcidium*). 812.
Cestri (*Uromyces*). 584.
Chærophylli (*Æcidium*). 616.
Chærophylli (*Puccinia*). 616.
Chærophylli (*Uredo*). 616.
Chamædryos (*Puccinia*). 689.
Chamæsyscis (*Uromyces*). 553.
Cheiranthi (*Puccinia*). 692.
Chelidonii (*Uredo*). 863.
chenopodiatum (*Cæoma*). 819.
Chenopodii (*Uredo*). 819.
Chenopodii (*Uromyces*). 548.
Chenopodii-fruticosi (*Æcidium*). 819.
Chionanthi (*Æcidium*). 807.
Chlorophyti (*Æcidium*). 827.

- Chondrillæ* (*Puccinia*). 606.
Chorizanthi (*Uromyces*). 583.
chrysoides (*Cæoma*). 868.
chrysoides (*Erysibe*). 868.
Chrysophylli (*Puccinia*). 735.
Chrysosplenii (*Entyloma*). 491.
Chrysosplenii (*Puccinia*). 685.
Ciceris-arietini (*Uredo*). 844.
Cichoracearum (*Æcidium*). 668.
Cichoracearum (*Cæoma*). 668.
Cichoracearum (*Uredo*). 633.
Cichorearum (*Uredo*). 606.
Cichorii (*Puccinia*). 606.
Cicutæ (*Puccinia*). 647.
Cicutæ-majoris (*Puccinia*). 647.
cimicifugatum (*Æcidium*). 777.
cimicifugatum (*Celeosporium*). 758.
cincta (*Puccinia*). 668.
cincta (*Uredo*). 536.
cingens (*Cintractia*). 481.
Cinis (*Ustilago*). 480.
Circææ (*Æcidium*). 791.
Circææ (*Puccinia*). 686.
Circææ (*Pucciniastrum*). 763.
circinalis (*Uredo*). 679.
circinalis (*Uromyces*). 573.
circinatum (*Æcidium*). 817.
Cirsii (*Æcidium*). 633.
Cirsii (*Æcidium*). 629.
Cirsii (*Sphæronema*). 633.
Cirsii (*Thecaphora*). 510.
Cirsii-lanceolati (*Puccinia*). 606.
Cisneroana (*Uredo*). 844.
Cisneroanus (*Uromyces*). 576.
Cissi (*Æcidium*). 812.
Cissi (*Schroeteria*). 501.
citrina (*Uredo*). 845.
cladophila (*Puccinia*). 712.
clandestina (*Puccinia*). 703.
clavariiforme (*Gymnosporangium*). 737.
clavellosum (*Triphragmium*). 770.
clavigera (*Uredo*). 533.
clavipes (*Gymnosporangium*). 741.
Claytoniæ (*Puccinia*). 701.
Claytoniæ (*Uromyces*). 583.
Claytoniatum (*Cæoma*). 673.
Clematidis (*Æcidium*). 774.
Clematidis (*Uredo*). 867.
clematitatum (*Cæoma*). 774.
Clinopodii (*Puccinia*). 617.
Clinopodii (*Uredo*). 617.
Clintonii (*Puccinia*). 719.
Cluytiæ (*Uromyces*). 556.
Cnici (*Puccinia*). 634.
Coeconii (*Tolyposporium*). 502.
Colchici (*Urocystis*). 516.
Collinsiae (*Æcidium*). 813.
columellatum (*Æcidium*). 748.
columnare (*Æcidium*). 766.
columnare (*Peridermium*). 766.
columnneum (*Cæoma*). 766.
Comandræ (*Cronartium*). 597.
Comari (*Doassansia*). 506.
Commelinæ (*Uredo*). 845.
Commelinæ (*Uredo*). 845.
Commelinæ (*Uromyces*). 573.
compacta (*Puccinia*). 687.
compactiuscula (*Ustilago*). 499.
compactus (*Uromyces*). 583.
Compositarum (*Æcidium*). 798.
Compositarum (*Æcidium*). 541, 625, 633.
Compositarum (*Cæoma*). 606, 627.
Compositarum (*Coleosporium*). 753.
Compositarum (*Entyloma*). 494.
Compositarum (*Puccinia*). 634.
compransor (*Cæoma*). 752.
compressa (*Graphiola*). 523.
concentrica (*Uredo*). 567.
concentricus (*Uromyces*). 567.
conclusa (*Puccinia*). 730.
concomitans (*Uromyces*). 572.
concomitans (*Uromyces*). 559.
condensata (*Ustilago*). 456.
confluens (*Uredo*). 864.
confluens (*Uredo*). 586, 679, 869.
congesta (*Graphiola*). 523.
congesta (*Puccinia*). 734.
conglomerata (*Puccinia*). 667.
congregata (*Puccinia*). 702.
conica (*Tremella*). 738.
conicum (*Gymnosporangium*). 738.
Conii (*Uredo*). 634.
Conoclinii (*Puccinia*). 650.
conorum (*Peridermium*). 836.
conorum-Abietis (*Æcidium*). 836.
conorum-Piceæ (*Æcidium*). 836.
conorum-Piceæ (*Peridermium*). 836.
consanguineum (*Sorosporium*). 514.
constellata (*Uredo*). 845.
controversa (*Tilletia*). 483.
Convallariæ (*Æcidium*). 828.
convallariatum (*Cæoma*). 828.
Convolvulacearum (*Æcidium*). 610.
Convolvuli (*Puccinia*). 610.

- Cookeanum* (*Æcidium*). 822.
Cookei (*Puccinia*). 615.
ceralloides (*Urocystis*). 521.
cordobensis (*Ustilago*). 471.
corniculatum (*Lycoperdon*). 738.
corniferum (*Lycoperdon*). 738.
Cornuana (*Thecaphora*). 508.
cornuta (*Ræstelia*). 738.
cornutum (*Æcidium*). 789.
cornutum (*Æcidium*). 738.
cornutum (*Ceratitium*). 738.
coronata (*Puccinia*). 623.
Corrigiolæ (*Puccinia*). 684.
corticoides (*Puccinia*). 731.
corticola (*Peridermium*). 751.
coruscans (*Peridermium*). 835.
Corydalis (*Entyloma*). 489.
Corydalis (*Urocystis*). 519.
Cotoneasteris (*Æcidium*). 789.
Crameri (*Ustilago*). 455.
crassipes (*Puccinia*). 716.
crassivertex (*Puccinia*). 657.
crassum (*Æcidium*). 541, 623.
crastophilum (*Entyloma*). 491.
crenulatum (*Ceratitium*). 609.
Crepidis (*Puccinia*). 607.
Crepidis-pygmææ (*Puccinia*). 608.
Crepinianum (*Entyloma*). 495.
Cressæ (*Æcidium*). 781.
Crini (*Æcidium*). 827.
cristata (*Puccinia*). 739.
cristata (*Uredo*). 845.
cristatus (*Uromyces*). 551.
Croci (*Uromyces*). 568.
Cronartites (*Cæoma*). 597.
Crotonis (*Pucciniastrum*). 763.
Crotonopsidis (*Æcidium*). 824.
Cruciferarum (*Puccinia*). 724.
Cruciferarum (*Puccinia*). 693.
cruciferatum (*Cæoma*). 778.
cruenta (*Ustilago*). 455.
crypticum (*Æcidium*). 800.
Cryptotæniæ (*Puccinia*). 702.
Cucubali (*Uredo*). 846.
culmorum (*Uredo*). 452; 622.
curtipes (*Puccinia*). 678.
Cuspidatus (*Uromyces*). 573.
Cussoniæ (*Æcidium*). 794.
Cussoniæ (*Uredo*). 846.
cyanatum (*Cæoma*). 805.
Cyani (*Æcidium*). 805.
Cyani (*Puccinia*). 634.
Cyani (*Uredo*). 633.
cyclogena (*Uredo*). 846.
Cydoniæ (*Ræstelia*). 834.
cylindrica (*Erysibe*). 590.
cylindrica (*Puccinia*). 735.
cylindrica (*Uredo*). 590.
cylindrica (*Ustilago*). 468.
cylindricum (*Cæoma*). 590, 592, 609.
cylindricum (*Phragmidium*). 745.
cylindrites (*Cæoma*). 737, 738, 789.
Cymbonoti (*Æcidium*). 833.
Cynanchi (*Melampsora*). 591.
Cynanchi (*Puccinia*). 715.
Cynapii (*Uredo*). 634.
Cynoctoni (*Puccinia*). 715.
Cynodontis (*Puccinia*). 661.
cypericola (*Entorrhiza*). 497.
cypericola (*Entorrhiza*). 497.
Cypripedii (*Puccinia*). 663.
cystoseiroides (*Æcidium*). 833.
Cytisi (*Uredo*). 550.
Cytisi (*Uromyces*). 550.
Dactylidis (*Thecaphora*). 491.
Dactylidis (*Uromyces*). 540.
Danthoniæ (*Ustilago*). 467.
Dayi (*Puccinia*). 722.
De-Baryana (*Puccinia*). 687.
De-Baryana (*Tilletia*). 485.
Decaisneana (*Schroeteria*).
Decaisneana (*Uredo*). 552.
decipiens (*Cæoma*). 464.
decipiens (*Doassansia*). 505.
decipiens (*Tilletia*). 482.
decipiens (*Uredo*). 464, 472, 472.
decipiens (*Ustilago*). 508.
decolorans (*Peridermium*). 837.
deformans (*Puccinia*). 642.
deformans (*Thecaphora*). 509.
deformans (*Uromyces*). 585.
deformata (*Puccinia*). 731.
deglubens (*Phragmidium*). 749.
Delastrina (*Schroeteria*). 500.
Delawayi (*Cronartium*). 599.
deliquescens (*Ustilagopsis*). 497.
Delphinii (*Uredo*). 755.
Dentariæ (*Puccinia*). 683.
depauperans (*Æcidium*). 614.
desertorum (*Sorosporium*). 513.
Desmium (*Æcidium*). 782.
Desmodii (*Sorosporium*). 515.
Desmodii (*Uromyces*). 55.

- destruens* (*Cæoma*). 454.
destruens (*Tilletia*). 454.
destruens (*Uredo*). 454.
destruens (*Ustilago*). 454.
detergibile (*Coleosporium*). 856.
detritum (*Æcidium*). 823.
devastator (*Phragmidium*). 750.
Dianthi (*Puccinia*). 683.
Dianthi (*Sorosporium*). 512.
Dianthi (*Uredo*). 545.
Dianthi (*Uromyces*). 545.
Dicentræ (*Æcidium*). 777.
Dichondræ (*Puccinia*). 717.
Dichondræ (*Puccinia*). 717.
difformis (*Puccinia*). 601, 678.
Digitariæ (*Ustilago*). 454.
digitata (*Puccinia*). 698.
digitata (*Tremella*). 737, 739.
digitatus (*Uromyces*). 556.
digitatus (*Uromyces*). 557.
Diodiæ (*Æcidium*). 795.
Dioicæ (*Puccinia*). 629.
Dioscoreæ (*Æcidium*). 828.
Diotidis (*Puccinia*). 647.
Discariæ (*Æcidium*). 785.
Discoidearum (*Puccinia*). 637, 647.
discolor (*Puccinia*). 648.
dissiliens (*Puccinia*). 723.
Dissotidis (*Æcidium*). 789.
Dissotidis (*Uredo*). 838.
disticha (*Graphiola*). 523.
Dochmia (*Puccinia*). 734.
Dolichii (*Uromyces*). 565.
dolichospora (*Uredo*). 613.
doloris (*Puccinia*). 705.
domingensis (*Uredo*). 846.
Doronici (*Æcidium*). 687.
Doronici (*Puccinia*). 687.
Dorymopsidis (*Uredo*). 846.
Drabæ (*Æcidium*). 779.
Drabæ (*Puccinia*). 683.
Drabæ (*Puccinia*). 692.
Dracontii (*Æcidium*). 831.
Dracunculi (*Æcidium*). 804.
Dracunculi (*Puccinia*). 637.
Dregeana (*Ustilago*). 467.
dubiosa (*Ustilago*). 460.
dubium (*Æcidium*). 610.
Dubyi (*Puccinia*). 722.
Duriæana (*Ustilago*). 465.
ebenaccum (*Æcidium*). 807.
echinaceum (*Æcidium*). 821.
echinata (*Ustilago*). 470.
echinatum (*Triphraghium*). 769.
Echinopsis (*Puccinia*). 711.
Echinopsis (*Puccinia*). 634.
echinulatus (*Uromyces*). 577.
Ectadiopsidis (*Uredo*). 846.
Ecteinanthi (*Uredo*). 847.
effusa (*Uredo*). 590.
effusum (*Æcidium*). 817.
effusum (*Phragmidium*). 748.
effusus (*Uromyces*). 576.
Ehrenbergii (*Sorosporium*). 512.
elatinum (*Æcidium*). 825.
elegans (*Cæoma*). 828.
Eleocharidis (*Puccinia*). 656.
Elephantopodis (*Coleosporium*). 753.
Elephantopodis (*Uredo*). 753.
elevata (*Uredo*). 746.
Ellisiana (*Puccinia*). 731.
Ellisii (*Æcidium*). 819.
Ellisii (*Phragmidium*). 750.
Ellisii (*Puccinia*). 651.
Ellisii (*Ræstelia*). 740.
Ellisii (*Sorosporium*). 513.
elongata (*Puccinia*). 721.
elongata (*Puccinia*). 602.
elongatum (*Æcidium*). 623.
Elymi (*Puccinia*). 656.
emaculata (*Puccinia*). 663.
emodensis (*Ustilago*). 470.
Empetri (*Chrysomyxa*). 762.
Endiviæ (*Puccinia*). 647.
endogenum (*Melanotænium*). 496.
endophylla (*Tilletia*). 482.
endotricha (*Ustilago*). 467.
Engelmannii (*Peridermium*). 836.
enormis (*Puccinia*). 682.
entorrhiza (*Ustilago*). 479.
Ephedræ (*Æcidium*). 826.
Ephedræ (*Peridermium*). 835.
ephialtes (*Cæoma*). 633.
epidermoidalis (*Uredo*). 762.
epilobiatum (*Cæoma*). 791.
Epilobii (*Doassansia*). 506.
Epilobii (*Puccinia*). 608.
Epilobii (*Pucciniastrum*). 762.
epiphylla (*Puccinia*). 625.
epiphylla (*Tilletia*). 486.
epiphyllum (*Lycoperdon*). 625, 677.
epitea (*Lecythea*). 588.
epitea (*Melampsora*). 588.

- Equiseti (*Æcidium*). 832.
 Eriachnes (*Sorosporium*). 514.
 erigeronatum (*Æcidium*). 801.
 Eriogoni (*Uromyces*). 539.
 Eriophori (*Puccinia*). 730.
 Eriospermi (*Uromyces*). 557.
 Ervi (*Puccinia*). 735.
 Ervi (*Uromyces*). 532.
 Eryngii (*Entyloma*). 492.
 erythrobasia (*Æcidium*). 782.
 Erythronii (*Uromyces*). 564.
 Erythronii (*Ustilago*). 452.
 Eucalypti (*Melampsora*). 595.
 Euchlænæ (*Ustilago*). 464.
 Euphorbiæ (*Æcidium*). 823.
 Euphorbiæ (*Erysibe*). 587.
 Euphorbiæ (*Lecythea*). 587.
 Euphorbiæ (*Rhytisma*). 586.
 Euphorbiæ (*Uromyces*). 556.
 Euphorbiæ-silvaticæ (*Endophyllum*). 767.
 euphorbiicola (*Uredo*). 847.
 Euphrasiæ (*Coleosporium*). 754.
 evadens (*Puccinia*). 603.
 Evolvuli (*Uredo*). 847.
 Evonymi (*Uredo*). 867.
 exanthematica (*Puccinia*). 700.
 exanthematicum (*Æcidium*). 542.
 exasperata (*Uredo*). 846.
 excavata (*Uredo*). 552.
 excavatum (*Cæoma*). 552.
 excavatus (*Uromyces*). 552.
 exhaustiens (*Puccinia*). 714.
 exotica (*Geminella*). 501.
 expansa (*Puccinia*). 667.
 Fabæ (*Uromyces*). 531.
 Facelidis (*Uredo*). 847.
 Falcariæ (*Æcidium*). 666.
 Falcariæ (*Cæoma*). 666.
 Falcariæ (*Puccinia*). 666.
 Falcariæ (*Uredo*). 666.
 falcariatum (*Cæoma*). 666.
 fallaciosa (*Puccinia*). 679.
 fallens (*Puccinia*). 531, 534.
 farinosa (*Melampsora*). 587.
 Farlowii (*Doassansia*). 504.
 fasciata (*Puccinia*). 684.
 Fedæ-olitoricæ (*Æcidium*). 797.
 Fergussoni (*Puccinia*). 682.
 Ferulæ (*Æcidium*). 793.
 Ferulæ (*Puccinia*). 609.
 Festucæ (*Uredo*). 847.
 Festucæ (*Urocystis*). 516.
 Ficaricæ (*Entyloma*). 489.
 Ficaricæ (*Polycystis*). 518.
 Ficaricæ (*Protomyces*). 489.
 Ficaricæ (*Uromyces*). 568.
 Fici (*Uredo*). 847.
 ficicola (*Uredo*). 848.
 Ficus (*Uredo*). 847.
 Ficuum (*Ustilago*). 457.
 filamentosum (*Peridermium*). 837.
 filicinus (*Protomyces*). 858.
 Filicum (*Cæoma*). 858.
 Filicum (*Pucciniastrum*). 858.
 Filicum (*Uredo*). 858.
 Filipendulæ (*Triphragmium*). 769.
 Filipendulæ (*Urocystis*). 520.
 Fimbristylis (*Ustilago*). 459.
 Fischeri (*Entyloma*). 491.
 Fischeri (*Tilletia*). 486.
 Fischeri (*Urocystis*). 516.
 Fischeri (*Ustilago*). 470.
 Feniculi (*Æcidium*). 793.
 foetens (*Ustilago*). 485.
 foetida (*Erysibe*). 482.
 foetida (*Uredo*). 482.
 foliicola (*Geminella*). 500.
 foliicolum (*Podisoma*). 738.
 folliculata (*Erysibe*). 482.
 formosum (*Cæoma*). 606.
 flaccida (*Puccinia*). 656.
 flaccidum (*Cronartium*). 598.
 flavidula (*Uredo*). 848.
 flavidum (*Æcidium*). 795.
 flavo-nigrescens (*Ustilago*). 467.
 flavum (*Æcidium*). 828.
 flavum (*Coleosporium*). 754.
 flexuosa (*Uredo*). 533.
 floccosa (*Erysibe*). 518.
 flosculorum (*Cæoma*). 475.
 flosculorum (*Ustilago*). 475.
 flosculorum (*Puccinia*). 634.
 flosculosorum (*Uredo*). 606. 633.
 Flotowii (*Solenodonta*). 623.
 Fragariæ (*Phragmidium*). 742.
 Fragariæ (*Puccinia*). 742.
 Fragariastri (*Phragmidium*). 742.
 fragiforme (*Æcidium*). 825.
 fragilis (*Puccinia*). 724.
 Frangulæ (*Æcidium*). 623.
 Frankenicæ (*Uredo*). 848.
 fraternus (*Uromyces*). 544.
 Fraxini (*Æcidium*). 806.

Fraxinites (*Ræstelia*). 806.
Fritillariæ (*Uredo*). 564.
Fritillariæ (*Uromyces*). 564.
fructigenum (*Phragmidium*). 748.
Fuchsiae (*Coleosporium*). 756.
Fuckelii (*Puccinia*). 682.
fuegianus (*Uromyces*). 573.
Fuirenæ (*Puccinia*). 730.
fulgens (*Æcidium*). 785.
fulva (*Uredo*). 752.
Fumariæ (*Entyloma*). 494.
fusca (*Puccinia*). 669.
fusca (*Tilletia*). 484.
fusca (*Tremella*). 739.
fuscillum (*Entyloma*). 488.
fusco-virens (*Uredo*). 452.
Fumariæ (*Uredo*). 864.
fuscum (*Coleosporium*). 759.
fuscum (*Entyloma*). 488.
fuscum (*Gymnosporangium*). 739, 741.
fusiforme (*Phragmidium*). 747.
fusisporus (*Uromyces*). 555.
Fussii (*Ustilago*). 468.

Gageæ (*Uromyces*). 568.
Galanthi (*Puccinia*). 681.
Galanthi (*Uredo*). 866.
Galatellæ (*Æcidium*). 800.
galiatum (*Cœoma*). 601.
Galii (*Protomyces*). 496.
Galii (*Puccinia*). 600.
Galii (*Thecopsora*). 765.
Galii-cruciati (*Puccinia*). 685.
Galii-verni (*Puccinia*). 685.
Galiorum (*Puccinia*). 601.
Galopinæ (*Puccinia*). 703.
Geranii (*Puccinia*). 696.
gaurina (*Uredo*). 848.
gaurinum (*Æcidium*). 790.
Gayophyti (*Æcidium*). 791.
Gayophyti (*Puccinia*). 699.
Gayophyti (*Ustilago*). 473.
gemella (*Puccinia*). 648.
gemmatus (*Uromyces*). 577.
Génistæ-tinctoriæ (*Uromyces*). 550.
Gentianæ (*Puccinia*). 604.
gentianeum (*Cronartium*). 597.
Geranii (*Puccinia*). 681, 696.
Geranii (*Trichobasis*). 696.
Geranii (*Uromyces*). 535.
Geranii-silvatici (*Puccinia*). 682.
Gerardiæ (*Æcidium*). 813.

Gerardii (*Puccinia*). 687.
gibberosa (*Puccinia*). 665.
gibberulosa (*Puccinia*). 723.
gigantea (*Puccinia*). 699.
giganteus (*Uromyces*). 548.
Giliæ (*Æcidium*). 814.
Giliæ (*Puccinia*). 654.
Gilbertii (*Puccinia*). 653.
glabra (*Ravenelia*). 771.
Gladiolus (*Puccinia*). 728.
Gladioli (*Urocystis*). 518.
glanduliformis (*Ravenelia*). 771.
glanduliformis (*Ravenelia*). 773.
glandulosa (*Ravenelia*). 771.
Glaucis (*Æcidium*). 818.
Glaucis (*Uredo*). 849.
Glechomæ (*Æcidium*). 815.
Glechomæ (*Puccinia*). 688.
globosipes (*Puccinia*). 726.
globoso-aurantiaca (*Uredo*). 743.
globoso-flava (*Uredo*). 858.
Globulariæ (*Puccinia*). 689.
globulifera (*Thecaphora*). 509.
glomerulata (*Tilletia*). 486.
glumarum (*Uredo*). 849.
Glycyrrhizæ (*Puccinia*). 725.
gnaphaliatum (*Æcidium*). 804.
Gnaphalii (*Uredo*). 849.
Gœppertiana (*Calyptospora*). 766.
Gœppertiana (*Ustilago*). 478.
Gonolobi (*Puccinia*). 715.
gracile (*Aregma*). 748.
gracile (*Peridermium*). 820.
gracile (*Phragmidium*). 749.
gracile (*Phragmidium*). 748.
gracilens (*Æcidium*). 792.
gracilis (*Puccinia*). 748.
graminellum (*Æcidium*). 832.
gramineum (*Cronartium*). 599.
graminicola (*Uromyces*). 547.
graminis (*Capitularia*). 541.
graminis (*Puccinella*). 541.
graminis (*Puccinia*). 622.
graminum (*Polycystis*). 515.
graminum (*Uromyces*). 541.
grammica (*Ustilago*). 452.
grandis (*Ustilago*). 453.
granularis (*Puccinia*). 640.
granulata (*Puccinia*). 679.
granulatum (*Phragmidium*). 742, 745.
graveolens (*Æcidium*). 778.
gregarium (*Æcidium*). 780.

- Greviæ (Pericladium). 838.
 Grindeliæ (Puccinia). 705.
 grisea (Puccinia). 689.
 Grossulariæ (Æcidium). 792.
grossulariatum (Cœoma). 792.
 guaranitica (Rœstelia). 833.
 guaranitica (Ustilago). 459.
 guaraniticum (Coleosporium). 756.
 guaraniticum (Entyloma). 495.
 guaraniticum (Gymnosporangium). 741.
 guarapiensis (Uredo). 849.
 Guayacurù (Uromyces). 563.
 Gundeliæ (Puccinia). 640.
guttata (Melampsora). 765.
 Gynandrearum (Uredo). 853.
 Gynerii (Ustilago). 459.
 Gypsophilæ (Uromyces). 577.
gyrosa (Erysibe). 748.
gyrosa (Lecythea). 748.
gyrosa (Uredo). 748.
gyrosum (Cœoma). 748.

 Hæsendockii (Ustilago). 480.
 Haleniæ (Puccinia). 716.
 Halstedii (Uromyces). 557.
 Hamiltoniæ (Æcidium). 822.
 Harknessi (Peridermium). 838.
 Harknessii (Puccinia). 644.
Hartigii (Melampsora). 587.
 Hartwegiæ (Æcidium). 827.
hastata (Puccinia). 682.
 Haszlinskii (Uromyces). 565.
 Haszlinskii (Puccinia). 692.
Haussmanni (Puccinia). 683.
 Hedyotidis (Coleosporium). 759.
Hedysari (Phragmidium). 555.
 Hedysari (Uromyces). 560.
Hedysari (Uromyces). 565.
Hedysari-obscuri (Puccinia). 560.
Hedysari-obscuri (Uredo). 560.
Hedysari-obscuri (Uromyces). 561.
 Hedysari-paniculati (Uromyces). 555.
 Heideri (Puccinia). 648.
 Helenii (Puccinia). 708.
 Helianthellæ (Uredo). 849.
 Helianthemii (Uredo). 850.
 Helianthi (Puccinia). 603.
 Helianthi (Uredo). 850.
Helianthorum (Puccinia). 603.
 Helichrysi (Puccinia). 707.
Helichrysi (Puccinia). 645.
 Heliopsidis (Puccinia). 706.
 Helosciadii (Entyloma). 489.
 Helioscopiæ (Melampsora). 586.
 Heliotropii (Æcidium). 811.
 helvetica (Puccinia). 639.
 Hemerocallidis (Puccinia). 728.
hemisphærica (Uredo). 809.
 hemisphæricum (Æcidium). 805.
 hemisphæricus (Uromyces). 574.
 Hepaticæ (Æcidium). 776.
 Heraclei (Puccinia). 616.
Heraclei (Trichobasis). 616.
 Herniariæ (Puccinia). 684.
Herniariæ (Puccinia). 722.
heterochroa (Puccinia). 685.
 heterogeneus (Uromyces). 583.
Heteromorphæ (Uredo). 555.
 Heteromorphæ (Uromyces). 577.
 Heterophyllæ (Puccinia). 642.
 Heteropteridis (Puccinia). 724.
 heterospora (Puccinia). 695.
heterospora (Ustilago). 452.
Heufleri (Ustilago). 453.
 hibisciatum (Æcidium). 781.
 Hieracii (Puccinia). 633.
Hieracii (Puccinia). 606.
 Hieracii-murorum (Puccinia). 712.
 Hieronymi (Ravenelia). 770.
Hippocrepidis (Æcidium). 786.
 Hippuridis (Æcidium). 822.
 Hiptages (Æcidium). 781.
 Hobsoni (Ravenelia). 772.
 Hobsoni (Uromyces). 583.
 Holbolli (Puccinia). 734.
Holci (Polycystis). 484.
 Holmbergii (Uredo). 850.
 Holoschæni (Uredo). 850.
 holosericea (Puccinia). 717.
 Holostei (Ustilago). 475.
 Homogynes (Æcidium). 801.
Hordei (Puccinia). 625.
 Hordei (Tilletia). 484.
 Hottoniæ (Doassansia). 506.
 houstoniatum (Æcidium). 795.
 Howei (Uromyces). 577.
 hualtatinum (Æcidium). 802.
 hyalina (Rœstelia). 834.
 hyalina (Thecaphora). 508.
 hyalinus (Uromyces). 581.
 hydnoideum (Æcidium). 790.
 Hydrangeæ (Æcidium). 791.
 Hydrangeæ (Uredo). 850.
 Hydrocharidis (Æcidium). 826.

- Hydrocotyles* (*Æcidium*). 774.
Hydrocotyles (*Puccinia*). 641.
Hydrophylli (*Æcidium*). 810.
Hydrophylli (*Puccinia*). 726.
Hydropiperis (*Sphacelotheca*). 499.
hypericatum (*Æcidium*). 781.
Hyperici (*Uromyces*). 539.
Hyperici-frondosi (*Æcidium*). 781.
Hypericorum (*Æcidium*). 781.
Hypericorum (*Melampsora*). 591.
Hypochaeridis (*Puccinia*). 634.
hypodytes (*Ustilago*). 453.
Hypoëstis (*Uredo*). 850.
hypogæa (*Urocystis*). 517.
hypogæa (*Ustilago*). 480.
Hypoxidis (*Uromyces*). 555.
Hyssopi (*Puccinia*). 688.
hysteriiformis (*Puccinia*). 724.
hysterioides (*Puccinia*). 634.
Hysterium (*Puccinia*). 668.
Hysterium (*Uredo*). 668.

Iberidis (*Puccinia*). 693.
Ilicis (*Uredo*). 851.
impatientatum (*Æcidium*). 784.
Impatientis (*Æcidium*). 784.
Impatientis (*Cæoma*). 639.
Impatientis (*Uredo*). 639.
inæquialtus (*Uromyces*). 534.
incarcerata (*Puccinia*). 501.
incarceratum (*Æcidium*). 831.
incrassatum (*Phragmidium*). 745, 747.
indica (*Ravenelia*). 772.
indicus (*Uromyces*). 558.
inornatum (*Æcidium*). 787.
inquinans (*Puccinia*). 678.
inquinans (*Thecaphora*). 508.
insidiosa (*Puccinia*). 690.
insueta (*Puccinia*). 650.
intermedia (*Ustilago*). 476.
intermedium (*Phragmidium*). 748.
intermixta (*Puccinia*). 672.
Intermixtum (*Æcidium*). 800.
intervenians (*Ræstelia*). 834.
intricatus (*Uromyces*). 569.
intrusa (*Uredo*). 553.
intrusus (*Uromyces*). 553.
Inulæ (*Coleosporium*). 753.
Inulæ (*Uredo*). 752.
investita (*Puccinia*). 707.
involutorum (*Uredo*). 851.
involvens (*Æcidium*). 618.

Ipomeæ (*Æcidium*). 619, 671.
Ipomeæ (*Coleosporium*). 755.
Ipomeæ (*Puccinia*). 671.
Ipomeæ-pandurance (*Æcidium*). 671.
iridicola (*Uredo*). 852.
Iridis (*Æcidium*). 827.
Iridis (*Puccinia*). 657.
irregulare (*Æcidium*). 623.
irregulare (*Entyloma*). 490.
Ischæmi (*Ustilago*). 454.
Isiacæ (*Uredo*). 851.
isomerinum (*Æcidium*). 779.
Isopyri (*Æcidium*). 776.
Isopyri (*Triphagmlum*). 769.
italica (*Urocystis*). 520.
Ixiæ (*Uromyces*). 547.

Jacobeæ (*Æcidium*). 627.
Jamesianum (*Æcidium*). 808.
Janiphæ (*Uredo*). 851.
japonica (*Uredo*). 851.
Jasmini (*Puccinia*). 714.
Jonesii (*Puccinia*). 673.
Jonesii (*Uredo*). 852.
Jonesii (*Uromyces*). 575.
Junci (*Cintractia*). 480.
Junci (*Puccinia*). 658.
Junci (*Puccinia*). 659.
Junci (*Tolyposporium*). 501.
Junci (*Uromyces*). 541.
juncinus (*Uromyces*). 569.
Juniperi (*Podisoma*). 738.
Juniperi (*Puccinia*). 739.
Juniperi-communis (*Podisoma*). 737.
juniperina (*Tremella*). 737.
jurisperinum (*Gymnosporanum*). 738.
Juniperi-virginianæ (*Gymnosporangium*). 740.
Juniperi-virginianæ (*Podisoma*). 740.
Jurineæ (*Puccinia*). 708.
Jurineæ (*Puccinia*). 707.
Jussieæ (*Æcidium*). 790.
Jussiei (*Puccinia*). 700.

Kalchbrenneri (*Puccinia*). 645.
Kalchbrenneriana (*Puccinia*). 661.
Kalmusii (*Uromyces*). 575.
Kellermannii (*Æcidium*). 788.
Kirghisica (*Puccinia*). 696.
Kleinix (*Uredo*). 852.
Kolaczekii (*Ustilago*). 455.
Kraussiana (*Puccinia*). 657.

- Kuehneana (Ustilago). 474.
 Kuhniae (Puccinia). 640.
 Kurdistanii (Puccinia). 712.

Labiatarum (*Trichobasis*). 617.
Labiatarum (*Uredo*). 617.
Laburni (*Puccinia*). 550.
Laburni (*Uredo*). 550.
Laburni (*Uromyces*). 550.
lacerata (*Ræstelia*). 737.
laceratum (*Æcidium*). 737.
Lactucæ (*Æcidium*). 606.
Lagena (*Æcidium*). 783.
Lagenophoræ (*Puccinia*). 612.
Lampsanæ (*Puccinia*). 607.
Lantanæ (*Puccinia*). 721.
Lantanæ (*Uromyces*). 570.
Lappæ (*Puccinia*). 634.
Lappulæ (*Æcidium*). 810.
Laricis (*Uredo*). 864.
lateripes (*Puccinia*). 649.
lathyrella (*Uredo*). 852.
Lathyri (*Thecaphora*). 509.
Lathyri (*Uromyces*). 542.
lathyrinus (*Uromyces*). 562.
Ledi (*Chrysomyxa*). 760.
Ledi (*Puccinia*). 713.
ledicola (*Uredo*). 852.
Leguminosarum (*Æcidium*). 532.
Leguminosarum (*Cæoma*). 531.
Leguminosarum (*Melampsora*). 595.
Leguminosarum (*Uredo*). 534, 550.
Leimbachii (*Urocystis*). 519.
leonina (*Ustilago*). 456.
Lepidii (*Æcidium*). 779.
Lepidii (*Puccinia*). 693.
Lepisclinis (*Uredo*). 540, 645.
Leptocarpi (*Thecaphora*). 510.
Lespedezæ (*Uromyces*). 549.
Lespedezæ-polystachyæ (*Puccinia*). 549.
Lespedezæ-procumbentis (*Puccinia*). 549.
Lespedezæ-violaceæ (*Puccinia*). 549.
Leucanthemi (*Æcidium*). 803.
Leucanthemi (*Puccinia*). 705.
leucoderma (*Ustilago*). 460.
Leucoji (*Æcidium*). 827.
leucosperma (*Uredo*). 669.
leucospermum (*Æcidium*). 669.
leucospermum (*Cæoma*). 669.
leucospermum (*Æcidium*). 669.
leucostictum (*Æcidium*). 787.
leve (*Diorchidium*). 737.
Leveilleana (*Puccinia*). 696.
levigatum (*Phragmidium*). 745.
levis (*Tilletia*). 485.
levis (*Uromyces*). 552.
Libanotidis (*Æcidium*). 794.
Ligulariæ (*Æcidium*). 800.
Ligulariæ (*Coleosporium*). 759.
ligularis (*Tremella*). 737.
Ligustici (*Æcidium*). 897.
Ligustri (*Æcidium*). 806.
Ligustri (*Uredo*). 865.
Liliacearum (*Puccinia*). 668.
Liliacearum (*Uromyces*). 564.
Lilii (*Uromyces*). 576.
Lilii (*Uromyces*). 564.
limbata (*Uredo*). 657.
Limnanthemii (*Æcidium*). 809.
Limonii (*Uromyces*). 532.
Limosæ (*Puccinia*). 628.
Limosellæ (*Doassansia*). 505.
Linariæ (*Entyloma*). 491.
lineare (*Æcidium*). 622.
lineare (*Lycoperdon*). 522.
linearis (*Erysibe*). 622.
linearis (*Puccinia*). 622, 731.
linearis (*Uredo*). 622.
linearis (*Uromyces*). 575.
lineata (*Ustilago*). 456.
lineolatus (*Uromyces*). 543.
Lini (*Melampsora*). 588.
Linkii (*Puccinia*). 725.
Liquidambaris (*Melampsora*). 592.
Lisianthii (*Melampsora*). 594.
Lithospermi (*Æcidium*). 624.
Lithospermi (*Puccinia*). 717.
littoralis (*Puccinia*). 658.
lobata (*Puccinia*). 695.
lobatum (*Æcidium*). 823.
Lobeliæ (*Æcidium*). 676.
Lobeliæ (*Entyloma*). 490.
Lobeliæ (*Puccinia*). 713.
Lojkaiana (*Puccinia*). 681.
Lolii (*Cæoma*). 564.
Lolii (*Polycystis*). 509.
Lolii (*Sorosporium*). 512.
Lolii (*Tilletia*). 483.
longicapsula (*Uredo*). 590.
longipes (*Uredo*). 538.
longissima (*Puccinia*). 660.
longissima (*Ustilago*). 451.
longissimum (*Phragmidium*). 750.
longiusculum (*Cæoma*). 760.

- Lonicerae* (*Æcidium*). 797.
Lonicerae (*Cæoma*). 796.
lonicerinum (*Æcidium*). 796.
Loranthi (*Æcidium*). 822.
Loranthi (*Æcidium*). 822.
Loranthi (*Puccinia*). 702.
Lorentziana (*Ustilago*). 462.
Loti (*Puccinia*). 710.
lucida (*Uredo*). 750.
luminata (*Uredo*). 866.
luminatum (*Cæoma*). 866.
lugubris (*Uromyces*). 585.
Lupini (*Uredo*). 852.
Lupini (*Uromyces*). 554.
Lupini (*Uromyces*). 550.
Luzulæ (*Puccinia*). 658.
Luzulæ (*Urocystis*). 516.
Luzulæ (*Ustilago*). 463.
Lychnidearum (*Puccinia*). 605, 684.
Lychnidis (*Uredo*). 551.
Lycii (*Puccinia*). 651.
Lycotoni (*Puccinia*). 670.
Lycotoni (*Uredo*). 561.
lycoperdospora (*Ustilago*). 469.
Lycopi (*Æcidium*). 815.
Lycopsidis (*Æcidium*). 624.
Lygei (*Ustilago*). 453.
Lynckii (*Uredo*). 852.
Lysimachiae (*Æcidium*). 817.
Lysimachiae (*Æcidium*). 628.
Lysimachiae (*Cæoma*). 628.
Lysimachiae (*Puccinia*). 636.
lysimachiatum (*Cæoma*). 818.

Maclagani (*Ustilago*). 460.
Macluræ (*Uredo*). 853.
Mac-Owani (*Puccinia*). 674.
Mac-Owanianum (*Æcidium*). 800.
macrocystis (*Ravenelia*). 773.
macropoda (*Puccinia*). 652.
macropus (*Gymnosporangium*). 740.
Macrorrhynchi (*Puccinia*). 673.
macrospora (*Uredo*). 853.
macrosperma (*Uredo*). 853.
macrospora (*Uredo*). 658.
macrospora (*Ustilago*). 485.
macrosporum (*Æcidium*). 829.
macrosporus (*Uromyces*). 549.
macularis (*Polycystis*). 508.
macularis (*Protomyces*). 503.
macularis (*Urocystis*). 508.
maculosa (*Puccinia*). 711.

maculosa (*Uredo*). 606.
Madiæ (*Coleosporium*). 758.
magelænicum (*Æcidium*). 778. *lla*
magelænicus (*Uromyces*). 570.
magica (*Urocystis*). 517.
Magnusiana (*Puccinia*). 631.
Magnusiana (*Tilletia*). 485.
Magnusii (*Entyloma*). 493.
Magnusii (*Sorosporium*). 493.
Magnusii (*Ustilago*). 493.
Majanthæ (*Æcidium*). 828.
major (*Ustilago*). 477.
Mali (*Æcidium*). 737.
Malvacearum (*Puccinia*). 686.
Malvacearum (*Uromyces*). 570.
Malvastri (*Puccinia*). 695.
malvicola (*Uredo*). 854.
malvicola (*Uromyces*). 579.
mammillata (*Puccinia*). 639.
mammillatum-Acteæ (*Cæoma*). 777.
marginalis (*Ustilago*). 470.
marginatum (*Seiridium*). 744.
Mariæ-Wilsoni (*Æcidium*). 780.
Mariæ-Wilsoni (*Puccinia*). 673.
marina (*Ustilago*). 479.
marmorata (*Ustilago*). 460.
Marrubii (*Uredo*). 854.
Martianoffiana (*Doassansia*). 504.
Martianoffiana (*Puccinia*). 691.
Martianoffiana (*Uredo*). 865.
Martianoffianum (*Æcidium*). 804.
Martinii (*Uromyces*). 545.
Matricariæ (*Entyloma*). 490.
Maydis (*Puccinia*). 659.
Maydis (*Ustilago*). 472.
mbatobiensis (*Uredo*). 865.
Medicaginis (*Uromyces*). 542.
Medicaginis-falcatae (*Uromyces*). 542.
Medusæ (*Melampsora*). 591.
Medusæ (*Puccinia*). 649.
Mei (*Æcidium*). 793.
Mei-athamantici (*Æcidium*). 793.
Mei-Mutellinæ (*Æcidium*). 793.
melampyratum (*Cæoma*). 813.
Melampyri (*Æcidium*). 813.
Melampyri (*Coleosporium*). 754.
Melampyri (*Uredo*). 754.
melanconioides (*Puccinia*). 673.
melanogramma (*Schizonella*). 500.
melanosora (*Puccinia*). 710.
Melantheræ (*Uromyces*). 546.
Meleagris (*Æcidium*). 564.

- Melicæ (Cintractia). 481.
 Menispermi (Entyloma). 494.
 Menthæ (Puccinia). 617.
 Mercurialis (Uredo). 868.
Mercurialis-perennis (Cæoma). 868.
 Mertensiæ (Puccinia). 727.
mesenteriformis (Tremella). 741.
 Mesnieriana (Puccinia). 697.
mesomajalis (Puccinia). 713.
 mesomegala (Puccinia). 713.
 Mespili (Æcidium). 789.
 Metanarthecii (Puccinia). 729.
 mexicana (Ustilago). 456.
 Microcelis (Uredo). 854.
 microsperma (Puccinia). 713.
 microsporum (Entyloma). 493.
microsporus (Protomyces). 489, 493.
 microsora (Puccinia). 663.
 microsorum (Pragmidium). 746.
 microsorus (Uromyces). 558.
microstonum (Æcidium). 676.
 Microtidis (Uromyces). 579.
 miliare (Æcidium). 807.
Millefolii (Puccinia). 687.
 Mimusopsidis (Uromyces). 579.
miniata (Epitea). 746.
miniata (Uredo). 746.
miniatum (Coleosporium). 746.
miniatum (Erannium). 746.
 minima (Ravenelia). 772.
 minima (Ustilago). 479.
 minor (Uromyces). 560.
 minussense (Æcidium). 805.
 minussensis (Puccinia). 712.
minuta (Uredo). 637.
 minutellum (Æcidium). 774.
minutula (Puccinia). 679.
minutum (Cæoma). 553.
 mirabilis (Ustilago). 479.
 mirabilissima (Puccinia). 620.
 mixta (Melampsora). 589.
mixta (Puccinia). 605.
 Modiolæ (Æcidium). 783.
Mœhringiae (Puccinia). 684.
 Moliniæ (Puccinia). 631.
 Moliniæ (Tilletia). 486.
 Momordicæ (Puccinia). 714.
 monoicum (Æcidium). 779.
 Monotropæ (Urocystis). 522.
 Montagnei (Puccinia). 722.
Montagnei (Ustilago). 464.
 montana (Puccinia). 619.
 montana (Tilletia). 484.
 Moreæ (Uredo). 854.
 Morthieri (Puccinia). 681.
mucronata (Puccinia). 746.
mucronatum (Phragmidium). 747.
 Mucunæ (Uromyces). 568.
 Muelleri (Uredo). 854.
 Muelleriana (Ustilago). 458.
 Muellerianum (Sorosporium). 514.
muricatum (Sporisorium). 476.
muricella (Uredo). 634, 635.
 Muscari (Æcidium). 829.
Muscari (Uredo). 567.
Muscari (Uromyces). 567.
myelospora (Capitularia). 559.
 Myosotidis (Æcidium). 810.
 myricatum (Æcidium). 826.
 Myristica (Uromyces). 576.
 Myrrhis (Puccinia). 616.
 Myrsiphylli (Puccinia). 614.
Myrtilli (Æcidium). 765.
myrtillina (Thecopsora). 765.
 Napææ (Æcidium). 783.
 Nardosmiæ (Puccinia). 704.
 Nasturtii (Æcidium). 778.
 neglecta (Ustilago). 472.
 nervisequa (Uredo). 867.
nervisequum (Cæoma). 858.
 Nesææ (Æcidium). 789.
 Nesodaphnes (Melampsora). 594.
 neurophila (Puccinia). 698.
 neurophila (Uredo). 854.
 nevadensis (Uromyces). 571.
nidificans (Puccinia). 682.
 Nierembergiæ (Puccinia). 717.
 Niesslii (Doassansia). 505.
 nigrescens (Puccinia). 720.
 nitens (Uredo). 866.
nitida (Uredo). 634.
nitidum (Cæoma). 753.
 nodosa (Puccinia). 728.
Nolitangere (Puccinia). 639.
 Nonneæ (Æcidium). 810.
 Notarisii (Ustilago). 468.
 novissimus (Uromyces). 571.
 nuda (Puccinia). 641.
 nummulare (Æcidium). 809.
nymphoidatum (Cæoma). 809.
 Nymphoidis (Æcidium). 809.
 Obionis (Æcidium). 819.

L

Index Alphabeticus Specierum.

- obliqua* (Puccinia). 694.
oblongata (Puccinia). 658.
oblongisporum (Peridermium). 751.
oblongum (Phragmidium). 747.
oblongus (Uromyces). 579.
obscura (Puccinia). 629.
obtecta (Puccinia). 666.
obtegens (Cæoma). 633.
obtusa (Puccinia). 604.
obtusa (Uredo). 743, 744.
obtusatum (Aegma). 743.
obtusum (Phragmidium). 743, 744.
occulta (Doassansia). 504.
occulta (Urocystis). 515.
ocrearum (Ustilago). 458.
odoratum (Æcidium). 782.
Edipus (Puccinia). 608.
Enotheræ (Æcidium). 789.
Enotheræ (Æcidium). 790.
Enotheræ (Puccinia). 651.
Enotheræ (Pucciniastrum). 763.
Enotheræ (Uromyces). 540.
olida (Tilletia). 482.
olivacea (Ustilago). 463.
Onagrarum (Cæoma). 762, 763.
Onobrychidis (Æcidium). 786.
Onobrychidis (Uromyces). 550.
Ononidis (Uromyces). 557.
Onosmatis (Æcidium). 810.
ochraceum (Coleosporium). 839.
opaca (Polycystis). 507.
Opoponacis (Puccinia). 725.
opulenta (Puccinia). 619.
Orbicula (Puccinia). 651.
orbicularis (Uredo). 588.
Orchidearum (Æcidium). 631.
Orchidearum (Uromyces). 580.
Orchidis (Uredo). 868.
Orchidum (Cæoma). 868.
Oreoselini (Puccinia). 635.
orientale (Peridermium). 836.
ornamentale (Æcidium). 787.
ornata (Puccinia). 723.
Ornithogali (Puccinia). 732.
Ornithogali (Puccinia). 661.
Ornithogali (Urocystis). 517.
Ornithogali (Uromyces). 567.
Ornithogali (Ustilago). 452.
Orobanches (Urocystis). 521.
Orobi (Æcidium). 531.
Orobi (Uromyces). 532.
Osmorrhizæ (Æcidium). 794.
Osmorrhizæ (Puccinia). 616.
Osmundæ (Ustilago). 468.
Osyridis (Æcidium). 822.
otagense (Æcidium). 775.
Otitis (Æcidium). 781.
ovata (Uredo). 592.
ovoideo-aurantiaca (Uredo). 760.
Oxalidearum (Uredo). 855.
Oxalidis (Æcidium). 783.
Oxalidis (Uredo). 855.
Oxyacanthæ (Æcidium). 737.
Oxyacanthæ (Ræstelia). 737.
Oxyriæ (Puccinia). 642.
Oxyriæ (Puccinia). 723.
Oxytropidis (Æcidium). 788.
Oxytropidis (Uredo). 855.
Oxytropidis (Uromyces). 551.
Pachycarpi (Puccinia). 654.
pachyderma (Puccinia). 728.
Padi (Cæoma). 764.
Padi (Melampsora). 764.
Padi (Uredo). 764.
Pæoniæ (Æcidium). 498.
Pæoniæ (Cronartium). 598.
Pæoniæ (Uredo). 598.
Pæoniarum (Uredo). 598.
paliformis (Puccinia). 731.
pallescent (Thecaphora). 510.
pallida (Melampsora). 593.
pallida (Ustilago). 454, 478.
pallidissima (Puccinia). 720.
pallidulum (Coleosporium). 757.
pallidum (Æcidium). 789.
pallidum (Diorechidium). 737.
pallidum (Physonema). 587.
pallidus (Uromyces). 568.
Palmarum (Uredo). 855.
paludosum (Æcidium). 803.
palustre (Æcidium). 779.
Pammelii (Æcidium). 823.
Pamparum (Uredo). 855.
Pamparum (Uredo). 855.
pamparum (Ustilago). 455.
pampeana (Puccinia). 718.
pampeanum (Æcidium). 811.
Panici-glauci (Ustilago). 472.
Panici-miliacei (Ustilago). 454.
Panicorum (Erysibe). 454, 472.
papillata (Puccinia). 639.
papillatus (Uromyces). 555.
papillosa (Puccinia). 638.

- paradoxopoda* (Puccinia). 726.
paraguariensis (Uredo). 856.
paraguariensis (Ustilago). 466.
paraguayense (Coleosporium). 757.
paraguayensis (Ustilago). 466.
parallela (Polycystis). 515.
parallela (Uredo). 515.
parallela (Urocystis). 515.
paraphysaria (Puccinia). 660.
Paridis (Protomyces). 507.
Paridis (Sorosporium). 507.
Parlatorei (Ustilago). 474.
Parnassiæ (Æcidium). 791.
Parnassiæ (Trichobasis). 537.
Parnassiæ (Uredo). 537.
Parodii (Puccinia). 696.
Paspali (Cerebella). 524.
Passerinii (Ustilago). 458.
Passerinii (Puccinia). 602.
Pastinacæ (Æcidium). 792.
patagonica (Puccinia). 716.
patagonicus (Uromyces). 581.
Pavettæ (Æcidium). 795.
Peckiana (Puccinia). 699.
Peckianus (Uromyces). 548.
Peckii (Æcidium). 790.
Peckii (Peridermium). 837.
Pedicularis (Æcidium). 814.
Pedicularis (Puccinia). 719.
pedunculata (Puccinia). 636.
Pelargonii (Æcidium). 783.
Pelargonii (Uredo). 640.
Peltandræ (Uromyces). 537.
penicillata (Ræstelia). 737.
penicillatum (Æcidium). 737.
penicillatum (Ceratitium). 737.
penicillatum (Lycoperdon). 737.
Penniseti (Ustilago). 462.
Pentanisæ (Puccinia). 645.
Pentastemonis (Æcidium). 814.
Pentastemonis (Puccinia). 719.
Pentastemonum (Puccinia). 719.
perforans (Puccinia). 728.
peribebuyensis (Uredo). 856.
peribebuyensis (Ustilago). 458.
periclymenatum (Cæoma). 796.
Periclymeni (Æcidium). 796.
perplexans (Puccinia). 632.
persica (Puccinia). 644.
Persicariæ (Ustilago). 476.
Persoonii (Endophyllum). 767.
pervius (Uromyces). 569.
Petalostemonis (Uropyxis). 735.
Petasitidis (Coleosporium). 752.
Petasitidis (Uredo). 752.
Petersii (Æcidium). 780.
Petroselini (Uredo). 856.
Petrosclini (Uredo). 865.
Peucedani (Puccinia). 635.
peziziformis (Uredo). 856.
Phacæ (Uromyces). 546.
Phacæ-frigidæ (Æcidium). 786.
phacidiodides (Schizoderma). 522.
phæospora (Ræstelia). 834.
phæum (Cæoma). 637.
Phaseoli (Uredo). 535.
Phaseoli (Uromyces). 535.
Phaseoli-trilobi (Puccinia). 535.
Phaseolorum (Æcidium). 535.
Phaseolorum (Uromyces). 535.
Phlomidis (Æcidium). 815.
Phlomidis (Puccinia). 720.
Phœnicis (Graphiola). 522.
Phœnicis (Ustilago). 459. II
Phragmitis (Lecythea). 630.
Phragmitis (Puccinia). 636.
Phragmitis (Puccinia). 631.
Phrymæ (Æcidium). 816.
Phyllireæ (Æcidium). 807.
Phyllireæ (Uredo). 856, 857.
phyllocladia (Puccinia). 733.
phyllodiorum (Melampsora). 594.
Physalidis (Entyloma). 494.
Physalidis (Puccinia). 674.
Physospermi (Puccinia). 635.
Physostegiæ (Puccinia). 721.
Phyteumatum (Uromyces). 567.
Phytolacæ (Æcidium). 818.
piceatum (Cæoma). 760.
Picridis (Entyloma). 492.
Picridis (Puccinia). 652.
pictus (Uromyces). 570.
Pilocarpi (Puccinia). 696.
piluliformis (Thecaphora). 509.
piluliformis (Ustilago). 458.
Pimpinellæ (Puccinia). 616.
Pimpinellarum (Puccinia). 702.
pineum (Cæoma). 752.
pinguis (Uredo). 746.
Pini (Æcidium). 751.
Pini (Lycoperdon). 751.
Pini (Peridermium). 751.
Pini (Uredo). 751.
pinitorqua (Uredo). 867.

- piratum* (*Æcidium*). 740.
piriforme (*Pericladium*). 835.
piriformis (*Uromyces*). 572.
Pirolæ (*Chrysomyxa*). 761.
Pirolæ (*Puccinia*). 694.
Pirolæ (*Thecopsora*). 766.
pirolata (*Chrysomyxa*). 761.
pirolata (*Uredo*). 761.
pirolatum (*Æcidium*). 761.
Pisi (*Uromyces*). 542.
Pistaciæ (*Melampsora*). 595.
plagiopus (*Puccinia*). 734.
planiuscula (*Uredo*). 857.
Plantaginis (*Æcidium*). 813.
Plantaginis (*Puccinia*). 652.
Plantaginis (*Uredo*). 857.
platensis (*Uromyces*). 572.
Plectranthi (*Puccinia*). 672.
Plectroniæ (*Æcidium*). 795.
Plumbaginis (*Uromyces*). 564.
plumbaria (*Puccinia*). 716.
plumbarium (*Uromyces*). 580.
plumbea (*Ustilago*). 458.
pluriannulatus (*Uromyces*). 580.
Poæ (*Uromyces*). 541.
Poæ-sudeticiæ (*Uredo*). 857.
Poarum (*Puccinia*). 625.
poculiforme (*Æcidium*). 623.
poculiforme (*Lycoperdon*). 622.
poculiformis (*Puccinia*). 622.
Podophylli (*Puccinia*). 675.
Podospermi (*Puccinia*). 668.
Poggiolanum (*Cronartium*). 598.
Polemanniæ (*Uromyces*). 578.
Polemonii (*Æcidium*). 806.
polita (*Ræstelia*). 833.
Polygalæ (*Uredo*). 857.
polygalinum (*Æcidium*). 780.
polygonatum (*Cæoma*). 828.
Polygoni (*Milesia*). 768.
Polygoni (*Puccinia*). 636.
Polygoni (*Uromyces*). 533.
Polygoni-aviculariæ (*Puccinia*). 593.
Polygoni-aviculariæ (*Uredo*). 533.
Polygoni-convolvuli (*Puccinia*). 636.
Polygoni-pensylvanici (*Puccinia*). 636.
Polygoni-vivipari (*Puccinia*). 638.
Polygonorum (*Puccinia*). 636.
Polygonorum (*Trichobasis*). 636.
polymorpha (*Uredo*). 586.
polymorphus (*Uromyces*). 580.
Polypodii (*Milesia*). 768.
Polypodii (*Uredo*). 857.
Polypodii (*Uredo*). 860.
polysporum (*Entyloma*). 495.
pompholygodes (*Cæoma*). 518.
pompholygodes (*Polycystis*). 515, 518.
pompholygodes (*Uredo*). 518.
pompholygodes (*Urocystis*). 453, 518.
Pontedericiæ (*Uredo*). 858.
Pontedericiæ (*Uromyces*). 538.
Popowiæ (*Puccinia*). 619.
Populi (*Æcidium*). 824.
Populi (*Melampsora*). 590.
Populi (*Uredo*). 590.
populina (*Melampsora*). 590.
populnea (*Melampsora*). 589.
porosum (*Æcidium*). 787.
porphyrogenita (*Puccinia*). 703.
porphyrogenita (*Uredo*). 764.
porphyrogenitum (*Cæoma*). 764.
Porri (*Puccinia*). 605.
Potentillæ (*Phragmidium*). 743.
Potentillæ (*Puccinia*). 708.
Potentillarum (*Lecythea*). 743.
Potentillarum (*Uredo*). 743.
Poterii (*Cæoma*). 742.
Poterii (*Erysibe*). 742.
Poterii (*Lecythea*). 743.
Poterii (*Phragmidium*). 743.
Poterii (*Uredo*). 643.
prælongum (*Cronartium*). 599.
præminens (*Uromyces*). 553.
Pratiæ (*Æcidium*). 805.
Pratiæ (*Uromyces*). 581.
Prenanthis (*Puccinia*). 606.
Preussii (*Urocystis*). 516.
Primulæ (*Puccinia*). 612.
Primulæ (*Uromyces*). 565.
Primulæ-integrifoliæ (*Uredo*). 565.
Primulæ-integrifoliæ (*Uromyces*). 565.
Primularum (*Cæoma*). 612.
primulicola (*Urocystis*). 517.
Pringlei (*Puccinia*). 725.
Printziæ (*Puccinia*). 704.
Proserpinaceæ (*Æcidium*). 780.
Proserpinaceæ (*Puccinia*). 642.
Prostii (*Puccinia*). 732.
Prostii (*Puccinia*). 680.
Prunastri (*Uredo*). 648.
Prunellæ (*Æcidium*). 815.
Prunellæ (*Uromyces*). 540.
Pruni (*Puccinia*). 648.
Pruni (*Uredo*). 858.

- Pruni-spinosæ* (*Trichobasis*). 648.
Prunorum (*Puccinia*). 648.
Pseudarthriæ (*Uromyces*). 579.
pseudocolumnare (*Æcidium*). 826.
Pseudocyperi (*Cœoma*). 626.
Pseudocyperi (*Uredo*). 464, 626.
Pseudo-sphæria (*Puccinia*). 711.
Psidii (*Puccinia*). 643.
Psoraleæ (*Æcidium*). 785.
Psoraleæ (*Uromyces*). 580.
Ptarmicæ (*Æcidium*). 803.
Ptarmicæ (*Puccinia*). 687.
Pteleæ (*Æcidium*). 784.
pteridiformis (*Uredo*). 470.
puccinioides (*Melampsora*). 593.
puccinioides (*Uromyces*). 585.
puccinioides (*Uromyces*). 536.
pulchella (*Puccinia*). 701.
pulcherrimum (*Æcidium*). 785.
pulcherrimum (*Uromyces*). 695.
Pulmonariæ (*Æcidium*). 624.
Pulsatillæ (*Coleosporium*). 754.
pulveracea (*Ustilago*). 461.
pulverulenta (*Ascophora*). 764.
pulverulenta (*Puccinia*). 608.
pulvinata (*Puccinia*). 711.
pulvinatus (*Uromyces*). 571.
pulvinulata (*Puccinia*). 694.
punctata (*Puccinia*). 601.
punctata (*Uredo*). 586.
punctato-striatus (*Uromyces*). 554.
punctatum (*Æcidium*). 775.
punctatum (*Æcidium*). 669.
punctatus (*Uromyces*). 550.
punctiformis (*Doassansia*). 505.
punctiformis (*Doassansia*). 505.
punctiformis (*Protomyces*). 505.
punctiformis (*Uredo*). 633.
punctoidea (*Uredo*). 858.
punctosum (*Cœoma*). 586.
Punctum (*Puccinia*). 730.
Punctum (*Puccinia*). 626.
purpurescens (*Puccinia*). 687.
purpurea (*Puccinia*). 657.
purpurea (*Urocystis*). 521.
purpurea (*Ustilago*). 477.
pusilla (*Urocystis*). 500.
pustulata (*Erysibe*). 763.
pustulata (*Melampsora*). 762.
pustulata (*Uredo*). 596, 762.
pustulatum (*Æcidium*). 822.
Pycnanthemii (*Puccinia*). 710.
Pycnostachydis (*Uredo*). 859.
Pyrethri (*Puccinia*). 637.
quadrifidum (*Æcidium*). 775.
Quincunx (*Uredo*). 669.
Quercus (*Melampsora*). 594.
Rabenhorstiana (*Ustilago*). 471.
Rabenhorstii (*Uromyces*). 564.
Rafniæ (*Æcidium*). 788.
Ranunculacearum (*Æcidium*). 776.
Ranunculacearum (*Æcidium*). 541.
Ranunculacearum (*Cœoma*). 602.
Ranunculacearum (*Polycystis*). 518.
Ranunculacearum (*Uredo*). 518.
ranunculacearum (*Cœoma*). 561.
Ranunculi (*Æcidium*). 776.
Ranunculi (*Entyloma*). 488.
Ranunculi (*Puccinia*). 723.
Ranunculi-acris (*Æcidium*). 540, 632.
Ranwenhoffii (*Tilletia*). 484.
receptaculi (*Uredo*). 477.
receptaculorum (*Cœoma*). 477.
receptaculorum (*Erysibe*). 477.
receptaculorum (*Microbotryum*). 477.
receptaculorum (*Uredo*). 477.
receptaculorum (*Ustilago*). 477.
Reessiana (*Ustilago*). 477.
Rehderianum (*Æcidium*). 797.
Reiliana (*Ustilago*). 471.
Reiliana (*Ustilago*). 512.
resinicum (*Æcidium*). 788.
resinosum (*Clavaria*). 739.
reticulata (*Puccinia*). 616.
reticulatum (*Æcidium*). 830.
Rhagadioli (*Æcidium*). 805.
Rhagadioli (*Entyloma*). 495.
Rhagodiæ (*Uredo*). 859.
Rhamni (*Æcidium*). 623.
Rhamni (*Puccinia*). 623.
Rhamni (*Trichobasis*). 648.
Rhinanthacearum (*Coleosporium*). 754.
Rhinanthacearum (*Erysibe*). 754.
Rhinanthacearum (*Uredo*). 754.
Rhodiolæ (*Puccinia*). 701.
Rhodiolæ (*Puccinia*). 700.
Rhododendri (*Chrysomyxa*). 760.
Rhododendri (*Puccinia*). 710.
rhombica (*Uredo*). 859.
Rhynchosia (*Puccinia*). 621.
Rhynchosporæ (*Ustilago*). 464.
rhytismoides (*Puccinia*). 690.

- rhytismoideum (*Æcidium*). 807.
Ribesii (*Cæoma*). 679, 864, 867.
Ribesii (*Uredo*). 679.
ribicola (*Uredo*). 859.
ribicolum (*Cronartium*). 598.
Ribis (*Puccinia*). 679.
Ribis-alpini (*Cæoma*). 864.
Ricini (*Melampsorella*). 596.
Rivinæ (*Æcidium*). 818.
rivosum (*Cæoma*). 609.
roestelioides (*Æcidium*). 782.
Ræstelites (*Cæoma*). 739.
Rosæ (*Cæoma*). 746.
Rosæ (*Lecythea*). 746.
Rosæ (*Uredo*). 746.
Rosæ-alpinæ (*Phragmidium*). 747.
Rosæ-centifoliæ (*Uredo*). 746.
Rosarum (*Phragmidium*). 747.
Rossiana (*Puccinia*). 668.
rotundata (*Ustilago*). 479.
Rostkowiæ (*Puccinia*). 729.
rostrata (*Puccinia*). 693.
Rostrupii (*Æcidium*). 633.
rubefaciens (*Puccinia*). 680.
rubellatum (*Æcidium*). 533.
rubellum (*Æcidium*). 630.
Rubi (*Coleosporium*). 759.
Rubi (*Phragmidium*). 745.
Rubicæ (*Puccinia*). 639.
Rubi-fruticosi (*Uredo*). 745.
rubiginosa (*Puccinia*). 634.
Rubigo (*Cæoma*). 624.
Rubigo-vera (*Puccinia*). 624.
Rubi-idæi (*Phragmidium*). 748.
Ruborum (*Erysibe*). 745.
Ruborum (*Lecythea*). 745.
Ruborum (*Uredo*). 745.
Rudbeckiæ (*Uromyces*). 581.
Rudolphii (*Microbotryum*). 511.
Rudolphii (*Ustilago*). 511.
Ruellæ (*Uredo*). 859.
rugosa (*Puccinia*). 726.
rugulosus (*Uromyces*). 579.
Rumicis (*Æcidium*). 630.
Rumicis (*Puccinia*). 636, 638.
Rumicis (*Uromyces*). 544.
Rumicis-scutati (*Puccinia*). 636.
Rumicum (*Uredo*). 544.
Rumicum (*Uromyces*). 544.
Rusbyi (*Æcidium*). 832.
Sabinæ (*Gymnosporangium*). 739.
Saccardianum (*Æcidium*). 821.
Sacchari (*Ustilago*). 456.
Saginæ (*Puccinia*). 684.
Safianoffianum (*Æcidium*). 829.
Safianoffianum (*Coleosporium*). 758.
Sagittariæ (*Doassansia*). 503.
Sagittariæ (*Puccinia*). 727.
Saliceti (*Cæoma*). 589.
salicina (*Lecythea*). 587.
salicinum (*Leptostroma*). 587.
salicinum (*Sclerotium*). 587.
Salicis (*Æcidium*). 588.
Salicis (*Entyloma*). 495.
Salicis-capreæ (*Melampsora*). 587, 588.
Salicorniæ (*Uromyces*). 538.
salicorniatum (*Cæoma*). 538.
Salicum (*Puccinia*). 648.
Salsolæ (*Uromyces*). 574.
Salveii (*Ustilago*). 485.
Salviæ (*Æcidium*). 815.
Salviæ (*Puccinia*). 688.
Salviæ-glutinosa (*Puccinia*). 688.
Sambuci (*Æcidium*). 796.
sambuciatum (*Æcidium*). 796.
sanguineus (*Uromyces*). 582.
Sanguisorbæ (*Phragmidium*). 742.
Saniculæ (*Entyloma*). 496.
Saniculæ (*Puccinia*). 618.
Saponariæ (*Sorosporium*). 511.
sarawense (*Æcidium*). 832.
Sarcobati (*Æcidium*). 820.
Saussureæ (*Coleosporium*). 757.
Saussureæ (*Puccinia*). 708.
Saxifragæ (*Æcidium*). 792.
Saxifragæ (*Cæoma*). 864.
Saxifragæ (*Puccinia*). 678.
Saxifragarum (*Æcidium*). 833.
Saxifragarum (*Puccinia*). 612.
Saxifragarum (*Uredo*). 864.
Scabies (*Sorosporium*). 513.
Scabies (*Uredo*). 859.
Scabiosæ (*Æcidium*). 798.
Scabiosæ (*Ustilago*). 475.
scandica (*Puccinia*). 680.
scariosus (*Uromyces*). 578.
Schanginiæ (*Uromyces*). 554.
Schelliana (*Puccinia*). 690.
Schileana (*Puccinia*). 644.
schizocaulon (*Sorosporium*). 507, 519.
Schlechtendalii (*Cæoma*). 511.
Schneideri (*Puccinia*). 677.
Schnyderi (*Puccinia*). 715.

- Schoberiæ (*Æcidium*). 820.
 Schœleriana (*Puccinia*). 627.
 Schrœteri (*Puccinia*). 732.
 Schrœteri (*Uromyces*). 551.
 Schweinfurthiana (*Ustilago*). 457.
 Schweinitzii (*Ustilago*). 473.
Scillæ (*Æcidium*). 564.
Scillæ (*Puccinia*). 733.
Scillarum (*Uromyces*). 567.
scillinum (*Æcidium*). 829.
Scirpi (*Puccinia*). 659.
Scirpi (*Uredo*). 860.
Scirpi (*Uromyces*). 558.
Scirpi (*Ustilago*). 464.
scirpicolum (*Melanotænium*). 497.
scirpina (*Uredo*). 659.
Scleriæ (*Pucciniastrum*). 764.
Scleriæ (*Ustilago*). 466.
sclerothecium (*Æcidium*). 803.
sclerotioidea (*Puccinia*). 722.
sclerotioides (*Puccinia*). 709.
Scolopendrii (*Uredo*). 860.
Scorodizon (*Cœoma*). 605.
Scorodonie (*Puccinia*). 689.
Scorzoneræ (*Uredo*). 668.
Scorzoneræ (*Ustilago*). 478.
Scrophulariæ (*Uromyces*). 559.
scrophulariatum (*Cœoma*). 559.
scutellatus (*Uromyces*). 552.
Sebastianæ (*Uredo*). 860.
Secalis (*Tilletia*). 482.
Secalis (*Ustilago*). 478.
Sedi (*Endophyllum*). 767.
Sedi (*Puccinia*). 681.
Sedi (*Uredo*). 767.
segetum (*Cœoma*). 481.
segetum (*Ustilago*). 461.
segetum (*Ustilago*). 454, 464, 472.
seminis-Convulvuli (*Uredo*). 508.
semireticulata (*Puccinia*). 682.
sempertecta (*Uredo*). 559.
Sempervivi (*Endophyllum*). 767.
Senecionis (*Æcidium*). 667.
Senecionis (*Coleosporium*). 751.
Senecionis (*Puccinia*). 667.
Senecionis-crispati (*Æcidium*). 803.
separata (*Tilletia*). 483.
sepulta (*Puccinia*). 723.
serotinum (*Entyloma*). 487.
Serratulæ (*Æcidium*). 804.
Serratulæ (*Puccinia*). 709.
Serratulæ (*Uredo*). 633.
sertata (*Puccinia*). 623.
Seselis (*Æcidium*). 793.
Sesleriæ (*Puccinia*). 632.
sessilis (*Puccinia*). 624.
sessilis (*Ravenelia*). 773.
Setariæ (*Ustilago*). 471.
Setariæ (*Ustilago*). 455.
Seymeriæ (*Puccinia*). 719.
Sherardiæ (*Uredo*). 765.
Sherardiana (*Puccinia*). 694.
Sidæ (*Uromyces*). 570.
Sii-Falcariæ (*Puccinia*). 666.
Sii-latifolii (*Æcidium*). 792.
Silai (*Puccinia*). 634.
Silenes (*Puccinia*). 605.
Silenes (*Uromyces*). 534.
Sileris (*Puccinia*). 616.
Silphii (*Puccinia*). 706.
silvatica (*Puccinia*). 627.
simplex (*Puccinia*). 698.
simulans (*Uromyces*). 578.
sinensis (*Uromyces*). 578.
Sisyrhynchii (*Puccinia*). 727.
Sisyrhynchii (*Uromyces*). 578.
sitophila (*Uredo*). 481.
sitophilum (*Cœoma*). 482.
Smilacis (*Æcidium*). 829.
Smilacis (*Puccinia*). 661.
Smyrni (*Puccinia*). 670.
Solani (*Æcidium*). 674.
Solani (*Puccinia*). 718.
solaninum (*Æcidium*). 812.
Soldanellæ (*Puccinia*). 618.
soldanellatum (*Cœoma*). 618.
soleniiforme (*Æcidium*). 788.
Solidaginis (*Æcidium*). 802.
Solidaginis (*Coleosporium*). 756.
Solidaginis (*Uromyces*). 566.
Solidaginis (*Xyloma*). 679.
solida (*Puccinia*). 713.
solida (*Puccinia*). 687.
solida (*Urocystis*). 521.
sopidus (*Uromyces*). 581.
Sommerfeltii (*Æcidium*). 775.
Sonchi (*Æcidium*). 805.
Sonchi (*Coleosporium*). 752.
Sonchi (*Puccinia*). 638.
Sonchi-arvensis (*Uredo*). 752.
sonchina (*Uredo*). 860.
Sophoræ (*Uromyces*). 582.
Sorbi (*Cœoma*). 592.
Sorbi (*Centridium*). 738.

- Sorbi* (*Melampsora*). 593.
Sorghi (*Cintractia*). 481.
Sorghi (*Puccinia*). 659.
Sorghi (*Ustilago*). 456.
Sorghi-vulgaris (*Tilletia*). 456.
sororia (*Uredo*). 544.
sorosporioides (*Urocystis*). 519.
Sparganii (*Uromyces*). 574.
sparsa (*Melampsora*). 593.
sparsa (*Puccinia*). 733.
sparsum (*Æcidium*). 781.
sparsus (*Uromyces*). 545.
Spartinæ (*Uromyces*). 549.
speciosa (*Uredo*). 860.
speciosum (*Gymnosporangium*). 741.
speciosum (*Phragmidium*). 744.
Spegazziniana (*Puccinia*). 644.
Spegazzinii (*Æcidium*). 802.
Spegazzinii (*Puccinia*). 704.
Spegazzinii (*Uredo*). 845.
Spergulæ (*Puccinia*). 684.
Spermacoces (*Puccinia*). 703.
Spermacoces (*Uromyces*). 546.
spermoidea (*Ustilago*). 479.
spermophora (*Ustilago*). 466.
sphærococca (*Erysibe*). 482.
sphærococca (*Tilletia*). 482.
sphærococca (*Uredo*). 482.
sphærogena (*Ustilago*). 468.
sphæropleus (*Uromyces*). 582.
Spirææ (*Coleosporium*). 768.
Spirææ (*Uredo*). 768.
splendens (*Æcidium*). 784.
splendens (*Puccinia*). 728.
spongiosa (*Puccinia*). 703.
Sporoboli (*Puccinia*). 664.
Spragueæ (*Uromyces*). 557.
spretæ (*Puccinia*). 701.
Spyridii (*Uredo*). 861.
Stachydis (*Puccinia*). 637.
Statice (*Cæoma*). 532.
Statice (*Uredo*). 861.
Statice (*Uredo*). 532.
Stellariæ (*Æcidium*). 832.
Stellariæ (*Cæoma*). 596.
Stellariæ (*Farinaria*). 474.
Stellariæ (*Puccinia*). 684.
Stellariæ (*Uredo*). 596.
Stellatarum (*Puccinia*). 685.
sterilis (*Tilletia*). 487.
stictica (*Ravenelia*). 772.
stictica (*Ravenelia*). 772.
Stipæ (*Puccinia*). 661.
Stobææ (*Æcidium*). 800.
Stobææ (*Puccinia*). 615.
straminis (*Puccinia*). 624.
stratosa (*Melampsora*). 594.
striata (*Puccinia*). 734.
striatula (*Puccinia*). 731.
striatus (*Uromyces*). 542.
striiformis (*Puccinia*). 624.
striiformis (*Tilletia*). 484.
Striola (*Puccinia*). 626, 630.
Striola (*Uredo*). 630.
striolata (*Uredo*). 652.
Strobi (*Peridermium*). 837.
strobilinum (*Æcidium*). 824.
stromatica (*Puccinia*). 690.
strumosa (*Ustilago*). 457.
Suædæ (*Æcidium*). 820.
Suædæ (*Æcidium*). 821.
suaveolens (*Puccinia*). 633.
subcircinata (*Puccinia*). 675.
subcorticium (*Phragmidium*). 746.
subinclusa (*Ustilago*). 472.
subneurophila (*Uredo*). 861.
subtecta (*Puccinia*). 710.
Succisæ (*Puccinia*). 679.
Succisæ (*Ustilago*). 476.
suffulta (*Puccinia*). 734.
superficialis (*Uredo*). 865.
Swertiæ (*Æcidium*). 809.
Swertiæ (*Puccinia*). 613.
Symphistemi (*Uromyces*). 574.
Symphoricarpi (*Puccinia*). 675.
Symphyti (*Æcidium*). 624.
Symphyti (*Uredo*). 861.
Synantherearum (*Coleosporium*). 753.
Syngenesiarum (*Puccinia*). 634, 667.
Sgnterismæ (*Uredo*). 474.
Tabernæmontanæ (*Puccinia*). 714.
Tabernæmontanæ (*Puccinia*). 615.
Tanacetæ (*Puccinia*). 637.
Tanacetæ (*Uromyces*). 575.
Tanacetæ-Balsamitæ (*Puccinia*). 647.
Tanacetæ-Balsamitæ (*Uredo*). 647.
Taraxaci (*Æcidium*). 606, 627.
Tecleæ (*Puccinia*). 697.
tenuis (*Puccinia*). 676.
tenuistipes (*Puccinia*). 628, 735.
Tephrosiæ (*Ravenelia*). 773.
Tephrosiæ (*Uredo*). 861.
Terebinthi (*Uromyces*). 552.

- Tessariæ (Uredo). 861.
 Teucris (Puccinia). 721.
Teucris (Puccinia). 689.
 Texensis (Uromyces). 578.
Thalictri (Æcidium). 775.
Thalictri (Cæoma). 775.
 Thalictri (Entyloma). 490.
 Thalictri (Puccinia). 680.
Thalictri-flavi (Æcidium). 775.
 Thermopsidis (Uredo). 862.
 Thesii (Puccinia). 602.
Thlaspidis (Puccinia). 692.
 Thlaspeos (Puccinia). 688.
 Thlaspeos (Tilletia). 486.
 Thomsoni (Peridermium). 837.
 Thuemeniana (Puccinia). 618.
 Thuemenii (Ustilago). 463.
 Thumbergiæ (Puccinia). 615.
 Thwaitesii (Puccinia). 720.
 Thwaitesii (Triphragmium). 770.
Thwaitesii (Uromyces). 695.
Thymi (Æcidium). 677.
 Tiarellæ (Puccinia). 701.
Tiarellæ (Puccinia). 701.
 tinctoria (Puccinia). 646.
 tomentellus (Uromyces). 585.
 tomipara (Puccinia). 656.
 tordillense (Æcidium). 824.
 tordillensis (Uredo). 862.
 Tormentillæ (Phragmidium). 744.
Torquati (Puccinia). 670.
Toxicodendri (Uromyces). 552.
 Trabutii (Puccinia). 732.
 Tracyi (Diorchidium). 736.
 Tragiæ (Puccinia). 676.
Tragopogi-pratensis (Uredo). 477.
tragopogonatum (Cæoma). 668.
 Tragopogonis (Puccinia). 668.
 Tragopogonis (Ustilago). 477.
 Traili (Thecaphora). 510.
transformans (Ræstelia). 750.
 transversalis (Uromyces). 546.
trechispora (Puccinia). 681.
 Tremandræ (Puccinia). 694.
 Tremulæ (Melampsora). 589.
 triannulatus (Uromyces). 582.
 triarticulata (Puccinia). 732.
 trichophora (Ustilago). 462.
 Trientalis (Tubercinia). 507.
 Trifolii (Uromyces). 534.
Trifolii-repentis (Æcidium). 534.
 Trillii (Æcidium). 828.
Tripolii (Puccinia). 687.
 Triptilii (Puccinia). 707.
tripustulata (Puccinia). 699.
triqueter (Uromyces). 539.
 Tritici (Tilletia). 481.
Tritici (Urocystis). 515.
 Trochomeriæ Puccinia). 654.
 Trollii (Puccinia). 670.
 Trollipii (Uromyces). 582.
 Tropæoli (Uredo). 862.
 Troximontis (Puccinia). 649.
truncata (Puccinella). 541.
truncata (Puccinia). 657.
truncatum (Æcidium). 674.
 tuberculata (Puccinia). 646.
tuberculata (Puccinia). 680.
tuberculata (Uredo). 553.
 tuberculatum (Æcidium). 827.
 tuberculatum (Phragmidium). 747.
tuberculatus (Uromyces). 552, 553.
tuberculosa (Uredo). 752.
 tubiforme (Sarcorhopalum). 600.
 tucumanense (Æcidium). 816.
Tulasnei (Ustilago). 456.
 Tulipæ (Puccinia). 679.
 Tulipæ (Ustilago). 452.
 tumida (Puccinia). 735.
 tumidipes (Puccinia). 654.
 Tunicæ (Thecaphora). 511.
Tussilaginis (Æcidium). 625.
Tussilaginis (Æcidium). 625.
Tussilaginis (Coleosporium). 752.
Tussilaginis (Uredo). 752.
 tuyutensis (Puccinia). 611.
 Tweedianum (Æcidium). 817.
typhoides (Erysibe). 453.
typhoides (Ustilago). 453.
Ulei (Urocystis). 516.
 Ulmaræ (Triphragmium). 768.
 Ulmaræ (Uredo). 866.
Umbelliferarum (Cæoma). 616.
Umbelliferarum (Puccinia). 634, 635.
 umbilicatum (Æcidium). 787.
 Umbilici Puccinia). 700.
umbrina (Ustilago). 452.
Ungerianum (Entyloma). 489, 493.
 Uniolæ (Ustilago). 473.
 unitus (Uromyces). 565.
 Urbaniana (Ustilago). 465.
 urceolatum (Æcidium). 775.
urceolorum (Æcidium). 464.

- urceolorum* (*Cæoma*). 464.
urceolorum (*Uredo*). 464.
urceolorum (*Ustilago*). 464.
 Urgines (*Uromyces*). 540.
 Urospermi (*Puccinia*). 711.
 Urticæ (*Æcidium*). 821.
 Urticæ (*Æcidium*). 626.
urticatum (*Cæoma*). 821.
 ustalis (*Puccinia*). 691.
Ustilago (*Reticularia*). 461.
utriculorum (*Ustilago*). 476.
 utriculosa (*Ustilago*). 476.
 Uvulariæ (*Æcidium*). 830.
uvulariatum (*Cæoma*). 830.

Vaccinii (*Melampsora*). 765.
Vacciniorum (*Thecopsora*). 765.
vaginalium (*Puccinia*). 533.
Vaillantiae (*Uredo*). 601.
 Vaillantii (*Ustilago*). 465.
Valantiae (*Æcidium*). 601.
 Valantiæ (*Puccinia*). 685.
Valantiae (*Puccinia*). 601.
 valenzueliana (*Uredo*). 862.
 Valerianæ (*Puccinia*). 669.
Valerianæ (*Uredo*). 670.
 Valerianæ (*Uromyces*). 536.
Valerianearum (*Æcidium*). 537.
 Valerianellæ (*Æcidium*). 797.
 Vangueriæ (*Æcidium*). 795.
variabilis (*Puccinia*). 634.
 variolans (*Puccinia*). 705.
variolosa (*Erysibe*). 564.
 vastatrix (*Hemileia*). 585.
Vepris (*Uredo*). 744.
vera (*Erysibe*). 461.
 Veratri (*Puccinia*). 665.
 Veratri (*Uromyces*). 543.
Verbasci (*Æcidium*). 559.
Verbasci (*Uromyces*). 559.
 Verbenæ (*Æcidium*). 816.
verbenicolum (*Æcidium*). 816.
 Verbesinæ (*Puccinia*). 706.
Verbesinæ (*Puccinia*). 644.
Verbesinæ (*Uredo*). 644.
 vernalis (*Melampsora*). 592.
 vernalis (*Uromyces*). 562. *ale. Nym. !!*
 Vernoniæ (*Coleosporium*). 755.
 Vernoniæ (*Puccinia*). 653.
 Veronicæ (*Æcidium*). 814.
 Veronicæ (*Puccinia*). 685.
 Veronicæ (*Sorosporium*). 515.
 Veronicarum (*Puccinia*). 685.
 Veronicæ-Anagallidis (*Puccinia*). 718.
 Verruca (*Puccinia*). 709.
verrucosa (*Puccinia*). 688.
 verrucosa (*Ravenelia*). 772.
verrucosa (*Uredo*). 684.
verrucosum (*Æcidium*). 688.
verrucosum (*Dicæoma*). 688.
verrucosum (*Entyloma*). 489.
 verruculosum (*Entyloma*). 491.
 verruculosus (*Uromyces*). 577.
 verruculosus (*Uromyces*). 551.
 versatilis (*Uromyces*). 582.
vertisepta (*Puccinia*). 736.
vesicaria (*Uredo*). 519.
 vesiculosus (*Uromyces*). 547.
 vexans (*Puccinia*). 733.
 Viburni (*Coleosporium*). 758.
Viciæ (*Uredo*). 531.
Viciæ-Fabæ (*Uredo*). 531.
 Vignæ (*Æcidium*). 831.
 Viguieræ (*Puccinia*). 706.
 Vilfæ (*Ustilago*). 469.
 Vincæ (*Puccinia*). 715.
Vincæ (*Puccinia*). 645.
 Vincæ (*Trichobasis*). 645.
 Vincæ (*Uredo*). 645.
Vincetoxici (*Uredo*). 597.
 vinosa (*Ustilago*). 469.
 violacea (*Ustilago*). 474.
 violaceum (*Phragmidium*). 744.
violaceus (*Protomyces*). 480.
 Violæ (*Puccinia*). 609.
 Violæ (*Urocystis*). 519.
Violarum (*Æcidium*). 609.
Violarum (*Puccinia*). 609.
Violarum (*Trichobasis*). 609.
Violarum (*Uredo*). 609.
 virens (*Ustilago*). 467.
 Virgaureæ (*Puccinia*). 679.
virginianum (*Gymnosporangium*). 740.
 viridis (*Ustilago*). 467.
vitalbatum (*Cæoma*). 774.
 Vitellinæ (*Melampsora*). 589.
 Vitis (*Uredo*). 863.
 vittata (*Ustilago*). 459.
 vomica (*Puccinia*). 708.
 Vossianum (*Sorosporium*). 514.
Vossii (*Puccinia*). 677.
 Vuilleminii (*Puccinia*). 692.
 Vulpinæ (*Puccinia*). 630.
vulgaris (*Epitea*). 587.

vulgaris (*Puccinia*). 634.

Waldsteiniae (*Puccinia*). 699.

Warmingii (*Ustilago*). 470.

Westendorpii (*Thecaphora*). 509.

Wettsteinii (*Puccinia*). 707.

Wilcoxiana (*Puccinia*). 716.

Windsoriae (*Puccinia*). 664.

Winteri (*Entyloma*). 490.

Withaniae (*Æcidium*). 811.

Woodii (*Diorchidium*). 736.

Woodii (*Uromyces*). 586.

Wurmbeae (*Puccinia*). 664.

Wyethiae (*Uredo*). 863.

Xanthii (*Puccinia*). 706.

Xanthoxyli (*Æcidium*). 784.

xylosteatum (*Cæoma*). 796.

Xylostei (*Æcidium*). 796.

Zea (*Cæoma*). 472.

Zea (*Puccinia*). 659.

Zea (*Uredo*). 473, 659.

Zea-Mays (*Uredo*). 472.

Zea-Mays (*Ustilago*). 472.

Zehneriae (*Uredo*). 863.

Zizaniae (*Puccinia*). 732.

zonale (*Æcidium*). 541.

Zopfii (*Puccinia*). 621.

Zygadeni (*Puccinia*). 729.

Zygadeni (*Uromyces*). 563.



