

oben bezeichneten Namen in den Tauschvereinen und an Freunde ausgegeben. Jetzt sind sie an der Localität verschwunden; ich habe indess seiner Zeit so viel Material angesammelt, dass ich im Stande bin, auf Wunsch anderen Phykologen davon mitzuthemen.

Leipzig-Anger, Villa Dreyzehner, April 79.

## Repertorium.

**Baglietto, F., Lichenes Insulae Sardiniae.**

(Nuovo Giorn. botan. Italiano. XI. Nr. 1.)

(Schluss.)

*Diplotomma porphyricum* Arnold  $\beta$  cinereum. Thalli areolae cinerascetes, minutae, plerumque in plagulas suborbiculatas dispositae. Apothecia parvula, atra, nuda. Asci 8-spori paraphysibus conglutinatis apice fuscescentibus obvallati. Sporae ut plurimum subreniformes, 4-loculares, aut localis medianis verticaliter septatis, 6-loculares, 0,016—20 mm long., 0,010 mm crassae. Ad muros campestres.

*Melaspilea opegraphoides* Bagl. in Erb. Critt. Ital. II. 518. Thallus effusus, cinereo-albicans, tenuissime subarachnoideo-leprosus aut fere nullus. Apothecia exigua, constanter discreta, primitus subinnata, punctiformia, demum emmersa, patellaria aut rotundato-ellipsoidea, raro brevissime lyrata, concaviuscula, margine inflexo, obtusato. Asci crebri, elliptico-ventricosi, 8-spori, inter paraphyses crassiusculas grumoso-dissolutas obvallati. Sporae majusculae, soleaeformes, biloculares, nonnumquam ad dissepimentum constrictae, hyalinae, 0,015—18 mm. long., 0,006—8 mm. crassae. Ad corticem Oleastri et Pruni Cerasi.

*Arthothelium sardoum* nov. spec. Thallus tenuis submembranaceo-leprosus, albus, plerumque in maculas orbiculatas dispositus. Apothecia parvula, subinnata, rotundato-angulosa, vel oblongo-flexuosa, passim difformiter aggregata, atra, nuda, tandem elabentia. Asci subsphaeroidei pyriformes, 8-spori, materia grumulosa obvallati. Sporae ovoideae aut ventricoso-ellipsoideae nonnumquam utroque apice attenuatae, primitus 4—6—8-loculares, demum pluriloculares, muriformes, hyalinae aut stramineo diaphanae. Ad corticem Phyllireae latifoliae et Oleastri.

*Placidiopsis circinata* n. sp. Thallus cartilagineus, squamulosus, obscure cinereo-virens, squamulae in crustam subimbricatam undulato-plicatam contiguam vel tenuiter diffractam, ambitu orbiculato-effiguratam coadnatae. Apothecia parvula, atra, semiemmersa, hemisphaerica, creberrima, nonnumquam plura aggregata, apice integro. Asci obovati,

8-spori, paraphysibus diffluxis obvallati. Sporae oblongato-ellipsoideae, hyalinae, nucleola bina sphaeroidea foventes, vel septo transverso biloculares, 0,117—20 mm long., 0,005—8 mm crassae. Super terram.

*Polyblastia terricola* n. sp. (Polybl. terrestris Fries, Bagl. dubitanter in litt. ad Krempelh. et Garrovaglio. — Polybl. tarvesedis  $\beta$  terrestris Garov. Tent. 172). Thallus tenuis, subcartilagineus, aegre undulato — verruculosus, luride cinereo-virens (humectus viridulus), effusus. Apothecia parvula, discreta, innata, vix prominula aut semiemorsa, furfure thalode conspurcata, demum nuda, atra, nonnumquam scabriuscula, ostiolo vix depresso tandem minutissime pertuso. Asci majusculi subelliptico-saccati, 8-spori: paraphyses rudimentales. Sporae oblongato-ellipsoideae, quandoque in medio constrictae, pluriloculares, loculis admodum polymorphis, primitus stramineo-diaphanae tandem fuscescentes, 0,036—43 mm. long., 0,013—17 mm. crassae. Super terram.

*Sagedia Marcucciana* n. sp. Thallus tenuissimus, leprosus, e cinereo in roseum expallens variegatus, humectus odoratus, effusus, protothallo indistincto. Apothecia mediocria, hemisphaerico-conoidea, subinnato-sessilia, sub lente plerumque levissime scabrida, ostiolo late deplanata, depresso, tandem pertuso. Asci lanceolati, 8-spori, paraphysibus flexuosis articulato-guttatis obvallati. Sporae longe fusiformes primitus materia tenuissime granulosa repletae demum 8-loculares, loculis tetragonis, hyalinae. — In rupibus.

*Sagedia persicina* var. *plumbea*. Thallus tartareus, plumbeus, orbiculari-determinatus. Apothecia minuta, innata, hemisphaerica, ostiolo demum pertuso. Asci ellipsoidei, 8-spori, paraphysibus capillaribus flexuosis obvallati. Sporae minores, breviter fusiformes, 4-loculares, hyalinae. — Ad rupes calcareas.

*Polychidium Gennarii* n. sp. Thallus obscure virescens, nudus, laevis, siccus rigide membranaceus, udus flaccidus, laciniatus, laciniis nonnihil imbricatis, elongatis, sursum dilatatis, lobulato-dissectis, marginibus erectiusculis, minute erosulo-fimbriatis, subtus in ambitu concolor plerumque glaber, ceterum fibrillis rhizinoideis sordide albescentibus instructus arcteqe adhaerens. Apothecia superficialia, sessilia, disco rufescente primitus plano, demum convexo, margine-dilutiore tenui, integro, mox reclinante. Asci rarefacti, clavati, 8-spori, inter paraphyses graciliores, apice incrassatulo dilute flavescente, nidulantes. Sporae elongato-ellipsoideae, primum binucleatae, nuclei ellipsoidei, demum septo interjecto biloculares, stramineo-diaphanae, 0,019—22 mm. long., 0,006—8 mm. crassae. Super Homalothecium sericeum.



**Baker, J. G. Report on a collection of Ferns made in the north of Borneo by Burbidge.**

(The Journal of Botany. 1879. Februar).

Die hier mitgetheilte Liste von Filices von Borneo ist eine willkommene Ergänzung zu der 1876 von Cesati publicirten Arbeit über die von Beccari auf Borneo gesammelten Gefässkryptogamen. Es werden 123 Filices, 1 Equisetum (*elongatum* Willd.), 6 Lycopodiumarten, 6 Selaginellae und 2 Species von *Psilotum* aufgeführt. Unter den Filices sind mehrere neue Arten, deren Diagnosen wir folgen lassen.

*Gleichenia circinata* Sw. var. *borneensis* Baker. A stiff erect-growing form, with the final bipinnate divisions unusually long (sometimes a foot in length), the leafy portion between the primary and secondary forkings also unusually long, the rachises glabrous, the texture more rigid, and the ultimate segments smaller and more hullate than in the Australian type, thus approximating to some of the varieties of *dicarpa*.

*Gleichenia vestita* Blume, var. *paleacea* Baker. A form differing from the Javan type by its lamina very glaucous on the under surface and narrower ultimate segments, with rachises densely clothed with spreading or deflexed linear-subulate ferruginous paleae.

*Alsophila Burbidgei* Baker nova spec. Frond ample, tripinnatifid, moderately firm in texture, green on both sides, paler beneath, the under side strongly ciliated on the midrib of the pinnules, for the rest nearly glabrous, both surfaces and rachises entirely free from scales, the latter without prickles, those of the pinnae clothed throughout with fine spreading hairs. Pinnae oblong-lanceolate, a foot or more long. Pinnules sessile, lanceolate, two to two and a half inches long, half an inch broad, cut down to a narrow wing into ligulate subentire obtuse tertiary segments about a line broad. Veins four-to five-jugate, distant, simple or forked. Sori medial.

*Davallia* (*Eudavallia*) *Veitchii* Baker n. sp. Rhizome thicker than a quill, epigaeous, wide-creeping, clothed with small shining linear acuminate castaneous paleae. Stipes naked, erect, slender, castaneous, one foot to one and a half long. Lamina oblong-deltoid, decomposed, one foot to one and a half long, about half a foot broad, quite glabrous on both surfaces, subcoriaceous in texture. Pinnae distant, deltoid, stalked, erecto-patent, many of the lower ones subequal, four to five inches long by half as broad. Pinnules and tertiary segments subpetioled, rhomboid,

cuneately cut away on the lower side at the base. Ultimate lobes subremote, ligulate or rather broader towards the truncate tip, one-eighth to one-sixteenth of an inch long, one-quarter to one-third of a line broad, with only a single central vein, the tip denticulate. Sori minute, oblong, usually immersed in the tip of the segments, rarely free and terminal. Involucre free at the end only.

*Lindsaya Jamesonioides*, Baker, n. sp. Rhizome short-creeping, as thick as a quill, clothed with minute subulate rigid nearly black scales. Stipes wiry, nearly black, one to three inches long. Fronds linear, simply pinnate, three to five inches long, under half an inch broad, composed of sessile contiguous roundish alternate deciduous entire pinnae one-sixth to one-fifth of an inch broad, those of the upper third of the frond growing gradually smaller. Rachis wiry, dark chestnut-brown. Veins quite hidden. Texture rigidly coriaceous; both surfaces quite free from hairs or scales, the upper side much wrinkled. Sorus continuous round all the pinna except its base. Inner valve of the involucre equalling the outer, broad, chartaceous, persistent glabrous.

*Lindsaya crispa*, Baker, n. sp. Caudex short-creeping. Stipe wiry, naked, castaneous, one to nine inches long. Lamina simply pinnate, lanceolate, about half a foot long, half to three-quarters of an inch broad. Pinnae not crowded, all sessile, dimidiate-deltoid, truncate and entire on the inner and patent or erecto-patent lower edge, irregularly inciso-crenate on the upper one, glabrous, bright green, membranous in texture, with the free very distinctly marked flabellate veins radiating from the inner half of the lower edge. Involucre undulated, with two distinct nearly equal cartilaginous valves. — Habit of the small tender forms of *Adiantum caudatum*, but the fronds neither at all hairy nor rooting at the tip.

*Pteris quadriaurita*, Betz., var. *digitata*, Baker. A digitate form, like the Indian *P. Grevilleana*, Wall., but the barren and fertile fronds not dimorphic. The texture firmer than usual. The rachis with a broad wing, as in *P. biaurita*, and the veins crowded and obscure.

*Asplenium (Diplazium) Porphyrorachis*, Baker. Caudex suberect, producing many short-stiped barren fronds to a few long-stiped fertile ones. Stipes purple, of the barren frond two to three inches, of the fertile six to twelve inches long, clothed throughout with spreading black linear-subulate paleae. Frond lanceolate, six to twelve inches long, one to two inches and a half broad, cut down throughout



to a narrow wing to the rachis, which is purplish in colour and clothed on the under side with spreading paleae, like those of the stipe. Pinnae lanceolate, one-quarter to one-third of an inch broad, toothed towards the tip, several of the lower ones reduced in size. Texture moderately firm. Both surfaces glabrous. Veins fine, close, distinct, erecto-patent, usually once forked. Sori reaching from the midrib to the edge, few double. Involucre narrow, persistent, glabrous.

*Asplenium (Diplazium) xiphophyllum*, Baker, n. sp. Caudex suberect. Stipes close, reaching a foot in length, naked except at the base, where they have a tuft of large brown linear scales. Lamina oblong-deltoid or deltoid, simply pinnate, one foot to one and a half long, with an end pinna like the side ones. Pinnae thirteen to twenty-five, subsessile, lanceolate, reaching a length of eight to nine inches, and a breadth of nine to fifteen lines, toothed and much acuminate at the point, cuneate at the base. Texture subcoriaceous. Both surfaces glabrous and free from scales. Veins in the fully developed pinnae in pinnate groups of three to four. Sori running all the way from the midrib to the edge, few diplazioid. Involucre narrow, glabrous, persistent.

*Nephrodium (Sagenia) nudum*, Baker, n. sp. Rhizome not seen. Stipe about two feet long, pale brown, naked. Frond oblong-deltoid, one and a half to two foot long, a half to one foot broad, with nine to eleven distant pinnae, the lowest two to four two- or three-forked from the base, the rest simple; the end one like the others, but larger, lanceolate, six to twelve inches long, three-quarters to one inch broad, very acuminate, narrowed gradually to the base, not repand, all except the lowest sessile. Texture membranous. Both surfaces and rachis free from hairs and scales. Main veins erecto-patent, distinct to the edge at a distance of a quarter to one-third of an inch from each other; copious small irregular areolae between them furnished with free included veinlets. Sori middle-sized, in regular rows near the main veins. Involucre glabrous, persistent.

*Polypodium (Eupolypodium) minimum*, Baker, n. sp. Densely tufted. Fronds simple, sessile, ligulate, half to one inch long, under a line broad, entire, obtuse, subcoriaceous in texture, glabrous on the upper surface, slightly pubescent beneath, narrowed gradually from the middle to the base. Veins simple, erecto-patent, extending from the midrib beyond the sori, but stopping short of the margin. Sori round, superficial, close, forming a single row close to

the midrib in the upper half or two-thirds of the frond, in the finest fronds eight to twelve in a row.

*Polypodium (Eupolypodium) Burbidgei* Baker, n. sp. Caudex suberect, its paleae clathrate, large, linear, membranous, brown, distinctly ciliated. Fronds tufted, sessile, lanceolate, once deeply pinnatifid, reaching a foot in length, twelve to fourteen lines broad at the middle, cut down to a broad wing to the rachis into numerous close entire obtuse ascending segments one-eighth of an inch broad at the base, the lower segments growing gradually smaller downwards and the basal third of the rachis bordered only by an entire wing, which is one-sixth of an inch broad at the top and narrowed gradually downwards. Texture subcoriaceous. Under surface slightly pubescent on the rachis, the rest glabrous. Veins distant, simple, erecto-patent, falling short of the edge. Sori globose, slightly immersed, mainly in a single row in the wing of the main rachis, not forming papillae on the face of the frond.

*Polypodium (Eupolypodium) streptophyllum*, Baker, n. sp. Densely tufted. Stipe scarcely any. Lamina linear, three to four inches long, one fifth of an inch broad, cut down to the main rachis into very numerous ligulate entire slightly twisted adnate contiguous pinnae one quarter of a line broad, with a single medial nerve, and a single superficial sorus at the tip, firm in texture, green and glabrous on both surfaces, the lower pinnae gradually reduced in size.

*Polypodium (Eupolypodium) taxodioides*, Baker, n. sp. Rhizome filiform, creeping widely below the surface of the ground. Stipes wiry, brown, one inch to one and a half long, clothed like the rachis with fine spreading brown hairs. Frond lanceolate, regularly bipinnate, six to eight inches long, eighteen to twenty-one lines broad. Pinnae numerous, close, lanceolate, one-quarter of an inch broad, regularly pectinato-pinnate, with narrow linear parallel erecto-patent one-nerved secondary segments not more than one-eighth of a line broad. Texture rather rigid. Both surfaces glabrous. Sori confined to a few of the uppermost pinnae, placed singly in the centre of the secondary segments.

*Polypodium (Phymatodes) stenopteris*, Baker, n. sp. Rhizome like that of a hare's-foot *Davallia*, wide-creeping, epigaeous, as thick as a quill, densely clothed with squarrose linear bright brown paleae. Fronds nearly sessile, entire, linear, glabrous, very rigid in texture, eight to twelve inches long, one-eighth to one-sixth of an inch broad at the



middle, narrowed gradually to the tip and the base. Veins quite invisible. Sori round, immersed, distant, uniseriate, confined to the upper third or half of the frond, which is repand, the sori being placed in the projections of the waves and causing prominent papillae on the face.

*Polypodium* (*Phymatodes*) *holophyllum*, Baker, n. sp. Rhizome wide-creeping, not more than half a line in diameter, clothed with dense erecto-patent minute linear-subulate paleae. Stipes subdistant, brown, polished, very slender, naked, one to two inches long. Lamina entire, roundish or ovate, one-third to half an inch long and broad, crenulate round the edge except towards the base, glabrous, rigid in texture, without any distinct midrib, the veins flabellate from the apex of the stipe, forming copious irregular areolae without any free included veinlets. Sori few, round superficial, scattered irregularly. — Like *P. oodes* in its rhizome, stipe and sori; differing by its smaller frond, crenulate border and flabellate veining.

**Wittrock et Nordstedt, Algae aquae dulcis exsiccatae etc. Fasc. V et VI. (Upsaliae 1879.)**

Diese beiden neuen Fascikel der werthvollen Sammlung enthalten wieder eine ausserordentliche Fülle seltener und interessanter Formen. Es sind vertreten: Schweden, Norwegen, Dänemark, Oesterreich, Sibirien, das rothe Meer, Nordamerika und die Sandwichsinseln. Aus dem reichen Inhalt heben wir zunächst die neuen Arten und Formen mit ihren Diagnosen hervor.

204. *Oedogonium Landsboroughii* (Hass.) Wittr.  $\beta$  *norvegicum* Wittr. nov. var. Var. *oogoniis* singulis vel binis (raro ternis); *oogoniis* et *oosporis* brevioribus, cellulis *spermogoniorum* crassioribus, cellulis vegetativis crassioribus et brevioribus quam in forma  $\alpha$ ; plantis masculis eadem fere crassitudine ac femineis;

crass. cell. veget.	38—45 $\mu$ ,	altit.	$1\frac{1}{2}$ — $3\frac{1}{2}$	plo	maiore;
„ oogon.	64—73 „	„	70—105	$\mu$ ;	
„ oospor.	61—70 „	„	67—90	„	
„ cell. spermog.	37—45 „	„	8—15	„	

207. *Oedogonium Wolleanum* Wittr.  $\beta$  *insigne* Nordst. nov. var. A forma americana differt magnitudine paullo majore, *oogoniis* 3—5 (rarissime 10) continuis, costis membranae *oogoniorum* paullo densioribus et paullo minus eminentibus, *spermogonio* uni-quadriloculari; crass. cell. veg. trivial. 18—36  $\mu$ , altit. 3—7 plo majore; cr. cell. suff.

60—66  $\mu$ , alt. 116—140  $\mu$ ; cr. oogon. 68—80  $\mu$ , alt. 78—92  $\mu$ ;  
 cr. oospor. 64—73  $\mu$ , alt. 74—84  $\mu$ ; cr. cell. androsporang.  
 24—30  $\mu$ , alt. 18—25  $\mu$ ; cr. stip. nannandr. 18—22  $\mu$ , alt.  
 60—68  $\mu$ ; cr. cell. spermog. 12—14  $\mu$ , alt. 10—12  $\mu$ .

208. *Oedogonium crassiusculum* Wittr.  $\beta$ . *idiandrosporum* Nordst. et Wittr. nov. var. Var. *idiandrospora*;  
*oosporis angulari-oboviformis vel angulari-globosis*;

crass. cell. veg.	25—63 $\mu$ ;	alt. $2\frac{1}{2}$ — $5\frac{1}{3}$ plo	majori;
„ oogon.	48—56 „ „	57—90 $\mu$ ;	
„ oospor.	42—54 „ „	50—66 (88) $\mu$ ;	
„ androspor.	30—34 „ „	12—21 $\mu$ alt.;	
„ stip. nannandr.	15—16 „ „	60—70 „	
„ cell. spermog.	10 $\mu$ , alt. 18 $\mu$ ;		
„ membr. oospor. ad	6 $\mu$ .		

234. *Haematococcus nivalis* (Bauer) Ag. Forma  
*membrana valde incrassata gelatinosa, diametro cell. maximo*  
 60  $\mu$ .

237. *Chlorococcum botryoides* Fries.; Kütz. Forma  
*familiis in thallum gelatinosum, amorphum, fusco-aurantiacum*  
*consociatis; cytoplasmate cellularum pallide flavescenti-viridi;*  
*membrana in more Schizochlamydis saepe constructa.*

239. *Dictyosphaerium pulchellum* Wood. Forma  
*cellulis confertis, diametro cellularum adularum  $4\frac{1}{2}$ —7  $\mu$ .*  
 — Species haec a D. Ehrenbergiano Naeg. in primis differt  
*cellulis adultis globosis, nec ellipsoideis. Cellulae juveniles*  
*(divisione mox facta) etiam D. pulchelli ellipsoideae sunt,*  
*sed axis longitudinalis cellularum hic radialis (in familia*  
*globosa), non tangentialis, est positus.*

244. *Oocystis solitaria* Wittr. nov. spec. *O. cel-*  
*lulis plerumque solitariis interdum in familias e 2—4 cel-*  
*lulis formatas consociatis, ellipsoideis, corporibus chlorophyl-*  
*laceis pulvinatis parietalibus (cellulae totae massa chlorophyl-*  
*lacea interdum expletae sunt), membrana subcrassa in utro-*  
*que fine tuberculo instructa; longitudine cell. 13—35  $\mu$ ,*  
*crassit. cell. 7—18  $\mu$ .*

248. *Hyalotheca undulata* Nordst. nov. spec. *H.*  
*mimina, filis minus fragilibus, margine undulatis; cellulae*  
*diametro  $1\frac{1}{2}$ —2 plo longiores, medio excavato-constrictae;*  
*semicellulae globoso-obovatae apice truncatae, a vertice visae,*  
*perfecte circulares massa chlorophyllacea e nucleo amylaceo*  
*centrali 4-radiata. Latitudo isthmi, latitudinem apicis aequans,*  
*circiter tres partes diametri transversalis semicellulae. Long.*  
*11—14  $\mu$ ; lat. 7—7,5  $\mu$ ; lat. isthmi 5  $\mu$ .*

255. *Cosmarium dovrense* Nordst. nov. spec. *C.*  
*diametro circiter tertia parte longius, medio modice constrict-*



tum sinu amplo non profundo; semicellulae semicirculares, circ.  $\frac{2}{3}$  circuli efficientes, ad basin saepe paullo angustatae, angulis inferioribus obtuso rotundatis, margine (8-) 10-undulato-crenatae crenis 2—3-granulatis, ad basin circiter 15jugis granulatis (granulis in 4 series horizontales plus minus distinctas ordinatis), area supra granula basalia parva nuda, marginem versus granulatae granulis binis (intimis singulis) radiatim et concentrice dispositis; a latere visae rectangulares apice late rotundatae ad basim utrinque paullo tumidae, transverse granulatae; a vertice conspectae late ovali-ellipticae granulis transverse ordinatis, massa chlorophyllacea e nucleo amylaceo centrali undique radiante. Long. 38—42  $\mu$ ; lat. 26—28  $\mu$ ; crass. 24—26  $\mu$ ; lat. isthm. 18—20  $\mu$ .

257. *Cosmarium pseudarctoum* Nordst. nov. spec. C. diametro circ. quarta parte longius, medio levissime excavatum, a latere conspectum ellipticum, semicellulae a fronte visae latissime ovatae, apice truncato, angulis (superioribus) late rotundatis; a vertice visae circulari-ellipticae massa chlorophyllacea e nucleo amylaceo centrali radiante, cruciatim disposita. Long. 17,5—21  $\mu$ , lat. 14—16  $\mu$ ; crass. 11,5—14,5  $\mu$ ; lat. isthmi 13,5—15  $\mu$ .

265. *Penium phymatosporum* Nordst.  $\beta$ . majus nov. var. Long. cell. 25—72  $\mu$ , lat. 24—26  $\mu$ .

271. *Mesotaenium Endlicherianum* Naeg.  $\beta$ . grande Nordst. Nuclei amylacei 2 (vel rarissime ante divisionem 4) in quaque semicellula. Plasma violaceum. Diametr. 10—14  $\mu$ ; long. 29—64  $\mu$ .

286. *Oscillaria major* Vauch. form. tenuior; diametr. fili 16—28  $\mu$ .

295. *Aphanothece saxicola* Naeg.  $\beta$ . aquatica Wittr. nov. var. Var. aquatica, thallo luteo-fuscescente, tegumentis cellularum vix visibilibus, arctis; crassitudine cellularum 1,5—1,6  $\mu$ , longit. cell. 2—4 plo majore.

296. *Polycystis (Clathrocystis) aeruginosa* Kütz. forma major diametro cellularum 5,5—6,5  $\mu$ .

297. *Polycystis prasina* Wittr. nov. spec. P. thallo submucoso, granuloso, prasino (colore thalli siccati vix mutato), familiis confertis minus distincte limitatis; cellulis globosis, corpore phycochromaceo vacuolis magnis plus minus ovalibus saepe radiantibus praedito (structura haec adspectum fere clathratum contenti cellularum efficit); diametro cellularum  $3\frac{1}{2}$ — $4\frac{1}{2}$   $\mu$ . Differt a specie affini P. viridi A. Br., magnitudine cellularum minore, colore (etiam thalli siccati) prasino, familiis minus distincto limitatis.

298. *Polycystis Flos-aquae* Wittr. nov. spec. P. thallo mucoso difformi, sublutescente-aeruginoso (colore thalli

siccati vix mutato); familiis confertis, vix distinctis; cellulis globosis, corpore phycochromaceo structura verosimiliter cadem ac in *P. prasina*; diametro cellularum  $4\frac{1}{2}$ — $6\frac{1}{2}$   $\mu$ . —

Ausser diesen neuen Arten und Varietäten enthält die Sammlung noch zahlreiche interessante Formen. Wir nennen von solchen:

*Trentepohlia* (*Chroolepus*) *Bleischii* (Rbh.) Wille., *Entromorpha fucicola* Kütz., *Ulva reticulata* Forsk., *Vaucheria sphaerospora* Nordst., *Vaucheria Thuretii* Woron., *Dasycladus clavaeformis* (Roth.) Ag., *Haematococcus nivalis* Ag., *Pediastrum simplex* Meyen! von Thuret gesammelt; *Tetraspora cylindrica* Ag. in bis 1 Meter langen Exemplaren; *Euastrum sinuosum* Lenorm., *Cosmarium monochondrum* Nordst., *Cosmarium subglobosum* Nordst., *Pleurotaenium indicum* (Grun.) Lund., *Ancylonema Nordenskiöldii* Berggr., *Plectonema Wollei* Farlow, *Lyngbya luteo-fusca* Ag., *Lyngbya aestuarii* (Jung.) Liebm., *Entophysalis granulosa* Kütz. u. v. a.

#### F. v. Thümen, *Melampsora salicina*, der Weidenrost.

(S. A. aus den „Mittheilungen aus d. forstl. Versuchswesen Oesterreichs“. Bd. II. Heft 1.)

Eine monographische Studie über den durch Hartig als sehr schädlich bekannten Weidenrost, in der Verfasser zu dem Resultate kommt, dass die bisher angenommene einzige Species in mehrere getrennt werden muss. Nach einer historischen Einleitung wird die Uredo- und die Teleutosporenform in Bezug auf Anatomie, Entwicklung und Habitus geschildert. Die Keimung beiderlei Sporen kann sehr leicht hervorgerufen werden, wie auch die künstliche Infection junger Weidenblätter keine Schwierigkeiten bietet. Der Verfasser hat nun zahlreiche derartige Infectionen angestellt und ist dadurch in seiner Ansicht, dass mehrere Species vorliegen, bestärkt worden. Beispielsweise haben Aussaaten von Sporen der *Melampsora* auf *Salix Caprea* auf die Blätter von *Salix viminalis*, *purpurea* und *alba* kein Resultat gehabt. Umgekehrt haben Uredo-Sporen von *Salix alba* entnommen auf *Salix Caprea* und *aurita* keine Erkrankung hervorgerufen. Unterstützt wird Thümen's Ansicht durch die anatomischen Befunde an einem sehr reichen Untersuchungsmaterial; hingegen scheint ein anderer Umstand dagegen zu sprechen, nämlich der, dass die von Thümen angenommenen *Melampsora*-Species durchaus nicht immer den natürlichen Gruppen innerhalb der Gattung *Salix* entsprechen. — Es folgt dann ein Verzeichniss der *Salix*-Arten mit den darauf lebenden *Melampsora*-Species. Es



sind 29 *Salix*-Species aus Europa, 8 aus Nord-Amerika, 1 aus Süd-Afrika und 5 aus Asien (von denen 3 auch in Europa vorkommen!), also im Ganzen 40 *Salix*-Species, deren *Melampsora*-Art bekannt ist, ausserdem noch 11, von denen zweifelhaft, welche *Melampsora* auf ihnen vegetirt.

Thümen macht nun aus der bisherigen *Melampsora salicina* 7 Species, von denen meist nur die *Stylosporenform* bekannt ist. Wir lassen die Diagnosen mit Angabe der Verbreitung jeder Art folgen.

1. *Melampsora Capraearum* Thüm. nov. spec.

A. *Stylosporen*: *Uredo acervulis hypophyllis*, sparsis, aut gregariis aut subsolitariis, saepe in circulo dispositis, primo firmis plano-hemisphaericisve, demum pulveraceis, aurantiacis, in speciminibus siccis subaehrois vel griseo-flavidis; sporis plus minusve globosis, episporio aculeato-granuloso, 3 mm crasso, hyalino, intus dilute aureis, 12—17 mm diam.; paraphysisibus numerosissimis, clavatis, rectis vel deorsum minime curvatis, vertice dilatato-obtusatis, hyalinis, 40 mm long., 20 mm cr., membrana laevi. Germinatio semper bina, opposita.

Auf *Salix Caprea*, aurita, cinerea, *Cutleri*, *discolor*, *humilis*, *phlomoides*, *phylicifolia*, *repens*, *reticulata*, *rosmarinifolia* und *tristis*.

B. *Teleutosporen*. *Melampsora acervulis epiphyllis*, sine macula, semper epidermide tectis, dense gregariis, saepe confluentibus et deinde crustas subfirmas formans, mediis, plano-adpressis, subinduratis, primo aurantiacis, fere *stylosporarum* coloris, demum fuseis, postremo nigris, vel purpureo-atris; sporis palliformibus, plus minusve parallelogrammicis, deorsum minime angustatis, vertice vix subdilatis, accumbentibus, episporio 2,5—3 mm crasso, laevi, dilute fuscescentibus, diaphanis, 34—38 mm long., 14—16 mm crass.

Auf *Salix Caprea*, aurita und cinerea.

2. *Melampsora Bigelowii* Thüm. nov. spec. *Stylosporen*: *Uredo acervulis hypophyllis*, sparsis, numquam orbiculatis, aurantiacis demum expallescens, fere hemisphaericis, subfirmis, tantum pulveraceis; sporis majoribus ut in *Melampsora Capraearum*, globosis, hyalinis (in speciminibus siccis!), episporio granuloso-spinuloso, 4 mm crasso, hyalino, 19—24, plerumque 22 mm diam.; paraphysisibus non crebris, ovoideis vel fere globosis cum pedicello longissimo, curvulato, aehrois, 30—40 mm diam.; cum pedicello 75—78 mm longis, membrana 3,5—4,5 mm crassa, laevi. — *Teleutosporen* unbekannt. Auf *Salix Bigelowii* Ait. Torr. in Californien. Durch die Paraphysen und grösseren Sporen von voriger verschieden.

3. *Melampsora epitea* Thüm. nov. spec. *Stylosporen*: *U. acervulis hypophyllis*, raro etiam epiphyllis, sine

macula sed in pagina superiore maculam determinatam, rubro-fuscam formans, minutissimis vel majoribus, irregulariter dispositis, primo epidermide tectis, subfirmis, hemisphaericis vel subplanis, demum libero-pulveraceis, dilute aurantiacis, postremo cito expallescens; sporis regulariter fere globosis vel rarissime subellipsoideo-globosis, episporio laevi, tenui, 2 mm crasso, subgranuloso-spinuloso, hyalinis vel pallidissime flavescens, 20 mm diam.; paraphysibus numerosissimis, clavato-guttulaeformibus, hyalinis, basi acutatis, membrana laevi, 40 mm long., 22 mm crass. Auf *Salix viminalis*, *alba*, *Helix*, *incana*, *lanceolata*, *monandra*, *nigricans*, *purpurea*, *retusa*, *rubra* und *silesiaca*. — B. Teleutosporen. *Melampsora acervulis hypophyllis*, eximie minutis obsoletisve, primo fusco brunneis, demum fusco-atris, postremo aterrimis, subverrucaeformibus, hemisphaericis, emersis, plus minusve dense gregariis, sine macula; sporis ut in *Melampsora Capraearum*, sed paullulo minoribus, irregulariter parallelogrammis, palliformibus, dilute fuscis, subdiaphanis, 30—34 mm long., 12—14 mm. crass., episporio laevi, 2 mm crasso. Auf *Salix alba*, *nigricans* und *retusa*.

4. *Melampsora Hartigii* Thüm. nov. spec. A. Stylosporen: Uredo acervulis hypophyllis, raro amphigenis sed interdum etiam ramulicolis, minimis, dense gregariis, hemisphaerico-convexulis, primo subfirmis, epidermide tectis, aurantiaco-luteis, postremo liberis pulveratisve, expallescens, sine macula in pagina inferiore sed maculam non limitatam, parvam, stramineo-flavam, demum fuscam in pagina superiore formans; sporis ellipticis vel rotundatis, regularibus, numerosis, flavidis, cito expallidis, 16—18 mm long., 12—14 mm crass., episporio granuloso-mucronulato, 2—2,5 mm crasso, achroo; paraphysibus numerosissimis, mixtis, clavatis, hyalinis, 30 mm long., 16 mm crass., membrana tenui, laevi. Auf *Salix acutifolia*, *cordata*, *daphnoides*, *mollissima* und *nigra*. — B. Teleutosporen nur von Hartig kurz beschrieben.

5. *Melampsora mixta* Thüm. nov. spec. A. Stylosporen: Uredo acervulis hypophyllis, mediis, dense gregariis, sed sine ordine dispositis, in pagina inferiore maculas nullas, in pagina superiore maculas subparvulas, rubroaurantiacas formans; primo epidermide tectis, subfirmis, demum liberis pulveraceisve, citissime expallescens; sporis ellipticis, plerumque basi verticeque minime acutatulis, episporio subgranuloso, non verruculoso-aculeato, tenui, 1,5—2 mm crasso, achroo, dilute flavidis demum hyalinis, 14—18 mm long., 12 mm crass.; paraphysibus subpaucis, fere globosis, basi cum processo parvulo, achrois, laevibus, 24 mm long., 20 mm crass. Auf *Salix triandra*, *capensis*, *hastata*, *longifolia* und *pyrolaefolia*. — B. Teleutosporen unbekannt.



6. *Melampsora Vitellinae* Thümen nov. spec. A. Stylosporen: Uredo acervulis hypo-vel etiam non raro epiphyllis, dense gregariis vel interdum confluentibus, aureis vel dilute aurantiaco-flavis, minutis, primo subfirmis, verrucaeformibus, demum liberis pulverosisve in macula amphigena, straminea, distincta sed non determinata, sporis ovoideis vel rotundo-ovatis numquam fere globosulis, primo aureis demum pallidis, episporio granuloso, tenui, vix 2—2,5 mm crasso, 26—28 mm long., 20 mm crass.; paraphysibus paucis, fere guttulaeformibus vel interdum quin etiam globosis cum processo vel propagulo tantulo ad basin, membrana laevi, 2 mm crassa, 30—36 mm long., 30 mm crass. Auf *Salix vitellina*, fragilis, lucida, pentandra. B. Teleutosporen nicht genauer bekannt.

7. *Melampsora Castagnei* Thüm. nov. spec. A. Stylosporen: Uredo acervulis plerumque amphigenis, numerosis, sed non dense gregariis, in pagina superiore maculas parvas, flavido-rubras demum fuscas formans, subtus epidermide primo tectis, demum liberis pulverosisve, in pagina superiore e contrario semper liberis, dilute aurantiacis sed cito expallescentibus; sporis maximis, ellipsoideis vel ovoideo-ellipticis, vel longe ellipticis, utrinque subangustatis, dilute flavescentibus cito pallidioribus, episporio 3—3,5 mm crasso, mucronulato, 34—40 mm long. 16—18 mm crass.; paraphysibus paucis, clavato-guttulaeformibus, achrois, 50 mm long., 24 mm crass., membrana tenui, laevi. Auf *Salix amygdalina* und *cuspidata*. Teleutosporen unbekannt.

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## Eingegangene neue Literatur und Sammlungen.

Bennett, A. W. A few last words on *Chara* (S. A. aus *Journal of Botany*, March 1879.)

Bennett, A. W. On the structure and affinities of *Characeae*. (S. A. aus *Journal of Botany*, July 1878.)

Nordstedt, O. *Botaniska Notiser*. 1879. No. 2. Enthält über Sporenpflanzen:

Eckstrand, E. V. Om groddbildningar hos de bladiga lefvermossorna. — Derselbe, Anteckningar öfver skandinaviska lefvermossorna.

Thümen und Voss, Neue Beiträge zur Pilz-Flora Wiens. (S. A. aus d. *Verhandl. d. k. k. zoolog. bot. Gesellschaft in Wien*. 1878.)

*The Journal of Botany*. 1879. Januar. Enthält Nichts über Sporenpflanzen.

Dasselbe 1879. April. Enthält über Sporenpflanzen:

Crombie, J. M. Correlation of the Lichens in

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