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NEW OR RARE PYRENOAMYCETEA FROM
WESTERN NEW YORK

BY

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NEW OR RARE PYRENOMYCETEAÆ FROM WESTERN
NEW YORK.

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The species here enumerated were collected at Lyndonville, N. Y., unless other locality is given. The numbers run on consecutively from the list of Pyrenomyceteæ of Orleans County, printed as pages 165-191 of this volume, to which this paper is supplementary.*

Among the Ophioboli are some species distinguished by having curved sporidia. The curves may occur at any point in the sporidium, from one-third to one-half its length. Some are straight while in the ascus, becoming curved only when free. Some of the species with curved sporidia have, also, one or more of the joints swollen, at a point varying with the species. Most of the species of this genus occur upon dead stems, and but rarely upon leaves. Hence the following species is deemed worthy of mention, inasmuch as it combines the features of curved sporidia, swollen joints, and foliicolous habitat.

355. *Ophiobolus sceliscophorus* Fairman, n. sp.

Perithecia minute, black, seated upon dead arid spots on the leaves; asci clavate-cylindrical, mostly bent, but occasionally straight, the curvature corresponding to a similar bend in the sporidia, 90-100 x 10 μ ; paraphyses not seen; sporidia filiform, curved, 10-11 septate, the joint at a distance of 30 μ from the end, (one-third the length), slightly swollen, hyaline, about the length of the ascus, 90 x 2½ to 3 μ . (Plate XX., Fig. 1.)

On leaves of *Phlox drummondii*, in garden, Lyndonville, N. Y., 1905. Etym. from Gr. skeliskos, a little leg, and therein, to bear.

*In reference to number 285 of the first list, *Othia morbosa* (Schw.) E. & E., Professor P. A. Saccardo writes from Padova Nov. 11, 1905, "J'observe que vous referez d'apres votre illustre am. Ellis le *Plowrightia morbosa* au genr. *Othia*, mais si vous pensez qu'il est un vrai parasite hypertrophisant vous resterez convenu qu'il est un type tres-distinct."

Number 331, *Lophiostoma pruni* E. & E., was found on decorticated branches of *Salix* on the beach of Lake Ontario at Shadicee, Orleans Co., Nov. 18, 1905. Det. Rehm. This is a *new habitat* for this species.

356. *Hypoderma ptarmicola* Fairman, n. sp.

Perithecia erumpent longitudinally, 1-4 mm. long, open when fresh, when dry almost closed, margin entire, regular, but sometimes curved, black externally, the interior reddish-brown to brown, and becoming sub-olivaceous when dry; asci clavate-cylindrical, narrowed at the apex and tapering to a long filiform stipe, $74-125 \times 10-13 \mu$, (averaging $80-90 \times 10 \mu$.); sporidia oblong, straight or curved, generally acutely pointed at one end, $33-35 \times 2-3 \mu$, nucleate at each end, and spuriously uniseptate from endochromatic division. (Plate XX., Fig. 2).

On dead stems of *Achillea ptarmica*, lying on ground in garden, Lyndonville, N. Y., 1905.

As a rule there are eight small nuclei in each end of the sporidium, but it can not be said that this is a constant feature. The asci are shaped like a tadpole.

This can not be the *Schizothyrium ptarmicæ*, common in Europe, upon *Achillea*, nor *Phacidium ptarmicæ* Schröter, which, sec. Feltgen, Vorstudien, I. Theil, No. 381, page 128, is a synonym of *Schizothyrium ptarmicæ* Desmazieres, for this is said to have oval spores, 10μ in diam., but may be the hysteriaceous representative found in this country.

357. *Leptosphaeria physostegiae* Fairman, n. sp.

Perithecia small, black, conical, erumpent, scattered or gregarious; asci oblong cylindrical, $80-85 \times 10 \mu$; sporidia overlapping uniseriate, 3-5 septate, slightly, or not at all constricted at the septa, light brown, oblong fusoid, nucleolate, $20-26 \times 6-7 \mu$.

On dead stems of *Physostegia virginiana* Benth., False Dragon-head, cultivated, in garden, Lyndonville, N. Y., Sept., 1905. The end cells are apt to be smaller and binuclear, and the middle cells larger and mononuclear.

358. *Sporormia leguminosa* Fairman, n. sp.

(Plate XXI., Figs. 1, 2, 3, 4, 5.)

Perithecia gregarious, elevating the surface of the pod into sub-hemispherical pustules, which are concolorous with the pod, and pierced at the summit by the ostiola, which vary from a sub-acute to a broad sub-compressed form; asci clavate-cylindrical, surrounded by numerous interwoven filiform paraphyses, $140-150 \times 15-16 \mu$; sporidia brown, when young marked by light colored longitudinal

bands, or streaks, which may be invisible in the older and opaque ones, quadrilocular, irregularly biseriate, straight, or curved, involved in mucus, $43-47 \times 10 \mu$; end cells ovate, 13μ long, middle cells barrel shaped, 10μ long. On the inner surface of pod of locust, *Robinia pseudacacia* L., lying on the ground, under shrubbery, in garden, Lyndonville, N. Y., October 3, 1905. This can not be referred to *Sporormia intermedia*, var. *lignicola* Ph. et Plow., for the asci are not as broad, the sporidia are smaller, and the ostiola are different, according to the description in Sylloge, and Berlese, Icones Fungorum, Tab. XXIX., Fig. 3. The light colored bands of the young sporidia are peculiar, we think, to this species.

A distinct group of fungi inhabiting dung has been proposed, the *Fimicoli*, yet it is well known that species of *Sordaria*, *Sporormia*, etc., are occasionally, even if rarely, found on decaying vegetable tissues. Among the species of *Sporormia*, described in Sylloge, volumes II. and IX., 44 species, only 5, or eight and eight-tenths per cent. are mentioned as occurring on plants. *Sporormia lignicola* Ph. & Plow., Sacc., Syll., II., p. 128, No. 3330 is on *Fraxinus*, and has sporidia $60 \times 14 \mu$. *Sporormia ulmicola* Pass. & Winter, Sacc., Syll., II., p. 128, is on elm and is provided with sporidia $38 \times 8 \mu$, while form *quercina*, with sporidia $40-50 \times 10 \mu$, is different from our specimen, in habitat and ostiola. *Sporormia gigaspora* Fuckel, on wood, Sacc., Syll., II., p. 132, No. 3342, has 8-celled sporidia. *Sporormia ticinensis* Pirota, Sacc., Syll., II., p. 132, No. 3343, is on *Populus*, and is also 8-celled. *Sporormia brassicæ* Grove, Sacc., Syll., IX., p. 818, No. 3332, on putrescent stalks of cabbage, *Brassica* sp., has sporidia $25-35 \times 4-5 \mu$. The "Sporormia spec.", on *Brassica*, described by Feltgen, in Vorstudien, I. Theil, Ascomycetes, p. 341, No. 1043, resembles Grove's species somewhat, having sporidia $25-27 \times 7 \mu$. Thus it appears that *Sporormia leguminosa* is, at least, different from non-fimicolous *Sporormiæ*, which have been described.

359. *Amphisphæria bertiana* Fairman, n. sp.

(Plate XX., Figs. 3 and 4.)

Perithecia gregarious in indefinite clusters, or rarely, scattered, large, $300-500 \mu$ diam., globose or ovate-globose, dull black, coarsely tuberculate-roughened, pierced by the prominent conical ostiola, which are lustrous polished black; contents of the crushed perithecia white; asci octosporous, narrow clavate-cylindrical, tapering to a

very long filiform stipe, surrounded by numerous filiform paraphyses, 125-150 x 5-6 μ : sporidia uniseriate, uniseptate, the septum being very broad and dark brown, elliptical, ends obtusely rounded, not constricted at the septum, with a single large nucleus in each cell (which is very plainly seen in the young smoky-hyaline sporidia, but also observable in older specimens, by close inspection of the cell contents, which are lighter than the very dark brown septa and external cell walls), brown or olivaceous, 10-12 x 3-4 μ . In moist cavities on the end of a rotten log, in the woods, Lyndonville, N. Y., Oct., 1905. Etym. *bertiana* from the resemblance of its perithecia to the rough tuberculate ones of *Bertia moriformis* Tode (DeNot). I have re-examined the specimens of *Amphisphaeria granulosa* E. & E., in the original collection, and find that *Amphisphaeria bertiana*, while having sporidia about the same size, differs in larger, more closely gregarious perithecia, larger, shining ostiola, in long stipitate asci, and in sporidia not narrowed toward the ends, in equal cells, not constricted, and having, also, nuclei. It differs from *A. bispherica* (C. & E.), in larger, blacker perithecia, and prominent ostiola, and in long stipitate asci, and sporidia not constricted. It was associated with *Helotium citrinum* (Hedw.), and a *Nectria* with scattered perithecia having uniseriate, oblong-elliptical, uniseptate sporidia, 13 x 5-6 μ . On the blackened surface of the wood on which the fungus grew there were found many of the dark, evidently discharged sporidia of the *Amphisphaeria*, and a hyphomycetous fungus with septate, branching, hyaline hyphæ, 6 μ wide, bearing at the tips, hyaline to smoky-hyaline conidia, which are oblong elliptical, 2-septate, 20 x 6-7 μ , which may be provisionally designated *Dendryphium* (?) *intermixtum*. Plate XX., Fig. 3.

360. *Leptospora stictochætophora* Fairman, n. sp.
(Plate XX., Figs. 5 and 6).

Perithecia scattered or gregarious, small, clothed with bristles which are light brown when young, becoming darker, and which are straight, not denticulate, acute tipped, with a light streak through the center of the hairs, (due, probably, to a parting or cleft in the hair, or formation of a channel, thereby giving the appearance of a stinging hair of a plant, or the sting of a bee (*Bombus*) and its poison channel), 150-250 x 7-13 μ (measurements of the hairs); asci broad fusoid-oblong, 8-spored, short stipitate, 80-90 x 10-13 μ ; paraphyses indistinct in the crushed cell contents, which are white; sporidia irregularly

biseriate, straight or curved, cylindrical or large allantoid, ends sub-obtusely rounded, with a large oblong-elliptical nucleus in each end, hyaline, $20-27 \times 4-6 \mu$. Ostiolum concealed by the dense tomentum, but not ribbed. Etym. *stictochætophora*, bearing stinging bristles, from Greek, *stizein*, to puncture or prick, *chaite*, (N. L., *chæta*,) a bristle, and Gr. *pherein*, to bear. On hard surface of decorticated maple twig, on ground, in woods, Lyndonville, N. Y., 1905. The sporidia resemble those of *Lasiosphæria stupea* E. & E., N. A. Pyr., p. 150 and plate 19, but are *hyaline* and much smaller, the asci are also smaller, and there was no appearance of ribbed ostiola, so that all these points, and the peculiar structure of the hairs, entitle the species to specific rank.

361. *Trichosphæria interpilosa* Fairman, n. sp.

Perithecia scattered, minute, ovate-globose, sparingly clothed with dark brown hairs, which are lighter at the tips, with a minute papilliform ostiolum, asci clavate-cylindrical, $77-93 \times 10 \mu$; sporidia obliquely uniseriate, oblong oval to ovate, continuous, granular, occasionally assuming a sub-sigmoid form from pressure in the asci, hyaline, $13-14 \times 6-7 \mu$. On rotten wood, Lyndonville, N. Y., Oct., 1905. The fungus occurs on lighter areas of the wood, and seems to rest upon a thin brownish subiculum, and the surface of the wood is covered with erect brownish hairs, whence the specific name, *interpilosa*. On the same stick, on blacker areas, were to be seen perithecia with blackish hairs, and having asci oblong clavate, paraphysate, $83-85 \times 12-13 \mu$, sporidia fusoid, hyaline, $27 \times 4-6 \mu$, with no visible septa. This was considered to be an immature form of *Acanthostigma decastylum* (Cooke), which Dr. William G. Farlow in Bibliographical Index of North American Fungi, Vol. I., Part I., page 3, refers to *Acanthostigma perpusillum*, DeNot.

362. *Amphisphæria abietina* Fairman, n. sp.

Perithecia scattered, or very loosely gregarious, minute, depressed sub-hemispherical, thin, when young and immature elevating the surface of the bark into light brown or concolorous pustules, when maturer becoming sub-erumpent, black at the apex, and readily removable from the surface, leaving therein a depression with flattened base, having the same color as the interior of the bark; ostiola minute, papilliform; asci oblong cylindrical, $100-110 \times 20 \mu$; paraphyses filiform, nucleolate; sporidia 7-8 in an ascus, irregularly biseriata, elliptical, rounded at the ends, slightly or not at all constricted at the septum,

when young smoky hyaline, nuceolate or granular, becoming brown, 23-28 x 6-10 μ , and uniseptate. On smooth areas on bark of hemlock, *Tsuga canadensis* Carr., in woods, Lyndonville, N. Y., Nov., 1905. This species is ambiguous between *Didymosphæria* and *Amphisphæria*. At first it is covered and wholly like *Didymosphæria* but with age becomes more superficial, and is partially denuded, with sporidia not broadly elliptical, nor as dark as *Didymosphæria*, but narrow-elliptical and smoky-hyaline to brownish in color.

363. *Diaporthe ailanthi megacerasphora* Fairman, n. var.

Perithecia in a yellow stroma, formed of the scarcely altered substance of the wood or bark, valsoid, black, with very long, 2-4 mm., black, simple or branched, spreading, flexuous or contorted, tuberculate roughened, sub-spinous ostiola, which are sometimes knobbed, but generally narrowed to a sub-acute, translucent, light brown tip, and which pierce the bark singly, or in erumpent fascicles of 1 to 20; asci clavate oblong, 45 x 11-12 μ ; sporidia irregularly biseriate, hyaline, oblong fusoid, acute or rounded at the apices, at times sub-constricted (at length, uniseptate?), 4-guttulate, usually with one half a little larger than the other, 10-13 x 3 μ .

Etym. from Greek, megas, long, and cerasphora, horn-bearing, from the fungus bearing very long ostiola. On dead and rotting limbs of *Ailanthus glandulosus* Desf., Lyndonville, N. Y., Oct., 1905. The perithecia leave a deep excavation in the wood when picked out, and the contents are white, and waxy when fresh, and sometimes push up the bark above them and underlie it. No distinct black circumscribing line was noticed around the stroma. In the description of *Diaporthe ailanthi* Sacc., in North Am. Pyrenomycetes, Ellis and Everhart say the ostiola are quite variable and are "sometimes $\frac{1}{2}$ mm. long." In our variety they are very much longer. In the *Sylloge*, Vol. I, p. 621, it is stated that the nucleus is yellow, that of var. *megacerasphora* is white. The peculiar tuberculate-roughened ostiola, with hyaline to light brown apices, and great length of the ostiola render this a well marked variety. The surface of the wood is covered with a thin, plane black crust. An interesting phenomenon was noticed in this species in the ejection of the sporidia. Normally these are ejected through the ostiola, at the apex, after escaping from the ascus during rupture, or *ascorhexis* (askos, a sac or ascus, and rhexis, a rupture of a vessel or organ). The ejaculation of the sporidia has received various names, according to the language of

the observer. It is called ejection, or ejaculation of the sporidia, *herausschleuderung*, etc. A name is here proposed which is universally applicable, viz., *sporobolia* (Greek, *sporos*, and *bolia* from *bole*). Following Zopf, in *Die Pilze*, we may divide this into, *a*, simultaneous sporobolia, *b*, succedaneous sporobolia. A small piece of the black crust, and a long ostiolum were removed from the wood and placed in a drop of water on the slide, when the microscope revealed the curious fact that the sporidia were escaping from the lower, or cut end of the ostiolum, and not from the tip. This retropulsion of the sporidia, or *retrosporobolia*, was probably caused by endosmosis taking place, and the hydrostatic pressure forcing the sporidia stored up in the ostiolum to escape along the lines of least resistance, by way of the cut lower end of the ostiolum, which was larger, and, presumably, more pervious. Plate XX., Fig. 7 shows a branched ostiolum and the act of retrosporobolia, which was succedaneous.

364. *Amphisphæria æruginosa* Fairman, n. sp.

(Plate XXII., Figs. 1, 2, 3, 4.)

Perithecia scattered, or gregarious, minute, about 80 to 100 μ diam., depressed hemispherical, erumpent, black, with a minute papilliform ostiolum; asci cylindrical, 4-8 spored; sporidia uniseptate, overlapping uniseriate, straight or curved, narrow-elliptic, scarcely constricted at the septum, ends sub-obtuse, smoky-hyaline at first, becoming pale brown, $13-15 \times 2\frac{1}{2}-3\frac{1}{2} \mu$. On old board (*Tilia*) lying on the ground in school yard, Lyndonville, N. Y., Nov., 1905. Many of the sporidia are shrivelled, and the lower cell is contracted, so that a club-shaped effect is produced. The surface of the board is brown, not black as in *A. atrograna* (C. & E.), and the interior of the wood is stained green, as if caused by *Chlorosplenium æruginosum*. Specimens were submitted to Dr. H. Rehm, Neufriedenheim, München, and he writes, "wächst offenbar auf grünfaulem Holz durch *Chlorosplenium æruginosum*, und steht der *A. atrograna* (C. & E.), zunächst, verschieden besonders durch kleinere Perithechien. Ist als nova species zu erachten, und von Ihnen zu veröffentlichen." The following species were sent to Dr. Rehm for identification, and found to be new. He has kindly allowed me to publish them:

365. *Didymella arthoniæspora* Rehm, n. sp.

Perithecia sessilia, gregaria, hemisphærica, vix papillata, ostiolo perspicuo pertusa, nigra, ad basim hyphis nonnullis brevibus, fuscis obsessa, c. 100 μ diam., parenchymatice fuscidule contexta, sicca

collabentia ; asci oblongi, apice rotundati, sessiles, 35 x 15 μ , 8-spori ; sporæ sub-clavatæ, medio septatæ, vix constrictæ, cellula superiore latiore, utraque 1 magniguttata, hyalinæ, 18-20 x 6-7 μ , distichæ ; paraphyses articulatæ, hyalinæ, 2.5 μ cr. (*Didymella stenocarpi* Tassi-Sacc. Syll. XVI. p. 480-proxima, sporis majoribus et paryphysis distinctis diversa). On bark of some fallen tree in the woods, Lyndonville, N. Y., autumn of 1905, C. E. Fairman, coll.

366. **Amphisphæria polymorpha** Rehm, n. sp.

Perithecia dispersa, primitus innata, dein emergentia, globosiconoidea, plus minusve elongato-papillata, atra, glabra, 0,5 mm. diam., ad basim hyphis crebris, ramosis, fuscis, 3-4 μ cr. obsessa, parenchymatice contexta, subcarbonacea ; asci elongato-fusiformes, apice rotundati, crasse tunicati, 210-250 x 30-35 μ , 4-8 spori ; sporæ fusiformes, rectæ, primitus utrinque acutissimæ, episporio crasso instructæ, medio septatæ, vix constrictæ, utraque cellula guttulis oleosis dilute flaveolis repletæ, hyalinæ, demum brunneolæ, versus apices minus acutatae, medio paullum constrictæ, evanidis guttulis oleosis, 75-80 x 12-20 μ , distichæ ; paraphyses ramosæ, septatæ, hyalinæ, 2 μ cr. ("Polymorpha propter" formam et colorem variantem juvenilem ad senilem. Diversa ab *A. botulispora* (Cooke) Sacc. cellulis sporæ æqualibus, ab *A. closterophora* B. & Br., peritheciis multo minoribus, sporis medio vix constrictis). On bark of fallen log (probably *Ulmus*), in a wooded, marshy ravine, Lyndonville, N. Y., autumn of 1905, C. E. Fairman coll. The Latin diagnoses were furnished by Dr. Rehm.

367. **Rosellinia linderæ** Peck.

Peck, 49th Rep., 1896, page 24. On dead stems of *Lindera benzoin* Blume, Oct. 14, 1905. Asci long cylindrical, long stipitate, with filiform paraphyses ; sporidia uniseriate, oblong elliptical, brown, 10 x 3 μ . The very thick walls of the perithecia have a layer of brown cells in the interior.

368. **Hyoxylon rubiginosum** (Pers.) Fr.

On birch chips, *Betula lutea*, on the ground in the woods, Oct., 1905. Asci clavate-cylindrical, 83-85 x 7-8 μ ; sporidia uniseriate, elliptical, continuous, brown, when young binucleate, 10 x 4 μ .

369. **Nummularia clypeus** (Schw.) Cke.

E. & E., N. Am. Pyren., page 627. On trunks of fallen trees in the woods, Ridgeway, N. Y., autumn of 1905. Det. Peck.

370. *Ceratostomella cirrhosa* (Pers.) Sacc.

E. & E., N. Am. Pyr., page 196. On rotten limbs on the ground in woods, October 24, 1905. Perithecia surrounded by septate brown hairs, and provided with a long cylindrical ostiolum; asci cylindrical, short stipitate, straight or curved, $53-57 \times 6-7 \mu$; sporidia narrow oblong cylindrical, continuous, greenish hyaline, $10-12 \times 2-3 \mu$.

371. *Zignoella pulviscula* (Curr.) Sacc.

On chips of *Betula lutea* Michx. Woods, Oct., 1905. Probably a variety of *Zignoella ovoidea* (Fr.), which in Lindau, Hilfsbuch für das Sammeln der Ascomyceten, is given as the species found in Germany on *Betula*. Perithecia minute, black, hemispherical, minutely roughened; asci clavate cylindrical, short stipitate, paraphysate, straight or curved, $73-80 \times 10 \mu$ (some were found long tapering stipitate, $110 \times 10 \mu$); sporidia overlapping uniseriate, or irregularly biseriate, fusoid, straight, or curved, uniseptate, occasionally granular and nucleolate, $25 \times 3-4 \mu$, hyaline.

372. *Cryptospora caryæ* Peck.

Peck, 38th Rep., p. 106, tab. 2, Figs 28-31. N. A. Pyr., p. 536. On dead branches of *Carya*, Oct. 13, 1905. Asci $100-120 \times 12-13 \mu$, clavate cylindrical; sporidia granular nucleate, spuriously septate, hyaline, $37 \times 6-7 \mu$, a little smaller than Ellis states. Needs to be studied in all its stages of growth, so as to be compared with *Pseudovalsa fairmani* E. & E.

373. *Hypomyces insignis* B. & C.

E. & E., N. A. Pyr., p. 76. Syn. *Hypomyces transformans* Peck, in 39th Rep. N. Y. State Museum, page 57. On *Cantharellus*, in the woods, August, 1905. In our specimens the sporidia are hyaline, uniseptate, apiculate at each end, $33 \times 6-7 \mu$. Ellis says 37μ long, but Peck makes them $33-38 \mu$ long.

374. *Hypocrea contorta* (Schw.) B. & C.

Syn. *H. Schweinitzii* (Fr.) in N. A. Pyr., p. 79. On dead branches, in the woods, 1905. Det. Peck.

375. *Hypocrea gelatinosa* (Tode) Fr., var. *viridis* Tode.

E. & E., N. A. Pyr., p. 84. On rotten log, woods, Autumn, 1905. The stroma, at first, is of a light transparent color, which turns yellow, then becomes pulverulent green on the surface, from the greenish sporidia. Accompanied by *Trichoderma viride* Tode, conidial state.

376. *Gibberella saubinettii* (Mont.) Sacc.

On dead grass stems, in the woods, Sept. 7th, 1905. Perithecia conoid, bluish when crushed; sporidia triseptate, slightly constricted at the septa, hyaline, 20-27 x 4 μ .

377. *Lophiostoma cæspitosum* Fuckel.

On dry corticated branches of *Ulmus*.

378. *Lophiostoma simillimum* Karst.

Syn. *Leptosphaeria achilleæ* Sacc., *Lophiostoma bicuspidatum* Cooke. Sacc., Syll., vol. II., p. 707, Berlese, Icones Fungorum, Fasc. I., p. 12 and Tab. VII., Fig. 5. On dead stems of cultivated *Helianthemum mutabile*, on the ground, in garden, Sept. 15th, 1905. The fungus blackens the stems wherever it appears. Asci elongated, clavate-cylindrical, 75 x 12 μ ; sporidia 5-septate, straight, or curved, armed at each end with a hyaline appendage, brown, 20 x 6-7 μ .

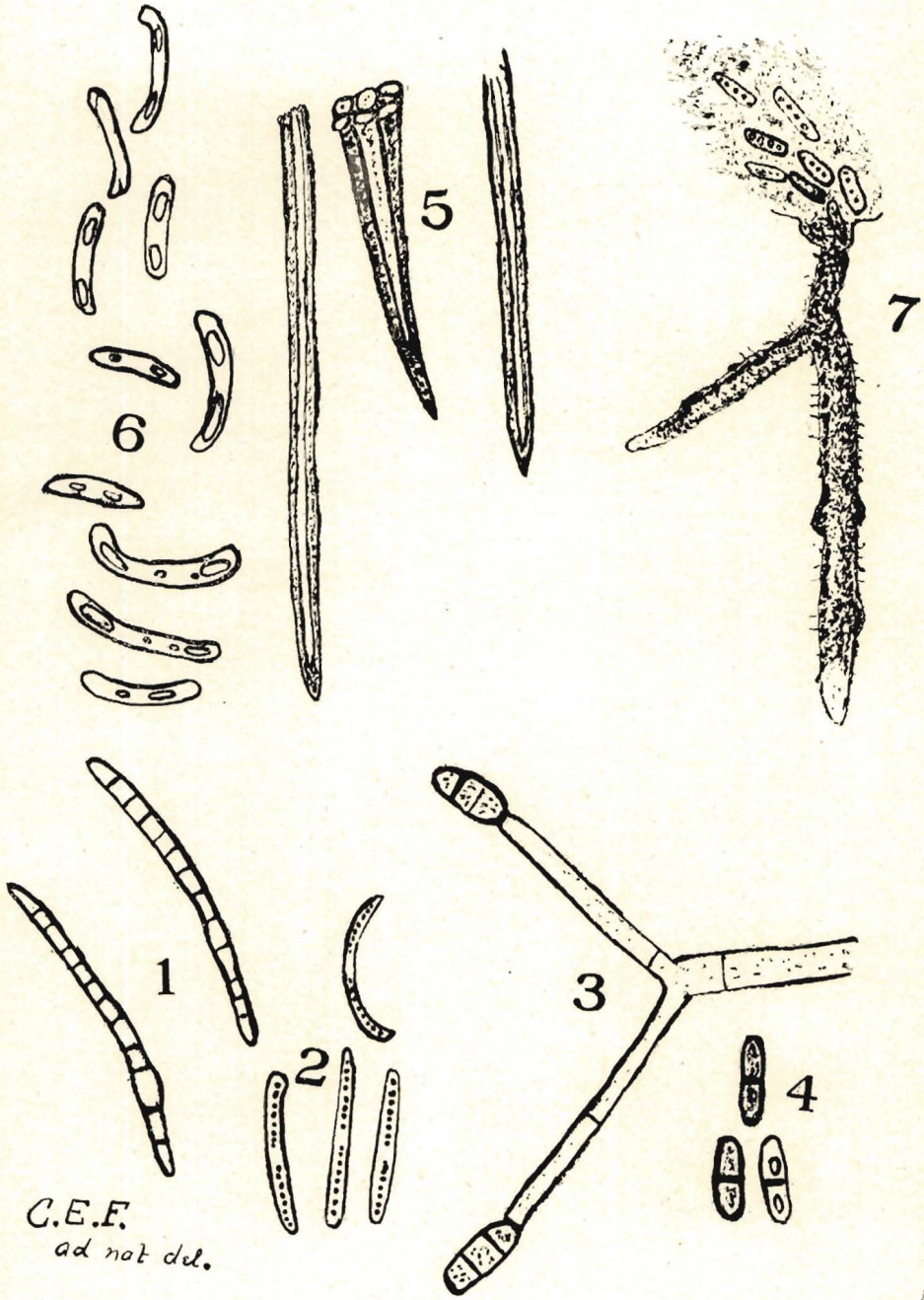
379. *Hysterographium variabile* (C. & P.) Sacc.

On dead wood. Det. Peck.

380. *Hysteropatella prostii* (Duby) Rehm, var. *vixvisibilis*

Gerard. Rehm, Discom., p. 267. Cfr. Shear, New York Fungi, 183.

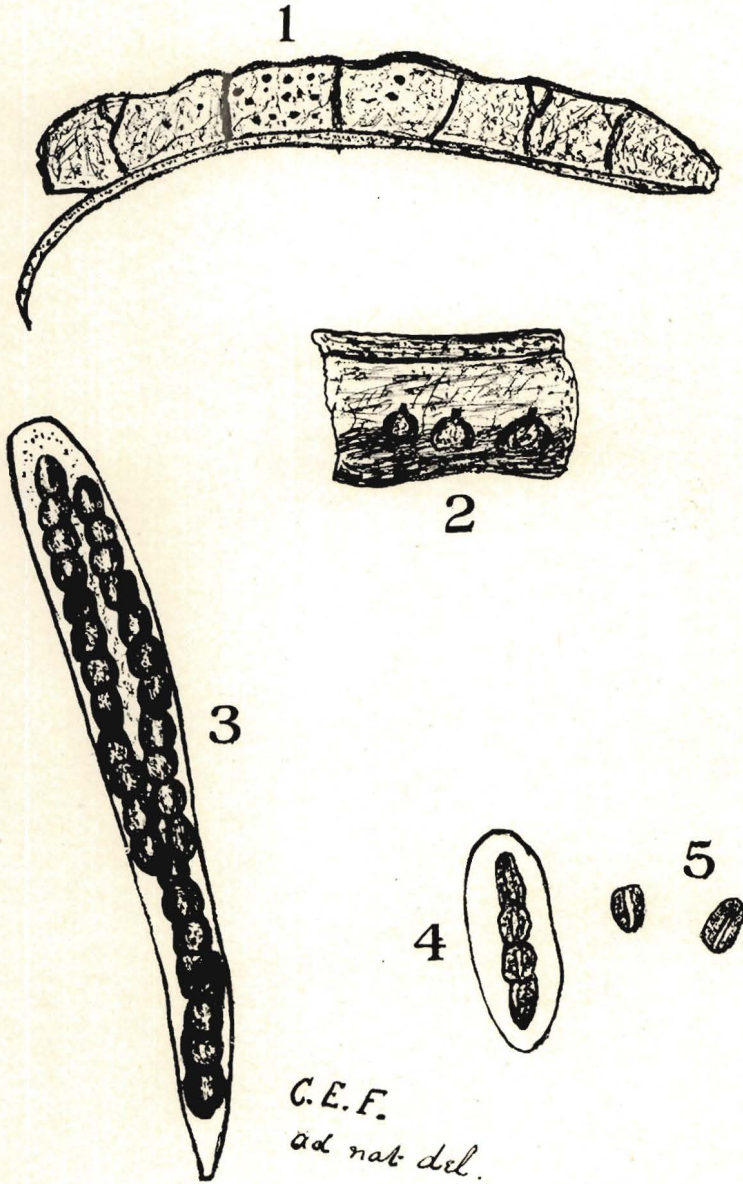
On bark in the woods, Autumn, 1905. Det. Rehm.



C.E.F.
ad nat del.

Fig. 1.—Sporidia of *Ophiobolus sceliscophorus*.
 Fig. 2.—Sporidia of *Hypoderma ptarmicola*.
 Fig. 3.—Hyphomycetous growth accompanying *Amphisphaeria bertiana*.
 Fig. 4.—Sporidia of *Amphisphaeria bertiana*.
 Fig. 5.—Hairs of the perithecia of *Leptospora stictochatophora*.
 Fig. 6.—Sporidia of the same.
 Fig. 7.—Ostium of *Diaporthe aianthi*, illustrating repulsion of the sporidia.

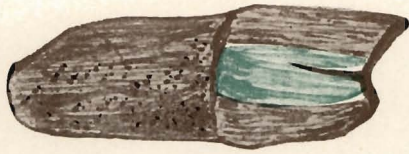
PYRENOZYCETEÆ.



C.E.F.
ad nat. del.

Fig. 1.—Pod of *Robinia* with the fungus, *Sporormia leguminosa*.
Fig. 2.—Portion of the same more highly magnified.
Fig. 3.—An ascus and sporidia.
Fig. 4.—A sporidium, involved in gelatine.
Fig. 5.—Two cells of the sporidium showing the light-colored bands across the face.

SPORORMIA LEGUMINOSA.



1



2



3



4

$\frac{1}{10}$ mm.

Fig. 1. Section of basswood board, showing perithecia. Natural size.
 Fig. 2. Under surface of the same board, showing the green discoloration.
 Fig. 3. Fragment, highly magnified.
 Fig. 4. Sporidia of the fungus, showing at *a* some desiccated and shrivelled specimens, somewhat club shaped.

AMPHISPHERIA ÆRUGINOSA FAIRMAN.

