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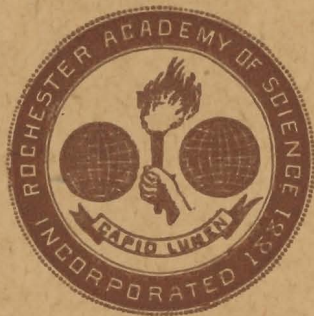
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THE PYRENOAMYCETÆ OF ORLEANS COUNTY, N. Y.

BY

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THE PYRENOMYCETEÆ OF ORLEANS COUNTY,  
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BY CHARLES E. FAIRMAN.

(Read by title, February 13th, 1905.)

The Pyrenomyceteæ or Black Fungi belong to the division Teleomycetæ of Saccardo. They are also called perfect or higher fungi, in contradistinction to the metagenetic or imperfect fungi, whose relationship to the higher fungi is in some instances known, but for the most part remains unknown. By means of culture and inoculation experiments, this relationship has been more thoroughly worked out by mycologists among the Uredineæ or Rust Fungi, and there is a pressing need and an opening field of work in tracing the form relatives of the Black Fungi. Often the presence of deuteromycetous forms in association with the pyrenomycetous has led to the assumption that they are in some manner connected. While the life history of some black fungi, from secondary to perfect forms, has been traced, the demand of the present is for less assumption and more direct experiments by the scientific method.

The pyrenomycetes are parasitic or saprophytic. The parasitic forms belonging to the mildews have often been treated by themselves in local floras of parasitic fungi, as, for instance, by Prof. T. J. Burrill in Parasitic Fungi of Illinois, and Dr. J. J. Davis, in his Parasitic Fungi of Wisconsin. Less attention has been given in local lists to the more numerous saprophytic pyrenomycetes. The present enumeration embraces both parasitic and saprophytic forms.

There may be many roads into the field of pyrenomycetology,

\*EDITORIAL NOTE.—The present paper is the fourth of a series by Dr. Fairman on the cellular cryptogams of our region, the three previously published being entitled "Fungi of Western New York" (Vol. I, pp. 44-54 of these Proceedings), "Hymenomyceteæ of Orleans County" (Volume II, pages 154-167), and "Puff Balls, Slime Moulds and Cup Fungi of Orleans County" (Proc., Vol. III, pp. 206-220). The numbering of the species is consecutive throughout these articles.

but the following, which the author travelled, has been ever full of opening vistas, pleasant surprises and happy work. He started on his mycological trip in the autumn, among the mildews. In autumn we often find the leaves of living plants overrun by the white mycelium of mildew. If we examine a leaf thus infected, closely and with a lens, we may find, scattered among the mycelial fibres or on the surface of the leaf, minute black dots like grains of black pepper. If we wet such a surface with dilute alcohol, to free from air bubbles, and transfer one or two of these black specks and a bit of the accompanying mycelium to a drop of water on a slide; and cover with a cover glass, then examine under a microscope, we shall see a globe-like body surrounded by appendages. This fruiting globe-like body is called the perithecium. If with gentle pressure upon the cover glass we crush a perithecium we may see it burst asunder and some oval sac-like bodies, called asci, escaping from the rent. Within these sacs we may also see some rounded forms which are the spores,—ascospores they are called from being contained in asci. They are also termed sporidia. As we continue our study of other forms of mildew we shall find variations in mycelium, perithecia and appendages, asci and sporidia. After we have studied the various forms of parasitic pyrenomycetes during the fall and winter months we shall be in a position to consider the saprophytic members upon wood, bark, dead stems, and decaying vegetation, the following March and April, months especially favorable for their collection. We shall find that the saprophytic pyrenomycetes also have perithecia, asci, and sporidia, differing in structure from the forms we observed in the mildews, and from other saprophytic forms. While some are superficial, many are immersed in bark or wood, or in a special matrix, called the stroma, from which they may erupt. Thus little by little we shall advance in our knowledge. The following represent the morphological features whose variation and resemblances we seek to study in descriptive pyrenomycetology :

1. Mycelium and subiculum.
2. Stroma.
3. Perithecium.
4. Asci.
5. Paraphyses.
6. Sporidia.

The apparatus and materials necessary for the study are not extensive. There are needed :

A microscope.

The optical combination which the author uses contains a Gundlach  $\frac{1}{4}$  obj. of  $75^\circ$ , a separable  $\frac{3}{8}$  ds, and a Bausch and Lomb  $\frac{1}{12}$  homogeneous immersion.

An accurate micrometer.

Camera lucida.

Pocket lens.

Sharp knives.

The following books are valuable :

Ellis and Everhart's North American Pyrenomycetes.

The Reports of the State Botanist of N. Y., Charles H. Peck.

Saccardo's Sylloge Fungorum.

Berlese, Icones.

Farlow and Seymour's Host Index.

The statement of Cooke remains true, viz. :

"The life-history of the majority of species has still to be read, and the prospects of new discoveries for the industrious and persevering student are great. All who have as yet devoted themselves with assiduity have been in this manner rewarded. The objects are easily obtainable and there is a constantly increasing infatuation in the study."

In the present list the numbers run on consecutively from the author's lists previously published in the Proceedings of the Rochester Academy of Science. At the time of their collection the following numbers had not been reported from the state, viz., 224, 228, 235, 236, 237, 246, 252, 261, 271, 272, 276, 283, 284, 295, 298, 299, 302, 304, 305, 309, 313, 325, 326, 330, 331, 334, 336, 339, 347, 348, 349, 352, 353, 354. Some of the above have been reported in Prof. Peck's reports, since their collection. The following numbers are the new species of Pyrenomyceteae found here, viz., 237, 252, 283, 295, 302, 309, 331, 336, 347, 348, 349, 353 and 354.

In the present list the following are the proposed new species, viz., 336, 348, 349, 353, 354.

## PYRENOMYCETÆ FRIES.

## Fam. I. PERISPORIACEÆ Fries.

## Subfam. I. ERYSSIPHEÆ Lev.

## I. AMEROSPORÆ. Sporidia ovoid, continuous, hyaline.

## SPHÆROTHECA Lévillé 1851.

200. *Sphærotheca castagnei* Lévillé. Pk. 25 Rep. page 94. Sacc. Syll. p. 4. Burrill, Parasit. Fung. Ills., p. 400. Also in N. A. Pyr., p. 8. On *Bidens frondosa*. 1885.

201. *Sphærotheca humuli* (D. C.) Burrill. Burrill, Par. Ills. p. 400 and N. A. Pyr. p. 5. On *Agrimonia eupatoria*.

202. *Sphærotheca mors-uvæ* (Schw.) B. & C. Burrill, Par. Fung. Ills., p. 399 and N. A. Pyr., p. 7. On cultivated gooseberry, forming "gooseberry mildew."

## ERYSSIPHE Hedwig 1851.

203. *Erysiphe communis* (Wallr.) Fr. Pk. 22 Rep., p. 101. Burrill, Par. Fung. Ills., p. 402 and N. A. Pyr., p. 10. *Erysibe polygoni* Schroeter, 1893, sec. Feltgen in his Vorstudien zu einer Pilz-Flora des Grossherzogthums Luxemburg, 1 Theil, Ascomycetes, no. 1095. On *Ranunculus abortivus*, in woods, July 1886. On *Delphinium elatum*, Bee Larkspur, July 1886.

204. *Erysiphe cichoracearum* DC. Burrill, Par. Fung. Ills., p. 404 and N. A. Pyr., p. 12. *Erysiphe lamprocarpa* in Pk. 23 Rep. p. 65. On *Aster macrophyllus*, July, 1886. The form which has been called *Erysiphe phlogis* Schw. was found, July 20, 1886, on leaves of cultivated Phlox.

205. *Erysiphe graminis* DC. Burrill, N. A. Pyr., p. 15. *Erysibe*, Feltgen no. 1100. Only the conidial stage, *Oidium monilioides* Lk., was found on grass leaves, June, 1886.

## UNCINULA Lévillé 1851.

206. *Uncinula necator* (Schw.) Burrill. Burrill, N. A. Pyr., p. 15. *Uncinula ampelopsidis* Peck in Trans. Alb. Inst., VII, p. 216; Pk., 25 Rep., p. 96. On leaves of *Ampelopsis quinquefolia*, Aug. 2nd, 1886. The form on grape leaves, sometime designated *Uncinula americana* Howe, was found Oct. 1885.

207. *Uncinula macrospora* Peck. Peck, Trans. Alb. Inst., p. 215, Vol. VII. and 25 Rep., p. 96. Burrill, Par. Fung. Ills., p. 408

and N. A. Pyr., p. 18. On leaves of some species of *Ulmus*, Aug. 3, 1886.

208. *Uncinula flexuosa* Peck. Peck, Trans. Alb. Inst., VII, p. 215. Burrill, Par. Fung. Ills., p. 408 and N. A. Pyr., p. 16. On leaves of horse chestnut, *Æsculus hippocastanum*, Oct., 1885.

209. *Uncinula circinata* C. & P. Erysiphei of U. S. in Jour. Bot., 1872. Peck, 25 Rep., p. 96. Burrill, Par. Fung. Ills., p. 408 and N. A. Pyr., p. 17. On leaves of *Acer*, Oct., 1886.

210. *Uncinula clintonii* Peck. Peck, Trans. Alb. Inst., VII, p. 216 and 25 Rep., p. 106. Burrill, N. A. Pyr., p. 15. On leaves of *Tilia americana*, Sept. 26, 1886.

211. *Uncinula salicis* (DC.) Winter. Burrill, N. A. Pyr., p. 19. Feltgen, Ascom. no. 1111. *Uncinula adunca* in Pk., Rep. 23, p. 65. On leaves of *Salix* sp., Oct. 1, 1891.

#### PODOSPHÆRA Kunze 1823.

212. *Podosphæra oxyacanthæ* (DC.) DeBary. Burrill, Par. Fung. Ills., p. 413 and N. A. Pyr., p. 21. In Europe this is often referred to *Podosphæra tridactyla* DeBary, e. g. Feltgen, Asc. no. 1092. On leaves of cultivated cherry.

#### MICROSPHÆRA Lévillé 1851.

213. *Microsphæra russellii* Clinton. 26 Rep. N. Y. State Mus. p. 80. Burrill, Par. Fung. Ills., p. 415 and N. A. Pyr., p. 23. On leaves of the yellow wood sorrel, *Oxalis*, Aug., 1886. Rare.

214. *Microsphæra alni* (DC.) Winter. Burrill, Par. Fung. Ills, p. 421 and N. A. Pyr., p. 27. Feltgen No. 1109. Several forms found which have been referred by botanists to different species.

(a). On maple-leaved *Viburnum*, Aug., 1886. This is what Howe published as *Microsphæra viburni* in Torrey Bull., V, p. 43, and is probably the same as *Erysiphe viburni* Duby.

(b). On leaves of *Fagus americana*, Aug. 1886. Often called *Microsphæra penicillata* Lev.

(c). On leaves of *Syringa vulgaris*. This is the form denominated *Microsphæra friesii* Lev.

(d). On leaves of cultivated *Lonicera*, July, 1886. This form has been referred to *Microsphæra dubyi* Lev. In our specimens the appendages are longer than stated in the books. Feltgen refers the mildew which occurs on *Lonicera xylosteum* in the Grand Duchy of Luxemburg to *Microsphæra loniceræ* Winter (Feltgen No. 1106), and

the form on *Lonicera tartarica* to *Microsphæra chrenbergii* Lév., (Feltgen No. 1110). Not having these European forms for examination we leave our specimens where Prof. Burrill placed them in N. A. Pyr.

215. *Microsphæra diffusa* C. and P. Pk., 25 Rep., 95. Burrill, N. A. Pyr., p. 24. On leaves of *Desmodium*, Oct 10th, 1891.

216. *Microsphæra grossulariæ* (Wallr.) Lév. Burrill, N. A. Pyr., p. 24. *Microsphæra vanbruntiana* Ger., in Pk., 28 Rep., p. 64. Feltgen, No. 1108. On leaves of *Sambucus canadensis*, Aug. 4, 1886.

217. *Microsphæra quercina* (Schw.) Burrill. Burrill, Par. Fung. Ills., p. 324 and N. A. Pyr., p. 28. Peck, 28 Rep., p. 64. On leaves of some *Quercus*, Sept. 1900.

#### PHYLLACTINIA Lév. 1851.

218. *Phyllactinia suffulta* (Reb.) Saccardo. Burrill, N. A. Pyr., p. 20. On leaves of *Celastrus scandens*, Oct. 1, 1891 (Miss L. A. Weld); and on leaves of *Carpinus*. On leaves of *Ulmus* and *Hamamelis*, Oct. 1900. Common.

### Subfam. II. PERISPORIÆ Sacc.

#### EUROTIIUM Link.

219. *Eurotium herbariorum* (Wigg.) Link. Peck, 23 Rep., p. 65. E. & E., N. A. Pyr., p. 57. *Mucor h.*, Wigg., 1780. *Aspergillus herbariorum* Schroeter, 1893, in Feltgen, Asc. No. 1130. On mouldy plants.

### Fam. II. SPHÆRIACEÆ Fries.

#### Sect. I. ALLANTOSPORÆ Sacc.

Sporidia continuous, cylindrical, allantoid or sausage-shaped, hyaline.

#### FRACCHIÆA Sacc.

220. *Fracchiæa callista* (B & C.) Sacc. *Sphæria callista*, Pk., 28 Rep., p. 77 and 34 Rep., p. 58. *Fracchiæa* in E. & E., N. A. Pyr., p. 244. On bark of *Cornus*. Also reported from Western New York in Saccardo's Sylloge (Buffalo, Clinton).

#### QUATERNARIA Tulasne 1862.

221. *Quaternaria quaternata* (Pers.) Schroeter 1897. In Peck's 25th Rep., p. 103 called *Valsa quaternata*. *Quaternaria*

*persoonii* Tul. in Sacc. Syll., I., p. 106. *Valsa quaternata* Pers., E. & E., N. A. Pyr., p. 480. Ellis, N. A. F. 175. Feltgen, No. 498. On *Acer* and *Cornus*.

## VALSA Fries 1849.

222. *Valsa nivea* (Hoff.) Fries. Pk., 22 Rep., p. 98. N. A. Pyr., p. 484. N. A. F. 869. Feltgen, No. 541. On dead branches of *Populus*. April, 1888.

223. *Valsa linderæ* Peck. Pk., 29 Rep., p. 59. N. A. Pyr., p. 470 and p. 739. On dead branches of *Benzoin*, April, 1889.

224. *Valsa ligustri* (Schweinitz) Schroeter 1897. *Sphæria ligustri* Schw. 1835. *Valsa cypri* Tul. in N. A. Pyr., p. 482. *V. ligustri*, Feltgen, No. 187. On dead branches of California Privet, *Ligustrum ovalifolium aureum*, June 1895. Sporidia only 7-10  $\mu$  long. Not to our knowledge reported from the State.

225. *Valsa ambiens* (Pers.) Fries. Pk., 25 Rep., p. 102. N. A. Pyr., p. 476. Feltgen, No. 567. On dead limbs of apple trees. Also on fallen branches of some undetermined tree in woods. Oct., 1900.

226. *Valsa salicina* (Pers.) Fries. Pk., 24 Rep., p. 98. N. A. Pyr., p. 477. Feltgen, No. 578. On dead limbs of *Salix*, Yates, N. Y., Oct., 1900.

227. *Valsa fraxinina* Peck. N. A. Pyr., p. 481. On dead branches of *Fraxinus* in brush piles, Yates, Orleans County, N. Y., Oct. 1900.

228. *Valsa variolaria* Schw. N. A. Pyr., p. 468. On fallen branches of basswood, *Tilia*, Oct., 1900. Not previously reported from this state. Sporidia longer and narrower than stated by Stevenson.

## EUTYPELLA Nitschke, 1867.

229. *Eutypella ailanthi* (Sacc.). Only the spermogonial stage found. It oozes out in long red tendrils. On dead *Ailanthus glandulosus*.

230. *Eutypella stellulata* (Fr.) Sacc. N. A. Pyr., p. 489. *Valsa*, Feltgen 579. On dead branches of *Cratægus*, March, 1888.

231. *Eutypella innumerabilis* (Peck.) Sacc. *Valsa innumerabilis* Peck, 30 Rep., p. 65. Included by E. & E. under *E. stellulata*. On dead branches of *Robinia*, Ridgeway, N. Y., Sept., 1891.



232. *Eutypella cerviculata* (Fr.) Sacc. N. A. Pyr., p. 491. On *Carpinus*, July, 1890.

## EUTYPA Tulasne 1862.

233. *Eutypa spinosa* (Pers.) Tulasne. E. & E., N. A. Pyr., p. 500. Widely effused on stumps and logs in woods, Ridgeway and Yates, Orleans County, N. Y., June, 1886.

234. *Eutypa velutina* (Wallr.) Sacc. Fairman, Jour. Mycol., V., p. 79. N. A. Pyr., p. 500. On dead wood.

235. *Eutypa flavovirescens* (Hoff.) Tul. Fairman, Notes on New or Rare Fungi from Western New York in Journal of Mycology, V., page 79. N. A. Pyr., p. 504. *Valsa flavovirescens* Winter in Feltgen, No. 586. Easily recognized by taking a thin horizontal slice from the black surface when the characteristic greenish-yellow color of the interior stroma will be revealed. Ellis says, N. A. Pyr., loc. cit., "On decorticated limbs, Lyndonville, N. Y., (Fairman), Carolina (Ravenel). Probably not uncommon, but the specc. quoted are the only ones we have seen." Feltgen gives as hosts for this species, *Prunus spinosa*, *Prunus cerasus*, *Cratægus*, *Quercus*, *Salix caprea*, *Corylus*, *Carpinus*, *Rosa canina*, *Vitis vinifera*, *Juniperus communis*. Lyndonville specimens were on beech or maple.

## CRYPTOVALSA Cesati and DeNotaris 1861.

236. *Cryptovalsa eutypæformis* Saccardo. Syll. 5907. N. A. Pyr., p. 517. Peck, 54 Rep., p. 157. On dead, decorticated branches of maple, in ditches by the roadside. August.

## DIATRYPE Fries 1849.

237. *Diatrype cornuta* E. & E. N. A. Pyr., p. 568. The original specimens upon which Ellis and Everhart founded this species were found by the author on bark of dead *Ailanthus* limbs, Lyndonville, N. Y.

238. *Diatrype stigma* (Hoff.) DeNot. Peck, 23 Rep., p. 98. N. A. Pyr., p. 565. Feltgen, No. 487. Common on dead branches of various trees.

239. *Diatrype virescens* (Schw.). Pk., 23 Rep., p. 63. N. A. Pyr., p. 569, and plate 34. Common on dead limbs of *Fagus*.

240. *Diatrype platystoma* (Schw.). Pk., 26 Rep., p. 85. N. A. Pyr., p. 566 and plate 34. On dead limbs.

241. *Diatrype albopruinosa* (Schw.). N. A. Pyr., p. 570.  
On dead limbs of *Fagus*?

DIATRYPELLA Cesati and DeNotaris, 1861.

242. *Diatrypella frostii* Peck. Pk., 38 Rep., p. 103. Pk.,  
Bot. Gaz., III., p. 35. N. A. Pyr., p. 593. On dead limbs of *Acer*,  
June 28, 1890.

243. *Diatrypella favacea* (Fr.) Nitschke. N. A. Pyr., p.  
585. Feltgen, No. 495. On dead limbs of *Betula*, Oct. 11, 1891.

## Sect. II. PHÆOSPORÆ Saccardo.

Sporidia continuous, ovoid, brown or fuliginous.

CHÆTOMIUM Kunze 1817.

244. *Chætomium comatum* (Tode) Fries. Sacc. Syll., 793.  
Feltgen, No. 1021. On dead stems and old, damp, papers of garden  
seeds, left on the ground in my garden.

245. *Chætomium elatum* Kunze. N. A. Pyr., p. 122. On  
dead herbaceous stems.

HYPOCOPRA Fuckel.

246. *Hypocopra fimicola* (Rob.) Sacc. *Sordaria f.* in N. A.  
Pyr., p. 127 and Feltgen No. 1023. On decaying potato. Mr. Ellis,  
in a letter to me, called this form *tubericola*. In N. A. Pyr., loc. cit.,  
Ellis and Everhart say, "On decaying potato, Lyndonville, N. Y.  
(Fairman). Winter in Die Pilze makes the spore bearing part of the  
asci 120-140 x 17-19  $\mu$ . The form on potato has asci (p. sp.) 120-  
134 x 12-15  $\mu$ ."

ROSELLINIA Cesati and DeNotaris 1847.

### I. EUROSELLINIA.

247. *Rosellinia byssiseda* (Tode) Schroeter. *Sphaeria byss.*  
Tode, 1791. *Rosellinia byss.* Feltgen, No. 975. *Sphaeria aquila*  
Peck, 23 Rep., p. 63. *Rosellinia aquila* in N. A. Pyr., p. 163. On  
decaying branches and limbs.

248. *Rosellinia subiculata* (Schw.) Sacc. *Sphaeria subiculata*  
Peck, 32 Rep., p. 51. *Rosellinia sub.* in N. A. Pyr., p. 165. On  
rotten wood.

## II CALOMASTIA.

249. *Rosellinia mammiformis* (Pers.) Winter. *Sphæria mammiformis* Persoon, 1801. *Rosellinia mastoidea* Saccardo. *R. mammiformis* in N. A. Pyr., p. 166 and Feltgen, No. 977. On dead branches.

## IV. CONIOMELA.

250. *Rosellinia pulveracea* (Ehr.) Fuckel. *Sphæria p.*, Ehr. 1801. *Sphæria millegrana* Schw. *Sphæria pulveracea* Peck, 25 Rep., p. 105. *Rosellinia p.* N. A. Pyr., p. 169 and Feltgen No. 982.

## V. CONIOCHÆTA.

251. *Rosellinia ligniaria* (Grev.) Fuckel. N. A. Pyr., p. 172. Feltgen No. 982.

## ANTHOSTOMELLA Saccardo 1875.

252. *Anthostomella eructans* E. & E. Fairman, Proc. Roch. Acad. of Science, 1890, p. 50, plate 4, fig. 7-8. N. A. Pyr., p. 420. Rare. The original specimens were found at Lyndonville several years ago, and we have not found any since that time. On decorticated wood (*Acer?*).

## ANTHOSTOMA Nits.

253. *Anthostoma dryophilum* (Curr.) Sacc. N. A. Pyr., p. 581. On fallen branches (Oak?). Autumn of 1900.

## XYLARIA Hill 1773.

254. *Xylaria clavata* (Scop.) Schrank. *Valsa clavata* Scopoli 1772. *Sphæria polymorpha* Persoon, 1787. *Xylaria polymorpha* Peck, in 22 Rep., p. 97. N. A. Pyr., p. 665. Underwood, Moulds, Etc., plate IV., figs. 11 & 12. *X. clavata*, Feltgen, No. 459. The Lyndonville plant is the var. *pistillaris* Nits.

255. *Xylaria corniformis* Fr. Peck, 24 Rep., p. 97 and 28 Rep., p. 87. N. A. Pyr., p. 668.

## USTULINA Tulasne 1861.

256. *Ustulina maxima* (Haller) Schroeter. *Sphæria maxima* Haller 1768. *Hypoxylon ustulatum* Bull., Peck, 22 Rep., p. 97. *Ustulina vulgaris* Tulasne in N. A. Pyr., p. 662. Feltgen, No. 462. At the base of old stumps.

## HYPOXYLON Bulliard 1791.

257. *Hypoxylon coccineum* Bull. N. A. Pyr., p. 629. Feltgen, No. 470.
258. *Hypoxylon fuscum* (Pers.) Fr. Pk., 22 Rep., p. 98, N. A. Pyr., p. 633. Feltgen, No. 469.
259. *Hypoxylon multiforme* Fr. Pk., 22 Rep., p. 98, & 22 Rep., p. 103. N. A. Pyr., p. 634.
260. *Hypoxylon cohærens* (Pers.) Fries. Peck, 22 Rep., p. 98. N. A. Pyr., p. 635. Feltgen, No. 467.
261. *Hypoxylon turbinatum* (Schw.) E. & E. N. A. Pyr., p. 636. Our specimens are the form sometimes called *Hypoxylon bagnisii* Sacc., which in N. A. Pyr. is called a synonym.
262. *Hypoxylon sassafras* (Schw.) Berk. Peck, 28 Rep., p. 71. N. A. Pyr., p. 641.
263. *Hypoxylon perforatum* (Schw.) Fr. Peck, 24 Rep., p. 98. N. A. Pyr., p. 645. Feltgen, No. 475.
264. *Hypoxylon serpens* (Pers.) Fries. Peck, 22 Rep., p. 98. N. A. Pyr., 653.

## DALDINIA DeNotaris 1863.

265. *Daldinia tuberosa* (Scop.) Schroeter. *Valsa tuberosa* Scopoli 1772. *Hypoxylon concentricum* Pk., 24 Rep., p. 97. *Daldinia concentrica* (Bolt.) Ces. and DeNot., in N. A. Pyr., p. 660 and Syll., 1515. *D. tuberosa*, Feltgen, No. 463. On *Quercus*, Oct., 1900.

## Sect. III. HYALOSPORÆ Sacc.

Sporidia ovoid, oblong or fusoid, continuous, hyaline or sub-hyaline.

## CERATOSTOMELLA Saccardo 1878.

266. *Ceratostomella pilifera* (Fr.) Winter. *Sphæria p.* Fries 1822 and Pk., 27 R., p. 100. *Ceratostoma*, N. A. Pyr., p. 192. Feltgen, 967. Underwood, Moulds, Mildews and Mushrooms, plate IV., figs. 17 and 18. Found on decaying acorns and is probably what Feltgen calls form *dryina*.

## BOTRYOSPHERIA Cesati and DeNotaris 1861.

267. *Botryosphæria quercuum* (Schw.) Sacc. *B. fuliginosa*, N. A. Pyr., p. 546 and plate 36. On various dead branches. A variable species.

## Sect. IV. HYALODIDYMÆ Sacc.

Sporidia ovoid, oblong or fusoid, uniseptate, hyaline or sub-hyaline.

## MYCOSPHÆRELLA Johanson 1884.

268. **Mycosphærella punctiformis** (Pers.) Johanson. Feltgen, 864. *Sphærella*, N. A. Pyr., p. 265. On old leaves.

269. **Mycosphærella asterinoides** (E. & E.). *Sphærella*, Journal of Mycology, IV., p. 98 and N. A. Pyr. p. 281. Peck, 54 Rep., p. 157. On dead stems of wild teazel, *Dipsacus*, May. The outline of the sporidia reminds one of a foot-print. Originally collected at Clyde by O. F. Cook, Jr.

270. **Mycosphærella verbascicola** (Schw.) Spermogonial stage found on dead stems of *Verbascum thapsus*.

## DIDYMELLA Saccardo 1878.

271. **Didymella rauii** (E. & E.) Sacc. N. A. Pyr., p. 316. *Sphæria rauii* E. & E., in Bull. Torr. Bot. Club, X. p. 90. Fairman. Notes on New or Rare Fungi from Western New York, Jour. Mycol., V., p. 79. On dead stems of wild rose.

272. **Didymella** sp. Found on dead branches of spice bush, *Benzoin*. Journal of Mycology, V., p. 79. Sporidia fusoid, hyaline, quadrinucleate, 18-20 x 4-5  $\mu$ . Originally designated in a personal communication to us as *Didymella linderæ* E. & E., but we find no publication.

## BERTIA DeNotaris 1844.

273. **Bertia moriformis** (Tode) DeNotaris. *Sphæria moriformis* Tode, 1841. Peck, 24 Rep., p. 104. *Bertia m.*, N. A. Pyr., p. 180 and Feltgen No. 993. On decaying wood of maple, Ridgeway, N. Y. In N. A. Pyr. reported as having been found at Canandaigua, N. Y., by Edgar Brown on old *Dædalea unicolor*. Sartwell also found it at an early date in this state.

## HERCOSPORA Tulasne.

274. **Hercospora tiliæ** (Fr.) Tul. *Sphæria tiliæ* in Peck, 24 Rep., p. 99? N. A. Pyr., p. 525, as *Melanconis tiliacea* (Ell.). *Valsaria tiliæ* DeNot., sec. Feltgen, No. 512. We have specimens from Prof. John Dearness of London, Ontario, which are the same as our fungi. On dead *Tilia*, basswood, Oct., 1900.

## DIAPORTHE Nitschke 1867.

275. *Diaporthe salicella* (Fr.) Sacc. *Sphæria*, Peck, 25 Rep., p. 104. *Diaporthe*, N. A. Pyr., p. 435. *Gnomonia*, Feltgen, No. 676. On dead branches of *Salix*.

276. *Diaporthe sociata* (C. & E.) Sacc. *Valsa*, C. & E. in Grevillea, VI., p. 11. *Diaporthe*, N. A. Pyr. p. 435. On dead branches of spice bush, *Benzoin*, Oct., 1900. Not previously reported from the state.

277. *Diaporthe aculeata* (Schw.) Sacc. N. A. Pyr., p. 452. On dead stems of *Phytolacca decandra*.

278. *Diaporthe obscura* (Peck) Sacc. Peck, 28 Rep., p. 73. N. A. Pyr., p. 441. On dead stems of *Rubus*, cult.

279. *Diaporthe bicincta* (Peck) Sacc. *Valsa*, Pk., 29 Rep., p. 64. *Diaporthe*, N. A. Pyr., p. 429. On dead branches of butter-nut, *Juglans cinerea*.

280. *Diaporthe acerina* Peck. *Valsa acerina*, Peck, 28 Rep., p. 74. N. A. Pyr. 424. On dead *Acer* sp.

281. *Diaporthe carpini* (Pers.) Fuckel. N. A. Pyr., p. 425, where the authors say, "the specc. from Dr. Fairman have asci and sporidia corresponding to the smaller dimensions in the foregoing diagnosis, which is taken from Saccardo's Sylloge." On dry branches of *Carpinus americana*.

## Sect. V. PHÆODIDYMÆ Sacc.

Sporidia ovoid, oblong or fusoid, uniseptate, fuliginous or olivaceous.

## DIDYMOSPHERIA Fuckel 1869.

282. *Didymosphæria accedens* Sacc. Sacc. in Fairman, Mycology of Western N. Y., Proc. Roch. Acad. Sc., 1890, p. 48, plate IV., fig. 12. N. A. Pyr., p. 330. On dead branches of *Fraxinus*, April–May, 1889. Evidently rare.

283. *Didymosphæria oblitescens* (B & Br.) Sacc. *Sphæria oblitescens*, B. & Br., Ann. N. H. n. 887, pl. 11 fig. 32. Cooke, Handbook, No. 2675. *Didymosphæria* in Syll., No. 2992. "Perithecia covered by the epidermis, depressed, somewhat large, ostiolum obscure; sporidia oblong elliptical, obtuse at the ends, uniseptate, moderately constricted, 12–13  $\mu$  long." Sylloge, loc. cit. On dead branches of *Cornus*, associated with *Metasphæria fiedleri*. Not to our knowledge reported heretofore from the United States.

## OTTHIA Nitschke 1869.

284. **Otthia aceris** Winter. N. A. Pyr., p. 249. Feltgen No. 960. On bark of dead *Acer*.

285. **Otthia morbosa** (Schw.) E. and E. *Sphæria morbosa* in Peck 31 Rep. p. 60. *Plowrightia m.* in Sylloge, 5295. *Otthia* in N. A. Pyr., p. 251. On limbs of plum trees, forming the disease called "black knot."

## VALSARIA DeNotaris.

286. **Valsaria insitiva** Ces. and DeNot. N. A. Pyr., p. 555. If this is the same as the *Sphæria rubricosa* Fries (1829) and the genus *Myrmæcium* of Nitschke (1869) holds, there would seem to be good reason for changing the name of this species to *Myrmæcium rubricosum* (Fr.) Fuckel (See Feltgen I., p. 163. No. 483). On bark of various trees.

## Section VI. PHÆOPHRAGMIÆ Sacc.

Sporidia oblong or fusoid, 2-multiseptate, olivaceous, brown or fuliginous.

## MASSARIA DeNotaris 1847.

287. **Massaria inquinans** (Tode) Fries. N. A. Pyr., p. 400. Feltgen, No. 700. Berlese, Icones Fungorum, Tab. XIII., f. 1. On dead limbs of *Acer* and of maple-leaved *Viburnum*.

288. **Massaria platani** Ces. N. A. Pyr., p. 403. Berlese, Icones, Tab. XIV., fig. 2. On dead *Platanus*.

## LEPTOSPHERIA Ces. and DeNot. 1861.

289. **Leptosphæria conoidea** DeNot. Berlese, Icones, Tab. XLVII., fig. 6. On dead stems of plants.

290. **Leptosphæria doliolum** (Pers.) DeNot. N. A. Pyr., p. 355. Feltgen, No. 776. Pk., 23 Rep., p. 64 (*Sphæria*). On dead branches of *Ailanthus glandulosus*. Asci 100 x 10  $\mu$ , sporidia 23 x 4  $\mu$ .

291. **Leptosphæria dumetorum** Niessl. N. A. Pyr., p. 357. Berlese, Icones, page 54 and plate XL., fig. 5. On dead stems of *Lonicera*.

## CARYOSPORA DeNotaris.

292. **Caryospora putaminum** (Schw.) DeNot. N. A. Pyr., p. 209 and plate 24. Underwood, Moulds etc., plate 4 fig. 15.

Berlese, Icones, Tab. XVI., fig. 1. On old peach stones on the ground.

SPORORMIA DeNotaris 1848.

293. *Sporormia minima* Auerswald. N. A. Pyr., p. 34 and plate 18. Berlese, Icones, Tab. 38, fig. 4. Sacc. Syll., 3317. Feltgen, No. 1038. On cow dung.

PSEUDOVALSA Ces. and DeNot. 1861.

294. *Pseudovalsa irregularis* (DC.) Schroeter. *Sphæria irregularis* DC., 1815. *Valsa profusa* Fr. in Peck, 25 Rep., p. 105. *Ps. profusa*, N. A. Pyr., p. 538. *Aglaospora profusa*, (Fr.) in Syll. 3346. *Ps. profusa*, Berlese, Icones, Tab. XXXIV., fig. 6. *Ps. irregularis*, Feltgen, No. 523. On dead branches of *Robinia pseudacacia*.

295. *Pseudovalsa fairmani* E. & E. Fairman, Proc. Roch. Acad. Sci., 1890, p. 51, plate 3, fig. 1, 2, 3, 10, 11. On dead hickory limbs.

296. *Pseudovalsa haplocystis* (B. and Br.) Sacc. N. A. Pyr., p. 538. Berlese, Icones, Tab. XXXVI., fig. 1. Feltgen, No. 526. Specimens from the Lyndonville collection were furnished for distribution in N. A. F. and the drawings by Berlese were made from No. 2119 of N. A. F. (doubtless from our specimens). On dead *Platanus occidentalis*.

MELOGRAMMA Fries 1849.

297. *Melogramma bulliardi* Tulasne 1862. N. A. Pyr., p. 553, plate 36. Feltgen, No. 485. *M. vagans*, Syll., 3381. *M. vagans*, Berlese, Icones, Tab. XXXVII, fig. 2. On dead *Carpinus*.

Section VII. HYALOPHRAGMIÆ Sacc.

Sporidia oblong or fusoid, 2-pluriseptate, hyaline.

METASPHERIA Sacc.

298. *Metasphæria leiostega* (Ellis) Sacc. N. A. Pyr., p. 383. Ellis, Bull. Torr. Bot. Club, 8, p. 91. On dead stems of wild Rose.

299. *Metasphæria fiedlæri* (Niessl) Sacc. *Letosphæria Fiedlæri* Niessl. *Cryptosphæria F.*, Niessl, 1874. Feltgen, No. 809. "Perithecia semi-immersed, covered or partially exposed, coriaceous-



carbonaceous, at length depressed, ostiolum minute; asci clavate, 100-110 x 18  $\mu$ , attenuated below, rounded at the apex, surrounded by numerous filiform paraphyses, 8-spored: Sporidia uniseriate or biseriate, fusoid cylindrical, curved, 26-32 x 6-7  $\mu$ , triseptate and constricted at the septa, greenish hyaline." According to Niessl, the pycnidial stage is *Hendersonia Fiedleri* Rabenhorst. On dead branches of *Cornus*, associated with *Didymosphæria oblitescens* (B. & Br.) Sacc. Feltgen reports this species as occurring in Luxemburg upon *Cornus*, *Ligustrum vulgare*, and *Ulex Europæus*. He describes the perithecia as sunken in the matrix up to their papilliform ostioli and the measurements as follows: Asci 106-120 x 15-18  $\mu$ ; sporidia 24-26 x 6  $\mu$ , hyaline. New to the United States.

LASIOSPHAERIA Ces. and DeNotaris, 1861.

300. *Lasiosphæria hirsuta* (Fr.) Ces. and DeNot. *Sphæria*, Fr. 1822. N. A. Pyr., p. 144. Pk., 25 Rep., p. 104, (*Sphæria*). Feltgen, No. 1008. On rotten *Carpinus*, Oct., 1891. Also found in Sept., 1900, associated with *Orbilia leucostigma* Fr. on rotten wood.

301. *Lasiosphæria spermoides* (Hoff.) Ces. & DeNot. N. A. Pyr., p. 148. *Sphæria*, Peck, 29 Rep., p. 61. *Leptospora*, Feltgen, No. 990.

302. *Lasiosphæria ovina* (Pers.) Fuckel., var. *aureliana*. The Orleans County variety of *L. ovina*. Fairman, Some new Fungi from Western N. Y., Jour. Mycology, Sept., 1904, page 229. *Sphæria ovina*, Pers., 1801. Peck, 22 Rep., p. 99. *Lasiosphæria*, N. A. Pyr., p. 150. *Leptospora*, Feltgen, No. 991. Perithecia scattered or gregarious, but not crowded, large, ovate globose, clothed mostly at the base with long, brown, bristle-like, septate hairs which are 6  $\mu$  in diameter, simple or branched, straight or reflexed and flexuous at the tips, covered with a persistent grayish white tomentum, all excepting the protruding papilliform ostiolum which is bare. Inner substance of the perithecia when crushed upon the slide pale greenish-yellow (flavovirescent). Asci straight or curved, oblong sub-fusoid or arcuate, with an occasional shining oil drop in the rounded, hyaline apex, 100 x 10-12  $\mu$ . Sporidia imperfectly biseriate or fasciculate, abruptly bent at the lower fourth, at times straighter and flexuous in the middle, continuous, hyaline, 40 x 5  $\mu$ . The sporidia are at times furnished with a short (about 6  $\mu$ ) acute hyaline tip, at one or both ends, which appendages however are usually absent or indistinct. These appendages are mostly seen in young sporidia and may become absorbed with age.

There are small oblong conidia and larger,  $40 \times 6 \mu$ , multiseptate fusiform spores found on the basal threads. The paraphyses are indistinct. On the surface of wood (basswood?) under moist bark. Lyndonville, N. Y., Oct., 1900. *Lasiosphæria sulphurella* Sacc. is seated on a sulphur-colored subiculum and the appendages of the sporidia are  $25-30 \mu$  long. *Lasiosphæria viridicoma* (C. & P.) is clothed with a dense greenish tomentum and *Lasiosphæria mutabilis* has a yellowish-green tomentum which turns brown and disappears. The flavo-virescent color of the crushed perithecia and the occasional appendages of the sporidia render our species different from the type of *L. ovina* (Pers.). At first we considered it a new species (*Lasiosphæria aureliana* Fairman, in herb.) but Mr. J. B. Ellis, the veteran American pyrenomycetologist, to whom specimens were submitted, thought that the color of the crushed perithecia did not entitle it to specific rank. It is to be noted, however, that in *Eutypha flavovirescens* (Hoff.) Tul. and *Lecanidion indigoticum* (C. & P.) Sacc. the interior color of the fungus is a diagnostic feature.

303. *Lasiosphæria hispida* (Tode) Fuckel. N. A. Pyr., p. 145.

ACANTHOSTIGMA DeNotaris.

304. *Acanthostigma decastylum* (Ck.) Sacc. N. A. Pyr., p. 155 and plate 9. *Sphæria* (*Zignoella*) *cariosa* C. & E., Grev., VI., p. 94 and tab. 100, fig. 28. *Zignoella*, Sacc. Syll., 3630. On rotten wood, May, 1889. Our specimens have triseptate, fusoid sporidia, 3-4 nucleate and  $18-20 \times 3-4 \mu$ .

Section VIII. DICTYOSPORÆ Saccardo.

Sporidia ovoid, oblong or sub-fusoid, transversely and longitudinally septate (muriform or clathrate), brown, or rarely hyaline.

PLEOMASSARIA Spegazzini 1880.

305. *Pleomassaria carpini* Fuckel. N. A. Pyr., p. 407. Sacc. Syll. No. 3710. On dead branches of *Carpinus*. The only station for this in the United States, so far as reported. According to Ellis and Everhart, "asci and sporidia in the New York specimens are smaller than the measurements given by Dr. Winter ( $170-220 \times 35-42 \mu$  and  $45-65 \times 17-21 \mu$ )."

306. *Pleospora herbarum* (Pers.) Rabh. *Sphæria herbarum*, Pers., 1801. Pk., 30 Rep., p. 67. *Pleospora*, N. A. Pyr.,

p. 335. *Pleospora subsulcata* E. & E., in Fairman, Mycology of Western N. Y., Proc. Roch. Acad. Science, Aug. 1890. p. 44 and Plate 4, figs. 1 and 2 is probably a synonym. On dead herbaceous stems (probably of Onion) which had remained out of doors all winter.

CUCURBITARIA Gray 1821.

307. *Cucurbitaria elongata* (Fries) Greville. Peck, 23 Rep. p. 64 (Sphæria). *Sphæria e.*, Fries 1822. *Cucurbitaria e.*, N. A. Pyr., p. 238, Sacc. Syll. 3938, and Feltgen, No. 943. On dead branches of *Robinia pseudacacia*.

FENESTELLA Tulasne 1862.

308. *Fenestella fenestrata* (B. & Br.) Schroeter 1897. *Valsa fenestrata* B. & Br. *Fenestella princeps*, Tul., N. A. Pyr., p. 543, Sacc. Syll. 3995, Feltgen, No. 531. On dead limbs of *Salix*. Our plant is the form *Salicis vitellinæ* of the Sylloge.

309. *Fenestella amorpha* E. & E., Jour. Mycol., IV., p. 58, Proc. Acad. Nat. Sci., Phil., July 1890, p. 239 and Proc. Roch. Acad., August, 1890, p. 48, N. A. Pyr., page 543 and plate 35. Fairman, Journal of Mycology, vol. V., page 79—Notes on new or Rare Fungi from Western New York. On fallen branches of *Carya*, in the spring. The development of the sporidia of this fungus is considered in Fairman, "Observations on the development of some fenestrate sporidia", Journal of Mycology, vol. VI., p. 29 and plate 1. Several years observation of this fungus enables me to confirm an interesting instance of accurate scientific prediction. The original specimens, which I sent to Mr. J. B. Ellis for identification, were upon decorticated branches of hickory. After a careful examination Mr. Ellis said (Jour. Mycol., vol. IV., p. 59), "the specimens examined were apparently superficial, but it is probable that the fungus grew while the limb was still invested with the bark through longitudinal cracks in which the ostiola penetrated." I have since then found several specimens growing on branches with ostiola protruding through deep longitudinal fissures.

Section IX. SCOLECOSPORÆ Sacc.

Sporidia filiform, hyaline or yellowish, sometimes guttulate or septate.

## OPHIOBOLUS Riess 1853.

310. *Ophiobolus porphyrogonus* (Tode.) Sacc. *Sphæria porphyrogona*, Tode, 1791. *Sphæria rubella*, Pers., also Peck, 25 Rep., p. 104. *Ophiobolus* in N. A. Pyr., 393, Sacc., Syll., 4017 and Feltgen, No. 715. On dead herbaceous stems.

311. *Ophiobolus anguillides* (Cooke.) Sacc. Sacc. Syll., 4029. N. A. Pyr., p. 397. On dead herbaceous stems.

## Fam. III. HYPOCREACEÆ DeNot.

## Section III. HYALODIDYMÆ Sacc.

Sporidia uniseptate, hyaline.

## NECTRIA Fries 1849.

312. *Nectria cinnabarina* (Tode.) Fries. Sacc. Syll., 4662. N. A. Pyr., page 93. Feltgen, No. 1071. Peck, 22 Rep. p. 98. Common on dead limbs.

313. *Nectria offuscata* B. & C. N. A. Pyr., p. 95, Sacc. Syll., 4688. On *Hibiscus syriacus*. Hitherto reported from North Carolina.

314. *Nectria pezizæ* (Tode.) Fries. N. A. Pyr., p. 105. Pk., 24 Rep., p. 98. Feltgen, 1080. On decaying wood in woods, Ridgeway, Oct., 1900, and on wood in wood piles, Lyndonville, same date.

315. *Nectria episphæria* (Tode.) Fr. Sacc. Syll., 4740. N. A. Pyr., p. 108. Pk., 27 Rep., p. 108. On *Hypoxylon*.

## HYPOCREA Fries 1849.

316. *Hypocrea citrina* (Pers.) Fr. N. A. Pyr., p. 85. Feltgen, No. 1056. Peck, 22 Rep., p. 97. On moist decaying log in woods, Oct., 1900.

## Section V. PHRAGMOSPORÆ Sacc.

Sporidia oblong or fusoid, multiseptate.

## GIBBERELLA Saccardo, 1877.

317. *Gibberella pulicaris* (Fr.) Sacc. N. A. Pyr., p. 120. Pk., 30 Rep., p. 76. Feltgen, No. 1063. On old corn stalks.

**Section VI. DICTYOSPORÆ Sacc.**

Sporidia ovoid or sub-oblong, septate, muriform, hyaline.

## PLEONECTRIA Sacc.

318. *Pleonectria berolinensis* Sacc. N. A. Pyr., page 115 and plate 12. On dead stems of *Ribes*.

**Section VII. SCOLECOSPORÆ Sacc.**

Sporidia filiform, frequently multiseptate.

## OPHIONECTRIA Sacc.

319. *Ophionectria cerea* (B. & C.) N. A. Pyr., p. 118. On old *Diatrype stigma*.

**Fam. IV. DOTHIDEACEÆ Nits. and Fuckel.**

## PHYLLACHORA Nitschke 1869.

320. *Phyllachora graminis* (Pers.) Fuckel. (*Sphaeria graminis*, Pers 1796.) N. A. Pyr., p. 599 and plate 40. Pk., 23 Rep., p. 64. Feltgen, No. 429. On grass leaves.
321. *Phyllachora trifolii* (Pers.) Fuckel. N. A. Pyr., p. 597. Feltgen, No. 431. On leaves of *Trifolium*.

## DOTHIDEA Fries 1818.

322. *Dothidea ribesia* (Pers.) Fr. *Plowrightia*, Sacc. Syll., II., p. 635. N. A. Pyr., p. 611. Feltgen, No. 446. Peck, 24 Rep., p. 99. On dead stems of *Ribes*.
323. *Dothidea collecta* (Schw.) N. A. Pyr., p. 613. On dead twigs of *Maclura*, Oct. 1900.

## RHPOGRAPHUS, Nitschke.

324. *Rhopographus filicinus* (Fr.) Fuckel. N. A. Pyr., p. 618 and plate 40. *R. Pteridis*. Winter, sec. Feltgen, No. 453. On some undetermined fern.

**Family VI. LOPHIOSTOMACEÆ Sacc.****Section IV. HYALOPHRAGMIÆ Sacc.**

## LOPHIOTREMA Sacc.

325. *Lophiotrema auctum* Sacc. N. A. Pyr., p. 233. Berlese, Icones, Tab. III., fig. 10. On dead stems of wild rose. In

N. A. Pyr., it is stated that the specimens from Lyndonville differ from the diagnosis in Sylloge "in having the asci and sporidia smaller: asci 75-90 x 12-15  $\mu$ : sporidia 25-35 x 6-7  $\mu$ , 6-7 septate, only slightly constricted and obscurely appendiculate."

326. *Lophiotrema littorale* Speg. Sacc., Syll. 5423. Berlese, Icones, Tab. IV., fig. 6. On decorticated willow twigs, deposited by, or, at least, subjected to the action of water, under willow trees along the flats of Johnson Creek. Not before reported from U. S.

LOPHIOSTOMA (Fr.) Ces. and DeNot.

327. *Lophiostoma macrostomum* (Tode.) Ces. and DeNot. *Sphæria m.*, Tode, 1791. Pk. 28 Rep., p. 76. N. A. Pyr., p. 221. Sacc. Syll., 5490. Feltgen, No. 914. Berlese, Tab. VIII., fig. 7. On bark (maple?) in the woods.

328. *Lophiostoma prominens* Peck. Peck, 31 Rep., p. 50. N. A. Pyr., p. 224. On decorticated branches of *Cornus*, Oct. 1900.

329. *Lophiostoma triseptatum* Peck. Peck, 28 Rep. p. 76. N. A. Pyr., p. 224. A common species and somewhat variable. Ellis and Everhart in N. A. Pyren. say "differs from *L. quadrinucleatum* Karst. in its smaller sporidia, constricted at the apex". *L. triseptatum* Peck, should probably be referred to *L. quadrinucleatum* Karst, as a small spored variety. In the diagnoses of Lophiostomas published in the Sylloge, there are a number of small spored forms, in length from 15 to 25  $\mu$ , which are difficult to separate. The forms we enumerate here as *L. triseptatum* occur on various habitats. Two of them have been examined by Prof. Peck and pronounced to be his species, viz.: On fallen branches of *Fraxinus*, with the bark still on and the perithecia erumpent, July 25, 1890. On decorticated, fallen, branches of *Acer*, Oct. 8, 1891. Normally this fungus has triseptate sporidia, but occasionally one or both of the terminal cells are divided by a septum and we have forms 4-5 septate, enumerated as *Lophiostoma rhopaloides* Sacc., var. *pluriseptata*, n. var., in Fairman, Fungi of Western, N. Y., Proc. Roch. Acad. Sc., Vol. 1, page 49 and in Farlow and Seymour's Provisional Host Index of the Fungi of the United States, Part III., page 192, (sub *Acer*, sp. indeter.) These should be cancelled and the form known as *Lophiostoma triseptatum* Peck, var. *pluriseptatum*, E. & E. Ellis and Everhart remark, loc. cit. page 225, "var. *pluriseptatum* E. & E., on decorticated maple limbs, Lyndonville, N. Y., (Fairman 134) has asci p. sp. 70-75 x 10-12  $\mu$ . Sporidia irregularly biseriata or oblique, oblong or oblong-clavate, 3

septate and constricted at the septa, obtuse, brown, 15-20 x 5-6  $\mu$ . In well developed specimens, one or both the terminal cells are again divided by a septum, making the sporidia 3-5 septate". Another form collected on decorticated *Salix* limbs, Sept. 1900 has triseptate brown sporidia, constricted, 17 x 6 $\frac{2}{3}$   $\mu$ . Here the sporidia are not uniformly transversely septate but occasionally *obliquely septate*. These forms for convenience may be called *L. triseptatum var. diagonalis* Fairman, *n. var.* On decorticated maple twigs, Oct., 1900 another form was found in which the sporidia were *uniserial*, brown, triseptate, 20 x 6-7  $\mu$ , but the sporidia are very *acute at the ends*, and may be known as *var. acuta*, Fairman, *n. var.*

330. **Lophiostoma quadrinucleatum** Karst. Sacc. Syll. No. 5451. Feltgen, No. 906. On dead branches of *Hamamelis virginiana*, October 2, 1900. Sporidia 3-5 septate, nucleolate, 18-24 x 7  $\mu$ . On *Cornus*, Oct., 1900, sporidia brown, 18 x 6-7  $\mu$ , quadrinucleate when young.

331. **Lophiostoma pruni** E. & E. Journal of Mycology, iv., p. 64. Proc. Roch. Acad., Vol. I, p. 49 and plate 4, figs. 10-11. Berlese, Icones Fungorum, Fasc. I, part I, tab. VI., fig. 3. N. A. Pyr., page 225, plate 25. On *Prunus serotina*. Lyndonville, April 1888. This is another one of the small, perplexing, triseptate Lophiostomas. The sporidia are mostly 4 in the ascus, and measure 18-22 x 6-8  $\mu$ . Berlese says, "affine *L. quadrinucleato*, (a quo loculis eguttulatis præcipue differt) et *L. pseudomacrostromo*, sed sporidiis raro 4-5 septatis, et longitrorsum divisis."

332. **Lophiostoma vagans** Fabr. Berlese, Icones, tab. VI., fig. 8. (*L. pseudomacrostromum*, Sacc. in N. A. Pyren., pages 225-226.) On dead branches of *Lonicera*.

333. **Lophiostoma insidiosum** (Desm.) Ces. et DeNot. (*Sphaeria i.*, Desm. 1841.) Feltgen, No. 915. Berlese, Icones, p. 12 and tab. VI., fig. 6. On dead stems of *Tanacetum*. On dead stems of wild raspberry, Ridgeway, N. Y., Sept., 1900. Sporidia brown, 5-6 septate, 20-27 x 7  $\mu$ , armed with acute hyaline appendages.

334. **Lophiostoma rhizophilum** (B. & C.). To this species we have provisionally referred the small triseptate forms found on exposed roots of maple, sumach, etc., and which are hard to separate from *L. triseptatum*, except by the different habitat. On roots we find them with sporidia 3-5 septate, or 3 septate, nucleolate, ends acutely pointed with hyaline tips and at times surrounded with mucus. They embrace characters common to *L. triseptatum*, quad-

*rinucleatum* and *desmazierii*. An examination of the original specimens of B. & C., if they are in satisfactory condition, would throw light upon these small triseptate forms. If, as we suspect, they are the same as *L. triseptatum*, the question of priority of publication would come up.

335. *Lophiostoma cephalanthi* Fairman. Journal of Mycology, Vol. X., page 230. On decorticated area of branch of *Cephalanthus occidentalis*, Ridgeway, N. Y., Aug. 1904. This should probably be referred to *Lophiostoma prominens*, Peck.

336. *Lophiostoma imperfecta* Ellis and Fairman, n. sp. On dead stems of *Asclepias*? Lyndonville, N. Y., Sept. 1904, (Fairman coll.). Perithecia superficial, scattered on blackened areas of the stem, hemispherical, collapsing to plane or shallow cup-shaped, about one-half millimeter in diam.; ostiolum slightly compressed, minute; asci clavate-cylindrical, stipitate, paraphysate, 40–50 x 6–8  $\mu$ ; sporidia uniseriate, or biseriate above, oblong-elliptical, narrowed at the ends, brown, triseptate, scarcely constricted, straight or curved, 12–18 x 6–7  $\mu$ . The sporidia in many of the asci are imperfectly developed, and appear shriveled and of a darker color.

## Section VI. DICTYOSPORÆ Sacc.

### PLATYSTOMUM Trevisan.

337. *Platystomum compressum* (Pers.) Trev. *Sphæria c.*, Pers., 1801. *Lophidium compressum* in Sacc., Syll., No. 5531., N. A. Pyren, p. 234, and Berlese, Icones, tab. X., fig. 4. *Platystomum c.*, Feltgen, No. 917. According to Feltgen, *Platystomum* was founded by Trevisan in 1877 and *Lophidium* by Saccardo in 1878. Hab. on decorticated logs and limbs.

## Family VII. HYSTERIACEÆ Corda.

### Section III. HYALODIDYMÆ Sacc.

#### GLONIUM Muhl.

338. *Glonium simulans* Gerard. Sacc., Syll., 5602. N. A. Pyren., p. 683. On old wood.

339. *Glonium nitidum* Ellis. Sacc., Syll., 5605. N. A. Pyren., p. 683. On the inner surface of loosely hanging bark of cedar fence posts.



## Section V. PHÆOPHRAGMIÆ Sacc.

## HYSTERIUM Tode.

340. *Hysterium prostii* Duby. Sacc. Syll. Pyr., No. 5644. N. A. Pyren., p. 697. On bark of *Ulmus*. When fresh, resembles a discomycete.

## Section VI. HYALOPHRAGMIÆ Sacc.

## DICHÆNA Fries.

341. *Dichæna faginea* (Pers.) Fr. Common on bark of living beech trees. We have never seen it in fruit.

## Section VIII. PHÆODICTYÆ Sacc.

## HYSTEROGRAPHIUM Corda.

342. *Hysterographium fraxini* (Pers.) DeNot. Sacc. Syll. Pyr., No. 5758. N. A. Pyr., p. 701. Feltgen, 418. Common on branches of *Fraxinus*.

343. *Hysterographium gloniopsis* (Gerard). N. A. Pyr., p. 708. *Gloniopsis Gerardiana*, Sacc. Syll., 5747. On dry hard wood of deciduous trees.

344. *Hysterographium mori* (Schw.) On dead Sumach, Ridgeway, April, 1904.

## Section IX. SCOLECOSPORÆ Sacc.

## LOPHODERMIIUM Chev.

345. *Lophodermium arundinaceum* (Schrad.) Chev. Sacc. Syll. Pyren., 5823. N. A. Pyren., p. 719. Feltgen, 405. On dead stems of some undetermined grain.

## HYPODERMA, DC.

346. *Hypoderma rubi* Schroeter. *H. virgultorum* in Sacc. Syll., 5792 and in N. A. Pyr., p. 711. According to Feltgen this species was first described by Persoon, in 1796, as *Hysterium rubi*, and *H. virgultorum* was published in 1815. Feltgen, No. 393. We have never found it mature but only in the spermogonial state, known as *Leptostroma virgultorum*, Sacc. On dead stems of *Rubus* sp., Ridgeway, N. Y.

## ADDENDA

Since this paper was written, the following additional species have been found.

347. *Amphisphæria granulosa* E. & E. Ellis and Everhart, *Journal of Mycology*, vol. X., page 169. On old oak barrel staves, lying on the ground. Sept., 1900.

“*Perithecia* erumpent-superficial, globose or depressed-globose, granular-roughened, about  $\frac{1}{2}$  mm. diam., quite evenly and thickly scattered; ostiolum minute, papilliform. Asci cylindrical short-stipitate,  $65-70 \times 4 \mu$ , obscurely paraphysate. Sporidia uniseriate, oblong, uniseptate, scarcely constricted, pale-brown, slightly narrowed at each end,  $10-12 \times 3-3\frac{1}{2} \mu$ .”

*A. confertissima* E. & E. has rather smaller perithecia and broader sporules. *A. conferta* Sz. has the perithecia seated on a radiate-fibrose mycelium but is otherwise much like this.” loc. cit.

348. *Valsaria acericola* Ellis and Fairman, n. sp. On *Acer rubrum*, Ridgeway, N. Y., April, 1904. (Fairman, 1904-5.) Stroma cortical, valsoid, about 2 mm. diam.; perithecia circinate, small,  $\frac{1}{2}$  mm. buried in the inner bark, and not surrounded by any circumscribing line, their necks converging and their tips united in a small, black disk erumpent and raising the bark into small subconical pustules closely embraced by the ruptured epidermis; asci cylindrical, p. sp.  $250 \times 15-18 \mu$ ; paraphyses?; sporidia uniseriate, oblong-elliptical, brown, uniseptate, constricted at the septum, rounded at the ends,  $33-40 \times 15-18 \mu$ . The ascigerous pustules are accompanied by smaller ones containing stylospores, *Dothiorella* sp.

349. *Anthostoma acerinum* Ellis and Fairman, n. sp. On bark of maple, Lyndonville, N. Y., April, 1904. Stroma valsoid, 1 mm., buried in the bark; perithecia 4-6, globose, small ( $\frac{1}{4}$  mm.), with converging necks, crowned with the minute, papilliform ostiola erumpent in a small, tuberculiform disk which pierces the bark in a little tubercle; asci cylindrical, paraphysate; sporidia uniseriate, oblong, brown, continuous,  $7-10 \times 4-5 \mu$ .

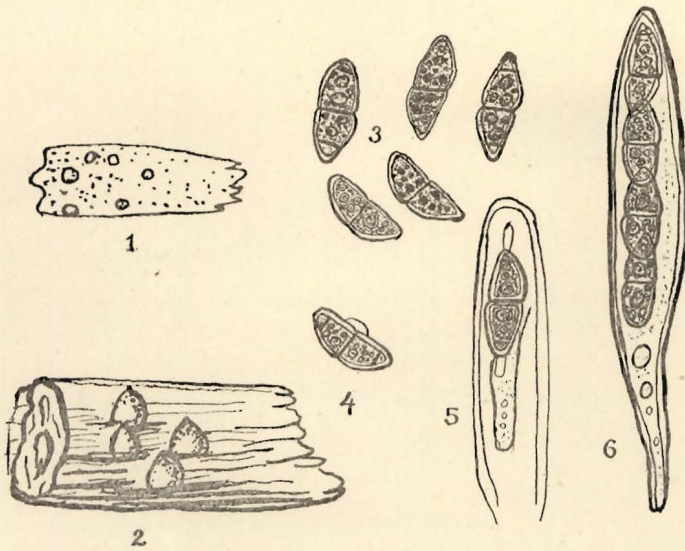
350. *Diatrypella cephalanthi* (Schw.) N. A. Pyren., page 591. On dead stems of *Cephalanthus occidentalis*, Ridgeway, Oct., 1904.

351. *Herpotrichia pezizula* (B. & C.) N. A. Pyren., page 160. On inner surface of moist, decaying bark, Ridgeway, autumn, 1904.

352. *Cryptosporella niesslii* (J. Kunze) Sacc. Sacc., Syll. 1812. *Cryptospora Nieslii* Kunze, Hedw., 1878, page 46. On maple bark, D. Clark's woods, Lyndonville, N. Y., Sept., 1904. Not to our knowledge reported before from this country. Pustules corticolous, elevating the bark. Stroma yellowish, or honey colored, and surrounded with a small black circumscribing line; perithecia several (3 to 5) in a stroma, mostly around the outer edges; asci oblong-cylindrical,  $50 \times 7 \mu$ ; sporidia uniseriate, hyaline, oblong cylindrical with rounded ends or sub-navicular, 2-4 guttulate,  $12-13 \times 3-4 \mu$ . In the Sylloge the asci are given as  $36 \times 9 \mu$ .

353. *Melanomma juniperi* Ellis & Everhart, n. sp. Perithecia superficial, the base slightly set in the bark, globose, black, large, scattered over wide areas of the bark, or occasionally very slightly clustered, with a small, slightly prominent, sub-mastoidal ostiolum; asci cylindrical, straight; sporidia fusoid, brown, 3-5 septate, the two middle cells larger, the end cells smaller,  $40 \times 10-12 \mu$ . On loosely hanging bark of red cedar, *Juniperus virginiana*, on fence posts at Blood's Bridge over Johnson's Creek at Lyndonville, N. Y., April, 1904. I have drawn up the description from the specimens originally collected. The sporidia resemble those of *Melanomma hydrophilum*, (Karst.), according to the fig. in Berlese, Icones Fungorum, Tab. XXIV., f. 4, but are larger and of a different color.

354. *Caryospora cariosa* Fairman, n. sp. Perithecia large, conic, black, superficial, or with base slightly immersed in the wood, scattered or gregarious; ostioli small; asci oblong cylindrical,  $150 \times 20 \mu$ . (p. sp.), surrounded by numerous filiform paraphyses, 2-8 spored; sporidia overlapping uniseriate, hyaline at first, then brown and finally almost opaque, uniseptate, with occasional additional septa near the ends, making them 1-3 septate, granulose guttulate (with opaque rounded granular contents), constricted at the middle septum, broad fusoid to biconical, ends sub-obtuse,  $36-43 \times 13-17 \mu$ . The sporidia are at times hyaline mucronate at the ends, or have a projection from the side of a bubble of mucus, and the halves of the sporidia are sometimes curved on opposite sides. On very hard blackened areas in carious cavities of beech firewood (*Fagus*). Lyndonville, N. Y., Oct., 1904.



## EXPLANATION OF THE FIGURES.

- Fig. 1. A piece of beech with the fungus, *Curyospora cariosa*, Fairman.  
 Fig. 2. The same enlarged.  
 Fig. 3. A group of sporidia.  
 Fig. 4. A sporidium with mucus bubble.  
 Fig. 5. A mucronate sporidium.  
 Fig. 6. An ascus with 4 sporidia.

Figures 1 and 2 were drawn from nature by Miss L. A. Weld.  
 Figs. 3, 4, 5 and 6 by the author, with camera lucida.



