XXVII.—*Notices of British Fungi.* By *the* Rev. M. J. Berkeley, M.A., F.L.S.

[With Plates.]

Continued from p. 208.

108. *Leptostroma juncinum*, Fr.! Scler. Suec. n. 330. Berk. Brit. Fung. Fasc. 3. n. 197. On dead stems of *Juncus conglomeratus*. Thringstone, Leic. Churchill Babington, Esq., King's Cliffe.

109. *Diderma contextum*, Pers., Obs. Myc. 1. p. 89. Ditm. in St. Deutsch. Fl. t. 39. On grass, fern, &c. Wothorpe. Norths.

110. *Didymium melanopus*, Fr., Syst. Myc. v. 3. p. 114. β. *Physarum Clavus*, A. and S. p. 96. t. 2. fig. 2. On moss. Apethorpe, Norths.

111. *Didymium xanthopus*, Fr., l. c. p. 120. *Cionium xanthopus*, Ditm. in St. Deutsch. Fl. t. 43. On ivy leaves, &c. King's Cliffe.

112. *Diachea elegans*, Fr. l. c. p. 156. *Trichia leucopodia*, Bull. t. 502. f. 2. On living leaves of *Convallaria majalis*, &c. King's Cliffe.

113. *Stemonitis typhoides*, Dec., Fl. Fr. vol. ii. p. 257. Ehr. Sylv. Myc. Ber. fig. 7. On rotten wood. Apethorpe.

114. *Stemonitis arcyrioides*, Sommerf., Fr. l. c. p. 162. On dead laurel leaves, &c. Apethorpe, Norths. Clifton, Notts.

115. *Arcyria ochroleuca*, Fr. l. c. p. 181. *A. silacea*, Ditm. l. c. t. 8. On rotten wood. Collyweston, Norths. This species has, I believe, been found in Scotland by Dr. Dickson.

116. Ascotricha, n. g. Peridium thin, at length bursting, clothed with dark, sub-pellucid, even, obscurely jointed hairs. Sporidia simple, contained in linear asci. Superficial at length free, or only supported by the investing thallus; black.

Ascotricha chartarum. On white printed paper in a deal candle-box. King's Cliffe. The present plant is one of considerable interest, and not referable to any genus at present established. When submitted to the microscope, if the asci be distinctly seen, a hasty or superficial examination might pronounce it a *Sphæria* of the division *Villosæ*; or on the other hand, if the asci were not observed, a *Chætomium*. A more

mature examination will show that it belongs to the *Perisporiaceæ*, being allied on the one hand to *Antennaria* and on the other to *Chætomium*, and that its relation to *Sphæria* is, if I mistake not, merely one of analogy. With *Chætomium* it agrees in most points, but the sporidia are not irregularly distributed in the gelatinous contents of the peridium, but are contained in distinct though highly transparent asci. The hairs are of a very different structure from those in *Chætomium elatum*, where they are curiously scabrous with minute rough points arranged in transverse lines, and nearly opake; in the present plant perfectly even and far more pellucid, though dark. A more important circumstance, perhaps, is the freeness of the peridia, in which point some approach is made in the genus *Antennaria*, which again presents a moniliform arrangement of the sporidia. The analysis given of *Antennaria cellaris* by Dr. Greville is exceedingly correct, and it will be seen that there is not the slightest trace of asci. Fries, however, whose acute observation nothing escapes, directs our attention to the apparently moniliform arrangement of the sporidia in *Sphæria Peziza*, which torulous appearance arises from the sporidia bulging out in consequence of the slenderness of the asci; and to this hint I have to acknowledge the being able to refer to its proper place the present production, which at first somewhat puzzled me. In the instance before us the asci are distinctly developed, though difficult to see, in consequence of their great transparency; but attentive observation will show them as distinct as represented in the figure. Indeed, except in old individuals, they are always to be seen with a careful adjustment. It is scarcely needful to add, that in the species of *Sphæria* of the division *Villosæ* the sporidia are always more or less distinctly septate, and altogether very different from those of the plant before us. The branching of the hairs which invest the peridia is very curious, and very much resembles that of the vine as explained by Turpin (See Ann. des Sc. Nat. n. s. 1. p. 225).

At first appearing under the form of a minute branched *Sporotrichum*, interspersed with globose brownish conidia. As it advances in growth globose black peridia become visible among the flocci, clothed with and supported by alternately

branched obscurely jointed filaments (thallus), the branches of which generally form an acute angle with the stem. The ramification of these is very peculiar, the stem and main shaft of each subdivision being almost constantly abbreviated and surmounted by the branchlet given off near its apex; this again is often abbreviated and another branchlet given off, which again surpasses it, and occasionally the same circumstance takes place a third time. The apices are clavate and colourless; the rest of the filaments, when viewed by transmitted light, brown, even, and pellucid; a few globose conidia are usually attached to them. The peridium is thin, black to the naked eye, of an olive brown under the microscope, filled with a mass of linear extremely transparent asci, each containing a single row of broadly elliptic chocolate sporidia. These have a paler border; sometimes the colour entirely vanishes either from age or abortion, and there is only a minute globose nucleus, or more probably a vesicle of air, in the centre; occasionally they become so transparent that the globular bodies alone are visible. After the peridia burst, several are frequently collected together into an irregular linear body, which consists principally of the conglomerated sporidia.

Tab. VII. fig. 8. *a*, *Ascotricha chartarum*, nat. size; *b*, peridia, a portion of the filaments only being represented, that their ramification may be more easily seen; *c*, peridium, artificially ruptured; *d*, portion of thallus, with conidia; *e*, asci; *f*, sporidia: all more or less magnified.

117. *Isaria arachnophila*, Ditm., l. c. t. 55. On a dead spider at the foot of a sallow, Collyweston, Norths. The sporidia are distinctly arranged in moniliform threads exactly as in *Aspergillus glaucus* or *albus*, of one of which species, or possibly of some *Penicillium*, I strongly suspect it to be a state. My specimen exactly accords with Ditmar's figure.

118. *Isaria intricata*, Fr., Syst. Myc. vol. iii. p. 278. On various dead Fungi, as *Agaricus mutabilis*, &c., Apethorpe, King's Cliffe. Some specimens belonged to the form described by Fries, others to *Isaria subsimplex* of Schumacher.

*119. *Anthina flammea*, Fr., Syst. Myc. vol. iii. p. 283. Amongst leaves of oak, beech, hazel, bilberry, &c., King's Cliffe, Norths.; Sherwood Forest, Notts.

120. *Syzygites megalocarpos*, Ehr. Verhandl. Naturf. Freund.

vol. i. p. 98; Fr. Syst. Myc. vol. iii. p. 329. On decaying Agarics, King's Cliffe. The manner in which the peridiolum in this most curious production is formed after the two lateral branches unite is very remarkable. The matter contained in them is attracted on either side towards the point of junction; a partition is then thrown out behind each grumous mass, which gradually becomes more and more distinct from the parent branch; at length the common commissure becomes obsolete, and finally the central septum which consisted of the two coats of the united branches is absorbed.

121. *Myxotrichum chartarum*, Kz. Myc. Heft. ii. p. 110.; Berk. Brit. Fung. Fasc. 3. n. 207. On straw, &c. in damp places, King's Cliffe, &c.

122. *Myxotrichum deflexum*, n. s. On paper which had been wrapped round a piece of decayed hazel wood on which was *Arcyria punicea*, and on the wood itself, King's Cliffe. This species to the naked eye perfectly resembles *Myx. chartarum*; but on examination not only does it want the curved apices to the flocci, but the mode of branching is altogether different. In the one the branches form more or less acute angles with the stem; in the present species they are mostly opposite, set on at right angles and deflexed. The main threads are generally simple, and if branched not trifid and subcymose.

Forming little patches consisting of little gray downy balls. From these arise a number of radiating threads furnished with a few opposite deflexed branchlets, which decrease in size from the base upwards, so as to give the appearance of a little grove of larches. The branches have occasionally a few short acute branchlets, which are often alternate. Sporidia collected in patches about the base of the threads, oblong-elliptic.

Plate VIII. fig. 9. *a*, *Myx. deflexum*, nat. size; *b*, a portion of one of the patches; *c*, a few of the filaments with masses of sporidia; *d*, sporidia; *e*, filaments of *Myxotrichum chartarum* from a part of a mass not producing the spiral tips.

123. *Helminthosporium Clavariarum*, Desm. in Ann. d. Sc. Nat. n. s. v. ii. tab. 2. fig. 2. On *Clavaria rugosa*, γ *grisea*, King's Cliffe.

124. *Dematium echinobotryum*, Fr. in Ind. Alph. p. 87. *Echinobotryum atrum*, Corda in St. Deutsch. Fl. fasc. 12. tab.

26. On decaying walnuts, Milton, Norths. My specimens, though tolerably abundant, were rather past maturity, but they agree with Corda's figure. His specimens were found at the bottom of an oil cask sprinkled with broken blister flies.

The discovery of this plant is interesting as confirming the general correctness of M. Corda in one of the most extraordinary of the new objects represented in his continuation of Ditmar's admirable work on German *Fungi*. I have lately met with another of these curious productions, *Hemicyphe stilboidea*, which is however clearly a species of *Mucor*, very nearly allied to *Mucor clavatus*. It is much to be regretted that he has made so many new genera on utterly insufficient grounds, and indeed that he has represented as autonomous species many mere *Mycelia*, or what is worse, decayed Fungi, or bad specimens of common species overrun with minute gelatinous Algæ. To the greater part of the sixteen productions represented in the last number, all referred to new genera, these remarks are strictly applicable. M. Corda's work is valuable as a register of various interesting forms of Fungi, but it is of little use where a correct delineation is requisite of parts differing but slightly from each other, on which the discrimination of nearly allied species depends.

125. *Macrosporium sarcinula*, n. s. On decaying orange gourds, King's Cliffe. Its first appearance is that of orbicular white downy patches consisting of suberect slightly branched threads. These soon vanish, leaving a dark olive green stratum, consisting at first of short clavate filaments with one or two septa. Their apices gradually become much incrassated, and the number of articulations increases. The septa are mostly horizontal with a few vertical ones; a few occasionally are inclined. In this state the colour is yellowish when viewed by transmitted light. The sporidia gradually assume a browner tint, become more and more distinct from the peduncle, and at length fall off, acquiring a rectangular outline, and resembling very much little corded bales, from which circumstance the name is taken. They vary greatly in size and in the number of cells. A few of the peduncles are seen amongst the sporidia, their articulations being frequently swollen above.

I am not certain whether the white filaments mentioned above properly belong to the plant.

Plate VIII. fig. 10. *a*, *Macrosporium sarcinula*, nat. size; *b*, white filaments and infant sporidia; *c*, sporidia from a patch in which the down has vanished; *d*, same, more highly magnified; *e*, perfect sporidia; *f*, same, more highly magnified.

126. *Aspergillus alternatus*, n. s. On damp paper, King's Cliffe. Grey black. Forming little orbicular patches. Extremely minute, scarcely to be distinguished without a lens. Mycelium thin, decumbent; fertile flocci articulate, erect, or subdecumbent, branched alternately in a zigzag manner; each branch terminated by a slightly swollen receptacle which is studded with oblong subtruncate sporidia. The mode of branching is as it were annotinous, the same as that of *Ascotricha chartarum*. The habit is that of *Sporocybe*, but in structure it agrees with *Aspergillus*.

Plate VIII. fig. 11. *a*, *Aspergillus alternatus*, nat. size; *b*, a portion magnified; *c*, the termination of one of the branches with its head of sporidia; *d*, sporidia.

127. *Botrytis citrina*, n. s. On dead branches of cherry lying upon the ground, King's Cliffe. Summer. Forming thin delicate mucedinous patches, about an inch across. Mycelium nearly white, as indeed is the whole plant at first. Fertile flocci erect, articulated, branched; branches subcymose, lemon-coloured, as well as the obovate spores.

Plate VIII. fig. 12. *a*, a portion of the plant; *b*, upper part of one of the fertile flocci more highly magnified.

128. *Botrytis curta*, Berk. Brit. Fung. Fasc. 3. n. 209. On *Anemone nemorosa*, King's Cliffe. Distinguished from *Botrytis parasitica*, which comprises many distinct forms by its simple denticulate, not branched or scarcely branched threads. Extremely minute, at length grey brown; flocci simple, abbreviated, their tips denticulate; spores oval.

Plate VIII. fig. 13. Flocci and spores highly magnified.

129. *Penicillium fasciculatum*, Sommerf. Fr. l. c. p. 407; Berk. Brit. Fung. Fasc. 3. n. 210. On various dead herbaceous plants, generally springing from *Sclerotium durum*, King's Cliffe, &c.

130. *Oidium chartarum*, Lk. Sp. 1. p. 124. On damp paper, King's Cliffe.

131. *Epochnium macrosporoideum*, n. s. On the decorticated portion of a decayed twig apparently of *Ribes rubrum*, King's Cliffe, August. Forming a thin slate-black stratum. Flocci transparent, perfectly colourless under the microscope, as far as I have observed not septate, very slender, effused, irregularly branched, often anastomosing at right angles. From the tips or on very short lateral branches spring subglobose or oval colourless transparent vesicles with a central nucleus; these by degrees are furnished within with obscure septa still retaining their transparency; at length they acquire when full-grown a brown hue, and are from $\frac{1}{1500}$ to $\frac{1}{2000}$ of an inch in diameter. They are then in general more or less globose, divided by septa into a few lobes, which are disposed in a radiating manner like the berries of a mulberry. Occasionally the septa appear darker than the rest of the sporidia. A few are furnished with a little apicular peduncle, but the greater part lose all traces of the point of attachment. I have sometimes seen one or two cells projecting from the otherwise globose sporidia, and in one instance two sporidia were united by means of such a process. I have little hesitation in referring the present highly curious production to the genus *Epochnium*, the circumstance of the sporidia being globose being clearly comparatively of small importance.

Plate VIII. fig. 14. *a*, *Epochnium macrosporoideum*, nat. size; *b*, early stage of do.; *c*, a portion more advanced; *d*, sporidia; *e*, a single sporidium more highly magnified.

*132. *Sepedonium roseum*, Fr. l. c. p. 438. On *Helvella crispa*, Laxton.

133. *Xenodochus carbonarius*, Schlecht. in Linn. vol. i. p. 237. t. 3. f. 3. Upon *Uredo miniata* of the common Burnet. This very interesting addition to our Flora was found near Ashby de la Zouch by Mr. Churchill Babington. It appears to have been detected before only by Schlechtendal.

134. *Torula graminis*, Desm. n. 169. On dry leaves of large Carices, Collyweston, Norths.

135. *Cylindrosporium Ficariæ*, Berk. Brit. Fung. Fasc. 3.

n. 212. On *Ranunculus Ficaria.* Common. White, sporidia irregularly oblong, slightly curved.

136. *Uredo Artemisiæ.* Chev. Fl. Par. vol. i. p. 399; Berk. Brit. Fung. Fasc. 3. n. 235. On *Artemisia Absinthium,* King's Cliffe.

137. *Uredo pompholygodes,* Schlecht. in Linn. vol. i. p. 248; Berk. Brit. Fung. Fasc. 3. n. 236. On *Anemone nemorosa,* King's Cliffe, May. It is to be observed that *U. Ranunculacearum,* Dec., is at least in great part the same species with the present, of which *U. Anemones,* Dec. Fl. Franc. is a synonym. Consequently the species described in Eng. Fl. under the name of *U. Ranunculacearum* on Link's authority, must bear the name of *Uredo Ficariæ,* Alb. and Schwein.

XXVIII.—*On the Ant Tree of Guiana* (Triplaris Americana).

By Robert Schomburgk, Esq.*

TRIPLARIS, Linn.

Class IX. Ord. II. Ord. Nat. Polygoneæ, Juss.

Flores dioici. Calyx basi tubulosus, pilosus. *Flores Masc.* Calyx limbo 6-partitus. Corolla 0. Stamina 9. *Flores Fem.* Calyx 3-partitus. Corolla 3-petala. Ovarium 3-quetrum. Styli tres. Akenium 3-quetrum, calyce aucto tectum.

T. Americana, foliis alternis, integerrimis, oblongis, acutis, nervosis; stipulis lanceolatis laceris, spicis terminalibus axillaribusque brachiatis.

Triplaris Americana, *Linn. Sp. Pl.* p. 130. *Aubl. Guian.* ii. p. 915. t. 347.—T. Pyramidalis, *Jacq. Amer.* 13. t. 173. f. 5.

A tree from fifty to sixty feet in height; its trunk smooth, of a greyish colour; the branches erect, frequently in the form of a pyramid; leaves entire, oblong and narrow, from nine to twelve inches long, of a dark green colour; petiole dilated at the base, somewhat amplexicaule, with ochreate stipulæ, and marks at the opposite direction, as of fallen-off petioles; flowers unisexual. *Males*: calyx hairy, tubular, surrounded by a laciniated bractea, six-parted; corolla absent; stamens nine, divided in three parcels of different sizes, the large ones opposite the segments of the calyx, filaments somewhat crooked; anthers ovate, two-celled, dehiscing lengthwise. *Females*: calyx provided with the bractea, three-

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