Army Medical Museum, a few months since, from Bourgogne of Paris. A careful study of these by monochromic sunlight inclines me to the opinion that Hartnack's interpretation is erroneous, and that the fine striae are in reality rows of minute hemispherical bosses, from which, as in the case of other diatoms, the appearance of hexagons would readily result if the frustule was observed by an objective of inferior defining-power to that I used, or if the illumination was unsuitable. This memorandum is accompanied by two photographs exhibiting what I saw; one is magnified \(1034\), the other \(3100\) diameters. The principal frustule shown in these photographs is \(\frac{1}{3}\) of an inch in length (the mean length of \(S. \text{gemma}\) is stated in the 'Micrographic Dictionary' as \(\frac{3}{4}\) of an inch). The fine transverse striae counted longitudinally at the rate of \(72\) to the \(\frac{1}{6}\) of an inch. Transversely these were resolved into beaded appearances which counted laterally \(84\) to the \(\frac{1}{6}\) of an inch. If the structure consists, as I suppose it does, of fine hemispherical bosses projecting from the surface of the frustules, the fact that these bosses are set together more closely in the transverse direction than in the longitudinal would account for the elongated form of the pseudohexagons when seen.

Some parts of the photographs closely approach Hartnack's description, but it is easy to observe that these are not the parts which are most nearly in focus.

I have also resolved this diatom by monochromatic light derived from the electric lamp. The appearances obtained were identical with those above described.


[Continued from vol. vi. p. 469.]

[Plates XVIII., XIX., XX., & XXI.]

* Coprinus fuscescens, Fr. Ep. 244.
This species, introduced on the authority of a drawing by Lady Orde, has been found lately at Walthamstow.
C. sublanatus, Hussey, seems to be a form of this species.
In moist woods, W. G. Smith.


1273. *C. (Telamonia) haematochelis*, Fr. Ep. p. 302; Huss. vol. i. tab. 19. In woods. Coed Coch, Oct. 1869. This appears to be a very different species from *C. armillatus*, of which we have a fine drawing from Prof. Fries.


This interesting species differs from *P. involuclus* in the scaly pileus and the yellow flesh of both stem and pileus.


In plantations, on the naked soil. Coed Coch, Oct. 1869-70.
Pileus $\frac{1}{2}-\frac{2}{3}$ inch across; stem 1-1$\frac{1}{4}$ inch high, 1-2 lines thick; gills narrow.
Quite distinct from every species in the section, except *H. turundus*, of which we consider this pretty species a form, which occurs every year at Coed Coch.

In grassy pastures. Laxton, Norths., Oct. 28, 1866.

This fine species occurred in great perfection at Coed Coch, Oct. 17, 1867. There is a splendid figure in Fries’s ‘Atlige och Giftiga Svampar.’

In woods.
This interesting species has been exhibited on more than one occasion at South Kensington, and appeared at the late meeting of the Woolhope Club. There is a good figure by Mr. Worthington Smith in Seemann’s ‘Journal of Botany.’

The small normal form occurred abundantly amongst pebbles on the side of Loch Ceneord, Aberdeenshire, at the end of August 1870.

Bowood, Oct. 19, 1869.

Edge of Loch Ceneord, Aberdeenshire, amongst pebbles.
This may perhaps as well be considered a small form of *R. fiventis*, if not a distinct species.


*Cantharellus radiocus*, B. & Br. no. 1134.
Specimens have been communicated to Prof. Fries, who believes our plant, which has now been found in other localities, to be *Merulius carbonarius*, A. & S. It has nothing whatever to do with *C. umbonatus*.


This species, which is certainly too near *P. torulosus*, occurred abundantly at Sibbertoft, on old elm-stumps, Oct. 1870, exactly agreeing with Bulliard’s figure.

In fir-woods. Ascot, Nov. 1868.
On grassy ground, Kew, 1868. It has occurred since in other localities.

On dead wood. Hopetoun, Lady Hopetoun, who sent an excellent drawing. It also occurs at Belvoir, and has lately been sent by the Rev. J. Keith from Forres.

Mr. W. G. Smith has lately sent what is undoubtedly *Boletus imbricatus*, Bull; but the substance is not fibro-casearius, and can therefore scarcely be *P. imbricatus* of Fries and Rostkovius. It is probably merely a thin form of *P. sulphi-reus*.


On the trunk of a poplar, abundantly. Uffington, Lincolnshire.

Has very much the habit of *P. connatus*.

On dead wood. Leigh Wood, Bristol, Oct. 6, 1865.

Epping Forest, Nov. 17, 1867, C. E. Broome and W. G. Smith.

1291. *P. (Resupinatus) hibernicus*, n. s. Totus effusus, non separabilis, albus; margine tenui, tomentoso; poris parvis, angulatis; dissepimentis rigidiusculis.

At first orbicular, then by confluence forming effused patches, with a narrow, very thin, tomentose margin; pores ¼ inch across; dissepiments mostly entire. Apparently nearer to *P. radula* than to *P. vaporarius*.


In fir-woods. ASCOT. With *H. tomentosum*.

In fir-woods. STREET, SOMERSETSHIRE, Oct. 23, 1868, Aubrey Clarke, Esq.


It is quite clear that *Hydnium gelatinosum* does not belong to the same category as normal *Hydnia*. The structure is that of a *Nematella*; and Mr. Currey and ourselves propose for it the genus *Hydnogloea*. There is a fine species amongst Kurtz's Fungi, which will probably soon be published by Mr. Currey.


W. G. Smith, Epping Forest, 1868; abundantly.

On decayed wood. Epping Forest, C. E. Broome.

Sowerby's figure seems to represent the true plant; but the specimens in his herbarium are *Radulum quercinum*.

As this plant has occurred in excellent fruit, we give a figure.

The spores are elliptic, and '0004-'0005 long.

Plate XVIII. fig. 1. a. one of the setigerous aculei, magnified; b. tip of one of the barren echinulate setae; c. spores: both more highly magnified.


Mr. English has more than once found at Epping fine specimens of *Thelephora multizonata*, B. & Br.


Plate XVIII. fig. 3. Spores magnified, '00035 inch long.


Plate XVIII. fig. 4. Various individuals, magnified.

This was mentioned, in the 'Transactions of the Bath Field Club,' as *S. candida*, Hoffm.; but, on comparison of specimens, it appears to be *S. fasciculata*.

Plate XXI. fig. 30. Mougeot's species, for comparison.

This noble fungus has been found this year in Kent by Miss Susan Broadwood, and it has occurred also in Herefordshire.
1302. *Clavaria spinulosa*, P. Obs. ii. tab. 3. fig. 1.
In pine-woods. Coed Coch, 1866.
Stem thick at the base, but not so thick as in Persoon's figure.

Frome, 1866, C. E. Broome.

1304. *Pterula multifida*, Fr.
This interesting addition to our list of Fungi was communicated by Sir W. C. Trevelyan, Sept. 1865.

Forming circular patches on twigs of ash and maple, in winter. Bath, 1868, C. E. B.

Plate XVIII. fig. 2. a. *D. sebacaeus*, nat. size; b. group of threads with two kinds of fruit, magnified; c. spores; d. ditto bearing secondary spores; e. spores of different forms, one germinating; f. fusarioid spores, all more or less magnified; g. conidia.

1306. *Geaster tunicatus*, Vitt. Mon. p. 18, tab. 3. fig. 3.
Found in considerable abundance amongst Rhododendra at Castle Ashby by Mr. Beech in 1869-1870.

Reading, Mr. Hoyle, Oct. 1870.

Stem 1 inch high, \(\frac{3}{4}\) inch thick, lacunose, olivaceous within; peridia 2 inches across; warts 1\(\frac{1}{2}\)-2 lines high; capillitium and spores lilac; spores globose, echinulate, \(\cdot00015\) in diameter; mycelium thread-like, white.

Agreeing exactly with an authentic specimen of Persoon's *L. echinautom* externally, who could, however, scarcely have overlooked the lilac spores. The stem is lacunose, the cavities verrucose.


Brought to the Fungus Show at South Kensington, Oct. 1870, from the neighbourhood of Marlow, by Mr. Sawyer.

As far as the present specimens go, the species seems to be a form of *L. atropurpureum*. Vittadini refers it doubly to *L. hiemale*.

1308. *Scleroderma geaster*, Fr. Syst. iii. p. 46.
Near Hereford, Dr. Bull, Oct. 6, 1870, during an excursion of the Woolhope Field Club.


Spores \(0.005\) in diameter.


Stem \(\frac{1}{16}\) inch high; spores \(0.003\) in diameter.


*Nidularia pisiformis*, Tul.

On the ground in great abundance, often attached to chips and sticks. Powerscourt, on the road leading to the waterfall, county Wicklow.

*Sphaeronema subulatum*, Tode, Meckl. Fung. fig. 117.

A form occurred at Ascot, Oct. 31, 1867, with much shorter appendages to the spores.


*Puccinia veronicae*, DC.


*Thecaphora hyalina*, Fing. This rare species has occurred lately near Bath and in some other locality.

*Stilbum bicolor*, P. Syn. p. 682.

On dead wood. Langridge, March 1869.

Stem with head \(0.02-0.05\) high.


Spores \(0.001\) inch long; \(0.004-0.005\) wide.

PLATE XVIII. fig. 7. a. threads with verticillate spores, magnified; b. septate spores, more highly magnified.
1315. Graphium stilboideum, Cord. Ic. fasc. ii. tab. 11. fig. 69.
On cabbage-stalks. Batheaston, April 1869.
Spores ’0002—0004 long.
1316. Rhinotrichum lanosum, B. & Br. MS. Clinotrichum lanosum, Cooke, MS.
Resting spores echinulate, ‘001 in diameter.

Plate XVIII. fig. 8. a. fertile threads, magnified; b. spores, more highly magnified.

If this species is to be assigned to a new genus, Peronospora curta must follow the same rule, for the structure is altogether similar. It is strange that the authors should have taken no notice of a species which has been more than once figured.

Endodesmia, n. g. Acervuli floccis nitidis laevibus e septatis leviter curvatis cooperti; sporeae concatenatae, unisepatae, ellipticae, utrinque appendiculate.
Spores ’0004—0005 long, ’0002 wide.

Plate XX. fig. 9. a. single plant; b. portion of plant, showing flocci and necklace of spores, magnified; c. spores, more highly magnified; d. another form of spore, if belonging to the same plant.

1319. Acremonium ranigenum, n. s. Stipite e floccis aggre-gatis composito, apicibus elongatis, liberis, sporis globosis echinulatis breviter pedicellatis conglomeratis obsitis.

On dead frogs. Dr. Bird, Monkton Farleigh, Sept. 1868.
Stem composed of a multitude of septate threads, of a delicate lemon-yellow, which diverge upwards and form a sub-globose head; the threads give origin on all sides to globose spores crowded so as to form little masses. Spores ’0004 in diameter.

Plate XVIII. fig. 10. a. single plant; b. portion of the same, to show the threads of which the stem is composed, and their fertile apices, magnified; c. spores, more highly magnified.

*Psiloma discoidea, B. & Br. no. 1150. Var. lateritia, B. & Br. Irregularis, disco aurantiaco, margine tomentoso, carneo, floccis flexuosis articulatis; sporophoris setaceis; sporis fusiformibus.
Spores ’0004—0005 in. long, white when young.
*P. nivea, Fr. This has been recognized long since as the produce of an insect. Mr. A. Murray now informs us that it is a Coccus named Adelges fagi.


Sporidia ‘0006–‘0008 long, ‘0003–‘0004 wide.

Plate XIX. fig. 11. a. asci and jointed paraphyses, magnified; b. sporidia, more highly magnified.

*P. (Discina) viridaria, B.

Sporidia ‘0005 long, ‘0003 wide.

Plate XIX. fig. 12. a. asci and paraphyses, magnified; b. sporidia, more highly magnified.

*P. (Dasyscyphæ) rufo-olivacea, A. & S. p. 320.

Sporidia elliptic, binnucleate, ‘0006 long; paraphyses filled at the top with dark green endochrom.

Plate XIX. fig. 13. a. asci and paraphyses, magnified; b. sporidia, one of which is germinating, more highly magnified.


On soil amongst grass. Powerscourt, Sept. 27, 1867.

Sporidia ‘0006 in diameter.

1321. P. (Dasyscyphæ) citricolor, B. & Br. Cupulis brevissime stipitatis v. sessilibus, carnoso-aceraces, turbinatis, subtiliter tomentosis, citrinis; sporidiis fusiformibus, guttulis oleosis maculatis.

On rotten wood, March 1869.

Cups ‘0009 inch across; paraphyses linear; sporidia ‘0008–‘001 long; ‘0002–‘00025 wide; asci ‘0035–‘004 long.

Plate XIX. fig. 14. a. plant, slightly magnified; b. ascus and paraphyses, magnified; c. sporidia, more highly magnified.

1322. P. (Dasyscyphæ) escharodes, B. & Cr. Cupula sessili, rugosa, floccis brevibus albidis asperata, sordide olivaceo-viridi; margine pallido, floccis subtilibus fimbriato; hymenio cinereo.


Sporidia fusiform, ‘0004 long, sometimes with two nuclei. Cup at first closed, globose, ‘03 inch in diameter, quite black when the hairs have vanished.

Plate XIX. fig. 15. a. plant, magnified; b. section of ditto; c. ascus and paraphyses; d. sporidia: e, f. asci and sporidia from another specimen (all more or less highly magnified).

1323. P. (Hymenosecyphæ) amenti, Batsch, Fuckel, no. 1159.

On female catkins of *Abele*. Langridge, March 31, 1869.
Sporidia obovate, '0004 inch long, '0002 wide.

Plate XIX. fig. 16. a. asci and paraphyses, magnified; b. sporidia, more highly magnified.

1324. P. (Mollisia) Bullii, Sm. Cupulis subhemisphæricis, demenum irregularibus, sessilibus v. brevissime stipitatis, albidis, margine inflexo grumaceo-pulverulento e velo massa albida partim obtectis; hymenio sæpe proliferó; mycelio fusco.

On a waterbut, W. G. Smith, Dec. 1869.
Sporidia subelliptic, '0002-'0003 inch long.

Plate XIX. fig. 17. a. P. Bullii; b. separate plant, to show the mycelium; c. asci; d. sporidia more highly magnified.


On dead wood. St. Catharine's, Jan. 29, 1869.
Granules often disposed in lines so that the cups are radiated. Ascii 0015 long; sporidia fusiform, '0003-'004 long, hyaline, smooth, uniseriate.

Plate XIX. fig. 18. a. P. elaphinos; b. asci; c. sporidia, more highly magnified.

1326. P. (Mollisia) aquosa, B. & Br. Cupulis primum ferme clausis, dein expansis, planis vel leviter concavis, viridi-brunneis, glabris; hymenio aquose griseo; sporidiis ovatis, hinc apiculatis biserialibus.

On or with Sphaeria hirsuta, on willow. Batheaston, Jan. 1867.
Resembling P. cinerea, but smoother and more concave when young, with totally different spores. Cup 0024 in diameter, growing on Sphaeria hirsuta and its mycelium, accompanied by a brown mould consisting of erect, simple, articulated threads surmounted by a single oblong uniseptate spore, 0005 long. Ascii 002 long; sporidia 0002-00025 long, 0001-00015 wide, bright orange when treated with iodine.

Plate XX. fig. 19. a. ascus and paraphysis; b. sporidia; c. threads with naked spores; d. spores: all more or less magnified.

1327. P. (Mollisia) hydnicola. Cupulis ex orbiculari irregularibus, planis, atroviridibus; asci cylindricis; paraphysibus ramosis; sporidiis subglobosis, uniserialibus.

On Hydnum ochraceum. Spores 0004 long, 0003 wide; conidia oblong, 0001-00015 long.

Plate XX. fig. 20. a. plant growing on Hydnum; b. asci and paraphyses, magnified; c. sporidia; d. conidia: both more highly magnified.
On *Carex paniculata*. Batheaston, June 1867, C. E. Broome.
On decorticated fallen oak-branches. Aboyne, Sept. 1870.
Sporidia '00015—'0003 long.
Roxburghshire, A. Jerdon, Esq.
*Patellaria atrovinosa*, Blox. Sporidia '001 long, '0003 wide.

Plate XX. fig. 21. a. ascus and paraphysis, magnified; b. sporidia, more highly magnified.


Paraphyses branched; sporidia ovate, '00015—'0002 unc. long; conidia '0002—'0003 long.

Plate XX. fig. 22. a. perithecium; b. asci and paraphyses; c. sporidia; d. conidia: all more or less magnified.

Sporidia clavato-falciform, '0025 in. long; conidia brown, pentagonal or doliiform, concatenate, '001—'002 long, springing from flexuous horizontal threads.

Plate XX. fig. 23. a. perithecium; b. hairs of ditto; c. mycelium with conidia; d. ascus with paraphysis; e. sporidia; f. sporidium germinating.

*S. (Villosæ) tristis*, Tode, var. sporidiis majoribus.
Sporidia '0005—'0006 long, '0002—'00025 wide.

On rotten elm-roots. Langridge, April 16, 1869. St. Catharine's, April 1861.
Sporidia fusiform, at length 4-septate, '0008—'001 long; conidia '0005 long, '0003 wide at the top. The Cladotrichoid hairs sometimes spring immediately from the mycelium. The
sporidia resemble those of *S. mutabilis*, which are '0008 long. The conidia are sometimes pentangular.

Plate XXI. fig. 24. *a*. perithecia with conidiiferous threads; *b*.* b*. conidiiferous threads; *c*. ascus; *d*. sporidia: all more or less magnified.

Sporidia '0025 long. Very near *S. ovina*, if really different.

Plate XXI. fig. 25. *a*. group of perithecia; *b*. ascus; *c*. sporidia: all more or less magnified.

*S*. (Denudatae) *brassicae*, Klotzsch, MS.
Sporidia '0015–'002 long, '0008–'0012 wide, with the appendages '003–'005 long.

Plate XXI. fig. 26. Portion of an ascus in a peculiar condition.
Fig. 27. *a*. ascus; *b*. sporidia: both more or less magnified.

This occurs with a mould which appears to be the conidiiferous state, which is apparently *Sporocybe albipes*, B. & Br. MS.

Floccis rectis, simplicibus, articulatis, albis, duobus articulis superioribus minute echinulatis; sporis ellipticis, bruneis, e sporophoris totidem oriundis, '0003–'0006 long, '0002–'00025 wide; threads '004–'009 high.

Plate XXI. fig. 28. *a*. *Sporocybe albipes*, magnified; *b*. separate head; *c*. spores: all more or less magnified.

*S*. (Subtectae) *apiculata*, Curr.
On bramble. Batheaston.
Sporidia '0005–'0006 long, '0002–'0003 wide.


On dead decorticated branches. Batheaston, April 8, 1869. Perithecia fragile, for the most part compressed and elongated so as to approximate Pertusae and Macrostromae. Ostiolum papilliform. Asei clavate; sporidia fusiform, with several nuclei, '001 inch long. The subjacent wood is tinged throughout with magenta-pink.

Plate XXI. fig. 29. *a*. ascus; *b*. sporidia: both more or less magnified.

[To be continued.]

Figs. 5 & 6 on Plate XVIII. represent the spores of *Agaricus metulac- spora* and those of *A. cristatus*, referred to in page 402 of the preceding volume.