

## MYCETOZOA FOUND DURING THE BASLOW FORAY.

By *Gulielma Lister, F.L.S.*

The visit of the British Mycological Society to Baslow had been arranged to take place from Monday, Sept. 22nd, to the following Saturday. Several of our party however arrived a few days earlier than the appointed time; and, owing to the railway strike, many were unable to leave at the end of the week; thus by the enforced extension of their visit a fuller opportunity was afforded for exploring the woods than had been anticipated. The weather for the previous weeks had been drier than the hunters for Mycetozoa could have wished, but on the whole a fair harvest of species was obtained.

On September 19th W. N. Cheesman searched some woods between Grindleford and Baslow, and found six species, including a good development of *Trichia verrucosa*. This species although it had been recorded from seven English counties, as well as from Wales and Scotland, is by no means common in the British Isles, and is a new record for Derbyshire. Mr Cheesman also obtained a fine gathering of *Cribraria rufa*.

On September 23rd the woods near Baslow were searched. These consisted of oak, ash, sycamore, poplar and beech, with some larch and Scots fir. Nineteen species were obtained. On fallen pine boughs *Didymium melanospermum* was abundant, and on the dead beech leaves amongst which the boughs were lying were found *Craterium minutum*, *Didymium nigripes* and *Lamproderma scintillans*. A large growth of *Craterium leucocephalum* occurred on dead oak leaves, and several gatherings of *Tubifera ferruginosa* were obtained in the rosy immature stage on old stumps.

On September 24th the party was conveyed by motor cars to explore three woods in the neighbourhood of Grindleford. In Highlow Wood the trees consisted of alder, birch, poplar, sycamore, larch and a little Scots fir; the moist peaty ground beneath was trenched with old draining ditches and rough with tussocks of *Aira caespitosa*. Thirteen species of Mycetozoa were found here, of which the most noteworthy were *Enteridium olivaceum*, forming small aethalia on dead sticks, a compact hemispherical aethalium of *Reticularia Lycoperdon* without any

enveloping cortex and showing distinctly the outlines of the component sporangia, and *Perichaena corticalis* abundant on the under surface of dead birch boughs lying among wet grass.

In Padley Wood, our lunching place, oaks clothed the steep sides of a ravine down which a stream fell in small cascades between fern-clad banks. Four species of Mycetozaa were found here, all on fallen boughs of oak: they were, *Comatricha nigra*, a minute form, *Arcyria nutans*, *A. pomiformis* and *Licea pusilla*; the sporangia of the last named species were, as usual, small and inconspicuous, matching in colour the dark decorticated wood on which they had developed. The spores proved to be unusually small, measuring 12 to 16 $\mu$ , instead of 16 to 20 $\mu$ , but were typical in colour and marking, being olive grey and very minutely warted all over. Stoke Wood formed a narrow strip beside the river Derwent, and consisted of sycamore and poplar with an undergrowth of dog's mercury, elder and rhododendrons. Of the three species found here the most striking was *Comatricha nigra* var. *alta* which formed conspicuous reddish brown patches extending over an area of six by twenty-four inches on the side of an old fencing plank: most of the sporangia were cylindrical on long slender stalks, but among them were globose sporangia with shorter stalks; the capillitium in all consisted of a tangle of sparingly branched flexuose threads attached chiefly to the base of the columella.

On September 25th we visited the timber yard and explored the woods and gardens of Chatsworth. Seventeen species were obtained, of which ten were found in the timber yard. Here *Fuligo septica* was very abundant on old pine trunks, and also *Arcyria nutans*. *Physarum psittacinum* and *Stemonitis ferruginea* were also found on these logs, in good condition; both are new records for Derbyshire. The fine old oaks, survivors of the giants of Sherwood Forest, scattered over grassy and bracken-covered slopes, yielded two interesting Mycetozaa, viz. *Cribraria rufa*, a species rarely found on any but coniferous wood, and a form of *Liceopsis lobata* having some sporangia stalked, globose and free, and others sessile and closely clustered.

Rough slopes of peaty soil above the Chatsworth gardens, clothed with cushion-like growths of the moss *Campylopus pyriformis*, recalled similar habitats in Epping Forest where *Colloderma oculatum* had repeatedly been obtained. No trace of this species was found at the time, but lumps of the mossy soil were brought away and kept moist; after a fortnight a sporangium of *Colloderma* made its appearance and was soon followed by others until after two months over thirty sporangia had developed.

A visit to the sawpits in the Chatsworth grounds on October 26th resulted in several additions to our list, among them being *Lindbladia effusa* found on sawdust, a species rare in England but obtained in the same locality during the visit of our society to Baslow in May, 1915.

On September 27th the woods called "New Piece" in the Chatsworth grounds were explored, when the most interesting finds were *Hemitrichia clavata*, and the conspicuous red sporangia of *Arcyria Oerstedtii*.

Two of our members visited later Calton Wood, on the Bake-well Road. Here, amongst other species, a small *Comatricha* was obtained on dead wood, agreeing on the whole with *C. elegans* in having the columella divided above to form the primary branches of the capillitium. Some of the sporangia however resemble *C. nigra* in having the columella unbranched and tapering upwards. The two species are undoubtedly very closely allied. Another interesting specimen was obtained by Mr Rea in Cheedale. He found there on a plant of *Mimulus Langsdorfii* growing in the river Wye a perfect development of *Physarum didermoides* var. *lividum*; this well-marked variety had only been recorded before with certainty from the counties of Bedfordshire, Buckinghamshire and Sussex, and always on old straw. In the present gathering we have a new record for Derbyshire and a new habitat for the species. As the plant to which the sporangia were attached was completely surrounded by running water we must infer that the plasmodium had been living under water before it crept up the *Mimulus* stalk to fruit. It is well known that a plasmodium can in special cases become adapted to submerged conditions, and may even thrive there, but such instances have rarely been met with in the field.

During the two previous forays at Baslow in September 1901 and May 1915, forty-four species of Mycetozoa were obtained altogether; during our recent foray forty-five species were collected, fifteen of which do not appear in the previous lists and appear to be new records for Derbyshire; they are distinguished by an asterisk in the following list.

*B.* refers to Baslow Woods, *C.* to Chatsworth, *Ca.* to Calton Wood, *G.* to Grindleford, *H.* to Highlow Wood, *P.* to Padley Wood, *S.* to Stoke Wood.

*Ceratiomyxa fruticulosa* (Müll.) Macbr., *B.*

*Physarum nutans* Pers., *B.*, *C.*, *H.*, subsp. *leucocephalum* Lister, *B.*

*P. viride* (Bull.) Pers., *H.*, *Ca.*

\**P. psittacinum* Ditmar., *C.*

- \**P. didermoides* (Ach.) Rost., var. *lividum* Lister, *Cheedale*.
- Fuligo septica* (L.) Gmel., B., C.
- Craterium minutum* (Leers) Fries., B., S.
- C. leucocephalum* Ditmar., B.
- Didymium nigripes* Fries., B., C.
- \**D. melanospermum* (Pers.) Macbr., B.
- D. squamulosum* (A. & S.) Fries., B., C.
- Mucilago spongiosa* (Leyss.) Morg., B.
- \**Colloderma oculatum* (Lipp.) G. Lister, C.
- Stemonitis fusca* Roth., B., C.
- \**S. herbatica* Peck, C.
- \**S. ferruginea* Ehrenb. C.
- Comatricha nigra* (Pers.) Schroet., B., C., G., H., P., var. *alta* Lister, S.
- \**C. elegans* (Rac.) Lister, Ca.
- \**C. typhoides* (Bull.) Rost., C.
- Lamproderma scintillans* (Berk. & Br.) Morg., B., C.
- Lindbladia effusa* (Ehrenb.) Rost., C.
- Cribraria argillacea* Pers., B., Ca.
- C. rufa* (Roth.) Rost., C., G.
- C. vulgaris* Schrad., C.
- \**Licea pusilla* Schrad., P.
- Tubifera ferruginosa* Gmel., B., H.
- Enteridium olivaceum* (Ehrenb.) Rost., H.
- Reticularia Lycoperdon* Bull., C., H.
- \**Liceopsis lobata* (Lister) Torr., C.
- Lycogala epidendrum* (L.) Fries., H.
- \**Trichia verrucosa* Berk., G.
- T. affinis* de Bary, C.
- T. persimilis* Karst., B.
- T. varia* Pers., B., C., G., H.
- T. decipiens* (Pers.) Macbr., S.
- T. Botrytis* Pers., C., H.
- \**Hemitrichia clavata* (Pers.) Rost., C.
- Arcyria cinerea* (Bull.) Pers., H.
- \**A. pomiformis* (Leers) Rost., B., C., G., P.
- A. denudata* (L.) Wettst., B., C., H.
- A. incarnata* Pers., B., C., Ca.
- A. nutans* (Bull.) Grev., C., P.
- \**A. Oerstedtii* Rost., C.
- Perichaena corticalis* (Batsch) Rost., G., H.
- \**P. depressa* Lib., G., H.

During the meeting some of our members exhibited interesting specimens which they had recently collected. From the Lake district Dr Adams brought a large growth of *Badhamia rubigr-*

*nosa* (Chev.) Rost. var. *globosa* Lister, on moss, a form of *Physarum globuliferum* (Bull.) Pers. showing in its pale drab tint an approach to the nearly allied *P. murinum* Lister, *Comatricha laxa* Rost., *Lachnobolus congestus* (Somm.) Lister and *Margarita metallica* (Berk. & Br.) Lister. Mr Knight exhibited a fine development of *Badhamia lilacina* (Fr.) Rost. found in the plasmodium stage on Sphagnum in a bog in North Wales.

## LICHENS OF THE BASLOW FORAY.

By A. Lorrain Smith, F.L.S.

The members of the Mycological Society naturally place fungi in the first rank for collection, and districts are chosen for the annual foray in which the fields and woods are likely to yield good gatherings of these fleeting plants: lichens have therefore not been considered in the choice of locality. They flourish only in pure air, and at Selby, in the 1918 foray, their absence was very striking, and was due to the smoke-clouds from manufacturing towns near-by. Better times for lichenologists were expected from Derbyshire, but Baslow lay within the influence of Sheffield smoke and lichens again were scarce. The atmosphere seemed to be absolutely pure, but the presence of sooty impurities was amply manifested by the condition of one's hands after a few hours' collecting.

The first day's excursion, in the immediate neighbourhood of Baslow, yielded the best results. On the stone walls by the road-side, there were numerous specimens of *Placodium flavescens* and allied yellow forms. *Lecanora muralis* and *L. parella* were also found; many of the stones were coated with an undeveloped powdery white thallus. *Cetraria glauca* was curiously abundant on some of the scattered boulders. Higher up on the moor, *Sphaerophorus globosus* was collected, with various poorly developed *Cladoniae* and, on the bare soil, *Lecidea granulosa* and *L. uliginosa*. Chatsworth Park proved especially disappointing, as the trees, which in more favourable conditions would have been covered with lichen growths, were quite bare. *Lecidea fuliginea* was noted on dead timber. Other species collected and determined during the expedition were *Lecanora varia*, *Parmelia perlata*, with var. *ciliata*, *P. omphalodes*, *P. physodes*, *Cetraria aculeata*, *Cladonia coccifera*, *C. fimbriata* and *Baeomyces rufus*.