FSO NEWSLETTER 2020

From the President, Richard Fortey

Every mycological year is different, and looking back over the past thirty years of the Oxfordshire Fungus Survey I have been struck how some years produce abundant fruit bodies of particular species which then disappear for years at a time. 2019 was an odd year even by comparison with its predecessors, and some mushrooms went "on holiday" for the first time in my many years of collecting and identification. The weather must have had something to do with it. After a precociously damp early August the latter part of that month and the whole of September were unusually dry and hot over the whole of Oxfordshire. While this may have been great news for holidaymakers it was bad news for the fungi of woodland and grassland – the "season'" did not begin at the usual time. Some normally abundant genera simply failed to put in an appearance. Most of these were mycorrhizal associates of our typical woodland – beech, birch and oak. They probably lasted through the year on the roots of their associated trees, but did not deign to give us a show.

In most years one of the commonest of all woodland fungi is *Russula nigricans* – the blackening brittlegill – which can live with many different kinds of trees. In 2019 it was hardly to be seen when other fungi began to appear during October. Even the common yellow brittlegill (*R. ochroleuca*) was represented by a few diminutive and meagre examples. The only *Russula* to appreciate the conditions in our beech woods was *Russula lepida* (rosy brittlegill), so at least there were a few bright splashes of colour. The milky caps (*Lactarius*) were, if anything, even shyer. Beech woods that are normally awash with *L. blennius* were devoid of a single example. There were other odd phenomena among the mycorrhizal fungi: *Amanita rubescens* (blusher) is the commonest species of its genus most years, but not in 2019. Instead its place seemed to be taken by the normally rather uncommon panther cap (*A. pantherina*), reversing their usual roles. It was a very poor year for boletes in general, although apparently it was a productive year for ceps in the Midlands. These kinds of abundance changes are almost certainly connected with climatic perturbations – and we may have to get used to them if global warming proceeds at its current rate. I expect that the brittlegills and milky caps will be back in force next year.

A few species do seem to be becoming genuinely more common. In 2016 the discovery of small brackets on cherry wood of *Plicatura crispa*, the crimped gill fungus, was exciting enough to earn it a place on the cover of our foray programme. In 2019 it turned up in a number of sites on fallen branches of several species of deciduous wood. It seems very likely it is here to stay, maybe a beneficiary of more equable winters. On the other hand, a fungus of similar habitats, the peeling oysterling (*Crepidotus mollis*) is reported less frequently. We must expect the fungi to respond rapidly to changing conditions. They are known to be environmental bellwethers.

When the fungus season finally *did* get going it proved very productive and interesting – as if saprobes took over from many of the usual mycorrhizal species. The common mushroom *Agaricus* abounded in the right habitats. Yellow staining mushrooms (*A. xanthodermus*) grew alongside their more edible cousins (A. *arvensis*) so it was an ideal year to demonstrate their differences to beginners. Woody substrates yielded *Mycena* species in number and variety. It was a good year for the "dapperlings" (*Lepiota*) along pathsides and in leaf litter. One rare species, *L. tomentella*, was added to the county list, and another awaits molecular sequencing at Kew. By the time late October arrived the fungi seemed to be making up for lost time. Although Russula and Lactarius still kept their counsel *Inocybe*

(fibrecaps) and *Cortinarius* (webcaps) seemed to come into their own. In my local patch the beautiful and appropriately named *C. elegantissimus* ("most elegant" webcap) (*Figure 1*) was a spectacular discovery. Even more interesting was the discovery of a closely related species *C. bergeronii* - which is not on British lists – which differs only in having much smaller spores. A visit from Mario Tortelli ran down this little known species. On the same day in November an unusually large *Inocybe* attracted our attention in the same beech woodland. It proved to be an unusually large example (*Figure 2*) of *I. fraudans*, its identity revealed by a penetrating odour of ripe pears. A variety of interesting webcaps was an unexpected bonus near the close of the year. So 2019 finished up as full of interest, even though it looked unpromising in September.

1

Cortinarius elegantissimus—the real McCoy?
Note greenish yellow tinge to young gills.

2

Inocybe fraudans
Photos Richard Fortey

SELECTED SURVEY REPORTS

National Fungus Day, Sunday October 6, 2019

Once again, we had a magnificent turn-out for our National Fungus Day event, which we held at the University of Oxford's Harcourt Arboretum. Almost 100 people, including children, joined us. We had a great display of fresh, labelled fruiting bodies and lots of information leaflets provided by the BMS. Most popular were the Grow Your Own Oyster Mushrooms kits.

Our President, Richard Fortey, gave an excellent talk about fungi to a keen and interested crowd. Afterwards Richard and Wendy led two guided walks around the arboretum. Despite the very dry weather in the spring and summer of 2019 we recorded 42 species. Notably absent was the Fly Agaric, *Amanita muscaria* .

Many thanks to Tegan Bennett, the educational officer at the Arboretum, for her help in advertising and setting up tables for displays etc. Holding this event at the Arboretum seems to be an excellent way of involving members of the public who would not otherwise bother to attend a fungal event.

Molly Dewey

Singe Wood Survey, Sunday 20th October, 2019

This site was a new one for the FSO, and, as far as we know, for mycological recording. It is a mixed woodland with a high proportion of oak and hazel that has recently been purchased to be managed for its natural history interest by the Wychwood Project. We met Toby Swift, the Countryside Learning Officer, and transferred a dozen or so members to the site in three cars. This involved a precarious route up some interestingly uneven concrete wheel-tracks into the wood itself. Fungi were sprouting out all around in almost extravagant numbers and included some species we seldom record, such as *Boletus aereus*, *Inocybe corydalina*, the Greenflush Fibrecap (inset), and *Tricholoma sejunctum*, the small vivid mustard and olive Deceiving Knight. There were also large numbers of *Cortinarius* and *Mycena* species, though sadly not all of them were identifiable. A later visit by CJH added Wrinkled Peach (*Rhodotus palmatus*) and the Slender Club (*Macrotyphula juncea*). Members were justifiably keen to revisit this site, and Toby hopes that next time more local publicity will attract followers of the Wychwood Project.

Our initial list of firm identifications is 57 species.

C. M. Jackson-Houlston

Buscot Park Survey, Sunday 27th October, 2019

On a bright but chilly afternoon an enthusiastic group met to survey the grass and woodland fungi. We were led by Richard Fortey . Buscot Park is the home of Lord Faringdon and is open to the public, in conjunction with the National Trust, for part of the year. At this time of the year the estate is closed to the public but we were fortunate to be given permission to survey out of season.

The site is mixed coniferous and deciduous parkland with a large expanse of lawn which proved to be a good source of grassland fungus. Piers Hugo found *Dermoloma josserandi* in grass under oak. Richard confirmed this as a first for the county and one that is seldom recorded. The attractive bracket *Abortiporus biennis* (Blushing Rosette) was found on the buried dead wood of *Tilia europe*a. Two uncommon pluteus, *Pluteus ephebeus* and *Pluteus phlebophorus* were also found with the former being on grass and latter on a dead stump. Caroline Jackson-Houlston found the unusual *Inocybe godeyi* on grass, the diminutive *Baeospora myosura* was present on its pine-cone substrate and the deadly poisonous *Amanita phalloides* also appeared, to the delight, as usual, of younger visitors

There were fifty-six records which was a very strong result compared to prior years when lack of rain, amongst other factors, had quite an effect.

Wendy MacEachrane

High Park Biodiversity Survey- Progress report 2019

2019 was the third year of the four-year project to survey biodiversity in High Park. High Park is the part of the Blenheim Estate that has always been closed to the public. It contains the most ancient Oaks (see 2017 Newsletter for background info). The project, which was initiated by Aljos Farjon from Kew, includes surveys of all forms of wild life, birds, butterflies, toads, bats and fungi etc. The number of people allowed to enter High Park at anyone time is limited to 4 or 5 by the Blenheim Estate Managers. FSO committee members have been helping Aljos survey the fungi, notably Richard Fortey, Molly Dewey, Wendy MacEachrane and Caroline Jackson-Houlston, plus Penny Cullington from the Bucks fungal group and Martyn Ainsworth from Kew.

The lack of rain in the spring of 2019 and throughout the summer made it a truly disappointing year for fungi. The woodland was so dry there was not a fruiting body in sight and unfortunately at mid-summer the estate managers no longer wished us to survey the whole area of High Park. Instead, we were restricted to five metres either side of the public road which runs through the area. Aljos hopes that in 2020 we may yet again be given permission to survey the whole area, particularly in the autumn. However, after some mycologically-welcome rain for our last survey at the end of October, we achieved a total of 74 more species for 2019 (mostly little brown jobs). This brings the cumulative total to 346. During an unrelated survey in July Aljos found, to his surprise and ours, a giant puffball, Calvatia gigantea and Martyn Ainsworth, also in July, recorded two more fruiting bodies of the rare Oak Polypore (Buglossoporus quercinus) associated with ancient oaks bringing the total number of sites for it to 13.

When Aljos has written and published his book on the Biodiversity of High Park, FSO members will have permission to submit the fungal records to the National FRDBI and share them with TVERC.

Molly Dewey

The picture shows CJH recording fungi on brown rot inside an ancient oak in High Park.

Practical Workshop on DNA extraction July 26th- 28th 2019

The workshop was run by Dr Brian Douglas (RGB Kew) at Northern College, Stainborough, Yorkshire. The costs were subsidized by The British Mycological Society and The Lost and Found Project (RGB Kew). All materials were provided but transport costs were not covered; I went by train, a relaxing but expensive route. Demand for the workshop was high, only14 places were offered.

This was a practical session using Bento Lab units (https://www.bento.bio/) for extracting and amplifying DNA so that material is ready for sequencing. The Bento Lab unit is an impressive, very compact unit containing a microcentrifuge, gel electrophoresis apparatus and transilluminator combined.

The course covered extraction of fungal DNA, amplification (polymerise chain reaction [PCR]), and gel visualisation of amplified DNA regions.

We tested material that we had collected dried ourselves prior to the workshop. Preparation involved cutting a 1mm cube disc of dried fungus using a sterile blade and placing it a sterile microtube. Briefly, DNA was extracted from specimens by grinding with a sterile plastic stick using a special extraction buffer, (apparently dilute washing up liquid can be used instead of the special extraction buffer!). Solids were separated from the extracting solution by centrifuging in the Bento Lab unit for 30 seconds. Fungal specific primers, present in the PCR mix, were added to the extract to pull out fungal-specific DNA sequences and these were amplified in the thermocycler. This process takes about 2 hours. Meanwhile gels for electrophoresis were prepared and poured into a mould. DNA stain was added to the electrophoresis buffer to help visualize bands so that they can be excised and retained for sequencing.

Clearly extracting and cleaning up fungal DNA prior to sequencing is quite time consuming and exacting. The downside is the cost involved, Bento Lab units cost from £1,299.00 to £1,599 excluding VAT, and fungal-specific primers needed in the PCR mix each cost about £6.00.

I enjoyed the workshop but do not feel that extracting and amplifying fungal-specific DNA is something that FSO members would want to do on their own or even as a group. Apparently the BMS has bought a few Bento Lab units which they are prepared to loan out to groups. Maybe we need to think again.

Molly Dewey

Fungus of the Year: Widespread Morel Panic?

Committee members were called on twice in the spring to identify mystery fungi occurring in quantity on two sites in Oxford, both on allotments. Aided by black plastic sheeting, it appeared in quantity, favouring an association with Comfrey (*Symphytum*) in one instance. The fungus was the Black Morel, *Morchella verpa*, and it seems to to have been a good year for this uncommon and sinister-looking (but edible) species beyond Oxfordshire as well.

C. M. Jackson-Houlston

Fungi New to the UK in Our Area

As well as the *Cortinarius bergeronii* mentioned in the President's Report. Judy Webb, our Recorder for part of 2019, has discovered a smut. It occurs on pods of Wild Liquorice (*Astragalus glycyphyllos*) in the Chilswell Valley. Martyn Ainsworth at Kew has identified it as *Thecaphora affinis*, which is new to the British list, as is the *Cortinarius*. A voucher specimen will be preserved at Kew as K(M) 263786. Paul Cannon took some micrographs which can be seen at http://fungi.myspecies.info/all-fungi/thecaphora-affinis. The site is in VC22, but that still makes it an Oxon. record in new money.

Judy Webb

SURVEY PROGRAMME FOR 2020

Due to the coronavirus pandemic, all dates must be regarded as provisional. This is a summary of plans so far.

[May 3rd, Sunday	Pinsley Wood	CANCELLED]
September 27th, Sunday	Singe Wood.	Joint meeting with Wychwood Project. TBC
October 4th, Sunday 1.00 for 2	Harcourt Arboretum	National Fungus Day event. Joint meeting with Ashmolean Natural History Society
October 18th, Sunday 10.30	Woodcote	Joint meeting with Woodcote Commoners
October 25th, Sunday 1.30	Bagley Wood (North)	Joint meeting with Abingdon Naturalists
November 1st , Sunday	Nettlebed Common and Wood. Joint meeting with TVFG	
November 6th, Friday	Crowsley Park	Meet in Sonning Common and car share
November 15th , Sunday	Ditchley Park	Keith Cohen
November 22nd, Friday, 11a.m.	North Leigh Common	Followed by AGM

We may also hold one or more *ad hoc* surveys in response to conditions. August is a likely time.