Notes and Records

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Every page of this issue has '25(4)' printed at the top. It is within the mental capacity of most readers to realise that this is the 100th issue of FM! It is thus the 99th to contain a column of mine under this heading. Unlike the cricketers, I have no overpowering desire to turn my 99 into a century. Twenty five years is enough. This is the last such column I am going to write, but I certainly don't intend it to be the last time I contribute an article to FM. However it finds me in reminiscent mood.

LOOKING BACK ON MY FIRST COLUMN

This appeared in the second issue of FM, a modest page and a half. I reproduce here its first few sentences. "This is to be a regular column giving digests of news items from readers, for instance 'edited highlights' from the local foray reports that have in the past appeared in the Mycologist and sometimes recently in the BMS Newsletter. In the July issue I anticipate it being largely devoted to such items from the 1999 reports of local Foray Groups. As these were still in the pipeline when deadlines approached for this issue it has temporarily become my column to fill as I please." After its first year it seems to have remained that way ever since, rather than what I had originally envisaged. That first column contained four items, their headings reproduced below. Two of these have since needed considerable updating, supplied in later issues of FM.

So much to learn

Under this heading I discussed *Tephrocybe ellisii*, a species I then considered, and still consider probably under-recorded. I appealed for a photo to appear in FM. It was described by Peter Orton, named in honour of Ted Ellis (who incidentally greatly surpassed my quarterly productivity by supplying a column 'In the Countryside' to the Eastern Daily Press five days a week for forty years). This is an unremarkable small brown toadstool, now *Lyophyllum ellisii*, illustrated in Kibby Vol.2, easily confirmed by its distinctive spore shape. Most records are from southern British *Hygrocybe* sites, where I suspect it is widespread but ignored by the waxcap enthusiasts. It seems to be still unknown in Scandinavia (unknown to Vesterholt & Ludwig writing in *Funga Nordica*). My call for a photo to appear in FM remained unanswered until Mario Tortelli provided a photograph in issue 20(2): 39 of FM where it was the Fungal Portrait.

Rare or Extinct

"Everyone now agrees", I wrote, "that *Myriostoma coliforme* is extinct in mainland Britain". This is the so-called 'pepper-pot' fungus, illustrated in Phillips (1981) with a photo of the dried material at Kew of what had been the last known mainland British collection from Norfolk in 1880 (though still present in the Channel Islands). It was accompanied by a wistful statement: "It is hoped that the publication of an illustration of this interesting fungus will lead to its rediscovery." As many will know, this is exactly what happened, as recorded by Shelley Evans (2006) in FM following its discovery in Suffolk in February of that year. Four years later a second Suffolk site was found, also written up in FM (Mahler & Ainsworth, 2010).

Data Deficient

Under this heading I took the opportunity to report two further records of *Antrodia pseudosinuosa* A.Henrici & Ryvarden, described in 1997 from a single site at Perivale Wood, Middlesex, where it fruited on an elm log from 1993 to 1997. Only two years later it had also been found by Ted Green in Windsor Great Park and also in France at Fontainebleau. I made the obvious point that more data was evidently needed to give some clue to its true distribution. Today, thanks to DNA sequencing, it is no longer an *Antrodia*, nor was it even new when described, being in fact a synonym of the better known *Trametes cervina*, recently moved to *Trametopsis*. It was, however, the first British record of that species. The reasons that this synonymy was initially missed were later fully explained in FM in Henrici *et al.* (2018). I remain slightly perturbed that the British collections illustrated there and others since are all much less regularly poroid than the one from Slovenia illustrated in Ryvarden & Melo (2014), looking significantly

different. If that too was sequenced, I will swallow my doubts.

The joys of 1999

I reported that, at least in Kent, it had been a bumper year for forayers ("24 bolete species reported before the end of August", "*Russula vesca* recorded from July to December"). True then, but seemingly all too rare in recent years. As I write this in late October reports of an autumn flush have been extremely patchy in southern Britain (agarics in general, ectomycorhizals in particular). I moaned about this in my November column last year, but then there was some excuse - a September heatwave and a severe drought. I moan some more on this topic at the end of these notes.

25 YEARS ON

An era of outstanding change

It is a happy accident that the first 25 years of FM have coincided with the most volatile period in the whole history of fungal taxonomy, driven of course by DNA. Things changed almost overnight from a time when all too many species were weakly characterised by a few doubtful features. Suddenly every fungal species had a vast range of characters available to be explored, some that reinforced existing species concepts, others suggesting these were too narrow, calling for synonymy. More often they were too broad, revealing a complex needing to be split.

In the very first issue of FM none of its ten articles even mentioned DNA. But in the second Derek Schafer noted that DNA evidence had supported the firmly held view of fungal dyers that *Sarcodon squamosus* (with pine) was much more use to them than *S. imbricatus* (with spruce), despite mycologists having considered them synonymous for the previous fifty years. They were indeed two species. However it was a long time before the first DNA-based tree (phylogram) was presented in FM. This was in Ainsworth *et al.* (2018) a paper distinguishing five British species in the *Entoloma bloxamii* complex (the 'Big Blue Pinkgill' for those who like English names). The use of such trees had been illustrated the previous year with a simplified example presented by David Harries (2017) in the second of two much welcomed introductory articles on DNA. Today there tends to be at least one such tree in every issue, almost an essential back-up to the credentials of any new British find.

A change I'm still wanting to make

Though the first issue of FM didn't have my 'Notes and Records', it did have an 8-page article from me entitled 'An introduction to corticioid fungi'. I had been hoping to produce an updated version to appear in this issue, mainly to update the nomenclature. But that depended on the publication of Vols 2 and 3 of CFE, i.e. of Larsson & Ryvarden (2021) *Corticioid Fungi of Europe*, initially expected to be out by now. Corticioids have been my main area of interest throughout these 25 years. They may look unexciting in the field but under the microscope they exhibit a much wider range of structures than the agarics. This is unsurprising as the agarics almost all belong in one order *Agaricales*, while DNA has shown that European corticioids are spread over parts of 14 orders together with a few seemingly not fitting into any of those currently defined.

I am very conscious that it is difficult to get started on corticioids. Following a key to any particular genus is usually not too painful. The trouble comes with getting anywhere near the right genus in the first place. I wrote my introduction fairly soon after I'd slowly got over that initial hump. In it I provided simple keys addressed to beginners merely distinguishing 42 of the commonest species. Most things beginners collect will in fact be one or other of these few. All but one are described and illustrated in Breitenbach & Kränzlin, *Fungi of Switzerland* Vol.2. (1986). More recently all but five are also illustrated in that invaluable compilation *Fungi of Temperate Europe*, Læssøe & Petersen (2019). Looking back at what I wrote 25 years ago, I still think my probably long forgotten article provides quite a useful place to start, despite one error quickly pointed out to me: I keyed *Cylindrobasidium evolvens* as lacking cystidia when in fact they are present but sparse.

CFE Vol.1 has a detailed set of keys covering the genera they plan to treat in all three volumes but these aren't easy. They start from the most taxonomically significant characters. What beginners need are the characters non-expert users finds easiest to confirm (eg. 'spores globose') or to rule out ('confined to boreal spruce' and the like). The corresponding keys in the other widely available identification guide, Bernicchia

& Gorjón (2010) have similar problems. In both books the user has to wade through numerous couplets ruling out unlikely genera with strange features to arrive at the much more likely one corresponding with what they actually collected.

The one published volume of CFE is excellent for genera with names in the range A to G, thus falling annoyingly short of *Hyphoderma*, badly in need of an up to date treatment. There are many other troublesome genera still to come, all in similar need, notably *Phlebia* and *Sistotrema*.

This year's puzzle

Writing in late October I have recently visited two unbelievably productive sites on chalk yielding uncommon toadstools in profusion, under beech in Surrey and under mainly hornbeam in Kent. Meanwhile, despite well above average rainfall in September, Kew Gardens has remained a virtual mycological desert. The contrast passes all understanding. Two adjacent sweet chestnuts (*Castanea sativa*) that in one year had 15 mycorrhizal species fruiting simultaneously in September have this year only just started produced any mushrooms at all, and then it was only three fruitbodies of *Russula atropurpurea*. There is still much to be learnt about the mechanisms that cause agarics to decide when to fruit. A wide range of genera all seem to follow the same pattern.

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Fig. 1. *Russula atropurpurea*, one of the few fungi to make an appearance in Kew in late October 2024. Photograph © Mario Tortelli.