Fungi

Tony Leech

Mycologists are probably the only naturalists who enjoy wet weather, or at least hope for good rainfalls through the summer and autumn. In 2011 this was not to be and on some public forays in October we were struggling to make double figures with agaric species. Notwithstanding, there were additions to the county list and a variety of interesting records are described below or listed in Table 1.

Fungi with teeth

Mushroom-shaped fungi have evolved to produce vast numbers of spores and drop them into the air currents that will carry them to new sites. Most use gills to increase their spore-bearing surface area but a smaller number (the boletes) use tubes, packed tightly under the cap, a device also employed by most bracket fungi. But there is a third way of creating a large surface area – by employing downward-pointing fleshy spines on which the spores develop. Relatively few fungi have developed such 'teeth'. One, the Earpick Fungus *Auriscalpium vulgare*, is common, stunningly beautiful, but so small (it grows on pine cones) that it is easily overlooked. The mushroom-sized Wood Hedgehog *Hydnum repandum* is quite scarce in Norfolk and the rest scarcer still. Several of the white bracket-like tooth fungi have recently made an appearance in the county (Table 1 and Leech 2011) but one that we did not expect to see was Bitter Tooth *Sarcodon scabrosus*, found by Anne Crotty in the woods at St Faith's Common (TG1817) last autumn. This stocky fungus, pale brown and with a somewhat scaly cap (photograph on inside back cover), has been recorded in Caledonian pine forests and in southern England (Berkshire, Surrey, Kent and Hampshire) where it occurs not with pine but with Sweet Chestnut (and occasionally oaks). This disjunct distribution with two very different mycorrhizal hosts suggests that more than one species is involved which is why Dr Martyn Ainsworth is undertaking DNA sequence analysis on these fungi at the Royal Botanic Gardens, Kew. It is good to know that Norfolk is contributing – and that the county has another Biodiversity Action Plan species to look after.

Coprinopsis update

In the 2010 Fungus Report the finding of a dung fungus on a henhouse in Briston (TG0632) was described (Leech 2011). Laslo Nagy, to whom the fungus was sent, is of the opinion that the fungus is indeed *Coprinopsis rugulobisporus* despite the unusually large spores. As such it is now recognised as the first British record, but the last word may not have been uttered – there is a report of a large-spored '*C. rugulobisporus*' in Canada that may yet be described as a new species. See back inside cover for photograph.

New sites for Sandy Stiltballs

Imagine a puffball developing underground. As the spores ripen, a rod-like stalk grows rapidly upwards to push the orange-brown spore-mass through the 'skin' of the puffball and several inches into the air and you have a Sandy Stiltball *Battarrea phalloides* (see photograph on inside back cover). This distinctive fungus was first described (in 1784) from specimens collected near Bungay and has remained an East Anglian speciality ever since (but with a slowly increasing number of records from elsewhere in southern England).

For a century until the 1990s the Sandy Stiltball had hardly been recorded in

Table 1. New records for some scarce Norfolk fungi (in addition to those described in the text). ARL = Tony Leech.

Species	Place	Collector [Identifier if different**]	Previous Norfolk sites	Habitat
Agaricus phaeolepidotus	Hempstead TG1036 Roughton TG2138	David Longden [ARL]	0	Hedgerow Grass verge.
Agaricus phaeolepidotus	Dinosaur Park, Lenwade TG1017	Tony Leech	2 (above)	Grass verge.
Boletus moravicus	Ken Hill Woods TF6634	Foray [ARL]	0	Leaf litter
Boletus satanas Devil's Bolete	Bunwell TM1094	Anthony Anson	2	Verge
Clitopilus pinsitus	Netherwood Green TG2306	Anne Crotty	1	Base of Beech stump
Entoloma atrocoeruleum	BTO Reserve, Thetford TL8680	Tony Leech	0	Rabbit-grazed grassland
Geopora tenuis	King's Lynn TF6219	Anne Crotty	2	Urban tree pit, with birch
Gymnopus quercophilus	Dinosaur Park, Lenwade TG1017	Tony Leech	0	Dead oak leaf
Hemipholiota populnea	Trowse Woods TG2506	Anne Crotty	1	?Poplar log.
Hericium cirrhatum Tiered Tooth	Newton St. Faith TG2116	[Jonathan Revett]	2	Old sycamore trunk
Hypoxylon macrocarpum	Holt Hall TG0739	Tony Leech	0	End of sycamore trunk
Leucocoprinus birnbaumii Greenhouse Dapperling	Whitlingham TG2707	Anne Crotty	2	Indoor plant pot
Mycena diosma	Holt Country Park TG0837	Foray [ARL]	0	Woodland
Peziza granularis	Wigston Villa TL5294	Jonathan Revett	0	Bare soil

Britain at all but then, within the space of about ten years, it was found in five places in Norfolk, all of them on roadside banks or verges. Now, in 2011, two further sites have been added. The first was discovered by Peter Lambley in July not far from his home in Lyng, also on a roadside bank (TG0617). The second site, or sites as there were six 'colonies' along a 2 km stretch of road (TM3892), was only 5 km from Bungay and could conceivably have been the site of the first discovery of the fungus. These were found by Neil Mahler, Suffolk county fungus recorder, who counted a total of 26 specimens. See inside back cover for photograph.

Amazing amanitas

2011 could go down as the year of the Fly Agaric *Amanita muscaria* as they fruited in abundance. Nowhere more so than Felbrgg where Jonathan Revett found more than thirty under a beech tree, with the nearest birch, their normal mycorrhizal host, some 300 metres away. Amanitas are a varied group; some are very common, others very rare; some are deadly, others good and edible. They are all large (as agarics go) but the recent publication of an identification guide to the genus (Kibby 2012) has revealed that at least 42 species occur in Britain and given us a sporting chance of correct identifications. With its aid, and guidance from author Geoffrey Kibby himself, it has been established that the mystery amanita found by Janet Metcalfe (Leech 2011) is in fact *Amanita lividopallescens* and a new county record.

A second amanita puzzle has also been solved by this publication. On a foray at Ken

Hill Woods (TF6634), near Dersingham, in October, Doreen Errington and Billy Read collected a ringless amanita with an orange-brown cap, not unlike Snakeskin Grisette *A. ceciliae* but with a much darker pattern on its stem. It turned out to be *A. betulae*, as yet little recorded in Britain but probably quite widespread.

Spots and dots

Numerous fungi are too small to catch the eye of the casual observer but many of these have been well-recorded in Norfolk thanks to the efforts of the late Ted Ellis. His interests, however, apparently did not extend to the many fungi that occur on herbivore dung. These are rarely apparent in the field but appear on samples kept moist in sealed containers, which was how *Schizothecium tetrasporum,* collected on Rabbit dung at the BTO Nunnery Reserve (TL8680) at Thetford in July, was added to the county list (photo opposite). It was initially suspected that *Cephalotrichum purpureofuscum* (on Reeve's Muntjac dung collected at Dersingham Bog NNR (TF6628)) would also be a new county record but Ted Ellis had got there first, recording it at Hellesdon in 1945 on rotting cabbage stems; it is less specific than most fungi.

A significant number of fungi grow on other fungi; some are truly parasitic while others, found on more persistent fruitbodies, only develop on the dead 'host'. At a foray at Bergh Apton (TM3199), several dried fruitbodies of Bearded Milkcap *Lactarius pubescens* were found, their gills covered with small ochre spheres, not unlike closely-packed moth eggs. These were the perithecia of *Hypomyces spadiceus*, not previously recorded in Norfolk and with as few as eight records on the national database (photo opposite). As so often happens with such finds, the same fungus, on the same host, was collected a few weeks later at Pensthorpe (TF9428). Later in the season, close examination of an old Smoky Bracket *Bjerkandera adusta* at Holt Hall (TG0739) revealed clusters of tiny black perithecia, each bearing a few wispy hairs, later identified as *Melanospora lagenaria*, also new to Norfolk.

New brackets

In contrast to the above, bracket fungi are never small and can produce some of the largest fruiting bodies of all fungi. This does not always make them easy to identify but Anne Crotty's perseverance paid off as she added three more to the Norfolk list this year. Beeswax Bracket *Ganoderma pfeifferi*, found on living Beech at Trowse Woods (TG2506), is mostly recorded from southern and south-eastern England with very few records further north than Norfolk. It is one of the shiny-crusted ganodermas, all scarce. Another large (and shiny) bracket, the Red-belted Bracket *Fomitopsis pinicola* is a more northerly distributed species, rarely recorded in Britain and then mostly, as here, on structural timber, in this case on two gate-posts at Whitlingham Woods (TG 2607, 2707). The identification of both of these was kindly confirmed by Dr Martyn Ainsworth.

The final new species, *Antrodia serialis,* is smaller, whitish and much less bracket-like, and was found on a pine stump at Reffley Wood (TF6522). Anne also found the Brownflesh Bracket *Coroleopsis gallica*, a rarely reported medium-sized hairy bracket, on dead Sycamore wood at Whitlingham TG2607). There is one previous Norfolk record for this species, from near Grimston in 1985 on unspecified dead wood.

References

KIBBY, G. 2012. *The Genus* Amanita *in Great Britain.* Privately published.

LEECH, A.R. 2011 Fungus Report 2010. *Trans. Norfolk Norwich Nat. Soc.* **44**: 100-104

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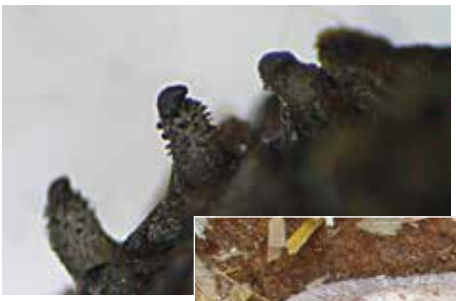
Above: **Bitter Tooth *Sarcodon scabrosus.*** Found by Anne Crotty at St Faith's Common,100 km from the next nearest record. *Tony Leech.*

Left: **Sandy Stiltball *Battarrea phalloides*.** New site near Bungay. *Neil Mahler.*



Left: ***Schizothecium tetrasporum***. On Rabbit dung collected at The BTO Nunnery Reserve, Thetford. Less than 1mm high. *Tony Leech.*

Left: ***Amanita lividopallescens.*** Found by Janet Metcalfe at Barnham Broom. New for Norfolk *Tony Leech.*

Perithecia of *Hypomyces spadicea.* Covering the gills of a Bearded Milkcap *Lactarius pubescens* at Bergh Apton. *Tony Leech.*

Coprinopsis rugulobisporus. An inkcap new to Britain found on a hen-house at Briston. *Tony Leech.*