SPOREPRINT *Newsletter of the Norfolk Fungus Study Group No. 3* **May 2013**

For the first two years of its existence, 2002 and 2003, the Norfolk Fungus Study Group produced a printed newsletter entitled Sporeprint. With the re-formation of the Group it seemed appropriate to resurrect the newsletter in electronic form.

The intention is to include anything of interest to someone trying to identify fungi in Norfolk. Its production will depend on the material available, so please send me reports, photographs, news and any other snippets and I will do my best to edit them into this format. Comments on style and contents are also welcome. Initially the aim is for bimonthly publication but, beware, in the absence of submitted items I will fill it with my own material (again)!

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## Productive winter foray

Expectations for a long species list were not high when a small group gathered for the first NFSG foray of the year, on 24 February to Pigney's Wood, North Walsham. It was to be the second foray of the year but the first, to Foxley Wood on 26 January, had been cancelled due to snow. The final tally of 48 species was therefore a welcome surprise, although inevitably most were on wood. The list included just four agarics of which the most interesting was *Meottomyces dissimulans* (see photo) a new record for Norfolk.

*Meottomyces dissimulans*, Pigney's Wood.

None of those present recognised the fungus in the field or were able to guess to what genus it might belong. This is not surprising since it has been placed in eight different genera since its discovery in 1882! Until recently this rather unprepossessing agaric was known as *Hemipholiota oedipus.* Its habitat, wet leaf litter, and time of fruiting (winter) are more distinctive than its appearance. It was found in two locations at Pygney's Wood, each with a number of scattered specimens.

Other species of interest were *Trametes ochracea*, a small bracket which is rarely recorded in Norfolk. *Botryosphaeria dothidia*, a pyrenomycete forming black, elliptical patches on the dead stems of *Rosa* spp. and *Nectria episphaeria*, a minute, red, spherical fungus, parasitic on several pyrenomycetes.

**New ascomycete guide**
A new book by Peter Thompson contining photographs and descriptions of 700 British ascomycetes is about to be published. The next Sporeprint will contain a review.

## The fungus behind ash dieback

In other circumstances, the finding of a fungus new to Britain might be something to celebrate but the discovery of *Chalara fraxinea* in Lower Ashwellthorpe Wood NWT last October was not welcome for it was the first time this causative agent of ash dieback had been found in Britain in mature trees.

*Hymenoscyphus pseudoalbidus* from Denmark. *Photo:* Lea Vig McKinney, University of Copenhagen.

What does the fungus look like? The answer is that although the symptoms of the disease can be readily recognised, the fungus itself is microscopic and lacks any kind of 'fruiting body'. It belongs to a large group of fungi which has been given many names including Fungi Imperfecti, deuteromycetes and mitosporic fungi. Gradually it has been realised that these are the asexual forms of ascomycetes which have entirely different-looking fruit bodies within which their sexual spores develop.

Matching the asexual form (anamorph) with the sexual form (teleomorph) requires much detective work and for many anamorphs, corresponding teleomorphs have either not been found or do not exist. It was 14 years after ash dieback was first recognised in Europe (in Poland, 1992) that the

causative agent was given the name *Chalara fraxinea* and only in 2010 was its sexual stage recognised as a discomycete (cup fungus) and named *Hymenoscyphus pseudoalbidus* (see photo). A very similar species, *H. albidus*, is well-known and has been recorded from seven sites in Norfolk. Both species fruit on the stalks of fallen Ash leaves from mid-summer into autumn. Over 70 species of *Hymenoscyphus* have been recorded in Britain, mostly a few millimetres across, with a short stalk and growing on dead plant material, many specific to their substrate.

In some ascomycetes, sexual and asexual stages alternate, or at least both are involved in an annual lifecycle. This appears to be the case with *Chalara fraxinea*/*Hymenoscyphus pseudoalbidus* (strictly, the name of the sexual form has precedence). Spores from the discomycete on the fallen leaf stalks are blown on to growing leaves where the germinating fungus enters, grows and spreads into the twigs. Eventually it reaches the stem of the tree, causing damage which is ultimately fatal. This is the *Chalara* stage.

When infected leaves fall to the ground, asexual spores are produced but these seem incapable of re-infection. However, those from different mating strains (analogous to different sexes) can undergo a fertilisation process which leads to the formation of the discomycete fruit bodies which develop on the leaf stalks and releases spores which, since they have arisen through a sexual process, show variation. To date, this discomycete form (*Hymenoscyphus pseudoalbidus*) has not been recorded in Britain, but I expect it will be in 2013.

Dr Anne Edwards organises the volunteers who manage Ashwellthorpe Lower Wood but is also a molecular biologist working at the John Innes Institute. She is a member of a group, led by Prof. Allan Downie, which has obtained funds to investigate the genetics of *Chalara fraxinea* and related fungi. A first step is to sequence its DNA and compare it with the DNA of the non-pathogenic *H. albidus*. The group will then investigate which genes are turned on during infection and so explore essential differences between the disease-causing species and its harmless relative. If anyone finds *H. albidus* in their travels this summer, please get a specimen to Anne.

This article has been condensed from one appearing in the NNNS Natterjack, May 2013. I am grateful to Anne Edwards for providing some of the information.

*Tony Leech*

**An invitation from the British Mycological Society**
This year, the annual residential BMS Autumn Foray is being held near Huntingdon from October 19 - 25th. Members of local groups are welcome to pay day visits. If anyone is interested please contact Tony Leech.

## Joseph's amazing find

The Oak Polypore *Piptoporus quercinus* is one of only four species of fungus on Schedule 8 of the Wildlife and Countryside Act 1981, making it illegal to pick or destroy the bracket. Its second British record was from West Norfolk in 1871 but after that it was very rarely recorded anywhere in Britain until the 1990s when Martyn Ainsworth, embarked on a mission to find out just how rare it was. Since then he has found a remarkable number of specimens, all of them on oak trees that are at least 200 years old. The bracket usually appears in early summer on wounded surfaces or on the ends of large fallen branches.

Joseph Hubbard, is barely 15 but has become fascinated with finding and identifying fungi and is getting good at both. Last year he found a strange *Agaricus* in a polytunnel at Hindolveston which turned out to be the first Norfolk record for *Agaricus genardii* (see photo). In February, he and his family visited Helmsley Castle in Yorkshire where he spotted a bracket fungus growing on a large oak beam over a window in the roofless keep. He thought it looked like a Birch Polypore and managed to bring it to the ground by hoisting on to his shoulders his young brother who broke it off with a knife attached to a stick.

*Agaricus genardii*, Hindolveston

*Piptoporus quercinus*, Helmsley, Yorkshire

At that point Joseph had no idea that the Oak Polypore existed and it was not until he saw the photograph in Sterry's field guide that he considered the possibility. I have never seen this fungus (despite searching at Thursford Wood) but the bracket he brought to me (see photo) did indeed look like an old Oak Polypore but I could not find any spores. Nevertheless, we sent it to Martyn Ainsworth at Kew who has confirmed the

identification. This is the only record we know of from worked timber.

To complete the Norfolk connection, in 2005 Martyn Ainsworth was being driven from a meeting in Brancaster to King's Lynn to catch a train back to London. As he passed close to Castle Rising he recognised the name as the locality where Charles Plowright had collected the fungus in 1871 and suggested that a brief detour might be made. From the village, Martyn looked across the fields towards a row of ancient oaks in a field boundary and observed that this was the sort of place that the bracket might occur. He walked over to the trees – and promptly found an Oak Polypore on the end of a large fallen branch! Good fortune does indeed favour the prepared mind.

*Tony Leech*

**Fungus event at Wheatfen**

We have been asked to help at a fungus 'workshop' at the Ted Ellis Trust, Wheatfen at 2.30 pm on Sunday October 6. This date is not on the NFSG programme.

## *The Times* screws up

The Times mistakenly illustrated a recent (May 10) report on the tragic death of Christina Hale from Death Cap *Amanita phalloides* poisoning with this photograph:

A bit of research revealed that the illustration was in fact of Yellow Fly Agaric *Amanita muscaria* var. *formosa,* the North American variety of Fly Agaric which occasionally occurs in this country. My letter to the editor, pointing this out, was published the next day with a photograph of the real Death Cap.

*Tony Leech*

**Forthcoming NFSG forays**

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| 25 May | 10.30 am | Poringland Wood |
| 29 June | 10.30 am | Foxley Wood |
| 28 July | to be confirmed | Staverton Park, Suffolk |

**Forthcoming Dersingham Mushroom Club forays**

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| 29 June | 10.00 am | Inner Trial Bank, west of King's Lynn |
| 14 July | 10.00 am | Snettisham Country Park |

Interested persons are welcome to attend any of these meetings. For further details of all these forays, and for those taking place later in the year, go to the NFSG website http://www.nnns.org.uk/content/fungus-study-group-home-page

**Fairies at Holt Hall**

St George's Mushroom *Calocybe gambosa* is more often found in the open but here at Holt Hall in May 2012 over 200 fruit bodies were counted in a partial ring some 16 metres in diameter.

**Frilly fungus** I was mystified when Josephine Luddington told me about the 'frilly fungus' in her Brancaster greenhouse but this photograph and a specimen enabled its identity to be established as Upright Coral *Ramaria stricta.*

**Rare bedfellows**

This Four-rayed Earthstar *Geastrum quadrifidum* was found by Peter Lambley on the same bank at Lyng where he found the Sandy Stiltball *Battarraea phalloides* eighteen months earlier. Remarkably, when the Four-rayed Earthstar was first found in Norfolk in 2000 by Jonathan Revett at Cockley Cley, it was also close to this species.