Lost & Found Fungi project report, August-October 2015

Hi all,

There’s a lot of new records and species in this update, since it covers August to end of October… it’s a big one that I’m hoping will help get us up to date.

If all goes well, the new assistant for the Lost and Found Fungi project will be arriving next month. Once he arrives, we can start thinking about streamlining some parts of the project, getting more datasheets finalised and updated, expanding into social media (Facebook, Twitter), and developing the body of records and voucher specimens we’ve been receiving towards more specific conservation-based targets.

We’ve also recently had an opportunity to get some publicity for the project focused on the more general public, including an article in the Plantlife magazine and a forthcoming piece in the Woodland Trust’s Woodwise magazine. The Plantlife article has been published and has already been attracting some interest, and I hope it has made many more people aware of the project and the importance of fungi and fungal conservation in general.

Other highlights of the report include:

- Continued growth of distribution maps of *Amanita nivalis*, *Chrysomyxa pyrolata*, *Polystigma rubrum*, *Mollisia fuscoparaphysata*, and *Xylaria crozonensis*, from old and new records of sites.
- A new site for *Tulostoma niveum* (now three!); confirmation that the one current and verified UK site for *Hypocreopsis lichenoides* appears to have a stable population larger than initially known; and evidence that the smut *Ustanciosporium majus* (last record 1932) is not extinct (although we still need to finalise this ID).
- New species to the British Isles include *Anthracoidea hostaniae* and *Neobarya xylariicola*.
- I’ve also featured a wide array of other species records and voucher specimens which have been sent in. These include LAFF Top 100 target species (annotated LAFF100), and species from our backup list of 300+ equally rare and potentially vulnerable species which we haven’t been able to prioritise yet (LAFF400).

As always, many many thanks to everyone who has contributed to the project! I hope that I’ve managed to include everyone’s work so far, and that there’s something of interest for everyone in this update.

Best regards,

Brian

Dr. Brian Douglas
Community Fungus Survey Leader for the Lost and Found Fungi Project
Email: b.douglas@kew.org
Project website: http://fungi.myspecies.info/content/lost-found-fungi-project
SPECIES TO LOOK FOR: RARE WAXCAPS!

Over the next month or two, we would particularly welcome records and specimens of a number of rarely recorded waxcap mushrooms: Gliophorus reginae, G. europerplexus, Hygrocybe spadicea and Hygrocybe marchii (especially sensu Boertmann 1995).

G. reginae, H. spadicea and H. marchii may already have started fruiting, but there are records of these species well into November, and I imagine some of you could have already encountered these species this year. G. reginae in particular may fruit into late January, so keep an eye out during and after Christmas! Fruiting times of G. europerplexus are less certain because there are only four records of this species, but it seems to fruit mid August to early November – so we may have missed it, but it’s worth being aware of as a new rare British waxcap.

_Gliophorus reginae and G. europerplexus_

_Gliophorus reginae_ possesses a variably coloured purple, pink or reddish brown cap, and mature specimens can sometimes superficially resemble small fruitbodies of the Pink Waxcap (Hygrocybe calyptriformis). With closer inspection however, it shares more characteristics with _G. psittacinus_ (=Hygrocybe psittacina; the parrot waxcap), despite lacking the distinctive green coloration.

_Gliophorus europerplexus_ resembles the taxon previously known as _H. psittacina_ var. _perplexa_, and more recently as _G. perplexus_ (= _H. perplexa_). However, it is phylogenetically distinct from _G. perplexus_, and verified specimens are only known from two UK sites in the whole world. There are also a number of morphologically similar, but genetically distinct species in this group which are undescribed, represented by only a few specimens, and which require further specimens for description and typification.

Some background to the species can be seen on the Kew website here: link. Details of the above two described taxa, and the ongoing work to resolve further species concepts around _H. psittacina_, can be found in Ainsworth et al, 2013: link. An account of the discovery of the holotype can be found here: link.

Please contact us if you have any records or specimens of likely candidates for these species.

_Hygrocybe spadicea_

We would be very interested in records and specimens of the “date waxcap”, _Hygrocybe spadicea_ (fruiting June to late November). Although not quite as infrequently recorded as most species in the LAFF project (about 100 records in the FRDBI, and about 50 known sites in the UK), _H. spadicea_ is
considered a “Priority Species” under Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006, and is on the Scottish Biodiversity List. There is evidence that this species concept could represent two distinct species, but Kew material is limited to only seven fungarium specimens, and it is unclear which species are present at the known sites throughout the UK. We need more specimens from more sites to work out if there are two distinct species; to properly describe the second species if it exists; and to get a better understanding of exactly how rare are each of these species. An excellent background account of *H. spadicea* can be found here: [http://www.first-nature.com/fungi/hygrocybe-sпадичеa.php](http://www.first-nature.com/fungi/hygrocybe-sпадичеa.php), and the current distribution map can be seen here: link.

**Hygrocybe marchii sensu Boertmann (1995)**

*Hygrocybe marchii* represents a highly confused species concept which has been considered a synonym of *H. reidii* by some, and by others as a nomen ambiguum. However, thanks to DNA sequences produced during Project Waxtongue at Kew, we do know that there is a British species resembling *Hygrocybe marchii* which is distinct from *H. reidii*, and which can be identified using the description and illustrations of *H. marchii* in Boertmann, D. (1995). Fungi of northern Europe. Vol. 1. The genus *Hygrocybe*. Denmark.

Boertmann (1995) describes his “*H. marchii*” as resembling a small, rather orange and discolouring *H. coccinea*, but with a less smooth and slippery cap, and somewhat smaller, more cylindrical and sometimes constricted spores. Other lookalikes include *H. constrictospora*, which Boertmann describes as “a more delicate fungus with a dry pileus and smaller spores”; and *H. reidii*, which has “a dry pileus and a distinct smell of honey” (Boertmann, 1995). Fruitbodies of *H. marchii* do not seem incredibly rare (the FRDBI contains nearly 500 records recorded as “*H. marchii*”), but the Kew Fungarium contains (at last count) only five collections, which are far too few to resolve these issues! Further records and voucher specimens of finds resembling Boertmann’s species concept would allow us to help refine the taxonomic concept and distribution of “*H. marchii*” and undescribed lookalikes in the UK.

**LAFF FINDS AND ACTIVITY**

**Mushrooms and bracket fungi**

*Amanita nivalis* (LAFF100), the “Mountain Grisette”, associated with *Salix herbacea* beds in montane habitats. Fruiting period June to September (rarely October). Four sites in Wales (Caernarvonshire VC:49); 23+ sites (depending how records are grouped) distributed throughout Scotland; and only one site known to us in England (Cumberland, VC:90) (but see below).

Since the last update, we’ve been receiving and compiling records of *Amanita nivalis*, thanks to the efforts and records of Debbie Evans and Charles Aron (North Wales); Arthur Chater (Mid-Wales); Liz Holden, Neville Kilkenny, John Taylor, and Emily Carroll (Scotland).

Known Welsh populations have been well-surveyed since 2010 thanks to Debbie Evans, but we have little idea if other mountainous regions with *Salix herbacea* populations could...
also be colonised by this fungus. One candidate Welsh site is Pumlumon (the highest point of the Cambrian Mountains in Mid-Wales), but Arthur Chater reported no sightings of this fungus on *S. herbacea* beds during his visit in mid August.

Scottish populations appear widespread, extensive and not uncommon, but many sites have not been resurveyed for 10 to 30 years, and would benefit from reinvestigation during the LAFF project. Liz Holden and Neville Kilkenny were looking out for fruitbodies during their montane surveys this August, but none were seen despite there being many of the “usual suspects”. Liz has also contributed her more recent sightings of *A. nivalis*, which have brought records of a number of historical sites up-to-date.

We currently have very few records of English populations apart from the one site found in the Lake District by Roy Watling and revisited by John Taylor in 1992. However, there does appear to have been regular survey work done on this species according to the NBN database, indicating between 6-8 sites around the Lake District. Hopefully we’ll soon be able to include these records into our dataset.

**Armillaria ectypa** (LAFF100), the “Marsh Honey Fungus”, found in very damp mossy fen grassland. Two sites known in England (Mid-west Yorkshire VC:62, Westmorland VC:69); one site in Wales (Carmarthenshire VC:44); three in Scotland (Selkirkshire VC:79, Argyll VC:98, Easterness VC:96); and one in Ireland (Antrim VC:H39).

Neville Kilkenny has reported a new site for *Armillaria ectypa*, recorded in 2012, from Selkirkshire (VC:79) (included in sites above). Mark Gurney has also supplied further details of his 2014 survey of the Easterness VC:96 site (Insh Marshes NNR), with records of multiple patches of fruitbodies throughout the site.

**Gliophorus reginae** (LAFF100), the “Jubilee Waxcap”, growing in unimproved short (grazed/mown) acid-neutral rough pasture or other grassland. Known only in the UK, and previously from only five sites: two in Derbyshire (VC:57), two in Staffordshire (VC:39) and one site in Wales (Pembrokeshire, VC:45). Now also known from two sites in Northern Ireland (Co. Antrim, VC:H39).

Roy Anderson informed us of two finds from near Belfast, Ireland in 2007 and 2009, which he later identified as *G. reginae*, representing the first records of this species from Ireland.
**Piptoporus quercinus** (LAFF100), the “Oak Polypore”, on old oak trees. Numerous sites are distributed throughout South England, but populations are restricted to veteran trees and need periodic monitoring. *P. quercinus* is one of the few species protected under Section 8 of the Wildlife and Country Act 2008, and it is an offence to pick, damage or destroy this species.

Roy Anderson has informed us of the first record of *P. quercinus* in Ireland, at Belvoir Park Forest in Belfast (see the following press release: [link](#)).

**Puffballs, Stalkballs, earthballs and earthstars**

**Tulostoma niveum** (LAFF100): (the “White Stalkball”) found on mosses growing on calcareous limestone boulders and walls. Three main localities in Scotland, one with many sites scattered across several 2km grid squares centred at Inchnadamph (West Sutherland VC:108); one with hundreds of recorded moss patches in a 2km grid square at Craig Leek SSSI (South Aberdeenshire, VC:92); and a new site detailed below. No sites are known in England, Wales or Ireland, despite potentially suitable habitats being present in all three countries.

A new site was recently discovered on the Isle of Lismore (Argyllshire, VC:98) by Lizzie Buckle in late July. The site was later surveyed by Paul Cannon, Carl Farmer and Noelle Odling in Mid September, resulting in 12 fruitbodies found in 9 moss clumps in the same area. No further sites could be found despite a fairly extensive search of the area and further south on the island. The population therefore appears very small and restricted compared to the other two Scottish sites, and could therefore be vulnerable.

**Rusts**

**Chrysomyxa pyrolata** (LAFF100), on *Pyrola rotundifolia* ssp. *maritima* (wintergreen) in dune slacks. Historically reported from 10-11 sites throughout the UK, including inland sites on *Pyrola minor* or *P. rotundifolia*. Currently known from two sites, both in England: Sandscale Haws NNR (Westmorland, VC:69), and Ainsdale LNR (South Lancashire, VC:59). A further site in Wales (Newbury Warren, Anglesey VC:52) has a 1971 record, and it is not yet appropriate to regard this population as potentially “extinct”.

Both English sites have been surveyed since the start of August, revealing multiple new patches infected by the rust. A survey at Sandscale NNR by Betty King resulted in records of five new patches
spread along the dune slacks. Tony Carter and Peter Gahan also have both discovered several new patches at Ainsdale NNR. Peter Gahan has also suggested the possibility of incorporating this species into regular volunteer surveys at Ainsdale NNR, thereby incorporating the conservation of this species into the general reserve management, which would be great news for this site.

In Wales, Mark Steer of the Glamorgan Fungus Group has continued his hunt for *Chrysomyxa pyrolata* on many new sites, without any evidence of the fungus. These accumulated negative records now strongly indicate that it doesn’t seem to be present in Glamorgan, despite the abundant presence of the host. Mark’s account of his searches has also been recently published in the SEWBReC Gwent-Glamorgan Recorders' Newsletter.

**Puccinia albulesis** (LAFF400 – our “backup” list of rare species): on *Veronica alpina* (Alpine Speedwell). Historically reported from five sites in Scotland: Ben Alder (Easternness, VC:96) in the nineteen century; Caenlochan (Angus, VC:90) in 1874 and 1953; Glen Clova (1909), and Glen Doll (1935) (Angus, VC:90); and Glen Nevis, Aonach Mor summit ridge (West Inverness-shire, VC:97) in 1984. One English site has been recorded in Herefordsire (VC:36) on *Veronica* sp., in 1908. Considered Extinct (1932) in the current but unofficial Red Data List for Threatened British Fungi (Evans et al., 2006). However, this assessment overlooked a Scottish record from 1984 (see Mycologica Scotica here: link).

John Poland recently rediscovered this species at the Caenlochan Glen site (last record 1953), and the record and specimen was checked and forwarded to us by Arthur Chater.

**Puccinia oxyriae** (LAFF400), on *Oxyria digyna* leaves in montane habitats. Considered Extinct (1941) in the current but unofficial Red Data List for Threatened British Fungi (Evans et al., 2006: link), but historic and recent records show the species to be extant in Scotland, from about seven sites in VC 88 Mid Perth, VC:90 Forfar and VC:104 North Ebudes.

Debbie Evans found a new site for this species in Caernarvonshire (VC:49) in 2007, and Wendy McCarthy has confirmed that the species is still extant at the same site this August.

**Smuts and allied taxa**

**Anthracoidea pulicaris** (LAFF100), ovary smut of *Carex pulicaris*. Historically recorded from the Isle of Skye (North Ebudes VC:104) and Great Yarmouth, East Norfolk (VC:27), both records in 1932; and Morrone by the River Dee in Scotland (South Aberdeenshire, VC:92) in 1980.

Found by Stewart Taylor in Morayshire (VC:95) this August.
Anthracoidea hostianae (LAFF400), ovary smut of Carex hostiana. New to Britain.

Found by Stewart Taylor in Banffshire (VC:94), at the end of July this year.

Anthracoidea pseudirregularis (LAFF400), ovary smut of Carex pallescens. One site known from the Isle of Mull, Mid Ebudes (VC:103), Scotland in 1966.

Found by Stewart Taylor this September in East Inverness-shire (VC:96).

NB: A. pseudirregularis is the only smut known on this host and so this ID very likely, but the find has not yet been fully confirmed.

Exobasidium pachysporum (LAFF100), on Vaccinium uliginosum. Two historic sites in Scotland, also in 2008 in Cumberland (VC:70), and 2013 in East Inverness-shire (VC:96).

Stewart Taylor revisited Chalamain Gap site in VC:96, where he found most of the plants infected by the fungus. Stewart also found a second site at Cairngorm Mountain (east of the above site), where only the V. uliginosum close to the day lodge and one of the lower paths hosted the fungus, while curiously the populations higher up the hill appeared completely uninfected.

Ustanciosporium gigantosporum (LAFF100), on ovaries of Rhynchospora alba. Historically known from two sites in England: 1865 in Berkshire (VC:22) and 18XX (precise date unknown) in Cambridgeshire (VC:29). Currently only known in England at Studland, Dorset (VC:9) and Scotland at Laxford Bridge, west of West Sutherland (VC:108).

This August, John Winterbottom revisited the site of Diana Hall’s and his 2014 find in Dorset, finding 20 flower-heads with the smut. He and Bryan Edwards later surveyed the site in more detail, bringing up the numbers of patches of this species to seven.

Ustanciosporium majus (LAFF400), infecting the ovaries of Rhynchospora alba. Three sites known, in West Sussex (VC:13), Dorset (VC9) and West Galway (VC:H16). Last recorded in 1959, and
considered Extinct (1939) in Britain and IOM (Evans et al., 2006: link). Tentatively Not Extinct, pending final confirmation and DNA sequencing.

While surveying for *Ustanciosporium gigantosporum* (see above) John Winterbottom identified some ovary smuts of *R. alba* which had completely different spores to his finds of *Ustanciosporium gigantosporum*, and which morphologically resemble Vanky’s description and depiction of *U. majus*. These finds still need to be completely verified, because the taxonomy of *Ustanciosporium* is quite tricky and not fully resolved, but we’re treating this as a tentative rediscovery of an “Extinct” UK species.

**Nonlichenized Ascomycota**

*Hypocreopsis lichenoides* (LAFF100), “Willow Gloves”, parasitising *Hymenochaete tabacina*, usually on, but not restricted to, *Salix*. Historical populations have been reported in England from Lancaster (VC:43), Lincolnshire (VC: 53), Yorkshire (VC:63), Westmorland (VC:69), and Cumberland (VC: 70); in Scotland from Forfar (VC: 90). Several of these sites have been reinvestigated in recent years without success. The most recent sightings were from a Berwickshire site (VC:81) in 2015; in the Republic of Ireland, Clare (VC: H9) in 2006; a Radnorshire site (VC:43) in 1993, and an East Kent site (VC: 15) in 1968. Only the Radnorshire and Berwickshire sites have been fully confirmed, and the Radnorshire site appears to be now unsuitable due to loss of habitat.

Ron McBeath has revisited the recently discovered *Hypocreopsis lichenoides* site at Gordon Moss nature reserve (Berwickshire, VC:81), the only known extant site for this fungus in the UK, and discovered a modest but apparently healthy population of at least nine fruitbodies.

*Mollisia fuscoparaphysata* (LAFF100), on culms of *Trichophorum* spp. Historically known only from three sites in Argyll and Bute (VC:102), West Inverness-shire (VC:97), and Dorset (VC:9). Records this year have shown its presence in Dorset, East Sussex (VC:14), Cardiganshire (VC:46), and Shetland (VC:112).

Sam Bosanquet found a new site found in Carmarthenshire (VC:44): a county first, and the first record from South Wales. Unsuccessful surveys have also been received from Cornwall via Pauline Penna.

*Neobarya xylariicola* (LAFF400), parasitic on *Xylaria hypoxylon*. Ireland: one site. New to Britain and Ireland.

A first record of this species (right) from Ireland from Roy Anderson, also unknown from elsewhere in Britain. Now added to the LAFF backup list of species.
**Polystigma rubrum** (LAFF100), “Blackthorn Dotty”, on leaves of *Prunus spinosa* and *Prunus domestica*. Historically reported throughout England and Wales, and the West coast of Ireland, with a few sites in Scotland. Current records are primarily from Cornwall (VC:1 and VC:2) and Anglesey (VC:52), with scattered records from Carmarthenshire (VC:46), Carnarvonshire (VC:49); North Devon (VC:4), the Burren, County Clare (VC:H9); and Argyll (VC:98).

Over the last two months we’ve received a number of records from Cornwall, (thanks to Paul Gainey, Pauline Penna and Ian Bennallick), Anglesey (Debbie Evans); Caermaervoshire (Debbie Evans and Wendy McCarthey), Cardiganshire (Arthur Chater), and Argyll (Carl Farmer and Noelle Odling). We’ve also received a dataset of “negative records” from Nigel Stringer, compiled during his hedgerow rust surveys throughout South Wales, and unsuccessful surveys from Mark Steer (Glamorganshire).

All positive records so far received have been from the West Coast of the UK, but we have seen very few records of unsuccessful searches from elsewhere. Please contact us if you have been looking for *Polystigma rubrum* elsewhere in the UK but haven’t found any.

**Xylaria crozonensis** (LAFF100), on *Quercus petraea*, *Corylus* and *Betula*. Known in the UK only from Cornwall (VC:1 and VC:2), and elsewhere only from the type locality in Brittany, western France. Recently considered new to Britain.

Pauline Penna, Liz Crow and Ken Preston-Mafham have sent in records of *Xylaria crozonensis* from a number of sites throughout Cornwall, and the species appears to be quite well distributed throughout the county. We would very much like to know if anyone has been finding this species elsewhere in the UK.

![Xylaria crozonensis © Pauline Penna.](image)

**Lichenicolous fungi**

**Lichenochora epifulgens** (LAFF100): a perithecial ascomycete parasitising the rare lichen *Fulgensia fulgens*. England: Three sites in Cornwall (VC:1). Wales: one site in Pembrokeshire (VC:45).

*Lichenochora epifulgens* was previously known (to us) in the UK from only a single site in Pembrokeshire. However, Paul Gainey has informed us that the extensive population of *F. fulgens* at Perranporth, Cornwall (which are “far and away the largest populations in Britain”), are frequently colonised by *Lichenochora epifulgens*, and that he considers the species “quite common” in the area! Two further *F. fulgens* sites in Cornwall have also been recorded as containing lesser populations of *L. epifulgens*.

I think that is all for now!

Best regards,

Brian Douglas