



Herefordshire Fungus Survey
Group

News Sheet N° 23: Spring 2012



Camarophyllopsis schulzeri – Whitney Court, 7/12/11 (photograph by Peter Roberts)

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Welcome to the Spring 2012 News Sheet

In spite of it being mid summer (you might not have believed it, though!) here is the Spring 2012 issue of our News Sheet – the 23rd since HFSG was formed in Autumn 1998. Once again, our contributors have excelled themselves and I hope that you enjoy the usual diversity of features in this issue – both geographical and in terms of content. My thanks to all of them.

Amongst other articles and reflecting this diversity:

- Debbie Evans, like the Tin Man in the Wizard of Oz, is not only 'Rusting in Wellies', but also reveals that the Devil lives in North Wales, with a very nice follow-up article to the one on *Clathrus archeri* in the last issue of the News Sheet (No. 22, Autumn 2011).
- We are very grateful to John Bingham and the *Worcestershire Record* (the newsletter and biological journal of the Worcestershire Biological Records Centre & Worcestershire Recorders) for his article on appearances of the Hoof Fungus, *Fomes fomentarius*, in neighbouring counties. [I can only find 4 records for VC 36 on the FRDBI - the last in 1902].

- Peter Roberts discusses some interesting new records from Radnorshire (VC 43) - mostly from his and Shelley Evans' garden in Glasbury.
- Jo Weightman has focused, this time, on some of the 'Bad Hair Day' Milkcaps, with helpful descriptions and means of distinguishing these long-haired *Lactarius* spp. Thanks also to Geoff Kibby, for allowing his photographs to be used for some of the illustrations in this article.
- Ted Blackwell has contributed an interesting synopsis of some of the colour effects that can be used in identifying certain species.

As you will already know, this and many other of our recent News Sheets (as well as the 2012 Foray Programme) are available on a part of the BMS website at

www.britmycolsoc.org.uk/mycology/recording-network/groups/herefordshire-fg/

By the time of the next HFSG News Sheet (Autumn 2012), we shall, hopefully, have our own HFSG Website, with this and much more information about the Group. We are very grateful to one of our members, Les Hughes, for 'volunteering' to set this up for HFSG – following on from his (excellent) one for the Shropshire Fungus Group.

Don't forget that the Editor is always looking for **your** contribution(s) to the News Sheet and the deadline for the next issue is September 20th. I shall do my best to send it out it expeditiously, but it does help if you can send me your articles, photos, etc. as far as possible in advance of the deadline!

Happy reading!

Mike Stroud
e-mail: mikestroud1@btinternet.com

CAPTION COMPETITION

The three suggestions that I had for a caption were (from Jo, Cherry herself and Steve Rolph):



Cherry had tried eating, smoking and finally snorting. However, the Magic *Mycena* failed to live up to it's name

Many thanks for your suggestions. They are all first equal – so no prizes!!

RECORDER'S REPORT SEPTEMBER – DECEMBER 2011

The dry, warm and otherwise delightful spring months introduced a rather bleak or slow show of early species. *Calocybe gambosa* failed to appear (or the news didn't reach me), there were no morels and only one (probable) *Mitrophora semilibera*. *Dumontinia tuberosa* did appear (foray at Queenswood) and I have only one record for *Sarcoscypha austriaca* (Haye Park).



Cystolepiota adulterine – Coppett Hill (23/10/11)



Chroogomphus rutilus – Croft Castle Estate (20/11/11)

August and September, although dry and unproductive generally, had their moments. *Clathrus archeri* made its first county appearance on the Brockhampton estate in August, as did *Calocera furcata* (Nether Wood foray).

October, on the other hand, usually the best month of all, was a disaster. Country wide, meetings had to be cancelled, such was the dearth of fungi. While the population basked, empty notebooks and long faces were the norm among mycologists. Where in a normal season, at least 100-150 species can be expected at a good site, it was, and I quote from my notebook, "2 spp here, 5 spp there, 8 spp at normally prime locations". Moccas Park, although basically dry – we could easily reach the island in the lake – was a most welcome exception. Coppett Hill also, a potentially good beech wood site, where some HFSG members led a Study Day for the Wye Valley AONB, was bone dry. We did record 75 (mostly common) species, but only by working very hard. Species recorded included *Abortiporus biennis*, *Cortinarius amoenolens* (3rd VC record), *Cystolepiota adulterina*, *Tephrocybe rancida*, the willow associate *Tricholoma cingulatum* (another 3rd VC record but surely not that uncommon) and *Thelephora spiculosa* (2nd VC record).

With the merciful rains and continuing mild weather in November and December came the oh-so-long anticipated sheets of common litter species. *Mycena*, *Clitocybe*, *Collybia* etc. eventually had their day. Then we led another Study Day, this time on the Croft Castle Estate for the Herefordshire Parklands Project, when 62 species were recorded including *Chroogomphus rutilus*, *Hygrocybe russocoriacea* and *Lyophyllum eustigium*.

The September – December forays

There was an astonishing absence of mycorrhizal species both on the forays and among records for other occasions viz: 5 species of *Russula*, 3 of *Lactarius*, 1 of *Cortinarius*, 2 of *Amanita*. Also, with few exceptions, large pieces of dead wood remained dry and unproductive eg in the whole year there were only 10 records of *Pluteus* (of which seven were *P. cervinus*) and just 1 of *Fistulina hepatica*. Grassland sites were quite good late in the year and litter species were very good in November and December.

Moreton Wood on 14.09.11 was unrewarding. It was hard to find anything except powdery mildews and rusts, *Mycena clavularis* and *Nectria sinopica* were the best of the bunch – It was too early for a mainly coniferous site and the broadleaf areas were dormant.

Nupend Nature Reserve on 05.10.11 should have been one of the most rewarding sites but was in fact the worst in terms of numbers of species recorded. It was undoubtedly a very disappointing visit especially since Stephanie Thomson, whom we sadly miss, visited this site in the same week in 2010 and fared much better. Only 23 species were seen and only *Macrolepiota procera* was in any abundance – it is always intriguing how such a large fungus can grow so well when the ground is bone dry.



Mycena clavularis – Moreton Wood (14/9/11)

Moccas Park on 19.10.11 (we did not, also visit Woodbury Hill, as planned). Although this is a prime date for foraging and we had the additional advantage of an all-day foray, we approached with trepidation, as conditions in the County remained Sahara-like. However, we were delighted to come away with 116 records. *Volvariella bombycina* was collected from sweet chestnut, mycorrhizals were largely absent, but an unusual (or untypical) *Xerocomus* has gone for DNA analysis but no results are in yet. Ted Blackwell collected some rabbit pellets from which he later identified 10 species. Other pleasing records included *Poculum firmum*, *Agrocybe erebia*, *Entoloma prunuloides*, *Leucocoprinus brebissonii*, *Pholiota conissans*, *Exidia recisa* and *Handkea utriformis*.

Hergest Ridge on 09.11.12 would probably have been better in December. For example, the waxcap count was down to three. However the Red Data List species *Spathularia flavida* was re-recorded and we had the only sighting anywhere this year for *Macrotyphula fistulosa* var. *contorta*.

The effect of the late rains and continuing mild weather was evident in **Haugh Wood on 23.11.11** where common litter species such as *Rhodocollybia butyracea* and *Clitocybe metachroa* were in great abundance on the forest floor. The far less common *Macrotyphula juncea* was found in oak litter and the dead wood was sufficiently dampened for fruitings of *Ptychogaster albus*, that curiously spiky anamorph of *Postia ptychogaster* and for some 'jellies' *Tremella foliacea* occurring on fallen oak and *Pseudohydnum gelatinosum* on a conifer stump.



The untypical *Xerexomus* sp. – Moccas Park (19/10/11)



Leucocoprinus brebissonii – Moccas Park (19/10/11)



Handkea utriformis – Moccas Park (19/10/11)



Left to right:
Macrotyphula fistulosa var. *contorta* – Hergest Ridge (9/11/11)
Macrotyphula juncea – Haugh Wood (23/11/11)



Tremella aurantia – Whitney Court (7/12/11)

Timing was better for the grassland at **Whitney Court on 07.12.11** where 8 of the 11 species of waxcap known here occurred and 6 of the 9 clubs. Earth tongues have stayed underground in Herefordshire this year – making the *Geoglossum fallax* and *Trichoglossum hirsutum* recorded the only occurrences in 2011. *Camarophyllopsis schulzeri* (see front cover photograph) was a 2nd VC record while *Amanita battarrae* and *Ramariopsis kunzei* were 3rd VC records. There are only 47 records of *Tremella aurantia* on the FRDBI, the last one being Ted's, at Turnastone in 2008. (This species parasitises *Stereum* and differs from the more common *T. mesenterica*, which parasitizes *Peniophora*), All four are nationally rare.

Non-foray records

Gomphidius maculatus 17.09.11 with larch in Fishpool Valley, Jo Weightman

Guepinia helvelloides 11.11.11 Bircher Common, Steve Rolph

Lactarius pubescens 18.09.11 Gatchapin Farm Jean Wynne-Jones (the only record received this year of a normally exceedingly common milk cap!)

Leucoagaricus leucothites 04.09.11 Canon Frome, Seb Bacon

Protomyces pachydermus 13.06.11 on living leaves of *Taraxacum officinale*, Orleton, Ted Blackwell

Out of County records

Astraeus hygrometricus 6.1.11 at Dudmaston, Shropshire, coll. Harvey Morgan, det. B. Spooner. Only the second known record of this RDL species for Shropshire

Geopora foliacea end of October 2011 in a garden in Telford, Shropshire, coll.anon, det E. Blackwell, conf. B. Spooner

Gibbellula pulchra 19.09.11 anamorph of *Torrubiella arachnophila*, Longdon Wood, Wyre Forest, Worcestershire, coll. Rosemary Winnall, det. B. Spooner

Thank you to everyone who has collected fungi for study, sent in records and determined species.

Jo Weightman - Recorder

THE COMMON FUNGI PROJECT – ‘CALLING ALL MEMBERS’
<http://www.britmycolsoc.org.uk/mycology/have-you-seen-this-fungus>

This is just a reminder of the request that Roger made at the last AGM (see the Minutes, section 3f) and the email that Jo sent to all HFSG members on 21st March.

The BMS has set up a project which they hope everyone, but everyone, will join and enjoy.

Six very common and easily recognised fungi have been chosen and we are invited to make a note every time we see any of them and submit our findings. Even when very common fungi are concerned there are still questions to which answers are needed and this is where you come in. As this project is nationwide you are all eligible to take part wherever you live.

The fungi are:



Amanita muscaria – Fly Agaric



Auricularia auricula-judae - Jelly Ear (previously known as Jew's Ear)



Calocera viscosa – Yellow Stagshorn



Piptoporus betulinus - Birch Polypore



Daedaleopsis confragosa – Blushing Bracket



Lycoperdon pyriforme – Stump Puffball

WHAT YOU DO. Note:

- Name of fungus
- Date
- Site name
- Tree species under, on or near to which the fungus is growing, including on which kind of wood it is growing. Where a fungus is growing near different tree species, list them all, with the nearest first.
- Your name (important so that suitable acknowledgements can be made).
- NO specimens need be sent.
- The details may be sent in any form, as records on paper, or as an Excel or Access file, by post or by e-mail.
- Records from previous years will be welcome as long as the ecological details are available.
- Please send records to: **Bruce Ing, Tigh na faoileige, Rhue, Ullapool, IV26 2TJ** or e-mail to: myxoking@btinternet.com
- with copies to sophie@britmycolsoc.info and stuart@skeates.me.uk
- or use **the online form**.
- Grid reference
- Vice-county (Herefordshire is VC36)

HOOF FUNGUS (*Fomes fomentarius*) AT THE DEVIL'S SPITTLEFUL NATURE RESERVE

(Previously published in the Worcestershire Record number 31)

On August 2011 some members of the Wyre Forest Study Group were looking for nocturnal beetles on the Devil's Spittleful with Alan Brown. On our wanderings, Alan pointed out some fungi on birch tree that he had found, but was uncertain as to which species they were. At night it was hard to identify them but, clearly, they were not the usual Birch Polypore (*Piptoporus betulinus*).

I returned in daylight a few days later to check and discovered they were young specimens of the Hoof Fungus, *Fomes fomentarius*. The lower fruiting brackets were zoned in shades of light brown - somewhat atypical - but, higher on the tree, a typical grey coloured bracket was noted. In total, three trees were found with *Fomes* present, all being dead or dying, with no top branches. Several also had Birch Polypore fruitbodies present, along with the *Fomes*.



This is a common species in Scotland growing on mature birch, but becomes very rare further south into England - possibly, with no more than three or four records for Worcestershire in recent years. I have seen the species in Shropshire a couple of times on large fallen birches within secondary woodland.

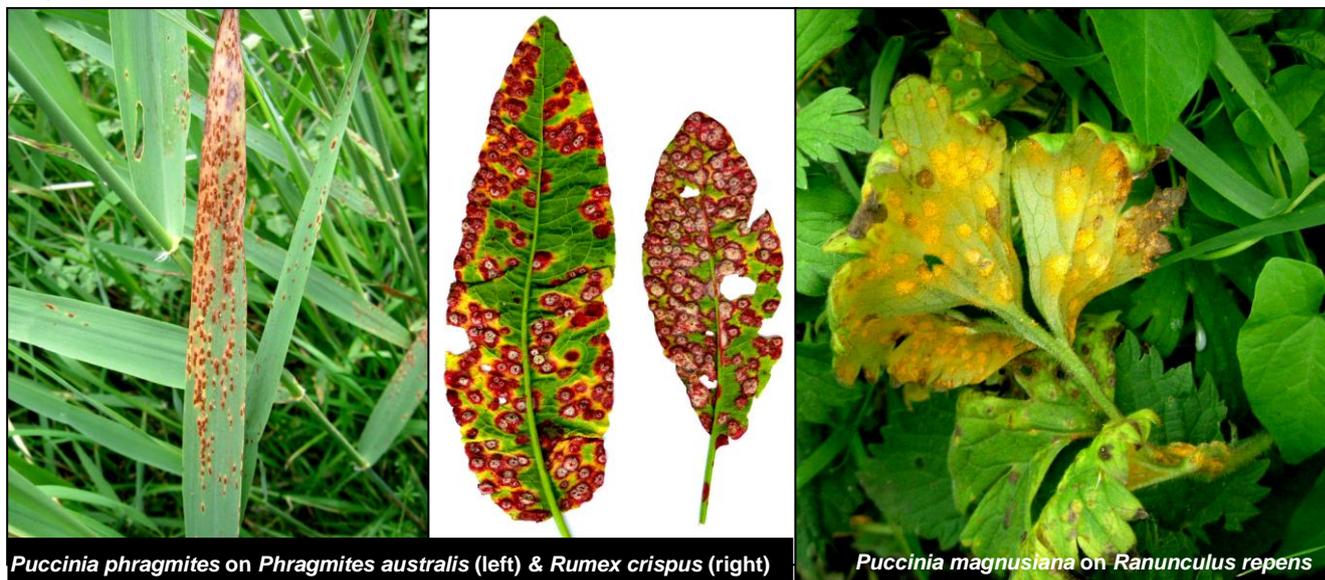
Fomes fomentarius may not be an ancient woodland species, but prefer mature secondary woodland and, possibly, the sandy soils typical of the Kidderminster area are suitable for it. If this is the case, other areas of birch woodland may support this species and perhaps naturalists tend to ignore the bracket fungi on birch, thinking it will always be the common Birch Polypore.

The few decayed birches and other suitable trees at the Devil's Spittleful are to be retained when the next phase of heathland restoration begins.

Photograph & text by John Bingham

RUSTING IN WELLIES

Fens, wetlands, riverbanks, ditches and damp fields are excellent places to botanise for the plants that thrive in wet habitats. These plants in turn can support a range of rust species, some of which are restricted to the wetland plants and thus to these habitats. I am very lucky to have a number of wonderful fens locally and I often spend an enjoyable day 'Rusting in Wellies' and also appreciating all the other attractions on offer – the plants, birds, dragonflies and butterflies – something for everyone.



Puccinia phragmites on *Phragmites australis* (left) & *Rumex crispus* (right)

Puccinia magnusiana on *Ranunculus repens*

One of the predominant features of many fens are the extensive reed-beds formed from Common Reed, *Phragmites australis*. This plant is the primary host of two 'heteroecious' rusts.¹ The commonest rust, *Puccinia phragmites* uses *Rumex* species, the Docks and Sorrels, as the alternate hosts and plants growing near to the reeds should be searched for signs of the rust in spring and early summer. Infection on the leaves results in a bright carmine-red reaction on the upper surface of the leaf and beautiful pale, white-fringed aecial cups are found on the underside. It remains one of my all time favourites and I always delight in finding infected plants.² Leaves may exhibit just a single lesion or may be covered with a dense mass of the delightful aecial cups.

The second rust species *Puccinia magnusiana* in contrast forms bright-yellow, white-fringed aecial cups on the underside of *Ranunculus* leaves and on petioles and stems. I record this species most frequently on Creeping Buttercup, *Ranunculus repens* growing near to the reeds. The rust is equally as common as *P. phragmites* in my area, although described as scarce in Wilson & Henderson. Both rusts can be present in the same stand of reed and even on the same leaf blade and, as the two species are superficially similar in appearance, the spores must be checked microscopically. Look on the reed leaves for brown pustules of the uredinia and dark-

brown telia, from summer through to winter, and they can also be sometimes found on old and dead leaves. The two rusts can be differentiated by

- the presence of capitate paraphyses, (sterile structures), with the urediniospores and a short pedicel (the stalk) on the teliospores in *P. magnusiana*;
- an absence of paraphyses and long pedicels indicates *P. phragmites*.

The teliospores also differ in shape - details of all spore characteristics can be found in E & E and W & H.

Common Valerian, *Valeriana officinalis* also supports two rust species. *Uromyces valerianae* is the common species and completes its full life cycle with all 5 spore stages on this host - an 'autoecious' rust. Yellow aecial cups on the leaves, petioles and stems are followed by small brown uredinia and finally dark-brown telia although the latter are not often found.



Uromyces valerianae on *Valeriana officinalis*

¹ Heteroecious rusts are species which require two taxonomically unrelated hosts to complete their life cycle. Usually the aeciospore stage is formed on the second or alternate host and the urediniospore and teliospore stages are found on the primary host. The teliospores germinate to produce basidia and the basidiospores which will subsequently infect the other host.

² *Ramularia* infection also results in red leaf spots but these are a much darker, more purple or wine-red colour and with experience quite easy to differentiate from the rust's reaction.

The second rust, *Puccinia commutata* is described as very rare in E & E and W & H and there are few records in the

FRDBI, but I have found it on four sites on Anglesey and I was recently given a sample from Caernarfonshire.



The two rusts are difficult to separate when only the aecial cup stage is present and this could have resulted in presence of the rarer species being over-looked with a 'presumed' identification of *U. valerianae*. Where later spore stages are present differentiation is easy, using a microscope to confirm. Uredinia and single-celled teliospores indicate *U. valerianae* and absence of uredinia and 2-celled teliospores confirm *P. commutata*. With the latter species I frequently find the aecia and telia together especially on the stems and petioles. Both species can occur together on adjacent or nearby plants, so it may pay to check a few representative leaves.

Marsh Marigold, *Caltha palustris* is host to two autoecious rusts - called *Puccinia calthae* and *P. calthicola*. Again, differentiation may be difficult when only the yellow aecial cups or the brown uredinial stage are present. The small dark-brown telia are formed in summer and the teliospores need to be checked with a microscope. The spores of *P. calthae* and *P. calthicola* differ in several respects including spore width, shape, surface characteristics and pedicel length. The urediniospores differ in the number of pores but this may be difficult to see. Both species appear to be equally as common in my area.



Uromyces junci should be looked for whenever Common Fleabane, *Pulicaria dysenterica*, is seen growing in ditches and damp fields close to rushes, *Juncus* species. This heteroecious rust is not common in my experience, but could easily be over-looked or under-recorded. In the spring and early summer the upper surface of the *Pulicaria* leaves exhibit yellow spots, often with a purple fringe and

underneath the rust forms clusters of lemon-yellow aecial cups. Later the rushes nearby can be closely examined for small brown uredinia and dark-brown telia which burst through the tough epidermis.



The common autoecious rust on most Violet species is *Puccinia violae*, but Marsh Violet, *Viola palustris*, has its own unique rust called *Puccinia fergussonii*. This microcyclic rust, (only telia are formed), was thought to be very rare locally, but I now have several records for VC49. The small dark-brown telia form in groups, mainly on the underside of leaves and petioles and infection is indicated by a pale area on the upper surface.



Amphibious Bistort, *Persicaria amphibia* is often infected by *Puccinia polygoni-amphibii* var. *polygoni-amphibii* (see below). The infected leaves are generally paler, yellowed or mottled in appearance and can be covered mainly underneath with brown uredinia and dark telia .



When not in flower this plant looks superficially like Rosebay Willowherb but the frequent presence of bright-red galled leaves caused by *Wachtliella persicariae*, a gall-midge makes it easy to spot. Only the terrestrial form of this plant supports the rust.

Puccinia sessilis is a common heteroecious rust found as aecial cups on Lords and Ladies, *Arum maculatum*. It also occurs on Wild Garlic, *Allium ursinum*, Orchid species and very rarely on Herb Paris, *Paris quadrifolia*. The primary host of this rust species is the wetland plant Reed Canarygrass, *Phalaris arundinacea* but, unlike the reed rusts, the two hosts are often not found growing close to each other. In my experience, when they are growing relatively close together infection on the aecial host tends to be much heavier. Small brown uredinia and telia can be found on infected *Phalaris* leaves. Note that Orchids can also be infected by *Melampsora epitae*, a rust alternating with *Salix* species. This rust differs in having caemoid aecia, (lacking any definite form), whereas distinct yellow aecial cups are formed with *P. sessilis*. (For more information about *P. sessilis* see Stringer *et al*).

Similarly caemoid aecia on Wild Garlic indicate a different rust to *P. sessilis*. Last year I re-evaluated an old 2003 '*P. sessilis*' record following discussions with Nigel Stringer and the rust I had collected is *Melampsora allii-fragilis*. This is a heteroecious rust alternating with Crack Willow, *Salix fragilis* and is now the first Welsh record. (Thanks Nigel). This rust is one to be aware of and to look out for on Wild Garlic and demonstrates the need for keeping photos and herbarium samples.

Another common and unmistakable rust is *Triphragmidium ulmariae* which forms bright orange, caemoid aecia on Meadowsweet, *Filipendula ulmaria*, especially on the leaf veins and petioles often causing distortion of the plant. The dark-brown telia are found later in the year and this rust has interesting subglobose or almost triangular, 3-celled teliospores in contrast to the 1-celled *Uromyces* and 2-celled *Puccinia* spores. There are many other rusts to search for. The wetland species of Bedstraw, Thistle, Stitchwort, Mint and Willowherb can all be infected with rust species that are not restricted to wet habitats, but also found on other members of these Genera in different habitats. Marsh Thistle, *Cirsium palustre* can be host to two species of rust. *Puccinia cnici-oleracei* is a microcyclic species and little groups of dark-brown telia are formed on the underside of leaves, often around the edges, denoted by pale spots on the upperside. The second species *Puccinia calcitrapae* forms uredinia and telia over the



Galled leaf of *Persicaria amphibia*



Melampsora allii-fragilis on *Allium ursinum*



Triphragmidium ulmariae on *Filipendula ulmaria*

whole underside of the leaf surface, and the presence of the uredinia and differing teliospores confirms this species. (See E & E and W & H for descriptions of the microscopical characteristics). Marsh Bedstraw, *Gallium palustre* is frequently found with stages of *Puccinia punctata* and Garden Mint rust, *Puccinia menthae* is very common on Watermint, *Mentha aquatica*. I have recorded both the microcyclic rust *Puccinia epilobii* and *Pucciniastrum epilobii*, the common rust of Fuchsias on Marsh Willowherb, *Epilobium palustre*. Bog Stitchwort, *Stellaria uliginosa* can support *Puccinia arenariae*, the common microcyclic rust on Red Campion, *Silene dioica*. It has recently also been recorded on Water Chickweed, *Myosoton aquaticum*, a new host record, (see Evans *Puccinia arenariae* article).

The highlight of my 'Wellie Rusting' remains finding the first British record of *Puccinia schroeteriana* back in 2008; a heteroecious rust with yellow aecia on Saw-wort, *Serratula tinctoria* and uredinia and telia on Tawny Sedge, *Carex hostiana*, (HFSG News Sheet no 16: 2008). I have since recorded it on a second fen on Anglesey and it should be considered wherever the two hosts are found growing together.

One species on 'my wish list' has eluded me so far; *Puccinia cladii* on Saw Sedge, *Cladium mariscus*. This rust has been recorded in southeast England and has no recent records in the database, but we do have plenty of the host on our local fens so..... I'm still looking. Many of my best records are chance findings and there are many other possibilities out there for anyone to find new or rare records.

Text & photographs by Debbie Evans

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INTERESTING COLOUR EFFECTS IN FUNGI



In addition to the obvious use of the colour of fruitbodies and spores, there are a number of other ways in which colour may be significant in distinguishing fungus species. These may occur as reactions to chemicals and stains, or may be inherent within the tissues. Of the latter, those in Boletes are usually well documented and will not be discussed here.

In other species, notes of many significant colour effects are scattered throughout the literature and the purpose of this article is to collect them together under one heading - some of these perhaps being less well known.

In the Ascomycetes the following have been noted:

Colour of juice (=sap, of some authors)

A number of *Peziza* species produce a coloured or watery juice when pricked or cut, which can be used diagnostically, as follows:

- P. badia*: pale reddish-brown.
- P. badiofusca*: opalescent, bluish.
- P. depressa*: watery.
- P. michelii*: whitish.
- P. plebia*: bright yellow.
- P. saniosa*: blue.
- P. sucosella*: yellow, often turning yellow-green to green.
- P. succosa*: bright yellow.

Other species noted for coloured juice are:

- Plicaria leiocarpa*: yellow.
- Velutaria rufo-olivacea*: greenish-brown.

Colour changes due to bruising

- Caloscypha fulgens*: staining dark bluish to olive green when bruised and drying orange (said to look like mouldy orange-peel).

Colour changes due to chemical reaction

- Ionomidotis fulvotrigens*: pigment soluble and turning reddish brown in KOH
- Phaeangella ulicis*: flesh crimson in KOH.
(Dr. Dennis says (a) 'contents of paraphyses become wine red in KOH solution'; (b) 'Fresh collections indicate variations in colouring of the excipular cells from brownish ochre to crimson in ammonia, with a blue-green tint to the cell wall in KOH solution').
- Scutellinia and Aleuria*: What has been called the 'carotenoid reaction' is exhibited where there is a green staining of certain tissues, notably tips of paraphyses, in Melzer's iodine.
- Dasyscyphus (Lachnum) cerinus & D. sulfureus*: paraphyses yield purple stain in KOH.
- Catinella olivacea*: tissue stains purple in KOH.
- Mollisia ramealis*: tissue yields a sulphur-yellow stain in KOH.
- Gibberella pulicaris*: when mounted in lactic acid a purple or reddish-purple pigment diffuses out from their walls (E&E Microf. on Land Plants p161).

In the Basidiomycetes the following have been noted:

Tissue colour reactions with reagents

All *Hymenochaete*: blacken in KOH.

Lactarius turpis, *Daedaleopsis confragosa*, & *Hapalopilus nidulans*: any alkali (eg KOH, NH₃ or Na₂CO₃ crystal) on the flesh of gives deep purple colour.

Amanita virosa: KOH on cap gives chrome yellow.

Asterophora: basidia are described as siderophilous (see explanation in *Lyophyllum* below).

Chroogomphus: hyphae of cap cuticle amyloid or darkening in Melzer's; strongly amyloid hyphae at base of stem and in mycelium in surrounding substrate - compare with *Gomphidius*, where there is no amyloid reaction on hyphae at base of stem nor in mycelium in surrounding substrate.

Crinipellis brown cap and hairs becoming olivaceous in KOH.

Cortinarius:

subgen. *Cortinarius*: flesh red in alkali.

subgen. *Dermocybe*: flesh black-brown in alkali.

Cystoderma: Cap cuticular cells rusty-brown in KOH, except for *C. carcharias* which hardly discolours.

Gomphidius: see *Chroogomphus* above.

Gymnopilus: flesh blackens in alkali.

Inocybe geophylla var. *lilacina*: It loses its colour if kept in the dark for 48 hours, but regains it if exposed to light for a few hours.

Lyophyllum connatum: Iron Salt, FeSO₄ on gills, violet in 1 minute (to distinguish from *Tricholoma columbetta*).

Lyophyllum spp.: Spores and basidia are described as 'siderophilous' (=in some texts 'carminophilous'), which means that they contain large particles which turn blackish-purple or violet-black in the stain aceto-carmin.

Lyophyllum s. s. All parts bruise bluish-black.

Reaction with paper

Limacella glioderma: moist white paper tissue in contact with cap stains brick-red.

Porphyrellus porphyrosporus: white paper in contact with cap stains blue-green.

Colour effects from infection by other fungus parasites

Basidiomycete infections:

Hygrocybe virginea: with pink or reddish staining of stipe - infected with a Hyphomycete fungus *Fusarium* aff. *graminearum*. (The coloured fruit bodies were once named, in ignorance, "*H. virginea* var. *roseipes*", a non-existent species).

H. virginea: With bright lilaceous lamellae, infected with Hyphomycete *Paecilomyces marquandii*.

Myxomycete infections:

Fuligo septica: Mature aethalia are normally bright yellow like scrambled eggs, but a common parasite,

Nectriopsis violacea, forms a violet hyphal net on the surface giving it a violet tint.

Human physiological reaction

Eating the edible Saffron Milkcap and False Saffron Milkcap (*Lactarius deliciosus* & *L. deterrimus*) turns urine red. This is harmless - but the unexpected discovery can cause some temporary alarm to the uninformed.

Ted Blackwell



Last Autumn was a particularly good season for Dog Stinkhorn, *Mutinus caninus*, in our garden at Cwmdru, Powys. This was part of a group of 20, or so specimens, growing on home made chippings. [Ed.]

NEW RECORDS OF RADNORSHIRE FUNGI



For some time, we have kept intermittent records of the larger fungi found in our Glasbury garden in the vice-county of Radnorshire (VC 43). Last autumn I resolved to tidy these up by filling in some obvious gaps (yes, we do have *Stereum hirsutum*) and by checking a few casual sightings under the microscope, such as the swarms of *Coprinellus disseminatus* that regularly appear on the remains of two old stumps. I was therefore taken aback to find the first specimen I looked at was not this species, but the less frequently recorded *Psathyrella pygmaea*. Examining further fruitbodies showed that both species were present. They are superficially very similar, but microscopically distinct, and often seem to grow together, which is curious since neither genus is otherwise known to contain mycoparasitic species. Apparently, *P. pygmaea* is new to Radnorshire, but this is no great claim. Both species were recorded on 5th November 2011.

Foraging in Devon with Carol Hobart in September, I noticed she was using a cheap, supermarket hand-rake with springy prongs to look for hypogeous fungi. Since we happen to have an identical hand-rake, I thought I would have a look in the garden and was pleased to find several small fruitbodies hiding under leaf litter, half-immersed in the soil surface. Two basidiomycetous species were found near birch on 28th September, namely *Hymenogaster griseus* and *H. tener*. The former name is here used in a wide sense (inclusive of *H. vulgaris*), following recent DNA research by Stielow *et al.* (2011). A tiny fruitbody of *Glomus microcarpum* was found on the 26th near pine – a rare chance to record a member of the *Glomeromycota* from the garden. It shows how common hypogeous fungi are, if deliberately searched for, and I would have had another rake around if a spell of dry weather had not intervened. Most of these hypogeous species are mycorrhizal and one stands the greatest chance of finding them when other mycorrhizal fungi are fruiting, typically in the autumn. All three appear to be new to Radnorshire, of course.

Late in the season (25th November) I was mystified by a single agaric with a slimy cap, greyish white, decurrent gills, and a distinct ring zone on the whitish stem. It looked like a species of *Hygrophorus*, so it was a bit of a shock to discover it had brown spores. Some searching eventually led to *Meottomyces dissimulans* – the latest in a long list of names given to this species. Several standard field guides call it *Hemipholiota oedipus*, which may be a name more familiar to some. [See also, HFSG News Sheet No. 19, p15, in 'Pholiotas in VC36', by Jo Weightman] Further specimens appeared over the following weeks, showing that the brown, slimy cap is constant but is more typically convex to subumbonate rather than flat and slightly depressed. Gills are not so

strikingly decurrent as in the initial collection, but remain misleadingly pale for a long time. The ring is evanescent and almost no trace remains in older or rain-sodden specimens.

By coincidence, Nick Legon has given the species a lengthy write-up in the January issue of *Field Mycology* (Legon, 2012). He has always claimed it is common, as has Alick Henrici – but both have collected extensively on the Surrey chalk (in the Norbury Park and Mickleham areas) from where many of the FRDBI records have come. Indeed *Meottomyces dissimulans* seems to be calciphilous, often (but not always) occurring amongst ash leaves, and typically producing fruitbodies in winter. It has been recorded several times in Herefordshire, but this appears to be a new Welsh record.

We did manage to get out of the garden last autumn and undertake some fungal surveys in an area of acidic, upland sheep pasture, north of Llandrindod Wells. Most of the larger fungi we encountered were predictable species, but there were some surprises. Fruitbodies of the Earthy Powdercap (*Cystoderma amianthinum*) were commonplace, for example, but finding the Pearly Powdercap (*Cystoderma carcharias*) was unexpected. I have only previously seen this attractive, pinkish white agaric in continental conifer woods, so it was news to me that it could also occur in grassland. It has a mainly northern distribution in the British Isles, with fewer reports from southern Britain, though it has been recorded several times in Herefordshire. In Wales, it has only been reported in the north – so it is another species new to Radnorshire. It was found at two of the survey sites, both of them old stone quarries, the anciently disturbed ground possibly remaining more basic than the surrounding acid grassland.

The turquoise Peppery Roundhead (*Stropharia pseudocyanea*) with its distinctive smell was another common species in the sheep-grazed grassland and the equally slimy, but purple-tinted Smoky Roundhead (*S. inuncta*) was also found. But ***Stropharia albonitens*** was a species I have not encountered before (see photo on previous page). It is of similar build to *S. pseudocyanea* and *S. inuncta* and very slimy, but the cap surface and stem are entirely white when young, the cap only later developing pale ochre tints from the centre. It has rarely been found in the British Isles, with just a

handful of recent records from England and Scotland. This collection seems to be a first for Wales.

Text & photographs by Peter Roberts

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- Legon, N.W. (2012). Fungal portraits 49: *Meotatomyces dissimulans*. *Field Mycology* 13(1): 3–7.
- Stielow, B. et al. (2011). Species delimitation in taxonomically difficult fungi: The case of *Hymenogaster*. *PLoS ONE* 6(1): e15614. doi:10.1371/journal.pone.0015614

“THE DEVIL” ALSO LIVES IN NORTH WALES



Following on from Jo’s interesting article about stinkhorn relatives and the finding of the 1st VC36 record of the Devil’s Fingers, *Clathrus archeri* near Bromyard in August last year, I thought I would tell readers of my experience of this species. Charles Aron and I were doing a grassland fungus survey on a farm near Harlech in late October 2010, when the farmer came over to show us a picture on his mobile phone. To our surprise the “something strange” he had seen was an unmistakable *C. archeri*. There are no records of this species in Charles’ Fungus Flora of NW Wales, certainly up to 2005. I had seen *C. archeri* before myself but only in France.

to adult. The habitat was an unimproved, sheep-grazed, heathy slope with some gorse outcrops - and no woodchips in sight. The slope is south facing and the site is fairly close to the coast and probably remains frost-free. When we re-visited the site again, in early October 2011, I only saw some dried remains - but this did demonstrate that the fungus was still present.

Text & photographs by Debbie Evans

References

- Aron, C. (2005). *Fungi of Northwest Wales*. Self-published.
- Weightman, J. (2011). ‘Look out for lesser known relatives!’ *HFSG News Sheet No 22*: Autumn 2011

We searched around and were delighted to locate a few groups of the fungus, including all stages from egg to birth



THE 'BAD HAIR DAY' MILKCAPS – a selection of *Lactarius* spp.

Among the several useful field characters possessed by *Lactarius* spp (the Milkcaps), one of the most conspicuous is a tomentose cap, a feature that can be highly developed at the margin, especially in young, fresh material. Some of these shaggy-edged *Lactarius* species are common and well known, others not so. All are depressed in the centre with in-rolled margins, have white milk (one is watery) and are acrid to very acrid. .

The two most familiar species by far are *L. torminosus* and *L. pubescens* (Figs 1a, 1b & 2). Both will be found, often in great profusion, under birch with which they are mycorrhizal. *L. torminosus*, cap diam. 40-110cm, probably has the deepest pelt and longest marginal beard of the two, with hairs up to 1cm. This need not become a matter for delicate decisions, as other characters come into play – colour and zonation. *L. torminosus* has it all – the dry cap is a medium shade of pink and has concentric brick-coloured bands.

On the other hand, *L. pubescens*, slightly smaller, with cap diam. 30-100 cm, is pale pink and lacks zonations. This should serve to separate the species in the field. At home, under the microscope, the spores of *L. torminosus* still have the plus factor of being distinctly larger.

The other five species are much less common. I regularly see *L. citriolens* (Fig. 3), cap diam. 60-140 cm, in Kent in areas of old brick works, where the clay overlies the chalk or has an overlying calcareous deposit from glaciations, but have not personally found it yet in Herefordshire. However, there are two VC36 records for it - from the Great Doward 10.09.1999 and from the village hall car park in Wellington Heath 07.10.2006, recorded on both occasions under the earlier name of *L. cilicioides*. It may be hoped for at other sites in the County, where the limestone is near the surface and in association with broad-leaved trees including birch. This species, like *L. pubescens*, is pale - but cream to pale yellow or buff, rather than pale pink - and is often larger and much less gregarious. The centre is glutinous. If in doubt - and you probably will be - break off a bit and smell it. It will be faintly lemony and by the time (or before) you have finished sniffing, the milk will have stained the flesh bright yellow. This is the only species of the 'bad hair day' *Lactarii* in Britain with yellow staining milk.

Whereas the species above can and often do occur in dry ground conditions, *L. scoticus*, cap diam. 14-60 cm (Fig. 4, next page), is a very rare fungus of marsh or bog. There are, as yet, no VC36 records, but I photographed this fungus at the Rhos Goch National Nature Reserve in Radnorshire in 1995 - not so very far to the west. It is a relatively small species, with a very pale, more or less white cap, strongly yellow in the centre and shortly bearded at the margin. Red Data Listed 2: Vulnerable.

Habitat is the key to *L. mairei*, (Figs. 5a & 5b, next page) cap diam. 30-120cm. It is a species which occurs in southern areas of Britain on calcareous soils, primarily with oak but also with ash and beech. The cap is dry, woolly hairy, essentially pale, ranging in colour from cream to pale clay buff and often zoned. The hairy margin is markedly dishevelled. Rarely recorded anywhere, but as Fred Fincher made two VC36 collections, in Homme Park in 1965 and in Eastnor Park 1967, both in September, we can hope to record it again. Red Data Listed 2: Near Threatened.



Fig. 1a. *Lactarius torminosus* – deepish pink and markedly zoned



Fig. 1b. *Lactarius torminosus* – close-up of the beard



Fig. 2. *Lactarius pubescens* – pale pink, no zones
(Copyright G. Kibby)



Fig. 3. *Lactarius citriolens* – yellow-staining milk

L. spinosulus (Fig. 6), cap diam. 18-70 cm, may be darker than the others, or more lilaceous. The usually dry cap is flesh to rosy brown to brick, with darker zones and sometimes violet tints. The short hairs at the margin can be agglutinated into erect spikelets (use a lens). The pale gills may also have lilac tints. The milk is watery and not very abundant. It usually occurs with birch on damp soils but may be associated with other broadleaf trees. In Herefordshire it has been recorded nine times since 1937, from five sites.

My last is *L. repraesentaneus* (Fig.7), which is rarely seen outside Scotland and only rarely there. While it could be a fungus that one might die without ever seeing in the flesh, I was spared that fate last year. It is yet another in this selection that is associated with birch in wet woodland (also pine) on acid soils, but is otherwise in the once-seen-never-forgotten category. The cap is slimy, apart from the margin, bright yellow to buff, more or less entirely appressed scaly and very bearded at the edge, with white to pale yellow hairs. The stipe is also buff yellow and the gills are cream. The milk is white, staining gills and flesh violet, once exposed. Well worth the wait. Good hunting. Red Data Listed 2: Near Threatened.

I am grateful to Geoffrey Kibby for permission to use some of his photographs.



Fig. 6. *Lactarius spinosulus* – darker, brickish colours and a finely spiky edge (Copyright G. Kibby)



Fig. 7. *Lactarius repraesentaneus* – strong yellow tones and violet staining milk

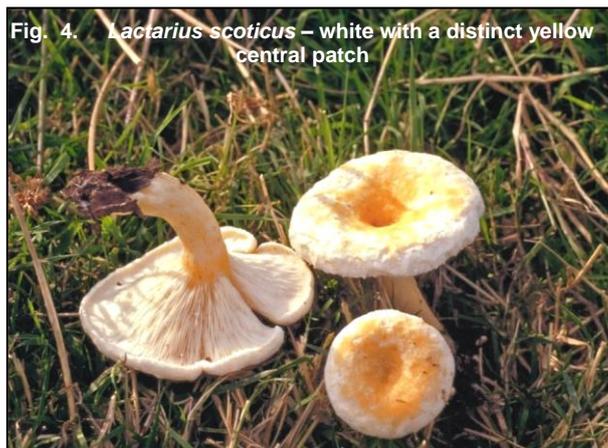


Fig. 4. *Lactarius scoticus* – white with a distinct yellow central patch



Fig. 5a. *Lactarius mairei* – creamy tones, and a dishevelled beard. (Copyright G. Kibby)



Fig. 5b. *Lactarius mairei* - not zoned – in habitat

