



Herefordshire Fungus Survey
Group

News Sheet N^o 9: Spring 2005



Mycena pterigena (Fishpool Valley, Croft – 17/11/04)

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Chair & Secretary: Sheila Spence

Treasurer: Ray Bray

[Welcome to the Spring 2005 News Sheet](#)

Firstly, many apologies for the late arrival of this News Sheet. The last few months have been rather fraught and busy for a number of reasons and the publication of this issue has had to take the back burner for a while. Mea culpa!

We have both good news and sad news to report in this issue - the good news being Ted's well-deserved 'Gong', which is included on page 3.

The sad news is the death of Peter Thompson and we all extend our deepest sympathy to Stephanie. You will see a tribute to him, also on page 3. In spite of all this, Stephanie has still contributed the next in her series on 'Know your Host Plants' – this time on Buttercups – in association with Ray's article on some associated microfungi.

Once again, many thanks to all our contributors.

I hope that, tardy though it may be, you will enjoy this issue of our News Sheet.

Mike Stroud

CHAIRMAN'S MESSAGE

An exciting year for those of us interested in the fungi of Herefordshire is expected this year, what with

- the BMS Festival Foray to be based at the YHA in Leominster from 16th – 23rd October,
- to be followed by the first ever event of its kind in Great Britain, the Herefordshire Festival of Fungi 2005.

We look forward to an interesting week of forays with the BMS, visiting sites all over Herefordshire, with a good range of different types of site and situation. More details are available on the BMS website, which can be accessed direct or via the Festival website on

<http://www.herefordshire-fungi.org.uk/>

As for the Festival itself, there has been a huge amount of interest throughout the County and beyond – and we are still well over six months away.

The Art and Photography competitions have been underway for some time now. The Art competition for children is being run through Herefordshire Museums and Herefordshire Schools and the

Photography competition with Melgrays Hi-Tech of Hereford. Unfortunately for HFSG members, we have had to rule out entries from you all – sorry about that!

During the Festival week there will be fungus walks and talks and two major exhibitions:

- the first one at Bodenham Parish Hall, on Saturday 22nd October,
- followed by the final exhibition over the weekend of 29th/30th October at the Gwynne Studios, Left Bank Village, Hereford.

The BMS Roadshow will be at both events, to be joined at the final exhibition by ABFG and, hopefully, some of the surrounding local recording groups. There are already several bookings for stands at these events which, together with speakers and slide/power-point presentations, should provide a very interesting and educational event. There will be cookery demonstrations too, but we shall only use commercially grown fungi that are available from supermarkets and delicatessens.

The AGM has been and gone, with little change to the general running of the HFSG. It was agreed to continue to meet for a 10.00 am start to forays, although some would have preferred to return to the original 10.30 am start. Subscriptions remain the same for yet another year. The only major change will be the timing of the AGM, which will now be held at the end of the year rather than the start of a new one.

Once again I would like to thank Ted for his stalwart record-keeping and general support with identification and advice, Ray for his continued support as Treasurer and Mike for producing time after time such a wonderful Newsletter. Also, a general thank-you to all members of the HFSG for making it such a friendly and worthwhile group. Happy Foraying!!

Sheila Spence
Chairman



WANTED

If you can spare a few hours to help with the exhibitions during the Festival of Fungi please talk to George & Sheila, or Mike & Shelly – all offers gratefully received

TED'S GONG

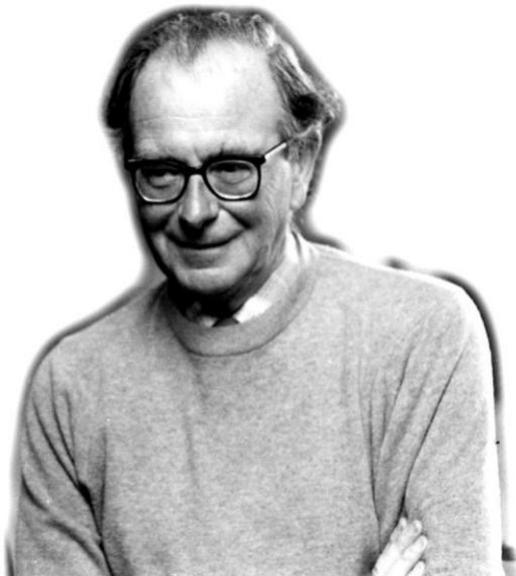


The extract from the President's address given by Professor Neil A. R. Gow at the BMS AGM in 2003 was published in the 2004 BMS 2004 Annual General Meeting Agenda and Financial Statements.

"At the AGM, we will congratulate five distinguished members for a variety of important contributions to the Society through the award of Benefactor's medals. This year we recogniseTed Blackwell as someone who has actively promoted field-mycology in numerous ways over many years"

We should also like to record our own congratulations (if somewhat belated!) to Ted, HFSG Founder and President, on this well-deserved honour.

PETER THOMPSON



Peter did not regularly attend forays but, when he did, we were always really pleased to see him. His enthusiasm and humour were greatly appreciated.

Originally trained as a geographer, but with his great interest in natural history, he ended his career passing on his considerable knowledge to students at Bristol Polytechnic's teacher training college. Following his retirement in 1983, he dedicated his

life to the natural history of Herefordshire, particularly its geology and botany.

He was a former president of the Woolhope Club and joined the Herefordshire Nature Trust a few years after it was founded in 1962. He was a trustee for many years and still, at the time of his death, on the Board.

He was also involved with much of the conservation work of the Trust and, in his role as chairman of the Hereford branch, led walks around the reserves and gave lectures and talks on many aspects of natural history.

He lectured widely on geology, as well as botany and conservation, for a variety of organisations. These included such as the Birmingham University Extra Mural Department - often integrating this with field visits - as well as the Woolhope Club, Herefordshire Botanical Society and Herefordshire Nature Trust. He also helped with geological notes and general advice for the BMS Centenary Forays at Hereford in 1996.

Peter was an active member of Hereford's Quaker Community and his Memorial Service was a contemplative and moving occasion. The silence was broken only by those remembering what a kind, thoughtful and helpful man we had lost.

As Ted said, 'With all his knowledge he was such a nice, courteous, gentle person'.

RECORDER'S REPORT, SEPTEMBER - DECEMBER 2004

BARNETT WOOD. (SO3967) 8th September 2004.

Fungi were abundant, amongst which *Cortinarius* was well represented. *Cortinarius dionysae* is a new record for VC36 and there is only a single previous record of *C. bivelus*, from Dinedor Hill at an unknown date '18xx'. *CC. xanthophyllus* is classified as 'vulnerable' in the provisional Red Data List and has been recorded only three times previously: Ray Bray, who examined it, reported only 10 records on BMSFRD - which included these previous VC36 records.

Podostroma alutaceum, first recorded at Dinmore Hill in 1951, appeared in Fishpool Valley in 1996, and was again twice recorded there in 2001.

Aureoboletus cramsinus (= *Pulveroboletus gentilis*) was first recorded at Haugh Wood in 1950, then not again until 2001 when it occurred at Barnett Wood, Bromyard Downs, and The Rough, Birchwood.

There are only three previous records of *Eudarleuca caricis* (in the anamorphic *Sphaerellopsis* state) which is parasitic on the sori of rust fungi; at The Flits in 1994 and, in 2002, at Bringsty Common and Hollybush Rough. A total of about 114 species identified.

**PERRY HILL FARM AREA. (SO4539)
22nd September 2004.**

Dry conditions prevailed and the wood was reported as unproductive and overgrown with brambles, although the pasture proved more rewarding. There was a new record in the Hyphomycete *Bactrodesmium obovatum*, although it is normally a common species. This has distinctive multicelled conidia, the upper cells being darker than the lower. The Slime Mould *Cribraria aurantiaca*, a conifer wood species whose delicate net and nodes (but not the spores) are said to turn purple in KOH, had been recorded only four times previously. A total of about 59 species identified plus 13 lichens.

FRITH WOOD. (SO7240) 6th October 2004

On this occasion fungi were abundant with a wide range of species, although lichens were scarce.

The yellow-veiled Fly Agaric, *Amanita muscaria* var. *formosa* was a first VC36 record. This has a yellow-spotted red cap, rather than the usual white universal veil remnants. Another first was the earthstar *Geastrum corollinum*, which is also rare nationally, in company with other earthstars as runners-up - *G. striatum* and *G. triplex*.



Geastrum corollinum – Frith Wood (6/11/03)
Photograph by Cherry Greenway

Lepiota langei had been recorded only once before as far back as 1963 in Capler Wood. Another small *Lepiota* with a characteristically green-spotted stipe was *L. grangei*, of which there were only two previous records, in 1979 at Leeping Stocks and

1987 at Great Doward. There were only four previous records of *Leucoagaricus badhamii*.

It is interesting that *Rhodotus palmatus*, once abundant on dead elms following Dutch Elm disease, was recorded here, although the substrate was recorded only as Angiosperm. The bracket *Ischnoderma benzoinium*, more commonly on conifers, has only four previous records. Amongst the Ascomycetes two *Helvella*, *H. crispa* and *H. macropus*, were noted and the microfungus, *Nitschkia confertula* has only two relatively recent records to its credit. A total of about 162 species identified, plus two lichens.

**WEIR GARDEN (NATIONAL TRUST)
(SO4341) 20th October 2004.**

The abundance of Waxcaps was notable, as elsewhere in the County this autumn, in sharp contrast to 2003 when there were few.

A first VC36 record was *Melanoleuca tabularis* which resembles *M. grammopodia* in its tendency to grow in fairy-rings but has a shorter stipe and darker cap, and differs microscopically in its tall fusiform facial cystidia.

Crinipellis stipitarius was found for the first time earlier this year at Vineyard Cottage so appears here as the second VC36 record.

The conspicuous pink spots of *Illosporopsis christiansenii*, parasitic on lichen thalli, were found as only the fourth VC36 record. A total of all areas of about 87 species and one lichen identified.



Illosporopsis christiansenii – The Weir (20/10/04)

MOCCAS PARK (SO3442) 3rd November 2004.

Waxcaps were again abundant including the reputedly rare *Hygrocybe calyptriformis* (only the second this year) together with an impressive haul of Agarics, brackets and other Aphyllophores on the grassy ancient parkland. In contrast, although making a representative showing, Russulales were much less in evidence.

Until relatively recently Moccas Park has been under-recorded mycologically. The meagre recording activities by the Woolhope Club ceased after 1892, beginning a 'dark age' of over 100 years when only a few sporadic records survive. Only in the last 15 years have fungus records begun to increase significantly. It was therefore interesting to note that this foray produced a number of species which are new records for the Park and reserve, even though some would not be regarded as out of the ordinary on other sites. About 125 species identified.

CROFT ESTATE. (SO 4466; 4465; 4566; 4665) 17th NOVEMBER 2004.

The extensive estate was covered by forayers ranging widely and dispersing to different areas, resulting in a large diverse list. Waxcaps were again much in evidence on grassland which also produced such as the Earthtongues *Geoglossum fallax* and *Trichoglossum hirsutum*.



Trichoglossum hirsutum – Croft Estate (17/11/04)

Several interesting finds occurred amongst the more common species, *Helvella crispa*, *Hygrocybe colmanniana*, *Merismodes fasciculatus* (which looks like a brownish *Dasyscyphus*, but is a Basidiomycete), and *Pachyella babingtonii*, a small

cup fungus typically found on semi-immersed very wet wood.

Also found was the minute *Mycena pterigena* (see front cover), with its delicately pink-edged gills and growing from dead *Dryopteris* petioles and this is only the second County record. It almost qualifies for the first because it was last recorded more 100 years ago (18XX) at Stoke Edith Park.

A grand total for all sites of about 161 species identified.

MAINS WOOD (SO 6438, 6338). 28th November 2004. JOINT HFSG & COTSWOLD FG. FORAY.

Two *Cortinarius* species new to the VC36 database were reported, *C. cinnamomeoluteus* and *C. speciosissimus*, the latter being a seriously toxic species. *Cortinarius cinnamomeoluteus*, according to the literature, is always under *Salix* on moist ground, although reportedly under conifers at this site.

There are only three previous records of *Arachnopeziza aurata* - a small cup-fungus resting on a cobwebby mass of hyphae - at Dinmore in 1926 and, more recently, at Barnett Wood in 2000, and Hergest Croft gardens in 2003.

Rather more frequently recorded and mainly in October and November, the white-topped, red-stemmed *Typhula erythropus* is typical on the previous season's decaying leaf litter.

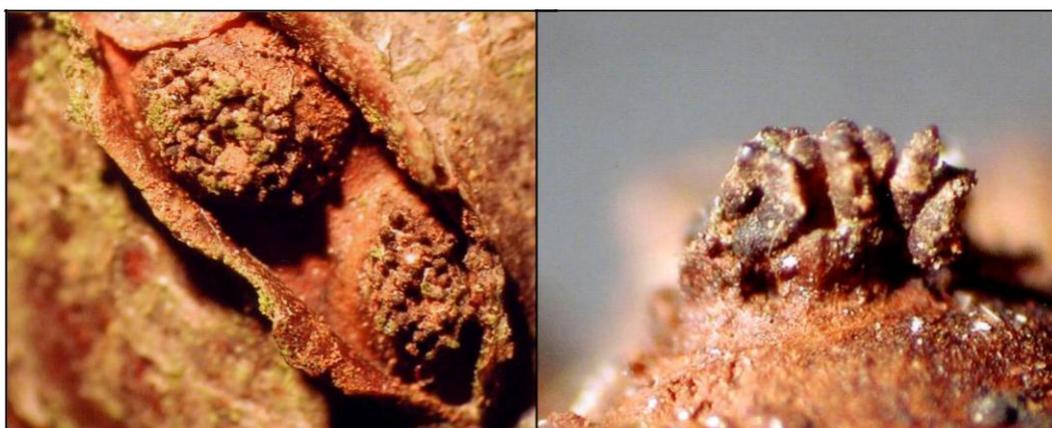


Typhula erythropus – Mains Wood (28/11/05)

A total number of species identified: for the whole site: 141; outside the SSSI: 96; for the SSSI: 76.

MOUSECASTLE WOOD (SO2442). 1st December 2004

Interestingly, there were three records of *Mucilago crustacea*, presumably due to absence of frosts, a Myxomycete which emerges to fruit on stems and grasses, usually indicative of a calcareous subsoil. Bruce Ing suggests that spores should always be examined to see if the seldom reported var. *dictyospora* has been found. *Cryptodiaporthe galericulata* (confirmed at Kew) is probably an uncommon Pyrenomycete and has not been recorded before on VC36 database. About 79 species identified.



Cryptodiaporthe galericulata – Mousecastle Wood (1/12/04): x 15 (left), x 30 (right). Photograph Brian Lack

HAUGH WOOD (NORTH). (SO5937) 15th December 2004.

Clitocybe flaccida, *Lepista nuda*, and *Hygrophoropsis aurantiaca* were all recorded from the needle litter forming the material of nest-mounds of Wood Ants, *Formica rufa*, which are a common sight in Haugh Wood. A total of about 63 species identified.

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NOTES OF UNUSUAL RECORDS 2004

In addition to those from programmed forays interesting records from Herefordshire and neighbouring counties have been reported. Churchyard surveys for the CFGA project have also discovered new or uncommon species. Inevitably, a number are of species which are seldom recorded or have not been recorded before in VC36, of which the following is a representative selection.

+ = A first VC36 record;
(+) = not recorded for more than 100 years, last recorded in Woolhope Club times circa 1870s-1890s.

Guignardia philoprina+ on living Holly leaf; and *Diplodia ilicola*+ on fading holly leaf. 13/3/2004. Orleton Memorial Garden (CFGAsurvey), Ted Blackwell. *Guignardia philoprina* closely followed on 22/5/2004 at Putley churchyard (CFGAsurvey), Ray Bray.

Ascochyta vincae+ on living *Vinca major* leaf; and *Cryptocline paradoxa*+ on living ivy leaf. 10/5/2004. Much Cowarne churchyard (CFGAsurvey), Sheila Spence.

Sphaeropsis sapinea+ on fallen pine twig. 22/5/2004. Putley churchyard (CFGAsurvey). Jo Weightman.

Diaporthe crataegi+ on hawthorn twig, 31/5/2004, Llangaron churchyard (CFGAsurvey). Sheila Spence,

Podostroma alutaceum, 8/9/04, Barnett Wood foray follow-up, Jo Weightman.

Crinipellis stipitarius+, 10/9/04, Vineyard Cottage, Cherry Greenway; closely followed on 20/10/04 at Weir Garden, Mike Stroud.

Strobilomyces floccopus 15/9/04. Mary Knoll Valley, Jo Weightman

Paxillus rubicundus+, 15/9/04. Mary Knoll Valley, Jo Weightman, confirmed by Alick Henrici.

Spathularia flavida(+). 12/10/2004. Upper Moccas Park SO335424, John Bingham. Last recorded in 1902 "Hereford area", although there are several previous records(+) at Dinedor Hill, Vennwood and Dinmore.

Cystolepiota moelleri+, 16/9/04. Wigmore Rolls, Jo Weightman; closely followed on 15/12/04 at Haugh Wood, Mike Stroud.

Amanita spadicea+, and *Russula fuscorubroides*+, 17/9/04. Mary Knoll Valley, Jo Weightman, identified by Geoffrey Kibby, *A. spadicea*: first British record was collected in Scotland 2003. *R. fuscorubroides*: only the second British collection.



Amanita spadicea (Photograph by Jo Weightman)

Bovista dermoxantha. Orleton Memorial Garden (CFGAsurvey). 27/9/2004/ Ted Blackwell. Only second record, the first at Bradnor Hill, 19/11/03 by Bryan Lack.



Russula fuscorubroides (Photograph by Jo Weightman)

Heyderia abietis(+) on conifer needles, 3/11/2004, Mallins Wood, Cherry Greenway.

Herpotrichiella moravica+. 17/11/04. Fishpool Valley, Shelly Stroud.

Microglossum viride. 9/11/2004. Vineyard Cottage and Halesend Wood 2/12/04, Cherry Greenway.



Microglossum viride (Photograph by Cherry Greenway)

Sowerbyella radiculata on soil. Little Dewchurch churchyard (CFGAsurvey). 20/11/2004, Sheila Spence, only two previous records by Douglas Graddon 1964.

Peronospora parasitica on Shepherd's Purse (*Capsella bursa-pastoris*) is the first record of it on this host, 11/12/2004. Durlow Common. Ray Bray.

Penicillium brevicompactum on *Agaricus* sp. is the first record of it on this host. 22/12/2004. Durlow Common, Ray Bray.

Trichothecium roseum(+) on foliose lichens on dead elm twigs. 31/12/2004. Lyepole Bridge, Covenhope. SO398654. Ted Blackwell.

Othia spiraeae+(as anamorph) on dead elm twigs. 31/12/2004. Lyepole Bridge, Covenhope. SO398654. Ted Blackwell.

OUT OF COUNTY

SHROPSHIRE

Squamanita paradoxa. 9/2004. Amazingly, two collections at different sites, Clee Hill and Wyre Forest. John & Denise Bingham. This is a rare obligate parasite of *Cystoderma amianthina* where seemingly the upper part of the *Cystoderma* fruitbody is replaced by the *Squamanita* cap of quite a different appearance. Reported with photographs in January 2005 FIELD MYCOLOGY 6(1).

Taphrina caerulescens, on Red Oak fallen leaves. 17/10/2004. Dudmaston estate, near Bridgnorth. Ted Blackwell.

WEST GLOUCESTERSHIRE

Sarcodon squamosus. 16/10/2004. Ruardean Woodside, Forest of Dean. Cherry Greenway

16/10/04. Cherry's photograph appeared in FIELD MYCOLOGY 5(4), but incorrectly as having been photographed in Scotland, and attributed to "Cherry Greenhaugh".

The range of species recorded from Herefordshire is now substantial, numbering with lichens and Myxomycetes in excess of 4000 names, thanks to all collectors and recorders, and additional thanks to Heather Colls for lichen records.

Ted Blackwell.

TRICHOHECIUM ROSEUM

This Hyphomycete has a worldwide distribution and is commonly found on decaying plant material and macrofungi, and also on lichens, as reported elsewhere. Plant pathologists know it as a disease of stored apples and dub it Pink Apple Mould. The copious discharge of conidia covers surfaces with a pale pink dust by which it is distinctive, the conidia being 1-septate and their shape reminiscent of toy balloons, with a short 'neck' or truncate base.

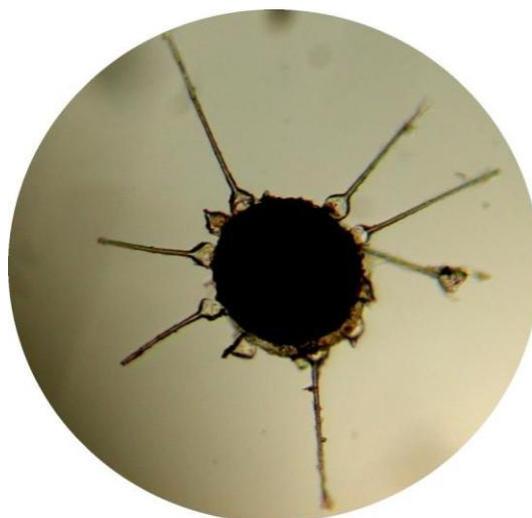


Trichothecium roseum conidia (microscope at x400)

It has been reported on a wide range of substrates such as temperate and tropical plants and fruits, on groundnuts, jute bags, wood pulp, sewage sludge, termite nests, prepupae of wild bees, nests and feathers of wild birds, and even on frescoes in a monastery. It was last reported in Herefordshire in Woolhope Club times (18xx). It is surprising it has escaped notice in the long interim.

Ted Blackwell.

HAWTHORN POWDERY MILDEW



Phyllactinia guttata cleistocarp (microscope at x100)

Powdery mildew of Hawthorn caused by Podosphaera clandestina var. clandestina is especially damaging to seedlings and soft shoots in hedges. It is said to be common, but I have failed to record it during the three years or more that I have been looking at hawthorn leaves in the fields and lanes near my home in Durlow. However, I have frequently recorded another powdery mildew, Phyllactinia guttata, usually associated with Hazel. My finds have been confirmed by Ted Blackwell, Dr. Tom Preece, an expert in this field and Dr. Brian Spooner of Kew, which has only a single collection, from 1911, of P. guttata on Hawthorn.

I have it in mind, at Dr. Preece's suggestion, to write a short piece for possible inclusion in **Field Mycology**, but should first like to establish to what extent other parts of Herefordshire might be affected. Accordingly, I should be most grateful if members of the HFSG would look out for cleistothecia on the lower surface of hawthorn leaves next October/November. If they find them, perhaps they would be kind enough to let me have, say, a packet from each of different trees/bushes with a note of location.

Ted's papers on powdery mildews of November 2003 will be of use to members interested in examining finds themselves. They include at page 33 diagrams of the cleistothecia of *Phyllactinia guttata*.

Ray Bray

FUNGAL FRAGMENTS

- From 'Healthy Way':
Fungi such as the razorstrop fungus (*Fomes fomentarius*) and members of the puffball family (Lycoperdaceae) were often used as styptics, to staunch the flow of blood from a wound. The fact that the puffballs may well contain anti-microbial compounds may again have influenced their success. The fungal kingdom also provides conventional medicine with a great many antibiotics, including Penicillin. An excellent account of the domestic use of *Penicillium* was recently sent in to Flora Celtica:

"In about 1932 or 1933, as a child I had boils on my neck. My Aunt insisted on applying the mould from the top of homemade jam daily and I also ate a spoonful of jam with the mould mixed in. I do not remember much about the recovery, except that my Father, who was previously sceptical, was astounded with the results. I am sure that my Aunt had no knowledge of, at the time unpublicised research into Penicillium!"

Mary Hunt



Ramaria abietina – Mallins Wood
(Photograph by Cherry Greenway)



Phellinus ribis – Shutfield Coppice
(Photograph by Cherry Greenway)



Lyophyllum infumatum – Fishpool Valley, Croft
(Photograph by Jo Weightman)

- From 'Especially Health':
Fungi are known to have medicinal properties and I am introducing to the store a range of medicinal mushroom products. The range includes 3 specific mushrooms, namely:

Reishi, known for its anti-ageing, anti-oxidant and blood thinning properties;

Cordyceps, with a reputation of being energising, stress reducing and an aphrodisiac;

Maitake, used to boost the immune system and reputed to have anti cancer properties.

Also included are 5 different combinations of a wide variety of mushrooms to support different areas of the body: **Breathe, Mental Clarity, Liver Force, Mycomend and Host Defence.**

Mycomend may be of special interest to people with Arthritis as it has joint repair properties similar to Glucosmine and is suitable for vegetarians and people with allergies to fish.

Host Defence has been written about in the newspaper for its help in relieving fungal toenail infections. It may be a surprise to some Candida sufferers to learn that this mushroom combination fights Candida.

Mary Hunt

KNOW YOUR HOST PLANTS: 4. Buttercups

Our three commonest buttercups of grassland are the Meadow, Creeping and Bulbous Buttercups. Superficially, they all look very much alike and all are hairy to a greater or lesser extent. All three are often Depicted in mediaeval church carvings.

When in flower there is no problem in distinguishing the three but, if presented with leaves only, difficulty may arise as all can be very variable.

In some ridge and furrow grasslands the three buttercups often inhabit different niches. The Meadow Buttercup prefers the more freely drained ridge top, the Bulbous Buttercup the moister ridge sides and the Creeping Buttercup the wetter furrows.

Creeping Buttercup (*Ranunculus repens*)



This is probably the best known and the most ubiquitous member of the trio. Given its head it will creep along rapidly (this has been called, 'Guerilla strategy'!) its runners putting down roots at every node as it heads off through undergrowth, hedgerow, road verge, or mire, always preferring damp situations. The basal leaves have three main segments; the middle one is long-stalked and borne above the two laterals. The familiar yellow flowers are 2-3 cm across and the flower stalk is ridged.

Meadow Buttercup (*Ranunculus acris*)



The Meadow Buttercup does not bear runners and is not so catholic in its tastes. It is commonest in meadows but may also be found in pastures and along verges. It is taller than the Creeping and Bulbous Buttercups and its basal leaves are deeply palmately lobed. The flowers are slightly smaller than in the previous species and have smooth, hairy stalks.

Bulbous Buttercup (*Ranunculus bulbosus*)



The Bulbous Buttercup is mainly restricted to older areas of permanent pasture. The basal leaves are similar to those of Creeping Buttercup, with the middle lobe being usually slightly longer stalked than the other two. It has a swollen corm-like stem base underground from which it gets its name. It is at once distinguished when in flower by the reflexed sepals.

Goldilocks Buttercup (*Ranunculus auricomus*)

This Buttercup is fairly frequent in ancient woods and grassland. The flowers are usually rather tatty looking, lacking their full complement of petals, although we were once initially taken in by a stand of this plant in Upton Bishop churchyard with perfect



Lesser Celandine (*Ranunculus ficaria*)



flowers. The lower leaves are variously 3-lobed and are similar to the previous three plants, but the few stem leaves are deeply divided into narrow segments. It is an apomictic species, i.e. produces seed without fertilization and on the Continent several hundred species have been described. Our plants are thought to be different from these; luckily, nobody has worked on them yet!

Who does not recognise the shiny, golden yellow flowers and small heart-shaped leaves of the Lesser Celandine? It is a plant of woodland, lawns, hedgerow, damp meadows and streamsides. There are two main subspecies: ssp. *bulbilifer* is more strictly a woodland plant and regenerates mainly by means of bulbils in the axils of the lower leaves, as it sets little seed. Ssp. *ficaria*, on the other hand, does not produce bulbils, but does produce seed. If you have problems with it in the garden, it is likely to be ssp. *bulbilifer*.

Celery-leaved Buttercup (*Ranunculus sceleratus*)



This is a tenacious plant of marshes and pond edges, often surviving long after the pond has dried out. The lower leaves are deeply 3-lobed and shiny. The small flowers, which are barely 1 cm across, have reflexed sepals. The seeds on the elongated fruiting heads may remain viable for many years.

Stephanie Thompson
Photographs by Peter Thompson

SOME MICROFUNGI ON COMMON BUTTERCUPS

The six species of common buttercups described above by Stephanie Thomson are, in different combinations, hosts to no fewer than five rusts (Uredinales), four smuts (Ustilaginales), a powdery mildew (Erysiphales) and two downy mildews (Peronosporales). Detailed descriptions are given in Ellis & Ellis, 1997 and a most useful guide to these groups of fungi in Preece, 1996.

Rusts

Of the five rusts, four appear in the aecial (clustercup) stage, or stage I in the usual convention. The fifth, *Uromyces ficariae* appears only on *Ranunculus ficaria* (Lesser Celandine) in the telial stage, or stage III.



Aecial spores of *Uromyces dactylidis* (microscope at x400)

Uromyces dactylidis is common as aecia on all six buttercups from March to May. Its later stages may be found on the alternate hosts *Dactylidis* and other grasses.

Uromyces rumicis. Aecia on *R. ficaria* were confirmed in 1960 (Henderson, 2000), but I could find only one record on the BMS Fungus Record Database (BMSFRD) and that “tentative”. Aecial spores are similar to those of *U. dactylidis* but have refractive granules. The species is thus both extremely rare and a microscopic challenge. A later stage on the alternative host, *Rumex*, although not uncommon, has been recorded only once in VC 36 (Herefordshire).

Uromyces ficariae is commonly found on *R. ficaria* from March to early June, but only as telia, or stage III. The aecia of *U. dactylidis* sometimes appear on the same leaf but there is no connexion.

Puccinia magnusiana is confined to *R. bulbosus* (Bulbous Buttercup) and *R. repens* (Creeping Buttercup) and may be found from June to August. It is scarce (no records in VC 36) and the aecia are “quite indistinguishable from those of *U. dactylidis*” (Wilson & Henderson, 1966), but are normally found earlier in the spring, from March to May.

Puccinia recondita appears only on *R. acris* (Meadow Buttercup). The aecia are scarce and similar to those of *Uromyces dactylidis* (Wilson & Henderson, 1966). The few records for VC 36 are of other stages on the alternate hosts: Foxtail grasses.

Smuts

Two species of *Entyloma* may be found, causing pale spots on leaves, possibly with large quantities of conidia; and two species of *Urocystis*, which cause silvery blisters containing dark masses of spore balls:

Entyloma ficariae. Conidia form on both leaf surfaces of *R. ficaria* and *R. sceleratus* (Celery-leaved Buttercup) from April to May (Ellis & Ellis, 1997). CMI 1984, however, gives *R. auricomus* (Goldilocks) and *R. repens* as additional hosts and the incidence as April to June and August. There are over 300 records on BMSFRD, of which some 24 for VC36, almost all on *R. ficaria*. So a must on everyone’s list.

Entyloma microsporum infects *R. acris* and *R. repens* and has been recorded from May to July and also September to October, mainly on *R. repens*. There are about 50 records on BMSFRD, although none as yet for VC36.

Urocystis ficariae. This rare smut is confined to leaves, petioles and flowers of *R. ficaria* (and *Troillus* sp., not considered in this article). According to CMI, 1984 it is restricted to Scotland. The BMSFRD, however, lists 4 records, 3 in England, 1 in the “British Isles”. It has yet to be recorded in VC36.

Urocystis ranunculi is fairly common from April to September in the leaves and stems of *R. repens* (Ellis & Ellis, 1997). CMI, 1984 treats this smut as *U. anemones* with hosts *R. repens*, *R. acris*, *R. bulbosus* and various *Anemone* species and regards it as common from April to October. It comments:

“ Collections of this smut on *Ranunculus* have frequently been assigned to *Urocystis ranunculi*, but we have been unable to distinguish between specimens from *Ranunculus* and *Anemone* with any certainty on a morphological basis”.

The BMSFRD, however, uses *U. ranunculi* and contains 137 records, most of them on *R. repens*, but none in VC36. So, another to look out for.

Powdery Mildew

Erysiphe aquilegiae* var. *ranunculi (*E. ranunculi* in Ellis & Ellis, 1997) is common on all our 6 species of buttercups except *R. ficaria*, with over 200 records on BMSFRD of which 3 for VC 36.

Downy Mildews

Peronospora ficariae, restricted to *R. ficaria*, is one of the most frequently recorded downy mildews in Britain (Preece, 2002). There are over 200 BMSFRD records, 3 of them for VC36.

Peronospora ranunculi has been recorded on *R. acris*, *R. bulbosus* and *R. repens* (and one species not considered here). Of over 300 records on the BMSFRD only one is for VC36 and that as long ago as 1967. Surely it will be found in 2005!

To summarise, by hosts:

Rusts

All six species of buttercups are hosts to *Uromyces dactylidis* (II).

R. acris alone may bear the scarce *Puccinia recondita* (II).

R. bulbosus and **R. repens** are hosts to the scarce *P. magnusiana* (II).

R. ficaria frequently carries *Uromyces ficariae* (III) ; very rarely *U. rumicis* (II).

Smuts

R. acris is host to *Entyloma microsporium*.

R. repens may be infected with *E. microsporium*, *E. ficariae* and *Urocystis ranunculi*.

R. ficaria, **R. auricomus** and **R. sceleratus** are hosts to *E. ficariae*.

Powdery Mildew

All six buttercups except *R. ficaria* are hosts to *Erysiphe aquilegiae* var. *ranunculi*.

Downy Mildews

R. ficaria is sole host to the common *Peronospora ficariae*.

R. acris, **R. bulbosus** and **R. repens** may carry the equally common *P. ranunculi*.

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