



Herefordshire Fungus Survey
Group

News Sheet N° 10: Autumn 2005



Lycogala terrestre (Lea & Paget's Wood – 18/5/05)

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President & Recorder: Ted Blackwell

Chair & Secretary: Sheila Spence

Treasurer: Ray Bray

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

Once again, many apologies for the late arrival of the News Sheet. However, I hope that you enjoy it and the wait has been worthwhile.

We have two articles this time, which are slightly out of our usual run:

- a 'musing' by Tom Preece, following up a pub lunch conversation several HFSG members had one day last year, concerning treatment of powdery mildew on vines in Roman times.
- the first part of a reprint (the second will follow in the next News Sheet) of an article by Neville Wild of the Wyre Forest Study Group, who died suddenly in January 2004. This looks at the use of fungi in textile dyeing and also paper-making. It is offered in the nature of a tribute to him by Ted.

I am sure that these will both interest you as much as they do me.

We also have a challenge from Mary to look more closely at our home-towns, to find what fungi are lurking there. Maybe someone will respond to this!

Mike Stroud

CHAIRMAN'S MESSAGE

As I write we are heading into another season of, hopefully, autumnal fruitfulness. It is always exciting at this particular time of year, wondering just which of the huge range of fungi will pop up to delight us this time. The first HFSG foray of the season, although not high in numbers of species, was pleasingly enhanced by the addition of *Boletus satanas* to the list of finds. Does this bode well for the coming months? I certainly hope so!

Please don't forget that we are still collecting records for the list of churchyards being surveyed this year, through Caring for God's Acre and also the Herefordshire Commons Project. If you have mislaid your list of either churchyards, or commons, let me know and I will gladly send you another one. Please keep sending in your records to Ted as, even if you only have a few, they all add up in the long run.

For the Strouds and the Spences the huge amount of work planning and organising the Herefordshire Festival of Fungi is still going on apace. There has been a massive amount of interest from all over the Country and we have also taken information boards to a Schools Science Fair in Hereford, as a result of media interest. I believe that we need to encourage children and their teachers to learn more about the world of fungi, as it is such a vital part of our environment. With a bit of encouragement from groups like ours, you never know, they will, hopefully, become the field mycologists of the future. It is our responsibility, I believe, to try to enthuse the next generations, because if we don't – who will?

We still need a few more Stewards during the Festival exhibitions and would be grateful for offers of help with this.

Happy hunting!

Sheila Spence

RECORDER'S REPORT, MARCH - AUGUST 2005

DINMORE HILL AND QUEENSWOOD ARBORETUM. (SO5051) 23rd March 2005

Several infrequently recorded cup fungi were found. *Plectania melastoma* (two separate collections) is characterised by the encrustation of reddish granules along the margin of the cup and the only recent previous records were in May 2000 at Queen's Wood, Dymock and at Haugh Wood in 1996. It is listed as vulnerable in the Provisional Red Data List of British Fungi.



Plectania melastoma – Queenswood Arboretum (23/3/05)

Another cup-fungus having the appearance of a brown golf tee, *Dumontinia tuberosa*, may be found on the roots of spring plants of Wood Anemone.

Although the books say that it is common, there are only five recent previous records. Only two recent previous records occur of *Micropodia pteridina*, always on dead bracken stems, both in 1996, one at this site, the other at Moccas Park. Another on ferns was *Pezizella chysostigma*, on the dead stems of Hartstongue Fern, two previous records occurring last year. Both *Dasyscyphus mollisimus* and *Mollisia clavata* have been recorded infrequently in the past. There is only one previous record of *Lophodermium foliicola*, a small leaf-spot which occurs on dead hawthorn leaves, by Douglas Graddon, S. Hereford, 19xx. A total of about 56 species identified, plus two lichens.



Dasyscyphus mollisimus (top) *Mollisia clavata* (below) – Queenswood Arboretum (23/3/05)

BROCKHAMPTON (SO6854) 9th April 2005.

Diaporthe strumella, on dead current twigs, was recorded earlier this year at Bringewood Forge: prior to that the only record comes from the Victoria History dated 18XX, where it is described as "Common everywhere". *Eichleriella deglubens*, on hazel, is absent from the records before 1996 when several finds were made during the BMS Centenary Foray and, following which, it has been recorded several times. *Junghuhnina nitida* was first recorded in 1926 at Dinmore: thereafter, 72 years were to elapse before the second record at Lea and Pagets wood in 1998 and there have been four more records since. A total of about 61 species identified.

HOLLYBUSH ROUGH (SO7537) 9th April 2005

There are only three previous records on the VC36 database of *Hypoderma rubi*, dated 1914, 1976, and 1983, although Dennis says "common". *Vuilleminia coryli* occurs slightly more frequently, with five previous records, all since 2001.

HERGEST CROFT GARDEN AND WOODLAND (SO2856) 20th April 2005.

Marasmius hudsonii, which is not as rare as previously thought, occurs only on damp dead holly leaves and the bristle-like cap hairs make it

distinctive. *Hydropus subalpinus* (see also page 11) has been recorded only once before at White Rocks nature reserve on 5/5/2004.

LEA & PAGETS WOOD (SO5934) 18th May 2005.

The lignicolous slime-mould *Lycogala terrestris* (see cover picture), which often emerges in May, was conspicuous by its colourful plasmodium. Several small Ascomycetes were recorded including *Hymenoscyphus repandus*, *Scutellinia umbrorum* and *Godronia ribis*, only the second VC36 record, the first being at the same site last year.



Scutellinia umbrorum – Lea & Pagets (18/5/05)

CROFT & FISHPOOL VALLEY (SO4565) 8th June 2005

Inocybe fascidula var. *fascidula* is a first record. There are only two previous records of *Hypoxyylon fraxinophilum*, in 1926 at Dinmore and 1993 at Downton Gorge: perhaps this species is overlooked or misidentified. There are only three previous records of *Diderma hemisphaericum*, at Hatfield in 2000 and 20001, and Durlow in 2001.

GREAT DOWARD (SO5415) 24th August 2005.

This appears to be the first time the appearance of *Boletus satanas* has coincided with a HFSG foray. It was first recorded here by Stephanie Thomson in 1973, followed by a gap until 1992 since when, perhaps because there have been more people in the know to keep a look-out, it has been seen most years. Most records appear in August, although they start as early as 21st July and as late as 14th October. All these are preceded by a single historical record from Eastnor in "18XX". I am sure it is bound to occur elsewhere in VC36 as there are plenty of limey subsoils. But it is really a matter of serendipity, someone being at the right site at the right time.

NOTES OF UNUSUAL RECORDS 2004

In addition to those from programmed forays interesting records from Herefordshire and neighbouring counties have been reported. Inevitably, there are 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.

+ = First VC36 record;

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

Boletus appendiculatus+ under *Quercus*, found by Sheila Spence at Bosbury Road (works), (SO783393) on 22/8/04, and a week later by John Bingham at Croft Castle Drive 29/8/04.

Ganoderma carnosum on *Taxus baccata*, 10/3/05, Durlow Common. Ray Bray. Confirmed by Peter Roberts, Kew.

Pachyella violaceonigra found again at Mallins Wood 4/4/05, Cherry Greenway.

Apomelasmia+ state of *Aporhytisma urticae* on dead nettle stem. 7/4/05. Burrington area SO 443730. Jo Weightman.

Diaporthe strumella(+) on dead current twigs, 9/4/05 Brockhampton estate, John Roberts. It has since been recorded at several other sites.

Sporidesmium altum+ on dead *Sambucus* log, Yatton Common, 11/6/05, Jo Weightman.

Sporidesmium aturbinatum+ on dead *Sambucus* branch, Climbing Jack Common, 9/6/05, Jo Weightman.

Plasmopara umbelliferarum+ (=P. crustosa) first record on *Angelica sylvestris*, Downton Gorge, 23/7/05 by Jo Weightman. (The only other records are on different hosts, one on *Anthriscus sylvestris* 1921 Hereford, and one on *Aegopodium podagraria* 1997 Eardisland).

Pluteus aurantiorugosus+ under *Acer pseudoplatanus*, Downton Gorge, 11/8/05 Jo Weightman.

Uncinula flexuosa on *Aesculus hippocastanea*, Byton Hand area 12/8/05 Ted Blackwell. First recorded at same site in 2003.

Provisionally identified as *Entomophthora dipterigena*, awaiting confirmation, on a cluster of flies emerging from horse-dung, Fishpool Valley, 11/8/05, Jo Weightman. Last recorded at the same site in 1996.

Boletus satanas at the usual Doward site, on 13th and 26th August 2005, Heather Colls.

Eyebright *Euphrasia officinalis* s.l. bearing the rust *Coleosporium tussilaginis*, a first record in VC36 on this host, Haugh Wood, 16/8/05, Cherry Greenway and Stephanie Thomson.

Colletotrichum dematium+ on Creeping-Jenny *Lysimachia nummularium*, Barnett Wood, 23/8/05, Cherry Greenway.

Correction.

I incorrectly reported in the last News Sheet that *Cryptodiaporthe galericulata* had been found at Mouse Castle Wood on 1/12/2004. Bryan Lack has subsequently received a letter from Kew saying this specimen was *Amphiporthe (Diaporthe) leiphaemia*+. It was retained by Kew as No. K(M)131356.

OUT OF COUNTY

Fuligo rufa, on oak debris and sawdust, Coneygore Coppice, Worcestershire, SO 746508, 12/6/2005, confirmed by Dr. Bruce Ing, Cherry Greenway. There is no VC36 record of it.



Fuligo rufa (Photograph by Cherry Greenway)

Rhizina undulata on a burnt site in clear-felled conifer area at Brown Clee, Shropshire, 14/8/05 by John & Denise Bingham. Although described as common in some books, there is no VC36 record of it and only one recent record (1994) in Shropshire. Its ascospores require activation by a soil temperature of 35-45°C, which explains why it occurs mainly on fire-sites. It is a root pathogen of conifers.

Ted Blackwell. Recorder.

FUNGI AS A SOURCE OF NATURAL DYES AND PAPER: NEVILLE WILDE - A TRIBUTE

Certain fungi have been employed in textile dyeing and paper making, and these aspects of mycology receive only occasional mention in the literature. Neville Wild, well known in West Midlands and local mycological groups, was intrigued when asked to bring his mycological expertise to bear at a dyeing workshop. He subsequently wrote the following account, kindly made available by Roy Mantle, editor of the Shropshire Fungus Group Newsletter. It is republished as a brief tribute to Neville's memory.

Neville, who died suddenly in January 2004, was both mycologist and an all-round naturalist. He was a knowledgeable ornithologist and lepidopterist, an expert photographer and member of the Royal Photographic Society. He was a BMS member for many years and had been an active participant in the Warwickshire Fungus Survey. He became President of the South Staffordshire Naturalists' Society and leader of its fungus group, and tutored many extra-mural classes both on fungi and other natural history subjects. As a graduate research engineer he was fired by



scientific curiosity, and so the investigation of fungi as sources of dye substances is typical of his widely ranging interests. In recent years, he was a founder member of the Wyre Forest Study Group and devoted much of his efforts to the natural history of the Forest and was working on a book about its wildlife when he died. He is sadly missed by the many who knew him and by those who had benefited from his generous help and expertise. I am indebted to Rosemary Winall of the Wyre Forest Study Group for additional information.

Ted Blackwell.

PART 1: FUNGI AS DYE AGENTS

Background to Fungal Dyeing.

Most mycologists examining fungi in order to identify them will have marvelled at the variety of colours they exhibit. A number will have observed *Pisolithus tinctorius* either as a specimen or as an illustration in a reference book. The specific epithet provides the clue that at least one toadstool has been recognised for some time as containing a usable natural dyestuff. Some fungal reference books, e.g. "Keys to Agarics and Boleti" by Meinhard Moser, identify the specific pigments in fungi where they are present.

Although there is a strong craft movement in Britain that employs natural plant dyes for woollen and other fibre products, the use of dyes from fungi is still at an early stage of development. This is not the case in the USA, or in Scandinavia or, indeed, in many other parts of Europe., Here there is a much longer history involving the use of fungal dyes.

A Weekend Workshop run by a British group of fungi dyers and paper makers was held in Wyre Forest from the 18th to 20th October 1996. I was pleased to be asked to be the consultant mycologist for this event, especially as it afforded an ideal opportunity to gain some knowledge of fungal dyeing first-hand.

The workshop was very well attended, with members of the group coming from as far afield as Scotland and Southern England. In addition to the indoor demonstrations, a foray into Wyre Forest was organised for the morning of the 19th October. Although a range of species typical of the area visited were found, the number (37) reflected the generally poor 1996 fruiting season. Among the species gathered, only *Hypholoma fasciculare* was suitable for use in dyeing. The foray yielded one interesting find, *Hypholoma fasciculare* (Huds.:Fr.) Kummer *forma*

sterile J.Lange., confirmed at Kew. This form being almost entirely sterile, is characterised by the beautiful bright yellow colours of the gills.

Fungal Dyes.

Within the fungus, pigments can be located in three areas:

- inside the hyphae, where they are described as vacuolar or intracellular;
- in or on the hyphal walls, where they are described as encrusting;
- lying as free grains in the spaces between the hyphae, where they are described as epimembranal or extracellular.

To be of use as a dye a substance has to:

- have colour;
- be colour fast in the presence of sunlight, air, soap and detergents;
- be soluble in water;
- be able to bind to the fibre being dyed, either directly or, where the fibre is protein-based, through the use of a mordant.

For certain types of dye, a mordant, commonly a salt of

- aluminium (e.g. potassium aluminium sulphate - an alum),
- tin (e.g. stannous chloride),
- copper (e.g. copper sulphate),
- iron (e.g. ferrous sulphate)
- or chrome (e.g. potassium dichromate)

may be needed to treat natural materials like wool and silk when they are being dyed. The mordant establishes ionic bonds between the proteins in the fibre and the dye molecules. The type of mordant used also influences the final colour taken up by the fibre. In certain cases therefore the choice of mordant can be used to extend the colour range from a single dye.

Principle dyestuffs found in the fungi include:

1. Anthraquinones found for example in *Cortinarius* and a number of species of mould;
2. Cinnamic acid derivatives found in lignicolous species like *Gymnopilus*, *Pholiota* and *Hypholoma* and also in for example the tough Polypores *Inonotus* and *Phellinus*;
3. Terphenylquinones found in *Hapalopilus*, *Paxillus* and *Hydnellum*;
4. Modified Terphenylquinones found in *Sarcodon*, *Hydnellum* and *Phellodon*.

In groups 3 and 4 some of the dyes present are not soluble in water in their natural state. The addition of

ammonia or sodium hydroxide to these dyes rectifies the insolubility.

Other fungal dyes can be so soluble in water that they will not attach properly to the fibres. A small amount of vinegar added to the rinse water can be used to correct the dye chemistry.

Preparation of the Dye Baths.

The fungi to be used for the weekend workshop had been brought in dried form and were from a range of sources, including Britain, the Continent and the USA. Several of the species were not commonly found in Britain. The only fresh material from Wyre Forest was *Hypholoma fasciculare* as previously described.

Water was heated to near boiling point in a variety of containers to be used as dye baths ranging from stainless steel to glass. A quantity of the appropriate crushed, dry fungus was added to each bath and allowed to steep with periodic stirring. For those of us with no experience of fungal dyeing this process proved to be a revelation. Abundant colour floods out of the fungus. In the case of *Cortinarius semisanguineus* - for example, six to eight caps of the fruit bodies in about two litres of water produced a deep wine red solution in minutes. When the bath was judged to have reached the correct colour density the fungus was strained off and the fibre to be dyed was carefully introduced. Dye baths were made up for the following species.

Cortinarius semisanguineus. (Caps only)
Cortinarius semisanguineus. (Stems only)
Cortinarius fervidus.
Cortinarius cinnamomeus.
Cortinarius croceus.
Phaeolus schweinitzii.
Inonotus hispidus.
Paxillus atrotomentosus.
Pisolithus tinctorius.
Hapalopilus rutilans.
Hydnellum ferrugineum
Sarcodon imbricatum.

Factors affecting the colour and depth of colour in the finished fibre include:

1. The original strength of the bath.
2. The dye bath depletion due to the amount of fibre passed through.
3. The time of immersion.
4. The bath temperature.

These are the areas where the skill and experience of the dyer are of prime importance, if wide colour variations between batches are to be avoided.

Two demonstration hanks of wool which had been pre-mordanted with an alum (potassium aluminium sulphate) were dyed in each bath by the instructor (Fiona Lees). The baths were then made available for use by the participants, so that they could experiment using their own materials.

In addition, a bath of water with a small amount of ferrous sulphate added was prepared for the final demonstration. One from each of the pairs of dyed hanks was immersed in the solution to show the darkening effect that iron has on the dyes. This process known as "saddening" often enables a second range of more sombre colours to be produced from the existing dyes.

Results And Conclusions.

To a person not experienced in dyeing with natural dyestuffs, the results can only be described as memorable. At the end of the workshop, for future reference, each participant was encouraged to make

Colour Table.

- The wool used for dyeing had all been mordanted with an alum.
- The colour description and number is the nearest match with the colour identification chart supplied with the "British Fungus Flora" published by HMSO.

up a tabulated colour card using strands of each of the dyed woollen hanks. The colours obtained are set out in the table below. Of particular interest to a mycologist was the difference in colour between the caps and the stems of *Cortinarius semisanguineus*. Looking at the range of beautiful colours produced on this weekend from only a few of the dye-bearing fungi, it is easy to see why there is such growing interest in fungal dyestuffs. Many of the colours are not known from other sources in nature. Unfortunately, fungi in the wild are notoriously unreliable in their fruiting habits. Many of the species most sought after for their dyes are at best uncommon. Fungi for dyeing therefore are never likely to be in plentiful supply.



Phaeolus schweinitzii

<u>Species.</u>	<u>Colour.</u>
<i>Cortinarius semisanguineus</i> . (Caps)	Blood red. (41)
<i>Cortinarius semisanguineus</i> . (+Iron)	Dark brick. (20)
<i>Cortinarius fervidus</i> .	Buff. (52)
<i>Cortinarius fervidus</i> . (+Iron)	Vinaceous buff. (31)
<i>Cortinarius cinnamomeus</i> .	Clay pink. (30)
<i>Cortinarius cinnamomeus</i> . (+Iron)	Dark clay pink. (30+)
<i>Cortinarius croceus</i> .	Clay pink. (30)
<i>Cortinarius croceus</i> . (+Iron)	Dark clay pink.(30+)
<i>Phaeolus schweinitzii</i> .	Fulvous. (12)
<i>Phaeolus schweinitzii</i> . (+Iron)	Dark fulvous. (12+)
<i>Inonotus hispidus</i> .	Fulvous. (12)
<i>Inonotus hispidus</i> . (+Iron)	Dark fulvous. (12+) 13)
<i>Paxillus atrotomentosus</i> .	Date brown. (24)
<i>Paxillus atrotomentosus</i> . (+Iron)	Date brown. (24)
<i>Pisolithus tinctorius</i> .	Milky coffee. (28)
<i>Pisolithus tinctorius</i> . (+Iron)	Milky coffee. (28)
<i>Hapalopilus rutilans</i> .	Livid vinaceous. (77)
<i>Cortinarius semisanguineus</i> . (Stems)	Cinnamon.(10)
<i>Hydnellum ferrugineum</i> .	Clay buff. (32)
<i>Sarcodon imbricatum</i> .	Hazel. (27)

POSTSCRIPT BY TED BLACKWELL

As a brief supplement to Neville Wilde's paper, lichens were used as dyestuffs before the introduction of synthetic dyes, and may still be used for the dyeing of Harris tweed. The thalli were pulverised and boiled in water, and treated with ammonia as the mordant, derived in earlier times from urine.

Crottle (*Parmelia omphalodes* and *P. saxatilis*), was used for red and purple dyes, as also **Cudbear** (*Ochrolechia tartarea*), but other genera also used include **Orchil** (*Rocella tinctoria* - also known as *Orchilla* or *Orchella*) *Lasallia*, and *Umbilicaria*.

I am indebted to Dr Tom Preece (personal communication) for the

information that *Orcellaria* was the name of a well known Florentine family who in the 15C monopolised the trade for Orchil obtained from *Rocella* spp. And that there is a street in Leeds called Cudbear St. and another called Orchella Place where the Yorkshire Chemical Co. made red dye until 1940 or so.

Ted Blackwell.

FUNGAL FRAGMENTS

- *Pluteus petasatus* found on oak debris and sawdust, Coneygore Coppice, Worcestershire, SO 746508 (10/9/05)



Photograph by Cherry Greenway

- **Fungal Fowl** Has anyone else kept hens who fight to get their beaks on a toadstool?

My latest feathered pets - who could possibly eat them after laying all those golden-yolked breakfasts? - four beautiful Rhode Island Reds, push and shove to get out of their house in the mornings to find toadstools or puffballs in the garden. These are then pounced upon, initiating a great chase and a squabble. Everything is eaten, stalk and all!

My old Warren and her new mate, a Warren cross bantam with green(!) legs, completely ignore any fungi.

So is this fungus-eating-frenzy restricted to Rhodies? Any observations/comments welcome.

Cherry Greenway

[Maybe it's to do with the owner, not the fowl! – Ed]

- Victorian Cambridge by Gwen Raverat, a niece of Charles Darwin:

In our native woods there grows a kind of toadstool, called in the vernacular, 'The Stinkhorn', though in Latin it bears a grosser name. This name is justified, for the fungus can be hunted by scent alone: and this was Aunt Etty's greatest invention: armed with a basket and a pointed stick, and wearing a special hunting cloak and gloves, she would sniff her way round the wood pausing here and there, her nostrils twitching, when she caught whiff of her prey; then at last, with a deadly pounce, she would fall upon her victim, and then poke his putrid carcass into her basket. At the end of the day's sport, the catch was brought back and burnt in the deepest secrecy on the drawing-room fire, with the doors locked, because of the morals of the maids!

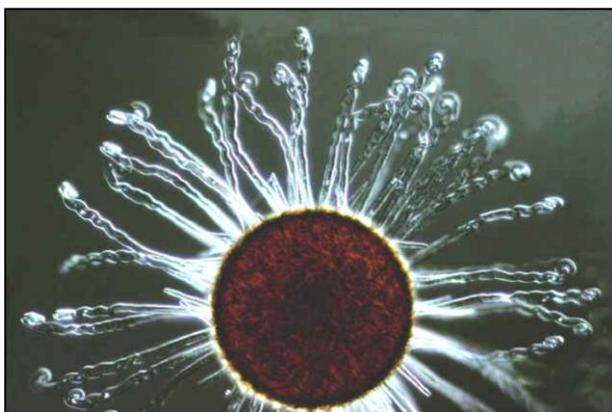
This passage is cited by Elio Schaechter in his book, "In the Company of Mushrooms"

Roger Evans

ROMAN PLANT PATHOLOGY?

After the HFSG foray at Queenswood Arboretum last autumn, I (your Editor) was talking to a gardener in the pub. He told me that the Romans used to plant a briar at the end of each row in their vineyards, in order to get prior warning of an outbreak of powdery mildew on the vines. The idea is that briars are more susceptible than the vines and thus show signs of the fungus earlier, enabling the growers to light bonfires in time to protect the vines.

I understood also from our conversation that the owners of the vineyard at the nearby Broadfield Court have recently adopted this practice.



Uncinula necator

This photomicrograph shows the fruitbody (= cleistothecium) that contains the spore mother cells (asci) of the fungus. The long appendages radiating from the ascoma are hooked at the end (uncinate) and the fungus takes its genus name from this character.

By kind permission of Dr. George Barron, University of Guelph, Canada

Taking the story to our guru, Ted, a discussion ensued over lunch, musing about whether this claim could have any truth behind it. Ted then subsequently relayed it to Tom Preece, asking for his opinion. This is Tom's reply:

I have not heard this tale before. Several things are worth saying about it from my personal observations.

Sphaerotheca pannosa on Rose: Rose Mildew is a 'dry weather disease', but has complex weather relationships. Warm, wet, muggy weather is good to start it off, but undoubtedly it is more severe in dry years. It is a very 'visible' disease - white on leaves from the start - and likes young leaves.

What happens at the start of each year depends on the severity of the winter. I have published this as regards gooseberry powdery mildew: Preece, T.F. (1965) in *Plant Pathology* 14, 83-86.

Uncinula necator (on vine): leaves can be attacked at any time, but first infections are very curious - we see discrete bubbles and blemishes, duller dark green in colour, with blistering and wrinkling. Later in the year, symptoms are white on leaves like rose mildew.

No ordinary mortal would think the first lesions of vine mildew (vital in the initiation of epidemics) were those of a powdery mildew - I have had a long research interest in the very early stages of several leaf diseases.

Recapitulation:

1. The timing of the first outbreaks of powdery

mildew depends on the severity (i.e. frost) of the winter in question and on nothing else (destruction of overwintering inoculum on the plant).

2. Although it is more-or-less likely that for *Sphaerotheca* and *Uncinula* the first stages of later epidemics will occur more-or-less at the same time, the 'white splash' lesions of rose mildew will become apparent (e.g. to workers on a farm) some time before those of vine mildew spread to anything visibly white.

This could (and probably did), in Roman times, constitute an "early warning system" about vine

Mildew: therefore, it is likely to be correct. However, I have not heard of anyone using it to indicate the need to spray, dust, etc.

As with human conception in the uterus, it is the earliest stages of things which are critical. This edges into the "just visible" as regards epidemics of all leaf diseases.

The great Marshall Ward, in 1882, first made it clear that the control of plant disease epidemics depends on action in these very early stages of infection*. Thus anything which helps is useful. You can read all about it in E.C. Large (1940) '*The Advance of the Fungi*', Jonathan Cape, pp 205-6).

Yes! I like the Roman idea!!

Should the Powdery Mildews (Erysiphales) as a group be a mystery to some of your readers, they could find the BMS 'Guides for the Amateur Mycologist No. 5: *Downy Mildews, Powdery Mildews, Smuts and Rusts*' helpful, as I wrote it with them in mind! These Guides are obtainable from the BMS Librarian, £2 each, plus 50p P&P for one book, plus 25p for each additional book.

* Ward realised that between the time a spore germinated on a leaf surface and before its germ-tube had time to penetrate into the leaf interior, the

germ-tube was more vulnerable (to chemical attack) than either the spore, or the mycelium in the leaf.

"The life of the parasite is so arranged that as short a time as possible shall intervene between the well-protected spore condition and the safely ensconced mycelium".

This marked the emergence of the idea of preventive treatment of foliage with chemical fungicides "to combat those those kinds of parasitic fungi whose spawn grew within the leaf".

Tom Preece.

MARY'S MUSINGS

Although we spend most of our time looking for fungi in the woodlands and the countryside, I have been surprised by the number and variety of fungi that I find as I walk about Cheltenham. My most recent finds have been a beautiful 'fairy ring' of *Marasmius oreades* on the lawn of the Funereal Home next door and, earlier on this summer, a beautiful 'frill' of a *Peziza sp.* (probably *domesticus*), at least two feet long.

I have also had interesting finds from my garden over the last four or five years. On the rotting oak water butt *Dacrymyces sp.* and then the *Resupinatus - not applicatus - sp.* on old oak fence posts that I have stored for use on my fire. These were stored in a place that was not completely dry, and when I set to to move them, I was amazed also to find the brilliant blue (and white) *Pulcherricium*



caeruleum on many of the pieces - rare in some woods, so very unexpected!

Amongst twiggy debris in the flowerbed I have found two *Basidiomyces* that at first sight appear to be ascomycetes:

Lachnella alboviolacea, when dry, appearing (under hand lens) as small, white, hairy spheres; moments after becoming moistened, though, they open up to show a smooth lilac/grey disc surrounded by the white hairs.

The second is the tiny *Flagelloscyphus minutus*.

Agaricus bitorquis under a roadside Lime tree, *Boletus* and/or *Xerocomus sp.* on roadside verge, and even between brick wall and pavement!!

There have been other finds, but as they were gilled fungi, I have not been able to identify them - other than that they were *Pluteus*, *Inocybe* and an *Entoloma*.

I wonder if anyone else has found an abundance of fungi in their town?

Mary Hunt

HYDROPUS SUBALPINUS: RARE, OR JUST UNREPORTED?



Great Doward (5/5/04)



Hergest Croft (20/4/05)

We are told in the literature that this fungus is quite rare in the UK and, certainly, there are only 4 records on the BMSFRD. However, we have now found it twice recently - at Great Doward and Hergest Croft (incidentally, not yet on the BMSFRD) - and, whilst 'one' (or, in this case, two) 'swallow does not make a summer', it raises the question of whether it is actually as uncommon as all that, or merely unreported.

As can be seen from the photographs, *Hydropus subalpinus* is not an 'Ooh! Ah!' fungus. It could easily be mistaken for a *Collybia* or *Mycena* - in both of which genera it has appeared - or, more especially, at first sight it might be thought to resemble a small *Melanoleuca*.

The cap is described as about 10 – 30 mm, dingy light yellow brown, often with a slightly striate margin; the gills are close, up to about 4.5 mm wide, white, ranging from adnate to almost free,

sometimes with a decurrent tooth. The context is white (or slightly greyish) and watery, the taste and smell indistinct.

The stipe is up to approx. 60 x 4 mm, pruinose, with white rhizoids, as can be seen in the left-hand photo.

The spore print is white, the spores themselves being allantoid, about 7 – 10 x 3 – 4 μm and inamalgamoid.

Hydropus subalpinus is generally found under broad-leaved trees, on fallen branches or wood fragments, especially *Fagus* - the specimens at Hergest Croft, though, were found under a large *Ilex*.

Few people seem to know of this fungus, but possibly, if more of us are on the lookout for it, we shall find that, at least in this part of Britain, it is not really all that unusual.

Shelly & Mike Stroud

'Forayers enjoying the scenery' - An irreverent contribution by a mycophobe friend, Anthony St. Clair

