



Herefordshire Fungus Survey Group

News Sheet N° 12: Autumn 2006



Still Life with *Scutellinia scutellata* (Ast Wood – 17/5/06) and Snail

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President & Recorder: Ted Blackwell

Chair & Secretary: Sheila Spence

Treasurer: Ray Bray

[Welcome to the Autumn 2006 News Sheet](#)

We are already well into our Autumn season, so it probably seems a bit strange to be getting all the 'News' from last Spring! However, here is our new issue, which I hope you will enjoy.

We have a slightly different mix of articles from usual this time, with:

- Mary, writing on her tiny, little 'Mixed-up-Mycetes', complete with her own line drawings;
- Ted, writing on the origins of fungal names, 'Fungus Names in Lego-land' and
- Tom Preece, who is describing some of his 'Recent Notes from my Accession Book'.

You will see that, from the fewer forays we had this Spring, our 'Recorder's Report' is somewhat shorter than normal. There is also no 'Chairman's Message' this time and it is replaced by an edited version of notes from the BMS Group Leaders Meeting, which Sheila and George attended in June.

In response to my request in the last issue for help with compiling an Index of subjects (ie fungi, lichens, host plants, articles) in our News Sheets, Jo Weightman has somehow found time to slave away at this. I am deeply indebted to her.

This Index is now more or less ready (up to and including this current News Sheet) and will be available online to anyone who wants it. I am

ERRRATA

I'm afraid that the editor of the HFSG Spring 2006 News Sheet has overlooked 2 misprints. Please, on page 13:

- Under *Puccinia pulverulenta*, 5th line, delete 'Ascospores' and substitute 'Aeciospores'.
- Also at foot of same page under references, 'Henderson, D.M.', transpose the dates 2000 and 2004 - i.e. the Checklist was in 2000, and the Rust Fungi Guide was 2004.

Apologies!

amazed that we already have references to about 750 different species of fungi in the 12 issues so far!

If you wish to be included on the circulation list, please can you let me know. The Index will be updated continually and I shall normally issue these updates to those of you who want it each Autumn.

Happy reading!

Mike Stroud

EDITED NOTES FROM THE BMS GROUP LEADERS' MEETING (16TH – 18TH JUNE 2006)

Publications and Library

As well as the change of publishers from Cambridge University Press to Elsevier, there are to be changes in the BMS publications themselves. From 2007 a new journal '**Fungal Biology Reviews**' will be introduced '**Field Mycology**' will continue as at present and it is proposed that members will be able to choose which of these two journals they will take for their subscription. If they take both they will pay for the additional journal, both journals costing the same amount. '**Mycological Research**' will continue as at present as this is the biggest source of income for the Society. The Mycologist will no longer be published but it is hoped that The Mycologist News will be issued quarterly from Jan 2007.

The BMS Foray Programme was outlined by Sherry Stannard (Foray Manager) and local groups were asked to investigate and suggest suitable venues in their area for forays or workshops. The possibility of re-instating BMS Day Forays was discussed.

- 2006:** Autumn – Kingcombe Centre, Dorset
Overseas – Sardinia
Rotheroe Memorial Foray –
Carmarthenshire
- 2007:** Spring – Isle of Arran, April or May
Autumn – Sheffield University, visiting
Derbyshire, Nottinghamshire & South Yorkshire
Overseas – Nice, South of France
Upland – possibly in Wales
Boletus Workshop – late summer at
Romsey

2008: Groups are asked to suggest suitable meetings venues in their areas

Conservation Report

The revised Red Data List of threatened British fungi has been completed after wide consultation. A working group chaired by Jill Sutcliffe of English

Nature has submitted the final document to JNCC (Joint Nature Conservation Committee).

JNCC is also involved in a review of BAP species. 77 non-lichenised macrofungi were initially proposed and Martyn Ainsworth prepared data sheets for each. After consultation 66 species of macrofungi have been submitted plus 27 species of microfungi. JNCC expected to publish in November 2006.

Education Matters

The word “fungi” does not appear in the science curriculum for schools up to GCSE level. It appears only once in the 16-18 year A-level Biology curriculum. David Moore, has been working with the BMS Education Officer on a three year programme to prepare material for primary and secondary schools e.g. ‘Fungus Fred goes Foraging’, ‘How the Mushroom got its Spots’, and ‘Key Stages for Fungi’ material aimed at science teachers. Efforts are now moving towards preparing material for higher education. There is a lot of interesting material on the BMS Web-site under Education and the linked website www.fungi4schools.org which local groups are encouraged to visit and use. The BMS Roadshow has again visited all the major RHS shows i.e. Malvern in spring, Chelsea, Tatton Park, Malvern in autumn, and Harlow Carr in late autumn. A ‘Pocket Guide to Common Fungi’ has been produced based on water-colours by Peter Thwaites to be sold at £1 a copy. Groups can purchase from the BMS at 50p per copy to sell on at £1 to make money for group funds. See web-site www.fungiforfun.co.uk

BMS Fungal Records Database

A new name is being considered to better reflect data sources and area covered. The suggested name is “Fungal Records Database of Britain & Ireland (managed by the BMS)” (FRDBI). This suggestion will be put to Council on June 23rd. The data has not yet been published on the BMS web-site in full because some major contributors have not yet signed copyright licence forms. There was agreement at the meeting that the data which had been licensed should be made openly available to the National Biodiversity Network in its present “unverified” format, even though it contains many errors. Cleaning up the data will be a lengthy process, though it can be attempted in stages (records from N. Ireland and Leicestershire are currently the only fungal data available on the NBN). This decision has now to be referred to the BMS Council.

General

A CD was issued to all group leaders containing updated versions of the starter pack for new groups, and ‘Guide to Collecting and Recording Fungi’ with

the new appendix on the 2005 Drugs Act. The CD also contains the primary school resource ‘The Good, The Bad and The Fungi’, with leader’s notes, teacher’s notes and a folder of props and images. These could be freely printed and distributed for non-commercial purposes.

Sheila Spence gave two excellent evening presentations, the first on the Herefordshire Fungus Festival – giving a very helpful overview of the highs and lows of organising such a large event. The second presentation introduced the meeting to ‘Caring for God’s Acre’, a project initially restricted to Shropshire but so successful that it might well be extended to churchyards across the country, giving local groups the opportunity to assist with the management of churchyards for fungi.

Paul Kirk ran an informal clinic on the Saturday evening to illustrate features of the BMSFRD and to give any help that group leaders needed with regard to recording.

General discussion covered topics including Recommended English Names, Mapmate, Sentinel Sites, Agri-environment schemes, grid references, the New Forest commercial picking court case, the recruitment of young people into the recording groups and how to deal with people who join groups



only to pick edible fungi. Lively debate took place and further detail is available in a full set of notes from the meeting that is available from Liz Holden.

RECORDER'S REPORT, January - August 2006.

FRITH WOOD (SO7240). 5th APRIL 2006.

Sarcoscypha austriaca, widely separated fruitings being seen by most present. Also satisfying to have recorded *Dumontinia tuberosa* (Anemone Cup) parasitic on roots of Wood Anemone, often difficult to find unless occurring on bare soil. *Geastrum corallinum* occurred again having been found here in 2004 when it was a first VC36 record, nationally much rarer than *G. striatum*, also recorded. There were three VC36 firsts, all unobtrusive unless looked for, *Teichospora obducens*, *Saccobolus citrina* and *Diapleella clivensis*. There are only a few previous records of *Claussenomyces atrovirens* and *Micropodia pteridina*, also inconspicuous, mostly recorded by Douglas Graddon circa 1979 from the Ross-on-Wye area. A total of about 80 species identified.

WHITNEY COURT WOODS (SO2648) 20th APRIL 2006

The site was unfortunately rather dry resulting in only two Agarics being recorded, *Panellus stipticus* and *Panaeolus fimicola*, although there was rhizomorph evidence of Honey fungus. The balance was redressed somewhat by microfungi records such as *Acrospermum compressum* and *Leptosphaeria acuta* on dead nettle stems, four Myxomycetes, both the common and rarer "Wolf's Milk", *Lycogala epidendron* and *L. terrestre*, plus *Stemonitopsis typhina*, and *Trichia contorta*, five rusts, and the rarer *Ganoderma applanatum*. The total record was boosted by 19 lichens giving about 63 species identified.

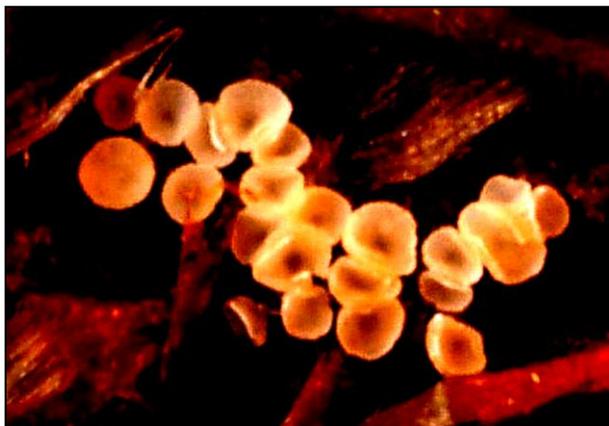


Leptosphaeria acuta – Whitney Court (20/4/06)

AST WOOD (SO6738). 17th MAY 2006

This was the group's first foray on this site and the finds were encouraging. These included two species new to the VC36 database: *Ophiovalsa (Cryptospora) corylina*, a bark-wart on hazel, unusual in having very long ascospores; and *Cryptostroma corticale* on living Sycamore, serious outbreaks being termed 'Sooty Bark

Last year's foray at this site was cancelled due to an impassable access track, happily cleared for this occasion. It was pleasing to start the season with several finds of the commoner Scarlet Elf Cup Disease'. The microfungi included *Scutellinia scutellata* s.s. on wood debris (see front cover), and *Pezizella chrysostigma* on the dead petals of Male Fern. A less common Myxomycete, *Enerthenema papillatus* was last found in 1996 by Bruce Ing during the BMS Centenary Hereford foray at Croft



and Moccas. A total of about 66 species identified. .
Pezizella chrysostigma – Ast Wood (17/5/06)

NOTES OF UNUSUAL RECORDS 2006.

Interesting records from Herefordshire and neighbouring counties have been reported in addition to those from programmed forays. Inevitably, a number are seldom recorded or have not been recorded before in VC36, of which the following are representative.

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

What was initially assumed to be **Phytophthora Bleeding Canker of Horse Chestnut** was seen on a circle of six Horse Chestnut trees surrounding the trig pillar on Bringsty Common, SO698549. It was first noticed there in August 2002 by Cherry Greenway, and again on 16/1/06 when disease symptoms were still evident. This disease is now known to be increasing and spreading. Symptoms are rusty-red, yellow-brown or almost black gummy liquid oozing from small to large areas of bark, the centre of the weeping patch becoming cracked. More recent research indicates that some other organism, probably a bacterium, (*Pseudomonas*?) is involved in most cases. Some trees may be able to survive an attack but if extensive bark death occurs the tree can be killed.

Gloeosporidiella turgida+ on fallen ash twig. Orleton. 13/2/2006 Ted Blackwell.

Pulcherricium caeruleum on ash, New Mills, Ledbury, 19/3/2006, Sheila Spence.

Geopora sumneriana, under cedar, How Caple churchyard 11/3/2006, Sheila Spence. A week later Heather Colls found a large quantity at the same site.

Dumontinia tuberosa on roots of Wood Anemone (*A. nemorosa*) 8/4/2006. Heather Colls, Hill Hole Dingle, 8/4/06; and David Champion, Frith Wood, 5/4/06; and Cherry Greenway 1/4/06, Lumbridge Wood.

Polyscytalum berkeleyi+ on dead nettle stem, Fishpool Valley, 3/4/06, Jo Weightman.

Lichenocmium xanthoriae+, parasitic on *Xanthoria parietina*, Orleton on 22/2/06, Ted Blackwell. Also near Aymestrey, 4/3/06, Jo Weightman.

Pachyella violaceonigra on ash, Malins Wood, 6/5/2006 Cherry Greenway.

Boletus satanas at the usual Biblins site, 20/7/2006, Heather Colls. Also on 27/7/06 Cherry Greenway.

Boletus fetchneri near Biblins car-park site, 27/7/06, Cherry Greenway, only the second VC36 record.



Telogala olivieri on the lichen *Xanthoria parietina*, 20/8/2006, Orleton, Ted Blackwell, only second VC36 record. This fungus causes bubble-like galls on the thallus and apothecia of *X. parietina*.

Podoscypha multizonata on soil. Moccas Park. 28/8/2006, Dave Shorten. Only the third VC36 record in the last 40 years."

OUT OF COUNTY

Splanchnonema foedans (Dothideales) on dead elm twig, Llyncllys near Oswestry, Shropshire, 3/1/2006, Dr Tom Preece. The large ascospores are like legless beetles.

Sclerotinia sclerotiorum, occurring as small black sclerotia amongst bought sunflower bird seed, Forest of Dean, 22/2/06, Vaughan Fleming.



Vaughan later damp-cultured these sclerotia and in July obtained the Ascomycete cup-fungi. It seems these sclerotia grow in the sunflower head or stems and are harvested along with the seeds. Although they are a storage organ just like a seed and theoretically could provide similar sustenance, experiments show the birds visiting my bird-feeders reject them. I am indebted to Dr. Mike Richardson for information about *Sclerotinia sclerotiorum* and on the topic of its occurrence in bird-seed.

Clavulinopsis subtilis on soil, Aileshurst Coppice, Dragons Lane, Worcestershire NT reserve 18/2/06. Cherry Greenway.

Lichenocmium xanthoriae on *Xanthoria parietina* apothecium, Ribbersford Wood Ted Blackwell. 8/4/2006

Geopora sumneriana, under cedar in garden, 4/4/06, Llyncllys, Tom Preece.

Uromyces appendiculatus, aecia and urediniospores, on runner bean leaves, Wernrheolydd, Raglan, Monmouthshire, 27/7/2006, Roger Evans. Aecia are seldom reported outside Southern England.

Piptoporus quercinus (Oak Polypore). Wentwood Forest, Monmouthshire (ST4295 region). First found in 2005 and verified July 2006. Colin Titcombe, confirmed by Dr Peter Roberts.

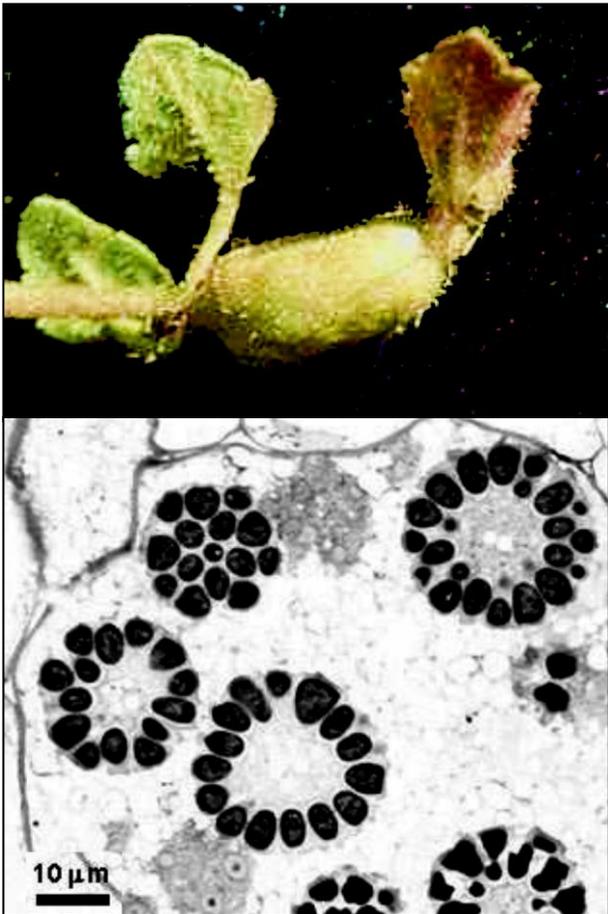
My thanks to all collectors and recorders who have contributed lists and reported the results of home-work, and who continue to expand the Herefordshire records of fungi.

Ted Blackwell

RECENT NOTES FROM MY ACCESSION BOOK

In February Debbie Evans sent a specimen of *Pilosella aurantiaca* from a cemetery in Wales, infected by the downy mildew, *Bremia lactucae*. This fungus, so common on lettuce in gardens has 4 characteristic points on the end of each sporangiophore (for illustration, see Guide for the Amateur Mycologist No. 5, BMS, 1996). Also in this family of fungi, I noted in the new Check List of downy mildews (Peronosporaceae) BMS, 2002, that no downy mildew had been recorded on a *Hieracium* species in Britain for over 100 years. Later more specimens were found during a search for waxcaps in another graveyard.

Continuing the graveyard theme, specimens of *Veronica chamaedrys* arrived from Robert Maidstone, who had found galls near the ground on them, which he recognised as being those described from Tottenham cemetery by Brian Wurzell (Mycologist, 16(1) 27-28, 2002). These galls contained the beautiful cystosori of *Sorosphaera veronicae*.



Sorosphaera veronicae (photographs with kind permission of Prof. James Braselton, Ohio University)

This fungus is, like *Plasmodiophora brassicae*, which causes club root disease of cabbages, in the order Plasmodiophorales.

At the end of April, specimens of box rust, *Puccinia buxi*, arrived from Ted Blackwell collected at Hergest Croft Gardens by S. Spence. Again, this fits with my story in Mycologist, 14(3) 104-6, 2000, that this fungus has only ever been found on very old boxes and never on the young plants sold in their thousands for planting out.

Under a tree of *Cedrus deodora* in our garden at about this time I noticed several cup-shape structures each about 10 cm across. They had white linings which were full of magnificent asci and ascospores. This was the *Geopora sumneriana* [however, see photograph in News Sheet no. 7, page 6 – Ed.], which Ted had encouraged me to look out for under any cedar trees I came across. I never found it over the years, but it has now come to me in my own garden!

This year we visited the Eden project in Cornwall, where we came across the rare rust (in Shropshire anyway), *Puccinia umbilici* on *Umbilicus rupestris*.

In May, Alex Lockton sent me a rust on *Senecio cambrensis*, growing in Wales at Chirk - a new British host for the *Puccinia lagenophorae*, so common on ordinary groundsel, *Senecio vulgaris*.



Calocybe gambosa

Opposite our front door, St. Georges mushroom, *Calocybe gambosa* was plentiful on 16th May. I have to confess that I did not look for it on the 23rd April, but it may have been there then.

Later in May we visited someone in the old Cottage Hospital at Much Wenlock, where there was a sycamore stump completely covered in *Pseudotrametes gibbosa* – dazzling, bright green with algae! Why don't algae grow on other bracket fungi? Is this one step from a lichen?

Soon a specimen of a rust on *Aristolochia* arrived, which had been collected by Jo Weightman in Spain. This was *Puccinia aristochliae* - another specimen for Kew!

Specimens of *Xanthoriicola* (see News Sheet 11, 2006) were either collected or sent to me from 22 VC's, from which it had never been recorded before. Preparing a new map of the fungus in Britain took up much time in June and July!

THE MAIZE MAZE



At the end of August, our six year-old grandson, Guy, thought that it would be good for our education to visit the Maize Maze at Elton Farm, near Littledean in the Forest of Dean.

As far as we were concerned, the icing on the cake of a most enjoyable (if wet!) day out was the discovery, of literally hundreds, of galls caused by *Ustilago maydis*, growing on the crop.

According to Spooner & Roberts (New Naturalist Series, 'Fungi', Collins, 2005, p 156), these galls, when young, are eaten as a delicacy in Mexico, known as 'Cuitlacoche'. However, papers sent to us by Ted Blackwell (Mycologist, 1990, p142 and Cecidology, 8(2), 88-90 (1993), p89), state that the smuts are toxic, whether young or ripe, to both man

and livestock. We have, incidentally, warned the farmer of this potential problem, since the crop is to be used as silage for cattle.

One point that puzzled us was that the density of infected plants was much higher at the outside of the maze (say, around 10%) than after we had gone further into it (say, ½%). Ted suggested that this might be due to any spraying of the crop not reaching the edges of the field. However, the farmer has told us that no post-emergence spraying was carried out.

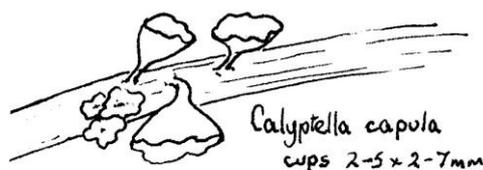
We now think that, as infection can be caused by wounding the plant (Mycologist, 1990, p142), this could be the reason – those near the outside (and close by the paths through the maze) being more prone to damage by members of the public.

Shelly & Mike Stroud

MIXED-UP-MYCETES!?

If you didn't look at these fungi under the microscope, you would be forgiven for thinking that they were Ascomycetes. There are very clear photographs, diagrams and details in B & K Vol 2, pages 198-203

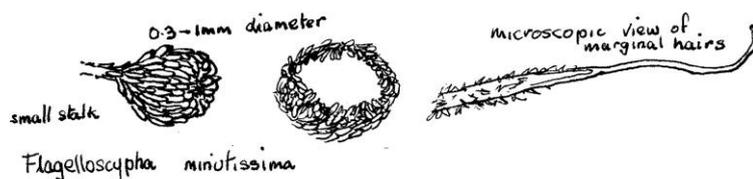
Calyprella capula appears more like a small flower than a fungus, as it is so fragile looking with the cup more like the petal of a flower.



The first time I found this beautiful fungus was on a sunny New Years Day, when the light fall of snow was just melting. It was growing on the base of a Thistle stem. B & K consider it to be rare, but it can be found at the base of Nettle stems and twiggy debris in damp areas.

I found the even more beautiful *C. campanula* growing on the base of some herbs beside a lake in France. The 'petals' a very pale 'primrose' yellow. *

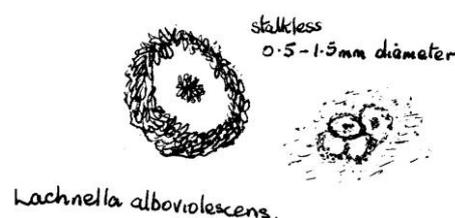
Flagelloscypha minutissima also grows on herbaceous and woody stems and is covered profusely with white hairs, looking very similar to the *Lachnella* - but smaller.



Only 0.3 - 1mm across and when closed in dry conditions, looking like minute white pom-poms! When open they reveal a grey-ocherish hymenium. The flagellum-like ends of the incrustated marginal hairs are easily recognisable under the microscope.

These are the few masquerading fungi that I have met, I am sure there are more, (two more in B & K) and I wonder if any HSG members have also been misled by them. I have noticed that in Ellis & Ellis they draw your attention to one of these - *Merismodes anomala* (although referred to as *Cyphellopsis anomalus* in Ellis & Ellis) - pointing out that the snuff coloured, crowded cups 'are sometimes mistaken in the field for discomycetes'!

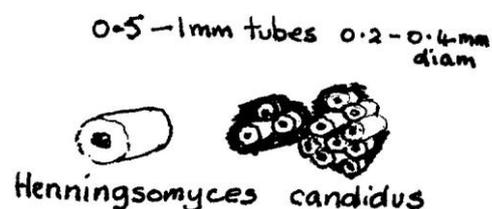
Lachnella albovirescens is a fungus to look out for when the conditions are dry, and most other small fungi have disappeared. During the dry weather, the stalkless, saucer-shaped, fruiting bodies close.



Because the outer surface and edges are covered with white hairs, they look very different and could be mistaken for a *Dasyscyphus* or *Flagelloscypha* sp. But with even a small amount of moisture they open to show a smooth, pale grey hymenium, often with a bluish tint and 'islands' of little white hairs.

Lachnella villosa is very similar, but grows on herbaceous stems and can be separated by the spore size.

Henningsomyces candidus is a little more difficult to spot as it is to be found on the underside of rotten wood and can be mistaken for a white resupinate initially. But looked at closely it is like tiny white tubes, straws or cups of various lengths, protruding from the rotten wood.



These are to be found on dead wood and considered by B & K to be 'widespread' but it is the only one of this group of masquerading fungi that I have not found!

Mary Hunt

* It may be of interest to mention that the recently published Basidiomycete Checklist has a footnote about *Calyprella campanula*: "Accepted, but doubtfully distinct from *C. capula*. This is the causal agent of Calyprella Root Rot of [greenhouse] tomatoes but is rarely reported" - Ted Blackwell.

FUNGUS NAMES IN LEGO-LAND?

We may take scientific names of fungi rather for than a mere hook on which to hang the identity of reveals unexpected facets and may lend charm to



granted, perhaps regarding them as nothing more a species. But a little dissection, as with fungi, often an otherwise mundane subject.

In former times Latin was the international means of communication in Europe and beyond and those who developed scientific interests had received as part of their general education a working knowledge of classical Greek and Latin. For the early botanists who began investigating fungi it was, therefore, normal to devise from classical sources, scientific names which they considered apt to describe some significant characteristic. This 'in-group' code for alluding to important attributes was, therefore, readily understood by those of similar backgrounds and interests and required no further elucidation.

Today, school curricula are necessarily more relevant to modern life and investing time in dead languages may be justified only for budding linguists. For the rest, anyone curious about meanings of scientific names must turn a hand to research. Much can be achieved from classical lexicons and etymological dictionaries, but arriving at a translation does not always convey an instantly relevant meaning. One may need to concede a modicum of 'author's licence' when trying to match some names to their alleged characters. What led an author to select a particular name is not always clear and some derivations seem to be without any direct relevance. In obscure cases reference to the original author citation may be necessary, not always an easy thing to do, or necessarily fruitful.

One may reasonably expect the specific epithet to refer descriptively to some physical attribute of the species and most do. The logic can sometimes be fancifully humorous, as with the aquatic Hyphomycete *Tripospermum camelopardus* named from its conidial shape after the giraffe. However, others like *triumphans*, triumphal, or *saeva*, fierce, are perhaps less than helpful and commemorative names such as *freisii*, *kuehneriana* and monstrosities like *crec'hqeraultii* provide no clues whatever. Many generic names are also descriptive, as in *Baeospora*, small spored, *Polyporus*, many pored and amusingly, the Zygomycete *Pilaira*, which literally translates as "I raise my hat" from its hugely elongating sporangiophore. A number are historical legacies



Badhamia utricularis

based on names of the old classical writers, amongst which are *Agaricus*, *Boletus*, *Hydnum*, *Peziza* and *Tuber*. As with specific epithets, commemorative names like *Badhamia*, *Oudemansiella*, *Puccinia*, *Ramsbottomia* or

Wakefieldia, although historically interesting, add nothing to our understanding of the species' characters.

If one excludes commemorative names, the construction of some scientific names is similar to building with Lego, utilising pre-formed components to assemble different configurations. As with Lego, the

same component-type can be used repeatedly in a variety of constructions and a glance at a names list will often show certain word elements recurring frequently. Since without insight scientific names may be unintelligible anyway, this kit-building of names may not be immediately obvious to the uninitiated and a brief review of the subject may perhaps be enlightening.

In the case of SPECIFIC EPITHETS, Latin seems to be the more frequent source, as in *badia* (bay brown), *betularum* (pertaining to Birch trees), or *foetens* (foul smelling), etc.. Usually, as in the foregoing, they are single Latin words, only occasionally comprising two words in combination such as (the / shows the join) *sub/ovalis*, somewhat egg-shaped, or especially for colour descriptions e.g. *atro/purpurea*, black-purple, *croceo/caeruleus*, saffron-azure, or *luteo/alba*, yellow-white. Such colour-compounds are sometimes hyphenated, at others times are not, a potential snag in computerised lists.

The names of GENERA, on the other hand, appear to be derived more often from Greek and a number which are compounds of two or more word elements demonstrate the kit-build technique, as in *Agrocybe*, *Clitocybe*, *Entoloma*, *Tricholoma* and so on. These are assembled Lego-style, having the Greek elements '-cybe' and '-loma' tacked onto another word. These particular endings occur in quite a few Agaric genera, '-cybe' meaning 'a head' and referring to the cap (or pileus), '-loma' meaning 'a fringe' and alluding to a veil.

Thus for '-cybe' we have:

<i>Agrocybe</i>	<i>agros</i> , a field, land; + head	Literally 'fieldhead' because many species occur in fields or grassland, though not all.
<i>Calocybe</i>	<i>kalos</i> , pretty, beautiful; + head	Probably from the brightly coloured caps of many species.
<i>Clitocybe</i>	<i>klitos</i> , a slope or declivity; + head	From the strongly decurrent gills. Note: the <i>klitos</i> element also occurs in <i>Clitopilus</i> , <i>pilos</i> being a cap from which 'pileus' is derived.
<i>Conocybe</i>	<i>conicos</i> , conical; + head	From the shape of the cap. Note: <i>conopilus</i> means the same, but is Latin in origin.
<i>Dermocybe</i>	<i>derma</i> , skin; + head	Literally skinhead! From the thin-fleshed dry and silky cap.
<i>Hydrocybe</i>	<i>hudor</i> , water; + head	From the hygrophanous cap.
<i>Hygrocybe</i>	<i>hugros</i> , moist; + head	From the watery consistency.
<i>Inocybe</i>	<i>is</i> , <i>inos</i> , fibre; + head	From the often fibrillose cap surface.
<i>Leprocybe</i>	<i>lepros</i> , scabby, rough, + head	From the fibrillose + scaly or fleecy cap.
<i>Psilocybe</i>	<i>psilos</i> , naked; + head	From the allegedly naked cap.
<i>Rhodocybe</i>	<i>rhodon</i> , rose; + head	From the pinkish gill colour at maturity and spore print of some species.
<i>Sericeocybe</i>	<i>sericeus</i> , silky + head	From the silky cap.
<i>Tephrocybe</i>	<i>tephra</i> ashes, or <i>tephras</i> ash-coloured; + head	Many have grey-brown caps and several are fire-site colonisers.

In the case of '-loma', which refers in some way to the veil or veil remnants, we have:

<i>Dermoloma</i>	<i>derma</i> , skin; + fringe	the cap is innately silky.
<i>Entoloma</i>	<i>entos</i> , within; + fringe	the veil is absent or rarely present so perhaps 'hidden within'.
<i>Hebeloma</i>	<i>hebe</i> , youth; + fringe	the veil is only seen in young specimens.
<i>Hypholoma</i>	<i>hyphe</i> , a web; + fringe	refers to the veil remnants at the cap margin of some species.
<i>Tricholoma</i>	<i>thrix</i> , hair; + fringe	according to Swanton, from the hairy or silky covering of the cap, well seen in young specimens.

Although -cybe is mentioned above as meaning 'head' another Greek word with the same meaning, *cephale*, is frequently represented in specific epithets.

Examples are (*Coprinus erythrocephalus*, red head; (*Amanita echinocephala*, hedgehog head; (*Conocybe macrocephala*, large head; (*Coprinus leioccephalus*, smooth head; (*Mycena leptoccephala* thin head; (*Hemimycena cephalotricha*, hairy head (at least, microscopically!); (*Psathyrella sarcocephala* flesh (coloured) head.



Mycena leptoccephala

Going from head to feet, the word for 'foot' appears commonly in specific epithets, referring either to the stipe generally or to its base and occurs as the termination, '-pus' (from the Greek word *pous*). Thus we have (*Coprinus lagopus*, hare's foot; (*Mycena galopus*, milky foot (stipe exudes white milk);

(*M.*) *haematopus* bloody foot (stipe exudes red milk); (*Pholiota oedipus*, club foot; (*Tricholoma psammopus*, sandy foot (granulose/scaly stipe); (*Polyporus melanopus*, black stipe; (*Physarum leucopus*, white limy stalk; (*Peziza micropus*, small stalk.

A frequent element of fungus names is '-phyll-' which comes from the Greek '*phullon*' meaning 'leaf'. Sometimes it means just that: at others it refers to gills (lamellae). 'Aphylophorales' for example, literally translates as 'not leaf-bearing' a rather arcane way of saying 'without gills'. On the other hand (*Athelia epiphylla* means 'on a leaf', a typical substrate, (*Lepiota xanthophylla* has 'yellow gills', (*Russula heterophylla*, 'different gills', from the unequal radial gill lengths and *Phylloporus* has anastomosing to subporiform gills. A similar sounding element but with a different spelling and a totally different meaning is '-phil-' deriving from the Greek word for 'loving' and occurring in ordinary English words such as philanthropic. When applied in fungus names it is perhaps best construed as meaning 'a

coloniser of' in such as (*Hebeloma anthracophila*, charcoal-loving, (*Xylaria carpophila*, common on beech mast (beech 'fruit'), (*Russula sphagnophila*, amongst *Sphagnum*, (*Hypoxylon fraxinophilum*, on fallen ash branches and so on. To round-off the series, the two elements occur together in (*Clitocybe phyllophila* and (*Hymenoscyphus phyllophilus*, a prime spelling pitfall.

The suffix '-cola' alludes to colonisation of substrates, as in *alnicola*: on *Alnus*; *pinicola*: on *Pinus*; *graminicola*: on grasses; *muscicola*: on mosses; *fimicola* and *merdicola*: on dung; *lignicola*: on wood and many more. This should not be confused with '-color' which refers to some aspect of colour as in *auricolor*, golden, *bicolor* and *dicolor*, two coloured, *variecolor*, *variicolor*, diverse colours, *versicolor*, much the same but strictly implies changing colour, but used loosely to mean 'many coloured', *persicolor*: peach-coloured.

Important indicators of shade are *leuco*-meaning white or pale, as in *Leucoagaricus*, *Leucocoprinus* and *Leucocortinarius* indicating pale-coloured spores. *Phaeo*-indicates dusky or dark-coloured spores, as in *Phaeocollybia*, *Phaeomarasmius* and *Phaeolepiota*.

The habitat, or place from which a species was originally described is signalled by the adjectival termination '-ensis', as in *arvensis*, from cultivated fields; *pratensis*, growing in meadows; *hortensis*, found in gardens. It is similarly coupled with place names as in (*Ascobolus woolhopensis*, Woolhope, Herefordshire, *Pholiota highlandensis*, Highland, USA, (*Trichia contorta* var.) *iowensis*, Iowa; (*Stemonitis virginensis*, Virginia; however some of the provenances thus indicated are geographically obscure. It is also rather oddly tacked onto English topographical nouns as in *parkensis*, pertaining to a park; *dunensis*, occurring on sand dunes, oddly because neither the word 'park' nor 'dune' existed in Latin.

The elements '*semi*' (Latin) and '*hemi*' (Greek), are used in both generic names and specific epithets, invariably as prefixes, both literally meaning 'half'. Where this refers to form the literal meaning is clear, as in (*Helvella semilibera*, (cap) half-free, *semiovatus*, half-egg-shaped, *hemisphaerica* and *semiglobata*, hemispherical. In other instances the meaning may be obscure almost to the point of inscrutability, as in (*Lactarius hemicyaneus* which refers to the blue colour of the milk (*cyaneus* = dark blue), but only from cuts in top layer of the cap, which elsewhere is carrot red before discolouring green. Another sense in which

'*hemi*' is employed suggests a close likeness, as in *Hemimycena*, separated from *Mycena* by a different staining reaction of stipe hyphae and *Hemitrichia* which differs from *Trichia* by its capillitium being united into a network. Note, however, (*Lyophyllum semitale* and (*Coprinus semitalis* are complete words in themselves meaning 'belonging to lanes and by-ways'.



Pholiota alnicola



Leucoagaricus croceovelutinus

Names such as *Macrocyttidia*, *macrospora*, *Microsphaera* and *microspermus* need little explanation but serve to remind us that microscopy plays an essential role in accurate determinations. But we should not forget, as a distinguished mycologist has

observed, that Agaricales in the last century were identified by the "look, sniff, nibble and spit" method and not surprisingly many Agaric names refer to appearance, smell, or taste. Allusions to taste are by such adjectives as *stipticus*, astringent, *acris*, sharp, *dulcamara*, sweet-bitter and *deliciosus*. But whereas for the other human senses certain standard word-elements are employed repeatedly, there is a singular absence of any recurring standard element referring to taste per se. One might have expected an element from such as Latin *gustatus*, from which our

English word 'gustation' is derived. In the naming of fungi, taste, it seems, comes low in the scale, a sobering thought for the mycophages.

On the other hand, olfactory perception has certainly evoked the ample application of word elements indicative of odour, though not everyone might agree with the aroma indicated. The most obvious is the Latin *odorus* (-a, -um), as in (*Clitocybe odora*, fragrant and (*Russula odorata*, scented, (*Inocybe pyriodora*, smelling of pears, or (*Tuber rapaeodorum*, smelling of raddish (an unreliable diagnostic according to Lilian Hawker) and lacking smell, (*Marasmius inodorus*. Another odour-indicator is the Latin *olens* meaning odorous, smelling of, as in (*Cortinarius melliolens*, smelling of honey, (*Hebeloma sacchariolens*, smelling of (burnt) sugar, (*Micromphale brassicolens*, smelling of rotting cabbage, (*Agaricus maleolens*, foul smelling (said to be fishy, stinking), (*Trametes suaveolens*, sweet-smelling and where odour though expected is lacking, (*Lentinellus cochleatus* var.) *inolens*.

Greek provides the odour-element *osmus*, scented, as in (*Hygrophorus agathosmus*, good scent, (*Lactarius glyciosmus*, sweet scent, (*Cortinarius osmophorus*, scent bearing, (C.) *diosmus* two-scented, "smell when cut at first radish-like, after a few minutes fruity"

(Moser) and (*Entoloma*) *lepiotosmus*, smelling of *Lepiota cristata*.

Many specific epithets imply a likeness to other forms or other species. This similarity is most frequently indicated by the suffix *-oides* (alternatively *-odes* or *-oideus*), as in (*Craterellus*) *cornucopioides*, resembling the Cornucopia or Horn of Plenty, (*Licea*) *chelonoides*, the undehisced sporangia having the appearance of a tortoise, (*Hygrophorus*) *discoideus*, disc-like, (*Galerina*) *mycenoides*, *Mycena*-like, (*Tomentella*) *botryoides*, like a bunch of grapes, (*Calocera*) *glossoides*, tongue-like, (*Hygrocybe*) *conicoideus* similar to *H. conicus*. Similarity is also signalled by the terminal *-opsis*, mainly in genera being likened to other genera and much less commonly in specific epithets, occurring in such as *Daedaleopsis*, *Fomitopsis*, *Hygrophoropsis*, *Mollisiopsis*, *Phlebiopsis*, *Ramariopsis*, *Stemonitopsis*, *Tricholomopsis*. Both suffixes occur in *Clavulinopsis cineroides*.



Tricholomopsis rutilans

Confusion may arise where an element has several possible origins and different meanings. The 'lep-' element occurs in such as *Lepiota*, *Leptonia*, *lepidopus*, *Lepista*, *lepideus*, *lepida* and *leporinus* but here the origins are various. Some are from Greek *lepis*, a scale, as in *Lepiota* and *lepideus* referring to the cap squammules, in *lepidopus*, to a scaly foot; but *Leptonia* is from *leptos* thin, delicate. Others stem from Latin: *Lepista*, a drinking vessel or goblet; *leporinus* pertaining to a hare (from the ear-shape in *Otidea*); and *lepida* means pleasant, charming, neat.

Linguistic purists disapprove of coupling a Greek word element with a Latin one (as in our modern hybrid 'television'). Interestingly, this also contravenes the International Code of Botanical Nomenclature which sets out the rules for naming fungi. Nevertheless bending the rules has occurred and *Leucopaxillus* is a case in point, *leucos* being Greek for white or pale, while *-paxillus* is Latin for a peg or small stake, the fungus being a white-to-cream spored form of *Paxillus*. Another is (*Lepista*) *glaucocana* from *glaukos* (Gk.) bluish grey and *cana* (L.) hoary.

For those interested in delving into the meanings of scientific names a good English etymological dictionary can often provide clues and Stearn's Botanical Latin is indispensable, although not aimed at Mycology as such. Less readily available but occasionally appearing on the second-hand market (or perhaps obtainable from a library) are:

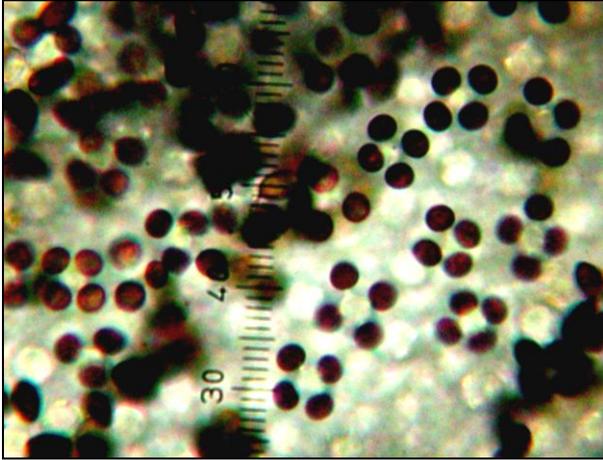
Further reading:

1. Carton Rea's *British Basidiomycetae* (1922) which gives very comprehensive translations of fungus names (although without explaining why they are so called).
2. W. Swanton's *Fungi and How to Know Them* (1909; 2nd Ed 1922) is less comprehensive but often more explicit.
3. *The Vocabulary of Science* by Lancelot Hogben (1969) is a thorough treatment of the use of Latin and Greek in scientific nomenclature, with an appendix of the most common Latin and Greek word elements found in technical terminology.
4. *The Loom of Language* by Frederick Bodmer (1943) has lists of Greek words and word elements in addition to a scholarly treatment of the history and development of language.

Ted Blackwell

FUNGAL FRAGMENTS

- It is not often that one sees the result of 4-spored basidia as clearly as we did with this *Paneolus fimicola*



Shelly & Mike Stroud

- From the Newsletter of the North American Mycological Association, *The Mycophile*, May/June 2006:

This fungus knows how to have a ball!

In the January on-line issue of the research journal *Proceedings of the Royal Society B* comes an amazing discovery. Mimicry has evolved in a wide range of organisms and encompasses diverse tactics for defense, foraging, pollination, and social parasitism. (Move over, cuckoo.)

The new master designer of impostor eggs is a genus of fungus called *Athelia*, some species of which trick termites into nurturing their young. Sclerotia, or “termite balls,” are tough, filamentous orbs that can sprout into fungal colonies when dropped into piles of termite excreta, where competition for resources is lacking.

This extraordinary case of egg mimicry by a fungus, whereby the fungus gains competitor-free habitat in termite nests, was discovered by Kenji Matsuura, of Okayama University. The brown fungal balls frequently are found in egg piles of *Reticulitermes* termites. Phylogenetic analysis illustrated that termite-ball fungi isolated from different hosts (*R. speratus*, *R. flavipes* and *R. virginicus*) were all very similar, with no significant molecular differences among host species or geographical locations. There appears to be no significant effect of termite balls on egg survivorship. The termite-ball

fungus rarely kills termite eggs in natural colonies. Even a termite species (*Reticulitermes okinawanus*), with no natural association with the fungus, tended termite balls along with its eggs when it was experimentally provided with termite balls. Scanning electron microscopic observations revealed sophisticated mimicry of the smooth surface texture of eggs by the fungus. These results provide clear evidence that this interaction is beneficial only for the fungus; that is, the fungus cuckolds termites for its sole gain in this unusual example of egg mimicry.

I was kindly sent a photo that clearly shows the termites tending the round orange fungus balls amid a pile of white eggs (see below).

Further information can be found in a related article by the same author in the journal *Applied and Entomological Zoology* (2005; 40[1]: 53–61).



- Vaughan Fleming has sent this lovely photograph of his ‘new, pinky puffball, *Calvatia rosacea*’, which was found in Ecuador.

