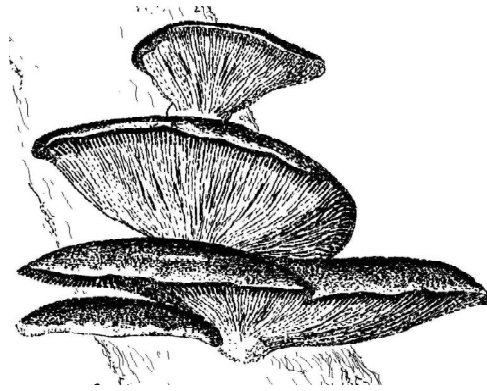


FUNGI OF THE SANDWELL VALLEY.

An important site in the heart of the West Midlands.

Vice-County 37, Stafford.

by
William Moodie



Pleurotus ostreatus (Oyster mushroom) by Terry Parker

**Dedicated to the memory of the late John Little (1938 - 1998)
who did so much for the Mycology of the area.**

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Notes on the photographs used in this booklet

Readers with experience in photography of fungi will know it to be challenging. The best results are often obtained in natural light without the use of flash. The photos here come from different photographers and getting the best balance of detail and colour has been difficult. We hope that we have managed to portray the fungi reasonably faithfully, but in some cases features that were present in the originals may have been slightly altered (the gills on the front cover *Russula* were whiter in the original photograph).

Publication of the central pages of photographs was made possible by donations including one from the West Bromwich Institute of which John Little was a member.

FOREWORD

The Club is fortunate indeed to have Bill Moodie as a member. An acknowledged regional authority on Fungi, he has been active both in field studies and also in research and writing on the subject for many years. When the late M.C.Clark edited the seminal Fungus Flora of Warwickshire, Bill was a key member in the production team, having been Secretary to the Survey for a considerable period. His work on the history of mycological survey was important in that volume and is also a salient feature in this publication where he has been able to shed fresh light on past mycological activity in the Valley.

This number of the bulletin is of unusual interest not only to the ordinary reader but also to the specialist. Bill has managed to make a difficult group of organisms intelligible to a wide audience by virtue of concise technical explanations and regular helpful signposts to give the reader encouragement in progressing not only through this text but also through the others mentioned along the way. His efforts provide another significant milestone on the Club's long journey of faunal & floral recording .

The notes on the species are both informative and entertaining, providing substantial motivation to potential students and the lists are comprehensively presented enabling every reader to gain something by exploring them. We hope everyone will enjoy this booklet.

M. Bloxham (Editor: SANDNATS Bulletin).

INTRODUCTION

The Fungi are rarely studied, yet it is strange that such an interesting subject is generally ignored in local floras. They are in reality all around us, though not easily observable, as they grow, immersed in one substrate or another. The larger fungi are seen only when they appear, in the form of mushrooms, toadstools, brackets, puff balls, cup fungi and in other forms. However we see only the fruiting of the fungus. The real, long lived part of the organism is found underground, or otherwise immersed in a substrate in the form of fine threads called mycelia.

Each mycelium can cover a very large area, deriving sustenance from organic matter in the ground. In the wood, in the leaf, or whatever it is growing on. In America, an experiment was carried out with the mycelium of the Honey Fungus *Armillaria bulbosa*, genetic identification was used to confirm the extent of the underground growth. It was found to take up the area of forty acres.

The mycelium can be feeding on dead material such as dead roots of trees and bushes, or on grass roots, or less commonly on insect pupae, and even on dead and buried animals. Mycelia can also be sustained on living roots of trees in a symbiotic relationship where they form a mantle around the roots and exchange nutrients to the mutual advantage of both tree and fungus. These are said to be Mycorrhizal Fungi. Carnivorous fungi are also present in the soil. One group of these exists by developing rings of mycelium, which contract suddenly when a nematode puts its head into one of the rings, becoming trapped, while the fungus kills and digests it.

Fungus mycelium can also be found above ground, particularly in dead wood, where

the fungus is rotting down the wood, making it more agreeable for boring insects and other small creatures, before it is rendered down to virtually nothing, feeding the soil.

These are the beneficial fungi, but there are others, not so benign. The mycelium can attack living tissue and progressively destroy it. Many bracket fungi are parasitic and after a time kill the tree they are living on.

The farmer has to deal with rusts and smuts, which attack his crops. Without control, they thrive in a monoculture.

We are not immune from attack, and can suffer from skin diseases such as ringworm, and diseases of the lung such as that caused by *Stachybotrys atra* a black mould of damp enclosed spaces, dangerous when the spores are inhaled over a long period.

Most people's initial interest in fungi comes from eating them. Mushrooms such as the cultivated mushroom *Agaricus bisporus*, are commonly on sale and other close species and varieties are now available. Edible species from abroad have been introduced, and now people can now enjoy Shitaake, from Japan, Oyster mushrooms, and Lentinus mushrooms. This can develop into trips into the countryside to collect wild mushrooms. It is important however that one must be sure of the identity of any mushrooms collected for the pot as there a number of poisonous species which are quite often encountered, and a very few which are deadly. The commonly used identification books in no way cover all the mushrooms and toadstools which can be encountered in the field.

The king of all edible fungi is the Truffle, *Tuber* spp., a fungus which fruits under the ground. Truffles are very, very expensive. A giant White Truffle, *Tuber magnatum*, found recently in Italy, weighing over 1.5 kilograms was sold to a group in London for 28,000 pounds, and deposited in a well-known London restaurant, in a safe in a refrigerator. The key was unfortunately mislaid, and when the fridge was eventually opened, the fungus had gone off. The remains were taken back to Italy and buried, in a garden, where it is hoped that, in the future, some truffles may grow; some hopes! Truffles do grow in this country, however they are very rare, and of an inferior variety. None has been recorded in the Valley.

CONSERVATION

Fungus conservation basically consists of maintaining and enhancing existing sites, particularly ancient woodland, semi-natural woodland, unimproved grassland, and a number of other habitats. The aim is to promote the survival of viable fungus populations, by protecting important sites.

Certain substrates such as dead wood are also important– the excess removal of dead wood impairs biodiversity. It is recommended that a wide range of both standing and lying dead wood should be left for the colonisation of insects and fungi. However, hazardous trees must be made safe. Log piles and piles of twigs are also encouraged.

Ancient grasslands that have not seen fertilisers for over one hundred years or so, produce vast numbers of waxcaps and other grassland fungi, as well as flowering plants. A provisional "Red List" of threatened species has been prepared by the British Mycological Society, to draw attention to rare and unusual fungi and their habitats. A revision of this list is at present under way. Unfortunately none of the listed species

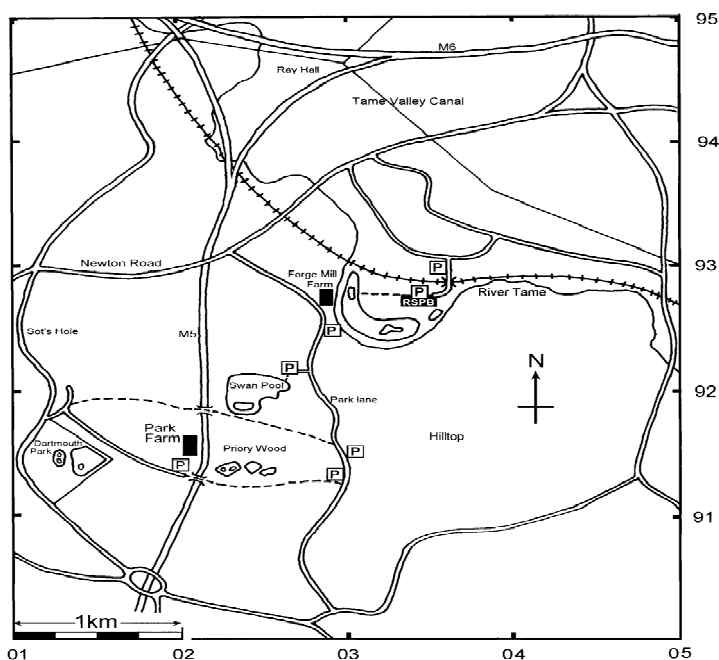
have as yet been identified from Sandwell Valley.

As regards the collection of fungi for the pot, collection by individuals on a personal basis is allowable, but commercial collection can only be tolerated in areas where viable populations can be maintained.

A Code of Conduct has been prepared for the guidance of foray leaders, collectors and landowners to give them sensible advice. Collections should be of the minimum number of individual fruit bodies, with minimum disturbance to the habitat. Any logs turned over or moved must be returned to their original position.

It has been estimated that there are about 15,000 species of fungi in Britain, over 72,000 species worldwide, and the latter number is increasing by about 1,800 species every year.

THE SANDWELL VALLEY



The area covered by the survey is the rectangle of area 2,000 hectares enclosed by the 20 square kilometer area within square SP 09 (with diagonal squares, SP 0190 to SP 0494). The river Tame runs through the area, and junction of the M5 and M6 motorways is at its heart. The area therefore does not just include the Sandwell Valley Country Park, but has several areas of interest outside the park boundaries. The surveyed area lies mainly in West Bromwich,(Sandwell), and has a large part within Handsworth in the City of Birmingham.

The Valley is in the Watsonian Vice-County 37, Stafford. The Vice Counties were proposed by Hewett Cottrell Watson in the early 19th Century, for the purpose of recording vascular plants, and for comparing areas with identical boundaries over long periods of time. The maps were re-published in 1969, along with an introductory booklet by the Ray Society. (J.E. Dandy, Watsonian Vice-Counties of Great Britain, The Ray Society, London 1969) With recent boundary changes, the Valley is divided between the Metropolitan Borough of Sandwell, and the City of Birmingham.

LOCALITIES

In 1989, the Nature Conservancy Council designated a number of sites in the Valley as being "Sites of interest for Nature Conservation" (SINCS) These are key sites in the central area of the valley, and recording has been carried in most if not all of them.

The sites are:-

Sot's Hole, SP 012923

Bluebell Wood, SP 019928 (Private land, belonging to Dartmouth Golf Club)

Swan Pool and adjoining habitats, SP 024919

Priory Wood, Park Farm Wood, Park Lane Wood & Meadow, SP 026914

Field West of Park Lane, SP 027924

Unimproved Grassland adjacent to the River Tame, SP 028934

RSPB Nature Reserve (Tame Balancing Lake and Marsh), SP 031925

Hill Top Farm Grasslands, SP037915

Additionally, records have been made in other areas, as noted below, and Lichens have been recorded from Handsworth Cemetery and All Saints Churchyard, West Bromwich, both of which lie within the recording area.

HISTORY OF MYCOLOGY IN THE SANDWELL VALLEY

The earliest records in the surveyed area are of Myxomycetes, recorded by Mr. Albert Camm of Smethwick in the early 1900s and published in 1910 in W.B. Grove's Mycetozoa of the West Midlands Plateau. At that time they were considered to be animals! A number of species were recorded from Hamstead Park, the estate of the Lords of the Manor of Handsworth, now almost completely covered in twentieth century housing. A small wooded area, Garden Grove remains. A few were recorded from Hay Pits, Wigmore, (near the Crematorium). Both sites fall within the survey area and Camm's records are indicated by a "C" in the lists. "C+" indicates that the species has been recorded by Camm and also recorded since 1974.

A few fungi were noted in the excellent 1972 publication 'The Sandwell Valley Nature Trail' by Bill Stott . In the notes on the Nature Trail, he noted the Birch Bracket, *Piptoporus betulinus*; Dryad's Saddle, *Polyporus squamosus*; Honey Fungus, *Armillaria mellea*; Judas's Ear, *Auricularia aricula-judae*.

1974 saw the founding of the Sandwell Valley Naturalists (SANDNATS), formed by Bill Stott and a number of interested naturalists, and Fungus Forays followed at more or less regular intervals up to the present day, originally instigated by John Little. A chemist and later the Information Officer at Robinson Brothers Ltd. (West Bromwich), John had a house adjoining the Sandwell Valley and became interested in fungi in the

1960s. As a member of Sandnats, he explored the Valley, developing his knowledge of the fungi and recording everything that he found there. He also had considerable interest in other groups and early copies of the Bulletin of the Sandwell Naturalists Field Club show him contributing records of mosses, lichens, and flowering plants. A member of the Warwickshire Fungus Survey Group, he accompanied them on numerous forays in that county, learning from the expert members always present. He encouraged them to visit the valley on several occasions, even although the valley is in Vice County 39, Stafford, and not VC 38, Warwickshire. In 1986, John provided an introduction and list to the Sandnats Publication 'Wildlife of the Sandwell Valley'. He acknowledged the contribution of Mr. Henry White and Mr. Malcolm Clark in the compilation of his list. Since his death in 1998, Sandnats have maintained the tradition of regular Fungus Forays, including the biennial John Little Memorial Foray, aided by Dr. David Antrobus and the author, both of whom remain engaged in the long-term study of its mycology.

As can be seen, Warwickshire Fungus Survey Group members have played a significant part in the recording of the fungi of the Valley. Special mention must be made of the late Malcolm Clark, who added many records of the smaller cup fungi as well as slime moulds, both his particular specialities, and the late Mike Austin, compiler of the Staffordshire Fungus List, who contributed records in various groups.

Records are welcomed from all sources and have been contributed by various Sandnats members and occasional visitors to the site such as Mr N. Williams from Halesowen.

MODERN GROUPING

The groups are introduced in their traditional forms, and up to date classification noted. The Main List is set out in order of the most recent classification as delineated in the Dictionary of the Fungi and used by the British Mycological Society Database ('Mycorec').

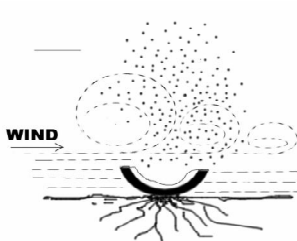
Where possible English Names are given as well as the Latin ones, but it must be stated that only a few traditional names exist. The recent publication 'Recommended English Names for Fungi', produced by the British Mycological Society with other interested groups, gives both traditional English names and a large number of made up ones, which the compilers hope will be accepted by mycologists. Those names are included in the lists, but it must be pointed out that only the commonest larger fungi are included

ASCOMYCETES (Cup Fungi, Flask Fungi, Morels)

The beginner finds it difficult at first to distinguish Ascomycetes from other groups, but after a relatively short time, it becomes fairly easy. The larger Cup Fungi are readily noted as being 'not toadstools', they shed their spores up into the air, and not from below as the mushrooms and toadstools do. A cup fungus such as Orange Peel, *Aleuria aurantia*, can be placed in an enclosed container for an hour or two, and then the lid removed quickly, and a cloud of spores will be shot out up into the air, seen as a white dust cloud. Some cup fungi are cups on stalks, and on some the cup is folded back, and contorted, giving us the Morels, usually seen in the Spring. The majority of cup fungi are relatively small, growing on dead wood, or on dead herbaceous plant

remains, and are best seen with a hand lens of x8 or x10 magnification. Many are incredibly beautiful, with bright colours and sometimes with eye-lash like hairs around the cup.

It needs a microscope to see the feature which defines an Ascomycete. The spores are formed in sausage shaped organs called Asci (singular Ascus), usually in rows, and most often in sets of eight. The tips of the Asci point upwards, and when the spores have ripened, the ascus swells, and the tip either breaks, or a tiny lid opens, and the eight spores are shot off into the air. The experiment with the enclosed cup fungus allows the pressure to build up in the asci, and when the lid is removed, the sudden change in pressure encourages a large number of asci to discharge at once.



A cup fungus

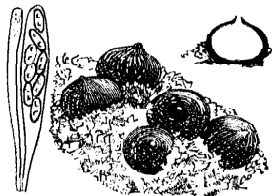


An ascus (x 250) Before & After ascospore discharge

The other major group of Ascomycetes are the Flask Fungi (Pyremomycetes), still having Asci, but the asci are contained in a closed flask like structure. When the ascus swells, it elongates considerably and pushes up to the neck of the flask, and discharges its spores out through the opening at the top. The flasks may be single, sitting on top of the dead wood or other substrate; they may be buried in the bark, or leaf, etc. with only the neck appearing as a minute black dot; or the flasks may be united, together in a flat structure, appearing as a black mat, pierced by tiny holes on its surface, where the spores are extruded. Instead of a flat resupinate surface, the fungus may be a round structure as in the case of cramp balls, *Daldinia concentrica*.

Truffles (Tuber spp.) are also Ascomycetes, but have decided to live underground, and the spores are no longer shot off, as these Fungi depend on being eaten by animals for their spore distribution, however, asci can still be seen under the microscope.

The Classification into Cup Fungi And Flask Fungi, while still very practical, has been superseded by a system which uses features of the Ascus and the structure of the flesh of the fungus.



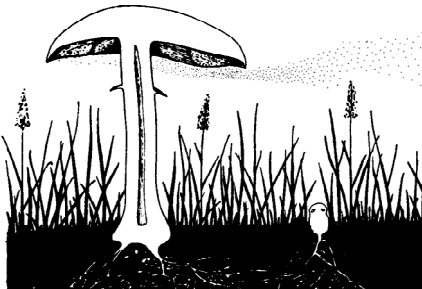
Rosellinia aquila
(a flask fungus)

LICHENS – A combination of a fungus with an Alga. As the fungus is the dominant member, and its classification fits in to the general system of Ascomycete classification, they are now included under Fungi, though those studying Lichens still consider themselves as Lichenologists, not Mycologists
The associated fungi of most Lichens are Ascomycetes (Ascolichens), but there are a small number of them with Basidia (Basidiolichens)

BASIDIOMYCETES (The Mushrooms, Toadstools Bracket Fungi, Fairy Clubs, Stomach Fungi and Jelly Fungi)

The mushrooms and/or toadstools are the group we are most familiar with. Some (a few) can be cultivated and are sold all over the world for eating. Many attempts have been made to grow other, more tasty mushrooms, but few have been successful. The distinction between the terms Mushroom and Toadstool is unclear, as some people consider the field or the cultivated mushroom (*Agaricus* spp.) to be the only true mushroom, while others consider any edible ‘toadstool’ as a mushroom. Some consider the terms completely interchangeable. The best term to use is “Agarics” for the gilled mushrooms and “Boletes” for the mushrooms with pores. Important features for classifying Agarics are spore colour, structure of the cross section of the gills and details of the basidia and the cystidia, sterile cells alongside the basidia, and presence of side swellings at the divisions between hyphae (septa) called Clamp Connections. With care, the discharge of spores from many Basidiomycetes can actually be seen in dark still conditions by shining a beam of light across the bottom of the fruit body, directing it towards the observer and moving it to the side and slightly down, still pointing at the centre of the fungus. The spores will be seen as tiny glistening specks dropping from the gills or pores in unbelievable numbers and wafting away with the slightest breath of wind.

Basidiomycete spore discharge



Marasmius oreades
(view of gills)

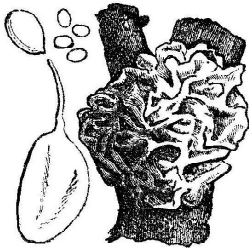
Russules and Milk Caps are separated out as their flesh structure is made up of round-ed cells while the other agarics have flesh of elongated cells.

Similarly, the distinction between the Agarics and Aphyllophorales (bracket fungi, resupinates, hydnums, polypores and fairy clubs) can be confusing. It nowadays always comes down to the microscopic structure of the fruit body, and details of spore colour and ornamentation. In the vast majority of cases, it is obvious: hydnums have

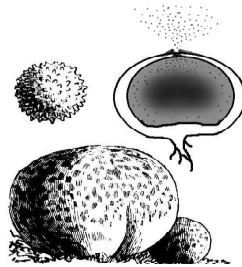
spines below, polypores have pores below, etc. and the fruit bodies are much firmer to downright hard to the touch. In modern polypore taxonomy the structure of the fruit body as seen under the microscope is all-important and the hyphae making up the flesh of the cap may have one, two or three different types of structure. There are thin walled septate, simple hyphae, called Generative Hyphae; thick walled simple hyphae, called Skeletal Hyphae and thick walled branched hyphae, called Binding Hyphae. The texture of the fruit body from soft, through cheesy, to rock hard, is related to some degree to the types of hyphae present. The structure (context) is described as being monomitic, dimitic or trimitic, according to these types.

The Fairy Clubs, (Clavariaceae) are simply stalked fungi, with very little differentiation between head and stem. They may have a reasonably defined head, or consist of simple more or less even cylinders growing from the ground. Some are branched and some are many branched like antlers.

Also included in the Basidiomycetes are the Jelly Fungi, so named due to the jelly- like consistency of many of the members. A few exceptions to this condition exist. The Tremellaceae are made up of four orders, the Exidias, with the spore bearing cells, the basidia divided vertically into four; the Auricularias, with the basidia divided horizontally into four, the Tulasnellas with the basidia branching into four parts, and the Dacrymyces- like species, with the basidia looking rather like tuning forks.



A jelly fungus
Tremella mesenterica



Scleroderma citrinum
(a puffball)

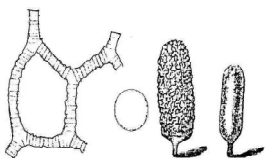
The stomach Fungi or Gasteromycetes are also Basidiomycetes, but the basidia and spores are developed inside the fruit body in Puff Balls and Earth Balls, and in the case of the Stinkhorns, in an evil smelling sticky 'goo'.

Puff Balls spread their spores by breaking up, or developing a pore through which puffs of spores are ejected on any physical disturbance such as rain drops or wind blow. Stinkhorns depend on insects which cannot resist eating the smelly sticky covering that they have, and distributing the spores this way.

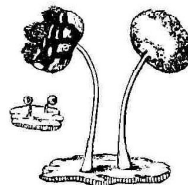
The final group of Basidiomycetes is the Rusts. These are microscopic fungi, often with complex lifestyles. They appear as spots on the leaves of plants and can be very destructive in cultivated plants and in garden plants.

MYXOMYCETES (The Slime Moulds)

The myxomycetes are a strange and interesting group, apparently half plant and half animal. We see them as small dry fruiting bodies of various forms, from small puff- ball like objects, on wood, to brightly coloured little stalked balls or cylinders on stalks, less than 10mm tall. They are so strange and they are now classified in a totally different Kingdom, the Protozoa, neither fungi nor animals. They continue to be treated as ‘honorary fungi’ for the purposes of recording.. They develop from spores into primitive animal forms, amoeba- like and swimming about in water in their substrates, eating bacteria. They then change their form by coming together in huge numbers to form a sort of slime, which still feeds by engulfing food as it moves around, flowing slowly like a large Amoeba. The organism finally decides that it should reproduce, and the slime emerges from within the dead wood, or whatever substrate it was growing in, and climbs up to a dry spot where the final transformation takes place. It slowly changes into the fruiting body we see, containing thousands on more of dry spores borne on minute threads which expand and contract, contorting, and releasing the spores to the air.



Arcyodes incarnata
(a slime mould)



Physarum nutans
(a slime mould)

ARRANGEMENT USED IN THE NOTES AND THE LIST.

A revolution is in progress over the classification of Fungi and related groups. Slow progress has been made over a number of years. The arrangement here follows that of the British Mycological Society in the Society Fungus Database MYCOREC.

The list of English Names are those proposed by the British Mycological Society, Plantlife and English Nature, published in 2004. It contains all the traditional names along with some new ones introduced as encouragement to naturalists to become interested in fungi.

As some recent changes have occurred in regard to a few commonly known generic names, a notes column is included in the list, with the more familiar genus name noted. This column may be used as a check off box for individual identifications.

References are given in the notes to two useful books with coloured photographs of fungi, both of which are available at reasonable cost.

RP – Roger Phillips, *Mushrooms of Great Britain and Europe*. Ed. 1 Pan Books, London also (Various publishers in several editions)

MJ – Michael Jordan, *The Encyclopedia of Fungi of Britain and Europe*. Ed 1, David and Charles, 1995; Revised Edition, Francis Lincoln, London, 2004.

An inclusive bibliography of references used and useful books for identification is included at a later stage.

NOTES OF SOME FUNGI FOUND IN THE VALLEY.

The arrangement follows the general systematic list.

FUNGI IMPERFECTI (Simple fungi with as yet no known perfect stage)

Torula herbarum A common mould which grows on dead herbaceous plants. The colony is olive when young, becoming black and velvety, with age. It can consist of small spots, or encircle stems, extending along for several centimeters. The spores are dark, and in long branching chains.

ASCOMYCETES

The Classification into Cup Fungi And Flask Fungi, while still very practical, has been superseded by a system which uses features of the Ascus, and the structure of the flesh.

DOTHIDIALES (Flask Fungi with spore bearing Asci with two coats, and fruiting body with numerous spore generating units immersed in a single crust)

The Common Tarcrust, *Diatrype stigma* is a black crust covering small dead branches of deciduous trees, usually Hawthorn. The black crust has minute pimples all over, with small holes from where the ascospores are ejected. If such a crust is seen, and there are minute red jelly like excrescences, then the identity is confirmed as the Common Tarcrust. It is specifically parasitised by another Ascomycete, *Nectria epispheeria*.

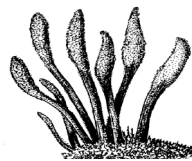
ERYSIPHALES – The Powdery Mildews.

The Oak Mildew, *Microsphaera aliphitoides* is very common on Oak leaves. It is a fine powdery coating over the leaves and can completely cover each leaf of a young oak seedling.

HYPOCREALES – Saphrophytes & Parasites with brightly coloured “flasks”

Scarlet Caterpillar Club *Cordyceps militaris* (RP 281, MJ 71)

Rarely seen. Though it is said to be common, it can be difficult to spot. It is a small slender club shaped fungus up to 50mm. tall, with a head only slightly swollen, red or orange red. The head is somewhat rough with the ascospore producing pores.



**Cordyceps
militaris**

It usually grows in grass, but it is not growing from the grass roots. If the fungus is gently prised from the ground, it will be found to attached to a larva or pupa of a member of the Lepidoptera. A spore has landed on the insect, germinated and grown into its body, killing it, then filled the body with mycelium, and finally sprouted the fruit body to release spores to carry on the cycle.

LECANORALES – Lichens with fruiting bodies like small cup fungi

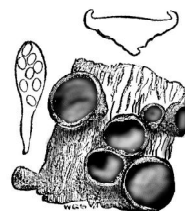
Cladonia chlorophaea is quite common, and grows on peaty soil and rotting wood and at the base of trees with acidic bark. It is composed of grey-green squamules, with wine - glass shaped green bodies arising from the surface.

LEOTIALES (Cup Fungi and Earth tongues) – With Asci which have a single coat, and break open when the spores are released. The ascospores are hyaline under the microscope.

The Snowy Disco, *Lachnum virgineum* (was *Dasyscyphus*) (MJ 62) are attractive little white cups with a cream coloured disc and otherwise covered with white hairs, growing on dead twigs and stems often on *Rubus*, but also on other vegetable debris.

The Purple Jellydisc *Ascocoryne sarcoides* (was *Coryne*) (RP276, MJ 64) is a reddish purple cup shaped gelatinous cup fungus usually found growing on stumps and fallen *Quercus* logs. Care must be taken in identification as a close relative, *Ascocoryne cylichnium* (MJ 63) looks very similar, but has much larger ascospores.

The Black Bulgar, *Bulgaria inquinans* (RP 276, MJ 68) is a black gelatinous cup fungus, with the cup only slightly concave, up to about 40mm diameter, growing on fallen trunks and branches of various trees, but usually on *Quercus*.



Bulgaria inquinans
(a cup fungus)

Geoglossum fallax is one of the **Earth Tongues**. Earth tongues have black velvety slender stalked fruit bodies, with slightly swollen heads and are up to about 80 mm tall. They are found growing in grass and can be quite difficult to spot. They all look very similar, and must be identified using the microscope.

PELTIGERALES – Lichens usually leaf-like, with a covering, splitting open to expose the spore bearing surface.

The Dog's Tooth Lichen, *Peltigera canina*, is a large flat, leaf-like Lichen, with broad branching lobes, growing on the ground. It is brownish green when moist, becoming whitish-grey on drying. The underside is white and felt-like, with root like structures anchoring the plant to the soil.

PEZIZALES (Cup Fungi and Morels) With asci which have a lid, which hinges open when the spores are released. They are said to be “operculate” - others have drawn-out asci with a narrow opening through which the spores are discharged.

The White Saddle, *Helvella crispa* (RP 267, MJ 52) has a white or cream fluted stalk, with a similarly coloured saddle shaped head.

The Morel, *Morchella esculenta* (RP 264, MJ 56)

can grow up to 200 mm tall, and has a very brittle, hollow furrowed white stem. The cap has honeycomb-like narrow ridges, and is greyish but becomes yellow- brown. It is usually solitary, growing under trees in open countryside.



Morchella esculenta
(a morel)

The Orange Peel Fungus, *Aleuria aurantia* (RP 274, MJ 43) is quite common and certainly can be mistaken for orange peel from a distance. It usually grows in clusters on bare soil and in open places. It is undulating, cup shaped and bright orange.

The Common Eyelash, *Scutellinia scutellata* (RP 273, MJ 51) is a delightful little cup fungus. It is about 10mm. diameter and is saucer shaped, with a bright red disc. All round the disc are stiff dark brown to blackish pointed hairs. The fungus grows on very wet, sodden wood, and is fairly common, but like all the small cup fungi, it must be searched for.

RHYTISMATALES (Tar Spots) Parasites with a black spore producing zone on the surface, or immersed in the host tissue.

The Common Tar Spot, *Rhytisma acerinum* (MJ 70) is one of the commonest Ascomycetes seen. Almost every Sycamore tree will have its leaves covered by this fungus, in the form of black, more or less circular spots. Strangely enough, the imperfect form is usually seen, having “conidiospores” only. The perfect stage with ascospores occurs in the Winter when the leaves have fallen to the ground. In the Valley, Tar Spot is found on Sycamore, *Acer pseudoplatanus* and, less commonly, on Field Maple *Acer campestre*.

TELOSCHISTALES – Lichens, which are often brightly coloured, with small cups with asci which release spores through an apical slit.

Xanthoria parietina grows on walls and on roofs, and bark which is rich in nutrients. It is made up of of bright orange-yellow lobes forming large circular rosettes, nearly always with similarly coloured cup fungus- like bodies present.

VERRUCARIALES – Encrusting Lichens, with flask-fungi like fruiting bodies.

Verrucaria nigrescens can grow on cement and on limestone, and is quite common. It forms irregular patches, with a brownish-black top layer, growing on a thin black under layer. Spores are produced in small black flask shaped structures on the surface.

XYLARIALES (Dark or black Pyrenomycetes or Flask Fungi with non- septate dark coloured spores with “flasks” either single, or embedded in a dark hard structure, the “stroma”.)

Cramp Balls (or King Alfred’s Cakes), *Daldinia concentrica* (RP 281, MJ 74) are hemispherical excrescences, usually found on dead branches of Ash trees. They start off reddish brown, and become shiny black, up to 40mm. diameter. The fungus is very common and was said to cure cramp by holding a fruit body under one’s arm. It is interesting to cut a fruit body in half and observe the interior structure. There are concentric rings of material and in the outer spore- producing layer, the little “flasks” can be seen, along with the minute pores opening out to the outer surface, where the ascospores emerge.

The Birch Woodward, *Hypoxylon multifforme* (MJ 76) is very common on fallen Birch logs. It forms an elongated black cushion like crust, covered in small pimples, growing across the

axis of the wood, and can extend over a large area.

AGARICALES (Fungi with gills, with the gill structure being an extension of the cap flesh structure, and with a distinct layer on the gill faces, separate from the internal structure, divided on the basis of microscopic, structural and biochemical features).

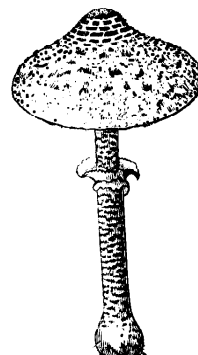
AGARICEAE (Mushrooms in the strict sense, and Parasols, with blackish or white spores and free gills, with a ring on the stem)

The Field Mushroom, *Agaricus campestris* (RP 162, MJ 223) is the best known and loved edible mushroom. The cap is dome shaped and later on expands. It is white at first then yellows somewhat, and can be smooth or with scales. The stem is even, or slightly tapered towards the base, and has a thin white ring around it. The crowded gills are pink to start with then gradually become brown as the spores ripen. It used to be said that it only grew in fields where horses were kept, but this is not entirely true as we still find the mushroom, even though there are much fewer horses in fields these days. It is edible, popular, and good, with much better flavour than the cultivated varieties sold in shops and markets. There are a number of edible mushrooms in the genus *Agaricus* but there is one to be avoided, and it is important to be able to distinguish it.

The Yellow Stainer, *Agaricus xanthodermus* (RP 167, MJ 228) is mushroom- like, but the gills start white, become pink, then finally brown. It can grow in meadows, but is usually found in, or on the edge of woods. It is taller than the field mushroom, with creamy white cap and stem. The cap is often somewhat flattened at the top, and the stem has a much more substantial ring around the stem than the field mushroom. The smell is slightly unpleasant, as though it has slightly “gone off”. The most important character to note is the colour change in the flesh at the base of the stipe if it is scratched or damaged. **THE FLESH TURNS INSTANTLY INTENSE YELLOW.** If it is eaten, it causes sweating, flushing, and severe stomach pains, but is not fatal. Some people are not affected.

The Stinking Dapperling, *Lepiota cristata*, (RP 28, MJ 216) is a miniature parasol. The cap is white with tan scales, but the centre boss (umbo) is entirely tan. The cap is only up to 50mm. diameter The gills are white, and there is a minute space where they approach the stem. They are not joined to the stem and are said to be “free”. The spores are white. The stem is white, but buff at the base, and has a white ring towards its top. The fungus has a particular, somewhat unpleasant smell, which once sampled will be remembered and serve to identify the fungus easily in the field.

The Parasol, *Macrolepiota procera*, (RP 25, MJ 219) The true Parasol is a large fungus. It can grow to 350mm. tall, with a cap up to 250mm. in diameter. It is absolutely distinctive, especially in the juvenile state when it is shaped like a giant matchstick. The cap- is scaly, brown and the stem develops brown snake- like patterns. The ring is double and becomes free of the stem. It grows in open woodland and pastures. The cap is attached to the stem with a sort of ball and socket joint, and it easily separates from the stem.



**Macrolepiota
procera**

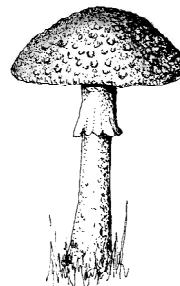
AMANITACEAE (Fungi with white spores, free gills, a veil covering the young fruit body before it expands. The main character of distinguishing is the structure of a gill in section. The elements grow down and out from the top of the gill (an example of “divergent trama”).

Fly Agaric – *Amanita muscaria*. (RP 15, MJ 197) Absolutely unmistakable, the Fly Agaric grows under Birch trees, and also, less commonly with Pine trees, or rarely where Pine trees have been. With its bright red cap, covered with white patches of a skin like material, it is instantly recognised. Unfortunately it is often the target of well aimed kicks by those afraid of it and not appreciating its beauty. It starts off as a small white knob in the grass and expands (‘mushroom growth’ is really an expansion, with cells expanding by absorbing water) The cap which is red, bursts through the covering white skin, which breaks up more or less evenly to leave the white patches adhering. Heavy rain, however will wash away the white particles, so that there can be a red naked cap, and one must look underneath to confirm the identity. Where the cap has burst through the covering veil, as well as the patches on the cap, a similar pattern is left at the base of the stem, the white patches there, adhering in ring like zones. When the cap has burst through the covering (universal) veil, at first another skin covers the underside of the cap from the edge to the cap to the stem. This protects the expanding gills, which will drop innumerable spores, from any small creatures which may like to eat or lay eggs in the flesh of the fungus. When the gills are ready to drop spores, cap opens out, and this skin is ruptured, breaking more or less cleanly at the cap margin, leaving a fleshy ring attached to the stem.

This fungus, along with many many others is said to be Mychorrizal. The mycelium, the real part of the fungus grows underground and attaches itself to the roots of a convenient tree, and plugs itself in, to exchange nutrients with the tree. Fly Agaric will only live with Birch and Pine, and the relationship is of mutual benefit to tree and fungus. Many toadstools have a mychorrizal relation ship with trees, some only with specific trees and others with any tree. There is some question now about relationships with other plants, and whether such relationships are occurring between vascular plants also.

Fly Agaric is not edible, but there is a drug effect that was used by the natives of the Camchatka peninsula in Russia, it is hallucinogenic, but experimentation is not to be done as some fatalities have occurred. Fruit bodies can be used for a useful purpose, and this is where the popular name comes from. If one collects one or two caps and cuts them up or mashes them, and puts them out in a dish of milk, flies and other insects will be attracted and will be killed by this concoction. The Genus *Amanita* contains a number of deadly toadstools and white spored mushrooms with a cup or ring like zone at the base of the stipe, with a ring around the stipe, should not be put in baskets along with species to be eaten.

The Blusher, *Amanita rubescens* (RP 17, MJ 198) The Blusher can be quite variable, but it is one of the commonest of Amanitas and the flesh reddens to a greater or lesser extent making it easy to recognise in the field. The cap is rosy brown with reddish patches. The stem is similarly coloured below the ring and is swollen at the base. The volva or cup at the base is not distinguishable, but consists only of some patches. The Blusher is edible, but not recommended for two reasons: the genus *Amanita* contains some of the most poisonous fungi known and careless identification could prove to be fatal and additionally, the flesh of Blusher always seems to absolutely riddled with maggots.



Amanita rubescens

BOLBITIACEAE (With brown to rust coloured spores with the flesh of the cap having a layer of elements with ends at right angles to the cap surface (“Cap cuticle hymeniform”).

The Yellow Fieldcap, *Bolbitius vitellinus* (RP 154, MJ 248) is a fragile, bright chrome yellow little toadstool growing in rich or manured grass and rotting straw. The cap flesh is very thin, and the cap is grooved towards the margins. The gills are yellow, but become rust- coloured or cinnamon.



Bolbitius vitellinus

COPRINACEAE (Ink Caps and Brittlestems, with dark brown or black spores, fruit bodies may be deliquescent at maturity, or may not. The gills are attached to the stem for their full width “adnate” or be almost free.)

The Common Inkcap, *Coprinus atramentarius* (RP 178, MJ 228) has a conical grey brown semi grooved cap. The fruit body is surprisingly heavy for its size. The reason is that the gills, while very thin and of parallel sides, are extremely closely packed. In reality there are swollen cells protruding from the faces of the gills that hold them apart. In other groups of toadstools, the gills are tapered, and spores are shot off at random from all over the gills, being allowed to drop down between the gills into the air. With this *Coprinus*, and many others, the spores only ripen at the extreme bottom edge of the gills, where they can fall away unimpeded. The bottom edge of the gills then dissolves away into a liquid, which looks to be black, and does contain some spores. The layer immediately above then ripens and discharges its spores, and so on up the gill until the gills have disappeared and only the remains of the cap is left. It is a myth that Ink Caps shed all their spores in the black liquid- by far the greater amount goes into the air. This method of shedding spores means that the alignment of the gills is less important than in other groups where the spores need a clear path between the gills to avoid the gill faces below. It also means that the greater area of closely packed gills can produce many more spores.

If the black liquid is collected from a range of Ink Caps, a genuine ink can be prepared simply by adding a preservative. *Coprinus* spores are distinctive for different species, so this ink can be used (and has been) for the signing of important documents where the ink can be examined microscopically to check the relative percentage of different spores and thus verify the document. The Common Inkcap has another valuable characteristic. If consumed along with alcohol, symptoms of nausea and general palpitations are experienced. This has caused it to be used as a cure for alcoholism.



Coprinus atramentarius

The Lawyer’s Wig, or Shaggy Ink Cap, *Coprinus comatus* (RP 177, MJ 229) is easy to recognise from the shape of the cap and its covering of large white shaggy scales, which can make it look exactly like the rear view of a judge’s head. It can grow up to 400mm. tall and the cap gradually disappears upwards as the gills deliquesce. It grows in grass, and seems to like disturbed ground, so troops of them are found on lawns in front gardens of houses.

The Weeping Widow, *Lacrymaria velutina*, (RP 176, MJ 237) has an ochre brown to tan cap which is covered in woolly fibrils. The cap margin has a woolly toothed edge. The stem is whitish for the most part, but becomes cap coloured towards the base. The gills are mottled purple brown, and have a lighter coloured edge. A good character for recognition is the fact that the gills ‘weep’, exuding drops of moisture. The Weeping Widow usually grows amongst rough grass.

ENTOLOMATACEAE (Pink spored toadstools, with the spores having distinctive shapes, either prism like, faceted or ridged.)

The Shield Pinkgill, *Entoloma clypeatum* (RP 114, MJ 207) occurs early in the year, spring to early summer and is associated with members of the Rosaceae, such as hawthorn, cherry or rose. It has a brownish grey cap with fibrils radiating from the centre and the margin is wavy. It usually has a slight bump at the centre of the cap (umbonate) The gills start off grey, then become pink with the spores. It smells of “new meal” a smell quite common in fungi, and soon becomes familiar, even if one has never visited a flower mill.

Entoloma nidorosum (RP 115) is a small to medium sized fragile pale grey toadstool which grows in damp broad leaved woods, and has a distinctive nitrous smell when fresh. The gills are pallid, and turn pink with the spores.

HYGROPHORACEAE (Waxcaps, a distinctive group of mainly grassland species with usually bright coloured waxy caps. With white spores, and a defining character in the spore bearing elements (basidia) which are much longer than other Agaric groups).

The Blackening Waxcap, *Hygrocybe conica* (RP 60, MJ 133) has an acutely conical orange red cap and a yellowish stem, turning black gradually, or with handling. Until recently, the very similar fungus, *Hygrocybe nigrescens*, was considered to be separate, but they are now considered to be one species. *H. conica*



Hygrocybe conica

The Meadow Waxcap, *Hygrocybe pratensis*, (RP 60, MJ 137) is a medium sized waxcap, with tawny orange convex cap and relatively fat, similarly coloured stem. The gills are very widely spaced, and run down the stem (decurrent)

The Parrot Waxcap, *Hygrocybe psittacina*, (RP 64, MJ 138) is a green slime covered toadstool and is very easy to identify. However, the green sliminess is washed off by rain, and the underlying cap becomes yellow. There will always be traces of green on the stem and under the cap. The gills are yellow, but have a slight greenish tinge.

PLUTACEAE (Pink spored Fungi with fibrous texture and free gills. A cross section of the gills shows a structure with elements apparently growing from the outside towards the centre (Inverse Trama))

The Deer Shield, *Pluteus cervinus*, (RP 119, MJ 201) grows on wood and woody debris, which may be buried and has a streaked dark brown cap. The gills are pink and free, and the stem white, with dark fibres running down. It has a faint smell, rather like potato.

The Velvet Shield, *Pluteus umbrosus*, (RP 119, MJ 204) grows on dead deciduous wood, and has a cap decorated with dark brown veined scales. The gills are first whitish but become pink from the spores, and have brown edge. The stem is white and has brown scales at its base. There is a faint smell of garlic.

The Velvet Shield, *Volvariella bombycina* (RP 111, MJ 204) is a very rare fungus. It is quite large, up to 200mm in diameter, and has a silky fibrous cap, which is bell shaped (campanulate). It is white, but the covering fibres have a yellowish tinge. The stem is also white, and has a conspicuous bag (volva) at its base. The gills are white, becoming pink, free and close together (crowded). It grows on very rotten wood, typically in the hollowed out trunks of diseased broad- leaved trees.

The Silky Rosegill, *Volvariella speciosa*, (RP 112) is another rare fungus. It grows on well manured ground, compost heaps, and on rotting straw. Whilst edible, it is not recommended as it looks rather like an *Amanita* (with pink rather than white spores). The cap is viscid, brown at the centre, and otherwise white. The white stem tapers upwards, and has grey bag (volva) at its base. The gills are white, becoming dark pink.

STROPHARIACEAE (Toadstools with brown to purplish black spores, frequently having elements in the spore bearing surface which stain yellow in ammonia and cotton blue (chrysoconidia).

Sulphur Tuft, *Hypoholoma fasciculare*, (RP 159, MJ 259) is one of the commonest of toadstools growing on dead wood. The cap is sulphur yellow, brownish towards the centre. The spores are purplish brown. It grows in densely crowded groups on both coniferous and deciduous wood. The stem has a faint ring like zone and is cap coloured, with darker brown near the base. It has a bitter taste, which can distinguish it from the closely related *Hypoholoma capnoides* (RP159)

The Sheathed Woodtuft, *Kuehneromyces mutabilis* (RP 156 as *Galerina*, MJ 260) is also very common, tufted on deciduous stumps and logs, with a preference for Birch. The cap is bright tan, but dries to a pale colour from the top, giving a banded appearance. The spores are reddish ochre, the gills are pallid, then take up the spore colour. The stem has a distinct ring, and is dark tan below merging into almost black at the base.

The Egghead Mottlegill, *Panaeolus semiovatus*, (RP 180, MJ 258) grows on dung. It has a smooth shiny pallid cap which crazes or wrinkles. The gills are mottled dark brown, then black with the black spores. It grows to about 100mm. tall, and has a brittle white stipe.

The Bonfire Scalycap, *Pholiota highlandensis*, (RP 146 as *P. carbonaria*, MJ 262) grows on old bonfire sites having a tan, slimy cap and clay brown or cinnamon gills. The spores are rust coloured. The stem is yellow, but brownish below a ring zone.

The Shaggy Scalycap, *Pholiota squarrosa*, (RP 145, MJ 262) has a convex cap with its margin inrolled. It is pale straw coloured with a dense covering of upturned red brown scales on cap and stem. The stem has a ragged ring. It forms dense clusters low down on living broad- leaved trees, with a preference for Ash. It has been found, rarely, on conifers.



**Pholiota
squarrosa**

The Magic Mushroom or Liberty Cap, *Psilocybe semilanceata*, (RP 173, MJ 264) grows in grass in lawns and pastures. It is a small toadstool with a distinct point at the summit of its cap, which is ochre brown, drying buff. The name Liberty Cap stems from its shape, that of the headgear worn in France at the time of the French Revolution.

TRICHOLOMATACEAE (Fungi with white or near white spores, and a mixture of other features, a heterogeneous group)

St. George's Mushroom, *Calocybe gambosa*, (RP 41 as *Tricholoma*, MJ 143.) A large creamy white agaric traditionally appearing on St. George's Day 23rd April. It grows normally in pastures, but is occasionally found in woodland. Both cap and stem are whitish cream, sometimes tinged brown. The flesh is white and firm. It smells and tastes of meal. The gills are white, not very deep, and very close together, with a slight notch where they join the stem

The Anise Funnel, *Clitocybe odora*, (RP 49, MJ 148) has a greenish appearance. The stipe also has greenness about it, and has a fine white down at the base. The gills are similarly coloured, running down the stem for a little way. There is a strong smell of aniseed in the fruit body. It grows in leaf litter in deciduous woodland.

The Clouded Funnel, *Clitocybe nebularis*, (RP48, MJ 148) is funnel shaped, with a wavy margin and the grey brown cap has a gentle swelling at its centre (umbo) The stem is paler than the cap and is distinctly swollen towards the base. The gills are close together, whitish, with a yellow flush, and run down the stem for quite a way. The common name comes from the supposed likeness of the cap to dark clouds in the sky.

The Velvet Shank, *Flammulina velutipes*, (RP 58, MJ 187) is tan-yellow, darker at the centre, smooth and slimy. The distinctive stem is yellow at the top, merging into a dark brown velvety texture below. The gills are pale yellow. The fungus grows in dense clusters on decaying deciduous trees.

The Wood Woolly Foot, *Gymnopus (Collybia) peronatus*, (RP 57, MJ 153, both as *Collybia*) is tan to darker brown and somewhat wrinkled. The stem is yellowish and half- covered with white or yellowish woolly hairs. The gills are yellow brown or tan and are attached to the stem by their full width (adnexed) It grows in leaf litter in deciduous woods.

The Amethyst Deceiver, *Laccaria amethystea*, (RP 53, MJ 184) is a diminutive deep purplish lilac toadstool, which becomes paler on drying. All parts of it share the same colour, and it is easy to recognise in the field. The surface is slightly scurfy, and the slim stem has white fibrils. It grows in both conifer and deciduous woods.

The Wood Blewit, *Lepista nuda*, (RP 113, MJ 156) is another fungus with lilac colours, which make it easy to identify. It can be quite large, up to 120mm diameter and has a bluish lilac cap which becomes more brownish. The stem is also bluish lilac, with fibrils and is slightly swollen towards the base. Wood Blewits are good edible fungi, and it is said that they were at one time sold in markets here in the Midlands.

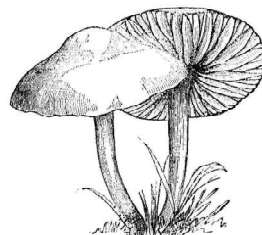


Lepista nuda

The Giant Funnel, *Leucopaxillus giganteus*, (RP47, MJ 158) is truly a giant among agarics, it grows to over 300mm. in diameter and is usually found growing in rings of several metres diameter. It is an ivory colour, is funnel shaped and flushes slightly tan in colour. The edge of the cap is inrolled. The gills are cream coloured, very close together, not very deep, and run down the stem.

The Fairy Ring Champignon, *Marasmius oreades*, (RP 66, MJ 190)

is common in short grass in pastures. It is tan coloured when damp, and dries out to a buff colour from the margin. The stem is whitish or pale buff and is very tough. In age, the cap turns up at the edges, giving a coarse look to the gills. This is the best known and commonest ring forming agaric. It is edible said to be best added to stews. Before the fungus appears, the grass shows variation in richness and starvation, which gave rise to many suggestions as to why this should happen, ranging from fairies (or witches) dancing, to lightening strikes and other more bizarre explanations. All was finally resolved by the physician William Withering of Edgbaston Hall, Birmingham, who realised the fungus was responsible.



Marasmius oreades

The Clustered Bonnet, *Mycena inclinata*, (RP 72, MJ 168) is another small fungus forming dense clusters on stumps, in this case, Oak. It is a small bell shaped bay-brown agaric, with a darker centre. The cap has minute lines and is somewhat folded towards the margin, which overhangs somewhat. The stipe is white at the top and lower down is bay brown and roots into the substrate. The gills are whitish first, then become flesh-pink.

The Pine Cone Cap, *Strobilurus tenacellus*, (RP 76 as *Pseudohiatula*, MJ 194) grows only on buried pine cones, attached by roots which may be quite long. It is only found in the Spring. The cap is brown, with a paler centre, starting convex, and flattening out. The gills are white. It grows up to 25 mm. in diameter and is up to 80 mm tall.

The Butter Cup, *Rhodocollybia (Collybia) butyracea*, (RP 56, MJ 151, both as *Collybia*) is common and is a variable species. It grows in litter, mainly in coniferous woods, but is also, less commonly seen in deciduous woods. The cap is greasy, dark reddish brown when damp, and on drying out becomes ivory coloured. When partially dry the two shades are present, giving the strange “buttery” feeling and appearance. This is due to the cap cells being water absorbent, with the presence of water in the cap cuticle altering the cap colour. This type of cap is said to be “hygrophanous”. The stem is cap- coloured and swollen at the base, which is covered with white woolly hairs.

The Spotted Toughshank, *Rhodocollybia (Collybia) maculata*, (RP 54, MJ 153, both as *Collybia*) grows in woodlands, and under Bracken in heaths. It is all white, but soon develops tan-brown patches all over. The gills are white, also spotting, and are closely packed (crowded).

The Wrinkled Peach, *Rhodotus palmatus*, (RP 187, MJ 175) used to be rare, but then became fairly common, but is getting rare again. It grows on elm logs, and after the incidence of Dutch Elm Disease, there was an abundance of dead elm wood for it to grow on. Now most of them have gone, so the fungus is rare again. It is a distinctive

agaric , with a cap up to 100mm. diameter, peach to apricot coloured and distinctly wrinkled. It is covered with a gelatinous pellicle which can be separated from the cap. The stem is white or pink, covered with white fibrils.

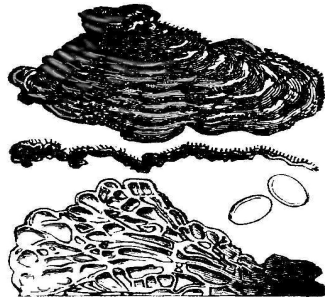
The Birch Knight, *Tricholoma fulvum*, (RP 38, MJ 179) is a large reddish-brown agaric, with yellowish gills. The cap has fine radiating fibrils, and is slightly sticky. The yellowish gills are notched where they join the stem (emarginate) and develop brown spots with age. The flesh is whitish in the cap and yellow in the stem.

The Rooting Shank, *Xerula (Oudemansiella) radicata*, (RP 33, as *Oudemansiella*, MJ 193) usually grows in association with Beech trees, and has a long rooting stem, which leads to the root of a friendly tree. The cap is olive brown, slightly damp and is radially wrinkled, and has a central boss (umbo). The gills are white, quite thick, and fairly well separated (distant).

AURICULARIALES (Jelly Fungi with the spores borne on basidia which are transversely divided)

Jelly Ear or Judas' Ear, *Auricularia auricula-judae*, (RP 262, MJ 373) is a gelatinous brown ear shaped fungus, which usually grows on dying branches and trunks of Elder, and occasionally on other trees. It is tan on the top with a fine greyish down, and on drying becomes wrinkled like an ear. It is shaped like an inverted cup, and the inner surface is grey-brown. It is edible and often included in Chinese cuisine.

The Tripe Fungus, *Auricularia mesenterica*, (RP 263, MJ 373) grows on logs and branches usually on dead wood, flattened against the wood (resupinate), but with caps growing out at the top. (reflexed) The tops are brownish grey, palid at the margin which is covered in hairs. The under side is reddish purple and wrinkled. The whole fungus is gelatinous.



Auricularia mesenterica

BOLETALES (Fungi generally with pores, but with some with gills. The structure is different from the Agaricales in that the gills or pores separate easily from the main flesh of the fungus (non-homogeneous structure)

The Penny Bun or Cep, *Boletus edulus*, (RP 193, MJ 337) is a large stout Bolete with a dirty brown bun shaped cap. The pores are white or cream, and discolour greyish yellow. The stipe is bulbous and has a white network on top of the pallid brown flesh. It grows in soil under deciduous or coniferous trees. A good and popular edible mushroom, the flavour is stronger than the field mushroom and is included in dried form in some packet mushroom soups. There was a court case a number of years ago, where there was doubt if ceps could be described as mushrooms when included in mushroom soup. It was ruled that it was acceptable.

The Orange Birch Bolete, *Leccinum versipelle*, (RP208, MJ 345) grows specifically under Birch Trees. The cap is tawny orange, convex, with the cuticle overhanging the cap

margin. The pores are whitish or buff. The stem is more or less even and is pallid white, covered with brownish black wooly scales. It is large, up to 200mm. diameter and 200mm. tall.

The Larch Bolete, *Suillus grevillei*. (RP 216, MJ 349) grows exclusively under larch, in a mycorrhizal relationship. In the season, one only needs to look in the ground under larches and this fungus will probably be seen. The cap is yellow, and very sticky, there is a ring around the stem. The changes in name of this fungus are quite interesting, name changes being fairly frequent in the fungus world as more detailed investigation is carried out. For many years this fungus was known as *Boletus elegans*, named by Elias Fries, in 1838. Previous to this, a bolete found in Scotland was named *Boletus grevillei* in 1832 by Johann Friedrich Klotzsch, who was working at the Glasgow University Herbarium at the time. It was thought that *B. grevillei* could not be the same as *B. elegans*, as there were no larch woods in Scotland at that time. However, investigation by Roy Watling in Edinburgh proved that larches had been introduced by the Duke of Atholl in Dunkeld in 1738, and this was where Klotzsch found the fungus. Because he described it earlier than 1838, the name had to be changed to *B. grevillei* ("Rules is rules"). The Genus *Boletus* has subsequently been split up into several Genera, and so the fungus is now placed alongside all the Boletes with sticky caps in the Genus *Suillus*. It can be found in the valley where there are larches.

The False Chanterelle, *Hygrophoropsis aurantiaca*, (RP 66, MJ 333) is vaguely similar to the Chanterelle, *Cantharellus cibarius* (which has not yet been recorded in the Valley) The False Chanterelle is funnel shaped, and is orange yellow, but close inspection of the gills shows that they are genuine gills as opposed to ridges or folds. It has a mushroom smell, while the Chanterelle smells of apricots, but is not good to eat.

The Brown Rollrim, *Paxillus involutus*, (RP 142, MJ 331) has a hazel or snuff- brown cap, first convex, then flattened, finally depressed at the centre. The cap margin is tightly inrolled. The stem is similarly coloured, but darkens on handling. The gills are narrow, and run down the stem (decurrent) and are pale ochre, also bruising chestnut. It is very common and grows in deciduous woods, particularly under Birch trees. It is poisonous.



Paxillus involutus

The Bay Bolete, *Xerocomus badius* (RP 196, MJ 336, both as *Boletus*) is a large Bolete with a bay-brown cap and lemon yellow pores which turn blue-green where bruised. The cap is bun shaped and quite viscid when damp. The stem is paler than the cap, and has fine cottony fibrils. It grows in deciduous and coniferous woods.

The Ruby Bolete, *Xerocomus rubellus*, (RP 204, as *Boletus versicolor*, MJ 341, as *Boletus*) is a rare and attractive Bolete which grows in grass under deciduous trees. It has a striking red downy cap, which cracks, and bright yellow pores. The stem is yellow or buff, with red fibrils from half way down, and pale yellow at the base. It has been found in Dartmouth Park in West Bromwich.

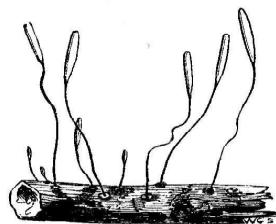
CANTHARELLALES (Includes fungi with folds and with spines, as well as the Fairy Clubs)

The Apricot Club, *Clavulinopsis luteo-alba*, (RP 259, MJ 86) is a small club fungus, yellow, and pale towards the apex. It is a simple, single unbranched club, slightly swollen at the top, and tapering down towards the base. It is found in short grass.

The Pipe Club, *Macrotyphula fistulosa*, (RP 256 as *Clavariadelphus*, MJ 86) is tiny dirty yellow, and spindle like, and grows on twigs of broadleaved trees, usually Beech. It is up to 8mm. diameter and 25mm. tall.

The Grey Coral, *Clavulina cinerea*, (RP 259, MJ 87) is a tallish, up to 100mm. much branched, grey fungus which grows in woodlands, often at the side of paths. It is ash-grey, with tufted, antler like arms. The tips of the arms are blunt, without fringes. It can be confused with the **Crested Coral**, *Clavulina cristata*, RP 259, MJ 87, as *C. coralloides*) but that grows in conifer woods and is lighter in colour and has fringed tips of the arms.

The Redleg Club, *Typhula erythropus*, (RP 259) is a tiny club shaped fungus growing on dead leaves and other herbaceous debris. It has a white, fertile head and a stem which is reddish brown and thread-like. It grows from a black ball of tissue (sclerotium) on the substrate. It is only 30mm. tall.



Typhula erythropus

CORTINARIALES (A heterogeneous group, with brown, rust coloured or violaceous to blackish spores, and includes the genera, *Cortinarius*, *Inocybe*, *Crepidotus*, *Hebeloma*, *Naucoria* and *Tubaria*.)

The Common Webcap, *Cortinarius cinnamomeus*, (RP 140, MJ 280) is a member of the sub-genus *Dermocybe*, having yellow, orange or olive gills. The Common Webcap has an olive brown cap, orange cinnamon gills. The cap has fine fibrils all over. The stem is ochre streaked with fine fibrils and has a ring like zone with fibrous scales below. Members of the Genus *Cortinarius* have spider's web like coverings growing between the edge of the cap and the stem (the cortina), or as a ring-like zone on the stem. The cortina is usually obvious in young, unopened fruit bodies, and can often be seen in mature specimens as fine threads at the edge of the cap, but these can disappear completely. *Cortinarius* is the most difficult group to identify species due to the large numbers of species with minimal differences, the sporadic occurrence of most of them and the lack of literature.

Cortinarius malachius (RP 131, MJ 274) is one of the specialities of the valley. It grows and fruits fairly regularly under the Black Poplars in Park Farm Wood, and has a violet-grey cap at first, which then becomes pale clay-buff to ochraceous, covered by a whitish silky veil, which soon disappears. The stem is swollen towards the base, and changes colour in the same way as the cap, but has white or pale violaceous zone of fine hairs (cortina) The gills are violaceous at first, then clay coloured, then rusty, with the spores. The fungus is a member of the Sub- Genus *Seriocybe*, which have dry, fibrillose-silky caps, which are finely fibrillose or scaly, and often bluish tones in the young gills.

The Spectacular Roughgill, *Gymnopilus junonius*, (RP 144, MJ 284) is a rich golden tawny colour, with small pressed down scales, and a chrome to ochre-buff stem, swollen

above the pointed base, with a prominent ring towards the top. The gills start yellow, then turn rusty brown with the spores. The fungus grows in dense clusters at the base of deciduous stumps, or trees and on logs.

Poison Pie, *Hebeloma crustuliniforme*, (RP 147, MJ 251) is buff to ochre-tan, darker at the centre, and slightly greasy when moist. The stem is whitish and somewhat granular, particularly towards the top. The gills are clay-brown and exude watery droplets, and finally become spotted. It grows in open woodland and has a fairly strong smell of radish. The spores are rust coloured.

The Sweet Poison Pie, *Hebeloma sacchariolens*, (RP 147, MJ 253) has deep rust coloured spores, and the cap is ochre-buff at the centre and buff at the margin. The stem is whitish, mealy at the top and silky and fibrous below. It has a very strong, sweet smell, a bit like burnt sugar.

The Lilac Fibrecap, *Inocybe geophylla* var. *lilacina*, (RP 151, MJ 290) is very common and has a striking lilac coloured conical cap, developing an ochraceous swelling (umbo) at the apex. The stem has the same colours, with the ochre colour at the base. The gills are clay coloured and the spores are snuff-brown in the mass. There is a earthy or mealy smell. It is common in woods of all sorts.

The Bulbous Fibrecap, *Inocybe napipes*, (RP 153, MJ 293) is a small chestnut or umber brown umbonate agaric, with grey-brown gills and a pale brown stem. The cap is covered with radial fibres. The stem has a distinct bulb at the base with an acute change of angle. It is found in deciduous and mixed woodland.



*Inocybe
napipes*

The Variable Oysterling, *Crepidotus variabilis*, (RP 188, MJ 271) grows on fallen twigs, old straw, dead grass or other vegetable debris. It is a small, virtually stemless fungus, growing eccentrically. It is kidney shaped up to 20mm. across and has a white, felty, hairy cap. The gills are whitish at first, becoming ochre-flesh coloured, and the spores are clay-pink in mass.

The Scurfy Twiglet, *Tubaria furfuracea*, (RP 159, MJ 268) is cinnamon or tan coloured, with faint lines from the margin of the cap to its centre (striate) When dry, the cap is buff and slightly scurfy. The stem is cap coloured and the base is covered with white down. The gills are cinnamon coloured, and attached to the stem over their full width, or run down a little. The spores are pale ochre in mass. The Scurfy Twiglet is fairly common, and grows on twigs and woody debris.

DACRYMYCETALES (Jelly Fungi, or tough gelatinous fungi, with spore bearing organs (basidia) with two arms, looking a bit like tuning forks.)

The Small Staghorn, *Calocera cornea*, (RP 263, MJ 368) grows only on deciduous wood, and consists of small, 10mm. pointed cylinders which are gelatinous, and quite hard but flexible, yellow, more orange on drying.

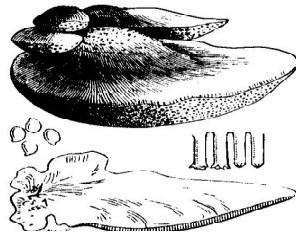
They are not brittle and easily broken, like the Clavarias.

The Common Jellyspot, *Dacrymyces stillatus*, (RP 263, MJ 369) seems to like growing on damp structural, or cut wood, like fenceposts, but also grows on natural deciduous and coniferous wood. It consists of 5mm. cushion shaped gelatinous fruiting bodies, often growing into each other. The colour is orange yellow, but it becomes darker, reddish and wrinkled when older.

FISTULINALES (Brackets growing on wood, apparently with pores like polypores, but on close examination, the fruiting body has individual tubes underneath)

The Vegetable Beefsteak – *Fistulina hepatica*. (RP 224, MJ 92)

Usually growing on the trunks of elderly oak trees, this bracket fungus is unique in this country. It looks like a polypore with pores underneath, but on close inspection, the underside is seen to consist of hollow tubes, not pores in a uniform surface. The top of the cap is dull red coloured, and yellowish underneath. The whole fruitbody is of a damp elastic consistency, a bit like raw meat, and if the fungus is cut through, it bleeds red blood, and the flesh looks exactly like a piece of raw beefsteak. It looks as though it might be edible, but the reports are conflicting, some say it is quite good, and others say it tastes a bit like wet cardboard. Perhaps it is in the cooking. Unfortunately it is a parasite, causing a heart rot in the tree, hollowing out its centre, perhaps only killing the tree by weakening it after a number of years.



Fistulina hepatica

GANODERMATALES (Hard bracket fungi growing on wood, with special spores which have two layers and a strong reticulated surface under the microscope. The spores in mass are brown.)

The Artist's Bracket, *Ganoderma applanatum*, (RP 226, MJ 95) is a large perennial, grey-brown bracket, with a somewhat knobby top. The underside is white and can be drawn on using a pointed object. The damaged surface turns brown, hence the popular name. The pores underneath are round, minute, approximately 0.5mm. diameter. The margin is relatively thin. It grows in overlapping tiers on deciduous trees, eventually killing them. It is easy to confuse with *Ganoderma adspersum*, (RP 226, MJ 94, as *G. australe*), which is very similar, even to staining brown on the pore layer, however, it is thicker fleshed and the spores are marginally larger. Insects seem to be able to identify the Artist's Bracket, as it occasionally has galls formed on the underside, caused by a fungus fly (*Agathomyia wankowiczi*) while *G. adspersum* is not attacked.

Ganoderma resinaceum, (RP 226 ?, MJ 95) is another of the specialities of the valley. It is a very rare fungus, and has been recorded over a period of years in Park Farm Wood. It is an annual fungus, and is a bracket, which grows in the valley low down on the base of living Turkey Oak, *Quercus cerris*, and continues to grow on the dead tree. It is an orange brown bracket, with a yellowish margin and undulating top surface. When mature, the cap looks as though it has been lacquered. As it ages, the cap gets darker and finishes up black. The pores are pale grey, and bruise brown. It attacks and progressively kills the tree it is growing on.

HYMENOCHAETALES (Brown Crusts, Bracket Polypores and Clubs are included here. The flesh is brown and has numerous thick walled structures present (Setae)
The Cinnamon Porecrust, *Phellinus ferreus*, (RP 234, MJ 113) forms a smallish cinnamon – brown cushion up to 10mm. thick on branches of deciduous trees, particularly Hazel. It becomes more rust coloured with age. The pores are round or somewhat angular, about 0.2 mm. across.

LYCOPERDALES (Puffballs and Earthstars, Stomach fungi with a true spore bearing layer. long interweaving threads present inside the fruit body (Capillitium)

Giant Puffball, *Langermannia gigantea* (RP 247, MJ 355) If one sees some rather large footballs in the undergrowth, they are almost certainly the giant puffball. When immature it has a kid glove feel if handled. It is a Gasteromycete or stomach fungus. The spores are formed inside the body of the fungus, developing on Basidia in a similar way to the mushrooms and toadstools. However dispersal of the spores is different. It depends on the outer skin of the fungus breaking up, allowing the spores to be blown away by the wind, or other disturbance. The practice of children and others, using the fungus as a football will assist greatly in this. The famous Birmingham lecturer and mycologist, A.H.R. Buller, did a calculation of the number of spores inside a giant puffball. He cut out a very small area of the flesh and actually counted the spores therein. He then calculated the volume of the puffball, and multiplied. He was amazed to find that the average giant pullball would produce about 7,000,000,000,000 spores. It is a good job that germination is difficult, for if all these grew to new puffballs, he estimated that the whole world could be covered in them. A more recent estimate for a Giant Puffball found in Canada, was 20,000,000,000,000 spores.

In the young state, the giant puffball is edible, and delicious. It must have white flesh, if it is darker, it's too late: spores are developing. The recommended method is to slice the fruitbody, cover each slice in egg and breadcrumbs and fry in oil. Each slice will fill a large frying pan, and give a good meal.

The Stump Puffball, *Lycoperdon pyriforme*, (RP 248, MJ 358) is the only true puffball which grows on wood. It starts off white, then becomes yellowish or greyish-brown and has scurfy spines, warts or granules on the outside. When the spores are ripe, a pore opens up at the top and the spores are blown out with raindrops or other disturbances. The inside is olive brown and sponge-like in the base. Always on wood, or attached to buried wood with white cords of mycelium.

The Meadow Puffball, *Vascellum pratense*, (RP 248, MJ 358) grows on lawns or pastures and is often found on golf courses. It is round, with a short fat stem. It is white, later yellowish-flesh colour, and finally light brown. The surface is scurfy with some small white spines. The interior is olive–brown. Spore discharge is initially through a small pore, but the skin all breaks away at the top leaving a bowl shaped fruit body. A good feature for determination is a membrane inside the fruit body, which separates the spore bearing area from the sterile base.

NIDULARIALES (Birds Nest Fungi)

The Fluted Birds Nest, *Cyathus striatus*, (RP 254, MJ 363) consists of little 12mm. brown conical cups, which contain whitish lens shaped “eggs” (peridioles), which contain the spores. The outside of each “nest” is reddish brown and covered in coarse hairs in tufts. The inner surface is fluted and coloured grey. At first the top of the fruit body is covered by a whitish membrane, which ruptures at maturity. Raindrops splashing inside the cups

throw out one or more of the “eggs” which have a trailing cord of mycelium, which wraps itself around any vegetation that the ejected “egg” lands on.

PHALLALES (Stinkhorns and Cages, with gelatinous outer layer and spores carried in a mucilaginous, olive-brown, often evil smelling substance)

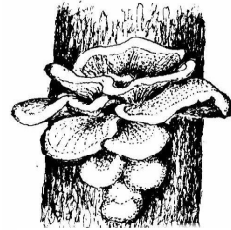
The Stinkhorn, *Phallus impudicus*, (RP 256, MJ 366) is usually smelt before it is seen. The fungus grows from a partially buried “egg” which is pure white, up to 60mm. The egg ruptures and the fungus expands up to 250mm tall with a whitish wrinkled conical head, covered with dark green vile smelling spore-mass (gleba) . The stem is a spongy white fragile hollow tube. People find it hard to believe, but the “egg” is edible.

PORIALES (Fungi with pores, brackets and fungi with stems, some gilled fungi with non-agaric structure.)

The Smoky Bracket, *Bjerkandera adusta*, (RP 236, MJ 96) is a small bracket fungus growing in tiers on dead deciduous wood. It is fairly common and easy to identify. The upper surface is grey-brown and darkens with age. The pores, the distinguishing feature, are smoke-grey and very small.

The Blushing Bracket, *Dedaleopsis confragosa*, (RP 232, MJ 99) is a small or medium sized bracket growing on dead deciduous wood. The upper surface is ochre, becoming reddish brown and covered in a downy material. The pores are creamy ochre, and bruise red or pinkish, and about 1 by 2mm. elongated radially. Old specimens turn to a deep red to almost black colour.

The Chicken of the Woods, *Laetiporus sulphureus*, (RP 223, MJ 101) is easily recognised, and consists of large fleshy cream or egg yellow fan shaped brackets in tiers on living trunks and dead stumps of broad leaved trees. The pores are yellow like the cap. The fungus is said to be edible. Old specimens lose their colour and finish up a sort of bleached out white.



Laetiporus sulphureus

Oligoporus phytogaster, is a rare and unusual fungus. Although inserted in the Polypore section, it is rarely found in the perfect state as a poroid fungus. What has been found in the valley was the imperfect state of the fungus, formerly known as *Phytogaster albus*. The imperfect stage is up to 400mm. in diameter, and up to 200mm. high, and is a white cheese like cushion with a roughened uneven surface, not looking in any way like a polypore fungus. It is full of brown asexual spores (Chlamydospores). It could be mistaken for a giant slime mould (Myxomycete)

The Birch Polypore – *Piptoporus betulinus*. (RP 227, MJ 93) One needs only to look out for a dead or dying Birch Tree to find a bracket fungus, light brown on top, and white underneath, with rounded edges. Close inspection of the underside will reveal minute pores, from the spores emerge. The fruit body starts as a small white knob, and gradually expands, and can be over 20 cm. across. It is specific to *Betula* and is a dangerous parasite, killing the tree. It is extremely common, and can usually be seen throughout the year, but only produces spores from late summer to autumn. Any tree

bearing the fruit body is doomed, the tree will die, fall and as it rots away will still produce fruit bodies, now at right angles to the original ones.

In 1991, a body was found high up in the Alps, on the Italian side of the border with Austria. It had been preserved in the ice for five thousand years. It was a man and he was christened 'Utzi' and has been the subject of intense research for the last fourteen years, and new facts keep emerging about his copper age lifestyle. Among his many possessions was found a pair of small white rings of a white corky material, threaded on a leather thong. The material was identified as the flesh of the Birch Polypore and it is now believed that the rings would have been used for medical reasons. It has subsequently been confirmed that the flesh of the Birch Polypore acts as an antiseptic.

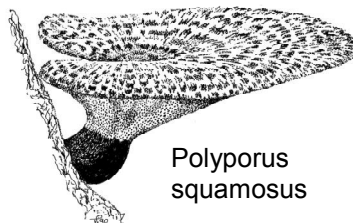
An alternative name for *P. betulinus* is the **Razorstrop Fungus**. It was used by cutting out a thickish strip of material from the interior of a large fruit body, allowing it to dry, then mounting it on a strip of wood so it could be used for sharpening cut-throat razors.

The Turkey Tail, *Trametes versicolor*, (RP 235, as *Coriolus*, MJ 105) is one of the commonest of bracket fungi. It is however a variable species. The caps are always concentrically zoned, and can have bands of ochre, green, blue, grey, rust or black. Individual caps are up to 80mm. across; they are arranged in close overlapping tiers on dead deciduous wood. The pores are white, yellowish or tawny, round or somewhat angular. The Turkey Tail can be found all through the year.

The Branching Oyster, *Pleurotus cornucopiae*, (RP 184, MJ 331) has gills and would be taken for an agaric, but its flesh structure is similar to the polypores. It has a cream cap, is depressed to funnel shaped, and has a wavy or cracked margin. The whitish stem is eccentric, and several stems are united into a common base. The gills run for a long way down the stem, nearly to the base. It grows up to 120mm. across, and grows in dense clusters on stumps of deciduous trees.

The Winter Polypore, *Polyporus brumalis*, (MJ 102) is a small brown polypore with a stem, which grows mainly in the winter. The cap is greyish brown or cigar-brown, and is faintly zoned from the centre. It is convex, with a small central depression. The stem is equal in diameter, pallid tawny, with no black colours. The pores are whitish and run down the stem as short way. They are round, but elongate somewhat with age. It grows usually on lying logs and fallen branches from dead deciduous trees.

Dryad's Saddle, *Polyporus squamosus*, (RP 218, MJ 103) is a very distinctive large polypore, which grows in spring and summer.



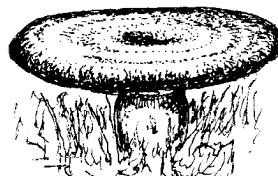
*Polyporus
squamosus*

It can be very large, up to 600mm. across. The upper surface is cream with cinnamon fibrillose scales. The stem is similarly coloured, but darkens towards the base. It is lateral or eccentric. The pores are cream, angular and irregular, and run down the stem. Dryad's Saddle is a parasite, growing on deciduous trees, and continues growing on the dead stumps.

RUSSULALES (now separated from the Agaricales due to the nature of the structure of the flesh, having round cells as opposed to elongated hyphae, Milkcaps and Russules are included).

The Bearded Milkcap, *Lactarius pubescens*, (RP 78, MJ 305) is cream to rosy buff, usually with slightly darker zones and is convex, but depressed at the centre. The cap margin is inrolled and covered with hairs. The gills run down the stem for a short way, and are close together, white and with salmon tints. When the flesh is broken, a white milk is seen. It has a very hot taste. The Bearded Milkcap grows under Birch Trees.

The Ugly Milkcap, *Lactarius turpis*, (RP83, MJ 309) also grows only under Birch, in wet areas. It is dark olive, umber or olive-black and is sticky and slimy. The somewhat woolly margin is inrolled to start with. The stem is more or less cap colour, short and stout. The gills run down the stem, are narrow and close together. The milk is white, and very acrid. The fungus turns purple-violet with ammonia or potassium hydroxide.



Lactarius turpis

The Purple Brittlegill, *Russula atropurpurea*, (RP 100, MJ 312) is one of the commonest Russules, and grows under broad-leaved trees. It grows up to 100mm. diameter and has a purplish-red cap which is black at the centre. The stem is white and of even thickness. The gills are pallid cream, close together, forked in places, and quite deep.

The Charcoal Burner, *Russula cyanoxantha*, (RP 97, MJ 314) grows under deciduous trees, and can be purple, wine coloured, olive, green or brown. It is convex in shape, becoming flatter and slightly depressed. The cap is smooth, with very faint radiating veins. The gills are white or cream, and are elastic, they can be flexed without breaking. The stem is white, and occasionally has a purple flush, and can be slightly swollen towards the base. The flesh is mild to taste.

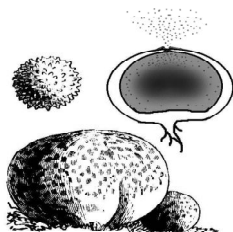
SCHIZOPHYLLALES (Inverted cups, tubes and splitgills)

Henningsomyces candidus, is a curiosity, and consists of lots of individual fruit bodies on the lower side of rotten conifer wood and bark. Each fruit body is a minute pure white tube up to 1mm. long by 0.4 mm. diameter. The spores are generated inside the tubes. The consistency is delicate and soft.

SCLERODERMATALES (Earth Balls, stomach fungi with spores generated in irregular clusters or scattered, with no proper interwoven hyphae. Spores are ornamented with warts, spines or a reticulum)

The Common Earthball, *Scleroderma citrinum*, (RP 250, MJ 364) grows on mossy ground, or on peat, on heaths, or in woodland. It is round, dirty yellow or ochre, and covered in coarse scales, breaking open irregularly at the top to release the spores. The

interior is purplish-black with white veins, and becomes powdery when spores have ripened.



Scleroderma citrinum

The Scaly Earthball, *Scleroderma verrucosum*, (RP 250, MJ 365) is round, and often somewhat flattened on top. It is yellowish or brown and has a covering of small dark brown scales. The base has a longish ribbed stem. The interior is olive-brown, and the spores dark brown. It grows on sandy soil in woods or heaths.

The ‘Ball Thrower’ or ‘Shooting Star’, *Sphaerobolus stellatus*, (RP 255) has small fruit bodies, about 2.5mm. diameter, and is often overlooked. It grows in groups on sticks, sawdust, dung, and other organic debris. Schools and colleges use it in demonstrations of its ballistic prowess. It starts off as a little ball, then the top splits open to leave a star shaped opening. The fungus has a double layer, with a brownish ball at its centre. This ball is a projectile and contains the spores. The fungus grows to point at the brightest source of light, and when the spores are ripe, the double layer opens out violently projecting the spores up to 14 feet into the air towards the light. In the laboratory, demonstrators suspend a lamp and a clear plastic sheet, marked with target circles, over a number of fruit bodies, about six feet away allowing the fungi to shoot their spores at the target. Their aim is remarkably good.

STEREALES (Fruit bodies are flat on the substrate (resupinate) or with bracket-like edges (reflexed), and have smooth or nearly smooth spore bearing surfaces, or are poroid.)

Elder Whitewash, *Hyphodontia sambuci*, (RP 240, MJ 108) grows on the wood of deciduous trees, mainly elder. It looks as though someone has painted the branch with matt white emulsion paint. It is entirely flat on the substrate (resupinate) with a chalky appearance, and an irregular edge.

The Split Porecrust, *Schizopora paradoxa*, (RP 237, MJ 108) is a whitish, turning cream, resupinate polypore. It grows on rotten deciduous wood in irregular patches. The pores are very variable, and can be circular, angular, elongated or maze-like. They are of uneven height and torn looking.

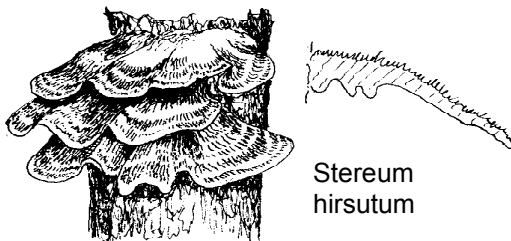
The Silverleaf Fungus, *Chondrostereum purpureum*, (RP 236, MJ 123) consists of tiers of brownish caps rising from resupinate lower part (reflexed). The margins of the caps are light coloured and the caps are covered with fine down-like hairs. The spore bearing surface is dark violaceous, turning more brown with age. This fungus is the cause of “silver leaf” disease in plum trees.

Mycoacia uda, (RP 241, MJ 117) is bright lemon yellow, and grows on the lower side of deciduous wood, particularly elder. It lies flat on the substrate and is covered with tiny slender spines, closely packed together. A drop of Potassium Hydroxide on the spines will turn them purple.

Jelly Rot, *Phlebia tremellosa*, (RP 239 as *Merulius*, MJ 118) can be flat on the substrate (resupinate), but normally has small brackets arising (reflexed). The spore bearing surface is orange-buff or pink and is unevenly wrinkled, looking almost poroid. Any caps formed have a white hairy upper surface. It grows on stumps or branches of deciduous, and, occasionally, on coniferous wood.

Bleeding Oak Crust, *Stereum gausapatum*, (RP 237, MJ 121) is a bleeding *stereum*. When scratched or rubbed the flesh weeps with red "blood" The fungus lies flat, or have very small bracket shaped caps, which are ochre-brown and grey in zones, covered in hairs and having a white margin. The lower, fertile surface is pallid or dark chestnut. The flesh is thin. It grows on stumps, logs and fallen branches of deciduous wood, mainly oak. There are another two bleeding stereums, Bleeding Broadleaf Crust *Stereum rugosum*, (RP 237, MJ 122) which also grows on deciduous wood, mainly hazel, but is buff coloured. Bleeding Conifer Crust, *Stereum sanguinolentum*, (MJ 122) grows only on coniferous wood, and has not yet been recorded in the valley.

The Hairy Curtain Crust, *Stereum hirsutum*, (RP 237, MJ 121) is one of the commonest fungi and can be seen throughout the year. It is not normally resupinate, and makes tough leathery brackets up to 100mm. across, often in tiered groups. The cap margin is lobed and waved, and the top surface is zoned ochre to greyish and hairy. The underside is bright yellow, but can be dull brownish or greyish with age. It grows on stumps, logs and fallen branches of deciduous trees.



Stereum hirsutum

TREMELLALES (Jelly fungi. gelatinous fungi with the spore bearing organs (basidia) divided vertically.)

The White Brain, *Exidia thuretiana*, (MJ 371) is a pure white contorted gelatinous fungus up to 10mm. diameter, but often several fruit bodies fuse together. Its surface becomes contorted and brain like. Though gelatinous, it is surprisingly tough. When jelly fungi dry out, they virtually disappear, just leaving a faint trace on the wood. It can be found on dead and rotting branches and twigs of deciduous trees.

The Yellow Brain, *Tremella mesenterica*, (RP 264, MJ 372) This is one of the so called 'jelly fungi' because it feels like, and wobbles like a jelly. It normally grows on the top side of dead fallen logs of broad leaved trees, and is a yellow contorted fungus up to about 20mm across with a brain like appearance. It cannot really be mistaken for anything else. The early botanists classified jelly fungi as Algae, but microscopic examination soon proved that it was a fungus, with basidia, i.e. organs bearing the spores, thus putting it alongside the other Basidiomycetes.. When dried out it goes to virtually nothing.

UREDINALES (Rust Fungi, obligate parasites of higher plants, which have a complex life cycle with one or several host plants)

Melampsora populnea, forms circular bright orange aecia on pale yellow spots on lower leaf surfaces and stems of *Mercurialis perennis*.

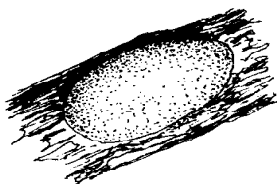
Mint Rust, *Puccinia menthae*, irregularly cup shaped aecia on groups of orange-purplish spots on *Mentha*, *Origanum*, *Satureja*, and related species.

CERATIOMYXOMYCETALES (A primitive group within the slime moulds, no longer classed as fungi, with one species only)

Ceratiomyxa fruticulosa, (MJ 375) Minute fragile white, fragile fruit bodies in rosettes, in colonies up to 100mm. diameter. They grow on bark of fallen trees.

MYXOMYCETES (The true slime moulds, with a mobile, “animal” stage, developing into minute fungus-like fruit bodies bearing dry spores.)

Enteridium lycoperdon, (MJ 376) Large for a myxo, it grows to 80mm. diameter, and is a rounded silvery-white fruit body, generally on dead wood. The fruit body becomes brown as the spores are ripened. The spores are formed on a network of thin brittle threads.



Enteridium lycoperdon

Diderma hemisphaericum, (MJ 374) consists of small stalked, white, disc shaped fruit bodies, which break down to expose a powdery brown spore mass. They grow on dead leaves and other plant debris.

Flowers of Tan, *Fuligo septica*, (MJ 375) A rounded lemon-yellow or ochre, spongy, fragile fruit body which breaks down gradually , releasing greyish-brown spores. The myxo is up to 130mm. across.

Metatrachia floriformis, (MJ 375). Clusters of brown or black, shiny round stalked fruit bodies break open like flowers with an orange-red spore mass at the centre, surrounded by a petal-like arrangement of brown lobes.

OOMYCETES (Microscopic fungi, but in mass can appear as a mould-like growth on its substrate)

Crucifer White Blister Disease, *Albugo candida*. Causes white lesions on leaves and stems of plants of the Cruciferae.

ZYGOMYCETES(Includes pin moulds, tiny stalked fungi with a dark, round ball of spores at the head)

Spinellus fusiger. A pin mould, which attacks small *Mycena* sp. Appearing as little club shaped “pins” with black heads and translucent stems all over the fungus host cap.

**LIST OF FUNGI (INCLUDING LICHENS) RECORDED
IN THE SANDWELL VALLEY**

Records "C" – recorded by Mr. A. Camm before 1910
 "C+" – recorded by Mr. Camm and also since 1974.

<u>ENGLISH NAME</u>	<u>LATIN NAME</u> (IMPERFECT FUNGI)	<u>NOTES</u>
	HYPHOMYCETES	
	<i>Fusarium sporotrichioides</i>	
	<i>Lepraria incana</i>	
	<i>Menispora ciliata</i>	
	<i>Paecilomyces farinosus</i>	
	<i>Periconia cookei</i>	
	<i>Torula herbarum</i>	
	<i>Trichothecium roseum</i>	
	(ASCOMYCETES & ASCOLICHENS)	
	ASCOMYCETES	
	<u>DIATRYPALES</u>	
	DIATRYPACEAE	
Common Tarcrust	<i>Diatrype stigma</i>	
	<i>Diatrypella favacea</i>	
	<u>DOTHIDIALES</u>	
	LEPTOSPHAREACEAE	
Nettle Rash	<i>Leptosphaeria acuta</i>	
	<i>Leptosphaeria doliolum</i>	
	MICROTHYRACEAE	
	<i>Microthyrium microscopicum</i>	
	(MILDEWS)	
	ERYSIPHACEAE	
	<i>Erysiphe artemisiae</i>	
	<i>Erysiphe polygoni</i>	
Oak Mildew	<i>Microsphaera alphitoides</i>	
	<u>HYPOCREALES</u>	
	CLAVICIPATACEAE	
Ergot	<i>Claviceps purpurea</i>	
Scarlet Caterpillar Club	<i>Cordyceps militaris</i>	
	HYPOCREACEAE	
Ochre Cushion	<i>Hypocrea pulvinata</i>	
	<i>Hypocrea rufa</i>	
Bolete Mould	<i>Hypomyces chrysospermus</i>	



**Claviceps
purpurea**

Coral Spot

Nectria cinnabarina
Nectria episphaeria

(LICHENS)

LECANORALES

BACIDIACEAE

Tephromela atra

CANDELARIAACEAE

Candelariella vitellina

CLADONIAACEAE

Cladonia chlorophaea

Cladonia humilis

Cladonia fimbriata

Cladonia macilenta subsp. *floerkeana*

Cladonia furcata

Cladonia pyxidata

LECANORACEAE

Lecanora campestris

Lecanora conizaeoides

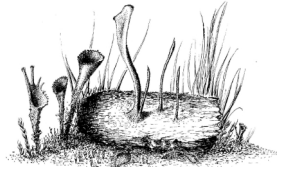
Lecanora dispersa

Lecanora muralis

Lecidella stigmatea

Scoliciosporum chlorococcum

Scoliciosporum umbrinum



Cladonia species

LECIDEACEAE

Lecidea fuscoatra

MICAREACEAE

Psilolechia lucida

PARMELIACEAE

Evernia prunastri

Hypogymnia physodes

Parmelia sulcata

PHYSICIACEAE

Phaeophyscia orbicularis

Physcia adscendens

Physcia caesia

Physcia tenella

Rinodina gennarii

RAMALINACEAE

Ramalina farinacea

TRAPELIACEAE
Placynthiella uliginosa
Trapelia coarctata
Trapeliopsis granulosa

(CUP FUNGI & EARTH TONGUES)

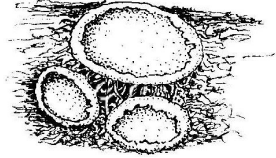
LEOTIALES

DERMATEACEAE

Leptotrochila ranunculi
Mollisia amenticola
Mollisia caricina
Mollisia chionea
Mollisia cinerea
Mollisia melaleuca
Trochila ilicina

Common Grey Disco

Holly Speckle



Mollisia cinerea (X5)

GEOGLOSSACEAE

Geoglossum fallax

HYALOSCYPHACEAE

Belonidium sulphureum
Calycellina punctata
Incrucipulum sulphurellum
Echinula asteriadiformis
Hyaloscypha albohyalina
Hyaloscypha herbarum
Hyaloscypha hyalina
Incrucipulum sulphurellum
Lachnum brevipilosum
Lachnum carneolum
Lachnum carneolum var. longisporum
Lachnum dumorum
Lachnum niveum
Lachnum virgineum
Mollisia rubi
Phialina lachnobrachya
Phialina pseudopuberula
Polydesmia pruinosa
Scutoscypha fagi

Dasyscyphus

Dasyscyphus

Dasyscyphus

Dasyscyphus

Dasyscyphus

Dasyscyphus

Dasyscyphus

Dasyscyphus

Snowy Disco

LEOTIACEAE

Ascocoryne cylichnium
Ascocoryne sarcoides
Bulgaria inquinans
Calycina herbarum
Crocicreas coronatum
Crocicreas cyathoides
Crocicreas dolosellum

Purple Jellydisc

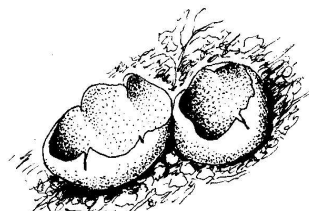
Black Bulgar

Nut Disco
Crocicreas starbaeckii
Crocicreas subhyalinum
Hymenoscyphus calyculus
Hymenoscyphus caudatus
Hymenoscyphus fructigenus
Hymenoscyphus imberbis
Hymenoscyphus scutula
Pezizella rubescens
Phaeohelotium geogenum

Common Glass Cup
 Common Glass Cup
 ORBILIACEAE
Orbilia cardui
Orbilia leucostigma
Orbilia xanthostigma

SCLEROTINIACEAE
Lanzia luteovirens
Poculum sydowianum

ONYGENALES
 GYMNOASCACEAE
Arachniotus aureus



Aleuria aurantia

(LICHENS)
PELTIGERALES
 PELTIGERACEAE
 Dog's Tooth Lichen
Peltigera canina
Peltigera didactyla

(CUP FUNGI & MORELS)

PEZIZALES
 ASCOBOLACEAE
Ascobolus denudatus

White Saddle
 HELVELLACEAE
Helvella crispa

Morel
 Thimble Morel
 MORCHELLACEAE
Morchella esculenta
Verpa conica

Orange Peel Fungus
 Toad's Ear
 Common Eyelash
 OTODIACEAE
Aleuria aurantia
Coprobia granulata
Otidea bufonia
Pulvinula convexella
Ramsbottomia asperior
Scutellinia scutellata

Scutellina

Palamino Cup
Blistered Cup

PEZIZACEAE
Peziza micropus
Peziza repanda
Peziza vesiculosa

PHYLLACHORALES
Phylloachora graminis

Tar Spot

RHYTISMATALES
RHTISMATAACEAE
Hypoderma rubi
Rhytisma acerinum



Daldinea concentrica

SORDARIALES
LASIOSPHAERIAACEAE
Lasiochaeria ovina

Pocket Plum

TAPHRINALES
TAPHRINACEAE
Taphrina pruni

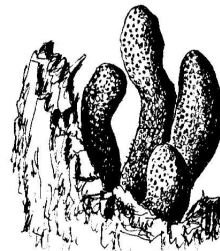
(LICHENS)
TELOSCHISTALES
TELOSCHISTACEAE
Caloplaca citrina
Xanthoria parietina
Xanthoria polycarpa

VERRUCARIALES
VERRUCARIAACEAE
Verrucaria muralis
Verrucaria nigrescens
Verrucaria viridula

(FLASK FUNGI)
XYLARIALES
XYLARIAACEAE

King Alfred's cakes/ cramp balls
Hazel Woodwart
Birch Woodwart

Daldinea concentrica
Hypoxylon fuscum
Hypoxylon multiforme
Rosellinia aquila
Rosellinia thelena
Ustulina deusta
Xylaria hypoxylon
Xylaria polymorpha



Xylaria polymorpha

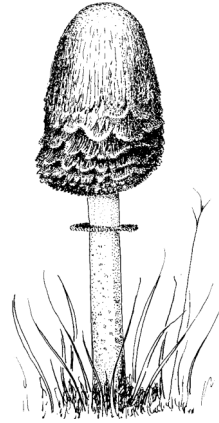
Candlesnuff Fungus
Dead Man's Fingers

BASIDIOMYCETES

AGARICALES

AGARICACEAE

Horse Mushroom	<i>Agaricus arvensis</i>
Cultivated Mushroom	<i>Agaricus bisporus</i>
Field Mushroom	<i>Agaricus campestris</i>
Wood Mushroom	<i>Agaricus silvicola</i>
Yellow Stainer	<i>Agaricus xanthodermus</i>
Bearded Dapperling	<i>Cystolepiota sistrata</i>
Chestnut Dapperling	<i>Lepiota castanea</i>
Stinking Dapperling	<i>Lepiota cristata</i>
	<i>Lepiota subalba</i>
Parasol	<i>Macrolepiota procera</i>
Shaggy Parasol	<i>Macrolepiota rhacodes</i>



Coprinus comatus

AMANITACEAE

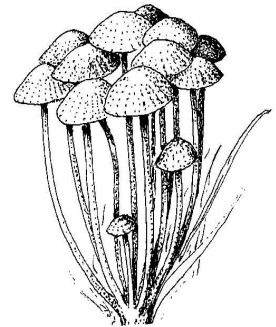
Grey Spotted Amanita	<i>Amanita excelsa</i>
Tawny Grisette	<i>Amanita fulva</i>
Fly agaric	<i>Amanita muscaria</i>
Blusher	<i>Amanita rubescens</i>

BOLBITIACEAE

Spring Fieldcap	<i>Agrocybe praecox</i>
Netted Fieldcap	<i>Bolbitius reticulatus</i>
Yellow Fieldcap	<i>Bolbitius vitellinus</i>
	<i>Conocybe tenera</i>

COPRINACEAE

Common Inkcap	<i>Coprinus atramentarius</i>
Shaggy Inkcap / Lawyer's Wig	<i>Coprinus comatus</i>
	<i>Coprinus congregatus</i>
Fairy Inkcap	<i>Coprinus disseminatus</i>
Hare's Foot Inkcap	<i>Coprinus lagopus</i>
Glistening Inkcap	<i>Coprinus micaceus</i>
Pleated Inkcap	<i>Coprinus plicatilis</i>
Weeping Widow	<i>Lacrymaria velutina</i>
Brown Mottlegill	<i>Panaeolina foenisecii</i>
Pale Brittlestem	<i>Psathyrella candolleana</i>
	<i>Psathyrella gracilis</i>
Clustered Brittlestem	<i>Psathyrella multipedata</i>
Common Stump Brittlestem	<i>Psathyrella piluliformis</i>
	<i>Psathyrella prona</i>



Psathyrella multipedata

ENTOLOMATACEAE

Shield Pinkgill	<i>Entoloma clypeatum</i>
	<i>Entoloma neglectum</i>
	<i>Entoloma nidorosum</i>

Wood Pinkgill *Entoloma politum*
 Mousepee Pinkgill *Entoloma rhodopolium*
Entoloma incanum

HYGROPHORACEAE

Butter Waxcap *Hygrocybe ceracea*
 Golden Waxcap *Hygrocybe chlorophana*
 Blackening Waxcap *Hygrocybe conica*
Hygrocybe helobia
 Spangle Waxcap *Hygrocybe insipida*
 Heath Waxcap *Hygrocybe laeta*
 Vermilion Waxcap *Hygrocybe miniata*
 Meadow Waxcap *Hygrocybe pratensis*
 Parrot Waxcap *Hygrocybe psittacina*
 Oily Waxcap *Hygrocybe quieta*
 Snowy Waxcap *Hygrocybe virginea*



PLUTEACEAE
 Deer Shield *Pluteus cervinus*
 Willow Shield *Pluteus salicinus*
 Velvet Shield *Pluteus umbrosus*
 Silky Rosegill *Volvariella bombycina*
Volvariella speciosa

Kuehneromyces mutabilis

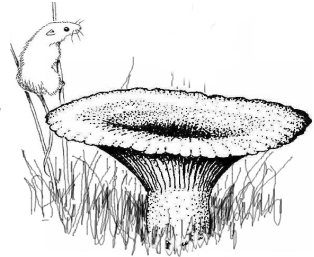
STROPHARIACEAE
 Sulphur Tuft *Hypholoma fasciculare*
 Sheathed Woodtuft *Kuehneromyces mutabilis*
 Wood Oysterling *Melanotus horizontalis*
Panaeolus campanulatus
Panaeolus rickenii
 Egghead Mottlegill *Panaeolus semiovatus*
Pholiota adiposa
Pholiota apicrea
 Sticky Scalycap *Pholiota gummosa*
 Bonfire Scalycap *Pholiota highlandensis*
Pholiota lenta
 Shaggy Scalycap *Pholiota squarrosa*
 Magic Mushroom /Liberty Cap *Psilocybe semilanceata*
 Redlead Roundhead *Stropharia aurantiaca*
 Garland Roundhead *Stropharia coronilla*
Stropharia cyanea
 Dung Roundhead *Stropharia semiglobata*

Pholiota

TRICHOLOMATACEAE

Bulbous Honey Fungus *Armillaria bulbosa*
Armillaria gallica
 Honey Fungus *Armillaria mellea*
 St. George's Mushroom *Calocybe gambosa*

Ivory Funnel	<i>Calyptella capula</i>	
Fragrant Funnel	<i>Clitocybe dealbata</i>	
	<i>Clitocybe fragrans</i>	
	<i>Clitocybe infundibuliformis</i>	
Clouded Funnel	<i>Clitocybe nebularis</i>	
Aniseed Funnel	<i>Clitocybe odora</i>	
Fool's Funnel	<i>Clitocybe rivulosa</i>	
Mealy Funnel	<i>Clitocybe vibecina</i>	
Velvet Shank	<i>Flammulina velutipes</i>	
Clustered Toughshank	<i>Gymnopus confluens</i>	<i>Collybia</i>
Russet Toughshank	<i>Gymnopus dryophilus</i>	<i>Collybia</i>
Redleg Toughshank	<i>Gymnopus erythropus</i>	<i>Collybia</i>
Wood Woolyfoot	<i>Gymnopus peronatus</i>	<i>Collybia</i>
	<i>Hohenbuehelia reniformis</i>	
Amethyst Deceiver	<i>Laccaria amethystina</i>	
Deceiver	<i>Laccaria laccata</i>	
Twisted Deceiver	<i>Laccaria tortilis</i>	
Tawny Funnel	<i>Lepista flaccida</i>	
Wood Blewit	<i>Lepista nuda</i>	
Giant Funnel	<i>Leucopaxillus giganteus</i>	
Clustered Domecap	<i>Lyophyllum decastes</i>	
Twig Parachute	<i>Marasmiellus ramealis</i>	
Goblet Parachute	<i>Marasmiellus vaillantii</i>	
Leaf Parachute	<i>Marasmius epiphyllus</i>	
Fairy Ring Champignon	<i>Marasmius oreades</i>	
Collared Parachute	<i>Marasmius rotula</i>	
	<i>Melanoleuca brevipes</i>	
	<i>Melanoleuca melaleuca</i>	
Orange Bonnet	<i>Mycena acicula</i>	
Frosty Bonnet	<i>Mycena adscendens</i>	
Drab Bonnet	<i>Mycena aetites</i>	
Angel's Bonnet	<i>Mycena arcangeliana</i>	
Mealy Bonnet	<i>Mycena cinerella</i>	
Iodine Bonnet	<i>Mycena filopes</i>	
Ivory Bonnet	<i>Mycena flavoalba</i>	
Common Bonnet	<i>Mycena galericulata</i>	
Milking Bonnet	<i>Mycena galopus</i>	
Black Milking Bonnet	<i>Mycena galopus var. nigra</i>	
Clustered Bonnet	<i>Mycena inclinata</i>	
Nitrous Bonnet	<i>Mycena leptcephala</i>	
	<i>Mycena metata</i>	
	<i>Mycena mirata</i>	
	<i>Mycena polyadelpa</i>	
Grooved Bonnet	<i>Mycena polygramma</i>	
Lilac Bonnet	<i>Mycena pura</i>	
Bark Bonnet	<i>Mycena speirea</i>	
Snapping Bonnet	<i>Mycena vitilis</i>	
Elastic Oysterling	<i>Panellus mitis</i>	



Leucopaxillus giganteus

Pine Cone Cap
 Butter Cup
 Spotted Toughshank
 Wrinkled Peach
 Orange Moss-cap
 Collared Moss-cap
 Birch Knight
 Rooting Shank

Strobilurus tenacellus
Rhodocollybia butyracea
Rhodocollybia maculata
Rhodotus palmatus
Rickenella fibula
Rickenella swartzii
Tricholoma fulvum
Xerula radicata

Pseudohiatula
Collybia
Collybia

Mycena
Mycena

Oudemansiella

(JELLY FUNGI)

AURICULARIALES

AURICULARIACEAE

Auricularia auricula-judae
Auricularia mesenterica

Jelly Ear
 Tripe Fungus



(BOLETES)

BOLETALES

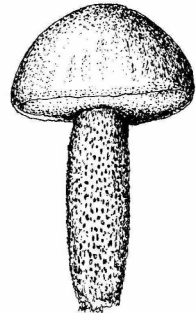
BOLETACEAE

Boletus edulis
Boletus erythropus
Leccinum duriusculum
Leccinum scabrum
Leccinum versipelle
Suillus grevillei

Penny Bun / Cep

Slat Bolete
 Brown Birch Bolete
 Orange Birch Bolete
 Larch Bolete

Strobilurus tenacellus



Leccinum versipelle

Dry Rot Fungus

CONIOPHORACEAE

Serpula lacrymans

False Chanterelle

HYGROPHOROPSISIDACEAE

Hygrophoropsis aurantiaca

Brown Rollrim

PAXILLACEAE

Paxillus involutus

Peppery Bolete

STROBILOMYCETACEAE

Chalciporus piperatus

Boletus

Bay Bolete
 Red Cracking Bolete
 Ruby Bolete
 Suede Bolete

XEROCOMACEAE

Xerocomus badius
Xerocomus chrysenteron
Xerocomus rubellus
Xerocomus subtomentosus

Boletus

Boletus

Boletus

Boletus

(FAIRY CLUBS)

CANTHARELLALES

CLAVARIACEAE

Clavaria vermicularis

Meadow Coral
Yellow Club
Apricot Club
Pipe Club

Clavulinopsis corniculata
Clavulinopsis helvola
Clavulinopsis luteoalba
Macrotyphula fistulosa
Macrotyphula fistulosa var. *contorta*
Macrotyphula juncea

Clavariadelphus

Grey Coral

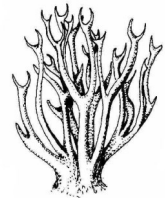
CLAVULINACEAE
Clavulina cinerea
Clavulina cristata

Clavaria
Clavaria

PTERULACEAE
Pterula multifida

Redleg Club

TYPHULACEAE
Typhula erythropus
Typhula setipes



(CORTINA TOADSTOOLS)

Clavulinopsis corniculata

CORTINARIALES

CORTINARIACEAE

Cinnamon Webcap

Cortinarius acutus
Cortinarius betuletorum
Cortinarius cinnamomeus
Cortinarius glandicolor
Cortinarius hemitrichus
Cortinarius lucorum
Cortinarius malachius
Cortinarius rigidus
Cortinarius saniosus

Frosty Webcap

Girdled Webcap

Cortinarius trivialis
Cortinarius umbrinolens

Spectacular Rustgill

Common Rustgill

Poison Pie

Gymnopilus junonius
Gymnopilus penetrans
Hebeloma crustuliniforme
Hebeloma leucosarx
Hebeloma pusillum

Sweet Poison Pie

Star Fibrecap

Lilac Fibrecap

Bulbous Fibrecap

Hebeloma sacchariolens
Inocybe asterospora
Inocybe geophylla var. *lilacina*
Inocybe napipes
Inocybe phaeocomis var. *major*

Split Fibrecap

Inocybe rimosa
Naucoria salicis

Striate Aldercap

Naucoria striatula
Naucoria subconspersa



Cortinarius trivialis

CREPIDOTACEAE
Crepidotus epibryus
Crepidotus inhoneustus
Crepidotus lundellii
Crepidotus luteolus
Crepidotus phillipsii
Crepidotus variabilis
Tubaria autochthona
Tubaria conspersa
Tubaria furfuracea

Yellowing Oysterling

Variable Oysterling

Felted Twiglet

Scurfy Twiglet

(RUBBER CLUBS)
DACRYMYCETALES
 DACRYMYCETACEAE
Calocera cornea
Dacrymyces stillatus

Small Stagshorn

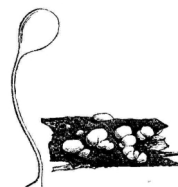
Common Jellyspot

(TUBED BRACKET)
FISTULINALES
 FISTULINACEAE
Fistulina hepatica

Beefsteak Fungus

(BRACKET FUNGI)
GANODERMATALES
 GANODERMATACEAE
Ganoderma adspersum
Ganoderma applanatum
Ganoderma resinaceum

Artist's Bracket



Dacrymyces stillatus

HYMENOCHAETALES
 HYMENOCHAETEACEAE
Inonotus hispidus
Phellinus ferreus

Shaggy Bracket

Cinnamon Porecrust

(PUFFBALLS)
LYCOPERDALES
 LYCOPERDACEAE
Calvatia gigantea
Hankea excupuliformis
Hankea utrififormis
Lycoperdon nigrescens
Lycoperdon perlatum
Lycoperdon pyriforme
Vascellum pratense

Giant Puffball

Pestle Puffball

Mosaic Puffball

Dusky Puffball

Common Puffball

Stump Puffball

Meadow Puffball

Lycoperdon

Lycoperdon

(BIRDS NESTS FUNGI)

NIDULARIALES
NIDULARIACEAE

Field Bird's Nest
Fluted Bird's Nest

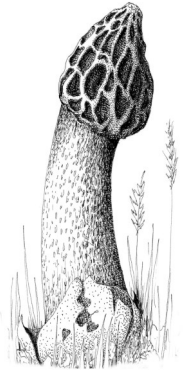
Cyathus olla
Cyathus striatus

(STINKHORNS)

PHALLALES
PHALLACEAE

Dog Stinkhorn
Stinkhorn

Mutinus caninus
Phallus impudicus



**Phallus
impudicus**

(BRACKET FUNGI)

PORIALES
CORIOLACEAE

Smoky Bracket

Bjerkandera adusta
Byssomerulius corium (= *Merulius*)

Blushing Bracket

Daedaleopsis confragosa

Hen of the Woods

Grifola frondosa

Chicken of the Woods

Laetiporus sulphureus

Giant Polypore

Meripilus giganteus

Oligoporus caesius

Tyromyces

Oligoporus ptychogaster

Tyromyces

Perenniporia fraxinea

Birch Polypore /Razorstrop

Piptoporus betulinus

Spongipellis delectans

Lumpy Bracket

Trametes gibbosa

Pseudotrametes

Hairy Bracket

Trametes hirsuta

Trametes ochracea

Turkey Tail

Trametes versicolor

Coriolus

(OYSTERS)

LENTINACEAE

Branching Oyster

Pleurotus cornucopiae

Veiled Oyster

Pleurotus dryinus

Oyster Mushroom

Pleurotus ostreatus



(STIPED POLYPORES)

POLYPORACEAE

Winter Polypore

Polyporus badius

Dryad's Saddle

Polyporus brumalis

Polyporus squamosus

Polyporus varius

**Trametes
gibbosa**

(MILK CAPS AND RUSSULES)

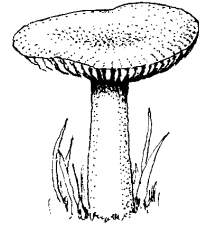
RUSSULALES

RUSSULACEAE

Lactarius britannicus

Coconut Milkcap
 Bearded Milkcap
 Oakbug Milkcap
 Rufous Milkcap
 Mild Milkcap
 Birch Milkcap
 Woolly Milkcap
 Ugly Milkcap
 Grey Milkcap
 Green Brittlegill
 Purple Brittlegill
 Birch Brittlegill
 Charcoal Burner
 Fragile Brittlegill
 Blackening Brittlegill
 Ochre Brittlegill
 Powdery Brittlegill
 Scarlet Brittlegill
 Variable Brittlegill

Lactarius glycosmus
Lactarius pubescens
Lactarius quietus
Lactarius rufus
Lactarius subdulcis
Lactarius tabidus
Lactarius torminosus
Lactarius turpis
Lactarius vietus
Russula aeruginea
Russula atropurpurea
Russula betularum
Russula cyanoxantha
Russula fragilis
Russula nigricans
Russula ochroleuca
Russula parazurea
Russula pseudointegra
Russula versicolor



Russula betularum

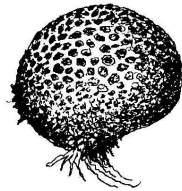
(INVERTED CUPS)
SCHIZOPHYLLALES
 SCHIZOPHYLLACEAE
Henningsomyces candidus

(EARTH BALLS)
SCLERODERMATALES
 SCLERODERMATACEAE
Scleroderma bovista
Scleroderma citrinum
Scleroderma verrucosum

Potato Earthball
 Common Earthball
 Scaly Earthball

(BALL THROWER)
SPHAEROBOLACEAE
Sphaerobolus stellatus

Shooting Star



Scleroderma citrinum

(RESUPINATES)
STEREALES
 HYPHODERMATACEAE
Hyphodontia sambuci
Schizopora paradoxa

Elder Whitewash
 Split Porecrust

Silverleaf Fungus

MERULIACEAE
Chondrostereum purpureum
Mycocacia uda
Phlebia merismoides
Phlebia tremellosa

Stereum
Acia

Jelly Rot

Merulius

PODOSCYPHACEAE

Cyphellostereum laeve

Corticium

Bleeding Oak Crust
Hairy Curtain Crust
Bleeding Broadleaf Crust

STEREACEAE

Stereum gausapatum

Stereum hirsutum

Stereum rugosum

(JELLY FUNGI)

TREMELLALES

EXIDIACEAE

White Brain
Crystal Brain

Exidia thuretiana

Exidia nucleata

Myxarium

Yellow Brain

TREMELLACEAE

Tremella mesenterica

(RUST FUNGI)

UREDINALES

MELAMPSORACEAE

Melampsora caprearum

Melampsora populnea



Tremella mesenterica

PHRAGMIDIACEAE

Phragmidium sanguisorbae

Xenodochnus carbonarius

PUCCINIACEAE

Gymnosporangium cornutum

Puccinia menthae

Puccinia poarum

Puccinia punctiformis

PUCCINIASTRACEAE

Melampsorella symphyti

SPHAEROPHRAGMIACEAE

Triphragmium filipendulae

(SLIME MOULDS)

CERATIOMYXOMYCETES

CERATIOMYXALES

CERATIOMYXACEAE

Ceratiomyxa fruticulosa C+

MYXOMYCETES

LICHEALES

CRIBRARIACEAE

- Cribraria argillacea* C
- Cribraria cancellata* C+

LYCOGALACEAE

- Dictydiaethalium plumbeum* C
- Enteridium lycoperdon* C+ *Reticularia*
- Lycogala epidendrum* C+

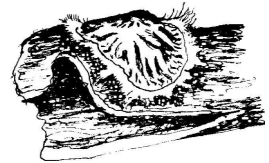
PHYSARALES

DIDYMIACEAE

- Diderma hemisphaericum*
- Diderma spumarioides*
- Didymium difforme*
- Didymium squamulosum* C+
- Mucilago crustacea*

PHYSARACEAE

- Badhamia macrocarpa* C
- Badhamia panicea* C+
- Craterium leucocephalum* C
- Craterium minutum* C
- Fuligo septica*
- Leocarpus fragilis* C
- Physarum bivalve* C+
- Physarum cinereum* C
- Physarum leucophaeum* C
- Physarum nutans* C+
- Physarum psittacinum* C
- Physarum robustum*
- Physarum viride* C



Didymium difforme
X 10

Flowers of Tan

STEMONITALES

STEMONITIDACEAE

- Comatricha nigra* C+
- Comatricha tenerrima*
- Diachea leucopodia* C+
- Enerthenema papillatum* C+
- Lamproderma arcyroides*
- Stemonitis flavogenita* C
- Stemonitis fusca* C+
- Stemonitis typhina*
- Symphytocarpus amaurochaetoides*
- Symphytocarpus flaccidus*

TRICHIALES

ARCYRIACEAE

Arcyria affinis
Arcyria cinerea C
Arcyria denudata C+
Arcyria ferruginea C
Arcyria incarnata C
Arcyria obvelata C
Arcyria pomiformis
Arcyodes incarnata C

TRICHIAACEAE

Hemitrichia calyculata
Hemitrichia clavata C+
Hemitrichia intorta C
Metatrichia floriformis
Metatrichia vesparium C
Oligonema flavidum C
Perichaena depressa C
Perichaena corticalis C
Prototrichia metallica C
Trichia contorta C
Trichia decipiens C
Trichia varia C+
Trichia persimilis C
Trichia scabra C

Trichia
Hemitrichia

OOMYCETES

PERONOSPORALES

ALBUGINACEAE

Albugo candida

ZYGOMYCETES

MUCORALES

MUCORACEAE

Spinellus fusiger

REFERENCES

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The illustrations consist partly of adaptations from texts illustrated by Worthington G. Smith in the late 19th century, with additional input by Michael Bloxham (several drawings after Marcel Bon 1987) and Terry Parker.

Finally a word of appreciation has to be extended to all members of Sandwell Valley Naturalists' Club who have participated in the numerous enthusiastic fungus forays that have provided a sizeable proportion of the information in this booklet.

It concludes with two Sandwell Valley Fungus Foray Checklists for reference during future visits by groups or individuals interested in extending knowledge of fungi & allied organisms in the Sandwell Valley. The first is a checklist of scientific names only, the second, a list of English names accompanied by their latin equivalents. When using the latter the reader is reminded that most fungi do not have familiar English names. Both checklists may be copied for general use.



Rhytisma acerinum
(on Sycamore leaf)

SANDWELL VALLEY FUNGUS FORAY CHECKLIST			
SPECIES	✓	SPECIES	✓
<i>Agaricus arvensis</i>		<i>Bolbitius reticulatus</i>	
<i>Agaricus bisporus</i>		<i>Bolbitius vitellinus</i>	
<i>Agaricus campestris</i>		<i>Boletus edulis</i>	
<i>Agaricus silvicola</i>		<i>Boletus erythropus</i>	
<i>Agaricus xanthodermus</i>		<i>Bulgaria inquinans</i>	
<i>Agrocybe praecox</i>		<i>Byssomerulius corium</i>	
<i>Albugo candida</i>		<i>Calocera cornea</i>	
<i>Aleuria aurantia</i>		<i>Calocybe gambosa</i>	
<i>Amanita excelsa</i>		<i>Caloplaca citrina</i>	
<i>Amanita fulva</i>		<i>Calvatia gigantea</i>	
<i>Amanita muscaria</i>		<i>Calycellina punctata</i>	
<i>Amanita rubescens</i>		<i>Calycina herbarum</i>	
<i>Arachniotus aureus</i>		<i>Calyptella capula</i>	
<i>Arcyodes incarnata</i>		<i>Candelariella vitellina</i>	
<i>Arcyria affinis</i>		<i>Ceratiomyxa fruticulosa</i>	
<i>Arcyria cinerea</i>		<i>Chalciporus piperatus</i>	
<i>Arcyria denudata</i>		<i>Chondrostereum purpureum</i>	
<i>Arcyria ferruginea</i>		<i>Cladonia chlorophaea</i>	
<i>Arcyria incarnata</i>		<i>Cladonia fimbriata</i>	
<i>Arcyria obvelata</i>		<i>Cladonia furcata</i>	
<i>Arcyria pomiformis</i>		<i>Cladonia humilis</i>	
<i>Armillaria bulbosa</i>		<i>Cladonia macilenta subsp.floerkeana</i>	
<i>Armillaria gallica</i>		<i>Cladonia pyxidata</i>	
<i>Armillaria mellea</i>		<i>Clavaria vermicularis</i>	
<i>Ascobolus denudatus</i>		<i>Claviceps purpurea</i>	
<i>Ascocoryne cylichnium</i>		<i>Clavulina cinerea</i>	
<i>Ascocoryne sarcoides</i>		<i>Clavulina cristata</i>	
<i>Auricularia auricula-judae</i>		<i>Clavulinopsis corniculata</i>	
<i>Auricularia mesenterica</i>		<i>Clavulinopsis helvola</i>	
<i>Badhamia macrocarpa</i>		<i>Clavulinopsis luteoalba</i>	
<i>Badhamia panicea</i>		<i>Clitocybe dealbata</i>	
<i>Belonidium sulphureum</i>		<i>Clitocybe fragrans</i>	
<i>Bjerkandera adusta</i>		<i>Clitocybe infundibuliformis</i>	

SPECIES	✓	SPECIES	✓
<i>Clitocybe nebularis</i>		<i>Crepidotus variabilis</i>	
<i>Clitocybe odora</i>		<i>Cribraria argillacea</i>	
<i>Clitocybe rivulosa</i>		<i>Cribraria cancellata</i>	
<i>Clitocybe vibecina</i>		<i>Crocicreas coronatum</i>	
<i>Comatricha nigra</i>		<i>Crocicreas cyathoideum</i>	
<i>Comatricha tenerrima</i>		<i>Crocicreas dolosellum</i>	
<i>Conocybe tenera</i>		<i>Crocicreas starbaeckii</i>	
<i>Coprinus atramentarius</i>		<i>Crocicreas subhyalinum</i>	
<i>Coprinus comatus</i>		<i>Cyathus olla</i>	
<i>Coprinus congregatus</i>		<i>Cyathus striatus</i>	
<i>Coprinus disseminatus</i>		<i>Cyphellostereum laeve</i>	
<i>Coprinus lagopus</i>		<i>Cystolepiota sistrata</i>	
<i>Coprinus micaceus</i>		<i>Dacrymyces stillatus</i>	
<i>Coprinus plicatilis</i>		<i>Daedaleopsis confragosa</i>	
<i>Coprobia granulata</i>		<i>Daldinia concentrica</i>	
<i>Cordyceps militaris</i>		<i>Diachea leucopodia</i>	
<i>Cortinarius acutus</i>		<i>Diatrype stigma</i>	
<i>Cortinarius betuletorum</i>		<i>Diatrypella favacea</i>	
<i>Cortinarius cinnamomeus</i>		<i>Dictydiaethalium plumbeum</i>	
<i>Cortinarius glandicolor</i>		<i>Diderma hemisphaericum</i>	
<i>Cortinarius hemitrichus</i>		<i>Diderma spumarioides</i>	
<i>Cortinarius lucorum</i>		<i>Didymium difforme</i>	
<i>Cortinarius malachius</i>		<i>Didymium squamulosum</i>	
<i>Cortinarius rigidus</i>		<i>Echinula asteriadiformis</i>	
<i>Cortinarius saniosus</i>		<i>Enerthenema papillatum</i>	
<i>Cortinarius trivialis</i>		<i>Enteridium lycoperdon</i>	
<i>Cortinarius umbrinolens</i>		<i>Entoloma clypeatum</i>	
<i>Craterium leucocephalum</i>		<i>Entoloma incanum</i>	
<i>Craterium minutum</i>		<i>Entoloma neglectum</i>	
<i>Crepidotus epibryus</i>		<i>Entoloma nidorosum</i>	
<i>Crepidotus inhoneustus</i>		<i>Entoloma politum</i>	
<i>Crepidotus lundellii</i>		<i>Entoloma rhodopolium</i>	
<i>Crepidotus luteolus</i>		<i>Erysiphe artemisiae</i>	
<i>Crepidotus phillipsii</i>		<i>Erysiphe polygoni</i>	

SPECIES	✓	SPECIES	✓
<i>Evernia prunastri</i>		<i>Hyaloscypha hyalina</i>	
<i>Exidia nucleata</i>		<i>Hygrocybe ceracea</i>	
<i>Exidia thuretiana</i>		<i>Hygrocybe chlorophana</i>	
<i>Fistulina hepatica</i>		<i>Hygrocybe conica</i>	
<i>Flammulina velutipes</i>		<i>Hygrocybe helobia</i>	
<i>Fuligo septica</i>		<i>Hygrocybe insipida</i>	
<i>Fusarium sporotrichioides</i>		<i>Hygrocybe laeta</i>	
<i>Ganoderma adspersum</i>		<i>Hygrocybe miniata</i>	
<i>Ganoderma applanatum</i>		<i>Hygrocybe pratensis</i>	
<i>Ganoderma resinaceum</i>		<i>Hygrocybe psittacina</i>	
<i>Geoglossum fallax</i>		<i>Hygrocybe quieta</i>	
<i>Grifola frondosa</i>		<i>Hygrocybe virginea</i>	
<i>Gymnopilus junonius</i>		<i>Hygrophoropsis aurantiaca</i>	
<i>Gymnopilus penetrans</i>		<i>Hymenoscyphus calyculus</i>	
<i>Gymnopus confluens</i>		<i>Hymenoscyphus caudatus</i>	
<i>Gymnopus dryophilus</i>		<i>Hymenoscyphus fructigenus</i>	
<i>Gymnopus erythropus</i>		<i>Hymenoscyphus imberbis</i>	
<i>Gymnopus peronatus</i>		<i>Hymenoscyphus scutula</i>	
<i>Gymnosporangium cornutum</i>		<i>Hyphodontia sambuci</i>	
<i>Hankea excupuliformis</i>		<i>Hypholoma fasciculare</i>	
<i>Hankea utrifomis</i>		<i>Hypocrea pulvinata</i>	
<i>Hebeloma crustuliniforme</i>		<i>Hypocrea rufa</i>	
<i>Hebeloma leucosarx</i>		<i>Hypoderma rubi</i>	
<i>Hebeloma pusillum</i>		<i>Hypogymnia physodes</i>	
<i>Hebeloma sacchariolens</i>		<i>Hypomyces chrysospermus</i>	
<i>Helvella crispa</i>		<i>Hypoxylon fuscum</i>	
<i>Hemitrichia calyculata</i>		<i>Hypoxylon multiforme</i>	
<i>Hemitrichia clavata</i>		<i>Incrucipulum sulphurellum</i>	
<i>Hemitrichia intorta</i>		<i>Incrucipulum sulphurellum</i>	
<i>Henningsomyces candidus</i>		<i>Inocybe asterospora</i>	
<i>Hohenbuehelia reniformis</i>		<i>Inocybe geophylla</i> var. <i>lilacina</i>	
<i>Hyaloscypha albohyalina</i>		<i>Inocybe napipes</i>	
<i>Hyaloscypha albohyalina</i>		<i>Inocybe phaeocomis</i> var. <i>major</i>	
<i>Hyaloscypha herbarum</i>		<i>Inocybe rimosa</i>	

SPECIES	✓	SPECIES	✓
<i>Inonotus hispidus</i>		<i>Lecidella stigmatea</i>	
<i>Kuehneromyces mutabilis</i>		<i>Leocarpus fragilis</i>	
<i>Laccaria amethystina</i>		<i>Lepiota castanea</i>	
<i>Laccaria laccata</i>		<i>Lepiota cristata</i>	
<i>Laccaria tortilis</i>		<i>Lepiota subalba</i>	
<i>Lachnum brevipilosum</i>		<i>Lepista flaccida</i>	
<i>Lachnum carneolum</i>		<i>Lepista nuda</i>	
<i>Lachnum carneolum</i> var. <i>Lsporum</i>		<i>Lepraria incana</i>	
<i>Lachnum dumorum</i>		<i>Leptosphaeria acuta</i>	
<i>Lachnum niveum</i>		<i>Leptosphaeria doliolum</i>	
<i>Lachnum virgineum</i>		<i>Leptotrochila ranunculi</i>	
<i>Lacrymaria velutina</i>		<i>Leucopaxillus giganteus</i>	
<i>Lactarius britannicus</i>		<i>Lycogala epidendrum</i>	
<i>Lactarius glycosmus</i>		<i>Lycoperdon nigrescens</i>	
<i>Lactarius pubescens</i>		<i>Lycoperdon perlatum</i>	
<i>Lactarius quietus</i>		<i>Lycoperdon pyriforme</i>	
<i>Lactarius rufus</i>		<i>Lyophyllum decastes</i>	
<i>Lactarius subdulcis</i>		<i>Macrolepiota procera</i>	
<i>Lactarius tabidus</i>		<i>Macrolepiota rhacodes</i>	
<i>Lactarius torminosus</i>		<i>Macrotyphula fistulosa</i>	
<i>Lactarius turpis</i>		<i>Macrotyphula fistulosa</i> var. <i>contorta</i>	
<i>Lactarius vietus</i>		<i>Macrotyphula juncea</i>	
<i>Laetiporus sulphureus</i>		<i>Marasmiellus ramealis</i>	
<i>Lamproderma arcyroides</i>		<i>Marasmiellus vaillantii</i>	
<i>Lanzia luteovirens</i>		<i>Marasmius epiphyllus</i>	
<i>Lasiosphaeria ovina</i>		<i>Marasmius oreades</i>	
<i>Lecanora campestris</i>		<i>Marasmius rotula</i>	
<i>Lecanora conizaeoides</i>		<i>Melampsora caprearum</i>	
<i>Lecanora dispersa</i>		<i>Melampsora populnea</i>	
<i>Lecanora muralis</i>		<i>Melampsorella symphyti</i>	
<i>Leccinum duriusculum</i>		<i>Melanoleuca brevipes</i>	
<i>Leccinum scabrum</i>		<i>Melanoleuca melaleuca</i>	
<i>Leccinum versipelle</i>		<i>Melanotus horizontalis</i>	
<i>Lecidea fuscoatra</i>		<i>Menispora ciliata</i>	

SPECIES	✓	SPECIES	✓
<i>Meripilus giganteus</i>		<i>Naucoria salicis</i>	
<i>Metatrachia floriformis</i>		<i>Naucoria striatula</i>	
<i>Metatrachia vesparium</i>		<i>Naucoria subconspersa</i>	
<i>Microsphaera alphitoides</i>		<i>Nectria cinnabarina</i>	
<i>Microthyrium microscopicum</i>		<i>Nectria episphaeria</i>	
<i>Mollisia amenticola</i>		<i>Oligonema flavidum</i>	
<i>Mollisia caricina</i>		<i>Oligoporus caesius</i>	
<i>Mollisia chionea</i>		<i>Oligoporus ptychogaster</i>	
<i>Mollisia cinerea</i>		<i>Orbilia cardui</i>	
<i>Mollisia melaleuca</i>		<i>Orbilia leucostigma</i>	
<i>Mollisia rubi</i>		<i>Orbilia xanthostigma</i>	
<i>Morchella esculenta</i>		<i>Otidea bufonia</i>	
<i>Mucilago crustacea</i>		<i>Paecilomyces farinosus</i>	
<i>Mutinus caninus</i>		<i>Panaeolina foenicisii</i>	
<i>Mycena acicula</i>		<i>Panaeolus campanulatus</i>	
<i>Mycena adscendens</i>		<i>Panaeolus rickenii</i>	
<i>Mycena aetites</i>		<i>Panaeolus semiovatus</i>	
<i>Mycena arcangeliana</i>		<i>Panellus mitis</i>	
<i>Mycena cinerella</i>		<i>Parmelia sulcata</i>	
<i>Mycena filopes</i>		<i>Paxillus involutus</i>	
<i>Mycena flavaalba</i>		<i>Peltigera canina</i>	
<i>Mycena galericulata</i>		<i>Peltigera didactyla</i>	
<i>Mycena galopus</i>		<i>Perenniporia fraxinea</i>	
<i>Mycena galopus var. nigra</i>		<i>Perichaena corticalis</i>	
<i>Mycena inclinata</i>		<i>Perichaena depressa</i>	
<i>Mycena leptocephala</i>		<i>Periconia cookei</i>	
<i>Mycena metata</i>		<i>Peziza micropus</i>	
<i>Mycena mirata</i>		<i>Peziza repanda</i>	
<i>Mycena polyadelpa</i>		<i>Peziza vesiculosa</i>	
<i>Mycena polygramma</i>		<i>Pezizella rubescens</i>	
<i>Mycena pura</i>		<i>Phaeohelotium geogenum</i>	
<i>Mycena speirea</i>		<i>Phaeophyscia orbicularis</i>	
<i>Mycena vitilis</i>		<i>Phallus impudicus</i>	
<i>Mycoacia uda</i>		<i>Phellinus ferreus</i>	

SPECIES	✓	SPECIES	✓
<i>Phialina lachnobrachya</i>		<i>Polyporus squamosus</i>	
<i>Phialina pseudopuberula</i>		<i>Polyporus varius</i>	
<i>Phlebia merismoides</i>		<i>Prototrichia metallica</i>	
<i>Phlebia tremellosa</i>		<i>Psathyrella candolleana</i>	
<i>Pholiota adiposa</i>		<i>Psathyrella gracilis</i>	
<i>Pholiota apicrea</i>		<i>Psathyrella multipedata</i>	
<i>Pholiota gummosa</i>		<i>Psathyrella piluliformis</i>	
<i>Pholiota highlandensis</i>		<i>Psathyrella prona</i>	
<i>Pholiota lenta</i>		<i>Psilocybe semilanceata</i>	
<i>Pholiota squarrosa</i>		<i>Psilolechia lucida</i>	
<i>Phragmidium sanguisorbae</i>		<i>Pterula multifida</i>	
<i>Phylloachora graminis</i>		<i>Puccinia menthae</i>	
<i>Physarum bivalve</i>		<i>Puccinia poarum</i>	
<i>Physarum cinereum</i>		<i>Puccinia punctiformis</i>	
<i>Physarum leucophaeum</i>		<i>Pulvinula convexella</i>	
<i>Physarum nutans</i>		<i>Ramalina farinacea</i>	
<i>Physarum psittacinum</i>		<i>Ramsbottomia asperior</i>	
<i>Physarum robustum</i>		<i>Rhodocollybia butyracea</i>	
<i>Physarum viride</i>		<i>Rhodocollybia maculata</i>	
<i>Physcia adscendens</i>		<i>Rhodotus palmatus</i>	
<i>Physcia caesia</i>		<i>Rhytisma acerinum</i>	
<i>Physcia tenella</i>		<i>Rickenella fibula</i>	
<i>Piptoporus betulinus</i>		<i>Rickenella swartzii</i>	
<i>Placynthiella uliginosa</i>		<i>Rinodina gennarii</i>	
<i>Pleurotus cornucopiae</i>		<i>Rosellinia aquila</i>	
<i>Pleurotus dryinus</i>		<i>Rosellinia thelena</i>	
<i>Pleurotus ostreatus</i>		<i>Russula aeruginea</i>	
<i>Pluteus cervinus</i>		<i>Russula atropurpurea</i>	
<i>Pluteus salicinus</i>		<i>Russula betularum</i>	
<i>Pluteus umbrosus</i>		<i>Russula cyanoxantha</i>	
<i>Poculum sydowianum</i>		<i>Russula fragilis</i>	
<i>Polydesmia pruinosa</i>		<i>Russula nigricans</i>	
<i>Polyporus badius</i>		<i>Russula ochroleuca</i>	
<i>Polyporus brumalis</i>		<i>Russula parazurea</i>	

SPECIES	✓	SPECIES	✓
<i>Russula pseudointegra</i>		<i>Trametes versicolor</i>	
<i>Russula versicolor</i>		<i>Trapelia coarctata</i>	
<i>Schizopora paradoxa</i>		<i>Trapeliopsis granulosa</i>	
<i>Scleroderma bovista</i>		<i>Tremella mesenterica</i>	
<i>Scleroderma citrinum</i>		<i>Trichia contorta</i>	
<i>Scleroderma verrucosum</i>		<i>Trichia decipiens</i>	
<i>Scoliciosporum chlorococcum</i>		<i>Trichia persimilis</i>	
<i>Scoliciosporum umbrinum</i>		<i>Trichia scabra</i>	
<i>Scutellinia scutellata</i>		<i>Trichia varia</i>	
<i>Scutoscypha fagi</i>		<i>Tricholoma fulvum</i>	
<i>Serpula lacrymans</i>		<i>Trichothecium roseum</i>	
<i>Sphaerobolus stellatus</i>		<i>Triphragmium filipendulae</i>	
<i>Spinellus fusiger</i>		<i>Trochila ilicina</i>	
<i>Spongipellis delectans</i>		<i>Tubaria autochthona</i>	
<i>Stemonitis flavogenita</i>		<i>Tubaria conspersa</i>	
<i>Stemonitis fusca</i>		<i>Tubaria furfuracea</i>	
<i>Stemonitis typhina</i>		<i>Typhula erythropus</i>	
<i>Stereum gausapatum</i>		<i>Typhula setipes</i>	
<i>Stereum hirsutum</i>		<i>Ustulina deusta</i>	
<i>Stereum rugosum</i>		<i>Vascellum pratense</i>	
<i>Strobilurus tenacellus</i>		<i>Verpa conica</i>	
<i>Stropharia aurantiaca</i>		<i>Verrucaria muralis</i>	
<i>Stropharia coronilla</i>		<i>Verrucaria nigrescens</i>	
<i>Stropharia cyanea</i>		<i>Verrucaria viridula</i>	
<i>Stropharia semiglobata</i>		<i>Volvariella bombycina</i>	
<i>Suillus grevillei</i>		<i>Volvariella speciosa</i>	
<i>Symphytocarpus amaurochaetoides</i>		<i>Xanthoria parietina</i>	
<i>Symphytocarpus flaccidus</i>		<i>Xanthoria polycarpa</i>	
<i>Taphrina pruni</i>		<i>Xenodochnus carbonarius</i>	
<i>Tephromela atra</i>		<i>Xerocomus badius</i>	
<i>Torula herbarum</i>		<i>Xerocomus chrysenteron</i>	
<i>Trametes gibbosa</i>		<i>Xerocomus rubellus</i>	
<i>Trametes hirsuta</i>		<i>Xerocomus subtomentosus</i>	
<i>Trametes ochracea</i>		<i>Xerula radicata</i>	

FUNGUS FORAY CHECKLIST OF ENGLISH & SCIENTIFIC NAMES		
ENGLISH NAME	SCIENTIFIC NAME	✓
Amethyst Deceiver	<i>Laccaria amethystina</i>	
Angel's Bonnet	<i>Mycena arcangeliana</i>	
Anisee Funnel	<i>Clitocybe odora</i>	
Apricot Club	<i>Clavulinopsis luteoalba</i>	
Artist's Bracket	<i>Ganoderma applanatum</i>	
Bark Bonnet	<i>Mycena speirea</i>	
Bay Bolete	<i>Xerocomus badius</i>	
Bearded Dapperling	<i>Cystolepiota sistrata</i>	
Bearded Milkcap	<i>Lactarius pubescens</i>	
Beefsteak Fungus	<i>Fistulina hepatica</i>	
Birch Brittlegill	<i>Russula betularum</i>	
Birch Knight	<i>Tricholoma fulvum</i>	
Birch Milkcap	<i>Lactarius tabidus</i>	
Birch Polypore / Razorstrop	<i>Piptoporus betulinus</i>	
Birch Woodwart	<i>Hypoxylon multiforme</i>	
Black Bulgar	<i>Bulgaria inquinans</i>	
Black Milking Bonnet	<i>Mycena galopus var. nigra</i>	
Blackening Brittlegill	<i>Russula nigricans</i>	
Blackening Waxcap	<i>Hygrocybe conica</i>	
Bleeding Broadleaf Crust	<i>Stereum rugosum</i>	
Bleeding Oak Crust	<i>Stereum gausapatum</i>	
Blistered Cup	<i>Peziza vesiculosa</i>	
Blusher	<i>Amanita rubescens</i>	
Blushing Bracket	<i>Daedaleopsis confragosa</i>	
Bolete Mould	<i>Hypomyces chrysospermus</i>	
Bonfire Scalycap	<i>Pholiota highlandensis</i>	
Branching Oyster	<i>Pleurotus cornucopiae</i>	
Brown Birch Bolete	<i>Leccinum scabrum</i>	
Brown Mottlegill	<i>Panaeolina foenicisii</i>	
Brown Rollrim	<i>Paxillus involutus</i>	
Bulbous Fibrecap	<i>Inocybe napipes</i>	
Bulbous Honey Fungus	<i>Armillaria gallica</i>	
Butter Cup	<i>Rhodocollybia butyracea</i>	

ENGLISH NAME	SCIENTIFIC NAME	✓
Butter Waxcap	<i>Hygrocybe ceracea</i>	
Candlesnuff Fungus	<i>Xylaria hypoxylon</i>	
Charcoal Burner	<i>Russula cyanoxantha</i>	
Chestnut Dapperling	<i>Lepiota castanea</i>	
Chicken of the Woods	<i>Laetiporus sulphureus</i>	
Cinnamon Porecrust	<i>Phellinus ferreus</i>	
Cinnamon Webcap	<i>Cortinarius cinnamomeus</i>	
Clouded Funnel	<i>Clitocybe nebularis</i>	
Clustered Bonnet	<i>Mycena inclinata</i>	
Clustered Brittlestem	<i>Psathyrella multipedata</i>	
Clustered Domecap	<i>Lyophyllum decastes</i>	
Clustered Toughshank	<i>Gymnopus confluens</i>	
Coconut Milkcap	<i>Lactarius glyciosmus</i>	
Collared Mosscap	<i>Rickenella swartzii</i>	
Collared Parachute	<i>Marasmius rotula</i>	
Common Bonnet	<i>Mycena galericulata</i>	
Common Earthball	<i>Scleroderma citrinum</i>	
Common Eyelash	<i>Scutellinia scutellata</i>	
Common Glass Cup	<i>Orbilbia xanthostigma</i>	
Common Grey Disco	<i>Mollisia cinerea</i>	
Common Inkcap	<i>Coprinus atramentarius</i>	
Common Jellyspot	<i>Dacrymyces stillatus</i>	
Common Puffball	<i>Lycoperdon perlatum</i>	
Common Rustgill	<i>Gymnopilus penetrans</i>	
Common Stump Brittlestem	<i>Psathyrella piluliformis</i>	
Common Tarcrust	<i>Diatrype stigma</i>	
Coral Spot	<i>Nectria cinnabarina</i>	
Cramp Balls / King Alfred's Cakes	<i>Daldinia concentrica</i>	
Crested Coral	<i>Clavulina cristata</i>	
Cultivated Mushroom	<i>Agaricus bisporus</i>	
Dead Man's Fingers	<i>Xylaria polymorpha</i>	
Deceiver	<i>Laccaria laccata</i>	
Deer Shield	<i>Pluteus cervinus</i>	
Dog Stinkhorn	<i>Mutinus caninus</i>	
Dog's Tooth Lichen	<i>Peltigera canina</i>	

ENGLISH NAME	SCIENTIFIC NAME	✓
Drab Bonnet	<i>Mycena aetites</i>	
Dry Rot Fungus	<i>Serpula lacrymans</i>	
Dryad's Saddle	<i>Polyporus squamosus</i>	
Dung Roundhead	<i>Stropharia semiglobata</i>	
Dusky Puffball	<i>Lycoperdon nigrescens</i>	
Egghead Mottlegill	<i>Panaeolus semiovatus</i>	
Elastic Oysterling	<i>Panellus mitis</i>	
Elder Whitewash	<i>Hyphodontia sambuci</i>	
Ergot	<i>Claviceps purpurea</i>	
Fairy Inkcap	<i>Coprinus disseminatus</i>	
Fairy Ring Champignon	<i>Marasmius oreades</i>	
False Chanterelle	<i>Hygrophoropsis aurantiaca</i>	
Felted Twiglet	<i>Tubaria conspersa</i>	
Field Bird's Nest	<i>Cyathus olla</i>	
Field Mushroom	<i>Agaricus campestris</i>	
Flowers of Tan	<i>Fuligo septica</i>	
Fluted Bird's Nest	<i>Cyathus striatus</i>	
Fly agaric	<i>Amanita muscaria</i>	
Fool's Funnel	<i>Clitocybe rivulosa</i>	
Fragile Brittlegill	<i>Russula fragilis</i>	
Fragrant Funnel	<i>Clitocybe fragrans</i>	
Frosty Bonnet	<i>Mycena adscendens</i>	
Frosty Webcap	<i>Cortinarius hemitrichus</i>	
Garland Roundhead	<i>Stropharia coronilla</i>	
Giant Funnel	<i>Leucopaxillus giganteus</i>	
Giant Polypore	<i>Meripilus giganteus</i>	
Giant Puffball	<i>Calvatia gigantea</i>	
Girdled Webcap	<i>Cortinarius trivialis</i>	
Glistening Inkcap	<i>Coprinus micaceus</i>	
Goblet Parachute	<i>Marasmiellus vaillantii</i>	
Golden Waxcap	<i>Hygrocybe chlorophana</i>	
Green Brittlegill	<i>Russula aeruginea</i>	
Grey Coral	<i>Clavulina cinerea</i>	
Grey Milkcap	<i>Lactarius vietus</i>	

ENGLISH NAME	SCIENTIFIC NAME	✓
Grey Spotted Amanita	<i>Amanita excelsa</i>	
Grooved Bonnet	<i>Mycena polygramma</i>	
Hairy Bracket	<i>Trametes hirsuta</i>	
Hairy Curtain Crust	<i>Stereum hirsutum</i>	
Hare's Foot Inkcap	<i>Coprinus lagopus</i>	
Hazel Woodwart	<i>Hyoxylon fuscum</i>	
Heath Waxcap	<i>Hygrocybe laeta</i>	
Hen of the Woods	<i>Grifola frondosa</i>	
Holly Speckle	<i>Trochila ilicina</i>	
Honey Fungus	<i>Armillaria mellea</i>	
Horse Mushroom	<i>Agaricus arvensis</i>	
Iodine Bonnet	<i>Mycena filopes</i>	
Ivory Bonnet	<i>Mycena flavoalba</i>	
Ivory Funnel	<i>Clitocybe dealbata</i>	
Jelly Ear	<i>Auricularia auricula-judae</i>	
Jelly Rot	<i>Phlebia tremellosa</i>	
King Alfred's Cakes	<i>Daldinia concentrica</i>	
Larch Bolete	<i>Suillus grevillei</i>	
Lawyer's Wig / Shaggy Ink Cap	<i>Coprinus comatus</i>	
Leaf Parachute	<i>Marasmius epiphyllus</i>	
Lilac Bonnet	<i>Mycena pura</i>	
Lilac Fibrecap	<i>Inocybe geophylla var. lilacina</i>	
Lumpy Bracket	<i>Trametes gibbosa</i>	
Magic Mushroom / Liberty Cap	<i>Psilocybe semilanceata</i>	
Meadow Coral	<i>Clavulinopsis corniculata</i>	
Meadow Puffball	<i>Vascellum pratense</i>	
Meadow Waxcap	<i>Hygrocybe pratensis</i>	
Mealy Bonnet	<i>Mycena cinerella</i>	
Mealy Funnel	<i>Clitocybe vibecina</i>	
Mild Milkcap	<i>Lactarius subdulcis</i>	
Milking Bonnet	<i>Mycena galopus</i>	
Morel	<i>Morchella esculenta</i>	
Mosaic Puffball	<i>Handkea utriformis</i>	
Mousepee Pinkgill	<i>Entoloma incanum</i>	

ENGLISH NAME	SCIENTIFIC NAME	✓
Netted Fieldcap	<i>Bolbitius reticulatus</i>	
Nettle Rash	<i>Leptosphaeria acuta</i>	
Nitrous Bonnet	<i>Mycena leptoccephala</i>	
Nut Disco	<i>Hymenoscyphus fructigenus</i>	
Oak Mildew	<i>Microsphaera alphitoides</i>	
Oakbug Milkcap	<i>Lactarius quietus</i>	
Ochre Brittle gill	<i>Russula ochroleuca</i>	
Ochre Cushion	<i>Hypocrea pulvinata</i>	
Oily Waxcap	<i>Hygrocybe quieta</i>	
Orange Birch Bolete	<i>Leccinum versipelle</i>	
Orange Bonnet	<i>Mycena acicula</i>	
Orange Moss cap	<i>Rickenella fibula</i>	
Orange Peel Fungus	<i>Aleuria aurantia</i>	
Oyster Mushroom	<i>Pleurotus ostreatus</i>	
Palamino Cup	<i>Peziza repanda</i>	
Pale Brittlestem	<i>Psathyrella candolleana</i>	
Parasol	<i>Macrolepiota procera</i>	
Parrot Waxcap	<i>Hygrocybe psittacina</i>	
Penny Bun / Cep	<i>Boletus edulis</i>	
Peppery Bolete	<i>Chalciporus piperatus</i>	
Pestle Puffball	<i>Hankea excipuliformis</i>	
Pine Cone Cap	<i>Strobilurus tenacellus</i>	
Pipe Club	<i>Macrotyphula fistulosa</i>	
Pleated Inkcap	<i>Coprinus plicatilis</i>	
Pocket Plum	<i>Taphrina pruni</i>	
Poison Pie	<i>Hebeloma crustuliniforme</i>	
Potato Earthball	<i>Scleroderma bovista</i>	
Powdery Brittle gill	<i>Russula parazurea</i>	
Purple Brittle gill	<i>Russula atropurpurea</i>	
Purple Jellydisc	<i>Ascocoryne sarcoides</i>	
Razorstrop Fungus / Birch Polypore	<i>Piptoporus betulinus</i>	
Red Cracking Bolete	<i>Xerocomus chrysenteron</i>	
Redlead Roundhead	<i>Stropharia aurantiaca</i>	
Redleg Club	<i>Typhula erythropus</i>	

ENGLISH NAME	SCIENTIFIC NAME	✓
Redleg Toughshank	<i>Gymnopus erythropus</i>	
Rooting Shank	<i>Xerula radicata</i>	
Ruby Bolete	<i>Xerocomus rubellus</i>	
Rufous Milkcap	<i>Lactarius rufus</i>	
Russet Toughshank	<i>Gymnopus dryophilus</i>	
Scaly Earthball	<i>Scleroderma verrucosum</i>	
Scarlet Brittlegill	<i>Russula pseudointegra</i>	
Scarlet Caterpillar Club	<i>Cordyceps militaris</i>	
Scurfy Twiglet	<i>Tubaria furfuracea</i>	
Shaggy Bracket	<i>Inonotus hispidus</i>	
Shaggy Inkcap / Lawyer's Wig	<i>Coprinus comatus</i>	
Shaggy Parasol	<i>Macrolepiota rhacodes</i>	
Shaggy Scalycap	<i>Pholiota squarrosa</i>	
Sheathed Woodtuft	<i>Kuehneromyces mutabilis</i>	
Shield Pinkgill	<i>Entoloma clypeatum</i>	
Shooting Star	<i>Sphaerobolus stellatus</i>	
Silky Rosegill	<i>Volvariella bombycina</i>	
Silverleaf Fungus	<i>Chondrostereum purpureum</i>	
Slat Bolete	<i>Leccinum duriusculum</i>	
Small Stagshorn	<i>Calocera cornea</i>	
Smoky Bracket	<i>Bjerkandera adusta</i>	
Snapping Bonnet	<i>Mycena vitilis</i>	
Snowy Disco	<i>Lachnum virgineum</i>	
Snowy Waxcap	<i>Hygrocybe virginea</i>	
Spangle Waxcap	<i>Hygrocybe insipida</i>	
Spectacular Rustgill	<i>Gymnopilus junonius</i>	
Split Fibrecap	<i>Inocybe rimosa</i>	
Split Porecrust	<i>Schizopora paradoxa</i>	
Spotted Toughshank	<i>Rhodocollybia maculata</i>	
Spring Fieldcap	<i>Agrocybe praecox</i>	
St. George's Mushroom	<i>Calocybe gambosa</i>	
Star Fibrecap	<i>Inocybe asterospora</i>	
Sticky Scalycap	<i>Pholiota gummosa</i>	
Stinkhorn	<i>Phallus impudicus</i>	
Stinking Dapperling	<i>Lepiota cristata</i>	

ENGLISH NAME	SCIENTIFIC NAME	✓
Striate Aldercap	<i>Naucoria striatula</i>	
Stump Puffball	<i>Lycoperdon pyriforme</i>	
Suede Bolete	<i>Xerocomus subtomentosus</i>	
Sulphur Tuft	<i>Hypholoma fasciculare</i>	
Sweet Poison Pie	<i>Hebeloma sacchariolens</i>	
Tar Spot	<i>Rhytisma acerinum</i>	
Tawny Funnel	<i>Lepista flaccida</i>	
Tawny Grisette	<i>Amanita fulva</i>	
Thimble Morel	<i>Verpa conica</i>	
Toad's Ear	<i>Otidea bufonia</i>	
Tripe Fungus	<i>Auricularia mesenterica</i>	
Turkey Tail	<i>Trametes versicolor</i>	
Twig Parachute	<i>Marasmiellus ramealis</i>	
Twisted Deceiver	<i>Laccaria tortilis</i>	
Ugly Milkcap	<i>Lactarius turpis</i>	
Variable Brittle Gill	<i>Russula versicolor</i>	
Variable Oysterling	<i>Crepidotus variabilis</i>	
Veiled Oyster	<i>Pleurotus dryinus</i>	
Velvet Shank	<i>Flammulina velutipes</i>	
Velvet Shield	<i>Pluteus umbrosus</i>	
Vermilion Waxcap	<i>Hygrocybe miniata</i>	
Weeping Widow	<i>Lacrymaria velutina</i>	
White Brain	<i>Exidia thuretiana</i>	
White Saddle	<i>Helvella crispa</i>	
Willow Shield	<i>Pluteus salicinus</i>	
Winter Polypore	<i>Polyporus brumalis</i>	
Wood Blewit	<i>Lepista nuda</i>	
Wood Mushroom	<i>Agaricus silvicola</i>	
Wood Oysterling	<i>Melanotus horizontalis</i>	
Wood Pinkgill	<i>Entoloma rhodopolium</i>	
Wood Woolyfoot	<i>Gymnopus peronatus</i>	
Woolly Milkcap	<i>Lactarius torminosus</i>	
Wrinkled Peach	<i>Rhodotus palmatus</i>	
Yellow Brain	<i>Tremella mesenterica</i>	
Yellow Club	<i>Clavulinopsis helvola</i>	

SANDWELL VALLEY NATURALISTS' CLUB- PUBLICATIONS IN PRINT

1. Wildlife of the Sandwell Valley (1986) Edited by M.G. Bloxham.

An 88 page booklet containing a series of short introductory papers by various writers on the local geology and general ecology together with information about familiar species of the area. A valuable introduction for anyone wishing to visit the area, although many new records have been added since its publication.

Price £ 3.00 plus 50 pence postage & packing.

Contact : *Mr.M.Bloxham, 1 St. John's Close, Sandwell Valley, West Bromwich. B70 6TH*

2. Sandwell Valley Flora (1994) ISBN 0 9511532 1 8

Special Series Publication no.1 Written by Mike Poulton and illustrated by Paul Edwards

This 44 page booklet contains information on groups and species of plants characteristic to the area. This work supplements and updates the original account of flowering plants given in 'Wildlife of the Sandwell Valley'.

Price £ 2.50 plus 50 pence postage & packing.

Contact : *Mr.M.Bloxham, 1 St. John's Close, Sandwell Valley, West Bromwich. B70 6TH*

3. Birds of the Sandwell Valley (2000) ISBN 0 9511532 26

Special Series Publication no. 2. 136 pages. Written by Peter Forbes, Peter Hackett and Tim Hextell and illustrated with line drawings by several well - known local ornithological artists. It also contains colour photographs of a variety of birds seen in the Valley. The work contains a glossary and index, concluding with a Sandwell Valley Check List with Status. This provides instant data to the birder and is very useful for quick reference in the field

Contact: *Mr. P.R. Shirley, Wildlife Trust for Birmingham & the Black Country, 28 Harborne Rd, Edgbaston, (tel. 0121 454 1199).*

DON'T FORGET TO VISIT THE SANDNATS WEBSITE.

WITH WELL OVER 1000 HITS PLUS AN AWARD

This is the home site of the club and has other extensive lists of the local flora.
A visit will enable comparison with findings in this booklet.

[Http://sandnats.org.uk](http://sandnats.org.uk)

But if you also search on '**SANDNATS**' you'll easily find it!

THE CLUB IS GRATEFUL TO BILL MOODIE & CLARE HINCHLIFFE FOR
MAINTAINING THIS WEBSITE

