

ALCESTER WILDLIFE & NATURE



**An Introduction Guide to some of the Wildlife & Nature
around Alcester, Warwickshire (VC38)**

Stuart M MacDonald

ALCESTER WILDLIFE & NATURE

An Introduction Guide to some of
the Wildlife & Nature around Alcester
Warwickshire (VC38)

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INTRODUCTION

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E-Book Context

I am a frequent walker who rekindled an interest in photography. Initially to photograph birds however I did not wish to carry a full DSLR and the various lens with me so opted instead for a compact camera with a decent zoom up to 30x and a macro function. This could easily be carried in a small rucksack or in a jacket pocket. Having the macro function then brought me into taking photographs of Lichen and then into Insects.

The context of this E-Book is to record what I have found mostly without being pre-planned and just by stopping when I spot something of interest and by looking at fallen trees and such like. Some days I have up to 10 useable photographs after editing and on others none.

Main Walking Area

My walks started in 2019 and are based around the Studley/Alcester/Bidford/Stratford & Evesham areas and utilise part of the Heart of England Way/ Monarchs Way/Shakespeare's Avon Way, Arden Way & Millennium Path and many other connecting paths close by.

The routes I use range around the 9 to 15 mile mark, walked as a loop from Alcester enabling the route to be repeated in the reverse direction at a later date almost as a separate walk. Walking in all the four seasons and in different weather condition changes what can be found

All walk recordings are within the right hand side of the VC38 Boundary (Blue Dashed Line) on the map extract below.i.e. the square bounded by Redditch in the Northwest to Stratford upon Avon in the South East.



Species Covered

In this E-Book I have not included Birds and only some sections of the larger species such as Fungi, Lichen and Mosses as each in their own right merit a separate publication. I have kept my interest as wide as possible through choice rather being specific so each section of this E-Book is only an introduction to what can be found around the Alcester area.

I have given links to the most useful websites and to any books I have used at the start of each Section. These should help anyone as a starter if they wish to explore any specific Sections further.

Amateur Identifications Accuracy

Being a complete amateur, Identifications have been made using my best attempts and cannot be taken as being correct on my interpretation alone, particularly for the Fungi and Lichen photographs.

A large number of finds will require close up microscope examination for a lot of the species. I have however found that a digital microscope attachment for my mobile phone to be a very useful aid to examine the smaller details along with the odd chemical testing to aid identifications.

Some renaming of the photographs may well be required as more experience in identification is gained.

Walking Encounters

Some amusing, some not incidents or encounters from walks.

- a) Elderly lady and elderly dog - moved way to the side of a tree lined path to let me pass in the opposite direction where she picked up a stout broken branch and glared at me as I passed. Bade her good afternoon but no response.
- b) Young lady with a puppy on a long lead coming towards me on a tree lined path. Young lady passed after a brief greeting but the puppy would not - just put its front legs ramrod straight. Young lady could not coax it past me and had to return to pick it up. Maybe it dogs that are scared of me not females !.
- c) Crossing a field spotted a male sheep with its horns caught in the perimeter wire fence. Had to manhandle it free from the wire – it then urinated in thanks - before running off back to the rest of the flock.
- d) Crossing another field a flock of sheep scattered before me with three deciding to jump the fence for some reason. Two made it over the wire fence to the next field but the third caught its hind legs between the top two wire strands and ended up hanging upside down. Had to pull the top two twisted wires apart and manhandle its rear legs free – then as before - in thanks it urinated - before running after the two other escapees.
- e) Two fields next to each other the first with a Billy Goat and the next with the females. Crossing the first field heard galloping behind me rapidly closing and just missed getting butted in the legs. The Billy Goat tried another four times before I gently hit it then it kept its distance. The females in the next field flocked behind me as I crossed their field so I think I won the contest that day.

f) A field with young frisky cows I will offer no advice on as there are people trampled every year. Suffice to say I have my own particular solution. If not confident in such a situation then best to avoid unless absolutely no choice.

The same advice applies if you are tempted to go between a mother and very young calf.

g) Exiting a path from a wood leading onto a B road with an informal lay-by that dog walkers use I was approaching the perimeter hedge when two cars quickly stopped at the lay-by. The driver doors flew open and the drivers quickly ran to the rear of the vehicles. As I came through the kissing gate one car was a supercar and the other a high powered saloon. The drivers were however foreign looking, big and late 20's and were in the process of changing the rear number plates with large bladed screwdrivers. They did not look best pleased as I walked between the cars as they moved to the front ones. A white van drew up to talk to the lead driver as I went through the kissing gate on the other side of the road. Obviously an organised gang and quite threatening with absolutely no chance to get my camera out before all three speed away.

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SECTION 1 – DEER

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Brief facts:-

Three species of Wild Deer occur in the Alcester area.

Online references:-

For more detailed information about each species such as distribution and background history the following online links from “The British Deer Society” are a good start point.

[Fallow Deer - The British Deer Society](#)

[Roe Deer - The British Deer Society](#)

[Muntjac Deer - The British Deer Society](#)

Book references:-

A book from 2009

“Wild Deer in Britain” by Roy A. Harris and K.R. Duff.

Fallow Deer (*Dama dama*)

Fallow Deer have been resident in Britain for so long that they are considered resident. They are the most widespread deer in England. They are essentially herd animals with usually a single fawn being born late May to late June. The fawn stays with the mother until a year old when the next fawn is born. In terms of damage to crops the Fallow Deer being a herd animal create more of a problem for farmers compared to the Roe & Muntjac Deer.

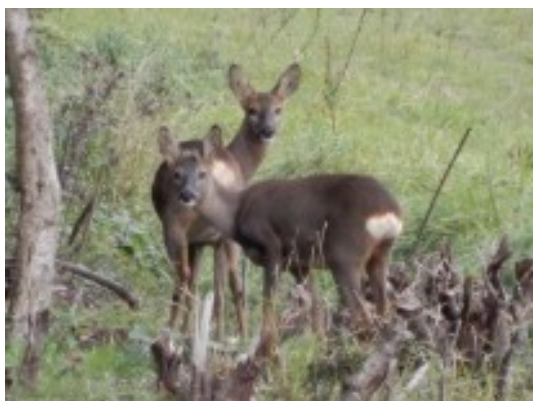


The herd below includes an uncommon white doe. The common variety lose their spots in the Autumn when the winter coat begins. The Menil variety retain their spotted coats throughout the winter. In a herd it is estimated that about 55% will be common, 40% will have chestnut brown to black coats with the White and Menhil varieties making up the remainder.



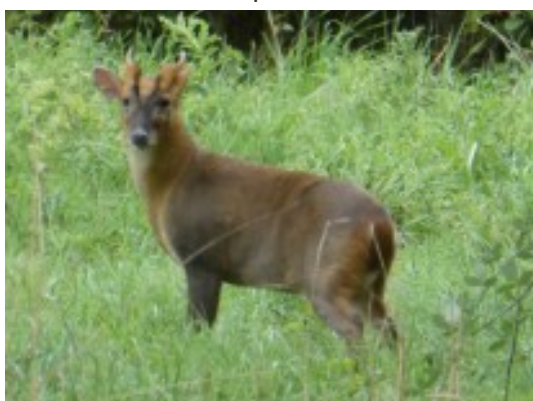
Roe Deer (*Capreolus capreolus*)

Roe Deer are found throughout Britain and are considered the most attractive of the British deer. They are graceful with a delicate build and have a combination of curiosity and reticence. The social unit is more solitary being a family group of the buck, doe and usually two fawns with fawns being born late May to late June.



Muntjac Deer (*Muntiacus reevesi*)

Muntjac Deer are small Asiatic Deer which were introduced into Britain. They have established feral populations over a wide area of England. They are usually seen either singly or in a small family group. Unlike the other deer in Britain Muntjacs do not have a limited breeding season and breed throughout the seasons. Single fawns being born around 7 months apart.



Deer Antler Rubbing

Most likely to be a Fallow or Roe Deer that has inflicted this bark stripping damage on this tree while rubbing the velvet coating from their antler..

Photograph taken in early January.



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SECTION 2- DRAGONFLIES

Brief facts:-

There are 39 breeding species and two migrants found in the British Isles.

Dragonflies consist of two sub-orders: true Dragonflies and Damselflies.
Dragonflies can further be divided into Hawkers and Darters.

Most Dragonflies live on average two to three weeks with six at the most.
Damselflies have an average life of one to two weeks with a maximum of eight.

In VC38 the county of Warwickshire there are nineteen species of true
Dragonfly and twelve species of Damselfly recorded.

Around Alcester I have encountered ten of the nineteen species of Dragonfly
and eight of the twelve species of Damselfly.

The general “on the wing months” of sighting are given for each species.

Online references:_

For more detailed information about each species such as distribution
and background history the following online links
are a good start point.

Just note the former is specific to Warwickshire but is not currently up to date and some
links may be broken.

[Warwickshire Dragonfly Group](#)
[British Dragonfly Society - British Dragonfly Society](#)

Book references:-

A book from 1986
“A Complete Guide to British Dragonflies”
by Andrew McGeeney.

2a- Chasers

Broad-bodied Chaser (*Libellula depressa*)

Male Broad-bodied Chaser



Female Broad-bodied Chaser



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec



Female laying eggs on submerged vegetation

Four-spotted Chaser (*Libellula quadrimaculata*)

The name refers to the four black bars on the leading edge of the front and rear wing sets.



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Scarce Chaser (*Libellula fulva*)

Mature Male Scarce Chaser



Immature Male Scarce Chaser



Intermediate Male Scarce Chaser



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

2b- Darters

Common Darter

(*Sympetrum striolatum*)

Male Common Darter



Female Common Darter



Male and Female mating



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Ruddy Darter

(*Sympetrum sanguineum*)

The Red colour is deeper and the mid-abdomen is narrow waisted.



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

2c- Dragonflies

Emperor Dragonfly

(*Anax imperator*)

Male Emperor Dragonfly



Female Emperor Dragonfly Egg laying



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Hairy Dragonfly

(*Brachytron pratense*)

Male & Female mating



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

2d- Hawkers

Brown Hawker

(*Aeshna grandis*)

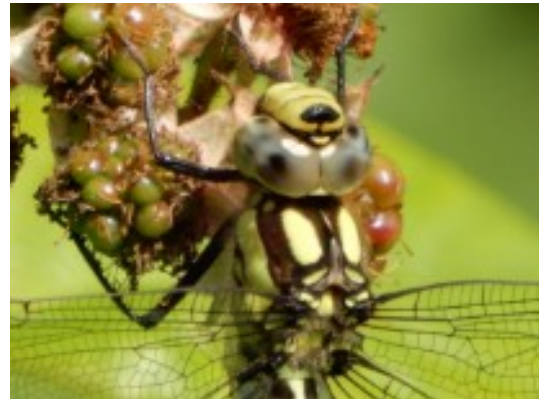


Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Southern Hawker

(*Aeshna cyanea*)

Male Southern Hawker



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

2e – Skimmers

Black-Tailed Skimmer (*Orthetrum cancellatum*)

Male Black-Tailed Skimmer



Female Black-Tailed Skimmer



2f- Damselflies

Azure Damselfly

(*Coenagrion puella*)

Male Azure Damselfly



Male & Female starting to mate



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Mating group egg laying



Banded Demoiselle Damselfly

(*Calopteryx splendens*)

Male Banded Demoiselle Damselfly



Female Banded Demoiselle Damselfly



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Beautiful Demoiselle Damselfly

(*Calopteryx virgo*)

Male Beautiful Demoiselle Damselfly

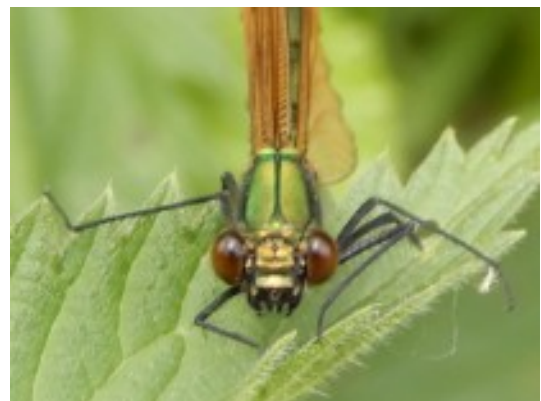
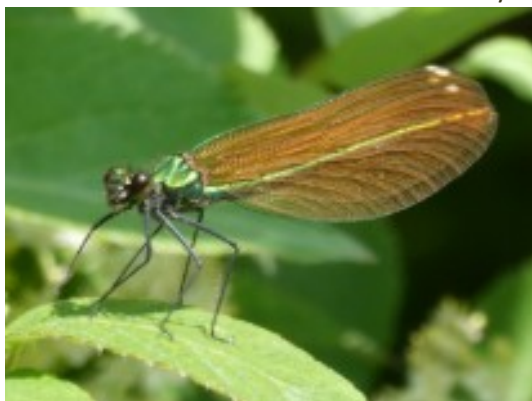


Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

The two above are mature adults with the dark wings while the one *below* is an immature adult with the light brown wings.



Female Beautiful Demoiselle Damselfly



Blue-Tailed Damselfly

(*Ischnura elegans*)

Male Blue-Tailed Damselfly



Blue-Tailed Damselflies mating



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Common Blue Damselfly

(*Enallagma cyathigerum*)

Male Common Blue Damselfly



Female Common Blue Damselfly



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Male Common Blue Damselfly Group



Mating Common Blue Damselflies



Large Red Damselfly (*Pyrhosoma nymphula*)

Large Red Damselfly



Large Red Damselfly



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Red-Eyed Damselfly (*Erythromma najas*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

White-Legged Damselfly (*Platycnemis pennipes*)

Male White-Legged Damselfly



Female White-Legged Damselfly



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

SECTION 3- BUTTERFLIES

Brief facts:-

These photographs are the most common butterflies (23 No.) - there are more.

The general “on the wing months” of sighting are given for each species along with the number of generations per year.

Online references:-

For more detailed information about each species such as distribution and background history the following online links are a good start point.

[Warwickshire branch | Butterfly Conservation](#)
[Butterflies | Butterfly Conservation](#)

Book references:-

“A Complete Guide to British Butterflies”
by Margaret Brooks and Charles Knight.

Brimstone Butterfly

(*Gonepteryx rhamni*) - One generation a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Clouded Yellow Butterfly

(*Colias croceus*) - One generation a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Comma Butterfly

(*Polygonia c-album*)

Two generations a year

Note - the white comma on the wing underside



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Common Blue Butterfly

(*Polyommatus icarus*) - Two generations a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Gatekeeper Butterfly

(*Pyronia tithonus*) - One generation a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Holly Blue Butterfly

(*Celastrina argiolus*) - Two generations a year

Male



Female



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Marbled White Butterfly

(*Melanargia galathea*) - One generation a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Meadow Brown Butterfly

(*Maniola jurtina*) - One sometimes two generations a year

Male



Female



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Orange Tip Butterfly

(*Anthocharis cardamines*) - One generation a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Painted Lady Butterfly & Peacock Butterfly
(Vanessa cardui) & (Inachis io)

One to two generations a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

One generation a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Red Admiral Butterfly

(Vanessa atalanta) - One to Two generations a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Ringlet Butterfly

(Aphantopus hyperantus) - One generation a year
Female Ringlet Butterfly



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Male Ringlet Butterfly



Silver-washed Fritillary Butterfly

(*Argynnis paphia*) - One generation a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Small Copper Butterfly & Small Heath Butterfly

(*Lycaena phlaeas*) & (*Coenonympha pamphilus*)

Three generations a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Two generations a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Small Skipper Butterfly

(*Thymelicus sylvestris*)

One generation a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Large Skipper Butterfly (*Ochlodes venata*)

Two generations a year



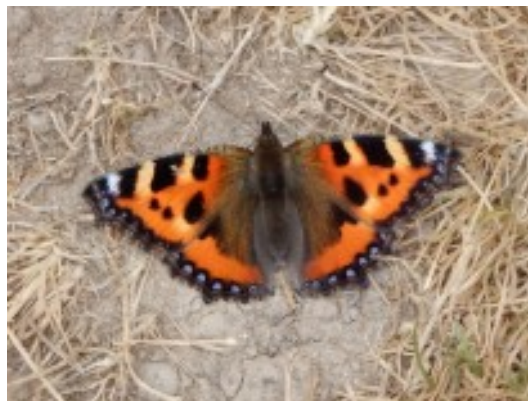
Mating pair



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Small Tortoiseshell Butterfly

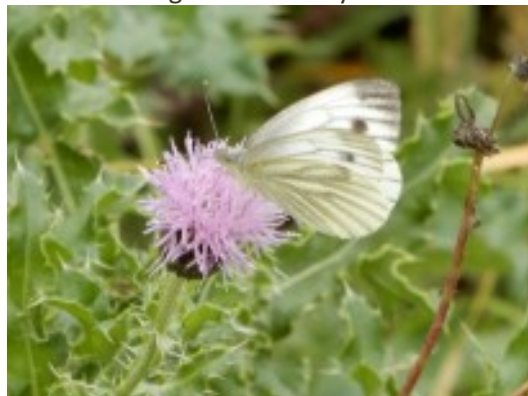
(*Aglais urticae*) - Two generation a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Green veined White Butterfly (*Pieris napi*)

Two generations a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Small White Butterfly, Eggs & Caterpillar (*Pieris rapae*)

One of our most abundant Butterflies
Two generations a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

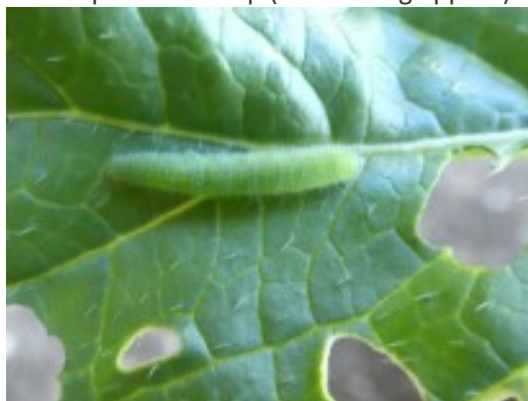
Random Egg Laying on Radish leaf underside



Egg Close Up (1mm long approx)



Caterpillar Close Up (10mm long approx)



Large White Butterfly

(*Pieris brassicae*)

Male Butterfly



Female Butterfly



Two generation a year

Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Speckled Wood Butterfly

(*Pararge aegeria*) - Two generation a year



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

SECTION 4- MOTHS

Brief facts:-

Compared to Butterflies, Moths are not viewed the same, however they are numerous and widespread, with over 2,500 species in Britain. A small percentage are day time fliers with the remainder requiring the use of a Moth Trap as dusk approaches.

This E-Book only records the day time fliers encountered along with any caterpillars.

It may however include a few nocturnal moths which will fly if accidentally disturbed from their daytime resting places.

The general “on the wing months” of sighting are given for each adult of the species.

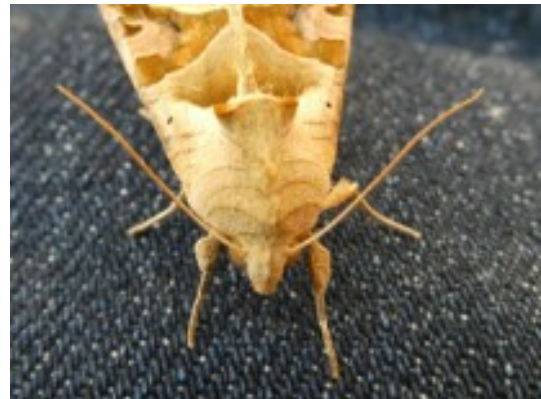
Online references:_

For more detailed information about each species such as distribution and background history the following online links are a good start point and include Moths.

[Warwickshire branch | Butterfly Conservation](#)
[Butterflies | Butterfly Conservation](#)
[Beginner's Top 20 - UKMoths](#)

Book references:_

Angle Shades Moth
(*Phlogophora meticulosa*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Blood-vein Moth & Box-tree Moth
(*Timandra comae*) & (*Cydalima perspectalis*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Cinnabar Moth & Cinnabar Caterpillar
(*Tyria jacobaeae*)



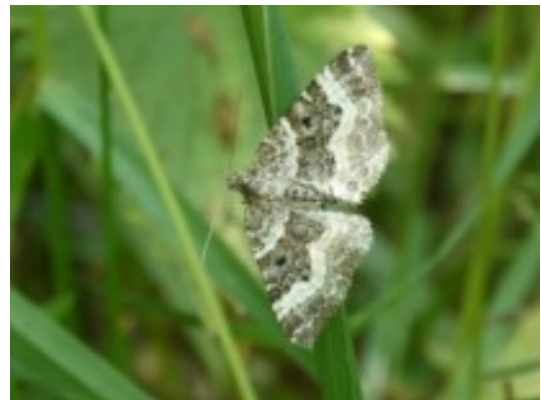
Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Clouded Magpie Moth & Common Carpet Moth

(*Abraxas sylvata*) & (*Epirrhoe alternata*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Common Wainscot Moth

(*Mythimna pallens*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Dotted Border Moth

(*Agriopis marginaria*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Drinker Moth Caterpillar & Fox Moth Caterpillar
(*Euthrix potatoria*) & (*Macrothylacia rubi*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Ermine Moths-Spindle Caterpillars

(*Yponomeula cagnagella*)

Tree specific. The Caterpillars hatch from their egg group and stay together spinning a dense silk cocoon for protection. They move through the tree foliage stripping the leaves spinning a new protective cocoon for protection until ready to moult when they separate into individuals for the next stage in their development into adult Moths.



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Ermine Moths-Willow Caterpillars

(*Yponomeula orrella*)

Again Tree specific. The Willow tree on the Left hand photograph has been completely de-foliaged by the hungry caterpillars which are now as shown on the Right hand photograph spinning vertical cords down to ground level to find a new food source. These vertical cords are covered in caterpillars and at least twelve cords were visible with others partly constructed. The Willow tree foliage will slowly re-establish itself once rid of the caterpillars.



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Green Oak Moth & Humming-Bird Hawk-Moth

(*Tortrix viridana*) & (*Macroglossum stellatarum*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Knot Grass Moth Caterpillar

(*Acronicta rumicis*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Large Yellow Underwing Moth Caterpillar

(*Noctua pronuba*)



Large Yellow Underwing Moth

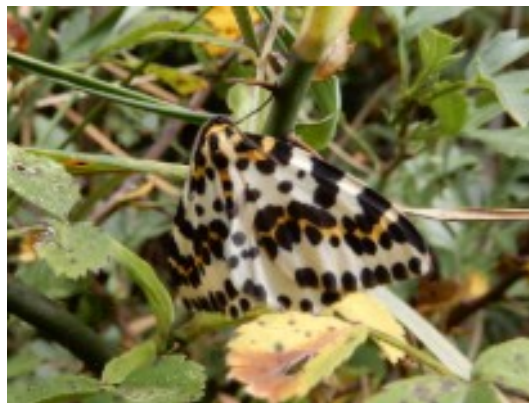
(*Noctua pronuba*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Magpie Moth

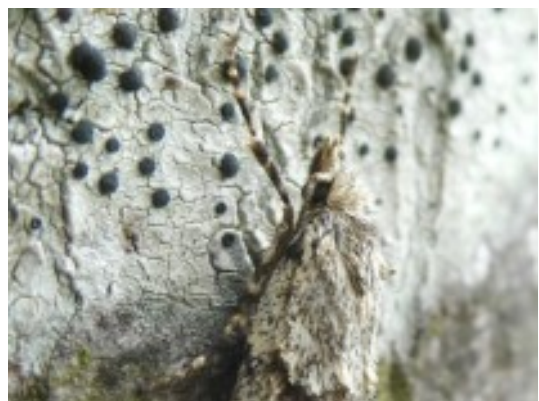
(*Abraxas grossulariata*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

March Dagger Moth

(*Diurnea fagella*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Mother Shipton Moth & Orange Underwing Moth
(*Callistege mi*) & (*Archiearis parthenias*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Pale-shouldered Brocade Moth
(*Lacanobia thalassina*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec



Pale Straw Pearl Micro-Moth
(*Udea lutealis*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Scarlet Tiger Moth (Callimorpha dominula)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Shade Broad-Bar Moth (Scotopteryx chenopodiata)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Silver Y Moth (Autographa gamma)



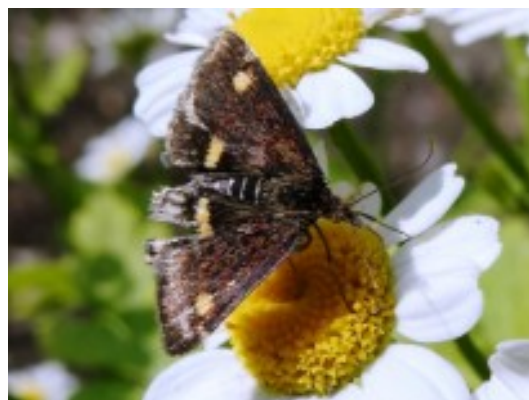
Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Six-Spot Burnet Moth & Small Purple-Gold Mint Moth

(*Zygaena filipendulae*) & (*Pyrausta aurata*)



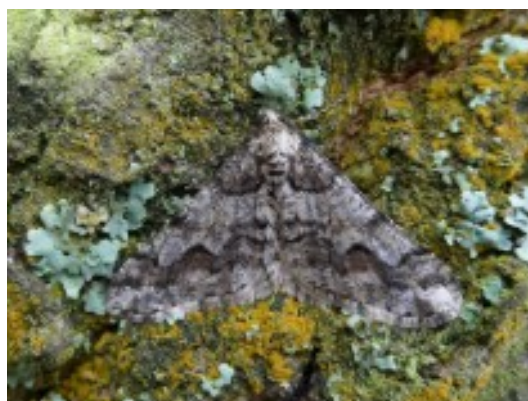
Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Spring Usher Moth

(*Agriopis leucophaearia*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Tawny-barred Angle Moth

(*Macaria liturata*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Yellow banded Longhorn Moth

(*Nemophora degeerell*)



Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

Yellow Shell Moth

(*Camptogramma bilineata*)



Jan	Feb	Mar	Apr	May	Jun
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SECTION 5 – OTHER INSECTS

Brief facts:-

Insect species are separated from Spiders and similar creatures by their three main body components. These are the Head, Thorax and Abdomen with three pairs of legs. Wings vary from none to two pairs.

Studies of insect DNA show that all the current varies species of insects developed over time from one initial species now called Lucia. That species is believed to to 470 million years old.

The Dragonflies shown in Section 2 are also an insect species.

Online references:_

For more detailed information about each species such as distribution and background history the following online links are a good start point.

<https://www.britishbugs.org.uk/>

<https://www.naturespot.org.uk/sites/default/files/downloads/british-ichneumonid-wasps-id-guide.pdf>

Book references:-

A handy little pocket guide
“Collins Gem Book of INSECTS”

5a – Aphids

Plum-Thistle Aphid
(*Brachycaudus cardui*)



Woolly Aphid
(Aphididae family)



5b – Bees

Ashy Mining Bee & Buff Tailed Bumblebee
(*Andrena cineraria*) & (*Bombus terrestris*)



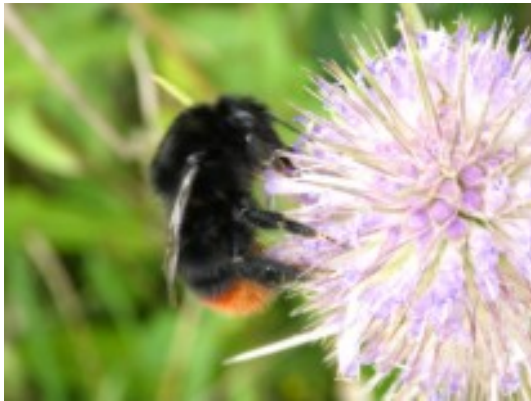
Common Carder Bee & Honey Bee
(*Bombus pascuorum*) & (*Apis mellifera*)



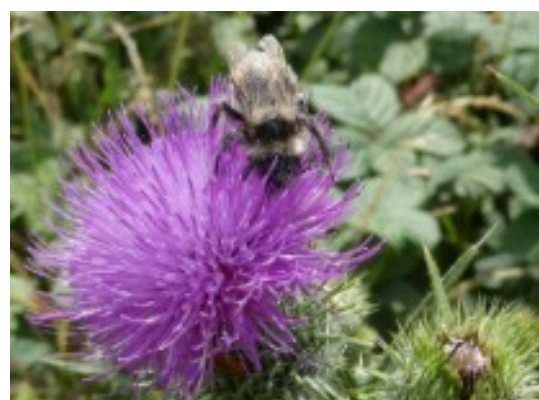
Hairy Footed Bee
(*Anthophora plumipes*)



Red Tailed Bumble Bee & Tree Bumble Bee
(*Bombus lepidarius*) & (*Bombus hypnorum*)



Sand-coloured Carder Bumble Bee
(*Bombus veteranus*)



Vestal Cuckoo Bee & White Tailed Bumble Bee
(*Bombus vestalis*) & (*Bombus lucorum*)



5c – Beetles

Cantharis Rustica Beetle & Common Red Soldier Beetle
(*Cantharis rustica*) & (*Rhagonycha fulva*)



Garden Chafer Beetle
(*Phyllopertha horticola*)



Green Dock Beetle & Egg Cluster
(*Gastrophysa viridula*)



Female Beetle



Egg cluster on Dock leaf underside

Green Weevil Beetle
(*Polydrusus formosus*)



Imported Willow Leaf Beetle – Larval Stages
(*Plagiodera versicolora*)



Red headed Cardinal Beetle & Spotted Longhorn Beetle
(*Pyrochroa serraticornis*) & (*Leptura maculata*)



Thick legged flower beetle (Male) & Thick legged flower beetle (Female)
(*Oedemera nobilis*)



Variable Longhorn Beetle & Wasp Beetle
(*Stenocorus meridianus* & *Clytus arietis*)



5d – Cricket's

There are 23 species of Cricket in the UK.
See the Grasshopper section also.

Dark Bush Cricket
(*Pholidoptera griseoaptera*)



Oak Bush Cricket & probably Nymph
(*Meconema thalassinum*)



Rosel's Bush Cricket
(*Roeseliana roeselii*)



5e – Flie's- Generally

Alder Fly

(*Sialis lutaria*)



Bee Fly

(*Bombylius major*)

The large bee fly, along with other species in the genus *Bombylius*, are parasitic and lay their eggs in the nests of mining bees and bumblebees. They do this by hovering over nests or burrows and dropping or flicking their eggs into the nest. Before they deposit their eggs, they coat them in soil or dust. This adds weight to the eggs and may also be a form of camouflage. Once the larvae hatch, they will crawl further into the nest/burrow and feed on mature bee larvae, eventually killing them. Therefore, the abundance of the bee fly depends upon the abundance, and conservation, of its host bee species.



Flesh Fly
(*Sarcophaga carnaria*)



Noon Fly
(*Mesembrina meridiana*)



Scorpion Fly

(*Panorpa communis*)

Scorpionflies belong to an ancient order of insects known as 'Mecoptera' which includes about 550 species worldwide. Mecoptera can be traced back to the Permian period, more than 250 million years ago, and are likely ancestors of butterflies and flies.

The scorpionfly is found along woodland edges. It has a long, beak-like projection from its head that is used to feed. It scavenges on dead insects. Adults usually mate at night, but mating can be a dangerous game for the male, who might easily be killed by the female. So he presents her with a nuptial gift of a dead insect or a mass of saliva to placate her. The resulting eggs are laid in the soil and the emerging larvae live and pupate at the soil surface.



5f – Craneflies

Tipula vernalis & *Tipula lunata*



Spotted Cranefly
(*Nephrotoma appendiculata*)



5g – Fruit Flie's

Mouse-eared Hawkweed Fly

(*Tephritis ruralis*)

Tephritis ruralis is a small species of fruit fly. The species is widespread but has only scattered records. It is known for its strongly patterned wings and is one of many similar-looking members of the Tephritidae family.

The larvae of *Tephritis ruralis* cause galls in the receptacles of the Mouse-ear Hawkweed during the summer.



5h – Froghoopers

Red & Black Froghopper

(*Cercopis vulnerata*)



Frogspit

This strange bubbly froth is called frog spit. Nothing at all to do with a frog as the cluster of small transparent bubbles in a whitish foam is caused by an insect called a spittlebug or froghopper.



There is a small pale green to yellow insect inside.

The adult is a small hopping insect, often brown or beige. It is seldom seen, for not only does its colour help conceal it, but it leaps to other plants when people approach. The adult spends its summer feeding on the sap of plants. At the end of the season, the female pierces holes in a stem and deposits its eggs. They hatch in the spring and, with the return of favourable temperatures, form a bubble home. The nymphs feed on the plant for several weeks, molt a few times, then emerge as adults. The foam is then washed from the plant by the next hard rain. There is only one generation a year. Given the pest's life cycle, the appearance of frog spit is often considered a sign of the arrival of summer.

5i – Grasshoppers

There are 11 species of Grasshoppers in the UK.
See the Cricket section also.

Meadow Grasshopper (*Chorthippus parallelus*)



5j – Hover Flies

Cheilosia impressa & *Chrysotoxum verralli*



Scaeva pyrastris & *Syrphus Ribesii*



Volucella inanis



Batman Hoverfly & Footballer Hoverfly

(*Myathropa florea*) & (*Helophilus pendulus*)

Notice the bat symbol & football shirt on the upper body.



Great Pied Hoverfly & Long Hoverfly

(*Volucella pellucens*) & (*Sphaerophoria scripta*)



Marmalade Hoverfly & Tapered Drone Hoverfly

(*Episyrphus balteatus*) & (*Eristalis pertinax*)



5k – Ladybirds

(For the typical lifecycle of a Ladybird see Harlequin Ladybird)

Seven-Spot Ladybird & Lavre
(*Coccinella 7-punctata*)



Fourteen-Spot Ladybird & Sixteen-Spot Ladybird
(*Propylea 14-punctata*) & (*Tytthaspis sedecimpunctata*)



Twenty two-Spot Ladybird
(*Psyllobora 22-punctata*)



Harlequin Ladybird & Pupa and Lavre (*Harmonia axyridis*)

Black version



Initial Larve Stage



Final Pupa Stage



Typical Ladybird Lifecycle



Kidney-Spot Ladybird & Pine Ladybird

(*Chilocorus renipustulatus*) & (*Exochomus quadripustulatus*)



Scyminae sp or *Cryptolaemus montrouzieri* Larva

Spotted a tiny piece of white fluff (2-3mm) on the leaf of a Mint Plant. Then realised it was moving around on that leaf. The close up photographs show the detail and I believe it is the early stage larva of a Ladybird but unlike anything seen to date. I have found very little hard data as to exactly what it is. I have gone with Scyminae sp. for now although the name *Cryptolaemus montrouzieri* crops up also in my research.



5I – Leafhoppers

There are over 400 species of Leafhoppers in the Britain and Northern Ireland.

About the size of grain of rice at 2mm-3mm in length these bite into the leaves and feed on the sap discolouring the leave in the process.

Empoasca vitis – only a possibility

(*Empoasca vitis*)



Potato Leafhopper

(*Eupteryx aurata*)



Leafhopper nymph

(unknown)



5m – Mayfly

There are 51 species of Mayfly in the Britain.

They range in size 5mm to over 20mm in size. The Males can be identified as having the larger eyes and the pair on pincers on the end of the abdomen neither of which the Females have. Once they become adults and emerge from the water they have no functioning mouths to feed as they seek a breeding partner.

Mayflies are thought to be the first winged insect to evolve and are older than the dinosaurs. Fossils exist that date back over 300 million years.

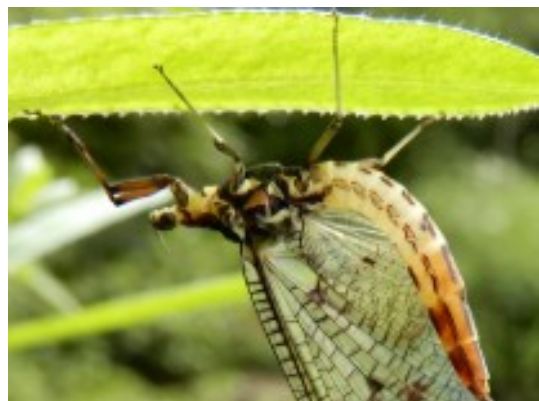
Ephemera dancia (Female)



Ephemera dancia (Male)



Ephemera vulgata (Female)



5n – Midge

Microtendipes pedellus

A midge only 2-3mm in size with a mohawk.



5o – Mites

Phytomyza ranunculi Fly

This adult Mite Fly only 2-3mm in size is a leaf mining mite fly whose larvae mine the leaves of various members of the Buttercup family.



5p – Shieldbugs

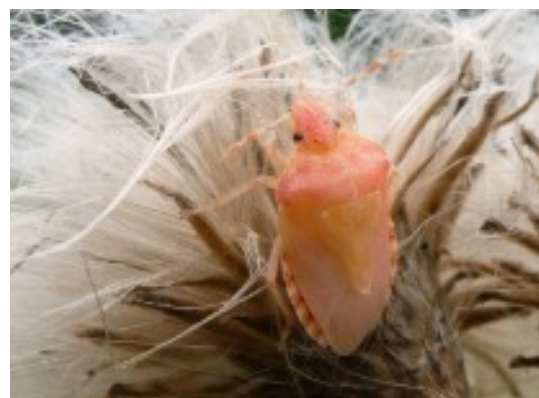
Dock Shieldbug
(*Coreus marginatus*)



Common Green Shieldbug & one at the second instar stage
(*Palomena prasina*)



Hairy- Sloe Shieldbug & one at the teneral stage
(*Dolycoris baccarum*)



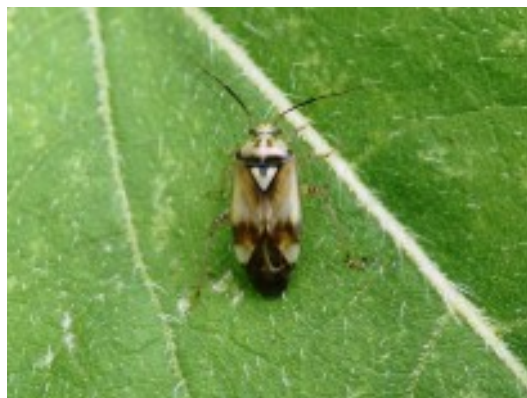
Hawthorn Shieldbug & Juniper Shieldbug
(*Acanthosoma haemorrhoidale*) & (*Cypostethus tristriatus*)



Red Legged Shieldbug & Woundwort Shieldbug
(*Pentatoma rufipes*) & (*Eysarcoris venustissimus*)



Tarnished Plant Bug
(*Lygus pratensis*)



5q – Wasps

There are approximately 9,000 species of wasp in the UK.

These include the parasitic wasps, some of which are so tiny, they can barely be seen without a microscope.

Of the larger wasps around 250 have a stinger.

Only 9 are social wasps which form large nests.

Common Wasp

(*Vespula vulgaris*)



Ichneumon Wasps

In the UK we have approximately 2,500 species of ichneumonid. Making up almost 10% of all British insects, Ichneumonidae are an important insect group and one of the most diverse. Many of the species are poorly understood and are known from very few specimens.

All ichneumonids are parasitoids of other invertebrates. Their larvae infect and then kill a single host insect. This distinguishes them from parasites, which live off a host but don't usually kill them and predators which attack and consume many individuals of the same or different species.

Lissonota lineolaris



Hornets

Although large in size and sometimes referred to as the King of the Wasps any fear of Hornets is unfounded as they will only sting if threatened.

They are generally less aggressive than the common wasp with the male Hornet unable to sting.

Hornet

(*Vespa crabro*)



SECTION 6

SPIDERS and HARVESTMEN

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SECTION 6 – SPIDERS and HARVESTMEN

Brief facts:-

Spiders and Insects are different. Spiders have the following characteristics

Four rather than three pairs of legs

Two rather than three body parts

No wings

Six or more usually eight simple rather than compound eyes.

Spiders and webs are commonly thought of together but only 17 out of the 37 spider families in Britain build webs in order to catch prey. The orb web is the structure children draw when depicting spiders it is only made by four spider families in Britain. In three of the families the silk spirals are coated with sticky glue.

Seven different web constructions are recognized among British spiders – orb, funnel, tangled, lacy, radial, hammock and purse.

Online references:_

For more detailed information about each species such as distribution and background history the following online links are a good start point.

<https://srs.britishspiders.org.uk/portal.php/p/Forum>

Book references:-

A book from 2020

“BRITAIN'S SPIDERS A field guide”

by Lawrence Bee, Geoff Oxford and Helen Smith.

6a – SPIDERS

Araniella displicata

The female is 5mm-11mm in length with the male slightly smaller at 4mm-5mm.



Candy-Striped Spider

(*Enoplognatha ovata*)

The female at 4mm-6mm with the male slightly smaller at 3mm-5mm.



Crab Spider- *Diaea dorsata*

Diaea dorsata is one of the smaller crab spiders. Females can grow up to 6 mm, males up to 4 mm. This spider can change colour to fit its surroundings however, the process takes several days although this one seems well in control of how to hide on the Hazel bud.



Crab Spider- White Crab Spider

(*Misumena vatia*)

Both these spiders use the ambush tactics of stealth and surprise rather than making a web to catch their prey see photograph below. White Crab female (LHS) is typically 9mm-11mm with the male (RHS) being much smaller at 3mm-4mm (next to the raspberry).



Cupboard Spider

(*Steatoda grossa*)

One of the five False Widow spiders which despite its name is also found outdoors usually around garden furniture etc. The female is 6mm-10mm in length with the male slightly smaller at 4mm-6mm.



Funnelweb Spider

(*Textrix denticulata*)

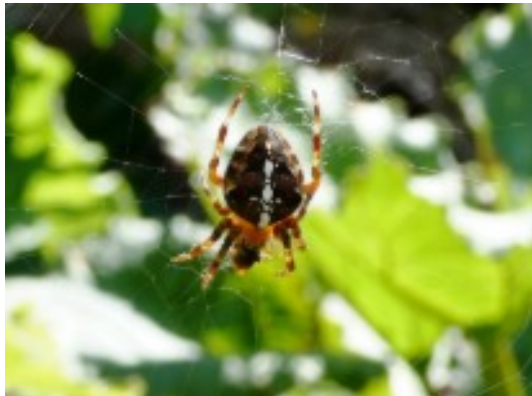
As the name says these spiders create Funnel Webs. Both sexes are 6mm-7mm in length.



Garden Spider Male & Female

(*Araneus diadematus*)

These spiders create Orb Webs. The web is rebuilt every day or so which takes just 30 minutes. The male on the Left is smaller at 4mm-8mm. The females at 10mm-18mm is on the Right.



Money Spider

(Linyphiidae)

Money Spiders make up about a third of all the spiders found in the UK.



These tiny spiders with a body length of 4mm-6mm often land on your clothes in summer (said to bring fortune and good luck). They travel through the air on strands of silk, picked up by the wind.

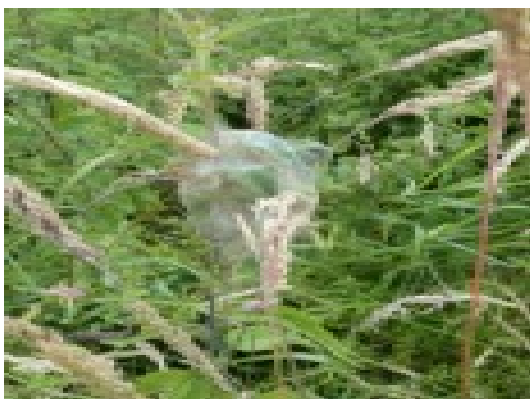
Money spiders create Hammock Webs. On a damp morning the extremely large number of webs built low down in a grassy field are made very visible when covered in dew.



Nurseryweb Spider

(Pisaura mirabilis)

These spiders create a hanging pouch web from the vegetation to raise their young contained inside. The female at 12mm-15mm can be seen directly below the pouch acting as a guardian. The male is only slightly smaller at 10mm-13mm.



Zebra Spider

(*Salticus senicus*)

These spiders use the ambush tactics of stealth and surprise rather than making a web to catch their prey. The Zebra spider (both sexes) are 3mm-4mm.



6b – HARVESTMEN

Leiobunum rotundumi



Below are the Male (front) with the Female (rear).



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FUNGI

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SECTION 7 - FUNGI

Brief facts:-

These can be difficult to identify at the best of times.

They generally fall into a number of categories being Acomycetes, Basidiomycetes, Brackets, Crusts, Clubs, Corals and Jellies.

Given that there are over 4,000 species in the United Kingdom with 2,600 recorded in VC38 Warwickshire in 1980 by the British Mycological Society some degree of specialisation was required.

To that effect I will only deal with some Brackets, Corals, Crusts and Jellies in this E-Book.

Online references:-

For help with identifying Fungi species the following online links are recommended.

[Nature and Wildlife Forum - Index page
https://fungi.org.uk/viewforum.php?f=1](https://fungi.org.uk/viewforum.php?f=1)

Book references:-

For Fungi two books are recommended :-

From 1998

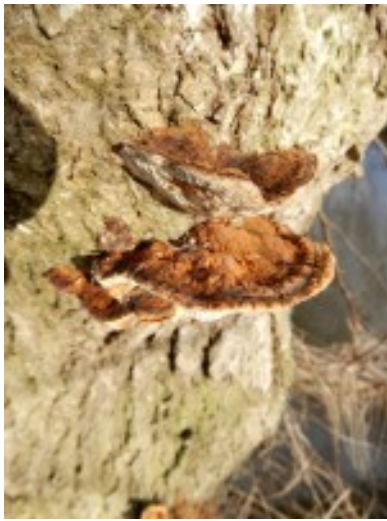
“The Complete Encyclopedia of Mushrooms” by Gerrit J. Keizer
and

From 2006

“Mushrooms” by Roger Phillips

7a - Brackets

Alder Bracket Fungus
(*Inonotus radiatus*)



Beafsteak Fungus
(*Fistulina hepatica*)



Birch Polypore Fungus
(*Piptoporus betulinus*)



Blushing Bracket Fungus
(*Daedaleopsis confragosa*)



Chicken of the Wood Fungus
(*Laetiporus sulphureus*)



Conifer Mazegill Fungus
(*Glocoeophyllum spiarium*)



Crimped Gill Fungus
(*Plicaturopsis crispa*)



Dryad's Saddle Fungus
(*Polyporus squamosus*)



Fomitopsis Fungus



Galerina autumnalis Fungus



Ganoderma applanatum Fungus



Ganoderma australe Fungus



Ganoderma pfeifferi Fungus



Hapalopilus rutilans Fungus



Inonotus hispidus Fungus



Oak Bracket Fungus
(*Pseudoinonotus dryadeus*)



Oak Mazegill Fungus
(*Daedalea quercina*)



Oligoporus caesius Fungus



Oligoporus stipticus Fungus



Oyster Fungus
(Pleurotus ostreatus)



Branched Oyster Fungus
(Pleurotus cornucopiaes)



Pale Oyster Fungus
(*Pleurotus pulmonarius*)



Phellinus pomaceus Fungus



Trametes gibbosa Fungus



Trichaptum abietinus Fungus



Tyromyces Fungus



Violet Fir Bracket Fungus
(Trichaptum abietinum)



Willow Bracket Fungus
(*Phellinus igniarius*)



Winter Polypore Fungus
(*Polyporus brumalis*)



7b – Fungi forming Rosettes

Blushing Rosette Fungus
(*Abortiporus blennis*)



Turkeytail Fungus
(*Trametes versicolor*)



7c- Corals

The Coral Tooth Fungus (*Hericium coralloides*) shown below is very rare and on the Red Data List of endangered species due to its rarity. The FRDBI (British Mycological Society database) for Warwickshire VC38 has only three previous recordings.

Coral Tooth Fungus
(*Hericium coralloides*)



7d- Cups & Ears

Hare's Ear Fungus
(*Otidea onotica*)



Hazel Cup Fungus
(*Encoelia furfuracea*)

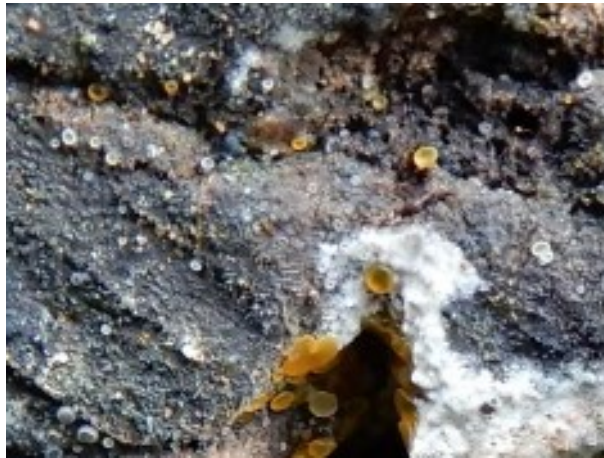


Orange Peel Fungus
(*Aleruria aurantia*)



Orbilia alnea & Mollisia cinerea Fungus

The Yellow cups are *Orbilia alnea* and the grey/blue smaller cups are *Mollisia cinerea*

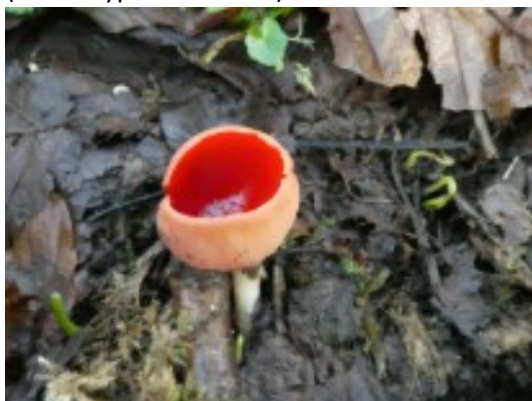


Pezzia repanda Fungus



Scarlet Elfcup Fungus

(*Sarcoscypha austriaca*)



7e- Jellies

Yellow Brain Fungus & Crystal Brain Fungus

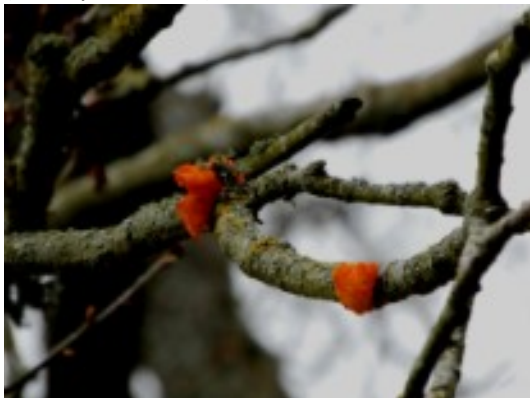
Yellow Brain Fungus
(*Tremella mesenterica*)



Crystal Brain Fungus
(*Myxarium nucleatum*)



Red Tree Brain Fungus (*Peniophora rufa*)



White Brain Fungus (*Exidia thuretiana*)



Warlock's Butter Fungus
(*Exidia nigrican*)



Witches Butter Fungus
(*Exidia glandulosa*)



Jelly Ear Fungus & Leafy Brain Fungus

Jelly Ear Fungus
(*Auricularia auricula-judae*)



Leafy Brain Fungus
(*Tremella foliacea*)



Orange Jelly Fungus
(*Dacrymyces stillatus*)



Yellow Fingers Fungus
(*Calocera cornea*)



Calocera (probably) *cornea* with the tiny Grey/Blue *Mollisia cinerea*



Purple Jellydisc Fungus
(*Ascocoryne sarcoides*)



Tripe Fungus
(*Auricularia mesenterica*)



7f- Resupinates

Similar but smaller than bracket Fungi growing on the same substrate with most forming a soft or hard crust.

Bleeding Oak Crust Fungus

(*Stereum gausapatum*)

Note – bleeding red when scored.



Cinnamon Porecrust Fungus

(*Fuscoporia ferrea*)



Hairy Curtain Crust Fungus

(*Stereum hirsutum*)



Jelly Rot Fungus

(*Phlebia tremellosa*)



Peniophora limitata Fungus



Silverleaf Fungus

(*Chondrostereum purpureum*)





Split Porecrust Fungus
(*Schizopora paradoxa*)



Wrinkled Crust Fungus
(*Phlebia radiata*)



7g- Others

Candle Snuff Fungus

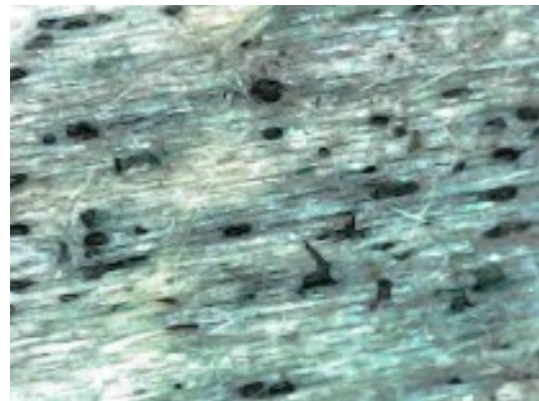
(*Xylaria hypoxylon*)



Green Elfcap Fungus

(*Chlorociboria acuginascen*)

Note – the black apothethia belong to a crustose Lichen. The fungus fruit bodies (green cups) are rarely present.



SECTION 8

MICROFUNGI

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SECTION 8 - MICROFUNGI

Microfungi are fungal organisms such as Rusts, Mildews, and Moulds.

Microfungi are distinguished from Macrofungi only by the absence of a large fruiting body.

They can be found in all environments with most of the fungal body consisting of microscopic threads called hyphae extending through the substrate in which it grows.

These have microscopic spore producing structures which produce spores that are carried by the insects, air, wind and rain in spreading the fungus.

Many microfungal species occur in Lichens forming symbiotic relationships with Algae. Other microfungi, such as those of the genera *Penicillium*, *Aspergillus* and *Neurospora* were first discovered as Moulds.

8a - Microfungi

Boeremia hedericola

An Ivy leaf specialist – spores within large spot spread by rainwater to adjacent Ivy leaves.



Leaf top surface



Leaf bottom surface



Red Dock Spot

Caused by the *Ramularia rubella* fungus. A dock leaf specialist.



Leaf bottom surface



Leaf top surface



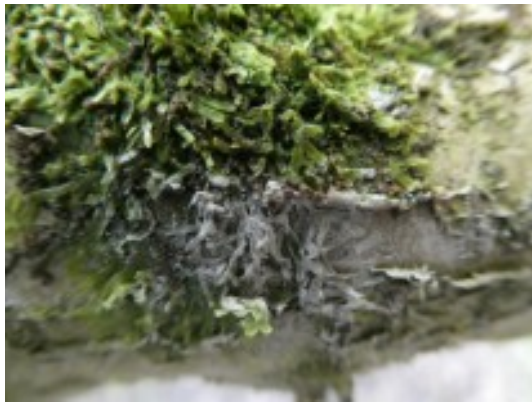
Leaf bottom surface

8b - Bryophilous fungi

Bryophilous fungi are specialized fungi that specifically colonise bryophytes including mosses, liverworts, and hornworts.

Ebibryon hepaticicola (tentative ID.)

On the Liverwort Forked Veilwort with the *Ebibryon hepaticicola* fungus attack forming a necrotic white patch.



Close Up 1



Close Up 2



Close Up 3

8c - Rusts

Brief facts:-

The rusts are amongst the most common fungal diseases of garden plants.

Trees, shrubs, herbaceous and bedding plants, grasses, bulbs, fruit
and vegetables can all be affected.

Rust diseases are unsightly and often (but not always) reduce plant vigour.

In extreme cases, rust infection can even kill the plant.

Online references:-

For help with identifying Rust species the following online links
are recommended.

[Nature and Wildlife Forum - Index page](https://fungi.org.uk/viewforum.php?f=1)
<https://fungi.org.uk/viewforum.php?f=1>

Book references:-

Bramble Leaf Rust

Caused by the *Phragmidium violaceum* fungus

Blackberry Leaf Rust Fungus (*Phragmidium violaceum*), also known as the Violet Bramble Rust forms wine-coloured blotches that appear individually peppering the upper surface of leaves and can spread to fuse together. On the underside of the leaves these appear as black specks which contain the rusts spores.



Leaf top surface



Leaf bottom surface

These black specks are clumps of thick-walled teliospores which will survive on the rotting leaves after leaf fall. They over winter there, then release basidiospores the following autumn. The rust is pretty common and whilst it affects the plant it is not usually enough to affect its future



Leaf underside close up

Bramble Stem Rust

Caused by the *Kuehneola uredinis* fungus



Bramble Stem

Dog Mercury Stem & Leaf Rust

Caused by the *Melampsora rostrupii* fungus (formally *Melampsora populnea*)

Dog's mercury is an ancient woodland indicator. All parts of dog's mercury are poisonous.



Stem & Leaves



Stem close up

Dog Rose Stem, Bud & Leaf Rust

Caused by the *Phragmidium mucronatum* fungus

A fungal disease of the Dog Rose plant Stem, Buds & Leaves. This causes bright yellow orange areas.



Stem, Bud & Leaf rust



Leaf rust

European Pear Leaf Rust

Caused by the *Phragmidium violaceum* fungus

European Pear rust is a fungal disease of Pear tree leaves. This causes bright orange spots on the leaves. During autumn spores are released from the blackish growths on the underside of the leaves. These spores are blown to nearby Juniper (or similar evergreen) trees which retain their leaves over the winter period. These evergreen leaves continue to nourish the fungal infection over the winter period. In the spring the fungal infection then returns back to infect the Pear trees.



Leaf top surface



Leaf bottom surface

Willow Leaf Rust

Caused by the Melampsora probably *Melampsora epitea* fungus.



Leaf top surface



Leaf bottom surface



Underside Close Up

8d - Mildews

Brief facts:-

There are over 700 species of Powdery Mildew.

Interestingly Wales despite its small size supports over 150 taxa compared to just under 200 in the whole of Britain and Ireland.

Each Mildew type is very host specific, and can typically infect only one kind of plant.

Online references:-

For help with identifying Mildews the following online links are recommended.

[Nature and Wildlife Forum - Index page
https://fungi.org.uk/viewforum.php?f=1](https://fungi.org.uk/viewforum.php?f=1)

Book references:-

An E-Book titled :-

The Powdery Mildews of Wales (Erysiphales) of Wales:
Arthur O. Chater & Ray G. Wood

Downloadable from:-

<https://www.aber.ac.uk/waxcap/downloads/Chater19-PowderyMildewsWalesCensus.pdf>

Oak Mildew

Caused by the fungus *Erysiphe alphitoides*

Oak Mildew is common throughout Europe and was first found in England in 1908. It was considered a contributory factor in the oak dieback episode in the 1920s. The mildew fungus attacks the young leaves, covering them with a felty-white mycelium, causing them to shrivel and blacken. Mild overcast conditions are optimal for development of the disease usually appearing in summer when warmer conditions prevail.



Leaf top surface



Close Up

Courgette Plant Mildew

Caused by the fungus *Golovinomyces cucurbitacearum* or *orontii*

The mildew fungus attacks the leaves and stems covering them with a felty-white mycelium, causing them to turn yellow and shrivel. Mild overcast conditions again are optimal for development of the disease usually appearing in summer when warmer conditions prevail



Plant top surface



Close Up

SECTION 9

SLIME MOULDS

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SECTION 9 - SLIME MOULDS

Brief facts:-

Slime moulds do not form part of the fungal kingdom.

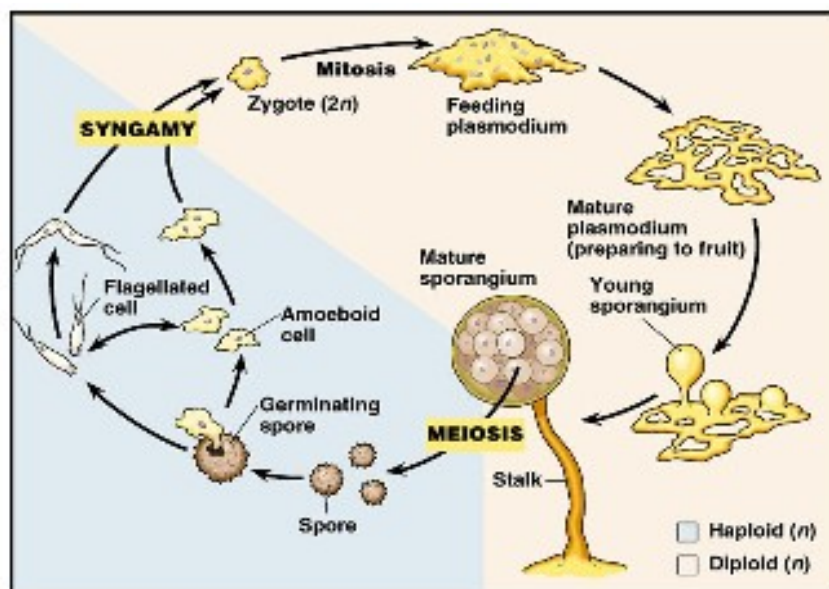
The nearly 500 species form a group of organisms distinct from all other forms of life. Slime moulds cannot make their own food they engulf other microscopic organisms such as fungi, bacteria, decaying leaves, logs and dung.

Plasmodial slime moulds reproduce by forming headed stalks containing spores. This reproductive stalk head is spherical or popsicle-like. When the time is right, these stalks will release the spores and new slime moulds will form.

Cellular slime moulds are called "slugs," which crawl along the substrate at an average speed of 1 millimetre per hour leaving behind a trail of chemicals which draws other slugs toward it. As more and more slugs travel over this trail, the chemical trail becomes stronger drawing in even more. Eventually all of the slugs merge into one mass. About a third of these massed cells come together to produce the stalk-like fruiting spore body.

Spore release usually occurs in the spring and autumn when there is adequate moisture and suitable temperatures.

Typical lifecycle diagram



Online references:-

For help with identifying Slime Moulds the following online links are recommended.

[Nature and Wildlife Forum - Index page](https://fungi.org.uk/viewforum.php?f=1)
<https://fungi.org.uk/viewforum.php?f=1>

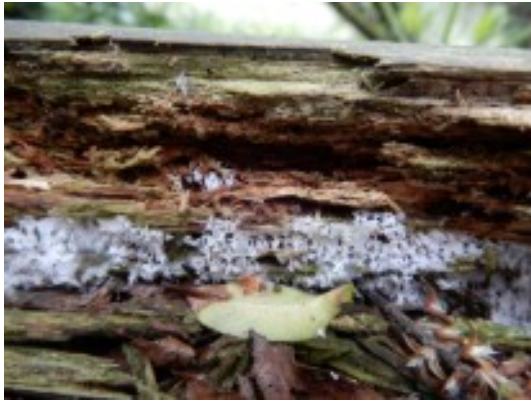
[Bucks Fungus Group](https://www.bucksfungusgroup.org.uk/slimemoulds.htm)
<https://www.bucksfungusgroup.org.uk/slimemoulds.htm>

This youtube link gives an idea of how Slime Moulds function

https://youtu.be/GY_uMH8Xpy0.

Book references:-

Ceratiomyxa fruticulose Slime Mould



Comatrichia nigra Slime Mould



Dogs Sick Slime Mould

(was *Mucilago crustacea* now called *Didymium spongiosum*)



Flowers of Tan Slime Mould

(*Fuligo septical*)



Lycogala epidendrum Slime Mould



Reticularia lycoperdon Slime Mould

The False Puffball, "*Reticularia lycoperdon*", is one of the more obvious species of slime mould, typically seen in its reproductive phase as a white 'swelling' on standing dead trees in the spring, or on large pieces of fallen wood. Alder is a common host.



Tapioca Slime Mould
(*Brefeldia maxima*)



Trichia decipiens Slime Mould



Tubifera arachnoidea Slime Mould



White Carnival Candy Slime Mould
(*Arcyria cinerea*)



SECTION 10 - 12

TREES, GALLS & LEAFMINERS

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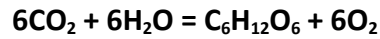
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SECTION 10 - TREES

Brief facts:-

The photosynthesis chemical reaction equation forms the basis of all plant life.



Carbon Dioxide + Water = Glucose + Oxygen

The leaves in presence of sunshine absorb carbon dioxide while the roots provide the water to the leaves. The resultant reaction provides glucose (the simplest form of carbohydrate) which grows the plant on which almost all life ultimately depends.

Online references:-

For more detailed information about each species such as distribution and background history the following online link is a good start point.

[A Guide to Tree Identification](#)

Book references:-

For Tree's a book from 2022
"Tree Spotting" by Ros & Nell Bennett

Holly Trees

(*Inonotus radiatus*)

The Holly leaves are very nutritious and are browsed on by sheep, cattle and deer. The lower leaves have edge spines to deter browsing while those above browsing level are without the deterrent edge spines.



Lower leaf with spines



Upper leaf without spines

The leaves of Holly contain a bitter tasting alkaloid – ilicin which possibly deters many leaf eating insects. Compared to many trees the holly is not subject to sustained insect attack - though its leaves can harbour the holly leaf miner. This is the larval stage of a fly. Its mining activities can cause local discolouration of the leaf.



There are separate Male trees and Female trees with small white flowers forming in late spring, with four petals. The male flowers have four yellow stamens; they will not give rise to berries. Only the female trees produce the red berries.



Spindle Berry Trees

(*Euonymus europaeus*)

My favourite Autumn species.

The Spindle four lobed pink seed capsules contains four to six seeds each coated in a bright orange covering.

The seeds themselves are toxic but the bright orange enclosures are very nutritious and Robins are one of the main consumers. The toxic seeds are poisonous to birds, mammals and humans. If eaten they are likely to result in liver and kidney damage.



Wych Elm Trees

(Ulnus Glabra)

There are three native Elms the Wych Elm, English Elm & Field Elm with the Wych Elm being now the most prevalent and the Field Elm the least. All three were badly affected by Dutch Elm Disease with the English Elm the worst affected.

The Wych Elm winged seed heads shown below (called samaras) grow from the spring blossom of the tree. The seeds in the centre are dispersed by the wind and these need to germinate within a week or they die with large numbers eaten by rodents and birds.



Yew Trees

(*Taxus baccata*)

An ancient majestic tree found mainly in Churchyards next to ancient gravestones.

In the UK, there are three native conifers: the Juniper, the Scots Pine and the Yew. The Yew is generally slow growing and can be up to thousands of years old. Estimating the age of a Yew can be difficult as they often develop hollow trunks, which makes dating by annual rings next to impossible. The trunks may also fill with aerial roots that grow down from the crown. The yew is our longest-living species and isn't considered ancient until around 800 to 900 years old.



Like nearly every part of the tree, the leaves are poisonous. Ingestion of any poisonous parts leads to heart failure. Chemicals extracted from the leaves are used in the treatment of certain forms of cancer, where the toxic effects of the chemical slows down the multiplication of cancer cells.



The tree is either male and female. Male flowers or rather cones shed their pollen in early spring. Female trees bear red fruits. The outer part of the fruit is a red, fleshy cup which attracts birds being non-toxic. The hard brown nut passes through their digestive system unharmed. Like the leaves, the nut is also highly toxic.

Tree Parasites, Damage and Oddities

Blackthorn & Hawthorn Spring Time Blossom

Telling Blackthorn & Hawthorn trees apart in the spring can be made by the Blossom/Leaf sequence. With Blackthorn the Blossom comes first followed by the leaves, with the Hawthorn the leaves appear first followed by the blossom.



Blackthorn Blossom first before leaf buds



Hawthorn Blossom only after leaf growth

Deer Antler Rubbing

Most likely to be a Fallow or Roe Deer that has inflicted this bark stripping damage on this tree while rubbing the velvet coating from their antler..



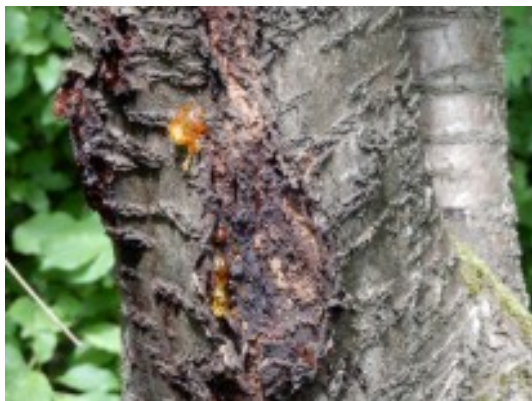
Honey Fungus Attack



The Honey Fungus spreads by spores from the cap and by these black bootlaces called Rhizomorphs. The Rhizomorphs can be found on the tree roots spreading up the tree beneath the bark and through the soil travelling long distances through the ground to infect other trees. This fungus is the most dangerous parasite of trees causing white rot and arising in the death of the tree. There is no cure making this fungus responsible for large tree losses each year.

Tree Resin

Thought I would take a look at this leaking tree resin to determine if it was caused by a tree wound or something like that. Ended up realising the photograph taken resembled a Lions head.



Mistletoe (*Viscum album*)

Mistletoe is easy to spot when the host trees have lost their leaves.

It's a parasitic plant attached to the host tree by a structure called the haustorium through which it extracts water and nutrients from the tree. Trees with large infestations of mistletoe can be negatively affected.

The seeds are spread by birds feeding on the white berries. On eating the white flesh of the mistletoe berry, the birds wipe their sticky bills on twigs and branches, leaving behind the seed. If the sticky seed is deposited on a host tree and manages to take hold by the root growing and penetrating the twig or branch, a mistletoe plant will result.

It's commonly found in Wales, the West Midlands and the South of England.



Witches Broom

Witch's broom is a deformity in a tree where the natural structure of the branch is changed. A dense mass of twigs grows out from a single point, with the resulting structure forming a dense tangle of young branches sometimes called a birds nest. The local deformity is attributed to tree damage, insects or other pathogens. More than one of these can occur on a tree.



The photograph below is Witches Broom on a damaged Willow branch



SECTION 11 - GALLS

Brief facts:-

A gall is the result of a parasitic attack.

The parasite generally a mite or insect results in an increase in the number of plant cells or by the cells becoming abnormally enlarged at the attack location.

The parasite is therefore not the actual gall maker rather it is the gall initiator for the plant to create this localised growth which in turn provides safe shelter and food for the larva of the parasite.

Online references:-

For more detailed information about each species such as distribution and background history the following online link is a good start point.

<https://www.britishplantgallsociety.org/>

Book references:-

For Galls a book from 1968
"Plant Galls" by Arnold Darlington

Oak Galls

There are more than 30 different species of Gall Wasp that lay their eggs on Oak trees, and each species produces a different type of gall - essentially a protective casing that shelters the wasp larvae as they feed and grow inside.

The 8No. Shown below are the most common found to date.

Oak Acorn Knopper Gall

Caused by the Gall Wasp *Andricus quercuscalicis*

The wrinkly mutant Oak acorns are known as Knopper Galls. The Gall Wasp looks like a tiny black fly just a few millimetres long.



Plant growth around the laid egg



Grub exit hole

Oak Apple Gall

Caused by the Gall Wasp *Biorhiza pallida*

The oak apple gall wasp is a tiny wasp that causes growths, or 'galls', on oak twigs. Galls are created around May and June after the female has laid her eggs into the leaf bud. Inside the formed gall are a number of chambers, each housing a larva which will emerge in June and July. .



Oak Artichoke Gall

Caused by the Gall Wasp *Andricus foecundatrix*.

The Artichoke Gall is a result of the Gall Wasp which lays a single egg within a leaf bud. The gall develops as a chemically induced distortion of the terminal buds on pedunculate or sessile (*Quercus robur* or *Quercus petraea*) Oak trees. The larva live inside a smaller hard casing inside the artichoke gall and is released in the autumn



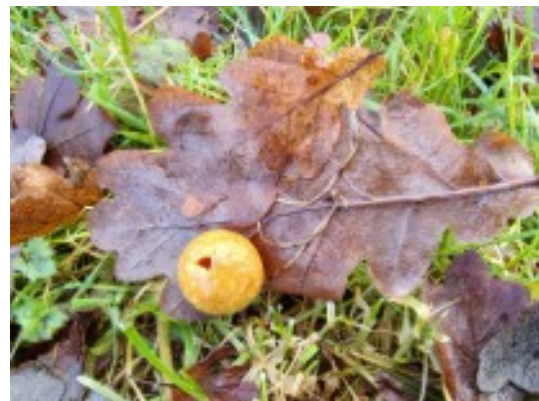
Oak Cherry Gall

Caused by cynipid Gall Wasp *Quercus folii*.

Which lays a single egg on the underside of the Oak leaf. The larva live inside the Galls and after the leaves have fallen and emerge early spring.



Leaf underside



Mature Gall on shed leaf - predated

Oak Marble Gall

Caused by the *Andricus kollari* Gall Wasp.

The resultant gall is attached to a twig. The larva live inside and emerge in the autumn. The second photograph shows the hole formed as the larva emerged.



The third photograph shows an older winter Gall previously attacked by a bird (possibly a Woodpecker) to feed on the Grub/Grubs inside



Oak Pea Gall

Caused by the Gall Wasp *cynips disticha*.

Rather rare - on the underside of an Oak leaf. Inside are two chambers, with the wasp larva in the basal chamber



Oak Spangle Galls

Caused by the Gall Wasp *Neuroterus Quercus-Baccarum*.

These common Spangle Galls mature in September and fall down to the ground. The larvae develop inside over winter and emerge in April. There can be up to ninety on the underside of a single Oak leaf.



Oak

Silk Button Spangle Galls

Caused by the Gall Wasp *Neuroterus numismalis*.

The Silk Spangle Galls are similar to the Common Spangle Galls above



Alder leaf Galls

Caused by *Acalitus brevitarsus* mites

These Galls appear in June and reach full size in the Autumn.



Leaf Top surface



Leaf Bottom surface

Caused by *Eriophyes axillaris* mites

Galls appear between the main rib and primary veins in May and reach full size in the Autumn.



Leaf Top surface



Leaf Bottom surface

Caused by *Eriophyes laevis* mites

Pimple like Galls formed on the leaf upper surface. Green, yellow, orange to purple and then red-Brown in colour. A single leaf can have up to around 400 of these Galls.



Leaf Top surface



Leaf Top surface

Creeping Thistle Gall

Caused by the dipteran fruit fly *Euribia cardui*.

Gall formed on the plant stem. This fly lays its eggs on the plant and as they hatch they burrow into the stem causing the plant to form the swollen stem gall. This gives the larva protection until they mature and exit out of the base of the gall. Galls usually contain four chambers with a single larva in each. Grows in July and matures August-September.



Dog Rose Gall

Caused by Gall Wasp *Diplolepis rosae*.

The female lays her eggs in spring in the unopened buds. There can be up to 60 chambers surrounded by the sticky filaments which start green then turn crimson and eventually brown when it loses its fibres. The larvae overwinter and adults emerge around May.



Blackthorn Leaf Galls

Eriophyes similis Mite Galls

Galls form on the leaves of *Prunus* species, usually Blackthorn, but also on plums and damsons. The galls are usually denser around the leaf margins. These appear in May and mature in September.



Leaf edge top surface



Leaf edge underside

Eriophyes homophyllu or *similis* Mite Galls

Galls form on the leaves of *Prunus* species, usually Blackthorn, but also on plums and damsons. These appear in May and mature in September.



Leaf edge top surface



Leaf edge underside



Lime Leaf Galls

Lime Leaf Galls by the Midge *Didymomyia tiliacea*.

The Galls on the leaf surface are conical above and hemispherical below. In midsummer an inner gall sticks out from the top of the cone, later falling out and leaving a hole in the outer gall. The inner Gall falls to ground level and the single larve pupates in springtime. The empty outer gall then looses the red surrounding.



Leaf Top surface

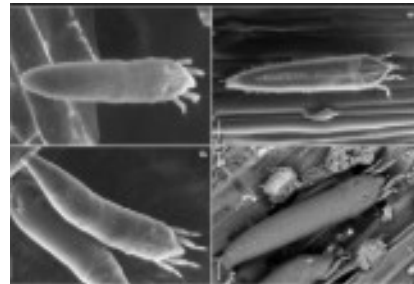


Gall close up

Maple Leaf Galls

Aceria macrochelus Mite Galls

The galls develop on the upper leaf surface in the angle between the primary and secondary leaf veins. The Mites are elongated and exceedingly small often less than 0.1mm long, blind with mouth parts for sucking liquid food from the leaf. Females are much more abundant than males with reproduction achieved without fertilisation. Found June to September and widespread in South and Central areas of England.



Eriophyes macrorhynchus cephalodes Mite Galls

There can be between 500 to 1000 galls on a single leaf usually on the upper surface. Growth begins in June with the galls maturing in early autumn until the leaf falls to the ground.



Nettle Leaf Galls

Nettle Pouch Midge Gall caused by *Dasineura urticae*

The Galls appear around May with the larvae emerging in the Autumn. They pupate in the ground with the adult insects appearing in the spring time.



Leaf Top surface



Leaf Bottom surface

Sycamore Leaf Galls

Aceria macrorhyncha Mite Galls

The mite (*Aceria macrorhyncha*) initiates these small red pustule galls up to 6mm high on the top surface of Sycamore tree leaves.



Leaf Top surface



Leaf Top surface



Galls – Close Up 1



Galls - Close up 2

Aceria pseudoplatani Mite Galls

Known as “Sycamore Felt Galls” the microscopic mites *Aceria pseudoplatani* infect the underside of Sycamore leaves causing these gall white felty patches which will darken with time ending up as dark brown by the end of summer.



Leaf Top surface



Leaf Bottom surface



Leaf Bottom surface



Galls – Close Up

Walnut Leaf Gall

Willow Leaf Galled by the *Aceria erinea* Mite.

These yellowish blisters appear on the upper surface of the leaves with hollows on the underside. The hollows are lined with whitish or pale brown hairs among which the mites live and feed. The mites spend the winter in the hollows.



Leaf Top surface



Close up

Willow Leaf Gall

Willow Leaf Galled by the *Pontania proxima* Sawfly.

The galls referred to as Bean Galls are generally red on the top of the leaf and yellow/brown on the leaf underside. Two broods occur with the first laid in May becoming mature in June/July and the second becoming mature September/October.



Leaf Top surface



Top & Bottom surface

SECTION 12- LEAFMINERS

Brief facts:-

Leafminers are the indication of insect larva.

Various insect larva feed within leaves, including Micro-moths, flies and sawflies.

The insect species are often specific to a particular plant species.

Leaf-mining insects are small and rarely seen as adults so being able to recognise the species from the leafmine is the best way to identify them

Online references:-

For more detailed information about each species such as distribution and background history the following online link is a good start point.

<http://www.leafmines.co.uk/index.htm>

<https://www.facebook.com/groups/1058038610890196/>

<https://agromyzidae.co.uk/leaf-miners/>

Book references:-

A book from 2018
“Micro-moth Field Tips” by Ben Smart

Alder Leafminer

Alder Leaf Mined by the Micro-Moth *Stigmella* probably *glutinosae*.

(Note-the more obvious Galls also shown are covered in the Gall section)

This Alder Leaf Miner could be the very tiny micro-moth known as the White-barred Alder Pigmy that feeds on Alder leaves. The larvae excavate serpentine-shaped tunnels just below the surface of the leaves as they feed. The shape of the pale gallery or blotch created by the larva as it feeds is usually a better means of identification than finding the adult micro-moths. The larvae spend the winter inside the mine and then come to the surface of the leaf to then pupate on the ground. There are two generations a year with emerging moth found around May and August time.

For formal recording in a database Mines can only be recorded if the larvae are also present.



Leaf top surface

Bramble Leafminers

Mined by the Micro-Moth *Coptotriche marginea*- Bramble Blotch-miner

The Bramble Blotch-miner is a very common tiny moth that feeds on bramble leaves. The larvae excavate a short white to yellow-brown gallery mine that widens into a long, upper-surface, elliptical blotch. It pupates in the mine. The moth may be found anywhere that brambles are present.



Leaf top surface

Mined by the Micro-Moth *Phyllonorycter coryli*

The Bramble Leaf Miner is a very tiny moth (*Stigmella aurella*) that feeds on bramble leaves. The larvae excavate serpentine-shaped tunnels just below the surface of blackberry leaves as they feed. The shape of the pale gallery or blotch created by the larva as it feeds is usually a better means of identification than finding the adult moths. The larvae spend the winter inside the mine and then come to the surface of the leaf to pupate. The emerging moth can be found April to September time. The species is probably the commonest and most widespread in the British Isles.



Leaf top surface



Leaf top surface

Burdock Leafminer

Mined by the Micro-Fly *Phytomyza lappae*

The Burdock Leaf Miner is a tiny fly and while you might never see the adult fly, the larval stage leaves intricate silvery trails winding across Burdock leaves.



Leaf top surface

Hazel Leafminers

Mined by the Micro-Moth *Phyllonorycter coryli*

A common micro-moth throughout much of the British Isles, this species is one of the few in the genus which mine the upper side of leaves, rather than the underside.

The larva forms a blotch on leaves of hazel (*Corylus avellana*), having a parchment-like upper surface causing the leaf to roll over if close to the margin. There can be several mines to one leaf, and the mines are very visible in late summer and autumn.

The adults are on the wing in May and again in August.



Leaf top surface



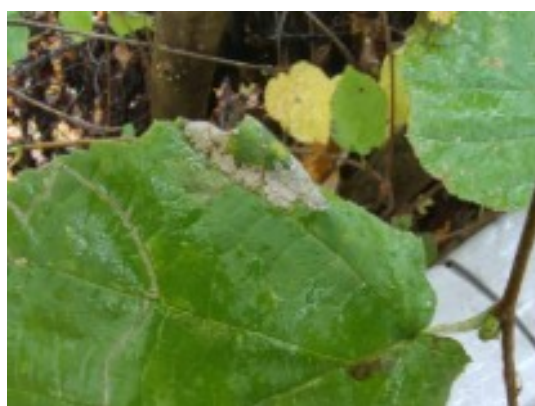
Leaf top surface

Mined by the Micro-Moth *Phyllonorycter nicellii*

This moth is common and widely found throughout Britain. It has two generations and may be found flying in May and August.

The leaf mines may be found in July and then September to October.

The larva form a long mine on the leaves located between the veins, is strongly arched with a parchment-like upper surface with a central green patch causing the leaf to roll over if close to the margin. Mines are very visible in late summer and autumn.



Leaf top surface



Leaf top surface

Holly Leafminer

Common Holly Leaves Mined by the agroyzid-fly *Phytomyza ilicis*

The leaves of Holly contain a bitter tasting alkaloid – ilicin which possibly deters many leaf eating insects. Compared to many trees the holly is not subject to sustained insect attack - though its leaves can harbour the holly leaf miner. This is the larval stage of a fly. Its mining activities can cause local discolouration of the leaf.



Leaf top surface



Leaf top surface

Honeysuckle Leafminer

Honeysuckle Leaf Mined by the *Aulagromyza hendeliana* or *cornigera* Fly.

The mines of the species *Aulagromyza hendeliana* and *Aulagromyza cornigera* Flies are often identical and can only be separated by examining the puparium or rearing adult material.



Leaf top surface

Horse Chestnut Leafminer

Horse Chestnut Leaves Mined by the Micro-Moth *Cameraria ohridella*.

A multivoltine species that has up to three generations a year May to October. First discovered in Macedonia in 1985 it has rapidly spread across Europe gaining a foothold in the UK in 2002. The many mines on a single leaf can cause serious defoliation.



Leaf top surface

SECTION 13 - 14

LIVERWORTS & MOSSES

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SECTION 13 - LIVERWORTS

Brief facts:-

Found on Tree trunks and main branches, liverworts are a group of simple small plants with flattened bodies, or with flattened stems bearing overlapping scales.

Scientists believe from testing DNA that liverworts were the first bryophyte to evolve. They believe that mosses, hornworts and more complex plants then evolved from liverworts.



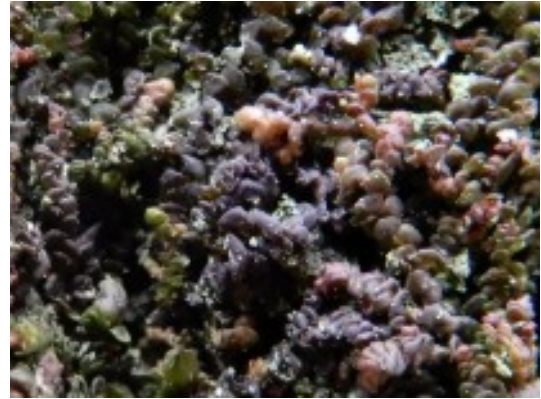
Online references:-

For more detailed information about each species such as distribution and background history the following online link is a good start point.

[Some common bryophytes - British Bryological Society](#)

Book references:-

Dilated Scalewort
(*Frullania dilatata*)

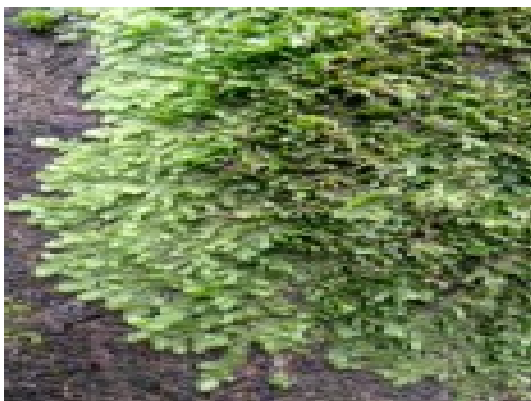


Female lobes with flowers



Staggered lobe arrangement

Even Scalewort
(*Radula complanata*)





Female lobes with flower



Parallel lobe arrangement

Forked Veilwort
(*Metzgeria furcata*)



Forked leaf arrangement

SECTION 14- MOSSES

Brief facts:-

There are over 600 species of moss in Britain, some of which are endangered.
Many require a microscope to distinguish between closely related species.

Online references:-

For more detailed information about each species such as distribution
and background history the following online link
is a good start point.

[Some common bryophytes - British Bryological Society](#)

Book references:-

Bank Haircap Moss
(*Polytrichum formosum*)



Capillary Thread Moss
(*Bryum capillare*)



Common Pincushion Moss
(*Dicranoweisia*)



Curly Thatch Moss
(*Dicranoweisia cirrata*)



Grey Cushion Moss
(*Grimmia pulvinata*)



Slender Mouse Tailed Moss
(*Isoetecium myosuroides*)



Springy Turf Moss
(*Rhytidiadelphus squarrosus*)



Wall Screw Moss
(*Tortula muralis*)



Wood Bristle Moss
(*Orthotrichum* affine)



SECTION 15

LICHEN

SECTION 15 – LICHEN

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Brief facts:-

There are around 1800 species listed in "The Lichens of Great Britain and Ireland". More are still being discovered each year, either new to the region or new to science. This compares with about 1760 species of native vascular plant.

The British Lichen Society Lichen Database January 2016 lists 439 species (taxa) for Warwickshire (VC38).

Lichens are 'dual' organisms. They consist of two (or more) different life-forms living together symbiotically in a more-or-less well defined body. The main partner is the fungus the other is green alga. The fungus forms most of the body protecting the algae.

The fungus is unable to produce food and relies on the algae to provide this by photosynthesis for them both.

Online references:-

For more detailed information about each species such as distribution and background history the following online links are a good start point.

<https://britishlichensociety.org.uk/learning/about-lichens>

<https://www.britishlichens.co.uk/>

[Dorset - Lichens](#)

Book references:-

“LICHENS An Illustrated Guide to the British and Irish Species”
by Frank S. Dobson

Lichens are divided into separate groups as follows:-

Crustose – hard crusts forming on almost any surface including metal and plastics.

Foliose – attached to Tree Trunks, branches & twigs and similar vegetation from multiple small anchors on the lower surface.

Fruiticose – attached to Tree Trunks, branches and twigs by a single holdfast.

Cladonias – these grow as tubular structures from tiny leaves.

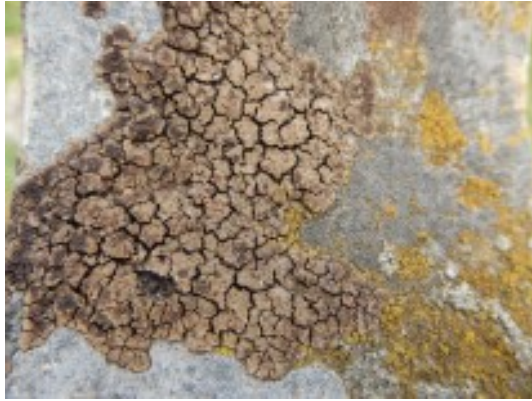
Lichenicolous - a parasitic fungus that only lives on lichen.

I have not covered Cladonias in this E-Book

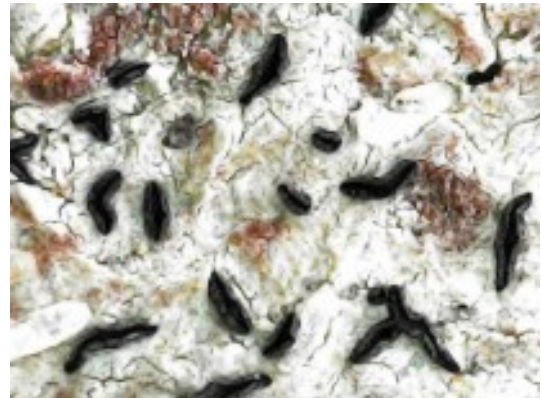
15a - Crustose Lichen

These lichen form a hard crust on almost any substance.

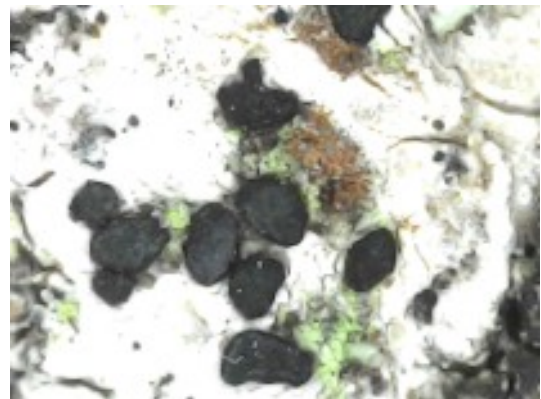
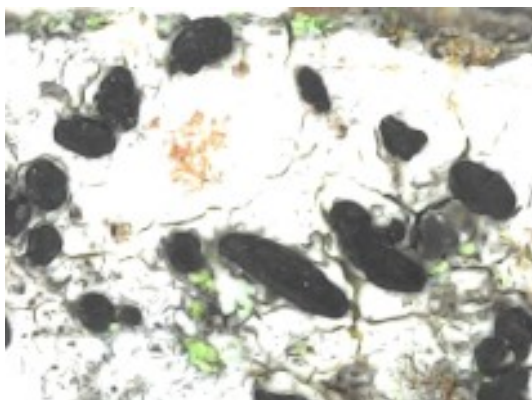
Acarospora fuscata



Alyxoria culmigena



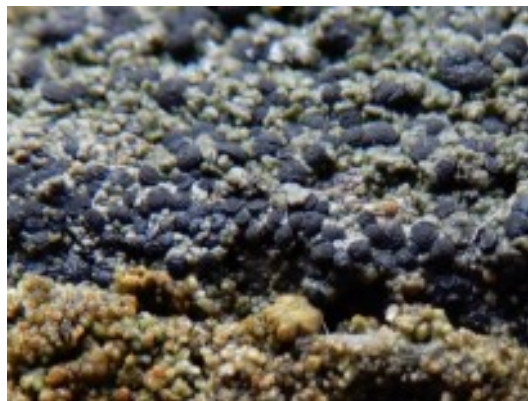
Alyxoria varia



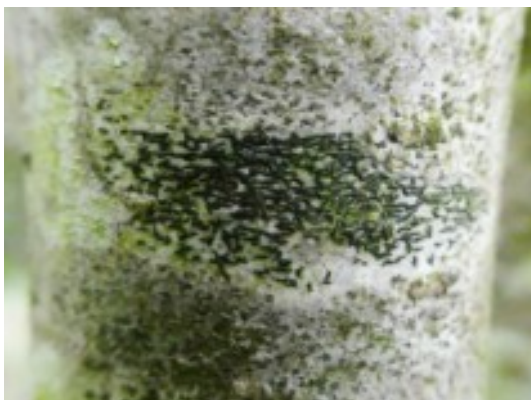
Alyxoria viridipruinosa



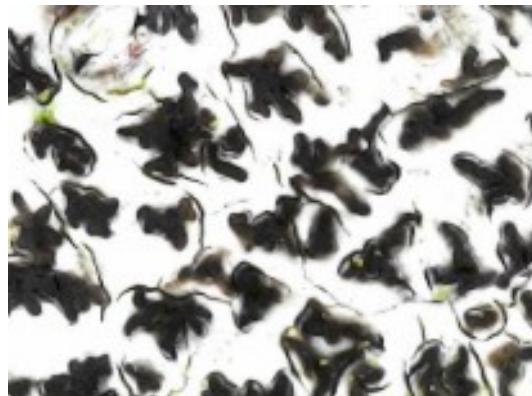
Amandinea punctata



Arthonia atra



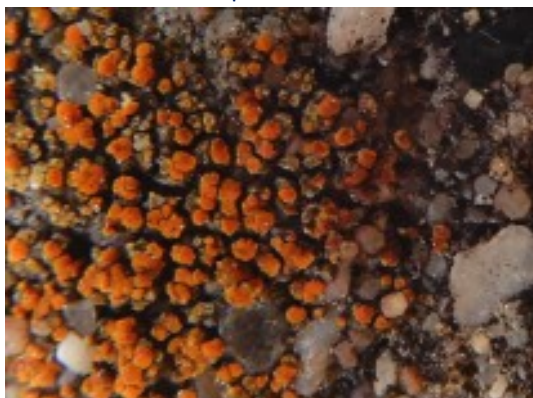
Arthonia radiata



Arthopyrenia analepta



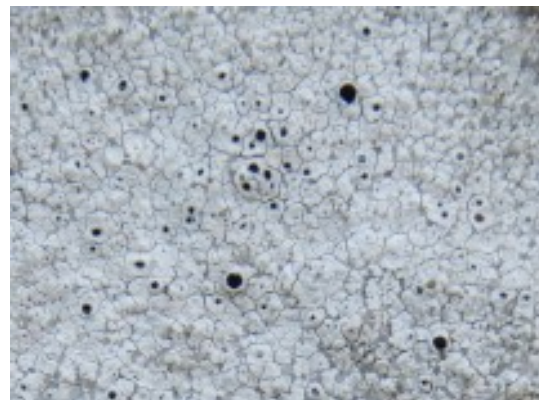
Athalia holocarpa



Candelariella vitellina



Circinaria calcarea (formally *Aspicilia calcarea*)



Circinaria contorta (formally *Aspicilia contorta*)



Diploicia canescens



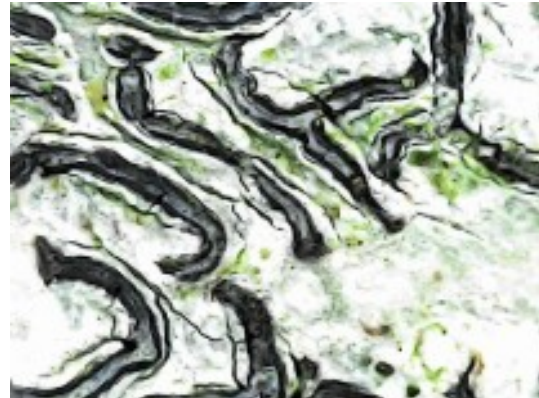
Fuscidea lightfootii



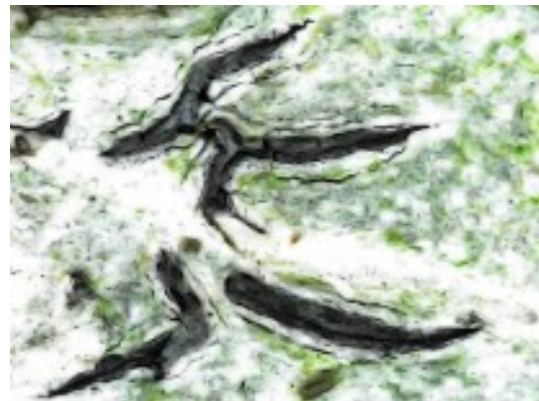
Glaucomaria carpinea (formally *Lecanora carpinea*)



Graphis betulina



Graphis pulverulenta



Graphis scripta



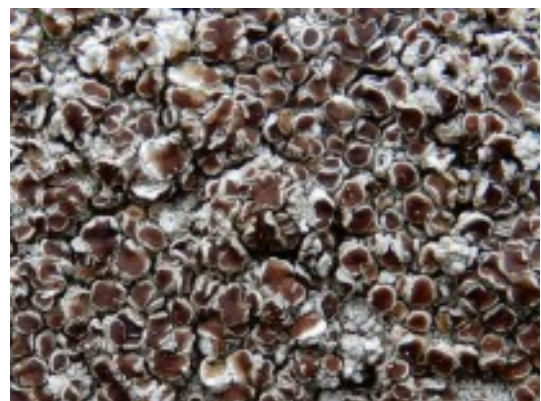
Kuettlingeria teicholyta (formally *Caloplaca teicholyta*)



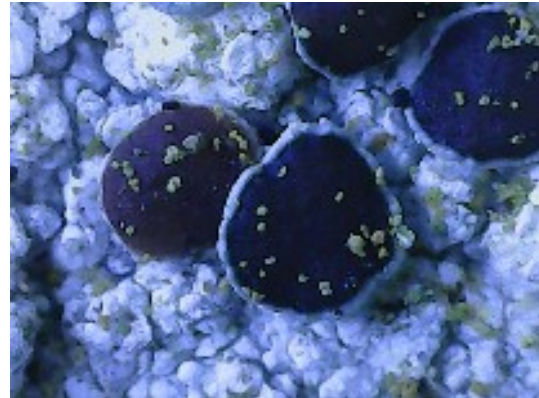
Lecanora albella



Lecanora campestris



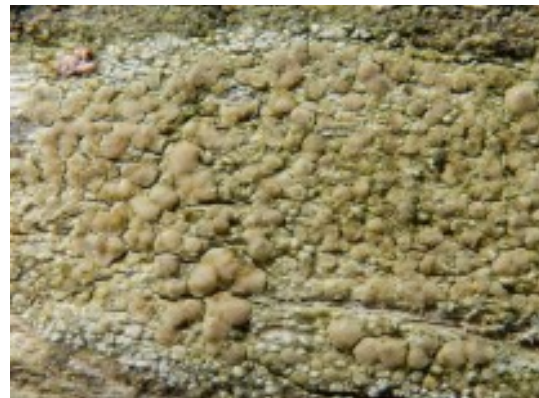
Lecanora horiza



Lecanora polytropa



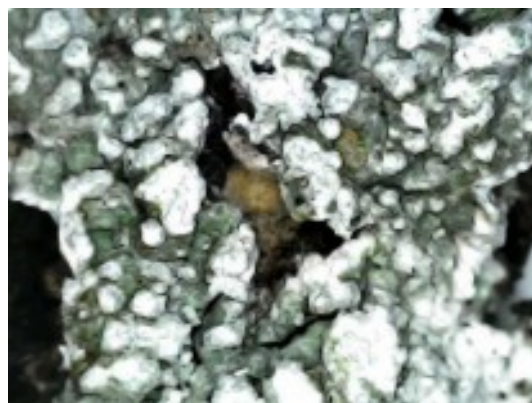
Lecanora symmicta



Lecidella elaeochroma



Lepra amara



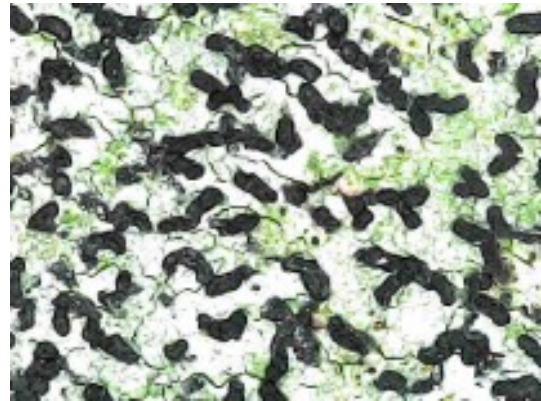
Lepraria finkii



Myriolecis albescens



Opegrapha niveoatra



Pertusaria leioplaca



Pertusaria pertusa



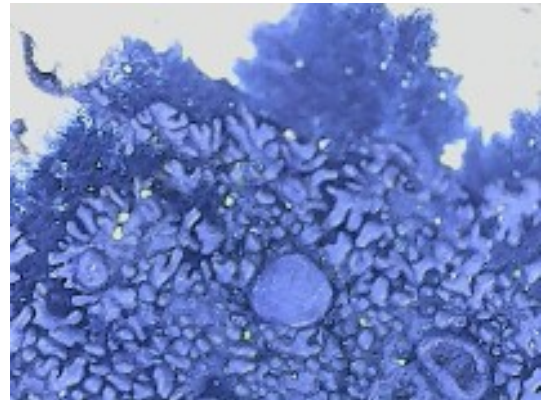
Phaeographis smithii



Phlyctis argena



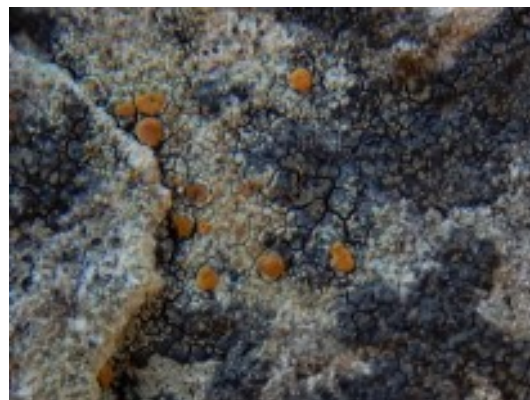
Placynthium nigrum



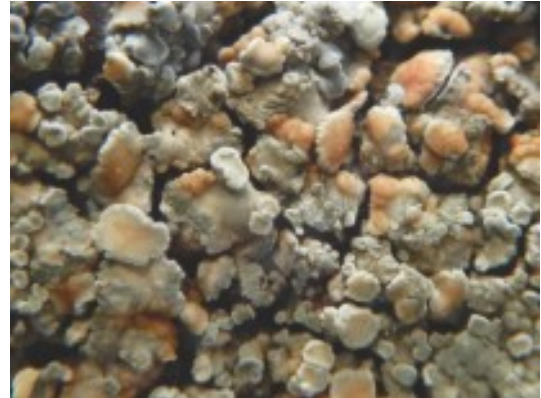
Porina aenea & *Porpidia tuberculosa*



Protoblastenia rupestris



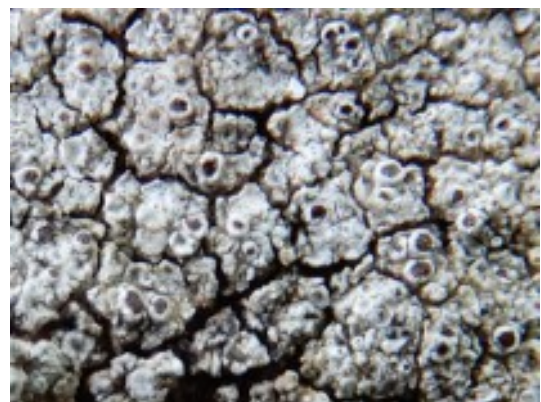
Protoparmeliopsis muralis (formally *Lecanora muralis*)



Psilolechia lucida



Tephromela atra



Variospora flavescens



Verrucaria macrostoma f. *macrostoma*



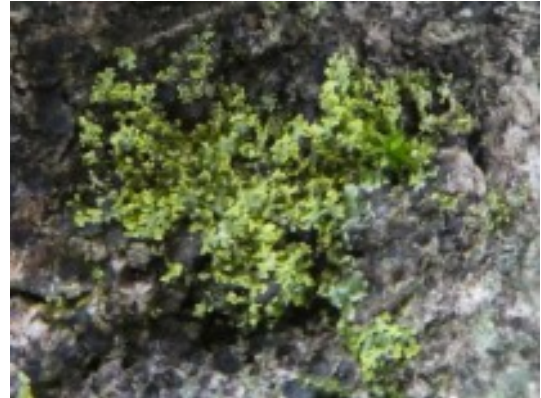
Verrucaria nigrescens



15b - Foliose Lichen

These are lichens that primarily grow on trees and dead wood..

Candelaria concolor



Evernia Prunastri



Flavoparmelia caperata & *Flavoparmelia soredians*



Hypogymnia physodes & *Hypogymnia tubulosa*



Hypotrachyna afrorevoluta & *Hypotrachyna revoluta*



Melanelixia fuliginosa & *Melanelixia subaurifera*
(On a grave stone)



Melanohalea elegantula



Melanohalea exasperatula



Parmelia saxatilis & *Parmelia sulcata*



Parmotrema perlatum



Phaeophyscia orbicularis



Physcia adscendens & *Physcia aipolia*



Physcia caesia & *Physcia tenella*



Physconia enteroxantha & *Physconia grisea*



Polyscaenia polycarpa (formally *Xanthoria polycarpa*)



Polycauliona ucrainia (formally *Xanthoria ucrainica*)
(On a boulder)



Punctelia jeckeri & *Punctelia subrudecta*



Scytinium plicatile

(On a grave stone)



Xanthoparmelia verruculifera
(On a grave stone)



Xanthoria calcicola
(On a grave stone)



Xanthoria parietina



15c - Fruiticose Lichen

Ramalina farinacea



Ramalina fastigata



Usnea's – these are slightly more difficult to determine and examination of the single holdfast point on the branch or twig is required along with the various lichen branches above this point.

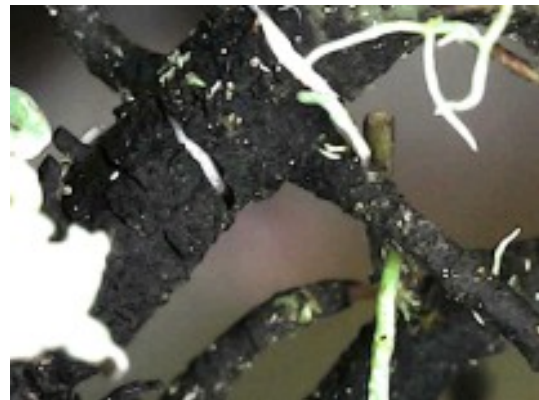
Usnea cornuta



Usnea esperantiana



Usnea subfloridana



Usnea wasmuthii



15d - Lichenicolous

These are lichens that are parasitic on other lichens leading to the demise of the host.

Erythricium aurantiacum

Parasitic on *Physcia tenella* (Orange blobs)



Illosporopsis christiansenii

Parasitic on *Physcia tenella* (Pink)



Intralichen christiansenii

Parasitic on *Candelariella vitellina* (Black discolouration)



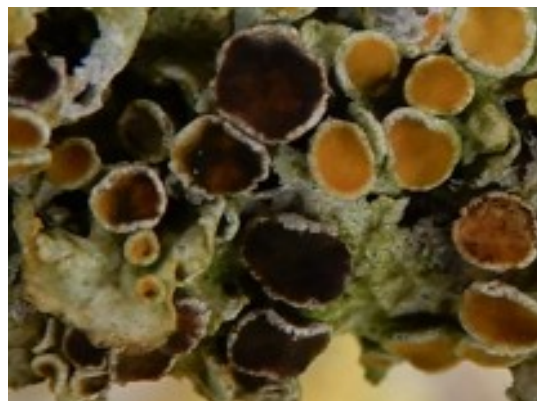
Laetisaria lichenicola

Parasitic on *Physcia tenella* (Pink bleaching)



Xanthoriicola physciae

(Black discolouration)



15e - Green Algae

Lichens are 'dual' organisms. They consist of two (or more) different life-forms living together symbiotically in a more-or-less well defined body. The main partner is the fungus the other is green alga. The fungus forms most of the body protecting the algae. The fungus is unable to produce food and relies on the algae to provide this by photosynthesis for them both.

Free Living Trentepohlia Algae

Trentepohlia algae would not, at first glance, be taken as a green algae. This free-living species is mostly yellow to bright orange or red in colour. This is due to the orange pigment which hides the green of the chlorophyll. The genus is common on rocks, walls and tree bark.

In Lichens the Trentepohlia algae forms an association with the fungal hyphae and is a widespread phycobiont in Lichens. Research has show that green algae of which the most common is Trebouxia is found in about 60% of lichen species. A further 30% being the orange pigmented Trentepohlia.

There are only about 30 algae phycobionts which form associations with over 270 fungal genera to form llichens in Britain.



Red-Orange Free living Trentepohlia Algae



Yellow-Orange Free living Trentepohlia Algae



Red-Orange Free living Trentepohlia Algae



Red-Orange Free living Trentepohlia Algae



Close up on Orange Free living Trentepohlia Algae

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SECTION 16 - FERNS

Brief facts:-

Ferns are split into four groups the largest being the Ferns with 60 species.
The other very small groups being eight species of Clubmosses,
three species of Quillworts and eight species of Horsetails.

Online references:-

For more detailed information about each species such as distribution
and background history the following online link
is a good start point.

[Fern-Guide01.pdf](#)

[Fern identification – Botanical Society of Britain & Ireland](#)

Book references:-

FERNS, clubmosses, quillworts and horsetails of Britain and Ireland
by James Merryweather.

Bracken

(*Pteridium aquilinum*)

Bracken is the UK's most common fern and grows in dense groups on heathland, moorland, hillsides and in woodland. It is a large fern that spreads by underground rhizomes. Unlike many ferns, bracken dies back in winter, leaving brown withered fronds. In the spring, the tightly curled fronds appear, grow and unfurl. Bracken is poisonous to grazing livestock and small mammals. When the young fronds are damaged, bracken produces hydrogen cyanide which quickly poisons the perpetrator. Bracken is one of the oldest ferns, fossil records over 55 million years old having been found.

Make sure that when going through a dense patch of Bracken that you are well covered up as Bracken is home to Ticks (*Ixodes ricinus*) with the risk of Lyme disease. If a circular rash occurs on your skin see a doctor.



Bracken in winter



Bracken early spring



Bracken in the summer



Topside

Borrer's Scaly Male Fern

(*Dryopteris borrieri*)

Grows mainly in shade in Woodland.



Topside



Underside with Sori



Close up on Sori

Common Male Fern

(*Dryopteris filix-mas*)

Grows mainly in shade in Woodland.



Topside



Underside with Sori

Soft Shield-Fern

(*Polystichum setiferum*)

Grows mainly in shade in Woodland.





Topside



Underside with Sori

FERNS-Spleenworts

Hart's Tounge

(*Asplenium scolopendrium*)

The simplest in form and most distinctive and termed a Spleenwort of which there are nine in the Fern category



Topside



Underside Close Up



Close Up of Underside with Sori

HORSETAILS

Field Horsetail

(*Equisetum arvense*)

The Field Horsetail is a primitive plant that has been around for millions of years. It is the only species of Horsetail which is an invasive species reproducing by means of spores and underground rhizomes. This makes it incredibly tenacious and difficult to eradicate. The bamboo like hollow stems topped with bush like foliage can reach a height of 800mm.



Stem Close Up



Node Close Up



Stem Section

SECTION 17 - WOODLAND PLANTS

Brief facts:-

The following can be found in Woodland termed to be ancient woodland where they usually prefer damp heavy clay soils.

Online references:-

For more detailed information about each species such as distribution and background history the following online link is a good start point.

Book references:-

Bluebell (UK native)

(*Hyacinthoides non-scripta*)

The Native Bluebell appears in ancient woodlands around April and May. Millions of bulbs can exist in just one wood, giving rise to the violet-blue 'carpets' on the forest floor making the most of the sunlight before the tree canopy becomes too dense. Native Bluebells are protected in the UK under the Wildlife and Countryside Act, 1981. The UK's woodlands are home to almost 50% of the world's population of the Bluebell.



The invasive Spanish Bluebell (*Hyacinthoides hispanica*) introduced by the Victorians escaped into the wild. Today, the Spanish Bluebell can be found alongside our Native Bluebell in woodlands. The Spanish Bluebell is more vigorous than our Native Bluebell and can hybridise with our Native Bluebell. A study of Bluebells has indicated that one in six of our broadleaved woodlands contained hybrids or the Spanish Bluebell also that most Bluebells in urban areas are actually hybrids.

Native Bluebells Identification

- narrow leaves, about 1-1.5cm wide
- deep violet-blue (sometimes white), narrow, tubular-bell flowers, with tips that curl back
- flowers on one side of the stem
- distinctly drooping stems
- a sweet scent
- cream-coloured pollen inside

Spanish Bluebells Identification

- broad leaves, about 3cm wide
- pale blue (often white or pink), conical-bell flowers, with spreading and open tips
- flowers all around the stem
- upright stems
- no scent
- blue- or pale green-coloured pollen inside

Bugle

(*Ajuga reptans*) - Found carpeting damp grassland and woodland clearings.



Cowslip

(*Rumex obtusifolius*) - Cowslips are present in meadows, grassland, woodland verges. They flower between April and May.



Dock Plant

(*Rumex obtusifolius*) - A new Dock Plant establishing itself in early spring.



Dog Mercury

((*Mercurialis perennis*) - Found carpeting damp woodland. All part of this plant are poisonous. Mainly a plant of ancient woods however it can colonise new deciduous woodland very quickly.



Garlic Mustard

(*Alliaria petiolata*)

In shady spots in Woodland. Grows tall with the heart-shaped leaves smooth and hairless, and rather like those of nettles; when crushed, they smell of garlic. Its small, white flowers have four petals in the shape of a cross and grow in clusters at the ends of the stems.



Glaucous Sedge

(*Carex flacca*)

In the UK, Glaucous Sedge is locally common in England and Wales and can be found in wet, ancient woodland and riversides where it prefers heavy clay soils. The male flowers are at the top with the female seed catkins directly beneath.



Pendulous Sedge

(*Carex pendula*)

Same location as Glaucous sedge. The male flowers shown when gently touched release hundreds of fine yellow spores. The spore bearing top with the female seed catkins directly below.



Greater Stitchwort

(*Stellaria holostea*)

Grows mainly in shade in Woodland. It flowers between April and June.



Lesser Celandine

(*Ficaria verna*)

Lesser celandine loves damp woodland paths, stream banks and ditches. It flowers between January and April.



Lords and Ladies

(*Arum maculatum*)



Spring time



Summer time

Primrose

(*Primula vulgaris*)

The Primrose is a small, perennial woodland plant that can flower from December through to May.



White Dead Nettle

(*Lamium album*)

Looking similar to a stinging nettle, white dead-nettle is a hairy perennial with heart-shaped, deeply toothed leaves. The white, 'hooded' flowers appear up the stem, among the leaves which do not have the nettle stings.



Wild Garlic

(*Allium ursinum*)

Wild garlic emerges to flower from April onwards. This early flowering allows it to make the most of the sunlight that is still able to make it to the forest floor habitat, before the tree canopy becomes too dense. Millions of bulbs may exist in one wood creating white, starry carpets and a strong garlic smell.



Wood Anemone

(*Anemone nemorosa*)



Wood Sorrel

(*Oxalis acetosella*)

Wood sorrel which flowers April-May has distinctive trefoil leaves. At night the three, heart-shaped lobes are folded back into a tent while during the day in the sun they flatten out.



Wood Violet

(*Viola odorata*)

Also called Sweet Violet & Common Violet



Yellow Archangel

(*Lamium galeobdolon*)

The flowers of yellow archangel appear just after the bluebells. A plant of the ancient woodlands.



ALCESTER WILDLIFE & NATURE

An Introduction Guide to some of the Wildlife & Nature around Alcester, Warwickshire (VC38)

I am a walker who has now combined walking with close up amateur nature photography.

My walks started in 2019 and are based around the Studley/Alcester/Bidford/Stratford & Evesham areas and utilise part of the Heart of England Way/ Monarchs Way/Shakespeare's Avon Way and other connecting paths close by. In general about a 12 mile radius centred on the town of Alcester with walks ranging 9 to 15 miles.

Strange as it may seem I don't actively search out particular subjects to photograph but just keep my eyes open as much as possible when walking. Most of these subjects can be found by any walker who keeps aware of what is around them as they go along. This changes every month and some indications are given in this publication.

Identifications have been made using my best attempts and cannot be taken as being correct on my interpretation alone (particularly for the Fungi and Lichen photographs).

Some renaming of these photographs may well be required as more experience in identification is gained.