

Ledbury Naturalists' Field Club

Field Survey 2021

Colwall Village Orchard and Lugg's Mill Orchard

HEREFORDSHIRE



Reported by: Hilary Ward, April 2022

Colwall Village Orchard and Lugg's Mill Orchard

INTRODUCTION

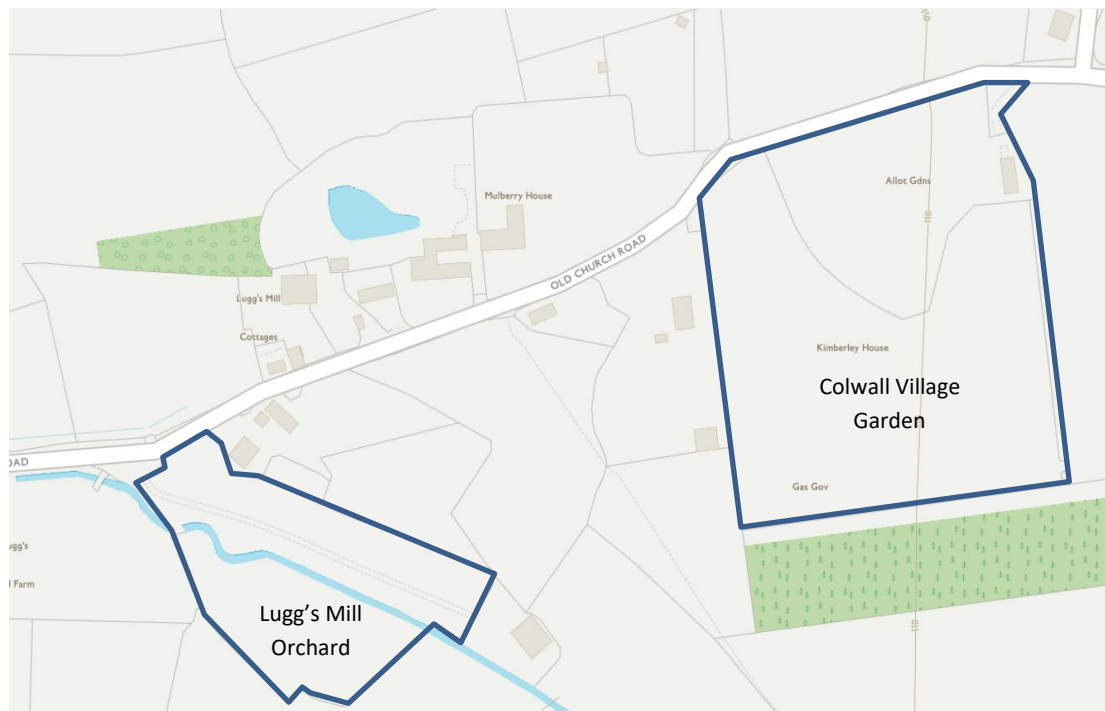
In 2020 Ledbury Naturalists' survey team was asked by members of Colwall Orchard Group if it would be willing to carry out a baseline survey of wildlife in the orchard area of the Village Garden and at Lugg's Mill Orchard. The group visited the sites once a month from April to October 2021 and recorded the species encountered on each occasion. This information is shown in the Appendices at the end of this report.

LOCATION

Colwall Village Garden (purchased in 2011) and Lugg's Mill Orchard (purchased in 2016) are located off Old Church Road, Colwall. National Grid References SO748426 and SO745425. The sites lie within the Malvern Hills Area of Outstanding Natural Beauty.

Colwall Village Garden covers an area of six acres and consists of a community orchard planted with 250 trees, mostly fruit, 60 allotment plots plus associated buildings, beehives and a wildlife pond in the southwest corner. The allotment plots were not included in the survey area.

The nearby Lugg's Mill Orchard is 2.5 acres in area and in the 18th and 19th centuries was the site of a corn mill powered by water from the stream (a Cradley Brook tributary, sometimes referred to as Chevenham Brook) which meanders through the site. This area has now been planted with a cherry orchard to the northeast of the stream and an apple orchard on the other side.



Site locations

MANAGEMENT

The sites are being actively managed to improve the wildlife value of the habitats.

Grazing – sheep are the preferred stock - cattle grazing was tried but the cows caused too much damage to the orchard trees. In 2021 the sheep grazed the orchard in sections, using electric fencing where necessary, from mid-summer onwards. Lugg's Mill Orchard was grazed in autumn.

Cutting – paths are mown through the areas of long grass during the summer to facilitate access.

Planting for biodiversity – some of the grassland areas have been enriched with herbaceous plants typical of neutral grassland eg Cowslip and Common Knapweed. In 2019 seed was introduced from a number of local wildflower meadows with an emphasis on yellow rattle to reduce the vigour of the coarser grasses.

Hedging – hedges are managed by a rotational system of hedge laying and coppicing. New hedges of mixed native species have been planted.

Habitat creation has included a pond, wood piles and dead hedging.

GEOLOGY AND SOILS

Appendix 1 gives a full description of these aspects of the site.

HABITATS

Appendix 2 is a map of the site showing the main habitat types.

NEUTRAL GRASSLAND

For the most part the grassland at the sites is semi-improved with a small range of species including the grasses Perennial Rye Grass, Yorkshire Fog, Cocksfoot, and False Oat Grass and herbs such as Red and White Clover, Yarrow, Bulbous Buttercup, Creeping Thistle and Hogweed.

To the west of the Village Orchard and in parts of Lugg's Mill Orchard the grassland is somewhat richer and displays more characteristics of unimproved grassland which very likely covered the whole site in the past. This is due to the addition of seed and plug plants from local wildflower sites. Species here include Meadow Foxtail, Sweet Vernal Grass, Crested Dog's Tail, Yellow Rattle, Greater Knapweed, Meadow Vetchling and Ox-eye Daisy.

SCATTERED SCRUB

This habitat occurs mainly along the steep stream banks at Lugg's Mill Orchard with species such as Holly, Elder, Hazel, Bramble and Hawthorn.

SCATTERED TREES

A variety of trees, both young and mature specimens, are found at Lugg's Mill Orchard with Alder being the predominant species along the streamside plus a few Oak, Ash and Field Maple trees with saplings of Silver Birch and at the southern end two Beech trees have been planted.

ORCHARD TREES

The Colwall Orchard Group have undertaken an extensive planting scheme including many old local and traditional varieties. Apples are the most common type but others include Pear, Medlar, Walnut, Hazelnut, Plum, Quince and Almond.

At Lugg's Mill Orchard a small nuttery of wild Hazelnut has been planted as well as Apples and Cherries.



POND AND STREAM

The pond in the Southwest corner of the Village Orchard was created in 2015. The damp surrounds support some typical wetland species eg Marsh Foxtail, Lesser Spearwort, Branched Bur-reed and Soft Rush. In summer the water surface was partially covered by Broadleaved Pondweed and Common Duckweed. A variety of aquatic invertebrates and amphibians were recorded.

The stream which flows through Lugg's Mill Orchard has quite steep banks and in places shrubs and trees are well established.



New bridge over stream at
Lugg's Mill Orchard



Beautiful Demoiselle

BOUNDARIES

The boundaries of the sites consist of fences and/or mixed species hedges of shrubs such as Hazel, Guelder Rose, Field Maple, Rowan, Hawthorn, Blackthorn and Spindle. A programme of planting new hedges and laying old ones has been initiated and undertaken by the Orchard Group.



SPECIES

Dicot Plants	Monocot Plants eg Grasses, Sedges	Trees and Shrubs	Fungi	Birds	Mammals	Amphibians and Reptiles
92	23	32	9	26	14	4 and 1

Invertebrates
13 Butterflies 6 Moths 14 Flies 24 Beetles 8 Dragonflies & Damselflies
39 Others
TOTAL 104

PLANTS – Appendix 3

As many as possible of the flowering plants (both dicotyledonous and monocotyledonous) were recorded from the survey sites and a few species also recorded from the Village Allotment area which was not part of the main survey. This is noted in the Appendix lists. The photo below left shows the striking Purple Toothwort which was growing in one place by the stream at Lugg’s Mill Orchard. This is a non-native plant which is occasionally found in the wild. On the right is the colourful sward in June.



Mosses, lichens and fungi were not well recorded as these require specialist help.

In October there were plenty of diminutive Yellow Fieldcaps and on deadwood the decorative Turkey Tails.



INVERTEBRATES – Appendix 4

Due to lack of expertise some groups of invertebrates were not studied eg spiders, terrestrial beetles although a few were noted where identifiable. In the Appendix table most species are assigned to the Village Orchard although it is likely that many of them would be found at Lugg’s Mill Orchard too.



Brown China-mark Moth



Swollen-thighed Beetle

MOTHS RECORDED BY LIGHT TRAP (Tim Dixon & Helen Stace) – Appendix 5

These records span several years between 2014 and 2019 and include a few species of local and national significance. Some of the moths were also recorded in daytime in 2021 and have been added to the list. The long list of moths from the light traps shows the benefit of this type of survey.

VERTEBRATES – Appendix 6

Amphibians & Reptiles: The pond at the Village Orchard supports Frogs and all 3 species of native Newt. A record for the larva of a Great Crested Newt was most encouraging – a species on the UK Biodiversity Action Plan 2007.



Great Crested Newt larva

Birds: Birds were noted across the whole of the site but have not been assigned to individual areas.

Surveys in the early afternoon are not the best time to record birds but of the 26 species noted, 8 are on the Red or Amber Lists of the UK Birds of Conservation Concern 5, 2021 and house sparrow is a priority species in the UK Biodiversity Action Plan 2007.

Mammals: A good range of mammal records has been compiled for the sites based on actual sightings plus evidence from droppings, tracks, diggings and infra-red wildlife camera shots. The latter method revealed an otter walking along the brook near Lugg's Mill Orchard and it is very likely to have traversed the survey site too.

FUTURE PLANS

It is the intention to let the orchard fruit trees grow to maturity: managing them for tree health; for wildlife habitat; for amenity; and for fruit production for the benefit of both people and wildlife. Further planting of meadow flowers will be undertaken in future years using seed harvested from neighbouring herb rich areas and other sites in Herefordshire. Plug plants of rare or difficult to establish species will be grown and planted by volunteers.

It is hoped that use of a small baler might make it possible to cut and bale areas of grassland as a hay crop. Sheep grazing will be continued.

More dead hedging and log piles will be created in appropriate locations. These are beneficial to a wide range of wildlife. Further hedge laying will be done where appropriate.

Creation of another pond will also be considered if a suitable location can be found.

There is a long-term plan to coppice the streamside trees at Lugg's Mill Orchard in rotation.

SUMMARY

The records obtained this year, for as many groups of wildlife as available expertise allowed, provides a baseline. It is evident that already the sites support a wide range of species and sympathetic management over the coming years will certainly increase the biodiversity value.

ACKNOWLEDGEMENTS

Colwall Orchard Group: Andy Ball, Lindsay Williams, Wendy Thompson, Tim Dixon, Helen Stace

Will Watson, Giles King-Salter (aquatics)

Ledbury Naturalists' Surveyors: Felicity Burge, Carolyn & David Evans, Moira Jenkins (geology), Richard & Phyl King (aquatics), Suzanne Noble, Janet Parry, David Taft, Eden and Wendy Tanner, Hilary Ward, Sally Webster, Cherry Greenway (fungi), John Davies

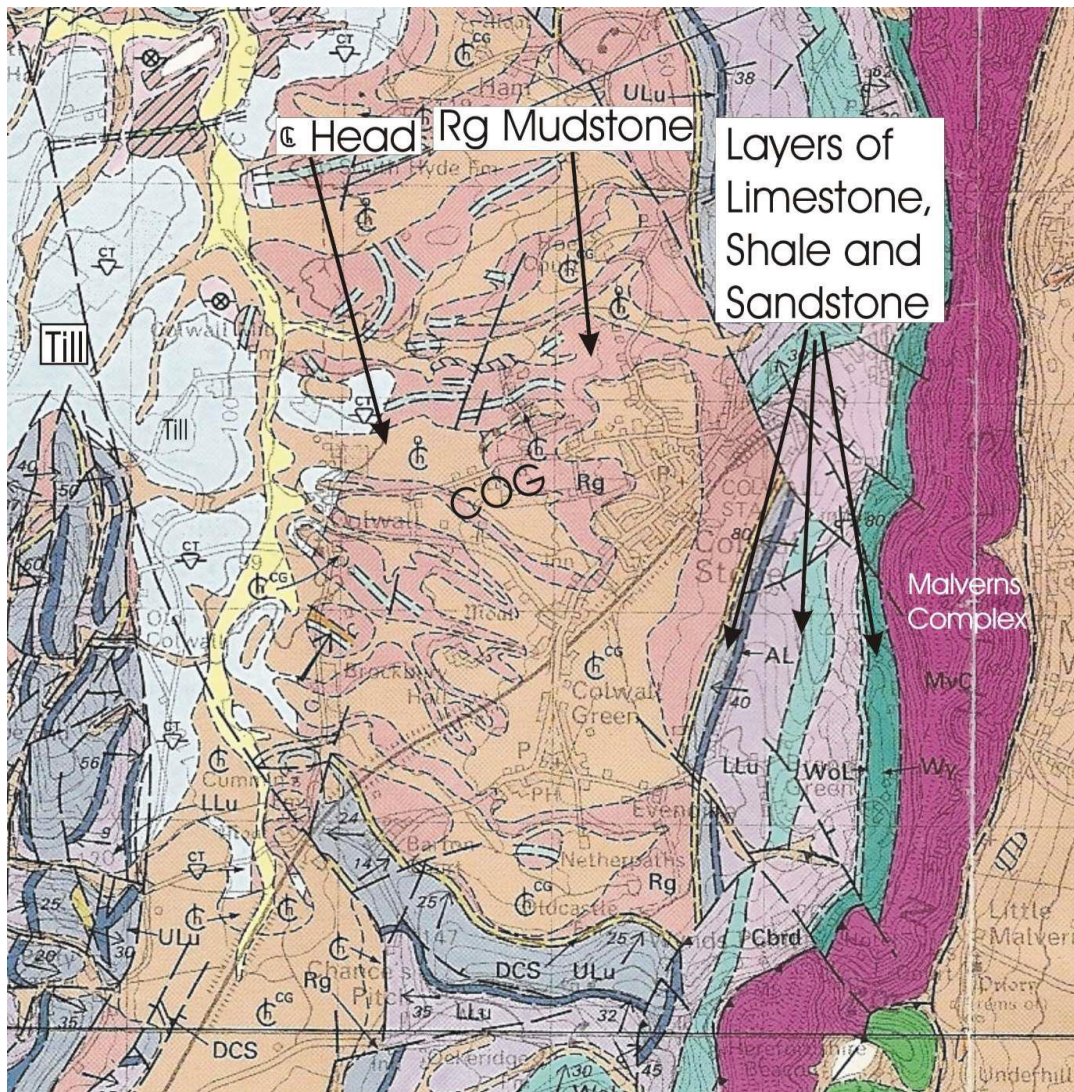
Photographs: Eden Tanner, Phyl King, Hilary Ward

Appendix 1: GEOLOGY AND SOILS

Moira Jenkins

The Colwall Village Orchard and Lugg’s Mill Orchard are sited where the ground levels out below the steep slopes on the west side of the Malvern Hills.

On the geology map below, adapted from the British Geological Survey Worcester Sheet 189, the position of Colwall Orchard is shown by COG. The map shows that the underlying rock is Silurian Raglan Mudstone Formation (the oldest of the Old Red Sandstone rocks) shown as Rg on the map to the left. The rock is covered by strips of Head, which are beige on the map and have a symbol like a C enclosing an h. The Precambrian of the Malverns have the symbol MvC. The strips of green, lilac and blue are the layers of Silurian sandstone, silt stone and limestone on the western slopes of the Malvern Hills. Head is poorly sorted angular rock debris formed in cold periods of the Ice Age and described later. Further to the west is Coddington Till, which is sediment deposited from the ice which travelled across the area from north to south.



The underlying rocks are not visible over most of the area. The soils of the area have developed either on the mudstone rock or are very stony where they are developed on the Head deposits.

The tributary stream of Cradley Brook has cut deeply into the Head overlying the mudstones. See the photo below. The stream is incised having been able to erode downwards when it was swelled with melt water.



On the stream bed there are angular rock fragments which were eroded out of the Head deposits. See photo below (obscured by reflections in the water).



Where a path has been cut into the slope on the far bank of the stream there is a glimpse of the Head deposits, which consist of angular fragments of rock in a finer matrix as shown in the photo below.



Head is a mixture of angular rock fragments which have been carried down from the slopes of the Malvern Hills. The hills were exposed during the Ice Age and the bare rock was frost shattered and broken up. This movement downhill was started by meltwater from ice lenses during the thawing of seasonally frozen ground and by the creep of material in waterlogged soil down the hill. The rock fragments are either crystalline igneous rocks from the Precambrian Malverns Complex of the hills, shown to the left below, or layered sedimentary rocks, limestones and sandstones which outcrop on the lower slopes of the Malvern Hills as in the photo to the right below.



Appendix 2: HABITAT MAPS

KEY From Handbook for Phase 1 Habitat Survey
 Joint Nature Conservation Committee, 2010 (revised 2016)

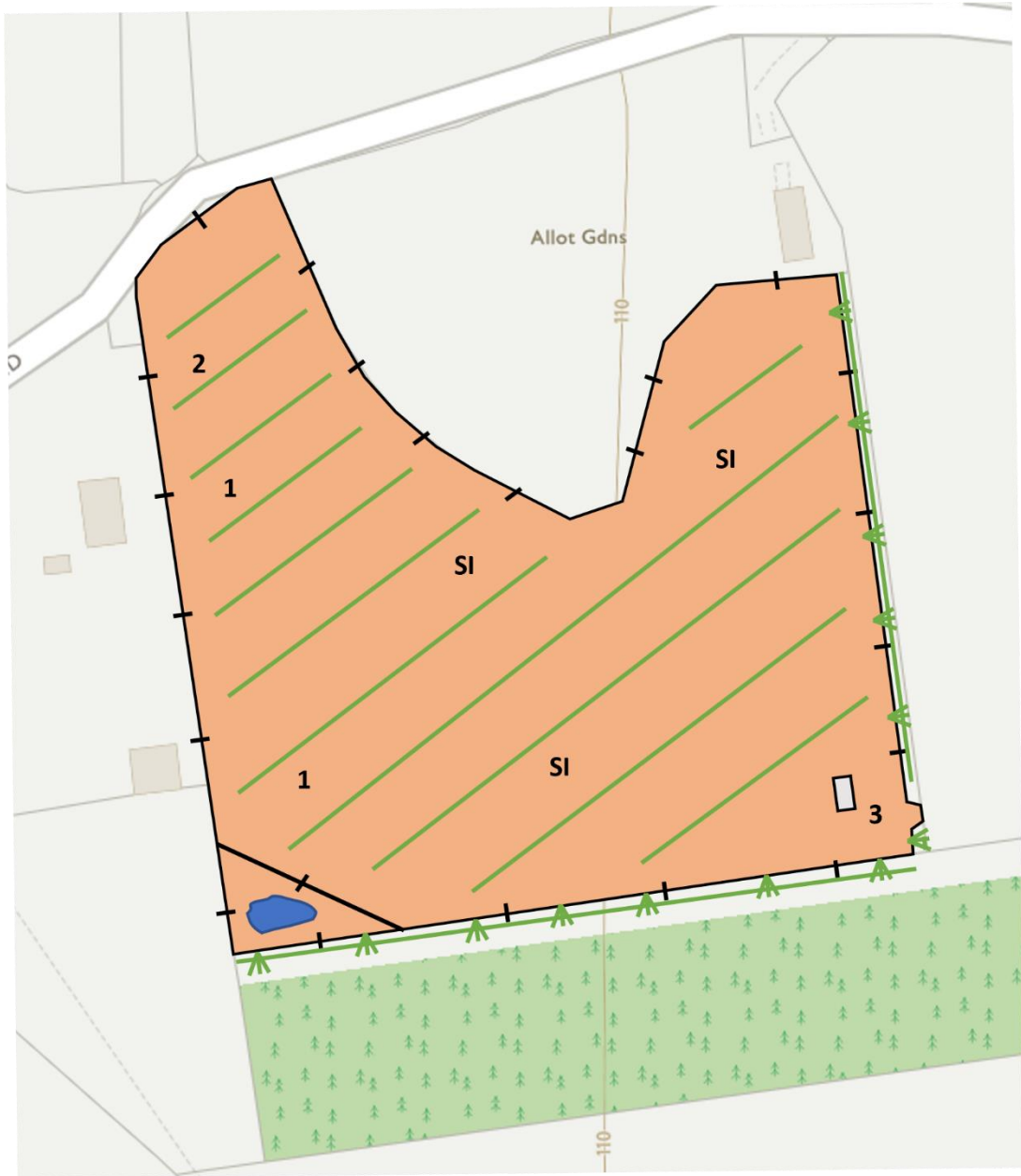
COLOUR	NAME	CODE
//////	Woodland – Orchard	A1
x x x	Scattered Scrub	A2.2
●	Scattered Trees	A3.1
SI	Semi-improved Neutral Grassland	B2.2
■	Open Water	G1
←	Stream	G2
∇	Species-rich Hedge	J2.4
—+—	Fence	N/A

Target Notes

- 1 – Areas with unimproved grassland characteristics
- 2 – Anthills
- 3 – Storage tanks
- 4 – Nuttery



Habitat Map for Lugg's Mill Orchard



Habitat Map for Colwall Village Orchard

Appendix 3: Plants

Dicotyledonous Plants

KEY	
VO	Village Orchard
LM	Lugg's Mill Orchard
x	recorded at LM in 2017

Common Name	Latin Name	V O	L M	Notes
Black Bryony	<i>Tamus communis</i>	x		
Bluebell	<i>Hyacinthoides non-scripta</i>		x	
Broad-leaved Dock	<i>Rumex obtusifolia</i>	x	x	By pond
Broadleaved Pondweed	<i>Potamogeton natans</i>	x		Pond
Broadleaved Willowherb	<i>Epilobium montanum</i>		x	
Bulbous Buttercup	<i>Ranunculus bulbosus</i>	x	x	
Bush Vetch	<i>Vicia sepium</i>	x	x	
Cat's-ear	<i>Hypochaeris radicata</i>		x	
Cleavers	<i>Galium aparine</i>	x	x	
Common Bird's-foot-trefoil	<i>Lotus corniculatus</i>		x	
Common Duckweed	<i>Lemna minor</i>	x		Pond
Common Field-speedwell	<i>Veronica persica</i>	x		
Common Fumitory	<i>Fumaria officinalis</i>	x		In veg beds
Common Groundsel	<i>Senecio vulgaris</i>	x		By bonfire site
Common Knapweed	<i>Centaurea nigra</i>	x		
Common Mouse-ear	<i>Cerastium fontanum</i>	x	x	
Common Nettle	<i>Urtica dioica</i>	x	x	
Common Sorrel	<i>Rumex acetosa</i>	x	x	
Cow Parsley	<i>Anthriscus sylvestris</i>	x	x	
Cowslip	<i>Primula veris</i>	x	x	
Creeping Buttercup	<i>Ranunculus repens</i>	x	x	
Creeping Cinquefoil	<i>Potentilla reptans</i>	x		
Creeping Thistle	<i>Cirsium arvense</i>	x		
Crosswort	<i>Cruciata laevipes</i>	x		
Cuckooflower	<i>Cardamine pratensis</i>	x	x	
Cut-leaved Crane's-bill	<i>Geranium dissectum</i>	x		
Daisy	<i>Bellis perennis</i>		x	
Dandelion	<i>Taraxacum officinale</i>	x	x	
Dog's Mercury	<i>Mercurialis perennis</i>	x	x	
Fat Hen	<i>Chenopodium album</i>	x		By bonfire site
Field Bindweed	<i>Convolvulus arvensis</i>	x		
Field Scabious	<i>Knautia arvensis</i>		x	
Fox and cubs	<i>Pilosella aurantiaca</i>	x		Planted
Garlic Mustard	<i>Alliaria petiolata</i>	x	x	

Common Name	Latin Name	V O	L M	Notes
Germander Speedwell	<i>Veronica chamaedrys</i>		x	
Great Mullein	<i>Verbascum thapsus</i>	x		
Great Willowherb	<i>Epilobium hirsutum</i>		x	
Greater Burdock	<i>Arctium lappa</i>		x	
Greater Plantain	<i>Plantago major</i>	x		
Greater Stitchwort	<i>Stellaria holostea</i>		x	
Ground Ivy	<i>Glechoma hederacea</i>		x	
Heath Speedwell	<i>Veronica officinalis</i>		x	
Hedge Bindweed	<i>Calystegia sepium</i>	x		
Hedge Woundwort	<i>Stachys sylvatica</i>	x		
Hedgerow Cranesbill	<i>Geranium pyrenaicum</i>	x		
Herb Robert	<i>Geranium robertianum</i>		x	
Hogweed	<i>Heracleum sphondylium</i>	x	x	
Indian Balsam	<i>Impatiens glandulifera</i>		x	
Ivy	<i>Hedera helix</i>		x	
Ivy-leaved Speedwell	<i>Veronica hederifolia</i>		x	
Lesser Celandine	<i>Ranunculus ficaria</i>		x	
Lesser Spearwort	<i>Ranunculus lingua</i>	x		By pond
Lesser Stitchwort	<i>Stellaria graminea</i>		x	
Lesser Trefoil	<i>Trifolium dubium</i>		x	
Lords-and-Ladies	<i>Arum maculatum</i>		x	
Meadow Buttercup	<i>Ranunculus acris</i>	x	x	
Meadow Vetchling	<i>Lathyrus pratensis</i>	x	x	
Meadowsweet	<i>Filipendula ulmaria</i>		x	
Musk Mallow	<i>Malva moschata</i>	x		
Ox-eye Daisy	<i>Leucanthemum vulgare</i>	x	x	
Pignut	<i>Conopodium majus</i>		x	
Prickly Sow-thistle	<i>Sonchus asper</i>		x	
Purple Toothwort	<i>Lathraea clandestina</i>		x	Naturalised by stream
Ragged Robin	<i>Lychnis flos-cuculi</i>	x		Planted
Ragwort	<i>Senecio jacobaea</i>	x		
Ramsons	<i>Allium ursinum</i>		x	
Red Campion	<i>Silene dioica</i>		x	
Red Clover	<i>Trifolium pratense</i>	x	x	
Red Dead-nettle	<i>Lamium purpureum</i>		x	
Ribwort Plantain	<i>Plantago lanceolata</i>		x	
Shepherd's Purse	<i>Capsella bursa pastoris</i>	x		By bonfire site
Shining Crane's-bill	<i>Geranium lucidum</i>		x	
Slender Speedwell	<i>Veronica filiformis</i>		x	
Snake's-head Fritillary	<i>Fritillara meleagris</i>	x		By pond (planted?)
Smooth Sow-thistle	<i>Sonchus oleraceus</i>	x	x	
Spear Thistle	<i>Cirsium vulgare</i>	x	x	
Sticky Mouse-ear	<i>Cerastium glomeratum</i>	x	x	

Common Name	Latin Name	V O	L M	Notes
Swine-cress	<i>Coronopus squamatus</i>	x		By bonfire site
Thyme-leaved Speedwell	<i>Veronica serpyllifolium</i>	x	x	
Tufted Vetch	<i>Vicia cracca</i>		x	
White Clover	<i>Trifolium repens</i>	x	x	
White Dead-nettle	<i>Lamium album</i>	x		
Wild Angelica	<i>Angelica sylvestris</i>	x	x	
Wild Daffodil	<i>Narcissus pseudonarcissus</i>		x	Planted on stream bank
Wild Strawberry	<i>Fragaria vesca</i>		x	
Wild Teasel	<i>Dipsacus fullonum</i>	x		By bonfire site
Wood Anemone	<i>Anemone nemorosa</i>		x	
Wood Avens	<i>Geum urbanum</i>		x	
Wood Sage	<i>Teucrium scorodonia</i>		x	
Yarrow	<i>Achillea millefolium</i>	x	x	
Yellow Archangel	<i>Lamium galeobdolon</i>		x	
Yellow Rattle	<i>Rhinanthus minor</i>	x	x	

Monocotyledonous Plants and Fungi

KEY	
VO	Village Orchard
LM	Lugg's Mill Orchard
x	recorded LM in 2017

	Common Name	Latin Name	V O	L M	Notes
Grasses	Annual Meadow-grass	<i>Poa annua</i>	x	x	
	Cocksfoot	<i>Dactylis glomerata</i>	x	x	
	Common Bent	<i>Agrostis capillaris</i>	x	x	
	Crested Dog's-tail	<i>Cynosurus cristatus</i>	x	x	
	False Oat-grass	<i>Arrhenatherum elatius</i>	x	x	
	Marsh Foxtail	<i>Alopecurus geniculatus</i>	x		By pond
	Meadow Brome	<i>Bromus commutatus</i>		x	
	Meadow Foxtail	<i>Alopecurus pratensis</i>	x	x	
	Perennial Ryegrass	<i>Lolium perenne</i>	x	x	
	Red Fescue	<i>Festuca rubra</i>	x	x	
	Small Flote grass	<i>Glyceria declinata</i>	x		By pond
	Smooth Meadow-grass	<i>Poa pratensis</i>	x	x	
	Soft Brome	<i>Bromus hordaceus</i>		x	
	Sweet Vernal-grass	<i>Anthoxanthum odoratum</i>	x	x	
	Tall Fescue	<i>Festuca arundinacea</i>		x	
	Timothy	<i>Phleum pratense</i>	x	x	
	Two-rowed Barley	<i>Hordeum distichon</i>		x	
	Yorkshire Fog	<i>Holcus lanatus</i>	x	x	
Rushes	Soft Rush	<i>Juncus effusus</i>	x		By pond & meadow edge
Sparganium	Branched Bur-reed	<i>Sparganium emersum</i>	x		Pond
Wood-rushes	Field Wood-rush	<i>Luzula campestris</i>		x	
	Heath Wood-rush	<i>Luzula multiflora</i>			
Horse-tails	Field Horsetail	<i>Equisetum arvense</i>		x	
Fungi	Alder Tongue gall	<i>Taphrina alni</i>		x	ID not confirmed
	Fibrous Psathyrella	<i>P. fibrillosa</i>	x		ID not confirmed
	Hairy Curtain Crust	<i>Stereum hirsutum</i>	x		ID not confirmed
	Many-zoned Polypore (Turkey Tails)	<i>Trametes versicolour</i>		x	
	Psathyrella	<i>Psathyrella sp</i>	x		ID not confirmed
	Smoky Roundhead	<i>Stropharia inuncta</i>	x		ID not confirmed
	Snowy Waxcap	<i>Cuphophyllus virgineus</i>	x		ID not confirmed
	White Dapperling	<i>Leucoagaricus leucothites</i>	x		
	Yellow Fieldcap	<i>Bolbitius titubans</i>	x		

Trees and Shrubs

KEY	
VO	Village Orchard
LM	Lugg's Mill Orchard
x	recorded at LM in 2017

Common Name	Latin Name	V O	L M	Notes
Alder	<i>Alnus glutinosa</i>	x	x	
Alder Buckthorn	<i>Frangula alnus</i>	x		
Ash	<i>Fraxinus excelsior</i>	x	x	
Beech	<i>Fagus sylvatica</i>		x	
Bird Cherry	<i>Prunus padus</i>	x		
Blackthorn	<i>Prunus spinosa</i>	x	x	
Bramble	<i>Rubus fruticosus</i>	x	x	
Burnet Rose	<i>Rosa pimpinellifolia</i>	x		
Dog Rose	<i>Rosa canina</i>	x	x	
Dogwood	<i>Cornus sanguinea</i>	x		
Elder	<i>Sambucus nigra</i>	x	x	
Elm	<i>Ulmus agg.</i>			
Field Maple	<i>Acer campestre</i>	x	x	
Goat Willow	<i>Salix caprea</i>	x		
Guelder Rose	<i>Viburnum opulus</i>	x		
Hawthorn	<i>Crataegus monogyna</i>	x	x	
Hazel	<i>Corylus avellana</i>	x	x	
Holly	<i>Ilex aquifolium</i>		x	
Hornbeam	<i>Carpinus betulus</i>	x	x	
Mirabelle	<i>Prunus domestica ssp syriaca)</i>	x		
Hybrid Oak	<i>Quercus sp</i>	x	x	
Red Cherry Plum	<i>Prunus sp</i>	x		
Rowan	<i>Sorbus aucuparia</i>	x		
Silver Birch	<i>Betula pendula</i>	x		
Spindle	<i>Euonymus europaeus</i>	x		
Wayfaring Tree	<i>Viburnum lantana</i>	x		
Whitebeam	<i>Sorbus aria</i>	x		
White Poplar	<i>Populus alba</i>		x	
White Willow	<i>Salix alba</i>	x		
Wild Cherry	<i>Prunus avium</i>	x		
Wild Service Tree	<i>Sorbus torminalis</i>	x		
Wych Elm	<i>Ulmus glabra</i>	x		

Appendix 4: Invertebrates

KEY	
VO	Village Orchard
LM	Lugg's Mill Orchard
1 Richard & Phyl King, 2021	
2 Giles King-Salter and Will Watson, 2018	
x Ledbury Naturalists 2021	

Group	Latin Name	Common Name	V O	L M	Notes
Lepidoptera	<i>Abraxus grossulariatus</i>	Magpie Moth	x		
	<i>Aglais urticae</i>	Small Tortoiseshell	x		1
	<i>Aphantopus hyperantus</i>	Ringlet	x	x	
	<i>Archips xylosteana</i>	Apple Variegated Tortrix	x		caterpillar
	<i>Callimorpha dominula</i>	Scarlet Tiger Moth	x		2 and caterpillar
	<i>Cataclysta lemnata</i>	Small China-mark	x		By pond
	<i>Celastrina argiolus</i>	Holly Blue	x		
	<i>Elophila nymphaeata</i>	Brown China-mark	x		By pond
	<i>Inachis io</i>	Peacock	x		
	<i>Maniola jurtina</i>	Meadow Brown	x	x	
	<i>Ochlodes venata</i>	Large Skipper	x		
	<i>Pararge aegeria</i>	Speckled Wood	x	x	
	<i>Pieris brassicae</i>	Large White	x		
	<i>Pieris napi</i>	Green-veined White	x		
	<i>Polygonia c-album</i>	Comma	x		
	<i>Pyronia tithonus</i>	Gatekeeper	x	x	

Group	Latin Name	Common Name	V O	L M	Notes
	<i>Rivula sericealis</i>	Straw Dot Moth	x	x	
	<i>Thymelicus lineola</i>	Essex Skipper	x		
	<i>Vanessa atalanta</i>	Red Admiral	x		
Diptera	<i>Bombylius major</i>	Beefly	x		
	<i>Chaoborus sp</i>	Phantom Midge larva	x		1
	<i>Culicidae</i>	Mosquito larva	x		1
	<i>Eristalis pertinax</i>	Tapered Drone Fly	x	x	
	<i>Eristalis tenax</i>	Common Drone Fly	x	x	
	<i>Erysyrphus balteatus</i>	Hoverfly	x		
	<i>Heliophilus pendulus</i>	The Footballer hoverfly	x	x	
	<i>Iteomyia caprae</i>	Gall on Goat Willow	x	x	
	<i>Jaapiella veronicae</i>	Gall midge on Germander Speedwell	x	x	
	<i>Phytomyza angelicae</i>	Leaf mine (fly) on Wild Angelica	x	x	
	<i>Rabdophaga strobilina/rosaria</i> agg.	Gall midge on Goat Willow	x	x	
	<i>Rhagio tringarius</i>	Snipefly	x		
	<i>Tachina fera</i>	A parasitic Bristle Fly	x	x	
	<i>Tolmerus atricapillus</i>	Kite-tailed Robberfly	x		
Coleoptera	<i>Acilus sulcatus</i>	Lesser Diving Beetle	x		1,2
	<i>Adalia bipunctata</i>	2-spot Ladybird	x		
	<i>Adalia decempunctata</i>	10-spot Ladybird	x		
	<i>Agabus bipustulatus</i>	Water beetle	x		2
	<i>Agabus nebulosus</i>	Water beetle	x		1,2
	<i>Coccinella septempunctata</i>	7-spot Ladybird	x	x	
	<i>Colymbetes fuscus</i>	Water beetle	x		2
	<i>Corixa sp</i>	Lesser Water-Boatman	x		1
	<i>Dytiscus marginalis</i>	Great Diving Beetle	x		1,2

Group	Latin Name	Common Name	V O	L M	Notes
	<i>Gastrophysa viridula</i>	Green Dock Beetle	x		
	<i>Gyrinus substriatus</i>	Whirligig Beetle	x		2
	<i>Haliplus ruficollis</i> Agg.	Water beetle	x		2
	<i>Helophorus brevipalpis</i>	Water beetle	x		2
	<i>Helophorus griseus</i>	Water beetle	x		2
	<i>Helophorus minutus</i>	Water beetle	x		2
	<i>Hydroporus incognitus</i>	Water beetle	x		2
	<i>Hydroporus palustris</i>	Water beetle	x		2
	<i>Hyphydrus ovatus</i>	Cherry-stone Beetle	x		1
	<i>Ilybius ater</i>	Water beetle	x		1,2
	<i>Ilybius fuliginosus</i>	Water beetle	x		2
	<i>Malachius bipustulatus</i>	Common Malachite Beetle	x		
	<i>Oedemera nobilis</i>	Swollen-thighed Beetle	x		Male
	<i>Rutpela Maculata</i>	Yellow & Black Longhorn Beetle	x		
	<i>Stenurella Melanura</i>	Black-striped Longhorn Beetle	x		
Hemiptera	<i>Acanthosoma haemorrhoidale</i>	Hawthorn Shield Bug	x	x	
	<i>Coreus marginatus</i>	Dock Bug	x	x	
	<i>Dolycoris baccarum</i>	Hairy Shield or Sloe Bug	x	x	
	<i>Gerris lacustris</i>	Common Pond Skater	x		1,2
	<i>Leptopterna dolabrata</i>	Meadow Plant Bug	x		
	<i>Notonecta glauca</i>	Back-Swimmer	x		2
	<i>Notonecta maculata</i>	Back-Swimmer	x		2
	<i>Notonecta obliqua</i>	Back-Swimmer	x		2
Hymenoptera	<i>Andricus fecundator</i>	Artichoke gall on Oak	x		
	<i>Andricus quercuscalicis</i>	Knopper gall on Oak	x	x	
	<i>Anthophora plumipes</i>	Hairy-footed Flower-bee	x		Male
	<i>Bombus hypnorum</i>	Tree Bumblebee	x		Worker

Group	Latin Name	Common Name	V O	L M	Notes
	<i>Bombus lapidarius</i>	Red-tailed Bumble Bee	x		Queen
	<i>Bombus pascuorum</i>	Common Carder Bee	x		Queen
	<i>Bombus pratorum</i>	Early Bumble Bee	x		Queen
	<i>Bombus terrestris</i>	Buff-tailed Bumble Bee	x		Queen
	<i>Bombylius major</i>	Dark-edged Bee-fly	x		
	<i>Lasius flavus</i>	Yellow Meadow Ant	x	x	
	<i>Neuroterus numismalis</i>	Silk-button spangle gall	x	x	
	<i>Neuroterus quercusbaccarum</i>	Common Spangle Gall on Oak	x	x	
Odonata	<i>Aeshna cyanea</i>	Southern Hawker	x	x	1
	<i>Calopteryx virgo</i>	Beautiful Demoiselle		x	
	<i>Coenagrion puella</i>	Azure Damselfly	x		1
	<i>Enallagma cyathigerum</i>	Common Blue Damselfly	x		1
	<i>Ischnura elegans</i>	Blue-tailed Damselfly	x		1, 2
	<i>Libellula depressa</i>	Broad-Bodied Chaser	x		1
	<i>Pyrrhosoma nymphula</i>	Large Red Damselfly	x		1
	<i>Sympetrum striolatum</i>	Common Darter		x	
Ephemeroptera	<i>Cloeon dipterum</i>	Mayfly	x		2
Orthoptera	<i>Chorthippus parallelus</i>	Meadow Grasshopper	x	x	
	<i>Leptophyes Punctatissima</i>	Speckled Bush Cricket	x		
	<i>Pholidoptera griseoptera</i>	Dark Bush Cricket	x		
Acari	<i>Acalitus brevitarsus</i>	Erineum gall on Alder	x	x	
	<i>Aceria eriobia</i>	Gall mite on Field Maple leaf	x	x	
	<i>Aceria macrochela</i>	Gall mite on Field Maple leaf	x	x	
	<i>Cecidophyes rouhollahi</i>	Gall mite on Cleavers	x	x	
	<i>Eriophyes laevis</i>	Gall on Alder	x	x	

Group	Latin Name	Common Name	V O	L M	Notes
	<i>Eriophyes pyri</i>	Gall mite on Whitebeam and Wild Service	x		
	<i>Eriophyes simili</i>	Gall mite on Blackthorn	x		
Crustacea	<i>Crangonyx pseudogracilis</i>	American Water Shrimp	x		1, 2 Non native
Isopoda	<i>Asellus aquaticus</i>	Water Slater	x		1
Annelida	<i>Chironomus</i>	Bloodworm	x		1
	<i>Hirudinea sp</i>	Leech	x		1
Mollusca	<i>Cepaea hortensis</i>	White-lipped Banded Snail	x		
	<i>Lymnaea stagnalis</i>	Great Pond Snail	x		1
	<i>Planorbis sp</i>	Ramshorn snail	x		1
	<i>Radix peregra</i>	Wandering Snail	x		1, 2

Appendix 5: Moths recorded by light trap

(List of Moths trapped by Helen Stace & Tim Dixon, Village Orchard and Garden)

Number		Common Name	2014	2016	2017	2018	2019	2021	Conservation Status
14	<i>Hepialus humuli</i>	Ghost Moth				2018			
15	<i>Hepialus sylvina</i>	Orange Swift		2016	2017				
17	<i>Hepialus lupulinus</i>	Common Swift		2016					
125	<i>Coptotriche marginea</i>	Coptotriche marginea		2016					
161	<i>Zeuzera pyrina</i>	Leopard Moth		2016	2017				
224	<i>Triaxomera parasitella</i>	Triaxomera parasitella		2016	2017				Local
286	<i>Caloptilia alchimiella</i>	Caloptilia alchimiella		2016		2018			
289	<i>Caloptilia falconipenella</i>	Caloptilia falconipenella	2014	2016	2017	2018			Notable B
366a	<i>Cameraria ohridella</i>	Cameraria ohridella		2016	2017	2018		2021	
385	<i>Anthophila fabriciana</i>	Nettle-tap Moth		2016	2017	2018			
424	<i>Yponomeuta evonymella</i>	Bird Cherry Ermine		2016	2017	2018			
425/6	<i>Y. padella/malinellus</i>	Orchard/Apple Ermine		2016		2018	2019		
427	<i>Yponomeuta cagnagella</i>	Spindle Ermine		2016	2017	2018	2019		
428	<i>Yponomeuta rorella</i>	Willow Ermine		2016	2017				
440	<i>Paraswammerdamia albicapitella</i>	Paraswammerdamia albicapitella			2017				Local
464	<i>Plutella xylostella</i>	Diamond-back Moth		2016	2017	2018	2019		
559	<i>Coleophora peribenanderi</i>	Coleophora peribenanderi		2016	2017				
607	<i>Elachista canapennella</i>	Elachista canapennella			2017				
648	<i>Endrosis sarcitrella</i>	White-shouldered House-moth		2016					
649	<i>Esperia sulphurella</i>	Esperia sulphurella					2018		
658	<i>Carcina quercana</i>	Oak Longhorned		2016			2019		
660	<i>Pseudatemelia josephinae</i>	Pseudatemelia josephinae		2016	2017				Local
757	<i>Recurvaria nanella</i>	Brindled Groundling		2016					Notable B

Number		Common Name	2014	2016	2017	2018	2019	2021	Conservation Status
868	<i>Helcystogramma rufescens</i>	Helcystogramma rufescens		2016	2017	2018			
873	<i>Blastobasis adustella</i>	Blastobasis adustella		2016	2017	2018			
888	<i>Mompha propinquella</i>	Mompha propinquella		2016	2017				
937	<i>Agapeta hamana</i>	Agapeta hamana		2016	2017				Local
945	<i>Aethes cnicana</i>	Aethes cnicana			2017				
947	<i>Aethes smeathmanniana</i>	Aethes smeathmanniana		2016	2017	2018			
969	<i>Pandemis corylana</i>	Chequered Fruit-tree Tortrix		2016	2017	2018			
972	<i>Pandemis heperana</i>	Pandemis heperana		2016					
980	<i>Archips xylosteana</i>	Apple Variegated Tortrix						2021	
986	<i>Syndemis musculana</i>	Syndemis musculana	2014	2016		2018	2019		
988	<i>Aphelia viburnana</i>	Bilberry Tortrix	2014	2016	2017				
989	<i>Aphelia paleana</i>	Timothy Tortrix		2016					
994	<i>Clepsis consimilana</i>	Clepsis consimilana		2016					
998	<i>Epiphyas postvittana</i>	Light Brown Apple Moth		2016		2018			
1001	<i>Lozotaeniodes formosanus</i>	Lozotaeniodes formosanus		2016	2017	2018			
1002	<i>Lozotaeniodes forsterana</i>	Lozotaeniodes forsterana		2016	2017		2019		
1006	<i>Epagoge grotiana</i>	Epagoge grotiana			2017				
1007	<i>Capua vulgana</i>	Capua vulgana		2016	2017	2018			
1011	<i>Pseudargyrotoza conwagana</i>	Pseudargyrotoza conwagana			2017				
1020	<i>Cnephasia stephensiana</i>	Grey Tortrix		2016			2019		
1033	<i>Tortrix viridana</i>	Green Oak Tortrix		2016					
1037	<i>Acleris holmiana</i>	Acleris holmiana		2016	2017				
1048	<i>Acleris variegana</i>	Garden Rose Tortrix				2018			
1063	<i>Celypha striana</i>	Celypha striana		2016	2017	2018			
1076	<i>Celypha lacunana</i>	Celypha lacunana		2016	2017				
1082	<i>Hedya pruniana</i>	Hedya pruniana		2016	2017				
1083	<i>Hedya nubiferana</i>	Marbled Orchard Tortrix	2014						
1092	<i>Apotomis turbidana</i>	Apotomis turbidana		2016	2017				

Number		Common Name	2014	2016	2017	2018	2019	2021	Conservation Status
1108	<i>Lobesia abscisana</i>	Lobesia abscisana		2016					
1111	<i>Bactra lancealana</i>	Bactra lancealana			2017				
1126	<i>Ancylis badiana</i>	Ancylis badiana		2016					
1159	<i>Rhopobata naevana</i>	Holly Tortrix				2018			
1169	<i>Gypsonoma dealbana</i>	Gypsonoma dealbana			2017				
1174	<i>Epiblema cynosbatella</i>	Epiblema cynosbatella	2014	2016	2017	2018	2019		
1175	<i>Epiblema uddmanniana</i>	Bramble Shoot Moth		2016	2017				
1176	<i>Epiblema trimaculana</i>	Epiblema trimaculana		2016		2018			
1201	<i>Eucosma cana</i>	Eucosma cana		2016	2017	2018	2019		
1205	<i>Spilonota ocellana</i>	Bud Moth			2017	2018			
1205a	<i>Spilonota laricana</i>	Spilonota laricana			2017	2018			Local
1219	<i>Lathronympha strigana</i>	Lathronympha strigana			2017				
1236	<i>Pammene fasciana</i>	Pammene fasciana			2017				
1247	<i>Grapholita funebrana</i>	Grapholita funebrana			2017				Local
1260	<i>Cydia splendana</i>	Cydia splendana					2019		
1288	<i>Alucita hexadactyla</i>	Twenty-Plume Moth		2016	2017				
1293	<i>Chrysoteuchia culmella</i>	Garden Grass-veneer		2016	2017	2018	2019		
1294	<i>Crambus pascuella</i>	Crambus pascuella		2016			2019		
1301	<i>Crambus lathionellus</i>	Crambus lathionellus		2016					
1302	<i>Crambus perllella</i>	Crambus perllella		2016	2016				
1304	<i>Agriphila straminella</i>	Agriphila straminella		2016					
1305	<i>Agriphila tristella</i>	Agriphila tristella			2017				
1331	<i>Acentria ephemerella</i>	Water Veneer		2016	2017	2018			
1334	<i>Scoparia ambigualis</i>	Scoparia ambigualis			2017				
1338	<i>Dipleurina lacustrata</i>	Dipleurina lacustrata		2016	2017				
1344	<i>Eudonia mercurella</i>	Eudonia mercurella		2016					
1345	<i>Cataclysta lemnata</i>	Small China-mark						2021	
1353	<i>Elophila nymphaeata</i>	Brown China Mark						2021	

Number		Common Name	2014	2016	2017	2018	2019	2021	Conservation Status
1356	<i>Evergestis forficalis</i>	Garden Pebble	2014	2016	2017				
1358	<i>Evergestis pallidata</i>	Evergestis pallidata			2017				
1362	<i>Pyrausta purpuralis</i>	Pyrausta purpuralis		2016	2017	2018			
1376	<i>Eurrhynx hortulata</i>	Small Magpie			2017				
1388	<i>Udea lutealis</i>	Udea lutealis			2017				
1390	<i>Udea prunalis</i>	Udea prunalis		2016	2017	2018			
1392	<i>Udea olivalis</i>	Udea olivalis	2014	2016	2017				
1398	<i>Nomophila noctuella</i>	Rush Veneer	2014	2016	2017	2018	2019		
1405	<i>Pleuroptya ruralis</i>	Mother of Pearl	2014	2016	2017	2018	2019		
1413	<i>Hypsopygia costalis</i>	Gold Triangle		2016		2018	2019		
1417	<i>Pyralis farinalis</i>	Meal Moth		2016	2017				
1424	<i>Endotricha flammealis</i>	Endotricha flammealis		2016	2017	2018	2019		
1428	<i>Aphomia sociella</i>	Bee Moth	2014	2016	2017				
1437	<i>Acrobasis consociella</i>	Acrobasis consociella			2017				Local
1452	<i>Phycita roborella</i>	Phycita roborella		2016	2017	2018	2019		
1458	<i>Myelois circumvoluta</i>	Thistle Ermine		2016	2017				
1470	<i>Euzophera pinguis</i>	Euzophera pinguis		2016	2017				
1483	<i>Phycitodes binaevella</i>	Phycitodes binaevella		2016	2017				
1526	<i>Thymelicus sylvestris</i>	Small Skipper		2016					
1527	<i>Thymelicus lineola</i>	Essex Skipper			2017				
1531	<i>Ochlodes sylvanus</i>	Large Skipper		2016	2017	2018			
1546	<i>Gonepteryx rhamni</i>	Brimstone		2016	2017	2018	2019	2021	
1549	<i>Pieris brassicae</i>	Large White		2016	2017	2018	2019		
1550	<i>Pieris rapae</i>	Small White	2014	2016	2017				
1551	<i>Pieris napi</i>	Green-veined White		2016				2021	
1553	<i>Anthocharis cardamines</i>	Orange Tip		2016	2017				
1561	<i>Lycaena phlaeas</i>	Small Copper			2017			2021	
1580	<i>Celastrina argiolus</i>	Holly Blue		2016					

Number		Common Name	2014	2016	2017	2018	2019	2021	Conservation Status
1590	<i>Vanessa atalanta</i>	Red Admiral		2016	2017				
1591	<i>Vanessa cardui</i>	Painted Lady		2016	2017			2021	
1593	<i>Aglais urticae</i>	Small Tortoiseshell		2016	2017			2021	
1597	<i>Inachis io</i>	Peacock			2017				
1598	<i>Polygonia c-album</i>	Comma		2016	2017			2021	
1614	<i>Pararge aegaria</i>	Speckled Wood		2016				2021	
1620	<i>Melanargia galathea</i>	Marbled White		2016		2018	2019	2021	
1625	<i>Pyronia tithonus</i>	Gatekeeper	2014	2016		2018	2019	2021	
1626	<i>Maniola jurtina</i>	Meadow Brown	2014	2016	2017	2018			
1629	<i>Aphantopus hyperantus</i>	Ringlet		2016	2017	2018		2021	
1634	<i>Malacosoma neustria</i>	Lackey		2016				2021	
1640	<i>Euthrix potatoria</i>	Drinker		2016		2018		2021	
1646	<i>Watsonalla binaria</i>	Oak Hook-tip		2016					
1648	<i>Drepana falcataria</i>	Pebble Hook-tip		2016	2017	2018			
1651	<i>Cilix glaucata</i>	Chinese Character					2019		
1652	<i>Thyatira batis</i>	Peach Blossom		2016		2018	2019		
1653	<i>Habrosyne pyritoides</i>	Buff Arches			2017	2018			
1654	<i>Tethea ocularis octogesimea</i>	Figure of Eighty		2016	2017				
1663	<i>Alsophila aescularia</i>	March Moth		2016	2017				
1667	<i>Comibaena bajularia</i>	Blotched Emerald		2016	2017	2018			Local
1669	<i>Hemithea aestivaria</i>	Common Emerald		2016		2018			
1682	<i>Timandra comae</i>	Blood-vein		2016					
1690	<i>Scopula imitaria</i>	Small Blood-vein		2016	2017				
1702	<i>Idaea biselata</i>	Small Fan-footed Wave		2016	2017	2018	2019		
1707	<i>Idaea seriata</i>	Small Dusty Wave			2017				
1713	<i>Idaea aversata</i>	Riband Wave			2017				
1722	<i>Xanthorhoe designata</i>	Flame Carpet			2017				
1724	<i>Xanthorhoe spadicearia</i>	Red Twin-spot Carpet			2017				

Number		Common Name	2014	2016	2017	2018	2019	2021	Conservation Status
1726	<i>Xanthorhoe quadrifasciata</i>	Large Twin-spot Carpet		2016	2017	2018	2019		Local
1727	<i>Xanthorhoe montanata</i>	Silver-ground Carpet		2016					
1732	<i>Scotopteryx chenopodiata</i>	Shaded Broad-bar			2017				
1738	<i>Epirrhoe alternata</i>	Common Carpet			2017	2018			
1758	<i>Eulithis pyraliata</i>	Barred Straw		2016					
1759	<i>Ecliptopera silaceata</i>	Small Phoenix			2017				
1764	<i>Chloroclysta truncata</i>	Common Marbled Carpet		2016	2017				
1767	<i>Thera firmata</i>	Pine Carpet			2017	2018			
1769	<i>Thera britannica</i>	Spruce Carpet		2016					
1776	<i>Colostygia pectinataria</i>	Green Carpet		2016	2017				
1777	<i>Hydriomena furcata</i>	July Highflyer			2017	2018			
1778	<i>Hydriomena impluviata</i>	May Highflyer		2016	2017				
1803	<i>Perizoma alchemillata</i>	Small Rivulet		2016					
1807	<i>Perizoma albulata</i>	Grass Rivulet			2017	2018			Local
1808	<i>Perizoma flavofasciata</i>	Sandy Carpet			2017				
1813	<i>Eupithecia haworthiata</i>	Haworth's Pug		2016	2017				
1819	<i>Eupithecia exiguata</i>	Mottled Pug		2016					
1825	<i>Eupithecia centaureata</i>	Lime-speck Pug		2016					
1832	<i>Eupithecia assimilata</i>	Currant Pug			2017	2018			
1834	<i>Eupithecia vulgata</i>	Common Pug		2016	2017		2019		
1844	<i>Eupithecia indigata</i>	Ochreous Pug		2016	2017				
1858	<i>Chloroclystis v-ata</i>	V-Pug		2016	2017				
1860	<i>Pasiphila rectangularata</i>	Green Pug		2016					
1862	<i>Gymnoscelis rufifasciata</i>	Double-striped Pug			2017	2018			
1884	<i>Abraxas grossulariata</i>	The Magpie		2016	2017				
1887	<i>Lomaspilis marginata</i>	Clouded Border			2017				
1888	<i>Ligdia adustata</i>	Scorched Carpet		2016	2017			2021	Local
1904	<i>Plagodis dolabraria</i>	Scorched Wing		2016	2017				Local

Number		Common Name	2014	2016	2017	2018	2019	2021	Conservation Status
1906	<i>Opisthograptis luteolata</i>	Brimstone Moth		2016					
1912	<i>Ennomos quercinaria</i>	August Thorn		2016	2017				
1913	<i>Ennomos alniaria</i>	Canary-shouldered Thorn		2016					
1914	<i>Ennomos fuscantaria</i>	Dusky Thorn		2016	2017	2018			
1915	<i>Ennomos erosaria</i>	September Thorn		2016					
1917	<i>Selenia dentaria</i>	Early Thorn		2016	2017				
1919	<i>Selenia tetralunaria</i>	Purple Thorn			2017				
1920	<i>Odontopera bidentata</i>	Scalloped Hazel		2016	2017		2019		
1921	<i>Crocallis elinguaris</i>	Scalloped Oak		2016		2018	2019		
1922	<i>Ourapteryx sambucaria</i>	Swallow-tailed Moth			2017				
1927	<i>Lycia hirtaria</i>	Brindled Beauty			2017				
1931	<i>Biston betularia</i>	Peppered Moth		2016					
1937	<i>Peribatodes rhomboidaria</i>	Willow Beauty		2016	2017	2018			
1941	<i>Alcis repandata</i>	Mottled Beauty		2016			2019		
1947/8	<i>Ectropis bistortata</i> agg	Engrailed/Small Engrailed		2016	2017	2018			
1954	<i>Bupalus piniaria</i>	Bordered White		2016					
1955	<i>Cabera pusaria</i>	Common White Wave			2017				
1958	<i>Lomographa temerata</i>	Clouded Silver		2016	2017	2018			
1961	<i>Campaea margaritata</i>	Light Emerald		2016					
1980	<i>Smerinthus ocellata</i>	Eyed Hawk-moth		2016	2017				
1981	<i>Laothoe populi</i>	Poplar Hawk-moth		2016	2017				
1991	<i>Deilephila elpenor</i>	Elephant Hawk-moth		2016	2017				
1992	<i>Deilephila porcellus</i>	Small Elephant Hawk Moth			2017				
1994	<i>Phalera bucephala</i>	Buff-tip		2016	2017				
1997	<i>Furcula furcula</i>	Sallow Kitten		2016	2017				
1998	<i>Furcula bifida</i>	Poplar Kitten		2016	2017				Local
1999	<i>Stauropus fagi</i>	Lobster Moth		2016	2017				
2003	<i>Notodonta ziczac</i>	Pebble Prominent		2016	2017				

Number		Common Name	2014	2016	2017	2018	2019	2021	Conservation Status
2006	<i>Pheosia gnoma</i>	Lesser Swallow Prominent		2016	2017				
2007	<i>Pheosia tremula</i>	Swallow Prominent		2016	2017				
2011	<i>Pterostoma palpina</i>	Pale Prominent			2017				
2015	<i>Drymonia reuficornis</i>	Lunar Marbled Brown		2016	2017				
2019	<i>Clostera curtula</i>	Chocolate Tip		2016	2017				
2026	<i>Orgyia antiqua</i>	Vapourer		2016	2017				
2028	<i>Calliteara pudibunda</i>	Pale Tussock		2016	2017				
2030	<i>Euproctis similis</i>	Yellow-tail		2016	2017				
2033	<i>Lymantria minacha</i>	Black Arches		2016					
2037	<i>Mitochrista miniata</i>	Rosy Footman		2016					
2038	<i>Nudaria mundana</i>	Muslin Footman		2016					
2043	<i>Eilema sororcula</i>	Orange Footman		2016					
2044	<i>Eilema griseola</i>	Dingy Footman		2016	2017				
2047	<i>Eilema complana</i>	Scarce Footman		2016			2019		
2049	<i>Eilema depressa</i>	Buff Footman		2016					
2050	<i>Eilema lurideola</i>	Common Footman		2016	2017				
2057	<i>Arctia caja</i>	Garden Tiger		2016	2017				
2060	<i>Spilosoma lubricipeda</i>	White Ermine		2016		2018			
2061	<i>Spilosoma luteum</i>	Buff Ermine			2017				
2064	<i>Phragmatobia fuliginosa</i>	Ruby Tiger		2016	2017	2018	2019		
2068	<i>Callimorpha dominula</i>	Scarlet Tiger						2021	
2069	<i>Tyria jacobaeae</i>	Cinnabar		2016	2017	2018	2019		
2089	<i>Agrotis exclamationis</i>	Heart & Dart			2017				
2098	<i>Axylia putris</i>	Flame		2016	2017		2019		
2102	<i>Ochropleura plecta</i>	Flame Shoulder		2016	2017	2018			
2107	<i>Noctua pronuba</i>	Large Yellow Underwing		2016	2017				
2109	<i>Noctua comes</i>	Lesser Yellow Underwing	2014		2017	2018			
2110	<i>Noctua fimbriata</i>	Broad-bordered Yellow Underwing		2016					

Number		Common Name	2014	2016	2017	2018	2019	2021	Conservation Status
2111	<i>Noctua janthe</i>	Lesser Broad-bordered Yellow Underwing		2016					
2112	<i>Noctua interjecta</i>	Least Yellow Underwing		2016					
2120	<i>Diarsia mendica</i>	Ingrailed Clay		2016	2017				
2123	<i>Diarsia rubi</i>	Small Square-spot		2016	2017		2019		
2126	<i>Xestia c-nigrum</i>	Setaceous Hebrew Character		2016					
2127	<i>Xestia ditrapezium</i>	Triple-spotted Clay		2016	2017	2018			
2128	<i>Xestia triangulum</i>	Double Square-spot		2016	2017				
2130	<i>Xestia baja</i>	Dotted Clay		2016	2017				
2133	<i>Xestia sexstrigata</i>	Six-striped Rustic			2017				
2134	<i>Xestia xanthographa</i>	Square-spot Rustic			2017				
2147	<i>Hada plebeja</i>	Shears		2016					
2155	<i>Melanchra persicariae</i>	Dot Moth		2016	2017	2018			
2160	<i>Lacanobia oleracea</i>	Bright-line Brown-eye		2016					
2163	<i>Melanchra pisi</i>	Broom Moth			2017				
2171	<i>Hadena confusa</i>	Marbled Coronet		2016	2017				
2186	<i>Orthosia gracilis</i>	Powdered Quaker				2018			
2187	<i>Orthosia cerasi</i>	Common Quaker			2017				
2188	<i>Orthosia incerta</i>	Clouded Drab		2016	2017				
2190	<i>Orthosia gothica</i>	Hebrew Character		2016	2017				
2192	<i>Mythimna conigera</i>	Brown-line Bright-eye		2016					
2193	<i>Mythimna ferrago</i>	Clay		2016	2017		2019		
2198	<i>Mythimna impura</i>	Smoky Wainscot		2016	2017				
2199	<i>Mythimna pallens</i>	Common Wainscot		2016	2017				
2205	<i>Mythimna comma</i>	Shoulder-striped Wainscot				2018			
2221	<i>Shargacucullia verbasci</i>	Mullein			2017		2019		
2225	<i>Brachylomia viminalis</i>	Minor Shoulder-knot	2014						
2236	<i>Lithophane hepatica</i>	Pale Pinion		2016	2017	2018			
2237	<i>Lithophane ornitopuslactipennis</i>	Grey Shoulder-knot			2017	2018			

Number		Common Name	2014	2016	2017	2018	2019	2021	Conservation Status
2243	<i>Xylocampa areola</i>	Early Grey		2016					
2278	<i>Acronicta megacephala</i>	Poplar Grey		2016	2017				
2280	<i>Acronicta leporina</i>	Miller		2016	2017	2018			
2283	<i>Acronicta psi/tridens</i>	Grey/Dark Dagger		2016	2017				
2289	<i>Acronicta rumicis</i>	Knot Grass		2016	2017				
2291	<i>Craniophora ligustri</i>	Coronet		2016					
2293	<i>Cryphia domestica</i>	Marbled Beauty			2017				
2303	<i>Thalpophila matura</i>	Straw Underwing					2019		
2305	<i>Euplexia lucipara</i>	Small Angle Shades	2014				2019		
2306	<i>Phlogophora meticulosa</i>	Angle Shades			2017				
2312	<i>Ipimorpha subtusa</i>	The Olive				2018			
2318	<i>Cosmia trapezina</i>	Dun-bar			2017				
2319	<i>Cosmia pyralina</i>	Lunar-spotted Pinion					2019		
2321	<i>Apamea monoglypha</i>	Dark Arches		2016	2017				
2322	<i>Apamea lithoxylaea</i>	Light Arches		2016	2017				
2326	<i>Apamea crenata</i>	Clouded-bordered Brindle					2019		
2327	<i>Apamea epomidion</i>	Clouded Brindle					2019		
2333	<i>Apamea anceps</i>	Large Nutmeg		2016					Local
2334	<i>Apamea sordens</i>	Rustic Shoulder-knot		2016	2017	2017			
2337	<i>Oligia strigilis</i>	Marbled Minor agg			2017				
2340	<i>Oligia fasciuncula</i>	Middle-barred Minor		2016					
2341	<i>Mesoligia furuncula</i>	Cloaked Minor			2017				
2343	<i>Mesapamea didyma</i>	Common Rustic agg		2016	2017	2018	2019		
2345	<i>Photedes minima</i>	Small Dotted Buff		2016					
2361	<i>Hydraecia micacea</i>	Rosy Rustic		2016	2017				
2380	<i>Charanyca trigrammica</i>	Treble Lines		2016	2017				
2381	<i>Hoplodrina alsines</i>	The Uncertain				2018			
2382	<i>Hoplodrina blanda</i>	Rustic			2017				

Number		Common Name	2014	2016	2017	2018	2019	2021	Conservation Status
2387	<i>Caradrina morpheus</i>	Mottled Rustic			2017				
2389	<i>Paradrina clavipalpis</i>	Pale Mottled Willow		2016					
2410	<i>Protodeltote pyrgarga</i>	Marbled White Spot		2016					
2418	<i>Earias chlorana</i>	Cream-bordered Green Pea				2018			
2421	<i>Bena bicolorana</i>	Scarce Silver-lines				2018			
2422	<i>Pseudoips prasinana</i>	Green Silver-lines		2016	2017	2018			
2423	<i>Nycteola reveyana</i>	Oak Nycteoline			2017				
2425	<i>Colocasia coryli</i>	Nut-tree Tussock		2016					
2434	<i>Diachrysia chrysitis</i>	Burnished Brass			2017				
2439	<i>Plusia festucae</i>	Gold Spot		2016		2018	2019		
2441	<i>Autographa gamma</i>	Silver Y		2016	2017				
2442	<i>Autographa pulchrina</i>	Beautiful Golden Y			2017				
2443	<i>Autographa jota</i>	Plain Golden Y		2016					
2450	<i>Abrostola tripartita</i>	Spectacle		2016					
2469	<i>Scoliopteryx libatrix</i>	Herald			2017				
2473	<i>Laspeyria flexula</i>	Beautiful Hook-tip				2018			
2474	<i>Rivula sericealis</i>	Straw Dot	2014	2016	2017				
2475	<i>Parascotia fuliginaria</i>	Waved Black		2016					Notable B
2477	<i>Hypena proboscidalis</i>	Snout	2014	2016					
2489	<i>Zanclognatha tarsipennalis</i>	Fan-foot		2016				2021	
	TOTAL	2014 to 2019 = 291	14 of these were recorded in 2021. 4 NEW species added to the list in 2021 (highlighted).						
	Conservation Status	Joint Nature Conservation Committee Designation							
	Notable B (Nationally scarce)	occurs in 31-100 hectads (10km square)							
	Local	occurs in 101-300 hectads							

Appendix 6: Vertebrates

KEY	
VO	Village Orchard
LM	Lugg's Mill Orchard
UK BAP = UK Biodiversity Action Plan Priority Species (2007)	
Red, Amber & Green Lists UK Birds of Conservation Concern 5, 2021	

	Common Name	Latin Name	VO	L M	Notes	UK BAP
Amphibians	Common Frog	<i>Rana temporaria</i>	x		1	
	Great Crested Newt	<i>Triturus cristatus</i>	x		1 Larva	Y
	Palmate Newt	<i>Lissotriton helveticus</i>	x		1	
	Smooth Newt	<i>Lissotriton vulgaris</i>	x		1	

Reptiles	Slow Worm	<i>Anguis fragilis</i>	x		2	Y
-----------------	-----------	------------------------	---	--	---	---

	Common Name	Latin Name	CONSERVATION STATUS			UK BAP
			RED	AMBER	GREEN	
Birds	Blackbird	<i>Turdus merula</i>			*	
	Blackcap	<i>Sylvia atricapilla</i>			*	
	Blue Tit	<i>Parus caeruleus</i>			*	
	Carrion Crow	<i>Corvus corone</i>			*	
	Chiff Chaff	<i>Phylloscopus collybita</i>			*	
	Common Buzzard	<i>Buteo buteo</i>			*	
	Common Chaffinch	<i>Fringilla coelebs</i>			*	
	Duncock	<i>Prunella modularis</i>		*		
	Goldfinch	<i>Carduelis carduelis</i>			*	
	Great Tit	<i>Parus major</i>			*	

	Common Name	Latin Name	CONSERVATION STATUS			
			RED	AMBER	GREEN	UK BAP
	Green Woodpecker	<i>Picus viridis</i>			*	
	Greenfinch	<i>Carduelis chloris</i>	*			
	Grey Heron	<i>Ardea cinerea</i>			*	
	House Sparrow	<i>Passer domesticus</i>	*			Y
	Jackdaw	<i>Corvus monedula</i>			*	
	Long Tailed Tit	<i>Aegithalos caudatus</i>			*	
	Magpie	<i>Pica pica</i>			*	
	Pheasant	<i>Phasianus colchicus</i>				
	Pied Wagtail	<i>Motacilla alba yarrellii</i>			*	
	Raven	<i>Corvus corax</i>			*	
	Robin	<i>Erithacus rubecula</i>			*	
	Rook	<i>Corvus frugilegus</i>		*		
	Swift	<i>Apus apus</i>	*			
	Whitethroat	<i>Sylvia communis</i>		*		
	Wood Pigeon	<i>Columba palumbus</i>		*		
	Wren	<i>Troglodytes troglodytes</i>		*		

	Common Name	Latin Name	VO	LM	Notes	UK BAP
Mammals	Badger	Meles meles		x	2	
	Bank Vole	Myodes glareolus	x	x	2	
	Brown Rat	Rattus norvegicus	x	x	2	
	Common Shrew	Sorex araneus	x	x	2	
	Field Vole	Microtus agrestis	x	x	2	
	Fox	Vulpes vulpes	x	x	2	
	Grey Squirrel	Sciurus carolinensis		x	2	
	Mole	Talpa europaea	x	x	2 & Led Nats	
	Muntjac	Muntiacus reevesi		x	2	
	Otter	Lutra lutra		x	2	Y
	Rabbit	Oryctolagus cuniculus	x	x	2	
	Stoat	Mustela ermineus		x	2	
	Wood Mouse	Apodemus sylvaticus	x	x	2	
	Yellow Necked Mouse	A. flavicollis		x	2	

Distribution List

1. Colwall Orchard Group
2. Ledbury Naturalists' Field Club survey team and committee members
3. Herefordshire Wildlife Trust
4. Herefordshire Biological Records Centre
5. Peter Hall, Herefordshire Lepidoptera Recorder
6. Stuart Hedley, Herefordshire Botanical Recorder
7. Woolhope Naturalists' Field Club
8. Natural England
9. Malvern Hills Trust
10. Malvern Hills AONB
11. Colwall Parish Council
12. Colwall Library