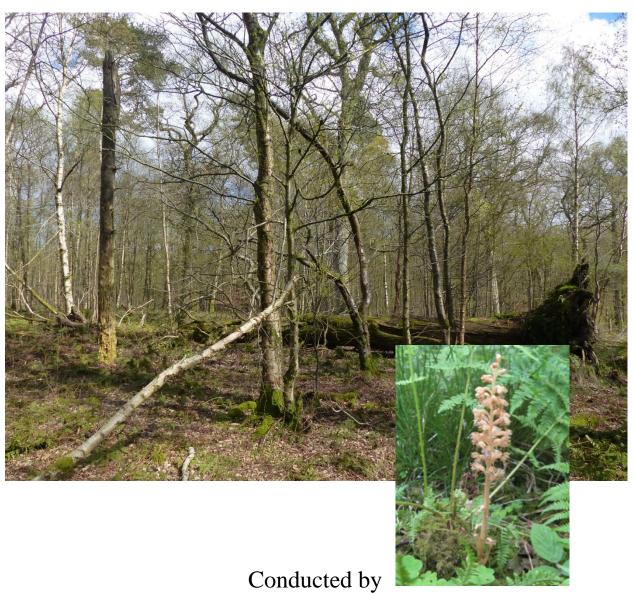
A survey of the wildlife of

Miltonrigg Wood



Carlisle Natural History Society in 2013/2014

Cover photograph inset: Bird's-nest Orchid, Miltonrigg Wood © Marie Saag

In memory of

Geoff Naylor 1939 - 2012



Gifted naturalist and obsessive recorder, Geoff Naylor made a major contribution to the study of Cumbrian natural history and left a significant legacy of information for posterity. Long-time member of Carlisle Natural History Society, Geoff served for many years as Recorder, collating the wildlife records provided by the membership. As a volunteer in the Natural Sciences section at Tullie House Museum he input these and many other data into the Cumbrian biological records database, laying the foundations of the Cumbria Biodiversity Data Centre established in 2011.

Geoff lived at Milton and spent much time in Miltonrigg Woods, walking his dog and cataloguing the wildlife he encountered, including birds, butterflies, plants, snails and fungi. For many years he ran a moth trap in his garden just across the field from the wood, recording some 353 different species of Lepidoptera in his garden and the wood. He published notes on some of his most interesting finds at Miltonrigg in the *Carlisle Naturalist*, issued by the Society:

Naylor, G. (2007) Dewick's Plusia (*Macdunnoughia confusa* (Steph.)) in a garden moth trap. *Carlisle Naturalist* **15**(2): 31-32.

Naylor, G. (2008) Broad-leaved Helleborine (*Epipactis phyllanthes* (L.) Crantz) in Miltonrigg Wood. *Carlisle Naturalist* **16**(2): 44-45.

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Acknowledgements

With thanks to all of the membership of the Society who supported this survey, attended field meetings, visited the site at their own initiative and contributed records of wildlife for this report. The Society is particularly grateful to Cumbria Biodiversity Data Centre for making available the collated historical records for Miltonrigg Wood contibuted by Geoff Naylor, CNHS and other visiting naturalists in previous years.



Summary

The survey has generated some 1,496 records of 771 different taxa. A number of scarce species are recorded for the first time at the site and some of the orchids that were previously recorded are mapped here in detail.

Considered to be an area of ancient semi-natural woodland, the soil structure could still have potential to support a natural woodland flora and fauna.

However, the even-age structure of the planted woodland gives a general uniformity to the site and the blocks of conifer create dense shade, reducing the wildlife interest within those areas.

This uniformity is mitigated by the now mature oak plantation producing a rich supply of dead wood, which supports an interesting variety of invertebrates and fungi.

Dead standing and fallen timber should be left in situ as far as possible.

More open areas along the rides, around the car park, at the pond and in the 'bog woodland' area let in the sunlight and are among the most interesting features for wildlife in the wood.

A number of scarce plants are restricted to the edges of paths in the wood and path maintenance works should take due diligence of these distributions.

On-going management work to increase the diversity of structure within the woodland is leading to a noticeable increase in the wildlife interest of the site.

There is scope to create more open glades within the woodland and possibly to create another pond.

The natural 'bog woodland' area is of significant biodiversity interest and should be conserved by maintaining water levels to maintain and encourage the *Sphagnum* moss carpet there.

Introduction

The objective behind the survey was to harness the diverse natural history expertise of the Society to survey the broad biodiversity of an under-recorded site in Cumbria, covering as many different wildlife groups as possible. The aim would be to both provide more detailed information on a specific site as well as adding to the broad picture of natural history in Cumbria. The information gained would be published online as a report on the Society's website. The choice of Miltonrigg Wood as the survey site fitted the criteria of not being too far from the Society's hub in Carlisle, having some features of biodiversity interest yet no statutory wildlife designations. Its connection with Geoff Naylor made it the obvious choice.

Aims of the Survey

- i) To give a general description of each of the distinctive compartments of the area, with indications of the general state of these areas, and any significant species or features
- ii) To identify areas of existing biodiversity which should be preserved and perhaps enhanced through appropriate management.
- iii) To locate and pinpoint any species of particular conservation significance and suggest ways that their populations could be protected and enhanced. iv) To provide the resulting records to Cumbria



Scope of the Survey

Biodiversity Data Centre.

The broad taxonomic groups covered in the survey were: fungi, vascular plants, bryophytes, butterflies and moths, other insects, amphibians, birds and mammals.

Broad areas and features of interest for wildlife were identified, see map on page 4. These features are variously highlighted within the sections of this report dealing with each wildlife group.

General botanical recording followed the tetrad system operated by the Cumbria Flora Group. The site overlaps two tetrads and separate species lists were collected for each tetrad although they have been combined for the purposes of this report. Within this framework species of particular interest are dealt with individually.

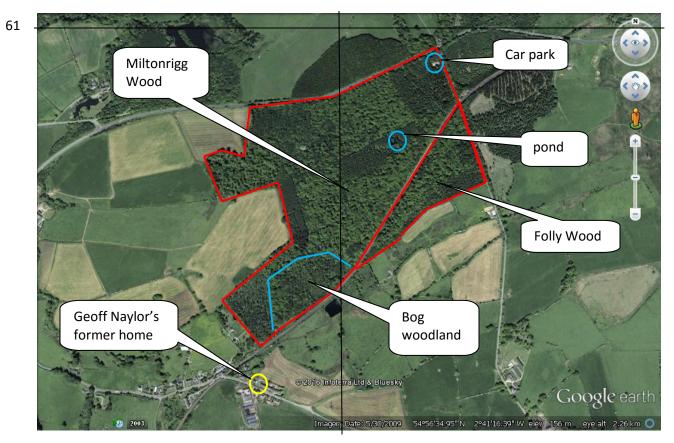
Methodology

A number of survey visits was booked into the Society's summer programme of field trips. An initial survey day planned on 18th May 2013 was a washout due to very heavy rain and although some members made further visits later in the season, it was decided to extend the survey through 2014. The 2014 survey began with a programmed day on 17th May and this was followed by a series of programmed evening

meetings throughout the summer on 11th June, a moth trapping evening on 25th July, 13th August and 17th September. A fungus foray was programmed for 19th October. Several members made additional adhoc visits to survey their particular groups at their own convenience.

Survey was largely by field identification, but some live-trapping of small mammals was conducted. A moth trapping evenning was programmed, with light traps being additionally run on other dates too. Other groups of insects, not identifiable in the field, were collected by sweep netting, beating foliage and hand searching dead wood and leaf litter for later identification under the microscope.

Miltonrigg & Folly Wood: Google Earth aerial view with site boundary, features and tetrad boundaries indicated



Site Description

Miltonrigg Wood is owned managed by the Woodland Trust. It is situated just east of Brampton and to the south of the A69, 15km east of Carlisle. The 64ha site is transected by the Carlisle to Newcastle railway line with the majority of the site lying north of the railway line. The southern portion is known as Folly Wood. Miltonrigg Wood is a reasonably flat site, varying between 140 and 150 metres ASL. Miltonrigg Wood is part of a larger woodland complex surrounding Naworth Castle and it is surrounded by a road on the north and east, pasture on the western boundary, and rough grazing land as well as a small duck



pond to the south. To the north and east of the adjoining roads there are areas of mixed woodland.

The underlying geology at Mitonrigg Wood is of sedimentary bedrock formed approximately 322 to 335 million years ago in the Carboniferous Period known as the Alston Formation – consisting of Limestone, Sandstone, Siltstone and Mudstone. These rocks were formed in warm shallow seas with carbonate deposited on platform, shelf and slope areas; often rich in corals and shelly faunas.

The site in places is very wet and in particular larger areas of wet woodland can be found between the main path and the railway line. A small pond surrounded by willows, birch and some non-natives, lies near the centre of the wood and there is extensive evidence of historic draining across large parts of the site. Some deeper channels exist towards the north east of the site.

Miltonrigg Wood is predominantly ancient semi-natural woodland dominated by Sessile Oak (Quercus petraea) and birches (Betula pubescens and B. pendula) with Beech (Fagus sylvatica), Ash (Fraxinus excelsior), Sycamore (Acer pseudoplatanus), Horse Chestnut (Aesculus hippocastanum), Sweet Chestnut (Castanea sativa), Yew (Taxus baccata) and Scots Pine (Pinus sylvestris). The Woodland Trust management plan (Anon 2011) for the site states the majority of the Oaks and Beech were planted in 1890 and since 1945 a variety of coniferous species have been planted, including Japanese Larch (Larix kaempferi), Norway Spruce (Picea abies), Western Hemlock (Tsuga heterophylla), Scots Pine (Pinus sylvestris), Corsican Pine (Pinus nigra var. maritima) and Douglas Fir (Pseudotsuga menziesii) by the previous owner.

Across the whole site natural regeneration of tree species is abundant. Some under-planting has been undertaken in the past, but Ash, Birch and Oak regeneration can be found across the whole site, varying from saplings through to 5-10+ year-old, self-seeded, established trees. There is very limited herbivore browsing due to the high level of human activity within Miltonrigg Wood, although small numbers of Roe Deer have been seen on multiple visits.

The wood in general has a high forest structure with little under-storey and the ground flora is characterised by common grasses, Wood Sorrel (Oxalis acetosella), Broad Buckler Fern (Dryopteris dilatata), Tufted Hair-grass (Deschampsia cespitosa), Honeysuckle (Lonicera periclymenum), and



bryophytes but also populations of Wood Anemone (Anemone nemorosa), Bluebell (Hyacinthoides non-scripta), Hard Fern (Blechnum spicant) and Wavy Hair-grass (Deschampsia flexuosa) are present.

Rhododendron (Rhododendron ponticum) has previously dominated the under-storey, but a lengthy programme of removal and control has gradually cleared most areas. However regenerating rhododendron is present throughout the wood. Bramble (Rubus fruticosus) and Bracken (Pteridium aquilinum) can be found generally where there has been a disturbance such as felling and or planting, although neither are extensive.

There are some spectacular veteran trees within Miltonrigg Wood, of particular note are several Beech and two or three Sweet Chestnut (although no veterans are recorded on the Ancient Tree Hunt website).

The Woodland Trust are managing the woodland to remove and reduce the impact of the non-native conifers and rhododendron. Evidence of this policy is present throughout the site with felling and thinning work much in evidence along the main path. This work allows light through the canopy and native species, previously out competed or shaded out, will re-establish in these areas. A plentiful and productive seed source is available on site and with low levels of browsing these areas should regenerate quickly. The Woodland Trust are managing the site to ultimately achieve a 'self sustaining broadleaf or native conifer (Scots Pine or Yew) high forest woodland' with 20% or less non-natives and only a small amount of Rhododendron. The Woodland Trust hope to achieve a self sustaining forest system. However the areas of dense birch regeneration in some areas of the woodland may need thinning in the future, and non-native invasives must continue to be monitored to ensure they do not re-establish.

Miltonrigg Wood has a small network of wider rides (5-8 metres) linked to the path network. Orchid populations occur along these rides and ride edge management is undertaken to ensure the rides stay open.



©Marie Saag

Reference

Anonymous (2011) *Miltonrigg Woods Management Plan 2011-2016*. Woodland Trust. http://www.woodlandtrust.org.uk/woodfile/571/management-plan.pdf?cb=ff09dc316a174a49bae5e37574618bd8.

Tim Frost

Fungi

Fungi are at their most diverse in woodlands due to the varied niches that they provide. Leaflitter and dead wood are used by the saprophytic decomposers whilst mycorrhizal species form associations with living trees, which also are hosts for parasitic species. The leaves of trees and plants in the field and ground layers are also hosts for a large number of fungal parasites.

The age of awoodland is also important in determining the diversity of fungi that occur, with ancient sites that have a long history of continuous woodland cover, as seen in Miltonrigg, supporting many more fungi than more recent plantations. However the most important influence on the diversity of mycota in woodlands is probably the variety of tree species, with mixed woodlands - again as seen in Miltonrigg which has a range of broadleaf species alongside planted conifers, being the most diverse.

The Survey of Miltonrigg was undertaken during 2013 and 2014 involving several visits by different groups and individuals. These visits were spread throughout the seasons covering spring, summer, early autumn and mid-autumn - which tends to be the peak of the fungi season. Most of the trees in Miltonrigg are ectomycorrhizal which means that they readily form symbiotic associations with fungi and therefore we would expect a good range of these fungi. The exception is ash with fungi associated with this tree being those feeding on wood, either living or dead, and litter.

The first fungus encountered when entering the wood forms round black spots on the leaves of Sycamore. This is the Sycamore Tarspot and is parasitic on the leaves of the tree. This fungus is apparently sensitive to atmospheric pollution, doing better in cleaner air away from urban areas with trees having greater infestation and more black spots on their leaves in the countryside.

As well as the more obvious habitats, an often interesting habitat which can have its own fungal associates is paths and path sides. Shortly after entering the wood by the main path there is invariably a good display of the White Dome cap (*Lyophyllum connatum*) which seems to persist throughout most of the autumn and is generally associated with trodden areas of woodlands. Areas of woodchip support the Brittlestem (*Psathyrella corrugis*). During the spring and summer litter fungi were few and far between and any fungi observed tended to brackets and crusts on wood. The ubiquitous Birch Polypore (*Piptoporus betulinus*) occurs invariably on dead birch trunks whilst the less common



Lyophyllum connatum ©Steve Hewitt

Hoof Bracket (*Fomes fomentarius*) is usually associated with birch trees in this part of the country but interestingly, shifts to Beech in southern counties. A bracket which occurs during the summer months is the Chicken of the Woods (*Laetiporous sulphureus*). The only record of early spring fungi was that of the Scarlet Elf Cup (*Sarcoscypha austriaca*), standing out vividly from the woodland floor on mossy wet logs. During early September when temperatures are dropping slightly the main fungi season starts, although this can be earlier depending on the weather

conditions. Looking at the records for this time it is apparent that the early autumn is the time when the mycorrhizal fungi dominate and 60% of the fungi recorded were such,including the Blusher (*Amanita rubescens*), Bay Bolete (*Boletus badius*), Brown Birch Bolete (*Leccinum scabrum*), two species of deceiver (*Laccaria laccata* and *.L amethystina*), four species of brittlegills (*Russula atropurpurea, R. cyanoxantha, R. fellea, R. nobilis* and *R. ochroleuca*), two species of milkcap (*Lactarius quietus* and *L. tabidus*) and the Brown Roll Rim (*Paxillus involutus*).



Hoof Bracket ©Steve Hewitt

As the season progessed into October, with conditions becoming wetter cooler, so the diversity of fungi increased in Miltonrigg. The foray on 19th October 2014 recorded in excess of 70 species with the proportion of mycorrhizal species dropping to less than 25%. A record of *Lactarius subumbonatus*, a milkcap associated with oaks was a good find as this is a rarely recorded fungus nationally. Litter-decomposers were now well represented and included the aptly named Club Foot (*Ampulloclitocybe clavipes*) which was widespread along with several species of funnelcaps (*Clitocybe ditopa, C. nebularis, C. phyllophila*) and the very sweet smelling *Clitocybe fragrans*. One fruit body of the Wood Blewit (*Lepista nuda*) was found. This species is usually a fungus of late autumn/early winter, the fruting seemingly being stimulated by a significant drop in the temperature. In the needle litter under the stand of conifers in Miltonrigg

there was extensive growth of the Grey Coral (Clavulina cinerea) and typically large troops of the Horsehair fungus (Marasmius androsaceus), along with The False Chanterelle (Hygrophoropsis aurantiaca). Growing on well rotted conifer stumps was the Jelly Tongue (Pseudohydnum gelatinosum) - a jelly fungus with spines projecting from the lower surface. The Yellow Stagshorn another jelly fungus again confined to wet conifer stumps was widespread. The Common Rustgill (Gymnopilus penetrans), an important decomposer of conifer wood, was common.



CNHS fungus Foray 19 October 2014 ©Steve Hewitt

On broadleaf wood, specifically that of oak, there was very extensive growth of the Black Bulgar (*Bulgaria inquinans*). 2014 seems to have been the year of the Black Bulgar with hundreds of fruit bodies of this black cup fungus, which feels like a jelly fungus often on one fallen bough, being observed in oak woodlands throughout the county. A somewhat similar jelly fungus observed was *Exidia recisa*, which is almost invariably found growing on dead branches of willow. One of the most toxic of all toadstools yet quite non-descript as a "Little Brown Job" is the Funeral Bell (*Galerina marginata*) which occurred on a fallen beech branch. Fungi specific

to beech were Beech Woodwart (*Hypoxylon fragiforme*) and Beech Tarcrust (*Biscogniauxia nummularia*). The latter forms a flat tar-like crust on dead beech.

Fallen twigs provide a substrate for specific species and probably the commonest and best known are the pink pustules of the Coral Spot (*Nectria cinnabarina*), most commonly found on twigs of Sycamore. Some species of Oysterling grow on small twigs and dead stems of herbaceous woodland plants. Two species of *Crepidotus* were recorded *C. cesati and C. variabilis*. An interesting and unusual find was *Crocicrea scoronatum* with only one other county record on the NBN gateway. This is a small stalked discomycete (cup fungus) which has a series of tooth-like projections arising along the rim of the cup giving the whole fruit body the look of a crown. Several fruit bodies were found growing along the length of the stem of a dead herbaceous plant. A fungus ubiquitous to woodlands and often present in large numbers is the Honey Fungus (*Armillaria mellea*). In Miltonrigg it was found both on the dead stumps and fallen branches of a number of deciduous trees. Although capable of being parasitic, *Armillaria* is frequently found growing saprophytically. Another parasitic species is the large Southern Bracket (*Ganoderma australe*) growing as large plates from the side of stricken beech trees.

Living in similar habitats to the fungi and frequently encountered when foraying are the slime moulds, an odd group of organisms which most people know little about. Belonging to the Phylum Myxomycota they are currently thought to be related to the protozoans. Many are very brightly coloured at least during part of their complex life cycle and are easily seen on the floor of a woodland. Frequently to be found on well decomposed wet stumps and logs they either appear as a slime - consisting of a large number of amoeboid cells which if photographed with



Dog's Vomit slime mould ©Steve Hewitt

time lapse photography can be seen to pulsate and slowly flow over the substrate on which they are growing and feeding - or as a static sporing body whose role is to produce and disseminate large numbers of spores.

Geoff Naylor produced an extensive list of fungi in Miltonrigg as a result of years of observing and recording. Included in his records are some which are rarely recorded nationally and include: Lepiota ochraceofulva, Cortinarius malicorius, Inocybe pusio, Mycena aurantiomarginata, Phaeolepiota aurea, Lacrymaria pyrotricha and Psilocybe cobula.

Species recorded during the CNHS survey which can be added to Geoff's listinclude: The Discomycete (*Crocicrea scoronatum*), Beech Tar Crust (*Biscogniauxia nummularia*), Oysterling (*Crepido tuscesati*), Funeral Bell (*Galerina marginata*), the Jelly fungus (*Exidia recisa*), Wood Hedgehog (*Hydnum repandum*), Split Porecrust (*Schizopora paradoxa*) the Milkcap (*Lactarius subumbonatus*) and Root Rot (*Heterobasidium annosum*).

Thanks to Steve Hewitt, David Clarke, Teresa and Tim Frost and to other members of the CNHS who were involved in the surveys and submitted records and to Marie Saag and Stuart Colgate for their work in compiling the lists from field records.

Paul Nichol

Mosses and Liverworts

A bryophyte recording day was arranged on the 15th November 2014, with Diane Dobson, Jeremy Roberts, Marie Saag, Phill Brown and Stuart Colgate in attendance. Fifty-two species of bryophytes were recorded comprising 11 liverworts (including three Metzgeria species on trees: Metzgeria furcata, M. fruticulosa and M. temperata) and 41 mosses (including four Sphagnum species: Sphagnum fallax, Sphagnum fimbriatum, Sphagnum palustre and Sphagnum denticulatum). No rare species were recorded though Nowellia curvifolia, which is a vibrant red colour, was a good find on a rotting fallen trunk.



Nowellia curvifolia ©Diane Dobson

CNHS members, Drs Roderick Corner and Derek Ratcliffe, found Fragile Fork-moss (*Dicranum tauricum*) new to Cumberland at Miltonrigg (Corner 2003). Corner observes that this moss has been expanding its national range in recent years, probably in response to atmospheric pollution. British Bryological Society member Mark Lawley visited Miltonrigg Wood in 2012. Mark recorded 78 species, most relatively common species but he did refind the *Dicranum tauricum* and also recorded the noteworthy Drummond's Pincushion (*Ulota drummondii*).

Reference

Corner, R.W.M. (2003) *Dicranum tauricum* Sapjegin : a moss new to Cumberland (VC 70). *Carlisle Naturalist*. **11**(1): 7-8.

Diane Dobson

Lichens

Miltonrigg Wood lies downwind of the town of Brampton, and the once heavily industrial city of Carlisle lies only a further 13km to the west. In the past century and more, this will have exposed the wood to significant levels of SO₂, from coal burning in particular, and eliminated species sensitive to this. Today, the woodland is sandwiched between the busy Carlisle-Newcastle railway line and the even busier A69 trunk road – both churning out nitrogen pollutants; surrounding agriculture will be another contributor. While there are no air quality data to confirm this, it would seem likely that air pollution levels are relatively



Parmotrema perlatum ©David Clarke

high with respect to nitrogen compounds. Thus, while the pollutants may have changed over the years, there will be significant historical *and* contemporary effects. This accords with the

conclusions of Corner (2003) who observed that the lichen flora of Miltonrigg Wood was in an impoverished state and that this, together with the uniform nature of the bryophyte fauna, was likely to be due to atmospheric pollution.

A further factor is woodland management. This has resulted in the lack of really ancient native trees that can provide the continuity for woodland lichen communities; equally, there is a notable absence of examples of richer barked trees such as Ash, Elm, Hazel and willows – all of which are especially attractive to some woodland lichens.

The main habitats for lichens are the trunks, branches and twigs of trees, especially birch and oak, which have fairly acidic bark. The range of other tree species and fallen, moss-grown rotting timber and fence posts are further substrates, though of more limited occurrence. The writer has struggled to find more than 20 lichen species, some of which are still being identified. An experienced lichenologist would undoubtedly have found more – especially amongst the so-called 'micro-species'.

The complete absence of 'Lobarion community' and other 'old forest' lichens is unsurprising. There is an almost total absence of other fruticose and foliose species. The 'beard-moss' lichen *Usnea subfloridana* is one of the most pollution-tolerant of its genus, but even this is present in only very tiny amounts – e.g. on birch near the pond. Common foliose species such as *Evernia prunastri*, *Platismatia glauca* and *Ramalina farinacea* are of very limited occurrence and the more sensitive widespread species of *Ramalina*, *R. fastigiata*, has not been found at all. The

wettest area - marked 'bog woodland' on p. 3 - has *Salix* swamp, and some of the best covering of the larger lichens, including the only occurrence of *Parmotrema perlatum* - a species known to have benefitted from SO₂ reduction. (*Flavoparmelia caperata* has expanded locally for the same reason, but was not found.). Big, fallen, mossy trunks over wet ground have the fast-growing 'dog lichens' *Peltigera praetextata* and *P. hymenina*. The small blue-green hummocks of *Cladonia* spp, especially *C. coniocraea* are frequent on mossy trunks of living oaks, and often the only noticeable lichens present.



Cladonia coniocraea ©David Clarke

Reference

Corner, R.W.M. (2003) *Dicranum tauricum* Sapjegin : a moss new to Cumberland (VC 70). *Carlisle Naturalist*. **11**(1): 7-8.

David Clarke

Flowering Plants and Ferns

Miltonrigg is a woodland with mature Oak, Beech, Birch and Scots Pine along with some exotic conifers such as Japanese Larch and Norway Spruce. During this survey we focused attention in particular on the ground flora. Over a number of visits to the wood (Miltonrigg and Folly Wood) in 2013 and 2014 a total of 201 vascular plants species were recorded.

In some parts of the wood the ground flora is dominated by ferns – Broad Buckler (*Dryopteris dilatata*) and Male Fern (*D. filix-mas*); while in other areas grasses, brambles or Bilberry (*Vaccinium mrytillus*) dominate. Most of the typical woodland plants like Dog's Mercury (*Mercuralis perennis*), Wood Sorrel (*Anemone nemorosa*) and Great Wood Rush (*Luzula sylvatica*) were present but their distributions are patchy. Bluebells (*Hyacinthoides non-scripta*) though present are rare.

The areas of best plant diversity were the areas alongside the rides. The path edges receive more light and the common plants include Herb Robert (Geranium robertianum), Wood Avens (Geum urbanum), Bugle (Ajuga reptans), Bilberry (Vaccinium mrytillus), Wood Dock (Rumex sanguineus), Germander Speedwell (Veronica chamaedrys), Enchanter's nightshade (Circaea lutetiana).... and nettles (Urtica dioica). The wood is a favourite dog-walking spot and the 'fertilization' of the path side by dog faeces has resulted in flourishing nettle growth, especially in the stretch leading from the car park to the point where the paths divide prior to reaching the pond.



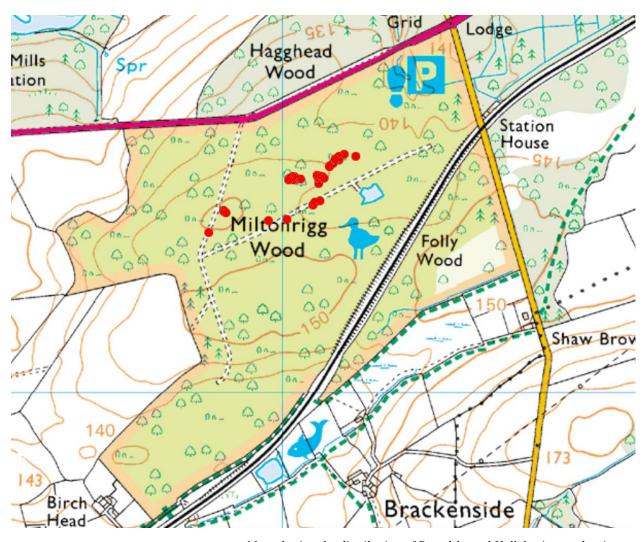
Bugle ©Marie Saag

Species that have probably arrived due to the forestry activities include Climbing Corydalis (*Ceratocapnos claviculata*) that grows in patches sprawling across the forest floor and *Juncus tenuis* (a rush originally from North America now frequent in Cumbria) found growing along the rougher paths.

Rhododendron ponticum remains a potential problem incomer though it is clear major attempts have been made to eradicate it. Within the car park the dumping of garden waste has resulted in the unexpected introduction of Blue Sow-thistle (*Cicerbita macrophylla*).

There is a pond near the centre of the wood. Here the flat floating leaves of the Broad-leaved pondweed (*Potamogeton natans*) can be seen. Algal growth in the pond includes *Spirogyra sp.* and *Nitella sp.* Narrow Buckler Fern (*Dryopteris carthusiana*), Star Sedge (*Carex echinata*) and White Sedge (*Carex canescens*) are to be found nearby the pond. This area could probably benefit from opening up to more light.

If you go along the main rides in the centre of the wood in June, July or August you will easily find Broad-leaved Helleborine (*Epipactis helleborine*) growing along the edges of the paths along with Common Spotted Orchid (*Dactylorhiza fuchsii*). The Common Spotted Orchid flowers first, around June, while the Broad-leaved Helleborine are at their best in early August. About 40 plants of the later were counted growing within 5m of the central circular main path. This seems to be their stronghold as they have not been found elsewhere in the wood. (Despite Early Purple Orchid appearing on the information board at the entrance to the wood it has not been found during this survey despite extensive searching. The information on the board is likely to have been the result of a mistaken identification as over many years neither the Carlisle Natural History Society nor local 'Flora of Cumbria' botanists have recorded it here.)

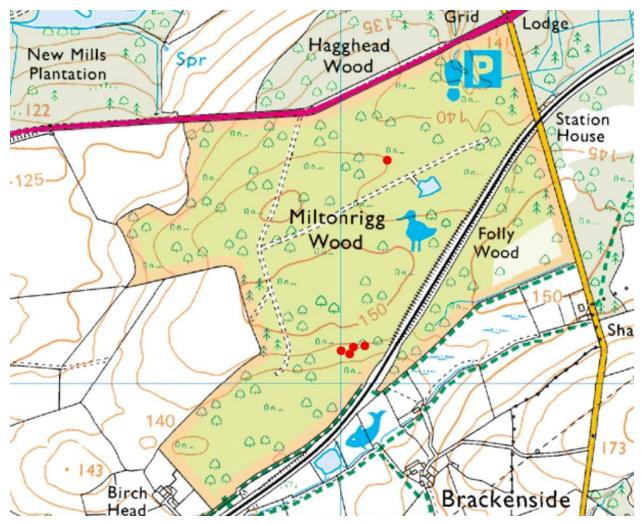


Map plotting the distribution of Broad-leaved Helleborine on the site

Bird's-nest Orchid (*Neottia nidis-avis*) is mainly to be found adjacent to the path that is parallel to the railway (see map). This plant lacks chlorophyll and has a brownish-yellow flower spike. It is parasitic on tree roots gaining its nutrients from its host plant. Eight separate patches were mapped in this area in 2014 each with between one and 6 plants. This is not the only place in the wood they are to be found but this is the stronghold. Geoff Naylor and David Clarke counted some 60 old spikes and c. 70 flowering spikes in May 1997, concluding that this might be the largest colony in the county (Clarke, 1997).



Bird's-nest Orchid ©Marie Saag



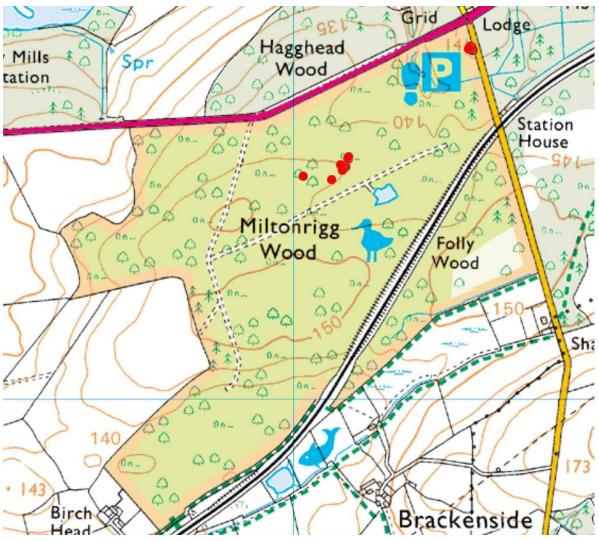
Map plotting the distribution of Bird's-nest Orchid on the site

Green-flowered Helleborine (*Epipactis phyllanthes*) is to be found along the road side from the car park entrance towards the level crossing and also within the car park edge. A few grow alongside the main rides with the Broad-leaved Helleborine.

Green-flowered Helleborine ©Steve Hewitt



Map plotting the distribution of Green-flowered Helleborine on the site



The car park area is also home to another rare plant, Common Wintergreen (*Pyrola minor*), where a small group of plants seems to be expanding. As yet they have not reached an age at which they have started to flower (one flowering stem was observed in 2015). The best examples of this plant are to be found growing on the bank side of the A69 just outside the wood. The area around the car park seems to be developing in interest every year!

Those who contributed records to the flowering plant list in this survey are: Helen Brown, Phill Brown, Dorothy Iveson, Jeremy Roberts, Marie Saag, Mary Smith.



Common Wintergreen on the verge of the A69 just outside the site boundary ©Steve Hewitt

References

Clarke, D. (1997) The Bird's-nest Orchid (*Neottia nidus-avis*) at Miltonrigg Wood, Brampton. *Carlisle Naturalist* **5**(2): 33.

Green-flowered Helleborine (*Epipactis phyllanthes* G.E. Sm.) in North Cumbria. *Carlisle Naturalist* **16**(2) (2008): 45-48.

Roberts, F.J. (2009) Two more sites in North Cumbria for Green-flowered Helleborine (*Epipactis phyllanthes*). *Carlisle Naturalist* **17**(2): 40-41.

Marie Saag

Insects

Prior to this survey, Cumbria Biodiversity Data Centre had records of 91 species of insect and 21 species of molluscs (slugs and snails). The insects comprised one bee (Hymenoptera), four true bugs (Hemiptera), 20 flies (Diptera), an earwig (Dermaptera), 18 beetles (Coleoptera) and 47 moths and butterflies (Lepidoptera). Additionally, Geoff Naylor ran a light trap for many years in the garden of his house just across the field from the southern fringe of the wood. In this time he made 4,848 records of 369 species of Lepidoptera in his garden, with only five more species recorded in the wood but not in his garden.

This survey has so far generated records of a total of 382 species of insect. This total is broken down into 103 species of beetle, one earwig, 134 flies, 39 true bugs, seven bees wasps and sawflies, one scorpionfly, four lacewings, seven dragonflies and 98 species of butterfly and moth. The butterflies and moths are dealt with separately in the following section, the remainder of this section deals with the non-Lepidopterous insect fauna of Miltonrigg Woods. Several members understook survey work on the insects of the site: Dorothy Iveson (hoverflies), John Parker (craneflies), John Read (beetles and bugs), Steven Routledge (water beetles).

Features of interest for insects

The oak woodland covering much of the site consits of largely even age mature trees providing fairly uniform high, closed canopy and correspondingly sparse ground flora. The sunnier situations along the rides and in any glades are more flower-rich. These areas are also richer in insects such as various species of weevils, click beetles and true bugs that feed on the foliage of different native species of trees and herbs. These herbivores also provide food for predatory insects such as ground beetles, some rove beetles and ladybirds. The nectar sources provided by the flowers also act as a honeypot, pulling in the adults of other insect species that develop in other habitats within the wood. A number of soldier beetles, bumblebees and hoverflies were observed nectaring in these situations. The local northwestern, bumblebee-mimicking hoverfly *Arctophila*



Arctophila superbiens ©Steve Hewitt

superbiens develops as a larva in waterlogged soil and feeds at flowers as an adult, showing a particular preference for the blue flowers of Devil's-bit Scabious.

The mature trees are now developing a rich supply of dead standing and fallen wood, providing the necessary developmental conditions for a number of specialised woodland insects such as the longhorn beetles *Pachytodes cerambyciformis* and *Rhagium mordax*, and the Rhinocerous Beetle (*Sinodendron cylindricum*) whose larvae bore through dead wood and feed on the decaying cellulose. The larvae of the Awl Fly (*Xylophagus ater*) were found under bark of fallen dead wood, where they are known to prey on longhorn beetle larvae. There are also several specialist saproxylic flies that develop variously in dead snags on living trees, under the bark of fallen dead wood or in the wet decay of roots in living trees and a number of these species were

recorded during the survey. Among those recorded is *Clusiodes ruficollis*, a fly that develops in white-rot wood and reaches the northern limit of its British range here; the nationally scarce cranefly *Ctenophora pectinicornis* requires dead standing timber. As the fallen wood decays further towards wood mould, a different community of species takes over including the Black Snail Beetle (*Silpha atrata*). Typical woodland species such as the little fly *Ocydromia glabricula* develop in leaf mould and decaying vegetable matter.

The site is rich in fungi - see section below - and there are a number of insects that utilise both dead-wood and micorhyzal fungi during their larval development. Although groups such as the fungus gnats (Mycetophilidae) were not surveyed during this project, the site can be expected to support a range of mycetophagous insects.



Rhagium mordax ©Steve Hewitt

The pond provides suitable habitat for a number of aquatic insects and Steven Routledge has found a rich community of water beetles here, including the nationally scarce *Stictonectes lepidus*. The marshy conditions around the pond and in the numerous ditches across the site provide conditions for wetland flies suh as long-headed flies (Dolichopodidae) and craneflies (Limoniidae).

The area of bog woodland at the south eastern margin of the site has a carpet of *Sphagnum* moss with some mature birch trees and is of particular interest for insects. It was interesting the see the bog hoverfly *Sericomyia lappona* here. This upland hoverfly has a widespread but scattered distribution in Britain. It prefers boggy areas and in the south is confined to the major bogs. The larvae are aquatic in shallow ponds and ditches or in boggy ground. The local ground bug *Lamproplax picea* is another *Sphagnum* bog specialist and was also found in this area. Scattered large mature birch trees in this area include a number of dead standing tees or trees with dead branches. Some of these dead birch exhibited the characteristic lines of flight holes formed by the nationally scarce bark beetle *Scolytus ratzeburgi*.

Rare and scarce species

Seven nationally rare or scarce species were recorded in the wood during this survey and these are presented in the table below. Accounts of individual species are based on Hyman & Parsons (1992), Falk (1991) and the species accounts in the Recorder 3 biological recording software.

Table 1. Nationally rare and scarce insects recorded during the survey			
Pterostichus cristatus	A ground beetle	Carabidae	Notable-B
Scolytus ratzeburgi	Birch Bark Beetle	Curculionidae	Notable-B
Stictonectes lepidus	A water beetle	Dytiscidae	Lower Risk (Near Threatened)
Helochares punctatus	a beetle	Hydrophilidae	Nationally Scarce
Triogma trisulcata	A cranefly	Cylindrotomidae	Rare
Campsicnemus pusillus	A long-headed fly	Dolichopodidae	Notable
Ctenophora pectinicornis	A cranefly	Tipulidae	Notable

Pterostichus cristatus

A 14-18mm long, dull black ground beetle usually living under stones or loose bark. Generally found in woodland in Cumbria, Durham, Northumberland and southern Scotland. Its distribution is centred on the River Tyne and it may have been accidentally introduced via docks on the Tyne in the 19th century.

Stictonectes lepidus

Small yellow and black water beetle of clear well oxygenated water. Most records are for base-poor streams and quarry ponds with a concentration of localities on the Millstone Grit in the Pennines. Scattered and very local.

Scolytus ratzeburgi

A reddish brown bark beetle living under bark of birch. All records were thought to be from central and northern Scotland until it was reported from Cumbria (Denton 1999, Hewitt 2003a & b). Associated with birch woodland containing large mature trees, the larvae develop in galleries just under the bark and emerging adults leave distinctive lines of flight holes. Usually found in dead or dying branches, though also in stumps, where they feed on dead wood. Adults have been recorded from June to August.

Threats include the loss of birch woodland through practices such as clear-felling or conversion to plantation forest. Habitat loss in the remaining areas through the felling of trees and the destruction or removal of standing and fallen dead wood for reasons such as forest hygiene, aesthetic tidiness, public safety or for use as fire wood.

Trees and both standing and fallen dead timber, especially with the bark attached, should be



flight holes of Scolytus ratzeburgi ©Steve Hewitt

retained. Gaps in the age structure of the tree population should be identified and regeneration encouraged to ensure the continuity of the appropriate habitats.

Helochares punctatus

A medium sized water beetle. Local species typically found in acidic pools on moorland. Widespread in suitably acidic conditions.

Ctenophora pectinicornis

A local species with records scattered in England, Wales and Scotland with a strong bias towards the south. Found in old broadleaved woodland with a requirement for dead wood and old or diseased trees.

Larvae develop in decaying wood, especially of beech, though other species such as oak and field maple are apparently also used. The larvae seem to use a range of sites including shattered ends of trunks and branches, and beneath bark, from ground level to some height. Adults recorded from April to July.

Threats include the destruction of old woodland through clearance for agriculture or afforestation, and the removal of old or diseased trees and dead wood from such sites. Management should aim to maximise the number of old trees and the amount of dead wood, ensuring continuity of these in the future.



Ctenophora pectinicornis ©Steve Hewitt

Triogma trisulcata

Recorded from seepage bog and upland streams in Southern Scotland, northern England and North Wales. The camouflaged larvae have been reared from the moss *Calliergonella cuspidata*, which grows on damp ground, and have also been found in mountain streams living amongst the stems of *Fontinalis*, to which they clung firmly by means of two strong caudal hooks. Adults have been recorded in May, a very short flight period being apparent.

Threats include drainage of bogs and seepages for afforestation, ditching of streams and excessive trampling of their banks. Sites supporting this species should be maintained in a natural and undisturbed state with a high and relatively stable water level in marshy areas to sustain the mossy breeding sites.

Campsicnemus pusillus

A small, 3mm long, long-headed fly, occurring on bogs and damp heaths. Larvae are probably semi-aquatic carnivores. There are scattered records of the species in England, Scotland and Wales. This is the first Cumbrian record of this Nationally Scarce species.

References

Denton, J. (1999) Rare and notable Coleoptera recorded in England, 1995-97. *The Coleopterist* **8**(1): 20-22.

Hyman, P.S. (revised Parsons, M.S.) (1992). A review of the scarce and thetened Coleoptera of Great Britain. Part 1. UK Nature Conservation: 3. Peterborough: Joint Nature Conservation Committee.

Falk, S. (1991) *A review of the scrce and threatened Diptera of Great Britain* UK Nature Conservation: 2. Peterborough: Joint Nature Conservation Committee.

Hewitt, S. (2003) The bark beetle *Scolytus ratzeburgi* Janson new to Cumberland (VC 70) with additional records from Westmorland (VC 69). *Carlisle Naturalist* **11**(1): 12-13.

Hewitt, S. (2003) The bark beetle *Scolytus ratzeburgi* Janson alive and well in Cumbria. *Carlisle Naturalist* **11**(2): 45-46.

Stephen Hewitt

Moths

Between 1980 and 2012, Geoff Naylor recorded 348 Lepidoptera taxa (332 moths and 16 butterflies) either in the garden of his house just across the field from the southern fringe of the wood or in the wood itself. Many of the species recorded by Geoff show preferences for woodland, moorland or heathland habitats and some of these are local or scarce in Cumbria, such as Lilac Beauty (*Apeira syringaria*). It seems highly probable that a proportion of the moth species recorded

at Geoff's garden light trap were 'drawn in' from the site and perhaps even some of the butterflies to the nectar sources available



view from Miltonrigg Wood towards Geoff Nayor's house in Milton ©Teresa Frost

there. Prior to this survey, the combined efforts of all other Lepidoptera recorders added no additional butterflies and 5 fewer than Geoff's solo effort. Macro moths recorded by others prior to this survey add only a single species, Gold Swift (*Hepialus hecta*). A further 15 micro moths (a group not focused on by Geoff) have been added by others, which gave an overall a total of 366 taxa before the 2013-14 CNHS survey.

Species lists and counts of moths were compiled from the contents of mercury vapour and actinic light traps / lights over white sheets deployed on four nights between 30th May and 13th September 2014 (1-4 lights per night). Lights were either attended (25th July only) or left in situ all night and emptied the following morning. For logistical ease, all lights were setup within 400 metres of the car park apart from a single trap placed in Folly Wood, near to the road abutting the site's Eastern edge. Additionally, casual observations of moths were recorded during daytime visits in both 2013 and 2014, and from a single night time walk on 6th November



CNHS moth trapping on 25 July 2014 ©Brett Carson

2014. All efforts to survey moths were focused within the monad NY5661, which encompasses the entire eastern half of the site, including the Folly Wood section. Butterflies were recorded more widely across the site (NY5561 and NY5661), all via casual observations during daytime visits.

A total of 178 Lepidoptera records were accumulated during the survey period, comprising 99 taxa (77 macro moths, 17 micro moths and 6 butterflies) (Table 1). The vast majority of species recorded were attracted to light on one or more of the four survey nights. All 6 butterfly species recorded came through casual observations and a further 3 moths that were not recorded at light; *Adela reaumurella*, *Udea olivalis* and Mottled Umber (*Erannis defoliaria*). Most species found

are common and widespread in the UK, occurring in a wide range of habitats, although there was a good number of woodland specialists represented, as was to be expected. Although no national or local rarities were recorded, members were impressed by the large numbers and variety of both Lepidoptera and non-Lepidoptera invertebrates attracted to light. The following account provides brief notes on a few of the most notable species recorded (number of individuals observed in brackets):

Welsh Wave (4+)

A rowan-feeding species, where it occurs in open woodlands and moorland. This geometrid has a predominately northern distribution in the UK and is widespread in Cumbria albeit not commonly recorded with usually <10 records submitted to CBDC annually.



Welsh Wave ©Liz Still

Golden-rod Pug (2)

A mainly northern and western species in the UK but can be found in a range of habitats. The second generation larvae feed on the flowers of Golden-rod and Common Ragwort. If this species is breeding in Miltonrigg Wood, Common Ragwort would be the most likely larval foodplant as Golden-rod was not found during the botanical surveys.

Scorched Wing (10)

A moth of deciduous woodland that was recorded in numbers during the survey. This indicates a high chance of a breeding population being supported by the site. The main larval foodplants are oaks and birches. The species is widespread in the UK but more local further North.

Satin Beauty (3)

A woodland specialist whose larvae feed on variety of coniferous trees. A local but possibly overlooked species in the county, this moth occurs here as a result of the former planting of conifers. Other species records that are dependent on the conifers include Dwarf and Larch Pugs, and Grey Pine and Spruce Carpets.

Slender Brindle (8+)

Another woodland specialist, this species occurred in numbers during the survey. The species is reliant on the understory woodland grasses and wood-rushes for breeding, which it seems very likely to be doing successfully at the site. Occurs locally commonly in Cumbria but becomes scarce further north in the UK.

80 Lepidoptera species now have a refreshed site record as a result of the CNHS survey, 78 of which had been recorded by Geoff previously. A further 17 species have been added to the overall site (+ Geoff Naylor's garden) list:

Micropterix aureatella Pandemis cinnamomeana Syndemis musculana Green Oak Tortrix (Tortrix viridana) Apotomis betuletana Epinotia brunnichana Eudonia lacustrata Agriphila straminella May Highflyer (*Hydriomena impluviata*) Golden-rod Pug (Eupithecia virgaureata) Dwarf Pug (Eupithecia tantillaria) Larch Pug (*Eupithecia lariciata*) Satin Beauty (*Deileptenia ribeata*) Engrailed (Ectropis crepuscularia) Grey Birch (Aethalura punctulata) Buff Footman (Eilema depressa) Least Black Arches (Nola confusalis)



Green Silver-lines ©Gary Hedges



Sallow Kitten ©Gary Hedges

The new species added could conceivably have gone undetected by Geoff Naylor and others, given the longevity of the habitat niches available and especially given the limited attention paid by recorders to micro moths in the past. Only Buff Footman (*Eilema depressa*) can be safely considered a recent coloniser, having only expanded into northern England in recent years. 285 Lepidopterans that had been previously recorded, were not re-found during the surveys. This shortfall must not be considered as an absence of certain species from the site. It is much more likely that greater survey effort would have refreshed many more records and a comprehensive current species list could easily exceed that compiled by Geoff (Table 3) and others if an extra focus was given to micro moths. It should also be noted that any list generated from adult moths recorded at light should not be assumed as a list of species breeding at the site. Many moths are highly mobile across the landscape.

Gary Hedges

Birds

Miltonrigg Wood is a mixed deciduous woodland with a conifer element. The undulating topography provide areas of wet and dry woodland including small areas of bog woodland. There are small ponds to provide open water. It is mainly mature woodland with a good age structure and abundant dead wood. There are younger areas of plantation woodland. The understorey is varied depending on the canopy and the rides and tracks provide additional woodland edge habitat.

The suite of breeding birds is very much as expected for the diversity of habitat. The most notable breeding bird is Wood Warbler and the single male heard in 2013 occupied the same general territory that Geoff Naylor and other recorders have noted. The presence of Redstart is also notable and indicates a good woodland age structure with an element of dead wood and nesting holes.

Table 2. BIRDS - 32 SPECIES SEEN, 26 CONFIRMED or PROBABLE BREEDING

Species Name	Common Name	Breeding Confirmed?
Anas platyrhynchos	Mallard	Possible
Phasianus colchicus	Pheasant	Probable
Buteo buteo	Buzzard	Yes
Scolopax rusticola	Woodcock	Possible
Columba palumbus	Woodpigeon	Yes
Dendrocopos major	Great Spotted Woodpecker	Yes
Phylloscopus sibilatrix	Wood Warbler	Yes
Phylloscopus collybita	Chiffchaff	Yes
Phylloscopus trochilus	Willow Warbler	Yes
Alauda arvensis	Skylark	Flying over
Troglodytes troglodytes	Wren	Yes
Erithacus rubecula	Robin	Yes
Phoenicurus phoenicurus	Redstart	Possible
Turdus merula	Blackbird	Yes
Turdus philomelos	Song Thrush	Yes
Turdus viscivorus	Mistle Thrush	Yes
Ficedula hypoleuca	Pied Flycatcher	Yes
Sylvia atricapilla	Blackcap	Yes
Sylvia borin	Garden Warbler	Yes
Regulus regulus	Goldcrest	Yes
Aegithalos caudatus	Long-tailed Tit	Yes
Cyanistes caeruleus	Blue Tit	Yes
Parus major	Great Tit	Yes
Periparus ater	Coal Tit	Yes
Sitta europaea	Nuthatch	Yes
Certhia familiaris	Treecreeper	Yes
Garrulus glandarius	Jay	Yes
Corvus monedula	Jackdaw	Yes
Corvus corone	Carrion Crow	Yes
Fringilla coelebs	Chaffinch	Yes
Carduelis carduelis	Goldfinch	Possible
Loxia curvirostra	Common Crossbill	

It is probable that Woodcock do breed here - see Geoff Naylor's record below for evidence of previous breeding. Notable omissions from the 2014 survey include Tawny Owl, Sparrow Hawk and Spotted Flycatcher, the latter was heard singing on a Society visit in 2009 (Saag 2009). Other possible species include Bullfinch and Lesser Redpoll although generally both seem to prefer young plantation woodland or dense scrub. During the autumn the wood should attract Fieldfare, Redwing and Brambling. Late evening visits would confirm Woodcock and Tawny Owl.

From Geoff's own records there are several of interest:

A breeding pair of **Tufted Duck** *Aythya fuligula* was confirmed by a nest find on 22nd May 1998. There are four records of **Goshawk** *Accipiter gentilis* in 1985, 1986, 2000 and 2006, but all are from NY5560 which is a km square to the west.

There is only one record of **Woodcock** *Scolopax rusticola* 24th April 1993 of a pair flushed by a dog with one carrying a chick with its feet.

Grasshopper Warbler *Locustella naevia* is recorded once too on 2nd May 2007.

Wood Warbler *Phylloscopus sibilatrix* was recorded by Geoff in 1997, 1998, 2003, 2006, 2007, 2009 and 2011. Most are of single singing males but two were recorded in 2011.

Pied Flycatcher *Ficedula hypoleuca* was only recorded once on 16th April 2011.

Nuthatch *Sitta europaea* was recorded in 1995 and 1995 and it would be interesting to know if they were actually first records of this bird, which has moved north rapidly over the last 20 years. **Marsh Tit** *Poecile palustris* was recorded in 2008, 2 birds and on 4th August 2012. It would be interesting to follow up this record and attempt to prove breeding in areas of suitable habitat. **Siskin** *Carduelis spinus* a single record from 1988. But it would be a surprise if they are not present every year.

Brambling Fringilla montifringilla a single record of ten in 13th October 2002.

Common Crossbill *Loxia curvirostra* several records of singles and small flocks from 1995, 96, 2001, 02, 05 and 2008.

Acknowledgements: Chris Hind, Robin Hodgson for records and Gary Hedges for Geoff's records from the CBDC database.

Reference

Saag, M. (2009) Field Meeting: Miltonrigg Wood, 23rd May 2009, Leader: Geoff Naylor. *Carlisle Naturalist.* **17**(2): 27-28.

Frank Mawby

Sources & References

- Anonymous (2011) Miltonrigg Woods Management Plan 2011-2016. Woodland Trust. http://www.woodlandtrust.org.uk/woodfile/571/management-plan.pdf?cb=ff09dc316a174a49bae5e 37574618bd8.
- Clarke, D. (1993) Field Meeting: Fungus Foray, Miltonrigg Wood, 3rd October 1993. Leader: Geoff Naylor. *Carlisle Naturalist*. **2**(1): 5.
- Clarke, D. (1997) The Bird's-nest Orchid (*Neottia nidus-avis*) at Miltonrigg Wood, Brampton. *Carlisle Naturalist* **5**(2): 33.
- Corner, R.W.M. (2003) *Dicranum tauricum* Sapjegin: a moss new to Cumberland (VC 70). *Carlisle Naturalist*. **11**(1): 7-8.
- Denton, J. (1999) Rare and notable Coleoptera recorded in England, 1995-97. *The Coleopterist* **8**(1). 20-22.
- Hyman, P.S. (revised Parsons, M.S.) (1992). *A review of the scarce and threatened Coleoptera of Great Britain*. Part 1. UK Nature Conservation: 3. Peterborough: Joint Nature Conservation Committee.
- Falk, S. (1991) *A review of the scree and threatened Diptera of Great Britain* UK Nature Conservation: 2. Peterborough: Joint Nature Conservation Committee.
- Hewitt, S. (2003) The bark beetle *Scolytus ratzeburgi* Janson new to Cumberland (VC 70) with additional records from Westmorland (VC 69). *Carlisle Naturalist* **11**(1): 12-13.
- Hewitt, S. (2003) The bark beetle *Scolytus ratzeburgi* Janson alive and well in Cumbria. *Carlisle Naturalist* **11**(2): 45-46.
- Mawby, F. (2014) Field Meeting: Miltonrigg Wood Moth Night. Leaders: Mike Clementson and Liz Still. *Lakeland Naturalist* **2**(2): 47-48.
- Naylor, G. (2007) Dewick's Plusia (*Macdunnoughia confusa* (Steph.)) in a garden moth trap. *Carlisle Naturalist* **15** (2): 31-32.
- Naylor, G. (2008) Broad-leaved Helleborine (*Epipactis phyllanthes* (l.) Crantzz) in Miltonrigg Wood. *Carlisle Naturalist* **16** (2): 44-45.
- Roberts, J. (2012) High Stand and Miltonrigg Woods. Field Meeting: 4th August 2012. Leader: Jeremy Roberts. *Carlisle Naturalist*. 20(2): 33-35
- Saag, M. (2009) Field Meeting: Miltonrigg Wood, 23rd May 2009. Leader: Geoff Naylor. *Carlisle Naturalist*. **17**(2): 27-28.
- Shreeve, A. (1994) Plant Report: 1993. Birds in Cumbria 1993: 82-86.

Geoff Naylor 1939 - 2012

Born in Knaresborough in 1939 Geoff Naylor grew up in Alwoodley, Leeds. From an early age, he developed a keen interest in all aspects of nature. He obsessively listed everything he saw and accumulated a valuable archive of his natural history observations. Gaining entry to Leeds University, he originally studied physics but then changed to geology and obtained a BSc with honours. Geoff went on to teach geology and geography at Allerton Grange School. In 1968, he took up a teaching post at Milton Hall School in Brampton. When the school closed, Geoff taught at a secondary school in Sunderland for three years, commuting weekly, then took early retirement and moved to Milton where he lived until his death.

Retirement gave Geoff the opportunity to spend more time bird-watching and studying the local flora and fauna. At this time he became actively involved in Carlisle Natural History Society and quickly became a leading member, serving on the Society's Council from 1993. His extraordinary breadth and depth of natural history knowledge and experience made him the ideal 'Recorder' for the Society, in which capacity he performed diligently for many years. He was well known to members through his inimitable presentation of recent records at indoor meetings, his regular publications in the *Carlisle Naturalist* and his frequent leading of field trips, including several to Miltonrigg Wood.

Geoff was a remarkable all round naturalist and made significant contributions to several fields of Cumbrian natural history. His expertise ranged across birds, wildflowers, mushrooms and toadstools, insects and even slugs and snails.

A life-long birder, he was a founder member of Cumbria Bird Club in 1989, and single-handedly computer databased all the 70,000 records from which the maps were generated for *The Breeding Birds of Cumbria* atlas published by the Club in 2002. Geoff was also one of the longest serving volunteers in the national Wetland Birds Survey operated by the British Trust for Ornithology, having begun in his home county of Yorkshire in 1958 and continued at Talkin and Tindale Tarns after his arrival in Cumbria in 1968. Although, sadly, his eyesight began to fail latterly affecting his bird watching it was typical of his character that he uncomplainingly carried on – continuing to recognise all the birds by their calls.

Geoff was also the county butterfly recorder, writing the annual report of that group for the Cumbria Naturalists' Union *Birds & wildlife in Cumbria* publication. He ran a moth trap in his garden for many years, carefully listing all the species and numbers found throughout the seasons and over the years.

Geoff was a regular volunteer at Tullie House Museum for over 20 years, becoming a key member of the natural sciences team there. In that time he did an immense amount of invaluable work on the records of the collections and in particular the Cumbria wildlife records database now operated by Cumbria Biodiversity Data Centre. In this time he personally typed 231,558 records of individual wildlife sightings into the computer database. He was also most helpful with natural history events and activities both at Tullie House and with Carlisle Natural History Society, where his experience as a former teacher was a great asset.

Geoff died at home on 20th August 2012 whilst working at his desk writing up his natural history records. He had been volunteering in Tullie House Museum as usual just a couple of days before his death. His archives and books have been given to Carlisle Natural History Society and Tullie House Museum.

Taken from an obituary that first appeared in Lakeland Naturalist I(2) 2012.

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Appendix 1. List of species recorded during the 2013/14 survey

Species Name	Common Name	Family	National Status
FUNGI			
Crocicreas coronatum	Crocicreas coronatum	Helotiaceae	
Ascocoryne sarcoides	Purple Jellydisc	Helotiales	
Mitrula paludosa	Bog Beacon	Helotiales	
Bulgaria inquinans	Black Bulgar	Bulgariaceae	
Rhytisma acerinum	Tar-Spot Fungus	Rhytismataceae	
Helvella crispa	White Saddle	Helvellaceae	
Sarcoscypha austriaca	Scarlet Elfcup	Sarcoscyphaceae	
Nectria cinnabarina	Coral-Spot Fungus	Nectriaceae	
Biscogniauxia nummularia	Beech Tarcrust	Xylariaceae	
Hypoxylon fragiforme	Beech Woodwart	Xylariaceae	
Xylaria hypoxylon	Candle-Snuff Fungus	Xylariaceae	
Amanita fulva	Tawny Grisette	Amanitaceae	
Cortinarius anomalus	Variable Webcap	Cortinariaceae	
Cortinarius hemitrichus	Frosty Webcap	Cortinariaceae	
Entoloma cetratum	Honey Pinkgill	Entolomataceae	
Entoloma rhodopolium	Wood Pinkgill	Entolomataceae	
Laccaria amethystina	Amethyst Deceiver	Hydnangiaceae	
Laccaria laccata	Deceiver	Hydnangiaceae	
Ampulloclitocybe clavipes	Club Foot	Hygrophoraceae	
Crepidotus cesatii	Crepidotus cesatii	Inocybaceae	
Crepidotus variabilis	Variable Oysterling	Inocybaceae	
Lyophyllum connatum	White Domecap	Lyophyllaceae	
Marasmius androsaceus	Horsehair Parachute	Marasmiaceae	
Mycena arcangeliana	Angel's Bonnet	Mycenaceae	
Mycena galericulata	Common Bonnet	Mycenaceae	
Mycena galopus var. candida	White Milking Bonnet	Mycenaceae	

Species Name	Common Name	Family	National Status
Mycena hiemalis	Mycena hiemalis	Mycenaceae	
Mycena metata	Mycena metata	Mycenaceae	
Armillaria mellea	Honey Fungus	Physalacriaceae	
Pluteus cervinus	Deer Shield	Pluteaceae	
Coprinellus micaceus	Glistening Ink-Cap	Psathyrellaceae	
Psathyrella corrugis	Red Edge Brittlestem	Psathyrellaceae	
Galerina marginata	Funeral Bell	Strophariaceae	
Gymnopilus penetrans	Common Rustgill	Strophariaceae	
Hypholoma fasciculare var. fasciculare	Sulphur Tuft	Strophariaceae	
Hypholoma marginatum	Snakeskin Brownie	Strophariaceae	
Clitocybe ditopa	Mealy Frosted Funnel	Tricholomataceae	
Clitocybe fragrans	Fragrant Funnel	Tricholomataceae	
Clitocybe nebularis	Clouded Funnel	Tricholomataceae	
Clitocybe phyllophila	Frosty Funnel	Tricholomataceae	
Collybia butyracea var. butyracea	Greasy Tough-Shank	Tricholomataceae	
Collybia confluens	Clustered Toughshank	Tricholomataceae	
Lepista nuda	Wood Blewit	Tricholomataceae	
Tricholoma fulvum	Birch Knight	Tricholomataceae	
Exidia recisa	Exidia recisa	Auriculariaceae	
Pseudohydnum gelatinosum	Jelly Tooth	Auriculariales	
Boletus chrysenteron	Red Cracking Bolete	Boletaceae	
Leccinum scabrum	Brown Birch Bolete	Boletaceae	
Hygrophoropsis aurantiaca	False Chanterelle	Hygrophoropsidaceae	
Paxillus involutus	Brown Rollrim	Paxillaceae	
Scleroderma citrinum	Common Earthball	Sclerodermataceae	
Scleroderma verrucosum	Scaly Earthball	Sclerodermataceae	
Clavulina cinerea forma cinerea	Grey Coral	Clavulinaceae	
Hydnum repandum	Wood Hedgehog	Hydnaceae	
Schizopora paradoxa	Split Porecrust	Schizoporaceae	

Species Name	Common Name	Family	National Status
Phallus impudicus var. impudicus	Stinkhorn	Phallaceae	
Daedalea quercina	Oak Mazegill	Fomitopsidaceae	
Laetiporus sulphureus	Chicken of the Woods	Fomitopsidaceae	
Piptoporus betulinus	Birch Polypore	Fomitopsidaceae	
Fomes fomentarius	Tinder Bracket	Polyporaceae	
Lactarius aurantiacus	Orange Milkcap	Russulaceae	
Lactarius quietus	Oak Milk-Cap	Russulaceae	
Lactarius subumbonatus	Lactarius subumbonatus	Russulaceae	
Lactarius tabidus	Birch Milkcap	Russulaceae	
Russula atropurpurea	Purple Brittlegill	Russulaceae	
Russula betularum	Birch Brittlegill	Russulaceae	
Russula ochroleuca	Ochre Brittlegill	Russulaceae	
Stereum hirsutum	Hairy Curtain Crust	Stereaceae	
Stereum rugosum	Bleeding Broadleaf Crust	Stereaceae	
Calocera viscosa	Yellow Stagshorn	Dacrymycetaceae	
SLIME MOULDS			
Lycogala epidendrum	Wolf's Milk	Reticulariaceae	
Fuligo septic var. flava	Scrambled Egg Slime	Phycaraceae	
VASCULAR PLANTS			
Phyllitis scolopendrium	Hart's-tongue	Aspleniaceae	
Athyrium filix-femina	Lady-fern	Athyriaceae	
Blechnum spicant	Hard-fern	Blechnaceae	
Pteridium aquilinum	Bracken	Dennstaedtiaceae	
Dryopteris affinis	Scaly Male-fern	Dryopteridaceae	
Dryopteris carthusiana	Narrow Buckler-fern	Dryopteridaceae	
Dryopteris dilatata	Broad Buckler-fern	Dryopteridaceae	
Dryopteris filix-mas	Male-fern	Dryopteridaceae	

Species Name	Common Name	Family	National Status
Oreopteris limbosperma	Lemon-scented Fern	Thelypteridaceae	
Equisetum arvense	Field Horsetail	Equisetaceae	
Equisetum fluviatile	Water Horsetail	Equisetaceae	
Equisetum sylvaticum	Wood Horsetail	Equisetaceae	
Lemna minor	Common Duckweed	Araceae	
Potamogeton natans	Broad-leaved Pondweed	Potamogetonaceae	
Aegopodium podagraria	Ground-elder	Apiaceae	
Aethusa cynapium	Fool's Parsley	Apiaceae	
Angelica sylvestris	Wild Angelica	Apiaceae	
Anthriscus sylvestris	Cow Parsley	Apiaceae	
Conopodium majus	Pignut	Apiaceae	
Heracleum sphondylium	Hogweed	Apiaceae	
Sanicula europaea	Sanicle	Apiaceae	
Torilis japonica	Upright Hedge-parsley	Apiaceae	
Hedera helix	lvy	Araliaceae	
Ilex aquifolium	Holly	Aquifoliaceae	
Hyacinthoides non-scripta	Bluebell	Asparagaceae	
Dactylorhiza fuchsii	Common Spotted-orchid	Orchidaceae	
Epipactis helleborine	Broad-leaved Helleborine	Orchidaceae	
Epipactis phyllanthes	Green-flowered Helleborine	Orchidaceae	Nationally scarce
Neottia nidus-avis	Bird's-nest Orchid	Orchidaceae	Near Threatened
Arctium minus	Lesser Burdock	Asteraceae	
Bellis perennis	Daisy	Asteraceae	
Centaurea nigra	Common Knapweed	Asteraceae	
Centaurea scabiosa	Greater Knapweed	Asteraceae	
Cicerbita macrophylla	Common Blue-sow-thistle	Asteraceae	
Cirsium arvense	Creeping Thistle	Asteraceae	
Cirsium palustre	Marsh Thistle	Asteraceae	
Cirsium vulgare	Spear Thistle	Asteraceae	

Species Name	Common Name	Family	National Status
Lapsana communis	Nipplewort	Asteraceae	
Matricaria discoidea	Pineappleweed	Asteraceae	
Senecio jacobaea	Common Ragwort	Asteraceae	
Sonchus asper	Prickly Sow-thistle	Asteraceae	
Taraxacum	Dandelion Agg.	Asteraceae	
Tussilago farfara	Colt's-foot	Asteraceae	
Campanula rotundifolia	Harebell	Campanulaceae	
Alliaria petiolata	Garlic Mustard	Brassicaceae	
Cardamine flexuosa	Wavy Bitter-cress	Brassicaceae	
Cardamine pratensis	Cuckooflower	Brassicaceae	
Cerastium fontanum	Common Mouse-ear	Caryophyllaceae	
Moehringia trinervia	Three-nerved Sandwort	Caryophyllaceae	
Silene dioica	Red Campion	Caryophyllaceae	
Stellaria alsine	Bog Stitchwort	Caryophyllaceae	
Stellaria graminea	Lesser Stitchwort	Caryophyllaceae	
Stellaria holostea	Greater Stitchwort	Caryophyllaceae	
Stellaria media	Common Chickweed	Caryophyllaceae	
Persicaria hydropiper	Water-pepper	Polygonaceae	
Rumex acetosa	Common Sorrel	Polygonaceae	
Rumex acetosella	Sheep's Sorrel	Polygonaceae	
Rumex obtusifolius	Broad-leaved Dock	Polygonaceae	
Rumex sanguineus	Wood Dock	Polygonaceae	
Sambucus nigra	Elder	Adoxaceae	
Lonicera periclymenum	Honeysuckle	Caprifoliaceae	
Succisa pratensis	Devil's-bit Scabious	Caprifoliaceae	
Valeriana officinalis	Common Valerian	Caprifoliaceae	
Calluna vulgaris	Heather	Ericaceae	
Pyrola minor	Common Wintergreen	Ericaceae	
Rhododendron ponticum	Rhododendron	Ericaceae	

Species Name	Common Name	Family	National Status
Vaccinium myrtillus	Bilberry	Ericaceae	
Lysimachia nemorum	Yellow Pimpernel	Primulaceae	
Lysimachia nummularia	Creeping-Jenny	Primulaceae	
Primula vulgaris	Primrose	Primulaceae	
Cytisus scoparius	Broom	Fabaceae	
Lathyrus pratensis	Meadow Vetchling	Fabaceae	
Lotus pedunculatus	Greater Bird's-foot-trefoil	Fabaceae	
Medicago lupulina	Black Medick	Fabaceae	
Trifolium medium	Zigzag Clover	Fabaceae	
Trifolium repens	White Clover	Fabaceae	
Ulex gallii	Western Gorse	Fabaceae	
Vicia cracca	Tufted Vetch	Fabaceae	
Vicia sepium	Bush Vetch	Fabaceae	
Alnus glutinosa	Alder	Betulaceae	
Betula pendula	Silver Birch	Betulaceae	
Betula pubescens	Downy Birch	Betulaceae	
Corylus avellana	Hazel	Betulaceae	
Castanea sativa	Sweet Chestnut	Fagaceae	
Fagus sylvatica	Beech	Fagaceae	
Quercus petraea	Sessile Oak	Fagaceae	
Quercus petraea x robur = Q. x rosacea	Hybrid Oak	Fagaceae	
Cruciata laevipes	Crosswort	Rubiaceae	
Galium aparine	Cleavers	Rubiaceae	
Galium mollugo subsp. erectum	Upright Hedge Bedstraw	Rubiaceae	
Galium palustre	Marsh-bedstraw	Rubiaceae	
Galium saxatile	Heath Bedstraw	Rubiaceae	
Geranium robertianum	Herb-Robert	Geraniaceae	
Ajuga reptans	Bugle	Lamiaceae	
Galeopsis tetrahit	Common Hemp-nettle	Lamiaceae	

Species Name	Common Name	Family	National Status
Lamiastrum galeobdolon	Yellow Archangel		
Mentha arvensis	Corn Mint	Lamiaceae	
Prunella vulgaris	Selfheal	Lamiaceae	
Stachys palustris	Marsh Woundwort	Lamiaceae	
Stachys sylvatica	Hedge Woundwort	Lamiaceae	
Teucrium scorodonia	Wood Sage	Lamiaceae	
Fraxinus excelsior	Ash	Oleaceae	
Odontites vernus	Red Bartsia	Orobanchaceae	
Callitriche stagnalis	Common Water-starwort	Plantaginaceae	
Digitalis purpurea	Foxglove	Plantaginaceae	
Plantago lanceolata	Ribwort Plantain	Plantaginaceae	
Plantago major	Greater Plantain	Plantaginaceae	
Veronica beccabunga	Brooklime	Plantaginaceae	
Veronica chamaedrys	Germander Speedwell	Plantaginaceae	
Veronica serpyllifolia	Thyme-leaved Speedwell	Plantaginaceae	
Scrophularia nodosa	Common Figwort	Scrophulariaceae	
Verbascum thapsus	Great Mullein	Scrophulariaceae	
Mercurialis perennis	Dog's Mercury	Euphorbiaceae	
Hypericum pulchrum	Slender St John's-wort	Hypericaceae	
Salix caprea	Goat Willow	Salicaceae	
Salix cinerea subsp. oleifolia	Rusty Willow	Salicaceae	
Viola palustris	Marsh Violet	Violaceae	
Viola riviniana	Common Dog-violet	Violaceae	
Chamerion angustifolium	Rosebay Willowherb	Onagraceae	
Circaea lutetiana	Enchanter's-nightshade	Onagraceae	
Epilobium ciliatum	American Willowherb	Onagraceae	
Epilobium hirsutum	Great Willowherb	Onagraceae	
Epilobium montanum	Broad-leaved Willowherb	Onagraceae	
Epilobium obscurum	Short-fruited Willowherb	Onagraceae	

Species Name	Common Name	Family	National Status
Epilobium palustre	Marsh Willowherb	Onagraceae	
Oxalis acetosella	Wood-sorrel	Oxalidaceae	
Carex curta	White Sedge	Cyperaceae	
Carex echinata	Star Sedge	Cyperaceae	
Carex flacca	Glaucous Sedge	Cyperaceae	
Carex pilulifera	Pill Sedge	Cyperaceae	
Carex remota	Remote Sedge	Cyperaceae	
Carex sylvatica	Wood-sedge	Cyperaceae	
Eleocharis palustris	Common Spike-rush	Cyperaceae	
Juncus articulatus	Jointed Rush	Juncaceae	
Juncus bufonius	Toad Rush	Juncaceae	
Juncus conglomeratus	Compact Rush	Juncaceae	
Juncus effusus	Soft-rush	Juncaceae	
Juncus tenuis	Slender Rush	Juncaceae	
Luzula multiflora	Heath Wood-rush	Juncaceae	
Luzula pilosa	Hairy Wood-rush	Juncaceae	
Luzula sylvatica	Great Wood-rush	Juncaceae	
Agrostis capillaris	Common Bent	Poaceae	
Agrostis stolonifera	Creeping Bent	Poaceae	
Alopecurus geniculatus	Marsh Foxtail	Poaceae	
Anthoxanthum odoratum	Sweet Vernal-grass	Poaceae	
Arrhenatherum elatius	False Oat-grass	Poaceae	
Bromopsis ramosa	Hairy-brome	Poaceae	
Cynosurus cristatus	Crested Dog's-tail	Poaceae	
Dactylis glomerata	Cock's-foot	Poaceae	
Deschampsia cespitosa	Tufted Hair-Grass	Poaceae	
Deschampsia flexuosa	Wavy Hair-grass	Poaceae	
Festuca gigantea	Giant Fescue	Poaceae	
Festuca rubra	Red Fescue	Poaceae	

Species Name	Common Name	Family	National Status
Glyceria fluitans	Floating Sweet-grass	Poaceae	
Holcus lanatus	Yorkshire-fog	Poaceae	
Holcus mollis	Creeping Soft-grass	Poaceae	
Phalaris arundinacea	Reed Canary-grass	Poaceae	
Phleum pratense	Timothy	Poaceae	
Poa annua	Annual Meadow-grass	Poaceae	
Poa trivialis	Rough Meadow-grass	Poaceae	
Typha latifolia	Bulrush	Typhaceae	
Ceratocapnos claviculata	Climbing Corydalis	Papaveraceae	
Caltha palustris	Marsh-marigold	Ranunculaceae	
Ranunculus acris	Meadow Buttercup	Ranunculaceae	
Ranunculus ficaria	Lesser Celandine	Ranunculaceae	
Ranunculus flammula	Lesser Spearwort	Ranunculaceae	
Ranunculus repens	Creeping Buttercup	Ranunculaceae	
Alchemilla glabra	Smooth Lady's-mantle	Rosaceae	
Alchemilla mollis	Garden Lady's-mantle	Rosaceae	
Crataegus monogyna	Hawthorn	Rosaceae	
Filipendula ulmaria	Meadowsweet	Rosaceae	
Fragaria vesca	Wild Strawberry	Rosaceae	
Geum rivale	Water Avens	Rosaceae	
Geum urbanum	Wood Avens	Rosaceae	
Malus pumila	Apple	Rosaceae	
Potentilla anserina	Silverweed	Rosaceae	
Potentilla erecta	Tormentil	Rosaceae	
Potentilla sterilis	Barren Strawberry	Rosaceae	
Prunus avium	Wild Cherry	Rosaceae	
Prunus padus	Bird Cherry	Rosaceae	
Rosa canina	Dog-rose	Rosaceae	
Rubus fruticosus agg.	Bramble	Rosaceae	

Species Name	Common Name	Family	National Status
Rubus idaeus	Raspberry	Rosaceae	
Sorbus aucuparia	Rowan	Rosaceae	
Ulmus glabra	Wych Elm	Ulmaceae	
Urtica dioica	Common Nettle	Urticaceae	
Acer platanoides	Norway Maple	Sapindaceae	
Acer pseudoplatanus	Sycamore	Sapindaceae	
Aesculus hippocastanum	Horse-chestnut	Sapindaceae	
Ribes uva-crispa	Gooseberry	Grossulariaceae	
Chrysosplenium oppositifolium	Opposite-leaved Golden-saxifrage	Saxifragaceae	
Myosotis arvensis	Field Forget-me-not	Boraginaceae	
Myosotis scorpioides	Water Forget-me-not	Boraginaceae	
Myosotis sylvatica	Wood Forget-me-not	Boraginaceae	
Larix kaempferi	Japanese Larch	Pinaceae	
Picea abies	Norway Spruce	Pinaceae	
Picea sitchensis	Sitka Spruce	Pinaceae	
Pinus sylvestris	Scots Pine	Pinaceae	Nationally scarce
Taxus baccata	Yew	Taxaceae	
TICKS (IXODIDA)			
Ixodes ricinus	Sheep Tick	Ixodidae	
SPIDERS (ARACHNIDA)			
Bathyphantes nigrinus	a spider	Linyphiidae	
Bolyphantes luteolus	a spider	Linyphiidae	
Ceratinella brevipes	a spider	Linyphiidae	
Dicymbium tibiale	a spider	Linyphiidae	
Diplocephalus latifrons	a spider	Linyphiidae	
Diplocephalus picinus	a spider	Linyphiidae	
Drapetisca socialis	a spider	Linyphiidae	

Species Name	Common Name	Family	National Status
Linyphia triangularis	a spider	Linyphiidae	
Microneta viaria	a spider	Linyphiidae	
Neriene peltata	a spider	Linyphiidae	
Palliduphantes pallidus	a spider	Linyphiidae	
Tenuiphantes cristatus	a spider	Linyphiidae	
Tenuiphantes mengei	a spider	Linyphiidae	
Tenuiphantes tenebricola	a spider	Linyphiidae	
Tenuiphantes zimmermanni	a spider	Linyphiidae	
HARVESTMEN (OPILIONES)			
Nemastoma bimaculatum	Nemastoma bimaculatum	Nemastomatidae	
WOODLICE (ISOPODA) Asellus aquaticus	Water Louse	Asellidae	
Oniscus asellus	a woodlouse	Oniscidae	
Porcellio scaber	a woodlouse	Porcellionidae	
Trichoniscus pusillus	a woodlouse	Trichoniscidae	
BEETLES (COLEOPTERA)		•	
Aphodius Iuridus	a beetle	Aphodiidae	
Cantharis pellucida	a soldier beetle	Cantharidae	
Rhagonycha lignosa	a soldier beetle	Cantharidae	
Rhagonycha limbata	a soldier beetle	Cantharidae	
Abax parallelepipedus	a ground beetle	Carabidae	
Amara plebeja	a ground beetle	Carabidae	
Nebria brevicollis	a ground beetle	Carabidae	
Patrobus atrorufus	a ground beetle	Carabidae	
Pterostichus cristatus	a ground beetle	Carabidae	Nationally Scarce
Pterostichus madidus	a ground beetle	Carabidae	
Pachytodes cerambyciformis	a longhorn beetle	Cerambycidae	

Species Name	Common Name	Family	National Status
Rhagium mordax	a longhorn beetle	Cerambycidae	
Gastrophysa viridula	a leaf beetle	Chrysomelidae	
Oulema obscura	a leaf beetle	Chrysomelidae	
Plateumaris discolor	a leaf beetle	Chrysomelidae	
Adalia decempunctata	10-spot Ladybird	Coccinellidae	
Calvia quattuordecimguttata	Cream-spot Ladybird	Coccinellidae	
Coccinella septempunctata	7-spot Ladybird	Coccinellidae	
Propylea quattuordecimpunctata	14-spot Ladybird	Coccinellidae	
Archarius pyrrhoceras	a weevil	Curculionidae	
Barypeithes araneiformis	Spider Weevil	Curculionidae	
Ceutorhynchus cochleariae	a weevil	Curculionidae	
Ceutorhynchus typhae	a weevil	Curculionidae	
Hypera plantaginis	a weevil	Curculionidae	
Leiosoma deflexum	a weevil	Curculionidae	
Nedyus quadrimaculatus	Small Nettle Weevil	Curculionidae	
Orchestes quercus	a weevil	Curculionidae	
Otiorhynchus singularis	Clay-coloured Weevil	Curculionidae	
Parethelcus pollinarius	a weevil	Curculionidae	
Pelenomus quadrituberculatus	a weevil	Curculionidae	
Phyllobius argentatus	Silver-Green Leaf Weevil	Curculionidae	
Phyllobius glaucus	a weevil	Curculionidae	
Phyllobius pyri	Common Leaf Weevil	Curculionidae	
Polydrusus pterygomalis	a weevil	Curculionidae	
Scolytus ratzeburgi	Birch Bark Beetle	Curculionidae	Nationally Scarce
Strophosoma melanogrammum	Nut Leaf Weevil	Curculionidae	
Agabus sturmii	a water beetle	Dytiscidae	
Agabus bipustulatus	a water beetle	Dytiscidae	
Agabus nebulosus	a water beetle	Dytiscidae	
Colymbetes fuscus	a water beetle	Dytiscidae	

Species Name	Common Name	Family	National Status
Hydroporus erythrocephalus	a water beetle	Dytiscidae	
Hydroporus gyllenhalii	a water beetle	Dytiscidae	
Hydroporus incognitus	a water beetle	Dytiscidae	
Hydroporus memnonius	a water beetle	Dytiscidae	
Hydroporus nigrita	a water beetle	Dytiscidae	
Hydroporus palustris	a water beetle	Dytiscidae	
Hydroporus planus	a water beetle	Dytiscidae	
Hydroporus pubescens	a water beetle	Dytiscidae	
Hydroporus tristis	a water beetle	Dytiscidae	
Hygrotus impressopunctatus	a water beetle	Dytiscidae	
Hygrotus inaequalis	a water beetle	Dytiscidae	
Hyphydrus ovatus	a water beetle	Dytiscidae	
Ilybius ater	a water beetle	Dytiscidae	
Ilybius fuliginosus	a water beetle	Dytiscidae	
Ilybius montanus	a water beetle	Dytiscidae	
Rhantus exsoletus	a water beetle	Dytiscidae	
Stictonectes lepidus	a water beetle	Dytiscidae	Near Threatened
Agriotes pallidulus	a click beetle	Elateridae	
Athous haemorrhoidalis	a click beetle	Elateridae	
Dalopius marginatus	a click beetle	Elateridae	
Gyrinus substriatus	a beetle	Gyrinidae	
Haliplus ruficollis	a beetle	Haliplidae	
Haliplus fulvus	a beetle	Haliplidae	
Anacaena globulus	a beetle	Hydrophilidae	
Anacaena lutescens	a beetle	Hydrophilidae	
Coelostoma orbiculare	a beetle	Hydrophilidae	
Enochrus affinis	a beetle	Hydrophilidae	
Helochares punctatus	a beetle	Hydrophilidae	Nationally Scarce
Helophorus brevipalpis	a beetle	Hydrophilidae	

Species Name	Common Name	Family	National Status
Helophorus aequalis	a beetle	Hydrophilidae	
Helophorus grandis	a beetle	Hydrophilidae	
Hydrobius fuscipes	a beetle	Hydrophilidae	
Megasternum concinnum	a beetle	Hydrophilidae	
Amphicyllis globus	a beetle	Leiodidae	
Anisotoma humeralis	a beetle	Leiodidae	
Sinodendron cylindricum	Rhinoceros Beetle	Lucanidae	
Melolontha melolontha	Common Cockchafer	Melolonthidae	
Meligethes aeneus	Common Pollen Beetle	Nitidulidae	
Cyphon coarctatus	a beetle	Scirtidae	
Cyphon padi	a beetle	Scirtidae	
Cyphon palustris	a beetle	Scirtidae	
Cyphon variabilis	a beetle	Scirtidae	
Neuraphes elongatulus	a beetle	Scydmaenidae	
Stenichnus collaris	a beetle	Scydmaenidae	
Silpha atrata	Black Snail Beetle	Silphidae	
Atrecus affinis	a rove beetle	Staphylinidae	
Bryaxis bulbifer	a rove beetle	Staphylinidae	
Bryaxis curtisii	a rove beetle	Staphylinidae	
Bryaxis puncticollis	a rove beetle	Staphylinidae	
Dropephylla ioptera	a rove beetle	Staphylinidae	
Gabrius splendidulus	a rove beetle	Staphylinidae	
Lathrobium brunnipes	a rove beetle	Staphylinidae	
Lesteva sicula	a rove beetle	Staphylinidae	
Othius subuliformis	a rove beetle	Staphylinidae	
Philonthus cognatus	a rove beetle	Staphylinidae	
Philonthus decorus	a rove beetle	Staphylinidae	
Quedius fuliginosus	a rove beetle	Staphylinidae	
Stenus fulvicornis	a rove beetle	Staphylinidae	

Species Name	Common Name	Family	National Status
Stenus tarsalis	a rove beetle	Staphylinidae	
Stenus nitidiusculus	a rove beetle	Staphylinidae	
Stenus juno	a rove beetle	Staphylinidae	
Syntomium aeneum	a rove beetle	Staphylinidae	
Trixagus dermestoides	a beetle	Throscidae	
FARMACC (DERMARTERA)			
EARWIGS (DERMAPTERA) Forficula auricularia	Common Earwig	Forficulidae	
	<u> </u>		
FLIES (DIPTERA)		1	
Phytomyza ilicis	Holly Leaf Gall Fly	Agromyzidae	
Chirosia betuleti	a fly	Anthomyiidae	
Bibio leucopterus	a fly	Bibionidae	
Dilophus febrilis	Fever Fly	Bibionidae	
Dilophus femoratus	a fly	Bibionidae	
Taxomyia taxi	a gall fly	Cecidiomyidae	
Clusiodes ruficollis	a fly	Clusiidae	
Triogma trisulcata	a cranefly	Cylindrotomidae	RDB3 - Rare
Diastata nebulosa	a fly	Diastatidae	
Anepsiomyia flaviventris	a long-headed fly	Dolichopodidae	
Argyra argentina	a long-headed fly	Dolichopodidae	
Argyra leucocephala	a long-headed fly	Dolichopodidae	
Argyra perplexa	a long-headed fly	Dolichopodidae	
Campsicnemus curvipes	a long-headed fly	Dolichopodidae	
Campsicnemus loripes	a long-headed fly	Dolichopodidae	
Campsicnemus pusillus	a long-headed fly	Dolichopodidae	Nationally Scarce
Dolichopus discifer	a long-headed fly	Dolichopodidae	
Dolichopus plumipes	a long-headed fly	Dolichopodidae	
Dolichopus popularis	a long-headed fly	Dolichopodidae	

Species Name	Common Name	Family	National Status
Dolichopus trivialis	a long-headed fly	Dolichopodidae	
Hercostomus aerosus	a long-headed fly	Dolichopodidae	
Hercostomus brevicornis	a long-headed fly	Dolichopodidae	
Hercostomus cupreus	a long-headed fly	Dolichopodidae	
Rhaphium caliginosum	a long-headed fly	Dolichopodidae	
Rhaphium crassipes	a long-headed fly	Dolichopodidae	
Sciapus platypterus	a long-headed fly	Dolichopodidae	
Sybistroma obscurellum	a long-headed fly	Dolichopodidae	
Sympycnus desoutteri	a long-headed fly	Dolichopodidae	
Chelipoda albiseta	a dance fly	Empididae	
Clinocera fontinalis	a dance fly	Empididae	
Dolichocephala guttata	a dance fly	Empididae	
Dolichocephala oblongoguttata	a dance fly	Empididae	
Empis opaca	a dance fly	Empididae	
Empis stercorea	a dance fly	Empididae	
Empis tessellata	a dance fly	Empididae	
Gloma fuscipennis	a dance fly	Empididae	
Hilara fuscipes	a dance fly	Empididae	
Phyllodromia melanocephala	a dance fly	Empididae	
Rhamphomyia anomalipennis	a dance fly	Empididae	
Rhamphomyia crassirostris	a dance fly	Empididae	
Rhamphomyia laevipes	a dance fly	Empididae	
Rhamphomyia pilifer	a dance fly	Empididae	
Rhamphomyia stigmosa	a dance fly	Empididae	
Rhamphomyia sulcata	a dance fly	Empididae	
Hydrellia obscura	a shore fly	Ephydridae	
Hybos culiciformis	a fly	Hybotidae	
Hybos femoratus	a fly	Hybotidae	
Ocydromia glabricula	a fly	Hybotidae	

Species Name	Common Name	Family	National Status
Oedalea holmgreni	a fly	Hybotidae	
Platypalpus longicornis	a fly	Hybotidae	
Platypalpus pallidiventris	a fly	Hybotidae	
Tachypeza nubila	a fly	Hybotidae	
Meiosimyza rorida	a fly	Lauxaniidae	
Tricholauxania praeusta	a fly	Lauxaniidae	
Austrolimnophila ochracea	a cranefly	Limoniidae	
Cheilotrichia cinerascens	a cranefly	Limoniidae	
Dicranomyia fusca	a cranefly	Limoniidae	
Dicranomyia mitis	a cranefly	Limoniidae	
Dicranomyia modesta	a cranefly	Limoniidae	
Eloeophila maculata	a cranefly	Limoniidae	
Epiphragma ocellare	a cranefly	Limoniidae	
Erioconopa trivialis	a cranefly	Limoniidae	
Erioptera lutea	a cranefly	Limoniidae	
Ilisia occoecata	a cranefly	Limoniidae	
Limonia macrostigma	a cranefly	Limoniidae	
Limonia nubeculosa	a cranefly	Limoniidae	
Limonia phragmitidis	a cranefly	Limoniidae	
Lipsothrix remota	a cranefly	Limoniidae	
Molophilus appendiculatus	a cranefly	Limoniidae	
Molophilus griseus	a cranefly	Limoniidae	
Molophilus medius	a cranefly	Limoniidae	
Molophilus occultus	a cranefly	Limoniidae	
Molophilus ochraceus	a cranefly	Limoniidae	
Molophilus serpentiger	a cranefly	Limoniidae	
Neolimnomyia nemoralis	a cranefly	Limoniidae	
Ormosia depilata	a cranefly	Limoniidae	
Phylidorea ferruginea	a cranefly	Limoniidae	

Species Name	Common Name	Family	National Status
Phylidorea fulvonervosa	a cranefly	Limoniidae	
Phylidorea longicornis	a cranefly	Limoniidae	
Pilaria discicollis	a cranefly	Limoniidae	
Rhipidia maculata	a cranefly	Limoniidae	
Lonchoptera lutea	a fly	Lonchopteridae	
Calobata petronella	a stilt fly	Micropezidae	
Neria ephippium	a stilt fly	Micropezidae	
Mesembrina meridiana	Noon Fly	Muscidae	
Opomyza germinationis	a fly	Opomyzidae	
Dicranota pavida	a cranefly	Pediciidae	
Padicia rivosa	a cranefly	Pediciidae	
Tricyphona immaculata	a cranefly	Pediciidae	
Ptychoptera albimana	a cranefly	Ptychopteridae	
Ptychoptera minuta	a cranefly	Ptychopteridae	
Chrysopilus cristatus	Black Snipefly	Rhagionidae	
Rhagio scolopaceus	Downlooker Snipefly	Rhagionidae	
Hydromya dorsalis	a snail-killing fly	Sciomyzidae	
Renocera pallida	a snail-killing fly	Sciomyzidae	
Tetanocera silvatica	a snail-killing fly	Sciomyzidae	
Beris chalybata	Murky-legged Black Legionnaire	Stratiomyidae	
Chloromyia formosa	Broad Centurion	Stratiomyidae	
Sargus iridatus	Iridescent Centurion	Stratiomyidae	
Arctophila superbiens	a hoverfly	Syrphidae	
Cheilosia bergenstammi	a hoverfly	Syrphidae	
Cheilosia fraterna	a hoverfly	Syrphidae	
Cheilosia pagana	a hoverfly	Syrphidae	
Cheilosia variabilis	a hoverfly	Syrphidae	
Cheilosia vernalis	a hoverfly	Syrphidae	
Chrysogaster virescens	a hoverfly	Syrphidae	

Species Name	Common Name	Family	National Status
Chrysogaster solstitialis	A hoverfly	Syrphidae	
Dasysyrphus venustus	a hoverfly	Syrphidae	
Eristalis interruptus	a hoverfly	Syrphidae	
Eristalis pertinax	a hoverfly	Syrphidae	
Eristalis tenax	a hoverfly	Syrphidae	
Helophilus pendulus	a hoverfly	Syrphidae	
Leucozona glaucia	a hoverfly	Syrphidae	
Leucozona lucorum	a hoverfly	Syrphidae	
Melanostoma mellinum	a hoverfly	Syrphidae	
Melanostoma scalare	a hoverfly	Syrphidae	
Neoascia podagrica	a hoverfly	Syrphidae	
Parasyrphus punctulatus	a hoverfly	Syrphidae	
Platycheirus albimanus	a hoverfly	Syrphidae	
Platycheirus rosarum	a hoverfly	Syrphidae	
Rhingia campestris	a hoverfly	Syrphidae	
Sericomyia lappona	a hoverfly	Syrphidae	
Sericomyia silentis	a hoverfly	Syrphidae	
Sphegina clunipes	a hoverfly	Syrphidae	
Sphegina elegans	a hoverfly	Syrphidae	
Syrphus ribesii	a hoverfly	Syrphidae	
Xylota segnis	a hoverfly	Syrphidae	
Xylota sylvarum	a hoverfly	Syrphidae	
Haematopota pluvialis	Common Cleg	Tabanidae	
Tephritis conura	a fly	Tephritidae	
Ctenophora pectinicornis	a cranefly	Tipulidae	Nationally Scarce
Dolichopeza albipes	White-Footed Ghost	Tipulidae	
Tipula submarmorata	a cranefly	Tipulidae	
Xylophagus ater	Common Awl-fly	Xylophagidae	

Species Name	Common Name	Family	National Status
TRUE BUGS (HEMIPTERA)		•	·
Elasmostethus interstinctus	Birch Shieldbug	Acanthosomatidae	
Elasmucha grisea	Parent Bug	Acanthosomatidae	
Anthocoris confusus	a flower bug	Anthocoridae	
Anthocoris nemorum	Common Flower Bug	Anthocoridae	
Temnostethus gracilis	a bug	Anthocoridae	
Aphrophora alni	a plant hopper	Aphrophoridae	
Gerris lacustris	Common Pondskater	Gerridae	
Hydrometra stagnorum	Water Measurer	Hydrometridae	
Lamproplax picea	a seed bug	Lygaeidae	
Blepharidopterus angulatus	Black-Kneed Apple Capsid	Miridae	
Bryocoris pteridis	Fernbug	Miridae	
Calocoris alpestris	a plant bug	Miridae	
Calocoris stysi	a plant bug	Miridae	
Dicyphus constrictus	a plant bug	Miridae	
Dicyphus stachydis	a plant bug	Miridae	
Liocoris tripustulatus	Nettle Capsid	Miridae	
Lygocoris pabulinus	Common Green Capsid	Miridae	
Lygocoris rugicollis	a plant bug	Miridae	
Lygocoris contaminatus	a plant bug	Miridae	
Lygus wagneri	a plant bug	Miridae	
Mecomma ambulans	a plant bug	Miridae	
Monalocoris filicis	Bracken Bug	Miridae	
Orthops campestris	a plant bug	Miridae	
Orthops kalmii	a plant bug	Miridae	
Orthotylus marginalis	Dark Green Apple Capsid	Miridae	
Phylus melanocephalus	a plant bug	Miridae	
Phylus palliceps	a plant bug	Miridae	
Phytocoris tiliae	a plant bug	Miridae	

Species Name	Common Name	Family	National Status
Plagiognathus arbustorum	a plant bug	Miridae	
Psallus falleni	a plant bug	Miridae	
Stenodema calcarata	a grassbug	Miridae	
Stenodema holsata	a grassbug	Miridae	
Stenotus binotatus	Timothy Grassbug	Miridae	
Nabis limbatus	Marsh Damselbug	Nabidae	
Notonecta glauca	Common Backswimmer	Notonectidae	
Pentatoma rufipes	Forest Bug	Pentatomidae	
Saldula saltatoria	A shorebug	Saldidae	
Velia caprai	Water Cricket	Veliidae	
BEES, WASPS & SAWFLIES (HYMENOPT		Τ	
Bombus hypnorum	Tree Bumblebee	Apidae	
Bombus lucorum	White-Tailed Bumble Bee	Apidae	
Bombus pascuorum	Common Carder Bee	Apidae	
Bombus pratorum	Early Bumble Bee	Apidae	
Andricus kollari	Marble Gall Wasp	Cynipidae	
Tenthredo scrophulariae	Figwort Sawfly	Tenthredinidae	
Dolichovespula vulgaris	Common Wasp	Vespidae	
MOTHS AND BUTTERFLIES (LEPIDOPTER			
Eilema depressa	Buff Footman	Arctiidae	
Eilema lurideola	Common Footman	Arctiidae	
Spilosoma lubricipeda	White Ermine	Arctiidae	Priority Species
Spilosoma luteum	Buff Ermine	Arctiidae	Priority Species
Agriphila straminella	Straw Grass-veneer	Crambidae	
Catoptria falsella	Chequered Grass-veneer	Crambidae	
Chrysoteuchia culmella	Garden Grass-veneer	Crambidae	
Dipleurina lacustrata	Little Grey	Crambidae	

Species Name	Common Name	Family	National Status
Elophila nymphaeata	Brown China-mark	Crambidae	
Pleuroptya ruralis	Mother of Pearl	Crambidae	
Udea prunalis	Dusky Pearl	Crambidae	
Ochropacha duplaris	Common Lutestring	Drepanidae	
Hypena proboscidalis	Snout	Erebidae	
Zanclognatha tarsipennalis	Fan-foot	Erebidae	
Aethalura punctulata	Grey Birch	Geometridae	
Alcis repandata	Mottled Beauty	Geometridae	
Cabera pusaria	Common White Wave	Geometridae	
Campaea margaritata	Light Emerald	Geometridae	
Chloroclysta citrata	Dark Marbled Carpet	Geometridae	
Chloroclysta truncata	Common Marbled Carpet	Geometridae	
Colostygia pectinataria	Green Carpet	Geometridae	
Cosmorhoe ocellata	Purple Bar	Geometridae	
Deileptenia ribeata	Satin Beauty	Geometridae	
Ecliptopera silaceata	Small Phoenix	Geometridae	Priority Species
Ectropis	Engrailed Moth	Geometridae	
Ectropis bistortata	Engrailed	Geometridae	
Electrophaes corylata	Broken-barred Carpet	Geometridae	
Epirrhoe alternata	Common Carpet	Geometridae	
Epirrita dilutata agg.	November Moth agg.	Geometridae	
Erannis defoliaria	Mottled Umber	Geometridae	
Eupithecia lariciata	Larch Pug	Geometridae	
Eupithecia pulchellata	Foxglove Pug	Geometridae	
Eupithecia tantillaria	Dwarf Pug	Geometridae	
Eupithecia virgaureata	Golden-rod Pug	Geometridae	
Geometra papilionaria	Large Emerald	Geometridae	
Hydriomena furcata	July Highflyer	Geometridae	
Hydriomena impluviata	May Highflyer	Geometridae	

Species Name	Common Name	Family	National Status
Idaea aversata	Riband Wave	Geometridae	
Idaea biselata	Small Fan-footed Wave	Geometridae	
Lampropteryx suffumata	Water Carpet	Geometridae	
Lomaspilis marginata	Clouded Border	Geometridae	
Lomographa temerata	Clouded Silver	Geometridae	
Macaria liturata	Tawny-barred Angle	Geometridae	
Odontopera bidentata	Scalloped Hazel	Geometridae	
Opisthograptis luteolata	Brimstone Moth	Geometridae	
Perizoma alchemillata	Small Rivulet	Geometridae	
Perizoma didymata	Twin-spot Carpet	Geometridae	
Petrophora chlorosata	Brown Silver-line	Geometridae	
Plagodis dolabraria	Scorched Wing	Geometridae	
Rheumaptera undulata	Scallop Shell	Geometridae	
Scopula floslactata	Cream Wave	Geometridae	
Selenia lunularia	Lunar Thorn	Geometridae	
Thera britannica	Spruce Carpet	Geometridae	
Thera obeliscata	Grey Pine Carpet	Geometridae	
Venusia cambrica	Welsh Wave	Geometridae	
Xanthorhoe designata	Flame Carpet	Geometridae	
Euthrix potatoria	Drinker	Lasiocampidae	
Micropterix aureatella	Yellow-barred Gold	Micropterigidae	
Amphipyra pyramidea agg.	Copper Underwings	Noctuidae	
Apamea monoglypha	Dark Arches	Noctuidae	
Apamea scolopacina	Slender Brindle	Noctuidae	
Cerapteryx graminis	Antler Moth	Noctuidae	
Chortodes pygmina	Small Wainscot	Noctuidae	
Cosmia trapezina	Dun-bar	Noctuidae	
Diachrysia chrysitis	Burnished Brass	Noctuidae	
Diarsia brunnea	Purple Clay	Noctuidae	

Species Name	Common Name	Family	National Status
Diarsia dahlii	Barred Chestnut	Noctuidae	
Gortyna flavago	Frosted Orange	Noctuidae	
Lacanobia thalassina	Pale-shouldered Brocade	Noctuidae	
Mesapamea secalis agg.	Common Rustic	Noctuidae	
Mythimna impura	Smoky Wainscot	Noctuidae	
Noctua janthe	Lesser Broad-bordered Yellow Underwing	Noctuidae	
Noctua pronuba	Large Yellow Underwing	Noctuidae	
Oligia strigilis agg.	Marbled Minor agg.	Noctuidae	
Oligia fasciuncula	Middle-barred Minor	Noctuidae	
Orthosia gothica	Hebrew Character	Noctuidae	
Photedes minima	Small Dotted Buff	Noctuidae	
Xestia baja	Dotted Clay	Noctuidae	
Xestia sexstrigata	Six-striped Rustic	Noctuidae	
Xestia triangulum	Double-square Spot	Noctuidae	
Nola confusalis	Least Black Arches	Nolidae	
Pseudoips prasinana	Green Silver-lines	Nolidae	
Furcula furcula	Sallow Kitten	Notodontidae	
Notodonta dromedarius	Iron Prominent	Notodontidae	
Notodonta ziczac	Pebble Prominent	Notodontidae	
Pheosia gnoma	Lesser Swallow Prominent	Notodontidae	
Pterostoma palpina	Pale Prominent	Notodontidae	
Aphantopus hyperantus	Ringlet	Nymphalidae	
Inachis io	Peacock	Nymphalidae	
Anthocharis cardamines	Orange-tip	Pieridae	
Pieris napi	Green-veined White	Pieridae	
Laothoe populi	Poplar Hawk-moth	Sphingidae	
Apotomis betuletana	Birch Marble	Tortricidae	
Epinotia brunnichana	Large Birch Bell	Tortricidae	

Species Name	Common Name	Family	National Status
Pandemis cerasana	Barred Fruit-tree Tortrix	Tortricidae	
Pandemis cinnamomeana	White-faced Twist	Tortricidae	
Syndemis musculana	Dark-barred Twist	Tortricidae	
Yponomeuta evonymella	Bird-cherry Ermine	Yponomeutidae	
SCORPIONFLIES (MECOPTERA)			
Panorpa germanica	Panorpa germanica	Panorpidae	
LACEWINGS (NEUROPTERA)			1
Chrysotropia ciliata	Chrysotropia ciliata	Chrysopidae	
Nineta vittata	Nineta vittata	Chrysopidae	
Hemerobius marginatus	Hemerobius marginatus	Hemerobiidae	
Hemerobius micans	Hemerobius micans	Hemerobiidae	
DRAGONFLIES & DAMSELFLIES (ODONATA	A)		
Aeshna cyanea	Southern Hawker	Aeshnidae	
Coenagrion puella	Azure Damselfly	Coenagrionidae	
Pyrrhosoma nymphula	Large Red Damselfly	Coenagrionidae	
Enallagma cyathigerum	Common Blue Damselfly	Coenagrionidae	
Lestes sponsa	Emerald Damselfly	Lestidae	
Libellula quadrimaculata	Four-spotted Chaser	Libellulidae	
Sympetrum striolatum	Common Darter	Libellulidae	
MILLIPEDES (DIPLOPODA)			_
Glomeris marginata	Pill Millipede	Glomeridae	
AMPHIBIANS (AMPHIBIA)			
Rana temporaria	Common Frog	Ranidae	
Lissotriton helveticus	Palmate Newt	Salamandridae	

Species Name	Common Name	Family	National Status
BIRDS (AVES)			
Anas platyrhynchos	Mallard	Anatidae	Amber species
Scolopax rusticola	Eurasian Woodcock	Scolopacidae	Amber species
Columba palumbus	Common Wood Pigeon	Columbidae	
Buteo buteo	Common Buzzard	Accipitridae	
Phasianus colchicus	Common Pheasant	Phasianidae	
Certhia familiaris	Eurasian Treecreeper	Certhiidae	
Fringilla coelebs	Chaffinch	Fringillidae	
Ficedula hypoleuca	Pied Flycatcher	Muscicapidae	Amber species
Cyanistes caeruleus	Blue Tit	Paridae	
Parus major	Great Tit	Paridae	
Regulus regulus	Goldcrest	Regulidae	
Erithacus rubecula	European Robin	Saxicolidae	
Sitta europaea	Wood Nuthatch	Sittidae	
Phylloscopus collybita	Common Chiffchaff	Sylviidae	
			Red species,
Phylloscopus sibilatrix	Wood Warbler	Sylviidae	Priority Species
Phylloscopus trochilus	Willow Warbler	Sylviidae	Amber species
Sylvia atricapilla	Blackcap	Sylviidae	
Troglodytes troglodytes	Winter Wren	Troglodytidae	
Turdus merula	Common Blackbird	Turdidae	
Turdus philomelos	Song Thrush	Turdidae	Red Species
Dendrocopos major	Great Spotted Woodpecker	Picidae	
MAMMALS (MAMMALIA)			
Capreolus capreolus	Roe Deer	Cervidae	
Vulpes vulpes	Red Fox	Canidae	

Species Name	Common Name	Family	National Status
			Near Threatened,
Lutra lutra	European Otter	Mustelidae	Priority Species
Meles meles	Eurasian Badger	Mustelidae	
Erinaceus europaeus	West European Hedgehog	Erinaceidae	Priority Species
Talpa europaea	European Mole	Talpidae	
Sorex minutus	Pygmy Shrew	Soricidae	
Clethriomys glareolus	Bank vole	Muridae	
Apodemus sylvatica	Wood mouse	Muridae	
Sciurus carolinensis	Eastern Grey Squirrel	Sciuridae	

Appendix 2. Species recorded from Miltonrigg Wood before 2013

Species	Common Name	Taxon Family	National Status
SLIME MOULDS		·	
Lycogala epidendrum	Lycogala epidendrum	Tubiferaceae	
LICHENS			
Lobaria scrobiculata	Textured Lungwort	Lobariaceae	
FUNGI			
Geoglossum cookeanum	Geoglossum cookeanum	Geoglossaceae	
Cudoniella acicularis	Oak Pin	Helotiaceae	
Rodwayella citrinula	Rodwayella citrinula	Hyaloscyphaceae	
Ascocoryne cylichnium	Ascocoryne cylichnium	Helotiales	
Ascocoryne sarcoides	Purple Jellydisc	Helotiales	
Bisporella citrina	Lemon Disco	Helotiales	
Chlorociboria aeruginascens	Green Elfcup	Helotiales	
Chlorociboria aeruginosa	Chlorociboria aeruginosa	Helotiales	
Bulgaria inquinans	Black Bulgar	Bulgariaceae	
Leotia lubrica	Jellybaby	Leotiaceae	
Rhytisma acerinum	Tar-Spot Fungus	Rhytismataceae	
Helvella atra	Helvella atra	Helvellaceae	
Helvella lacunosa	Elfin Saddle	Helvellaceae	
Helvella macropus	Felt Saddle	Helvellaceae	
Peziza badia	Bay Cup	Pezizaceae	
Aleuria aurantia	Orange-Peel Fungus	Pyronemataceae	
Melastiza chateri	Orange Cup	Pyronemataceae	
Rhizina undulata	Pine Firefungus	Rhizinaceae	
Claviceps purpurea	Ergot	Clavicipitaceae	
Nectria cinnabarina	Coral-Spot Fungus	Nectriaceae	
Hypoxylon multiforme	Birch Woodwart	Xylariaceae	
Xylaria carpophila	Beechmast Candlesnuff	Xylariaceae	
Xylaria hypoxylon	Candle-Snuff Fungus	Xylariaceae	

Species	Common Name	Taxon Family	National Status
Xylaria polymorpha	Dead Man's Fingers	Xylariaceae	
Agaricus campestris var. campestris	Field Mushroom	Agaricaceae	
Coprinus comatus	Shaggy Inkcap	Agaricaceae	
Coprinus plicatilis	Coprinus plicatilis	Agaricaceae	
Cystoderma amianthinum	Earthy Powdercap	Agaricaceae	
Lepiota ochraceofulva	Lepiota ochraceofulva	Agaricaceae	
Lycoperdon nigrescens	Blackish Puffball	Agaricaceae	
Lycoperdon perlatum	Common Puffball	Agaricaceae	
Lycoperdon pyriforme	Stump Puffball	Agaricaceae	
Phaeolepiota aurea	Golden Bootleg	Agaricaceae	
Amanita citrina	False Death Cap	Amanitaceae	
Amanita fulva	Tawny Grisette	Amanitaceae	
Amanita muscaria	Fly Agaric	Amanitaceae	
Amanita rubescens var. rubescens	Blusher	Amanitaceae	
Amanita vaginata var. vaginata	Grisette	Amanitaceae	
Amanita virosa	Destroying Angel	Amanitaceae	
Conocybe apala	Milky Conecap	Bolbitiaceae	
Clavaria argillacea	Moor Club	Clavariaceae	
Cortinarius anomalus	Variable Webcap	Cortinariaceae	
Cortinarius armillatus	Red Banded Webcap	Cortinariaceae	
Cortinarius brunneus var. brunneus	Cortinarius brunneus var. brunneus	Cortinariaceae	
Cortinarius decipiens var. decipiens	Sepia Webcap	Cortinariaceae	
Cortinarius delibutus	Yellow Webcap	Cortinariaceae	
Cortinarius hemitrichus	Frosty Webcap	Cortinariaceae	
Cortinarius livido-ochraceus	Wrinkled Webcap	Cortinariaceae	
Cortinarius malicorius	Cortinarius malicorius	Cortinariaceae	
Cortinarius obtusus	Cortinarius obtusus	Cortinariaceae	
Cortinarius paleaceus	Pelargonium Webcap	Cortinariaceae	
Cortinarius phoeniceus	Cortinarius phoeniceus	Cortinariaceae	

Species	Common Name	Taxon Family	National Status
Cortinarius sanguineus	Bloodred Webcap	Cortinariaceae	
Clitopilus prunulus	The Miller	Entolomataceae	
Entoloma clypeatum	Shield Pinkgill	Entolomataceae	
Entoloma hirtipes	Entoloma hirtipes	Entolomataceae	
Entoloma nigroviolaceum	Dark Purple Leptonia	Entolomataceae	
Laccaria laccata	Deceiver	Hydnangiaceae	
Laccaria proxima	Scurfy Deceiver	Hydnangiaceae	
Ampulloclitocybe clavipes	Club Foot	Hygrophoraceae	
Hygrophorus hypothejus	Herald of Winter	Hygrophoraceae	
Crepidotus mollis	Peeling Oysterling	Inocybaceae	
Crepidotus variabilis	Variable Oysterling	Inocybaceae	
Flammulaster carpophilus var. carpophilus	Flammulaster carpophilus var. carpophilus	Inocybaceae	
Inocybe asterospora	Star Fibrecap	Inocybaceae	
Inocybe dulcamara	Inocybe dulcamara	Inocybaceae	
Inocybe eutheles	Inocybe eutheles	Inocybaceae	
Inocybe geophylla var. geophylla	White Fibrecap	Inocybaceae	
Inocybe hystrix	Scaly Fibrecap	Inocybaceae	
Inocybe lacera	Inocybe lacera	Inocybaceae	
Inocybe lanuginosa var. lanuginosa	Woolly Fibrecap	Inocybaceae	
Inocybe petiginosa	Scurfy Fibrecap	Inocybaceae	
Inocybe pusio	Inocybe pusio	Inocybaceae	
Inocybe pyriodora	Pear Fibrecap	Inocybaceae	
Inocybe rimosa	Split Fibrecap	Inocybaceae	
Phaeomarasmius erinaceus	Phaeomarasmius erinaceus	Inocybaceae	
Asterophora parasitica	Silky Piggyback	Lyophyllaceae	
Lyophyllum connatum	White Domecap	Lyophyllaceae	
Baeospora myosura	Conifercone Cap	Marasmiaceae	
Marasmiellus candidus	Marasmiellus candidus	Marasmiaceae	
Marasmius alliaceus	Garlic Parachute	Marasmiaceae	

Species	Common Name	Taxon Family	National Status
Marasmius androsaceus	Horsehair Parachute	Marasmiaceae	
Marasmius rotula	Collared Parachute	Marasmiaceae	
Micromphale foetidum	Foetid Parachute	Marasmiaceae	
Rhodocollybia maculata var. maculata	Spotted Tough-Shank	Marasmiaceae	
Hemimycena lactea	Milky Bonnet	Mycenaceae	
Mycena acicula	Orange Bonnet	Mycenaceae	
Mycena aurantiomarginata	Mycena aurantiomarginata	Mycenaceae	
Mycena capillaris	Beechleaf Bonnet	Mycenaceae	
Mycena filopes	Iodine Bonnet	Mycenaceae	
Mycena galericulata	Common Bonnet	Mycenaceae	
Mycena galopus var. galopus	Milking Bonnet	Mycenaceae	
Mycena galopus var. nigra	Black Milking Bonnet	Mycenaceae	
Mycena haematopus	Burgundydrop Bonnet	Mycenaceae	
Mycena hiemalis	Mycena hiemalis	Mycenaceae	
Mycena inclinata	Clustered Bonnet	Mycenaceae	
Mycena leptocephala	Nitrous Bonnet	Mycenaceae	
Mycena olivaceomarginata	Brownedge Bonnet	Mycenaceae	
Mycena polygramma	Grooved Bonnet	Mycenaceae	
Mycena pseudocorticola	Mycena pseudocorticola	Mycenaceae	
Mycena sanguinolenta	Bleeding Bonnet	Mycenaceae	
Panellus mitis	Elastic Oysterling	Mycenaceae	
Armillaria mellea	Honey Fungus	Physalacriaceae	
Armillaria ostoyae	Dark Honey Fungus	Physalacriaceae	
Flammulina velutipes var. velutipes	Velvet Shank	Physalacriaceae	
Oudemansiella mucida	Porcelain Fungus	Physalacriaceae	
Xerula radicata	Rooting Shank	Physalacriaceae	
Pleurotus dryinus	Veiled Oyster	Pleurotaceae	
Pleurotus ostreatus	Oyster Mushroom	Pleurotaceae	
Pluteus cervinus	Deer Shield	Pluteaceae	

Species	Common Name	Taxon Family	National Status
Pluteus podospileus	Pluteus podospileus	Pluteaceae	
Pluteus semibulbosus	Pluteus semibulbosus	Pluteaceae	
Coprinellus disseminatus	Fairies' Bonnets	Psathyrellaceae	
Coprinellus micaceus	Glistening Ink-Cap	Psathyrellaceae	
Coprinopsis atramentaria	Common Ink-Cap	Psathyrellaceae	
Coprinopsis lagopus	Hare'sfoot Inkcap	Psathyrellaceae	
Coprinopsis radiata	Coprinopsis radiata	Psathyrellaceae	
Lacrymaria lacrymabunda	Weeping Widow	Psathyrellaceae	
Lacrymaria pyrotricha	Lacrymaria pyrotricha	Psathyrellaceae	
Psathyrella artemisiae	Psathyrella artemisiae	Psathyrellaceae	
Psathyrella candolleana	Pale Brittlestem	Psathyrellaceae	
Psathyrella corrugis	Red Edge Brittlestem	Psathyrellaceae	
Psathyrella pennata	Psathyrella pennata	Psathyrellaceae	
Psathyrella piluliformis	Common Stump Brittlestem	Psathyrellaceae	
Agrocybe praecox	Spring Fieldcap	Strophariaceae	
Agrocybe sphaleromorpha	Agrocybe sphaleromorpha	Strophariaceae	
Galerina paludosa	Bog Bell	Strophariaceae	
Gymnopilus junonius	Spectacular Rustgill	Strophariaceae	
Gymnopilus penetrans	Common Rustgill	Strophariaceae	
Hebeloma crustuliniforme	Poisonpie	Strophariaceae	
Hebeloma mesophaeum var. mesophaeum	Veiled Poisonpie	Strophariaceae	
Hebeloma pusillum	Hebeloma pusillum	Strophariaceae	
Hypholoma capnoides	Conifer Tuft	Strophariaceae	
Hypholoma fasciculare var. fasciculare	Sulphur Tuft	Strophariaceae	
Hypholoma lateritium	Brick Caps	Strophariaceae	
Hypholoma marginatum	Snakeskin Brownie	Strophariaceae	
Kuehneromyces mutabilis	Sheathed Woodtuft	Strophariaceae	
Pholiota adiposa	Pholiota adiposa	Strophariaceae	
Pholiota alnicola	Pholiota alnicola	Strophariaceae	

Species	Common Name	Taxon Family	National Status
Pholiota gummosa	Sticky Scalycap	Strophariaceae	
Pholiota highlandensis	Charcoal Pholiota	Strophariaceae	
Psilocybe crobula	Psilocybe crobula	Strophariaceae	
Psilocybe semilanceata	Liberty Cap	Strophariaceae	
Clitocybe fragrans	Fragrant Funnel	Tricholomataceae	
Clitocybe geotropa	Trooping Funnel	Tricholomataceae	
Clitocybe hydrogramma	Clitocybe hydrogramma	Tricholomataceae	
Clitocybe infundibuliformis	Common Funnel Cap	Tricholomataceae	
Clitocybe metachroa	Clitocybe metachroa	Tricholomataceae	
Clitocybe nebularis	Clouded Funnel	Tricholomataceae	
Clitocybe obsoleta	Clitocybe obsoleta	Tricholomataceae	
Clitocybe odora	Aniseed Funnel	Tricholomataceae	
Clitocybe rivulosa	Fool's Funnel	Tricholomataceae	
Clitocybe vibecina	Mealy Funnel	Tricholomataceae	
Collybia butyracea var. butyracea	Butter Cap	Tricholomataceae	
Collybia confluens	Clustered Toughshank	Tricholomataceae	
Collybia dryophila	Russet Toughshank	Tricholomataceae	
Collybia peronata	Wood Woollyfoot	Tricholomataceae	
Lepista flaccida	Tawny Funnel	Tricholomataceae	
Lepista nuda	Wood Blewit	Tricholomataceae	
Melanoleuca melaleuca	Melanoleuca melaleuca	Tricholomataceae	
Pseudoclitocybe cyathiformis	Goblet	Tricholomataceae	
Tricholoma fulvum	Birch Knight	Tricholomataceae	
Tricholoma virgatum	Ashen Knight	Tricholomataceae	
Tricholomopsis rutilans	Plums and Custard	Tricholomataceae	
Panaeolus acuminatus	Dewdrop Mottlegill	Agaricales	
Plicatura crispa	Plicatura crispa	Agaricales	
Exidia glandulosa	Witches' Butter	Auriculariaceae	
Pseudohydnum gelatinosum	Jelly Tooth	Auriculariales	

Species	Common Name	Taxon Family	National Status
Boletus badius	Bay Bolete	Boletaceae	
Boletus chrysenteron	Red Cracking Bolete	Boletaceae	
Boletus edulis	Сер	Boletaceae	
Boletus luridiformis var. luridiformis	Scarletina Bolete	Boletaceae	
Boletus pruinatus	Matt Bolete	Boletaceae	
Boletus subtomentosus	Suede Bolete	Boletaceae	
Chalciporus piperatus	Peppery Bolete	Boletaceae	
Leccinum scabrum	Brown Birch Bolete	Boletaceae	
Leccinum variicolor	Mottled Bolete	Boletaceae	
Leccinum versipelle	Orange Birch Bolete	Boletaceae	
Hygrophoropsis aurantiaca	False Chanterelle	Hygrophoropsidaceae	
Paxillus atrotomentosus	Paxillus atrotomentosus	Paxillaceae	
Paxillus involutus	Brown Rollrim	Paxillaceae	
Scleroderma areolatum	Leopard-Spotted Earthball	Sclerodermataceae	
Scleroderma citrinum	Common Earthball	Sclerodermataceae	
Scleroderma verrucosum	Scaly Earthball	Sclerodermataceae	
Suillus grevillei	Larch Bolete	Suillaceae	
Suillus luteus	Slippery Jack	Suillaceae	
Cantharellus cibarius	Chanterelle	Cantharellaceae	
Clavulina cinerea forma cinerea	Grey Coral	Clavulinaceae	
Clavulina coralloides	Crested Coral	Clavulinaceae	
Hymenochaete rubiginosa	Oak Curtain Crust	Hymenochaetaceae	
Phellinus igniarius	Willow Bracket	Hymenochaetaceae	
Mutinus caninus	Dog Stinkhorn	Phallaceae	
Phallus impudicus	Common Stinkhorn	Phallaceae	
Vuilleminia comedens	Waxy Crust	Corticiaceae	
Daedalea quercina	Oak Mazegill	Fomitopsidaceae	
Laetiporus sulphureus	Chicken of the Woods	Fomitopsidaceae	
Piptoporus betulinus	Birch Polypore	Fomitopsidaceae	

Species	Common Name	Taxon Family	National Status
Postia caesia	Conifer Blueing Bracket	Fomitopsidaceae	
Postia stiptica	Bitter Bracket	Fomitopsidaceae	
Ganoderma australe	Southern Bracket	Ganodermataceae	
Bjerkandera adusta	Smoky Bracket	Meruliaceae	
Phlebia tremellosa	Jelly Rot	Meruliaceae	
Daedaleopsis confragosa	Blushing Bracket	Polyporaceae	
Fomes fomentarius	Tinder Bracket	Polyporaceae	
Trametes versicolor	Turkeytail	Polyporaceae	
Peniophora quercina	Peniophora quercina	Peniophoraceae	
Lactarius aurantiacus	Orange Milkcap	Russulaceae	
Lactarius blennius	Beech Milkcap	Russulaceae	
Lactarius camphoratus	Curry Milkcap	Russulaceae	
Lactarius chrysorrheus	Yellowdrop Milkcap	Russulaceae	
Lactarius glyciosmus	Coconut Milkcap	Russulaceae	
Lactarius helvus	Fenugreek Milkcap	Russulaceae	
Lactarius hepaticus	Liver Milkcap	Russulaceae	
Lactarius pubescens	Bearded Milkcap	Russulaceae	
Lactarius pyrogalus	Fiery Milkcap	Russulaceae	
Lactarius quietus	Oak Milk-Cap	Russulaceae	
Lactarius rufus	Rufous Milkcap	Russulaceae	
Lactarius subdulcis	Mild Milkcap	Russulaceae	
Lactarius tabidus	Birch Milkcap	Russulaceae	
Lactarius torminosus	Woolly Milkcap	Russulaceae	
Lactarius turpis	Ugly Milk-Cap	Russulaceae	
Russula aeruginea	Green Brittlegill	Russulaceae	
Russula atropurpurea	Purple Brittlegill	Russulaceae	
Russula betularum	Birch Brittlegill	Russulaceae	
Russula claroflava	Yellow Swamp Russula	Russulaceae	
Russula cyanoxantha	Charcoal Burner	Russulaceae	

Species	Common Name	Taxon Family	National Status
Russula delica	Milk-White Russula	Russulaceae	
Russula fellea	Geranium-Scented Russula	Russulaceae	
Russula foetens	Stinking Brittlegill	Russulaceae	
Russula fragilis	Fragile Russula	Russulaceae	
Russula grata	Bitter Almond Brittlegill	Russulaceae	
Russula heterophylla	Greasy Green Brittlegill	Russulaceae	
Russula ionochlora	Oilslick Brittlegill	Russulaceae	
Russula nigricans	Blackening Brittlegill	Russulaceae	
Russula nitida	Purple Swamp Brittlegill	Russulaceae	
Russula nobilis	Beechwood Sickener	Russulaceae	
Russula ochroleuca	Ochre Brittlegill	Russulaceae	
Russula sanguinea	Russula sanguinea	Russulaceae	
Russula vesca	Bare-Toothed Russula	Russulaceae	
Russula xerampelina	Crab Brittlegill	Russulaceae	
Stereum hirsutum	Hairy Curtain Crust	Stereaceae	
Thelephora palmata	Stinking Earthfan	Thelephoraceae	
Thelephora terrestris forma terrestris	Earth-Fan	Thelephoraceae	
Rickenella fibula	Orange Mosscap	Agaricomycetes	
Calocera cornea	Small Stagshorn	Dacrymycetaceae	
Calocera viscosa	Yellow Stagshorn	Dacrymycetaceae	
Tremella foliacea	Leafy Brain	Tremellaceae	
Tremella mesenterica	Golden Jelly Fungus	Tremellaceae	
MOSSES & LIVERWORTS			
Mnium hornum	Swan's-neck Thyme-moss	Mniaceae	
Dicranella heteromalla	Silky Forklet-moss	Dicranaceae	
Dicranum scoparium	Broom Fork-moss	Dicranaceae	
Dicranum tauricum	Fragile Fork-moss	Dicranaceae	
Funaria hygrometrica	Common Cord-moss	Funariaceae	
Brachythecium rutabulum	Rough-stalked Feather-moss	Brachytheciaceae	

Species	Common Name	Taxon Family	National Status
Hypnum cupressiforme	Hypnum cupressiforme	Hypnaceae	
Atrichum undulatum	Common Smoothcap	Polytrichaceae	
VASCULAR PLANTS			
Epipactis helleborine	Broad-leaved Helleborine	Orchidaceae	
Epipactis phyllanthes	Green-flowered Helleborine	Orchidaceae	Nationally Scarce
Neottia nidus-avis	Bird's-nest Orchid	Orchidaceae	Near Threatened
Anthoxanthum odoratum	Sweet Vernal-grass	Poaceae	
MOLLUSCS			
Pisidium casertanum	Pisidium casertanum	Pisidiidae	
Pisidium personatum	Pisidium personatum	Pisidiidae	
Pisidium subtruncatum	Pisidium subtruncatum	Pisidiidae	
Carychium minimum seg.	Carychium minimum seg.	Carychiidae	
Carychium tridentatum	Carychium tridentatum	Carychiidae	
Cochlicopa cf. lubrica	Slippery Moss Snail	Cochlicopidae	
Cepaea nemoralis	Brown Lipped Snail	Helicidae	
Trochulus striolatus	Strawberry Snail	Hygromiidae	
Lehmannia marginata	Tree Slug	Limacidae	
Limax cinereoniger	Ash-Grey Slug	Limacidae	
Galba truncatula	Dwarf Pond Snail	Lymnaeidae	
Aegopinella nitidula	Aegopinella nitidula	Oxychilidae	
Aegopinella pura	Aegopinella pura	Oxychilidae	
Oxychilus alliarius	Garlic Snail	Oxychilidae	
Oxychilus cellarius	Cellar Snail	Oxychilidae	
Discus rotundatus	Rounded Snail	Patulidae	
Vitrea contracta	Vitrea contracta	Pristilomatidae	
Vitrea crystallina seg.	Vitrea crystallina seg.	Pristilomatidae	
Vitrina pellucida	Vitrina pellucida	Vitrinidae	
Arianta arbustorum	Arianta arbustorum	Pulmonata	
Lauria cylindracea	Common Chrysalis Snail	Pulmonata	

Species	Common Name	Taxon Family	National Status
BEETLES			
Oulema melanopus	Cereal Leaf Beetle	Chrysomelidae	
Adalia bipunctata	2-spot Ladybird	Coccinellidae	
Aphidecta obliterata	Larch Ladybird	Coccinellidae	
Chilocorus renipustulatus	Kidney-spot Ladybird	Coccinellidae	
Coccinella hieroglyphica	Hieroglyphic Ladybird	Coccinellidae	
Coccinella septempunctata	7-spot Ladybird	Coccinellidae	
Propylea quattuordecimpunctata	14-spot Ladybird	Coccinellidae	
Strophosoma melanogrammum	Nut Leaf Weevil	Curculionidae	
Agabus bipustulatus	Agabus (Gaurodytes) bipustulatus	Dytiscidae	
Hydroporus gyllenhalii	Hydroporus gyllenhalii	Dytiscidae	
Hydroporus incognitus	Hydroporus incognitus	Dytiscidae	
Hydroporus melanarius	Hydroporus melanarius	Dytiscidae	
Hydroporus pubescens	Hydroporus pubescens	Dytiscidae	
Athous haemorrhoidalis	Athous (Athous) haemorrhoidalis	Elateridae	
Anacaena globulus	Anacaena globulus	Hydrophilidae	
Phyllopertha horticola	Garden Chafer	Rutelidae	
Oiceoptoma thoracicum	Red-Breasted Carrion Beetle	Silphidae	
Ontholestes tessellatus	Ontholestes tessellatus	Staphylinidae	
EARWIGS			
Forficula auricularia	Common Earwig	Forficulidae	
FLIES			
Chirosia betuleti	Chirosia betuleti	Anthomyiidae	
Baccha	Baccha	Syrphidae	
Cheilosia antiqua	Cheilosia antiqua	Syrphidae	
Cheilosia bergenstammi	Cheilosia bergenstammi	Syrphidae	
Cheilosia illustrata	Cheilosia illustrata	Syrphidae	
Chrysotoxum arcuatum	Chrysotoxum arcuatum	Syrphidae	
Episyrphus balteatus	Marmalade Hoverfly	Syrphidae	

Species	Common Name	Taxon Family	National Status
Eristalis pertinax	Eristalis pertinax	Syrphidae	
Eristalis tenax	Eristalis tenax	Syrphidae	
Helophilus pendulus	Helophilus pendulus	Syrphidae	
Leucozona glaucia	Leucozona glaucia	Syrphidae	
Leucozona lucorum	Leucozona lucorum	Syrphidae	
Melanostoma scalare	Melanostoma scalare	Syrphidae	
Parasyrphus malinellus	Parasyrphus malinellus	Syrphidae	
Platycheirus albimanus	Platycheirus albimanus	Syrphidae	
Platycheirus scutatus	Platycheirus scutatus	Syrphidae	
Rhingia campestris	Rhingia campestris	Syrphidae	
Sericomyia silentis	Sericomyia silentis	Syrphidae	
Syrphus vitripennis	Syrphus vitripennis	Syrphidae	
Xylota sylvarum	Xylota sylvarum	Syrphidae	
Hybomitra distinguenda	Bright Horsefly	Tabanidae	
TRUE BUGS			
Elasmostethus interstinctus	Birch Shieldbug	Acanthosomatidae	
Leptopterna dolabrata	Meadow Plant Bug	Miridae	
Stenodema calcarata	Stenodema (Brachystira) calcarata	Miridae	
Piezodorus lituratus	Gorse Shieldbug	Pentatomidae	
BEES,WASPS, SAWFLIES			
Tenthredo livida	Tenthredo (Tenthredella) livida	Tenthredinidae	
BUTTERFLIES & MOTHS			
Adela reaumurella	Green Long-horn	Adelidae	
Nemophora degeerella	Yellow-barred Long-horn	Adelidae	
Chrysoteuchia culmella	Garden Grass-veneer	Crambidae	
Crambus lathoniellus	Hook-streak Grass-veneer	Crambidae	
Scoparia ambigualis	Common Grey	Crambidae	
Elachista argentella	Swan-feather Dwarf	Elachistidae	
Cabera exanthemata	Common Wave	Geometridae	

Species	Common Name	Taxon Family	National Status
Cabera pusaria	Common White Wave	Geometridae	
Colotois pennaria	Feathered Thorn	Geometridae	
Epirrhoe alternata	Common Carpet	Geometridae	
Eupithecia indigata	Ochreous Pug	Geometridae	
Idaea aversata	Riband Wave	Geometridae	
Lomaspilis marginata	Clouded Border	Geometridae	
Odezia atrata	Chimney Sweep	Geometridae	
Operophtera brumata	Winter Moth	Geometridae	
Scopula floslactata	Cream Wave	Geometridae	
Scotopteryx chenopodiata	Shaded Broad-bar	Geometridae	Priority Species
Xanthorhoe montanata	Silver-ground Carpet	Geometridae	
Glyphipterix simpliciella	Cocksfoot Moth	Glyphipterigidae	
Hepialus hecta	Gold Swift	Hepialidae	
Ochlodes sylvanus	Large Skipper	Hesperiidae	
Incurvaria masculella	Feathered Bright	Incurvariidae	
Lycaena phlaeas	Small Copper	Lycaenidae	
Neozephyrus quercus	Purple Hairstreak	Lycaenidae	
Micropterix calthella	Plain Gold	Micropterigidae	
Autographa gamma	Silver Y	Noctuidae	
Conistra vaccinii	Chestnut	Noctuidae	
Diarsia mendica subsp. mendica	Ingrailed Clay	Noctuidae	
Phlogophora meticulosa	Angle Shades	Noctuidae	
Aphantopus hyperantus	Ringlet	Nymphalidae	
Boloria selene	Small Pearl-bordered Fritillary	Nymphalidae	Priority Species
Coenonympha pamphilus	Small Heath	Nymphalidae	Priority Species
Maniola jurtina	Meadow Brown	Nymphalidae	
Vanessa atalanta	Red Admiral	Nymphalidae	
Vanessa cardui	Painted Lady	Nymphalidae	
Anthocharis cardamines	Orange-tip	Pieridae	

Species	Common Name	Taxon Family	National Status
Pieris brassicae	Large White	Pieridae	
Pieris napi	Green-veined White	Pieridae	
Pieris rapae	Small White	Pieridae	
Prays fraxinella	Ash Bud Moth	Praydidae	
Platyptilia gonodactyla	Triangle Plume	Pterophoridae	
Aphelia paleana	Timothy Tortrix	Tortricidae	
Celypha lacunana	Common Marble	Tortricidae	
Epinotia trigonella	White-blotch Bell	Tortricidae	
Eulia ministrana	Brassy Twist	Tortricidae	
Pammene regiana	Regal Piercer	Tortricidae	
Pandemis cerasana	Barred Fruit-tree Tortrix	Tortricidae	
Zeiraphera isertana	Cock's-head Bell	Tortricidae	
SCORPIONFLIES			
Panorpa communis	Panorpa communis	Panorpidae	
Panorpa germanica	Panorpa germanica	Panorpidae	
LACEWINGS			
Chrysopa perla	Chrysopa perla	Chrysopidae	
DRAGONFLIES			
Aeshna cyanea	Southern Hawker	Aeshnidae	
Aeshna juncea	Common Hawker	Aeshnidae	
Anax imperator	Emperor Dragonfly	Aeshnidae	
Coenagrion puella	Azure Damselfly	Coenagrionidae	
Enallagma cyathigerum	Common Blue Damselfly	Coenagrionidae	
Ischnura elegans	Blue-tailed Damselfly	Coenagrionidae	
Pyrrhosoma nymphula	Large Red Damselfly	Coenagrionidae	
Lestes sponsa	Emerald Damselfly	Lestidae	
Libellula quadrimaculata	Four-spotted Chaser	Libellulidae	
Sympetrum danae	Black Darter	Libellulidae	
Sympetrum striolatum	Common Darter	Libellulidae	

Species	Common Name	Taxon Family	National Status
AMPHIBIANS			·
Rana temporaria	Common Frog	Ranidae	
Lissotriton helveticus	Palmate Newt	Salamandridae	
BIRDS			
Aythya fuligula	Tufted Duck	Anatidae	Bird-Amber
Lymnocryptes minimus	Jack Snipe	Scolopacidae	Bird-Amber
Scolopax rusticola	Eurasian Woodcock	Scolopacidae	Bird-Amber
Garrulus glandarius	Eurasian Jay	Corvidae	
Carduelis spinus	Eurasian Siskin	Fringillidae	
Fringilla montifringilla	Brambling	Fringillidae	
Loxia curvirostra	Common Crossbill	Fringillidae	
Ficedula hypoleuca	Pied Flycatcher	Muscicapidae	Bird-Amber
Poecile palustris	Marsh Tit	Paridae	Bird-Red
Regulus regulus	Goldcrest	Regulidae	
Phoenicurus phoenicurus	Common Redstart	Saxicolidae	
Sitta europaea	Wood Nuthatch	Sittidae	
Locustella naevia	Common Grasshopper Warbler	Sylviidae	Priority Species, Bird-Red
Phylloscopus collybita	Common Chiffchaff	Sylviidae	
Phylloscopus sibilatrix	Wood Warbler	Sylviidae	Priority Species, Bird-Red
Phylloscopus trochilus	Willow Warbler	Sylviidae	Bird-Amber
Sylvia atricapilla	Blackcap	Sylviidae	
Dendrocopos major	Great Spotted Woodpecker	Picidae	
MAMMALS			
Capreolus capreolus	Roe Deer	Cervidae	
Vulpes vulpes	Red Fox	Canidae	
Meles meles	Eurasian Badger	Mustelidae	
Erinaceus europaeus	West European Hedgehog	Erinaceidae	Priority Species
Sorex araneus	Eurasian Common Shrew	Soricidae	
Talpa europaea	European Mole	Talpidae	

Species	Common Name	Taxon Family	National Status
Lepus europaeus	Brown Hare	Leporidae	Priority Species
Oryctolagus cuniculus	European Rabbit	Leporidae	
Apodemus sylvaticus	Wood Mouse	Muridae	
Microtus agrestis	Field Vole	Muridae	
Myodes glareolus	Bank Vole	Muridae	
Sciurus carolinensis	Eastern Grey Squirrel	Sciuridae	
Sciurus vulgaris	Eurasian Red Squirrel	Sciuridae	Priority Species

Appendix 3. Lepidoptera recorded by Geoff Naylor in his garden and Miltonrigg Wood

Species	Common Name	Taxon Family	National Status
Triodia sylvina	Orange Swift	Hepialidae	
Korscheltellus lupulina	Common Swift	Hepialidae	
Korscheltellus fusconebulosa	Map-winged Swift	Hepialidae	
Hepialus humuli	Ghost Moth	Hepialidae	Priority Species
Nemophora degeerella	Yellow-barred Long-horn	Adelidae	
Yponomeuta evonymella	Bird-cherry Ermine	Yponomeutidae	
Ypsolopha dentella	Honeysuckle Moth	Ypsolophidae	
Plutella xylostella	Diamond-back Moth	Plutellidae	
Endrosis sarcitrella	White-shouldered House-moth	Oecophoridae	
Hofmannophila pseudospretella	Brown House-moth	Oecophoridae	
Diurnea fagella	March Tubic	Chimabachidae	
Carcina quercana	Long-horned Flat-body	Peleopodidae	
Agonopterix arenella	Brindled Flat-body	Depressariidae	
Alucita hexadactyla	Twenty-plume Moth	Alucitidae	
Stenoptilia pterodactyla	Brown Plume	Pterophoridae	
Pterophorus pentadactyla	White Plume	Pterophoridae	
Archips podana	Large Fruit-tree Tortrix	Tortricidae	
Pandemis corylana	Chequered Fruit-tree Tortrix	Tortricidae	
Pandemis cerasana	Barred Fruit-tree Tortrix	Tortricidae	
Pandemis heparana	Dark Fruit-tree Tortrix	Tortricidae	
Aphelia paleana	Timothy Tortrix	Tortricidae	
Exapate congelatella	Autumnal Shade	Tortricidae	
Acleris forsskaleana	Maple Button	Tortricidae	
Acleris variegana	Garden Rose Tortrix	Tortricidae	
Agapeta hamana	Common Yellow Conch	Tortricidae	
Agapeta zoegana	Knapweed Conch	Tortricidae	
Hedya nubiferana	Marbled Orchard Tortrix	Tortricidae	

Species	Common Name	Taxon Family	National Status
Anthocharis cardamines	Orange-tip	Pieridae	
Pieris brassicae	Large White	Pieridae	
Pieris rapae	Small White	Pieridae	
Pieris napi	Green-veined White	Pieridae	
Coenonympha pamphilus	Small Heath	Nymphalidae	Near Threatened, Priority Species
Aphantopus hyperantus	Ringlet	Nymphalidae	
Maniola jurtina	Meadow Brown	Nymphalidae	
Boloria selene	Small Pearl-bordered Fritillary	Nymphalidae	Near Threatened, Priority Species
Vanessa atalanta	Red Admiral	Nymphalidae	
Vanessa cardui	Painted Lady	Nymphalidae	
Aglais io	Peacock	Nymphalidae	
Aglais urticae	Small Tortoiseshell	Nymphalidae	
Polygonia c-album	Comma	Nymphalidae	
Lycaena phlaeas	Small Copper	Lycaenidae	
Favonius quercus	Purple Hairstreak	Lycaenidae	
Celastrina argiolus subsp. britanna	Holly Blue	Lycaenidae	
Aphomia sociella	Bee Moth	Pyralidae	
Dioryctria abietella	Dark Pine Knot-horn	Pyralidae	
Pyralis farinalis	Meal Moth	Pyralidae	
Hypsopygia costalis	Gold Triangle	Pyralidae	
Anania hortulata	Small Magpie	Crambidae	
Udea lutealis	Pale Straw Pearl	Crambidae	
Udea prunalis	Dusky Pearl	Crambidae	
Udea olivalis	Olive Pearl	Crambidae	
Pleuroptya ruralis	Mother of Pearl	Crambidae	
Nomophila noctuella	Rush Veneer	Crambidae	
Evergestis forficalis	Garden Pebble	Crambidae	
Evergestis pallidata	Chequered Pearl	Crambidae	
Scoparia ambigualis	Common Grey	Crambidae	

Species	Common Name	Taxon Family	National Status
Crambus lathoniellus	Hook-streak Grass-veneer	Crambidae	
Agriphila tristella	Common Grass-veneer	Crambidae	
Catoptria margaritella	Silver-stripe Grass-veneer	Crambidae	
Catoptria falsella	Chequered Grass-veneer	Crambidae	
Elophila nymphaeata	Brown China-mark	Crambidae	
Nymphula nitidulata	Beautiful China-mark	Crambidae	
Drepana falcataria	Pebble Hook-tip	Drepanidae	
Cilix glaucata	Chinese Character	Drepanidae	
Thyatira batis	Peach Blossom	Drepanidae	
Ochropacha duplaris	Common Lutestring	Drepanidae	
Cymatophorina diluta hartwiegi	Oak Lutestring	Drepanidae	Priority Species
Polyploca ridens	Frosted Green	Drepanidae	
Achlya flavicornis	Yellow Horned	Drepanidae	
Poecilocampa populi	December Moth	Lasiocampidae	
Trichiura crataegi	Pale Eggar	Lasiocampidae	Priority Species
Lasiocampa quercus subsp. callunae	Northern Eggar	Lasiocampidae	
Macrothylacia rubi	Fox Moth	Lasiocampidae	
Euthrix potatoria	Drinker	Lasiocampidae	
Saturnia pavonia	Emperor Moth	Saturniidae	
Laothoe populi	Poplar Hawk-moth	Sphingidae	
Deilephila elpenor	Elephant Hawk-moth	Sphingidae	
Idaea seriata	Small Dusty Wave	Geometridae	
Idaea dimidiata	Single-dotted Wave	Geometridae	
Idaea biselata	Small Fan-footed Wave	Geometridae	
Idaea aversata	Riband Wave	Geometridae	
Scopula immutata	Lesser Cream Wave	Geometridae	
Scopula floslactata	Cream Wave	Geometridae	
Scotopteryx mucronata	Lead Belle	Geometridae	
Scotopteryx luridata subsp. plumbaria	July Belle	Geometridae	

Species	Common Name	Taxon Family	National Status
Scotopteryx chenopodiata	Shaded Broad-bar	Geometridae	Priority Species
Orthonama vittata	Oblique Carpet	Geometridae	Priority Species
Xanthorhoe decoloraria subsp. decoloraria	Red Carpet	Geometridae	Priority Species
Xanthorhoe fluctuata	Garden Carpet	Geometridae	Priority Species
Xanthorhoe designata	Flame Carpet	Geometridae	
Xanthorhoe montanata	Silver-ground Carpet	Geometridae	
Epirrhoe alternata	Common Carpet	Geometridae	
Epirrhoe galiata	Galium Carpet	Geometridae	
Earophila badiata	Shoulder Stripe	Geometridae	
Anticlea derivata	Streamer	Geometridae	
Hydriomena furcata	July Highflier	Geometridae	
Pennithera firmata	Pine Carpet	Geometridae	
Thera britannica	Spruce Carpet	Geometridae	
Thera obeliscata	Grey Pine Carpet	Geometridae	
Thera juniperata	Juniper Carpet	Geometridae	
Plemyria rubiginata	Blue-bordered Carpet	Geometridae	
Cidaria fulvata	Barred Yellow	Geometridae	
Electrophaes corylata	Broken-barred Carpet	Geometridae	
Cosmorhoe ocellata	Purple Bar	Geometridae	
Eulithis prunata	Phoenix	Geometridae	
Eulithis testata	Chevron	Geometridae	
Eulithis populata	Northern Spinach	Geometridae	
Eulithis mellinata	Spinach	Geometridae	Priority Species
Gandaritis pyraliata	Barred Straw	Geometridae	
Ecliptopera silaceata	Small Phoenix	Geometridae	Priority Species
Chloroclysta siterata	Red-Green Carpet	Geometridae	
Chloroclysta miata	Autumn Green Carpet	Geometridae	
Chloroclysta truncata	Common Marbled Carpet	Geometridae	
Chloroclysta citrata	Dark Marbled Carpet	Geometridae	

Species	Common Name	Taxon Family	National Status
Colostygia pectinataria	Green Carpet	Geometridae	
Colostygia multistrigaria	Mottled Grey	Geometridae	
Nebula salicata subsp. latentaria	Striped Twin-spot Carpet	Geometridae	
Lampropteryx suffumata	Water Carpet	Geometridae	
Operophtera fagata	Northern Winter Moth	Geometridae	
Operophtera brumata	Winter Moth	Geometridae	
Epirrita dilutata agg.	November Moth agg.	Geometridae	
Epirrita filigrammaria	Small Autumnal Moth	Geometridae	
Venusia cambrica	Welsh Wave	Geometridae	
Hydria undulata	Scallop Shell	Geometridae	
Odezia atrata	Chimney Sweeper	Geometridae	
Perizoma didymata	Twin-spot Carpet	Geometridae	
Perizoma affinitata	Rivulet	Geometridae	
Perizoma alchemillata	Small Rivulet	Geometridae	
Perizoma flavofasciata	Sandy Carpet	Geometridae	
Gymnoscelis rufifasciata	Double-striped Pug	Geometridae	
Chloroclystis v-ata	V-Pug	Geometridae	
Pasiphila rectangulata	Green Pug	Geometridae	
Eupithecia tenuiata	Slender Pug	Geometridae	
Eupithecia linariata	Toadflax Pug	Geometridae	
Eupithecia pulchellata	Foxglove Pug	Geometridae	
Eupithecia abbreviata	Brindled Pug	Geometridae	
Eupithecia pusillata	Juniper Pug	Geometridae	
Eupithecia nanata	Narrow-winged Pug	Geometridae	
Eupithecia innotata	Angle-barred Pug	Geometridae	
Eupithecia centaureata	Lime-speck Pug	Geometridae	
Eupithecia absinthiata	Wormwood Pug	Geometridae	
Eupithecia assimilata	Currant Pug	Geometridae	
Eupithecia vulgata	Common Pug	Geometridae	

Species	Common Name	Taxon Family	National Status
Eupithecia icterata	Tawny Speckled Pug	Geometridae	
Eupithecia subfuscata	Grey Pug	Geometridae	
Aplocera plagiata	Treble-bar	Geometridae	
Chesias legatella	Streak	Geometridae	Priority Species
Trichopteryx carpinata	Early Tooth-striped	Geometridae	
Abraxas grossulariata	Magpie	Geometridae	
Lomaspilis marginata	Clouded Border	Geometridae	
Macaria liturata	Tawny-barred Angle	Geometridae	
Macaria wauaria	V-Moth	Geometridae	Priority Species
Chiasmia clathrata	Latticed Heath	Geometridae	Priority Species
Petrophora chlorosata	Brown Silver-line	Geometridae	
Plagodis dolabraria	Scorched Wing	Geometridae	
Opisthograptis luteolata	Brimstone Moth	Geometridae	
Apeira syringaria	Lilac Beauty	Geometridae	
Ennomos alniaria	Canary-shouldered Thorn	Geometridae	
Ennomos erosaria	September Thorn	Geometridae	Priority Species
Selenia dentaria	Early Thorn	Geometridae	
Selenia lunularia	Lunar Thorn	Geometridae	
Selenia tetralunaria	Purple Thorn	Geometridae	
Odontopera bidentata	Scalloped Hazel	Geometridae	
Crocallis elinguaria	Scalloped Oak	Geometridae	
Ourapteryx sambucaria	Swallow-tailed Moth	Geometridae	
Colotois pennaria	Feathered Thorn	Geometridae	
Alsophila aescularia	March Moth	Geometridae	
Phigalia pilosaria	Pale Brindled Beauty	Geometridae	
Biston strataria	Oak Beauty	Geometridae	
Biston betularia	Peppered Moth	Geometridae	
Agriopis leucophaearia	Spring Usher	Geometridae	
Agriopis aurantiaria	Scarce Umber	Geometridae	

Species	Common Name	Taxon Family	National Status
Agriopis marginaria	Dotted Border	Geometridae	
Erannis defoliaria	Mottled Umber	Geometridae	
Peribatodes rhomboidaria	Willow Beauty	Geometridae	
Alcis repandata	Mottled Beauty	Geometridae	
Ectropis crepuscularia	Engrailed	Geometridae	
Bupalus piniaria	Bordered White	Geometridae	
Cabera pusaria	Common White Wave	Geometridae	
Cabera exanthemata	Common Wave	Geometridae	
Lomographa temerata	Clouded Silver	Geometridae	
Theria primaria	Early Moth	Geometridae	
Campaea margaritaria	Light Emerald	Geometridae	
Hylaea fasciaria	Barred Red	Geometridae	
Pseudoterpna pruinata atropunctaria	Grass Emerald	Geometridae	
Geometra papilionaria	Large Emerald	Geometridae	
Cerura vinula	Puss Moth	Notodontidae	
Furcula furcula	Sallow Kitten	Notodontidae	
Drymonia ruficornis	Lunar Marbled Brown	Notodontidae	
Notodonta dromedarius	Iron Prominent	Notodontidae	
Notodonta ziczac	Pebble Prominent	Notodontidae	
Pheosia tremula	Swallow Prominent	Notodontidae	
Pheosia gnoma	Lesser Swallow Prominent	Notodontidae	
Pterostoma palpina	Pale Prominent	Notodontidae	
Ptilodon capucina	Coxcomb Prominent	Notodontidae	
Phalera bucephala	Buff-tip	Notodontidae	
Scoliopteryx libatrix	Herald	Erebidae	
Rivula sericealis	Straw Dot	Erebidae	
Hypena proboscidalis	Snout	Erebidae	
Euproctis similis	Yellow-tail	Erebidae	
Orgyia antiqua	Vapourer	Erebidae	

Species	Common Name	Taxon Family	National Status
Spilosoma lutea	Buff Ermine	Erebidae	Priority Species
Spilosoma lubricipeda	White Ermine	Erebidae	Priority Species
Diaphora mendica	Muslin Moth	Erebidae	
Phragmatobia fuliginosa	Ruby Tiger	Erebidae	
Arctia caja	Garden Tiger	Erebidae	Priority Species
Tyria jacobaeae	Cinnabar	Erebidae	Priority Species
Nudaria mundana	Muslin Footman	Erebidae	
Cybosia mesomella	Four-dotted Footman	Erebidae	
Eilema lurideola	Common Footman	Erebidae	
Herminia tarsipennalis	Fan-foot	Erebidae	
Herminia grisealis	Small Fan-foot	Erebidae	
Schrankia costaestrigalis	Pinion-streaked Snout	Erebidae	
Abrostola tripartita	Spectacle	Noctuidae	
Abrostola triplasia	Dark Spectacle	Noctuidae	
Diachrysia chrysitis	Burnished Brass	Noctuidae	
Autographa gamma	Silver Y	Noctuidae	
Autographa pulchrina	Beautiful Golden Y	Noctuidae	
Autographa jota	Plain Golden Y	Noctuidae	
Autographa bractea	Gold Spangle	Noctuidae	
Macdunnoughia confusa	Dewick's Plusia	Noctuidae	
Plusia festucae	Gold Spot	Noctuidae	
Plusia putnami	Lempke's Gold Spot	Noctuidae	
Diloba caeruleocephala	Figure of Eight	Noctuidae	Priority Species
Acronicta alni	Alder Moth	Noctuidae	
Acronicta psi/tridens	Grey/Dark Dagger	Noctuidae	
Acronicta leporina	Miller	Noctuidae	
Acronicta menyanthidis	Light Knot Grass	Noctuidae	
Acronicta rumicis	Knot Grass	Noctuidae	Priority Species
Subacronicta megacephala	Poplar Grey	Noctuidae	

Species	Common Name	Taxon Family	National Status
Cucullia umbratica	Shark	Noctuidae	
Stilbia anomala	Anomalous	Noctuidae	Priority Species
Amphipyra berbera subsp. berbera	Svensson's Copper Underwing	Noctuidae	
Amphipyra tragopoginis	Mouse Moth	Noctuidae	Priority Species
Asteroscopus sphinx	Sprawler	Noctuidae	Priority Species
Allophyes oxyacanthae	Green-brindled Crescent	Noctuidae	Priority Species
Xylocampa areola	Early Grey	Noctuidae	
Bryophila domestica	Marbled Beauty	Noctuidae	
Caradrina morpheus	Mottled Rustic	Noctuidae	Priority Species
Caradrina clavipalpis	Pale Mottled Willow	Noctuidae	
Hoplodrina blanda	Rustic	Noctuidae	Priority Species
Rusina ferruginea	Brown Rustic	Noctuidae	
Phlogophora meticulosa	Angle Shades	Noctuidae	
Euplexia lucipara	Small Angle Shades	Noctuidae	
Celaena leucostigma	Crescent	Noctuidae	Priority Species
Gortyna flavago	Frosted Orange	Noctuidae	
Hydraecia micacea	Rosy Rustic	Noctuidae	Priority Species
Amphipoea oculea agg.	Ear Moth agg.	Noctuidae	
Luperina testacea	Flounced Rustic	Noctuidae	
Rhizedra lutosa	Large Wainscot	Noctuidae	Priority Species
Nonagria typhae	Bulrush Wainscot	Noctuidae	
Denticucullus pygmina	Small Wainscot	Noctuidae	
Photedes minima	Small Dotted Buff	Noctuidae	
Apamea remissa	Dusky Brocade	Noctuidae	Priority Species
Apamea epomidion	Clouded Brindle	Noctuidae	
Apamea crenata	Clouded-bordered Brindle	Noctuidae	
Apamea sordens	Rustic Shoulder-knot	Noctuidae	
Apamea unanimis	Small Clouded Brindle	Noctuidae	
Apamea scolopacina	Slender Brindle	Noctuidae	

Species	Common Name	Taxon Family	National Status
Apamea monoglypha	Dark Arches	Noctuidae	
Apamea lithoxylaea	Light Arches	Noctuidae	
Lateroligia ophiogramma	Double Lobed	Noctuidae	
Mesapamea secalis agg.	Common Rustic agg.	Noctuidae	
Litoligia literosa	Rosy Minor	Noctuidae	Priority Species
Mesoligia furuncula	Cloaked Minor	Noctuidae	
Oligia strigilis agg.	Marbled Minor agg.	Noctuidae	
Oligia fasciuncula	Middle-barred Minor	Noctuidae	
Xanthia togata	Pink-barred Sallow	Noctuidae	
Cirrhia icteritia	Sallow	Noctuidae	Priority Species
Agrochola lychnidis	Beaded Chestnut	Noctuidae	Priority Species
Agrochola litura	Brown-spot Pinion	Noctuidae	Priority Species
Agrochola lota	Red-line Quaker	Noctuidae	
Agrochola macilenta	Yellow-line Quaker	Noctuidae	
Agrochola circellaris	Brick	Noctuidae	
Omphaloscelis lunosa	Lunar Underwing	Noctuidae	
Conistra vaccinii	Chestnut	Noctuidae	
Lithophane semibrunnea	Tawny Pinion	Noctuidae	
Lithophane leautieri	Blair's Shoulder-knot	Noctuidae	
Xylena vetusta	Red Sword-grass	Noctuidae	
Eupsilia transversa	Satellite	Noctuidae	
Enargia paleacea	Angle-striped Sallow	Noctuidae	
Ipimorpha subtusa	Olive	Noctuidae	
Cosmia trapezina	Dun-bar	Noctuidae	
Atethmia centrago	Centre-barred Sallow	Noctuidae	Priority Species
Brachylomia viminalis	Minor Shoulder-knot	Noctuidae	Priority Species
Parastichtis suspecta	Suspected	Noctuidae	
Griposia aprilina	Merveille du Jour	Noctuidae	
Antitype chi	Grey Chi	Noctuidae	

Species	Common Name	Taxon Family	National Status
Dasypolia templi	Brindled Ochre	Noctuidae	Priority Species
Mniotype adusta	Dark Brocade	Noctuidae	Priority Species
Panolis flammea	Pine Beauty	Noctuidae	
Orthosia incerta	Clouded Drab	Noctuidae	
Orthosia cerasi	Common Quaker	Noctuidae	
Orthosia cruda	Small Quaker	Noctuidae	
Orthosia gracilis	Powdered Quaker	Noctuidae	Priority Species
Orthosia gothica	Hebrew Character	Noctuidae	
Anorthoa munda	Twin-spotted Quaker	Noctuidae	
Tholera cespitis	Hedge Rustic	Noctuidae	Priority Species
Tholera decimalis	Feathered Gothic	Noctuidae	Priority Species
Cerapteryx graminis	Antler Moth	Noctuidae	
Polia hepatica	Silvery Arches	Noctuidae	
Polia nebulosa	Grey Arches	Noctuidae	
Lacanobia thalassina	Pale-shouldered Brocade	Noctuidae	
*Lacanobia contigua	Beautiful Brocade	Noctuidae	
Lacanobia suasa	Dog's Tooth	Noctuidae	
Lacanobia oleracea	Bright-line Brown-eye	Noctuidae	
Melanchra persicariae	Dot Moth	Noctuidae	Priority Species
Ceramica pisi	Broom Moth	Noctuidae	Priority Species
Hada plebeja	Shears	Noctuidae	
Mamestra brassicae	Cabbage Moth	Noctuidae	
Sideridis rivularis	Campion	Noctuidae	
Hadena bicruris	Lychnis	Noctuidae	
Mythimna pallens	Common Wainscot	Noctuidae	
Mythimna impura	Smoky Wainscot	Noctuidae	
Mythimna ferrago	Clay	Noctuidae	
Leucania comma	Shoulder-striped Wainscot	Noctuidae	Priority Species
Peridroma saucia	Pearly Underwing	Noctuidae	

Species	Common Name	Taxon Family	National Status
Actebia praecox	Portland Moth	Noctuidae	
Euxoa tritici	White-line Dart	Noctuidae	Priority Species
*Euxoa nigricans	Garden Dart	Noctuidae	Priority Species
Agrotis exclamationis	Heart & Dart	Noctuidae	
Agrotis segetum	Turnip Moth	Noctuidae	
Agrotis puta	Shuttle-shaped Dart	Noctuidae	
Agrotis ipsilon	Dark Sword-grass	Noctuidae	
Axylia putris	Flame	Noctuidae	
Ochropleura plecta	Flame Shoulder	Noctuidae	
Diarsia dahlii	Barred Chestnut	Noctuidae	
Diarsia brunnea	Purple Clay	Noctuidae	
Diarsia mendica	Ingrailed Clay	Noctuidae	
Diarsia mendica subsp. mendica	Ingrailed Clay	Noctuidae	
Diarsia rubi	Small Square-spot	Noctuidae	Priority Species
Cerastis rubricosa	Red Chestnut	Noctuidae	
Lycophotia porphyrea	True Lover's Knot	Noctuidae	
Noctua pronuba	Large Yellow Underwing	Noctuidae	
Noctua fimbriata	Broad-bordered Yellow Underwing	Noctuidae	
Noctua comes	Lesser Yellow Underwing	Noctuidae	
Noctua interjecta	Least Yellow Underwing	Noctuidae	
Noctua janthe	Lesser Broad-bordered Yellow Underwing	Noctuidae	
Eurois occulta	Great Brocade	Noctuidae	
Graphiphora augur	Double Dart	Noctuidae	Priority Species
Anaplectoides prasina	Green Arches	Noctuidae	
Xestia baja	Dotted Clay	Noctuidae	
Xestia castanea	Neglected Rustic	Noctuidae	Priority Species
Xestia xanthographa	Square-spot Rustic	Noctuidae	
Xestia sexstrigata	Six-striped Rustic	Noctuidae	
Xestia c-nigrum	Setaceous Hebrew Character	Noctuidae	

Species	Common Name	Taxon Family	National Status
Xestia ditrapezium	Triple-spotted Clay	Noctuidae	
Xestia triangulum	Double Square-spot	Noctuidae	
Eugnorisma glareosa	Autumnal Rustic	Noctuidae	Priority Species
Pseudoips prasinana	Green Silver-lines	Nolidae	

^{*} Record requires confirmation