Wet Meadow Invertebrate Survey

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EXECUTIVE SUMMARY

Christian Owen (trading as Christian Owen Bio-surveys) was commissioned by the **Monmouthshire Meadows Group** (a registered charity) – to undertake invertebrate surveys across two Monmouthshire reserves in South Wales (**Kingcoed Meadows** and **Trellech Wet Meadow**) in 2025. **This report presents the results of the invertebrate survey conducted at Trellech Wet Meadow.**

This diverse site features species-rich grassland, wetlands, streams, ponds, scrub, a small wood and hedgerows, maintained through low-intensity grazing that promotes habitat heterogeneity and supports exceptional biodiversity.

The survey recorded **485 invertebrate** species, with **60** (**~12%**) of 'conservation interest'. The assemblage is dominated by **Coleoptera** (181 species, 28 of 'conservation interest'), **Diptera** (80 species, 10 of 'conservation interest'), and **Hemiptera** (79 species, 10 of 'conservation interest').

Trellech Wet Meadow serves as a vital refuge for declining, rare, and scarce invertebrates, including numerous habitat specialists of regional, national, and Welsh/British significance.

Key highlights include:

- **Section 7 species (Wales)**: 1 species – the ground beetle *Bembidion quadripustulatum*.
- **Nationally Rare**: 2 species – the plant bug *Lygus pratensis* and crab spider *Xysticus acerbus*.
- **Nationally Scarce**: 12 species, including the beetles (*Acupalpus exiguus*, *Attactagenus plumbeus*, *Bembidion quadripustulatum*, *Enicmus fungicola*, *Polydrusus flavipes*, *Polydrusus formosus*, *Platyrhinus resinosus*, *Protapion varipes*), the flies (*Dioctria cothurnata*, *Bombylius canescens*, *Eurychaeta palpalis*), and the planthopper *Scottianella dalei*.
- **New to Wales**: 3 species – the weevil *Polydrusus flavipes*, the planthopper *Scottianella dalei*, and leafhopper *Zygina tiliae*.
- **New to Vice-County 35 (Monmouthshire)**: 7 species – the beetles (*Acupalpus meridianus*, *Clambus pubescens*, *Enicmus fungicola*, *Pselaphus heisei*), the flies (*Sapromyza zetterstedti*, *Tomosvaryella palliditarsis*), and the springtail *Bourletiella hortensis*.
- **Additional notable records**: ~20 seldom-recorded species in Wales (e.g., *Acupalpus exiguus*, *Oncopsis avellanae*, *Berosus affinis*, *Dioctria cothurnata*, *Platyrhinus resinosus*, *Xysticus acerbus*, *Tomosvaryella palliditarsis*, *Stenopsocus stigmaticus*, *Aleochara tristis*).
- **38 Nationally/Wales Local species** (including one seemingly new to Wales and four new to VC35).
- **8 other species of interest** (including two seemingly new to VC35).
- **Recent British additions**: 3 species – the seed beetle *Bruchidius varius*, the ant *Lasius platythorax*, and the slug *Tandonia cf. cristata*.

Table of Contents

1.0 INTRODUCTION

1.1 Introductory comments

In 2025, Christian Owen (trading as Christian Owen Bio-surveys) was commissioned by the Monmouthshire Meadows Group (a registered charity) to undertake a suite of invertebrate surveys at two Monmouthshire reserves: **Kingcoed Meadows** and **Trellech Wet Meadow**. These surveys aimed to assess the current ecological value of the sites for invertebrates and to inform future habitat management.

This report presents the results of the invertebrate survey undertaken at **Trellech Wet Meadow** (also known as **Wet Meadow** and hereafter referred to simply as such), which was conducted over four daytime visits in April, June, July, and August 2025. All sampling and specimen identification were carried out by the author, Christian Owen, an experienced entomologist based in South Wales.

The Monmouthshire Meadows Group was founded in spring 2003, inspired by the Parish Grasslands Project in Gloucestershire. Within just 18 months it had grown to more than 60 members who, between them, manage around 300 acres – ranging from tiny garden minimeadows to sites of over 30 acres. Today, as a registered charity (a Charitable Incorporated Organisation, since 2020), the Monmouthshire Meadows Group has over 200 members with grasslands scattered across Monmouthshire. The group remains a small, friendly organisation whose members are passionate about restoring traditional flowering hay meadows and creating wildflower areas in their gardens. Each member's site is surveyed, and members receive individual botanical training and tailored advice on how to manage their land (Monmouthshire Meadows Group data, 2026).

Their charitable aims are: *"To promote the conservation, protection and improvement of hay meadows, grasslands and unimproved pastures in the Wye Valley and elsewhere in Monmouthshire so as to conserve and restore the diversity of plant and animal species native to that environment, in particular but not exclusively, by facilitating and promoting the management of those lands consistent with that purpose"*.

1.2 Site description

Wet Meadow (grid reference centred on SO500061) is located in the historic village of Trellech, Monmouthshire, Wales, NP25 4PG. The site lies approximately six miles south of the market town of Monmouth and comprises a 24-acre (~9.7 ha). It is designated as a **Local Wildlife Site**, recognising its important conservation value within Monmouthshire.

The site consists of five fields known as **Brewery Paddock**, **Dew Meadow**, **Dyer's Field**, **Forest Meadow**, and **Roman Park** (**Map 1**; **Figures 1-13**). These areas primarily feature species-rich neutral to slightly acidic grassland, interspersed with valuable wetland habitats. These include two boggy zones connected to seasonal streams, a more permanent stream running alongside/outside the boundary of the south-western section, patches of scrub, and two ponds. A small area of oak woodland (known as **Coates Wood**) is also present, while the fields are entirely bounded by mature hedgerows.

The ponds comprise a restored old pond at the western edge**,** known as **Pwll Pond** (a longestablished feature), and **a newly created pond** at the southern end of the reserve. These restoration and creation projects, completed in 2023, were supported by grants from the Biodiversity Fund of Dŵr Cymru (Welsh Water) and the Sustainable Development Fund

(a Welsh Government initiative for the Wye Valley Area of Outstanding Natural Beauty, now known as the Wye Valley National Landscape).

Managed by the Monmouthshire Meadows Group in partnership with Gwent Wildlife Trust under a long-term lease from the Church in Wales, the site employs traditional low-intensity practices – including cattle grazing – to maintain and enhance its botanical diversity while controlling scrub encroachment. The cattle (see **Appendices** – **Figures 29-31**) are controlled via the use of **NoFence GPS collars**. This part of the project is a partnership between the Monmouthshire Meadows Group and Grazing Management LTD, with support from the Wye Valley National Landscape's Sustainable Development Fund (SDF), funded by the Welsh Government (Monmouthshire Meadows Group, 2021).

The site is accessible via public footpaths, with a suggested circular walking route displayed on the on-site information board. It lies adjacent to **New Grove Meadows**, a Gwent Wildlife Trust reserve designated as Monmouthshire's Coronation Meadow in 2013, providing visitors with a peaceful and scenic opportunity to experience traditional unimproved grasslands within the beautiful Wye Valley landscape.

The primary objectives for **Wet Meadow** are to conserve and enhance plant diversity, support waxcap and other grassland fungi, and promote rich invertebrate communities, while encouraging public enjoyment through appropriate access and interpretation. This makes it a valuable example of successful meadow conservation in Monmouthshire.

Map 1: *Satellite image of Wet Meadow showing the five fields (Brewery Paddock, Dew Meadow, Dyers Field, Forest Meadow, and Roman Park), ponds (Pwll Pond and New Pond) and oak wood (Coates Wood). Image © Google 2026.*

1.3 Survey limitations

Standard guidelines for invertebrate surveys recommend survey visits distributed between approximately April and September/October to achieve adequate cross-seasonal representation of the invertebrate assemblage present. In the present study, full coverage of this recommended period was not achieved, as sampling was limited to four visits conducted in April, June, July, and August.

It should be emphasised, however, that the survey was never intended to generate a comprehensive invertebrate species inventory. Producing such an inventory would require a far more intensive effort, typically involving visits at approximately two-week intervals throughout the entire active season (April–September/October), repeated with comparable intensity over at least two or three years to account for inter-annual variation.

The primary purpose of this survey was more focused: to provide an assessment of the existing ecological value of the sites for invertebrates and to help inform the development of appropriate long-term habitat management prescriptions. A secondary aim was to collect baseline invertebrate data capable of detecting the effects of current and future management interventions – in particular, hay cutting and low-intensity cattle grazing – on invertebrate communities, with particular emphasis on species of conservation interest and species restricted to, or strongly associated with, flower-rich meadows.

In light of these clearly defined and relatively modest objectives, the restricted temporal coverage of the survey is not regarded as a significant limitation.

The principal limitation encountered during fieldwork arose from unfortunate operational timing. On the third scheduled site visit (24th July 2025), a seed-collecting operation involving a quad bike and towed vacuum harvester was being carried out concurrently across all fields (see **Appendices** – **Figure 26**). This activity resulted in substantial disturbance and removal of invertebrates from flower heads, seed heads, and other vegetation structures before most could be sampled using sweep-netting, or visual searching techniques. Consequently, invertebrate abundance and diversity recorded on that date are likely to have been underestimated in affected areas. No comparable disruption occurred during the other survey visits.

2.0 SAMPLING

2.1 Sampling methodology

Sampling at Wet Meadow was conducted by walking in a zigzag (or "W") pattern across each field, while employing a range of sampling techniques appropriate to the target invertebrate groups (as outlined in **Section 2.3**). The aim was to achieve comprehensive spatial coverage of the site and its habitats during each visit, thereby maximising encounters with the target invertebrates. **Table 1** (below) provides survey dates and times, weather conditions, and details of the sampling methods used during each visit.

Sampling covered four main periods/seasons of the meadows to capture seasonal variations in flora and associated fauna. The first visit, in April, was timed to sample late-winter and early-spring active or mature species. This coincided with Hawthorn (*Crataegus monogyna*) in flower (providing early nectar for pollinators) and a period when the meadows retained short turf, which is ideal for surveying ground-dwelling invertebrates. The June visit targeted a broader variety of species benefiting from peak flowering and fresh vegetative growth across many plant species. The July and August visits focused on species that prefer mature plant stages, including seed production and older foliage, as well as those reaching maturity later in the season. While the July visit captured peak maturity before heavy grazing impact, the August visit sampled the meadows under ongoing cattle grazing, featuring a heterogeneous sward structure with varied heights and patches of taller vegetation. This enabled assessment of late-season conditions and species adapted to pastoral rather than cutting management.

Due to the size of Wet Meadow, it was not possible to achieve good coverage of the entire sample area during any single visit. Alternate starting points were therefore used. The first visit started at the main gate entrance (at grid reference SO49920577) and proceeded in a broadly clockwise direction. The second visit commenced at the cattle gate (at grid reference SO50110605) and focused on the fields that had received little attention during the previous visit (e.g. Brewery Paddock) before moving on to the remaining areas, and so on.

Terrestrial invertebrates were sampled using a suite of active sampling techniques, including:

- **Aerial netting** – using a lightweight, 40 cm diameter net attached to a 1-metre-long pole to capture flying insects as they were encountered.

- **Beating** – a white try was held beneath tree or shrub branches, which were gently tapped with a stick to dislodge insects from the foliage. Taxa were then selectively removed using an aspirator (or pooter) or identified in the field.

- **Hand searching** – sifting through plant litter, inspecting under stones, tree bark, debris, etc., to locate invertebrates that may be feeding, resting, or sheltering.

- **Suction-sampling** (vacuum sampling) – a modified leaf blower was used to collect invertebrates from challenging habitats (such as very short grass or tree trunks) where sweep-netting is less effective. This method excels at capturing non-flying species or those residing in deep vegetation or bark crevices. Samples were transferred into a large white tray, and target taxa were selectively extracted using an aspirator for identification.

- **Sweep-netting** – a lightweight 40 cm diameter net mounted on a 1-metre-long pole was moved vigorously through long vegetation and overhanging tree branches to dislodge invertebrates. Invertebrates were then selectively removed from the sweep net using an aspirator.

- **Visual searching** – insects were observed foraging, basking, nesting, hunting, mating, etc., in their associated habitats without the need to deploy other sampling techniques (e.g. sweep-netting).

2.2 Survey dates

The invertebrate survey at Wet Meadow was conducted over four daytime visits during the months of April, June, July and August 2025. Sampling was attempted under dry, calm, and sunny conditions, ideal for peak invertebrate activity, however, given the often-unpredictable weather in Wales, this was not always possible. A combined total of approximately **26** hours and **10** minutes was spent sampling.

Survey dates, times, and activities are presented in **Table 1** below. Sampling techniques used at both sites are described in **Section 2.1** above.

Table 1. Survey date, times, and activities undertaken at Wet Meadow in 2025.

Survey Date	Survey Time	Activity	Weather Conditions
29th April 2025	10.00 am – 17.15 pm 7hours, 15 minutes	Sampling commenced at the main gate (at grid reference SO49920577) and followed a broadly clockwise route. A range of sampling techniques (see **Section 2.1**) where employed to maximise the number of invertebrate taxa recorded. Sweepnetting, suction-sampling, and visual searching were the most productive methods on the day.	Full Sun throughout the day. Max air temperature of 23°C. Wind speeds of around 8 miles per hour (mph) coming from an easterly direction.

18th June 2025	09.45 am – 15.50 pm 6 hours, 05 minutes	Sampling commenced at the cattle gate (at grid reference SO50110605), concentrating first on under-surveyed fields from the previous visit (e.g., Dew Meadow and Brewery Paddock) before proceeding to the remaining areas. A range of sampling techniques was employed, with sweep-netting, suctionsampling, and visual searching being the most productive methods on the day.	Full Sun throughout the day. Max air temperature of 26°C. Wind speeds of around 9 mph coming from a west-southwesterly direction.
24th July 2025	09.30 am – 15.35pm 6 hours, 05 minutes	Sampling commenced at the main gate (at grid reference SO49920577) and followed a broadly clockwise route. A range of sampling techniques was employed, with sweep-netting, suction-sampling, and hand searching (in cow dung etc.) being the most productive methods on the day.	Mostly sunny. Max air temperature of 22°C. Wind speeds of around 8 mph coming from a northerly direction. Overcast and light rain toward the end – 15.35 pm.

21st August 2025	09.10 am – 15.55 pm 6 hours, 45 minutes	Sampling commenced at the cattle gate (at grid reference SO50110605), concentrating first on under-surveyed fields from the previous visit before proceeding to the remaining areas. A range of sampling techniques was employed, with suction-sampling, hand searching (in cow dung etc.) and visual searching being the most productive methods on the day.	Sunny intervals. Max air temperature of 19°C. Wind speeds of around 7 mph coming from a north-easterly direction.

2.3 Target groups

The survey aimed to target as many different invertebrate groups as possible, with particular attention paid to the following groups:

- **Arachnida** → Araneae (spiders), Opiliones (harvestman) and Pseudoscorpiones (pseudoscorpions).
- **Coleoptera** → Carabidae (ground beetles), Chrysomelidae (leaf beetles), Curculionidae ('true' weevils), Staphylinidae (rove beetles).
- **Collembola** → Symphypleona, Entomobryomorpha etc. (springtails).
- **Diptera** (flies) → multiple families including Sciomyzidae (snail-killing flies), Stratiomyidae (soldier flies), Syrphidae (hoverflies) and Tephritidae (fruit flies).
- **Hemiptera** → Auchenorrhyncha (froghoppers, leafhoppers and planthoppers) and Heteroptera ('true bugs').
- **Hymenoptera** (bees, wasps, ants and sawflies).
- **Isopoda** (woodlice).
- **Lepidoptera** (butterflies and day-flying moths).
- **Mollusca** (slugs and snails).
- **Myriapoda** → Chilopoda (centipedes) and Diplopoda (millipedes).
- **Odonata** → Anisoptera (dragonflies) and Zygoptera (damselflies).
- **Orthoptera** → Tetrigidae (groundhoppers), Tettigoniidae (bush crickets) and Acrididae (typical grasshoppers) etc.

These target groups were selected because they encompass species with varied life histories and could reasonably be expected to occur at Wet Meadow (see **Section 2.4**). The choice of groups also partly reflects the surveyor's existing expertise. Incidental records of other

invertebrate taxa were also recorded when encountered. This included taxa such as Amphipoda ('shrimp-like crustaceans'), Arhynchobdellida (leaches), Plecoptera (stoneflies), and Trichoptera (caddisflies).

Where practicable, invertebrates were identified in the field using a x10 or x20 hand lens. Where identification was not possible in the field, representative specimens were collected and later identified using a binocular microscope. Specimen collection was kept to a minimum to avoid adverse impacts on populations and excluded species that could be confidently identified in the field – particularly those with restricted distributions (e.g. Nationally Scarce or Nationally Rare species), those considered threatened (e.g. Endangered or Vulnerable species), and/or those listed under Section 7 of the Environment (Wales) Act 2016 as species "of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales."

Invertebrates were identified to species level wherever possible. In some cases, however, species-level identification could not be achieved because: the specimen was not sexually mature (certain species can only be identified by examination of adult genitalia, usually male); an individual of the opposite sex was required for comparison; or the specimen was damaged, faded, or excessively worn. All collecting followed the Code of Conduct for Collecting Insects and Other Invertebrates (Invertebrate Link, 2002). Specimens were either preserved dry and later pinned (e.g. bees, wasps, and flies) or stored in 70-90 % isopropyl alcohol (e.g. leafhoppers, planthoppers, and spiders). All identifications were undertaken by Christian Owen, using the most appropriate and up-to-date identification keys (see **Section 5**), and were verified against reference voucher material wherever possible, particularly for difficult taxa.

2.4 Sample areas

Wet Meadow, a 24-acre (~9.7 hectare (ha)) Local Wildlife Site, consists of five fields known as Roman Park, Dyer's Field, Forest Meadow, Dew Meadow, and Brewery Paddock (**Map 1**; **Figures 1-13**). These are predominantly flower-rich grasslands, interspersed with wetland habitats including boggy zones associated with seasonal streams, patches of scrub, ponds (Pwll Pond and a newly installed pond), and a small area of oak woodland (Coates Wood). The entire fields are enclosed by a well-established hedgerow composed of traditional native species.

The meadows support a diverse floral composition, including Betony (*Stachys officinalis*), buttercups (*Ranunculus* spp.), Bracken (*Pteridium aquilinum*), Common Hogweed (*Heracleum sphondylium*), Common Spotted Orchid (*Dactylorhiza fuchsii*), Devil's-bit Scabious (*Succisa pratensis*), docks (*Rumex* spp.), Dyer's Greenweed (*Genista tinctoria*), grasses (Poaceae), Green-winged Orchid (*Anacamptis morio*), Hawthorn (*Crataegus monogyna*), Hazel (*Corylus avellana*), Marsh Marigold (*Caltha palustris*), Meadowsweet (*Filipendula ulmaria*), Nettle (*Urtica dioica*), rushes (*Juncus* spp.), Oak (*Quercus robur*), sedges (*Carex* spp.), Southern Marsh Orchid (*Dactylorhiza praetermissa*), and many more.

Roman Park and **Coates Wood** (grid reference centred on SO49920591 – the much larger of the fields/sample areas; covering an estimated area of 10.90 acres / ~4.4 ha), features a south-facing, gently sloping flower-rich meadow (**Figures 1** and **2**).

The entire field is enclosed by a well-established species-rich, mature hedgerow composed of traditional native species. A small copse of mature broadleaved woodland (Coates Wood; grid reference centred on SO49850599 – best viewed in **Figure 3**) occurs along the upper

western boundary. A newly installed wildlife pond (**Figure 4**) is located toward the southern tip of the meadow (grid reference centred on SO49860576).

Figure 1: View looking in a northerly direction over Roman Park meadow. Image photographed on 24th July 2025 from grid reference centred around SO49910579.

Figure 2: View looking in a south-easterly direction across Roman Park showing a flowerrich meadow. Image photographed on 18th June 2025 from grid reference centred around SO49890598.

Figure 3: View looking in a northerly direction along the western boundary of Roman Park, showing a mature hedgerow leading into Coates Wood. Image photographed on 29th April 2025.

Figure 4: Showing the newly installed pond located toward the southern end of Roman Park at grid reference centred on SO49860576. Image photographed on 29th April 2025.

Dyer's Field (grid reference centred on SO49920607; covering an estimated area of 3.10 acres / 1.25 ha) is a flower-rich meadow featuring two distinct yet complementary grassland habitats.

The larger portion – approximately two-thirds of the field – consists of a flower-rich meadow featuring a diverse assemblage of, grasses, and forbs characteristic of unimproved or semiimproved neutral grassland (see **Figures 5** and **6**).

The remaining third comprises rough, wet grassland dominated by tussocky vegetation, along with prominent moisture-loving species such as Meadowsweet (*Filipendula ulmaria*), Marsh Marigold (*Caltha palustris*), various rushes (*Juncus* spp.), and other wetland plants (**Figure 6**).

The two habitats are naturally separated by a small seasonal stream that flows through the site, providing valuable linear habitat and important hydrological connectivity across the field.

In the north-western corner of the meadow, partly surrounded by trees and scrub, lies Pwll Pond (grid reference centred on SO49870609), an old, seasonal pond (**Figure 7**) that holds water during wetter periods and supports wetland plants, invertebrates, and amphibians.

The entire field is enclosed by a well-established, mature hedgerow composed of traditional native species. Small stands of mature broadleaved woodland occur along the northernmost boundary (best viewed in **Figures 5** and **6**). The south-western third of the meadow directly adjoins the northern edge of Coates Wood.

Figure 5: View looking north-easterly across Dyer's Field from grid reference centred on SO49880603. A small seasonal stream viewed to the left of image, with Wetmeadow Wood viewed toward the upper end of the meadow. Image photographed on 29th April 2025.

Figure 6: Showing an area of rough, wet tussocky grassland, containing species such as Meadowsweet (*Filipendula ulmaria*), Marsh Marigold (*Caltha palustris*), rushes (*Juncus* spp.), and other moisture-loving species. Image photographed on 29th April 2025.

Figure 7: Showing a dry, cattle poached **Pwll Pond** (at grid reference SO49870609). Image photographed on 24th July 2025. This area was good for the Scarce Four-dot Pin-palp (*Bembidion quadripustulatum*), a Section 7 species.
Forest Meadow (grid reference centred on SO50060617; covering an estimated area of 3.90 acres / 1.25 hectares) is predominantly a dry, flower-rich meadow, with a smaller western portion transitioning into wet grassland.

The larger portion – approximately three-quarters of the field – supports a diverse, speciesrich sward characteristic of unimproved or semi-improved neutral grassland (**Figure 8**). This area contains an attractive assemblage of wildflowers, grasses, and forbs typical of such habitats.

The western quarter is noticeably damper and supports a slightly different plant community, including frequent tussocks of rushes (*Juncus* spp.) together with other moisture-loving species (**Figure 9**).

The field is enclosed by well-developed, mature hedgerows on most boundaries. Along the entire western edge runs Wetmeadow Wood (viewed in **Figure 8**), an area of mature broadleaved woodland whose name reflects its close historical association with the adjacent damp grasslands.

The woods are separated from the field by a small path lined with a linear stand of mature broadleaved trees.

Figure 8: View looking in a north-westerly direction across Forest Meadow toward Wetmeadow Woods. Image photographed on 18th June 2025, from grid reference centred around SO50070613.

Figure 9: View looking in a southerly direction across the wetter area of Forest Meadow. Image photographed on 18th June 2025, from grid reference centred on SO50010620.

Dew Meadow (grid reference centred on SO50040607; covering an estimated area of 3.50 acres / ~1.40 ha) is predominantly a dry, flower-rich meadow, with a small area of rough damp vegetation and a cattle holding pen.

The main area consists of an open, flat meadow supporting a diverse, species-rich sward characteristic of unimproved or semi-improved neutral grassland (**Figure 10**). This section supports an attractive and varied assemblage of wildflowers, grasses and forbs typical of such habitats. With small areas of bare-ground located near and around the cattle gate.

A smaller, rougher and damper area in one corner is dominated by docks (*Rumex* spp.), tall Nettles (*Urtica dioica*) and thistles (*Cirsium* spp.) (**Figure 11**). This vegetation was present at the start of the survey but was grazed back / cleared during later visits (as seen in **Figure 27** in the **Appendices**), together with an old straw pile, disused metal animal pens tucked beneath the hedgerow, and occasional stands of Common Elder (*Sambucus nigra*).

In the southwestern corner lies a-fixed cattle holding pen (see **Figure 28** in the **Appendices**). The pen consists of a compacted area of stone ballast enclosed by post-andrail fencing.

Figure 10: View looking north-westerly across Dew Meadow showing a flower-rich meadow and small areas of bare ground. Image photographed on 18th June 2025 from grid reference centred on SO50090605.

Figure 11: Showing a damp, rough area of vegetation consisting of docks, nettles and thistles, with old, metal animal sheds tucked in under the hedge, at grid reference centred on SO50080604. Image photographed on 29th April 2025.

Brewery Paddock (grid reference centred on SO50070594) – the smaller of the fields/sample areas; covering an estimated area of 2.60 acres / 1.05 ha. It comprises an elongate strip of flower-rich meadow that supports two distinct yet complementary grassland habitats.

The larger portion – accounting for approximately two-thirds of the field – consists of a flower-rich meadow characterised by a diverse assemblage of wildflowers, grasses, and forbs typical of unimproved or semi-improved neutral grassland. This area is also interspersed with wet flushes (see **Figures 12** and **13**).

The remaining third consists of rough, wet grassland and scrub, dominated by tussocky vegetation, bramble scrub, and prominent moisture-loving species including Meadowsweet (*Filipendula ulmaria*), Marsh Marigold (*Caltha palustris*), various rushes (*Juncus* spp.), and other wet-loving plants (see **Figure 12**).

These two habitats are clearly separated by a small seasonal stream that flows through the site. This watercourse provides valuable linear habitat and maintains important hydrological connectivity across the field.

The entire field is enclosed by a well-established, species-rich, mature hedgerow composed of traditional native species.

The B4293 Monmouth Road runs adjacent to the eastern boundary, while an old derelict property and Trellech Surgery are located along the southernmost boundary.

Figure 12: View looking in a southerly direction down Brewery Paddock from grid reference centred on SO50100602. Image photographed on 29th April 2025.

Figure 13: View looking in a northerly direction across the wetter area of Brewery Paddock (grid reference centred on SO50070598), showing Meadowsweet (*Filipendula ulmaria*), Marsh Marigold (*Caltha palustris*), various rushes (*Juncus* spp.), and other wet loving plants Image photographed on 29th April 2025.

3.0 RESULTS

3.1 Overview

During the 2025 survey at Wet Meadow, a total of **485 invertebrate** species were recorded. The complete species list, including the specific fields in which each species was encountered – marked with an X – is presented in **Appendix 1**, with relevant **National Status codes** added where applicable (see **Section 3.2** for details).

The survey recorded the following totals across the individual fields:

- **Roman Park**: 220 species (12 of which were of 'conservation interest').
- **Dyer's Field**: 213 species (23 of which were of 'conservation interest').
- **Brewery Paddock**: 169 species (11 of which were of 'conservation interest').
- **Dew Meadow**: 141 species (8 of which were of 'conservation interest').
- **Forest Meadow**: 130 species (10 of which were of 'conservation interest').

Table 2 below provides a summary of species richness across the main invertebrate groups covered during the survey, together with the number of species within each group that were assessed as being of 'conservation interest'.

Table 2. Summary of species richness across invertebrate groups, showing the total number of species recorded and the number assessed as being of 'conservation interest'.

Invertebrate Group	Number of Species	Conservation Interest
Total species	485	60
Coleoptera (beetles)	181	28
Diptera (flies)	80	10
Hemiptera (true bugs)	79	10
Arachnida (harvestman, spiders etc.)	43	5
Hymenoptera (bees, wasps, ants, etc.)	31	2
Lepidoptera (butterflies and moths)	17	2
Mollusca (slugs and snails)	10	1
Collembola (springtails)	7	1
Myriapoda (centipedes and millipedes)	7	0
Psocoptera/Psocodea (barkflies)	6	1
Neuroptera (lacewings)	6	0
Orthoptera and allies (crickets, grasshoppers, earwigs etc.)	6	0
Other	5	0
Isopoda (woodlice)	4	0
Odonata (damselflies and dragonflies)	3	0

The most species-rich groups were **Coleoptera** (beetles) with 181 species, followed by **Diptera** (flies) with 80 species, **Hemiptera** (true bugs) with 79 species, **Arachnida** (spiders, harvestmen, etc.) with 43 species, **Hymenoptera** (bees, wasps, ants, etc.) with 31 species, and **Lepidoptera** (butterflies and moths) with 17 species. Among these more diverse orders, the highest numbers of species of conservation interest were recorded in **Coleoptera** (28 species), **Diptera** (10 species), and **Hemiptera** (10 species).

Other moderately well-represented groups included **Mollusca** (slugs and snails) with 10 species, **Collembola** (springtails) with 7 species, **Myriapoda** (centipedes and millipedes) with 7 species, **Neuroptera** (lacewings) with 6 species, and **Orthoptera and allies** (crickets, grasshoppers, earwigs etc.), with 6 species.

Smaller numbers were recorded for several additional groups, such as **Psocoptera/ Psocodea** (barkflies), **Isopoda** (woodlice), and **Odonata** (damselflies and dragonflies).

Across the entire survey, **60 species** – approximately **12%** of the total recorded fauna – were identified as being of conservation interest. This relatively high proportion highlights the considerable ecological value of Wet Meadow for invertebrate biodiversity.

As partly noted in **Section 2.3**, many Hemiptera specimens were either females or nymphs, which often prevents reliable identification to species level without adult males. Consequently, the true species richness for this group (and therefore the overall total) is likely to be higher than reported here. Similar limitations apply to several other taxa, including Arachnida and Coleoptera. Furthermore, a number of individuals evaded capture or close examination, so their identities remain speculative and they have been excluded from this report.

3.2 Species of conservation interest

Of the **485** invertebrate species recorded at Wet Meadow in 2025, **60** (**~12%**) are deemed to be of 'conservation interest' (i.e., species considered to be Nationally Local, Scarce or Rare, and/or are listed under Section 7 of the Environment (Wales) Act 2016 as species of 'principal importance' for the conservation of biological diversity in Wales'). These species are summarised in **Table 3** and some discussed in further detail below.

National Status codes

Local (Nationally/Wales) – Species which, whilst fairly common, are evidently less widespread than truly common species, but also not qualifying as Nationally Scarce having been recorded from over 100, but less than 300, ten-kilometre squares of the British National Grid system since 1970.

Nationally Rare (NR or RDB 3) – Taxa with small populations which are not at present endangered or vulnerable but which are at risk. These are species which are estimated to occur in 15 or fewer ten-kilometre squares of the British National Grid system since 1970.

Nationally Scarce (NS) or **Notable (Na** or **Nb)** – Species occurring within the range of 16 to 100 ten-kilometre squares of the British National Grid system since 1970.

New for the vice-county (VC) – Species presumed new for the vice-county due to the lack of existing records for that particular area. **Please note** that an absence of records for a VC does not necessarily mean a record is new to a VC – it may mean previous records have simply not been submitted to the relevant recording schemes or yet to be made public.

New for Wales – Species presumed new for Wales due to the lack of existing records for that particular area. **Please note** that an absence of records for a particular species in Wales does not necessarily mean the record is inherently new to Wales – it may mean previous records have simply not been submitted to the relevant recording schemes or yet to be made public.

Section 7 – Species listed under Section 7 of Environment (Wales) Act 2016 as 'species of principal importance for conservation of biological diversity in Wales'.

Other – Species that are not considered threatened but are otherwise noteworthy (e.g. due to a lack of previous records or having been recently discovered new for Britain).

Table 3. List of species of 'conservation interest' recorded at Wet Meadow in 2025 (ordered alphabetically by Order, Family, and then Species), along with their conservation statuses and habitat preferences (as determined by **Pantheon**) where applicable. Species considered to be of greatest conservation importance at Wet Meadow are shown in **bold**.

Species	Family	Order	Conservation status	Roman Park	Dyer's Field	Dew Meadow	Forest Meadow	Brewery Paddock
Drassyllus pusillus	Gnaphosidae	Araneae	Local; generally uncommon		x			
Arctosa leopardus	Lycosidae	Araneae	Local		x			
Nesticus cellulanus	Nesticidae	Araneae	Local		x			
Ozyptila trux	Thomisidae	Araneae	Local		x			
Xysticus acerbus	**Thomisidae**	**Araneae**	**NR**				**x**	
Platyrhinus resinosus	Anthribidae	Coleoptera	[Nb]				x	
Protapion varipes	Apionidae	Coleoptera	[Nb]; Nb	x				x
Acupalpus exiguus	Carabidae	Coleoptera	NS		x			
Acupalpus meridianus	Carabidae	Coleoptera	Local in Wales; new for VC					x
Bembidion articulatum	Carabidae	Coleoptera	Local in Wales		x			
Bembidion quadripustulatum	**Carabidae**	**Coleoptera**	**NS; Section 7**		**x**			
Stenolophus mixtus	Carabidae	Coleoptera	Local in Wales		x			
Aphthona lutescens	Chrysomelidae	Coleoptera	Local		x			
Bruchidius varius	Chrysomelidae	Coleoptera	Other	x			x	
Phyllotreta flexuosa	Chrysomelidae	Coleoptera	Local; scarce in Duff		x			
Phyllotreta vittula	Chrysomelidae	Coleoptera	Local	x				

Clambus pubescens	Clambidae	Coleoptera	Local; new for VC		x			
Scymnus haemorrhoidalis	Coccinellidae	Coleoptera	Local		x			
Attactagenus plumbeus	Curculionidae	Coleoptera	Nb				x	

Curculio nucum	Curculionidae	Coleoptera	Local			x		
Graptus triguttatus	Curculionidae	Coleoptera	Local; scarce in Duff	x				
Hypera conmaculata	Curculionidae	Coleoptera	Local; scarce in Duff		x			
Polydrusus flavipes	Curculionidae	Coleoptera	Nb; new for Wales					x
Polydrusus formosus	Curculionidae	Coleoptera	[Na]			x		
Hister unicolor	Histeridae	Coleoptera	Local		x			
Berosus affinis	Hydrophilidae	Coleoptera	Local	x				
Enicmus fungicola	Latridiidae	Coleoptera	Notable; new for VC		x			
Meligethes brunnicornis	Nitidulidae	Coleoptera	Local				x	
Otophorus haemorrhoidalis	Scarabaeidae	Coleoptera	Local			x		
Aleochara tristis	Staphylinidae	Coleoptera	Other; rare in Wales			x		
Carpelimus pusillus	Staphylinidae	Coleoptera	Local		x			
Platystethus nitens	Staphylinidae	Coleoptera	Local in Wales		x			
Pselaphus heisei	Staphylinidae	Coleoptera	Other; new for VC		x			
Dioctria cothurnata	Asilidae	Diptera	NS	x		x		
Bombylius canescens	Bombyliidae	Diptera	NS	x				

Eurychaeta palpalis	Calliphoridae	Diptera	NS				x	
Limnellia fallax	Ephydridae	Diptera	Local					x
Sapromyza zetterstedti	Lauxaniidae	Diptera	Local; new for VC					x
Tomosvaryella palliditarsis	Pipunculidae	Diptera	Local; new for VC					x
Pollenia amentaria	Polleniidae	Diptera	Local				x	
Pollenia griseotomentosa	Polleniidae	Diptera	Local			x		
Euthycera fumigata	Sciomyzidae	Diptera	Other				x	
Phasia pusilla	Tachinidae	Diptera	Local in Wales					x
Orius (Heterorius) laticollis	Anthocoridae	Hemiptera	Other					x
Eupteryx filicum	Cicadellidae	Hemiptera	Local					x
Eupteryx signatipennis	Cicadellidae	Hemiptera	Local		x			
Macrosteles septemnotatus	Cicadellidae	Hemiptera	Local		x			
Oncopsis avellanae	Cicadellidae	Hemiptera	Local	x			x	
Zygina tiliae	**Cicadellidae**	**Hemiptera**	**Local; new for Wales**	**x**				
Megamelodes quadrimaculatus sensu stricto	Delphacidae	Hemiptera	Local		x			
Scottianella dalei	**Delphacidae**	**Hemiptera**	**Nb; new for Wales**	**x**				
Megalonotus chiragra	Lygaeidae	Hemiptera	Local	x				
Lygus pratensis	Miridae	Hemiptera	[RDB 3]			x		

Lasius platythorax	Formicidae	Hymenoptera	Other		x			
Lasioglossum laevigatum	Halictidae	Hymenoptera	Local					x
***Acrocercops brongniardella* (mines)**	**Gracillariidae**	**Lepidoptera**	**Local**					
Gillmeria pallidactyla	Pterophoridae	Lepidoptera	Local		x			
Stenopsocus stigmaticus	Stenopsocidae	Psocoptera	Local				x	
Tandonia cf. cristata	Milacidae	Pulmonata	Other			x		
Bourletiella hortensis	Bourletiellidae	Symphypleona	Other; new for VC	x				x

3.2.1 Section 7 species

Section 7 of the Environment (Wales) Act 2016 requires the Welsh Ministers to publish and maintain a list of living organisms and types of habitat that are of principal importance for the purpose of maintaining and enhancing biodiversity in Wales (commonly referred to as the 'Section 7 list'). This list replaced the Section 42 list under the Natural Environment and Rural Communities (NERC) Act 2006 that previously applied in Wales. Section 7 also imposes a duty on public authorities (including Welsh Ministers) to 'take all reasonable steps to maintain and enhance the features of the listed species and habitats, and to promote the taking of such steps by others' when exercising their functions.

A total of **one** species recorded during the survey is listed under **Section 7** of the Environment (Wales) Act 2016, which also has an additional conservation status, being classified as **Nationally Scarce** (**NS**). Where a species has more than one conservation status, their Section 7 status will be given precedence and they will be included within this subsection only.

***Bembidion quadripustulatum* (Coleoptera: Carabidae), Scarce Four-dot Pin-palp – NS; Section 7**

Bembidion quadripustulatum, commonly known as the Scarce Four-dot Pin-palp, is a small (3.3-4.2 mm) ground beetle (family Carabidae) in the genus *Bembidion*. It is one of three similar species in Britain with four distinct pale spots on the elytra: one humeral (behind each shoulder) and one subapical (just behind the middle).

In Britain, it is very local in north-eastern, central, and southern England, and mostly eastern Wales, and may possibly be declining. It is listed under Section 7 of the Environment (Wales) Act 2016 as a species of 'principal importance for the conservation of biological diversity in Wales' due to its rarity. In Wales, populations are scattered along the eastern part of the country, with records including the north shore of Llandegfedd Reservoir. The species favours damp, sometimes shaded, bare mud or clay substrates, typically at the edges of standing or slow-flowing water, such as riverbanks or reservoir margins. Adults overwinter under bark (Duff, 2012).

During the survey, an adult was encountered in Dyer's Field by suction-sampling the thendried-up, cattle-trodden pond (**Figure 7**) on 24th July 2025, at grid reference centred on SO49870609.

3.2.2 Nationally Rare species

A total of **two** species recorded during the survey are designated as **Nationally Rare** (**NR** or **RDB 3**). These are discussed below in alphabetical order by Order and then Species.

***Xysticus acerbus* (Araneae: Thomisidae), a crab-spider – NR**

Xysticus acerbus (**Figure 14**) is a rare and very local spider in Britain, with scattered records in southern England and South Wales. However, there does seem to be a slight increase in its distribution, at least in some areas. It occurs in a range of grassland habitats, including chalk and limestone grassland in Dorset, Hampshire, and Somerset; short meadow grassland in Sussex and Glamorgan; and sand dunes at Braunton Burrows (Devon). The spider has also been recorded on heathland and coastal undercliffs in Dorset (Spider and Harvestman Recording Scheme data, 2026a). Current threats to this species are difficult to assess due to its varied habitats, but the loss of unimproved grassland in general is likely to be detrimental, and such grasslands should be best maintained by grazing.

During the survey, one adult female was recorded in Forest Meadow on 29th April 2025, at grid reference centred on SO50120619.

Figure 14: The crab spider *Xysticus acerbus* © Liam Olds.

***Lygus pratensis* (Hemiptera: Miridae), a plant-bug – RDB 3**

Lygus pratensis, is a species of plant bug in the family Miridae (Hemiptera). Adults typically measure 6.0-7.0 mm in length, with variable coloration: males often reddish-brown to dark red, females more greenish-brown. Identification within the genus *Lygus* is challenging and often requires close examination of fine details, such as the pubescence (hairs) on the corium of the forewings.

Historically, in Britain, *L. pratensis* was considered a rare species (classified as RDB 3 – Rare in the older British Red Data Book system for invertebrates), largely restricted to heathland habitats in southern England, including woodland rides and edges. However, over recent decades, it has undergone a dramatic range expansion. It is now widespread and patchily distributed across much of Britain, particularly southern and central regions (NatureSpot data, 2026a). This spread has allowed it to occupy a broader variety of habitats, including meadows, hedgerows, weedy areas, and disturbed sites – aligning more with its polyphagous behaviour seen on the European continent. As such, it is now much more common than its RDB 3 status suggests, and its conservation status requires downgrading.

During the survey, several adults were encountered by sweep-netting vegetation within Dew Meadow on 21st August 2025, at grid reference centred on SO50120609.

3.2.3 Nationally Scarce species

A total of **eleven** species recorded during the survey are designated as **Nationally Scarce** (**NS**, **Notable**, **Na**, or **Nb**). These are discussed below in alphabetical order by Order and then Species.

***Acupalpus exiguus* (Coleoptera: Carabidae), a ground-beetle – NS**

Acupalpus exiguus is a small (2.4-2.8 mm) ground beetle belonging to the subfamily Harpalinae, tribe Harpalini, in the family Carabidae. The beetle is local and scarce throughout much of Britain. It is most regularly recorded in south-east England, particularly in coastal areas where it may be more frequent. Records extend elsewhere in England, with scattered occurrences further north and west, including rare records from Wales. It is predominantly a southern species in Britain, with coastal affinities, but also occurs inland on river margins, in grassland on clay soils, and amongst debris on mud or silt at the edges of freshwater bodies (Essex Field Club data, 2026).

During the survey, two adults were encountered by suction-sampling within Dyer's Field on 29th April 2025, at grid reference centred on SO49870606.

***Attactagenus plumbeus* (Coleoptera: Curculionidae), a broad-nosed weevil – Nb**

Attactagenus plumbeus is a medium-sized (5.5-9.0 mm) broad-nosed weevil (family Curculionidae, subfamily Entiminae). It is also known under older synonyms such as *Cneorrhinus plumbeus* or *Cneorhinus plumbeus*. The species is characterised by its robust body, prominent eyes, and covering of fine scales, giving it a somewhat mottled or greyish appearance.

The weevil is associated with the roots of various shrubs, herbaceous plants, and possibly trees; the larvae likely develop in the soil, feeding on the roots, though specific host plants are not extensively documented. The species prefers dry grasslands or open habitats. Adults are active mainly from May to August and can be found on low vegetation or swept from grass. In Britain, the weevil is local in England, very local in Wales, and southern Scotland (Duff, 2016).

During the survey, one adult was encountered by suction-sampling in Forest Meadow on 18th Jun 2025, at grid reference centred on SO50000618.

***Enicmus fungicola* (Coleoptera: Latridiidae), a small mould beetle – Notable**

Enicmus fungicola is a tiny brown scavenger beetle in the family Latridiidae (order Coleoptera). It was first described in 1868 by the Swedish entomologist Carl Gustaf Thomson. The specific name fungicola (from Latin, meaning "fungus-dwelling") reflects its lifestyle: these beetles are closely associated with fungi and feed primarily on moulds, fungal spores, hyphae, and decaying organic matter. They are usually found in damp, shaded habitats such as old woodlands, where they occur in leaf litter, rotting wood, fungal fruiting bodies, and occasionally slime moulds (myxomycetes). In Britain, *E. fungicola* is rare and very local, with scattered records mostly from England, Wales, and central and southern Scotland (Duff, 2020).

During the survey, two adults were encountered by sieving leaves and litter within Coates Wood – Roman Park – on 29th April 2025, at grid reference centred on SO49850596. **Note**: This appears to be the first recorded occurrence for this species within the vice-county of Monmouthshire (VC35).

***Platyrhinus resinosus* (Coleoptera: Anthribidae), Cramp-Ball Fungus Weevil – Nb**

Platyrhinus resinosus (**Figure 15**), commonly known as the Cramp-ball Fungus Weevil or Scarce Fungus Weevil, is a distinctive and unusually large beetle in the family Anthribidae (fungus weevils), reaching lengths of ~7.0-15 mm. It features a broad, flattened snout (rostrum) and a mottled grey, black, and buff body pattern that provides excellent camouflage, often resembling bird droppings (NatureSpot data, 2026b). The larvae develop exclusively within the hard, black fruiting bodies of the Cramp-ball Fungus (*Daldinia concentrica*), also known as King Alfred's Cakes or Coal Fungus, which grows largely on dead Ash trees (*Fraxinus excelsior*) and occasionally other hardwoods. Adults are active from spring to autumn, peaking in June and July, and are often found on or near these fungal hosts.

In Britain, the beetle is classified as Nationally Scarce (Notable B status), indicating it is uncommon and recorded from relatively few sites, though it occurs widely across southern England, extending north to Yorkshire and with localised populations, particularly in Wales.

During the survey, two larvae were recording inside *Daldinia concentrica* in Forest Meadow on 18th June 2025, at grid reference centred around SO49990621.

Figure 15: An adult Cramp-Ball Fungus Weevil © Liam Olds

***Polydrusus flavipes* (Coleoptera: Curculionidae), a broad-nosed weevil – Nb; new for Wales**

Polydrusus flavipes is a species of broad-nosed weevil (subfamily Entiminae, tribe Polydrusini) in the large family Curculionidae. The beetle measure ~4.5-5.5 mm in length, with the body covered in iridescent scales (often greenish or metallic) and yellowish legs. Adults feed on the leaves of various deciduous trees and shrubs, typically causing notched edges where they eat. Larvae develop in the soil, where they feed on plant roots. This species is polyphagous, on a wide range of host plants, including alders (*Alnus* spp.), birches (*Betula* spp.), Hornbeam (*Carpinus betulus*), poplars (*Populus* spp.), oaks (*Quercus*

spp.), and willows (*Salix* spp.), among others (Bladmineerders.nl, 2021). In Britain, it occurs mainly in England and is considered local and scarce (Duff, 2016).

During the survey, an adult female was encountered by beating the lower branches of trees within Brewery Paddock, at grid reference centred on SO50010588. **Note**: This appears to be the first recorded occurrence of this species in Wales.

***Polydrusus formosus* (Coleoptera: Curculionidae), a broad-nosed weevil – [Na]**

Polydrusus formosus is a species of broad-nosed weevil in the family Curculionidae (subfamily Entiminae). Adults are often found on trees and shrubs, feeding on the foliage of species such as birches (*Betula* spp.), Hazel (*Corylus avellana*), and various fruit trees, though they are generally not considered a major pest.

In Britain, *P. formosus* was historically a scarce species, rare enough to be designated as Nationally Notable A. This status reflected limited records and a restricted distribution. However, in recent years, the species has undergone a significant range expansion and population increase, especially in England. It is now widespread and fairly frequent in southern and central England, though it becomes scarcer further north. It remains a localised species in Wales; however, it should probably be considered Nationally Local at present.

During the survey, the weevil was recorded on 18th June 2025 by beating the lower branches of tree in Dew Meadow, at grid reference centred on SO50040611, and in Roman Park at grid reference centred on SO50040596.

***Protapion varipes* (Coleoptera: Apionidae), a seed-weevil – [Nb]; Nb**

Protapion varipes (**Figure 16**) is a small (~2.0-3.0 mm) seed weevil belonging to the family Apionidae. In Britain, the weevil occurs locally in central and southern England, with populations becoming increasingly scarce further north, including very local records in northern England, Wales, and south-east Scotland (Duff, 2016).

Figure 16: A carded *Protapion varipes* © Liam Olds.

Its distribution is tied to suitable habitats supporting its host plants. The species is primarily associated with Red Clover (*Trifolium pratense*), where adults are typically found feeding or resting on foliage and flowers (Duff, 2016). Continental European records also link it to Hare's-foot Clover (*Trifolium arvense*), suggesting some oligophagous behaviour on *Trifolium* species (Alonso-Zarazaga, 1990), though British observations predominantly note Red Clover. Despite its seed-feeding habits (typical of many Apionidae), the detailed biology and lifecycle of *P. varipes* remain poorly documented and largely unknown, particularly in Britain. Unlike closely related economic pests such as *P. fulvipes* (White Clover Seed Weevil, on *T. repens*) or *P. trifolii* (Clover Seed Weevil, on *T. pratense*), which have wellstudied univoltine lifecycles involving adult leaf-feeding, oviposition into florets, and larval development within developing seeds (Langer & Rohde, 2005; Lundin et al., 2016), no equivalent detailed studies exist for *P. varipes*. It is presumed to follow a similar pattern – adults active in spring/summer on clover-rich grasslands, meadows, or field margins – but confirmation of larval host use (e.g., seed predation) or generational cycle is lacking. Habitats include clover-rich grasslands, pastures, waysides, and disturbed areas where Red Clover thrives. Its rarity may reflect declines in traditional hay meadows or intensive agriculture.

During the survey, six females were recorded by suction-sampling various location in Roman Park on 29th April 2025, and two females encountered in Brewery Paddock on 24th July 2025, at grid reference centred around SO50070594.

***Bombylius canescens* (Diptera: Bombyliidae), Western Bee-fly – NS**

Bombylius canescens (**Figure 17**), commonly known as the Western Bee-fly, is one of four *Bombylius* species recorded in Britain. It is distinguished by its clear, unmarked wings, long black bristles among pale hairs behind the eyes, and often dark femora on the legs. This scarce species is mainly distributed in south-west England and Wales, with habitats including grassy slopes, open woodland, heathland edges, quarries, coastal cliffs, and shingle. Older records extend further north, but it remains uncommon.

Figure 17: An adult Western Bee-fly © Liam Olds

Adults fly from early May to mid-August (peaking in June-July), hovering to feed on nectar from flowers such as Bluebells (*Hyacinthoides non-scripta*), Bramble (*Rubus fruticosus* agg.), Bugle (*Ajuga reptans*), and thymes (*Thymus* spp.). Like other bee-flies, females flick eggs towards nest holes of solitary bees (*Lasioglossum* and *Halictus* mining bees); the larvae are parasitoids that develop inside the host nests (Harvey, 2014).

During the survey, several adults were observed on 18th June 2025 hawking over and flicking eggs into the nesting holes of solitary bees in Roman Park, along the bare ground on the pond bank (**Figure 4** and **Figure 23** in **Section 4.2**), at grid reference centred on SO49870577.

***Dioctria cothurnata* (Diptera: Asilidae), Scarce Red-legged Robberfly – NS**

Dioctria cothurnata, commonly known as the Scarce Red-legged Robberfly, is a predatory fly in the family Asilidae (robber flies). In Britain, it is widespread but scarce, with records extending north to Inverness, and it has been designated as Nationally Scarce by Drake (2017, Natural England status review).

This species is typically associated with woodland edges, mature scrub featuring gaps and scalloped margins, and often favours wetter sites linked to trees such as alders (*Alnus* spp.) and willows/sallows (*Salix* spp.). Adults are active and on the wing from May to July. Like other robber flies, *D. cothurnata* is an agile aerial predator that preys on various flies, parasitic wasps (including ichneumonids), and sawflies (Falk, 2026a).

During the survey, several adults were recorded in Dew Meadow and Forest Meadow on 18th Jun 2025.

***Eurychaeta palpalis* (Diptera: Calliphoridae), False Fleshfly – NS**

Eurychaeta palpalis, commonly known as the False Fleshfly, is a species of blowfly (family

Calliphoridae, subfamily Helicoboscinae). It resembles a large, strongly bristled fleshfly (Sarcophagidae) in the field, with grey dusting on the abdomen and thorax, but differs in head shape and bristle details. It is the only British species in its genus.

It occurs widely but locally in Britain, primarily in calcareous (chalky or limestone) habitats. Adults' frequent scrubby calcareous grassland, woodland rides, sunny margins, and hedgerows, often visiting flowers like spurge (*Euphorbia* spp.) and Wild Parsnip (*Pastinaca sativa*). The species is most common in southern England (e.g., southern downs, Chilterns, Cotswolds) with records extending north to Yorkshire (Falk, 2026b).

During the survey, an adult was encountered by sweep-netting in Forest Meadow on 18th June 2025, at grid reference centred around SO49990615.

***Scottianella dalei* (Hemiptera: Delphacidae), a planthopper – Nb; new for Wales**

Scottianella dalei (**Figure 18**), is a distinctive species of planthopper belonging to the family Delphacidae, a large group of small, phloem-feeding insects commonly known as planthoppers. This species is notable for its sexual dimorphism and limited distribution in Britain. The species is considered relatively rare in Britain, with most records concentrated in the southern counties of England. It inhabits open grassland habitats, where adults and nymphs feed on grasses (British Bugs data, 2026a).

Males are particularly striking: small (~3.0-4.0 mm), with a body colour that ranges from yellowish to pale golden brown, featuring a contrasting black scutellum (the triangular plate on the thorax) and a predominantly black abdomen. This bold coloration makes them visually distinctive among many other delphacids. Females, in contrast, lack these dark markings and are uniformly light yellow-brown, appearing much plainer.

During the survey, a single adult male was encountered by suction-sampling in Roman Park on 29th April 2025, at grid reference centred around SO49880591. **Note**: This appears to be the first recorded occurrence for this species in Wales. The bug was also recorded at Kingcoed Meadows on 30th April and 10th May 2025.

Figure 18: An adult male *Scottianella dalei* preserved in solution © Christian Owen

3.2.4 Nationally Local species

A total of **thirty-eight** species recorded during the survey are considered **Nationally Local** or considered **Local in Wales**; of which **twenty-eight** species are discussed below in alphabetical order by Order and then Species.

***Arctosa leopardus* (Araneae: Lycosidae), Leopard Bear-spider – Local**

The Leopard Bear-spider (*Arctosa leopardus*) is a distinctive wolf spider found across parts of Britain. It is relatively widespread in Wales and on southern heathlands in England, but becomes very scattered further north and east, with records absent from large areas of central and northern Britain. Isolated occurrences extend as far as the Inverness area in Scotland, though it is generally considered a local species, often present in low numbers at suitable sites. The spider favours damp, seasonally flooded habitats where there is plenty of ground cover, such as dune slacks, wet heathland, fens, carr woodland, and other marshy areas. The spider is often found in shaded spots among moss, leaf litter, and debris. Unlike some similar species (e.g., *Arctosa perita*), it does not dig a burrow but constructs a silken retreat within the litter or low vegetation. (Spider and Harvestman Recording Scheme data, 2026b).

During the survey, the spider was encountered by suction sampling in the marshy area of Dyer's Field (**Figure 6**) on 29th April 2025, at grid reference centred around SO49870606.

***Drassyllus pusillus* (Araneae: Gnaphosidae), a ground spider – Local; generally uncommon**

Drassyllus pusillus, a member of the ground spider family Gnaphosidae, is a widespread but patchily distributed species across Britain. Its occurrences are predominantly in lowland regions, with the strongest concentrations in the southern half of the country and parts of central eastern Scotland – noted as "local and not common," which reflects its scattered and infrequent sightings despite a broad overall range.

This small spider – a more colourful spider than many related species in the genus *Zelotes*, which are typically all black – shows a clear preference for open, relatively dry habitats. It is particularly associated with chalk downland (calcareous grasslands) and sandy heaths, though it can occasionally be found in other dry, open sites. As a nocturnal hunter that does not spin webs to catch prey, it is frequently encountered during the day in sheltered refuges such as under stones, within grassy tussocks, beneath discarded debris or rubbish, or in similar ground-level hiding spots (Spider and Harvestman Recording Scheme data, 2026c).

During the survey, an adult female was recorded in Dyer's Field on 29th April 2025, at grid reference centred on SO49950603.

***Nesticus cellulanus* (Araneae: Nesticidae), Comb-footed Cellar Spider – Local**

Nesticus cellulanus, commonly known as the Comb-footed Cellar Spider or Cavity Spider. It occurs widely throughout Britain, though it is considered local and likely under-recorded because of its preference for cryptic, subterranean-like environments. It thrives in permanently dark, damp habitats where it constructs small tangle-webs or loose sheet-like structures with sticky threads to capture prey, primarily small invertebrates.

Typical locations include cellars, drains, culverts, sewers, mines, caves, hollow trees, spaces amongst boulders, and occasionally thick marshland vegetation or under garden decking. The spider avoids dry subterranean sites, favouring consistently moist conditions that support its web-building lifestyle (Spider and Harvestman Recording Scheme data, 2026d). In Britain, *N. cellulanus* can be encountered year-round, though adults are most frequently recorded from June to September.

During the survey, an adult female was encountered on the underside of a large, old, fallen tree in Dyer's Field on 24th July 2025, at grid reference centred around SO49920610.

***Acupalpus meridianus* (Coleoptera: Carabidae), a ground beetle – Local in Wales; new for VC**

The ground beetle *Acupalpus meridianus* is a widespread species throughout the southern half of Britain, though records become scarcer farther north. It demonstrates remarkable adaptability, occupying a diverse range of habitats that include both dry and damp environments (NatureSpot data, 2026c).

This versatility allows it to thrive in woodlands, grasslands, post-industrial sites, and even disturbed areas, where it can be found under debris or in mossy tussocks. As a predator, it feeds primarily on smaller insects and invertebrates, contributing to natural pest control in these ecosystems. Activity peaks from April to early June, when adults are most frequently encountered, though the species may appear at other times depending on local conditions.

During the survey, an adult was encountered under a plank within Brewery Paddock on 29th April 2025, at grid reference centred on SO50110602. **Note**: This appears to be the first

recorded occurrence for this species within the vice-county of Monmouthshire (VC35).

***Berosus affinis* (Coleoptera: Hydrophilidae), a water scavenger beetle – Local**

Berosus affinis is a small (3.5-4.5 mm) aquatic beetle from the family Hydrophilidae, known as water scavenger beetles. In Britain, this species favours ponds, ditches, and marshy areas, particularly those with brackish conditions in coastal grazing marshes and levels, though it can occur in fresher marshy ponds as well (NatureSpot data, 2026d). It is recorded mainly from sites in Somerset, Gwent, Sussex, the Thames and Essex marshes, and occasionally the East Anglian fens. The species remains rather local and uncommon across the southern half of England and parts of Wales, with adults present throughout the year in silty or vegetated water bodies that may tolerate some salinity.

During the survey, an adult was encountered within the pond in Roman Park on 24 July 2025, at grid reference SO49860576.

***Carpelimus pusillus* (Coleoptera: Staphylinidae), an oxyteline rove beetle – Local**

Carpelimus pusillus is a small (~1.4-1.10 mm) rove beetle in the subfamily Oxytelinae. It belongs to a genus of typically tiny, often dark-coloured beetles, of which 22 species in four subgenera are known to occur in Britain. The species is generally associated with damp environments and is often found in litter heaps, herbivore dung, and sewage drying beds (Duff, 2024). In Britain*, C. pusillus* is widespread but patchily distributed, becoming scarcer towards Scotland.

During the survey, an adult male was encountered within cow dung, at the edge of a drying Pwll Pond in Dyer's Field on 24th July 2025, at grid reference centred on SO49870609.

***Clambus pubescens* (Coleoptera: Clambidae), a fringed-winged beetle – Local; new for VC**

Clambus pubescens is a minute species measuring just 0.9–1.2 mm in length. It belongs to the family Clambidae, commonly known as minute beetles or fringe-winged beetles due to the characteristic long hairs (fringes) along the margins of their elytra (wing covers). These beetles have broadly oval, strongly convex bodies that are typically shiny black or dark brown and often covered in fine pubescence (short hairs), which can give them a slightly fuzzy appearance under magnification. A distinctive defensive behaviour is their ability to conglobulate – curling tightly into a 'ball' when disturbed, much like a pill bug, making them even harder to spot and resembling small spherical mites or seeds. In Britain, *C. pubescens* is widespread but patchily distributed, becoming notably scarcer northward (e.g., rarer in Scotland). It occurs in a variety of habitats, most commonly found in decaying organic matter such as compost heaps, leaf litter, haystacks, mouldy vegetation, and fungal-rich environments like rotting wood or plant debris (Duff, 2020).

During the survey, an adult male was encountered somewhere within Dyer's Field on 24th July 2025. **Note**: This appears to be the first recorded occurrence for this species within the vice-county of Monmouthshire (VC35).

***Curculio nucum* (Coleoptera: Curculionidae), Hazel Nut Weevil – Local**

The Hazel Nut Weevil (*Curculio nucum*) is a medium-sized weevil (6.0-8.5 mm) with a distinctive long, curved snout (rostrum): in females, it is as long as the rest of the body and often ends in a reddish tip, while in males it is about one-third shorter.

The weevil occurs wherever Hazel (*Corylus avellana*) grows, including woodlands, hedgerows, scrub, and orchards (Duff, 2016). The larvae (**Figure 19**) develop inside hazelnuts, and when fully grown, they chew a neat circular exit hole in the shell to drop to the ground, where they pupate in the soil.

Adults emerge in spring (from May onwards) after overwintering in the soil as adults or pupae. They feed on hazel buds and leaves before mating. Females use their long snout to drill tiny holes into young, developing hazelnuts in summer, laying a single egg inside each. According to Duff (2016), the weevil is local in central and southeast England, and very local in northern England and South Wales, being generally scarce overall.

During the survey, a single larva was recorded from inside a hazelnut within an hedgerow at Dew Meadow on 21st August 2025, grid reference centred around SO49990611.

Figure 19: Larva of *Curculio nucum* from inside a hazelnut © Christian Owen

***Graptus triguttatus* (Coleoptera: Curculionidae), a broad-nosed weevil – Local; scarce in Duff**

Graptus triguttatus, is a broad-nosed weevil in the family Curculionidae (subfamily Entiminae). This species measures 6.0-10 mm long and features a distinctive appearance with pale brown elytra marked by creamy-white blotches – typically two per elytron, with the rear ones often forming a V-shape. The beetle is polyphagous, its larvae feed on the roots of various plants. It is particularly associated with Ribwort Plantain (*Plantago lanceolata*) in grassy places (Duff, 2016). According to Duff (2016), this species is local in Britain – north to Moray – and is considered scarce overall.

During the survey, an adult was encountered by suction-sampling within Roman Park on 29th April 2025, at grid reference centred on SO49890591.

***Hister unicolor* (Coleoptera: Histeridae), the Large Dung Clown – Local**

The Large Dung Clown Beetle (*Hister unicolor*) is a species predominantly associated with dung, especially from cattle on pasture. It also occurs in carrion, rotting vegetation, compost heaps, and occasionally woodland habitats (Lane et al., 2020). The beetle is widely distributed throughout Britain, though less frequent in the north.

During the survey, an adult was encountered within cow dung in Dyer's Field on 24 July 2025, at grid reference centred on SO49930607.

***Meligethes brunnicornis* (Coleoptera: Nitidulidae), a pollen beetle – Local**

Meligethes brunnicornis is a small (1.8-3.0 mm) pollen beetle that is associated with flowering Hedge Woundwort (*Stachys sylvatica*). It is widespread in central and southern England, becoming more local in northern England, Scotland and Wales (Duff, 2020); it appears to be a scarce species in Wales.

During the survey, an adult was encountered within Forest Meadow by sweep-netting vegetation along the hedgerows on 18th June 2025.

***Platystethus nitens* (Coleoptera: Staphylinidae), an oxyteline rove beetle – Local in Wales**

Platystethus nitens is a small rove beetle (2.2-3.5 mm) in the subfamily Oxytelinae (tribe Oxytelini). It is usually found in exposed mud or in tussocks on vegetated pond margins and can also occur in marshes with fluctuating water levels (Duff, 2024). In Britain, *P. nitens* is widespread in central and southern England but becomes very local elsewhere, scarcer further north up to Yorkshire, and seemingly absent from Scotland.

During the survey, the beetle was encountered by suction-sampling the dried-up bed of Pwll Pond within Dyer's Field on 24th July 2025.

***Limnellia fallax* (Diptera: Ephydridae), a shore fly – Local**

Limnellia fallax is a species of shore fly in the family Ephydridae. It belongs to the tribe Scatellini within the subfamily Ephydrinae. Adults of this fly are tiny (2.0-3.0 mm) have distinctively patterned wings, usually with dark spots or markings that help distinguish them from similar species in the genus (NatureSpot data, 2026e). Shore flies like inhabit moist environments, particularly around the edges of seashores, inland ponds, lakes, streams, and wet meadows (Drake, 2006). They thrive where algae or decaying organic matter is present, as both adults and larvae often feed on microscopic algae, bacteria, or organic debris. In Britain, it is considered local and appears to be the least common of the British *Limnellia* species, though the family as a whole may be under-recorded due to their diminutive size and the need for close examination. Adults can be found year-round in suitable habitats.

During the survey, the fly was encountered by sweep-netting the vegetation within Brewery Meadow on 24th July 2025, at grid reference centred on SO50070598.

***Pollenia amentaria* (Diptera: Polleniidae), Black-bellied Clusterfly – Local**

The Black-bellied Clusterfly (*Pollenia amentaria,* synonym: *P. vespillo*) is a widespread but localised species in Britain. It has become more frequent in recent years, especially in the north and west, where it occurs in a wide range of habitats. Like other *Pollenia* species, its larvae are believed to parasitise earthworms. Adults visit a variety of flowers. *P. amentaria* is

the most easily recognised British clusterfly owing to the absence of obvious grey dusting on the abdomen – the tergites are entirely black (Falk, 2026c).

, the fly was encountered by sweep-netting the vegetation in Forest Meadow on 18th June 2025, at grid reference centred around SO50060621.

***Pollenia griseotomentosa* (Diptera: Polleniidae), Little Clusterfly – Local**

Pollenia griseotomentosa (synonym: *P. varia*), commonly known as the Little Clusterfly, is a species of cluster fly in the family Polleniidae (formerly classified under Calliphoridae). It is one of eight *Pollenia* species recorded in Britain and is, on average, the smallest of the cluster flies.

In Britain, it is a widespread but rather localised species, often associated with wetlands and wet woodlands (Falk, 2026d). Like other *Pollenia* species, the larvae are presumed to parasitise earthworms (though the specific host for *P. griseotomentosa* is unknown). Adults visit flowers and can act as pollinators. They overwinter as adults, sometimes clustering in sheltered spots, including buildings.

During the survey, the fly was encountered by sweep-netting the vegetation in Dew Meadow on 18th June 2025, at grid reference centred on SO50120610.

***Phasia pusilla* (Diptera: Tachinidae), Little Phasia – Local in Wales**

The Little Phasia (**Figure 20**) is a small (2.0-3.0 mm), dark, clear-winged tachinid fly. It closely resembles *Phasia barbifrons* – a species recognised as distinct in Britain relatively recently (first confirmed records around 2001, having previously been overlooked or confused with *P. pusilla*). In Britain, *P. pusilla* is common in England (north to Yorkshire) but scarce in Wales, northern England and Scotland.

Figure 20: An adult Little Phasia (*Phasia pusilla*) © Liam Olds

The fly inhabits a variety of open and semi-open habitats, including brownfield sites, dry grasslands, flowery arable margins, woodland rides, clearings and even gardens – often

occurring alongside the related *Phasia obesa*. Adults are on the wing from around May to September and are frequently observed visiting the flowers of umbellifers such as Hogweed (*Heracleum sphondylium*) or Wild Angelica (*Angelica sylvestris*) and composites (especially daisy-types), as well as ivies in early autumn (Falk, 2026e). Like other members of the subfamily Phasiinae, *P. pusilla* is a parasitoid of true bugs (Heteroptera). The female lays eggs directly on the host, and the larvae develop inside before pupating externally. Known larval hosts include various species in the families Lygaeidae (ground bugs), Cydnidae (burrowing bugs) and Anthocoridae (flower bugs or minute pirate bugs).

During the survey, the fly was encountered by sweep-netting the vegetation in Brewery Paddock on 21st August 2025, at grid reference centred on SO50070598.

***Sapromyza zetterstedti* (Diptera: Lauxaniidae), a lauxaniid fly – Local; new for VC**

Sapromyza zetterstedti is a small fly in the family Lauxaniidae, commonly known as lauxaniid flies. This family comprises mainly small- to medium-sized (~3.0-5.0 mm) yellow flies (a few being brown or even black in ground colour), some with marked wings. Like other *Sapromyza* species, the larvae are likely saprophagous, developing in decaying leaf litter, composting vegetation, or similar organic matter (Falk et al., 2016). Adults are typically found in damp, shaded woodlands, hedgerows, or other leafy environments. The flight period is from spring to autumn, but specific phenology for this species in Britain is not well documented owing to its scarcity.

During the survey, the fly was encountered by sweep-netting the vegetation in Brewery Paddock on 21st August 2025, at grid reference centred around SO50050595. **Note**: This appears to be the first recorded occurrence for this species within the vice-county of Monmouthshire (VC35).

***Tomosvaryella palliditarsis* (Diptera: Pipunculidae), a big-headed fly – Local; new for VC**

Tomosvaryella palliditarsis (synonym: *Alloneura palliditarsis*) is a small big-headed fly in the family Pipunculidae (Coe, 1966; Földvári et. al., 1999). Most members of this family are endoparasitoids of leafhoppers (Cicadellidae) during their larval stage, with adults typically seen hovering in vegetation to locate hosts or mates. In Britain, *T. palliditarsis* is a seemingly scarce species. It appears to be localised and infrequently recorded, possibly owing to its small size and the challenges involved in identification. Like most *Tomosvaryella* species, adults are found in grassy or herbaceous habitats where leafhoppers occur, such as meadows, woodland edges, and wetlands. The flight period in Europe is typically from late spring to autumn. Specific host records for this species are unknown, but the genus predominantly parasitises Cicadellidae.

During the survey, an adult male was encountered by sweep-netting the vegetation within Brewery Paddock on 21st August 2025, at grid reference centred on SO50040589. **Note**: This appears to be the first recorded occurrence for this species within the vice-county of Monmouthshire (VC35).

***Eupteryx filicum* (Hemiptera: Cicadellidae), a leafhopper – Local**

The leafhopper *Eupteryx filicum* is a small, yellowish species primarily associated with ferns, including genera such as *Dryopteris* (e.g., Broad Buckler-fern – *D. dilatata*) and *Polypodium* (e.g., Common Polypody – *P vulgare*), across a range of habitats like woodlands,

hedgerows, and shady areas (British Bugs data, 2026b). In Britain, it occurs locally, mainly in England and Wales, with populations becoming increasingly scarce further north and extending into Scotland.

, an adult male was encountered by sweep-netting in Brewery Paddock on 21st August 2025, at grid reference centred around SO50080602.

***Eupteryx signatipennis* (Hemiptera: Cicadellidae), a leafhopper – Local**

Eupteryx signatipennis is a small (3.0-4.0 mm) leafhopper in the subfamily Typhlocybinae. In Britain, this species is locally common, typically found in damper habitats such as wet meadows, ditches, and marshes. It is associated with Meadowsweet (*Filipendula ulmaria*) as its primary host plant, where both nymphs and adults feed on the leaves. Adults are on the wing from June to October (British Bugs data, 2026c).

During the survey, the leafhopper was encountered on Meadowsweet within Dyer's Field on 18th June 2025, at grid reference centred on SO49870606.

***Oncopsis avellanae* (Hemiptera: Cicadellidae), a leafhopper – Local**

Oncopsis avellanae is a small (~4.0-5.0 mm) leafhopper that inhabits woodland edges, hedgerows, and scrub where its primary host plant, Hazel (*Corylus avellana*), occurs; both adults and nymphs feed on sap from the leaves. In Britain, it is patchily distributed in England and Wales, and apparently absent from Scotland.

During the survey, adults were encountered by beating the lower branches of hedgerow trees in Forest Meadow on 18th June 2025, and in Roman Park on 24th Jul 2025.

***Macrosteles septemnotatus* (Hemiptera: Cicadellidae), a leafhopper – Local**

The leafhopper *Macrosteles septemnotatus* is a small (3.0-4.0 mm), distinctive species in the family Cicadellidae. Adults are easily recognised by their vivid yellow colouration in the basal third of the forewings, combined with prominent large black spots on the scutellum and at both the centre and apex of the vertex (head). In Britain, this species is widespread but locally distributed, where it is primarily associated with Meadowsweet (*Filipendula ulmaria*) as its main host plant (British Bugs data, 2026d).

During the survey, adults were recorded on Meadowsweet within the wetter section of Dyer's Field on 18th June and 24th July 2025

***Megamelodes quadrimaculatus* (Hemiptera: Delphacidae), a planthopper – Local**

The planthopper *Megamelodes quadrimaculatus* is a small (2.0-4.0 mm) delphacid known from damp grasslands and fen habitats where its host plants are abundant. It is typically associated with various plants, including grasses (Poaceae), rushes (*Juncus* spp.), and sedges (*Carex* spp.), with reliable records also confirming its presence on fescues (*Festuca* spp.) (British Bugs, 2026e). Adults are brachypterous or macropterous. In Britain, the species is widespread but localised, occurring mainly in marshy and wetland areas across Wales and southern England.

During the survey, the planthopper was encountered by sweep-netting the vegetation within Dyer's Field on 29th April 2025, at grid reference centred on SO49930607.

During the survey

***Zygina tiliae* (Hemiptera: Cicadellidae), a leafhopper – Local; new for Wales**

Zygina tiliae is a small (~3.0 mm) leafhopper in the subfamily Typhlocybinae. Adults of this species often display a distinctive red zig-zag pattern on the forewings, characteristic of many in the genus *Zygina*, though identification can be challenging and usually requires close examination of features such as the hind tarsus in males, which is long, slender, and entirely dark.

In Britain, it occurs locally in widely scattered locations throughout England and Scotland, primarily associated with deciduous trees including alders (*Alnus* spp.), limes (*Tilia* spp.), and oaks (*Quercus* spp.) (British Bugs data, 2026f).

During the survey, an adult male was encountered my sweep-netting the lower branches of hedgerow trees within Roman Park on 24th July 2025, at grid reference centred on SO50040594. **Note**: This appears to be the first recorded occurrence for this species in Wales.

***Acrocercops brongniardella* (Lepidoptera: Gracillariidae), Oak Cloud – Local**

The Oak Cloud is a micromoth whose larvae produce large, characteristic silvery blotch mines on oaks (*Quercus* spp.). In Britain, it is regarded as a very local species, occurring primarily in southern England and parts of Wales (Kimber, 2026a). It is typically found in open woodland and mature hedgerows.

The species is univoltine (one brood or generation per year), with adults on the wing mainly from late July to early August, although individuals that have overwintered as adults may reappear in April and May.

During the survey, vacated mines were observed on oak within Dew Meadow on 21st August 2025, at grid reference centred around SO49990611.

***Gillmeria pallidactyla* (Lepidoptera: Pterophoridae), Yarrow Plume – Local**

Gillmeria pallidactyla, commonly known as the Yarrow Plume, is a distinctive plume moth belonging to the family Pterophoridae (Kimber, 2026b). With a wingspan of 23-27 mm, the adult has deeply divided, feathery wings that give it the characteristic plume-like appearance typical of the group. It is widely distributed throughout Britain but remains distinctly local in occurrence, favouring dry or sandy waste ground, rough grasslands, and similar open habitats where its foodplants are found. The species is on the wing primarily during June and July as a single generation, with adults resting concealed among low vegetation by day and becoming active at dusk, often attracted to light. The larvae feed mainly on Yarrow (*Achillea millefolium*) and Sneezewort (*Achillea ptarmica*), boring into the stems in autumn, overwintering in the roots, and resuming feeding on shoots in spring before pupating. Possibly, Tansy (*Tanacetum vulgare*) may also serve as a foodplant.

During the survey, two adults were observed resting on vegetation within Dyer's Field on 18th June 2025.

***Lasioglossum laevigatum* (Hymenoptera: Halictidae), Red-backed Furrow Bee – Local**

Lasioglossum laevigatum, a small- to medium-sized mining bee in the family Halictidae, is mainly confined to southern England in Britain, with scattered records extending further north, though it is absent from Scotland (Bees, Wasps and Ants Recording Society data, 2026a). This local species can occasionally form abundant populations where it occurs and

is particularly associated with calcareous grasslands, as well as open woodland on chalk, wooded heathland, and fenland habitats. The flight period sees females active from mid-April to late September, while males emerge from early July to September. Nesting biology remains poorly known in Britain, though the species is considered solitary elsewhere in its range. It is polylectic, visiting a variety of flowers including Lesser Celandine (*Ficaria verna*), Broom (*Cytisus scoparius*), Plum (*Prunus domestica*), Wild Parsnip (*Pastinaca sativa*), Wild Carrot (*Daucus carota*), willows (*Salix* spp.), speedwells (*Veronica* spp.), Guelder-rose (*Viburnum opulus*), Tormentil (*Potentilla erecta*), and ragworts (*Jacobaea* spp.).

, an adult female was recorded foraging within Brewery Paddock on 24th July 2025.

***Stenopsocus stigmaticus* (Psocoptera: Stenopsocidae), a barkfly – Local**

Stenopsocus stigmaticus is a moderately large barkfly, with adults typically measuring 5.0–6.0 mm in body length. This species belongs to the order Psocoptera (barkflies) and is characterised by distinctive wing markings, including a dark band along the posterior margin of the pterostigma, which helps distinguish it from related British species like *S. immaculatus* and *S. lachlani*.

It is widespread but uncommon in England and Wales, becoming progressively more localised further north, with no records yet from Scotland or Ireland (National Barkfly Recording Scheme data (Britain and Ireland), 2026). The species inhabits branches of various trees and shrubs, where it feeds on lichens, fungi, and organic debris. While it can occur on a range of deciduous species – such as Alder (*Alnus glutinosa*), Ash (*Fraxinus excelsior*), Blackthorn (*Prunus spinosa*), Elder (*Sambucus niger*), and willows (*Salix* spp.) – as well as occasionally on conifers like pine (*Pinus* spp.), it is most frequently associated with hawthorn (*Crataegus* spp.).

During the survey, the barkfly was encountered by beating various trees growing in the hedgerow within Forest Meadow on 18th June 2025, at grid reference centred around SO50080621.

3.2.5 Other species of interest

A total of **eight** other species recorded during the survey were also considered noteworthy. Three of these have only fairly recently been discovered in Britain, so their conservation status remains unclear. Two appear to be new to the vice-county of Monmouthshire (VC35). One is apparently rare in Wales, and one is considered to be declining in Britain. They are discussed below in alphabetical order, first by Order and then by species.

***Aleochara tristis* (Coleoptera: Staphylinidae), a rove beetle – Other; rare in Wales.**

The rove beetle *Aleochara tristis* is considered a rare species in Britain, with a predominantly south-eastern distribution in England. However, it has been recorded further north in Lancashire and around the Welsh Marches (the border region between England and Wales). This species is typically encountered singly or in small numbers in habitats such as carrion or dung, where adults prey on fly eggs and larvae. It has also been found in haystack refuse and flood debris (R. C. Welch, 1997).

A notable morphological feature of *A. tristis* is the highly exaggerated male genitalia: the intromittent organ (a long, whip-like flagellum within the aedeagus) measures over twice the body length of the male (typically around 16 mm long, compared to a body length of 4.5-6.0

mm). When retracted, it is coiled inside the abdomen; after mating, the male employs a unique "shouldering" behaviour – holding the extended flagellum taut over its shoulder (between the pronotum and mesothorax) – to prevent tangling while retracting it (Gack & Peschke, 2005).

During the survey, a single adult male (and possibly a female) was encountered within cow dung in Dew Meadow on 21st August 2025. **Note**: This appears to be only the second recorded occurrence of this species in Wales, the first having been from near Aberbargoed Grasslands on 20th April 2024.

***Bourletiella hortensis* (Symphypleona: Bourletiellidae), a globular sprigtail – Other; new for VC**

Bourletiella hortensis is a globular springtail belonging to the family Bourletiellidae. This small, wingless species appears bluish-black in colour, with a body length rarely exceeding a few millimetres. In Britain, *B. hortensis* is considered common and widespread, occurring across a range of habitats including gardens, cultivated fields, grasslands, and areas with moss or decaying vegetation. It primarily feeds on moss, fungi, and organic debris, though large aggregations can occasionally damage seedlings and young plants, making it one of the few collembolans regarded as a minor agricultural pest (Hopkin, n.d.).

During the survey, the springtail was encountered within Roman Park by suction-sampling on 21st August 2025. **Note**: This appears to be the first recorded occurrence for this species within the vice-county of Monmouthshire (VC35).

***Bruchidius varius* (Coleoptera: Chrysomelidae), a seed beetle, Other**

The seed beetle *Bruchidius varius* was first recorded from a single specimen found in East Sussex in 1994 (Hodge, 1997), and has since rapidly spread through much of the southern half of Britain. The beetle is mostly associated with Red Clover (*Trifolium pratense*) and Zigzag Clover (*T. medium*), but adults can sometimes be found feeding on pollen of flowering hawthorns (*Crataegus* spp.). This species occurs in woods, chalk pits grasslands and roadside verges (Duff, 2016). In Wales, it is mostly known to occur in south-east Wales where it currently remains fairly local but seemingly spreading.

During the survey, the beetle was encountered by sweep-netting within Forest Meadow (grid reference centred around SO50060617), and within Roman Park (grid reference centred around SO49950596) on 18th June 2025.

***Euthycera fumigata* (Diptera: Sciomyzidae), Brown Sieve-winged Snailkiller – Other**

Euthycera fumigata, commonly known as the Brown Sieve-winged Snailkiller, is a species of marsh fly in the family Sciomyzidae, whose larvae are typically predators or parasitoids of molluscs. Adult flies are medium-sized (7.0-9.0 mm), with a brownish body, entirely brown legs, and distinctive wings featuring a dense pattern of white spots on a brown membrane, resembling a sieve. In Britain, *E. fumigata* is widespread but has shown signs of decline in recent decades, becoming rather infrequent. It inhabits tall grassland, including both calcareous and base-poor sites, as well as heathland. Adults are on the wing from May to September (Falk, 2026f). The larval biology of this species remains poorly known, though species in the genus *Euthycera* are associated with terrestrial snails or slugs.

During the survey, the fly was encountered by sweep-netting the wet flush within Forest Meadow on 18th June 2025, at grid refence centred on SO50000617.

***Lasius platythorax* (Hymenoptera: Formicidae), a black ant – Other**

Lasius platythorax is a small- to medium-sized ant, with workers typically brown to dark brownish-black in colour, closely resembling the common Black Garden Ant (*Lasius niger*). It was only recognised as a distinct species in 1991 by Bernhard Seifert, having previously been confused with *L. niger* due to their morphological similarity. Separation requires close examination under magnification: key differences include sparser pubescence (short fine hairs) on the clypeus in *L. platythorax* compared to denser coverage in *L. niger*, a generally straighter clypeal profile, and subtle variations in hair spacing and body proportions.

In Britain, *L. platythorax* appears to be widely distributed, though it remains under-recorded because of historical misidentification. It is not considered scarce or threatened, however, there are currently few records for this species in Wales. Ecologically, it differs markedly from *L. niger* by preferring cooler, damper, and more shaded habitats, particularly woodlands, bogs, and wetlands, where it often nests in rotting wood, tree stumps, or under bark rather than in open soil. It tends to avoid human-modified environments such as gardens, parks, and urban areas, which are favoured by *L. niger* (Bees, Wasps and Ants Recording Society data, 2026b).

During the survey, the ant was recorded within Dyer's Field on 24th July 2025, at grid reference centred on SO49910611.

***Orius laticollis* (Hemiptera: Anthocoridae:), a minute pirate-bug – Other**

The minute pirate bug *Orius laticollis* is a patchily distributed and apparently local species in central and southern Britain, with few records from Wales; however, it may be underrecorded owing to identification difficulties. This predatory bug occurs on various trees, preferring willows (*Salix* spp.), where it feeds primarily on small insects, their larvae, and eggs – notably spider mites, thrips, and aphids – although it will also consume pollen and plant sap (Plant Parasites of Europe data, 2026).

During the survey, the bug was encountered by beating hedgerow branches within Brewery Paddock on 29th April 2025, at grid reference centred on SO50020589.

***Pselaphus heisei* (Coleoptera: Staphylinidae), a pselaphine rove beetle – Other; new for VC**

Pselaphus heisei is a minute (~1.7 mm) pselaphine rove beetle in the subfamily Pselaphinae (now classified within Staphylinidae). It belongs to the tribe Pselaphini and is the type species of the genus *Pselaphus*. This species occurs across Britain, where it inhabits moist habitats such as leaf litter, moss, and forest floor debris in temperate woodlands. It is widespread in central England and Wales, local in the rest of England and Scotland (Duff, 2024).

During the survey, an adult was encountered by suction-sampling within Dyer's Field on 29th April 2025, at grid reference centred on SO49870606. **Note**: This appears to be the first recorded occurrence for this species within the vice-county of Monmouthshire (VC35).

***Tandonia cf. cristata* (Pulmonata: Milacidae), Crimean Keeled slug – Other**

Tandonia cf. cristata (**Figure 21**) commonly known as the Crimean Keeled Slug, is a small to medium-sized keeled land slug in the family Milacidae. This species reaches lengths of around 50-70 mm when extended. It has a pale body with dark speckling and a distinct dorsal keel. It is similar in appearance to the more common *Tandonia budapestensis* but lacks the dark central stripe on the sole (Rowson et al., 2014).

Native to eastern Europe, including Ukraine and Crimea, *T. cf. cristata* is a recent introduction to Britain, likely arriving via human-mediated transport such as plants or soil. It was first recognised in the UK during a 2014 survey that identified several new slug species (Rowson et al., 2014). Records include sites in South Wales, Somerset, the Isle of Wight, and scattered locations elsewhere. The species inhabits synanthropic environments, such as gardens, allotments, churchyards, and disturbed ground. It is noted as a potential pest, feeding on underground crops like potatoes. Its distribution in Britain remains limited and localised compared to other introduced keeled slugs like *T. budapestensis* and *T. sowerbyi*.

During the survey, the slug was encountered in an old heap of straw etc., in Dew Meadow on 29th April 2025, at grid reference centred on SO50090604.

Figure 21: *Tandonia cf. cristata* © Christian Owen

4.0 DISCUSSION

The invertebrate survey at **Wet Meadow in 2025** documented a rich and ecologically valuable assemblage, with **485 species** recorded and **60** (**~12%**) of '**conservation interest**'. This highlights the site's importance as a Local Wildlife Site and demonstrates the positive impact of current low-intensity management in maintaining habitat heterogeneity and biodiversity.

The species of conservation interest documented during the survey comprise the following categories:

- **1 Section 7 species** (under the Environment (Wales) Act 2016), which is also Nationally Scarce (NS);
- **2 Nationally Rare** (NR or RDB 3) species;
- **11 Nationally Scarce** (NS) or Notable (Na/Nb) species (including two seemingly new to Wales and one seemingly new to vice-county 35);
- **38 Nationally/Wales Local** species (including one seemingly new to Wales and four seemingly new to vice-county 35);
- **8 other** species of interest (including two seemingly new to vice-county 35).

The overall recorded diversity of **485** species is noteworthy for a site of approximately 9.7 ha (comprising a mosaic of neutral/acid grassland, wetland features such as streams, boggy zones and pools, and scrub/hedgerows). The assemblage is dominated by **Coleoptera** (181 species), **Diptera** (80), and **Hemiptera** (79), reflecting the structural and hydrological variety present. The wetter elements and diverse microhabitats clearly contribute to this richness, providing niches for both generalist and specialist taxa.

The presence of **60** species of conservation interest – a notable total given the limitations highlighted in **Section 1.3** – clearly demonstrates that Wet Meadow is an important refuge for a number of rare and scarce invertebrates that are declining in the wider countryside, as well as for habitat specialists, many with restricted distributions. Some of these species are particularly significant in a regional (vice-county), Welsh, and/or British context.

Notable examples include:

- supports **one** priority species listed under Section 7 of the Environment (Wales) Act 2016: the ground beetle *Bembidion quadripustulatum*;
- **two** Nationally Rare species: the plant bug *Lygus pratensis* and the crab spider *Xysticus acerbus*;
- **twelve** Nationally Scarce species, comprising:
- **8 beetles**: *Acupalpus exiguus*, *Attactagenus plumbeus*, *Bembidion quadripustulatum*, *Enicmus fungicola*, *Polydrusus flavipes*, *Polydrusus formosus*, *Platyrhinus resinosus*, *Protapion varipes*;
- **3 flies**: *Dioctria cothurnata*, *Bombylius canescens*, *Eurychaeta palpalis*;
- **1 bug**: *Scottianella dalei*;
- **three species apparently new to Wales:** the broad-nosed weevil *Polydrusus flavipes*, the planthopper *Scottianella dalei*, and the leafhopper *Zygina tiliae*;
- **seven species apparently new to vice-county Monmouthshire (VC 35)**: the beetles *Acupalpus meridianus*, *Clambus pubescens*, *Enicmus fungicola*, and *Pselaphus heisei*; the flies *Sapromyza zetterstedti* and *Tomosvaryella palliditarsis*; and the globular springtail *Bourletiella hortensis*;
- strong representation in Coleoptera, **with 181 species in total**, of which 28 are of 'conservation interest';
- around **twenty species that are seldom recorded in Wales**, including *Acupalpus exiguus*, *Acupalpus meridianus*, *Oncopsis avellanae*, *Berosus affinis*, *Dioctria cothurnata*, *Eurychaeta palpalis*, *Enicmus fungicola*, *Limnellia fallax*, *Meligethes brunnicornis*, *Orius laticollis*, *Phasia pusilla*, *Platyrhinus resinosus*, *Platystethus nitens*, *Protapion varipes*, *Sapromyza zetterstedti*, and *Xysticus acerbus*, plus additional scarcely recorded taxa such as the big-headed fly *Tomosvaryella palliditarsis*, the barklouse *Stenopsocus stigmaticus*, the rove beetle *Aleochara tristis*, and the springtail *Bourletiella hortensis*; and
- three species that have only recently been recorded or recognised as new to Britain: the seed beetle *Bruchidius varius*, the ant *Lasius platythorax*, and the slug *Tandonia cf. cristata*.

4.1 Analysis of Species Data

The complete list of **485** invertebrate species recorded at Wet Meadow was analysed using Pantheon, an analytical tool developed by Natural England and the UK Centre for Ecology & Hydrology (UKCEH) for assessing invertebrate assemblages. Of these, **437** species (approximately **90%**) were successfully assigned habitat scores, indicating a high matching success rate and enabling a robust analysis of habitat associations.

Pantheon was used to identify the key habitat assemblages at Wet Meadow, focusing on those characterised by more widespread species. The Broad Assemblage Types (BATs) used in the predecessor system, ISIS, have been superseded by the more comprehensive 'Habitats' category in Pantheon. These updated **Habitats** serve a similar role but incorporate a broader range of species, reflecting advancements in ecological knowledge and providing a more accurate representation of invertebrate-habitat relationships.

Using the **437** species with habitat allocations, Pantheon generated a summary of the main habitat assemblages (**Table 4**).

Table 4. Main habitat assemblages identified at Wet Meadow from Pantheon analysis.

Broad biotope	Habitat	No. of species	% representation	SQI
open habitats	tall sward & scrub	222	8	110
wetland	marshland	36	4	125
tree-associated	arboreal	35	3	118
tree-associated	shaded woodland floor	32	3	110
open habitats	short sward & bare ground	29	2	100
wetland	acid & sedge peats	23	2	100
tree-associated	decaying wood	13	1	150
wetland	running water	10	<1	130
wetland	wet woodland	7	3	100
tree-associated	wet woodland	7	3	100
open habitats	upland	2	1	100
wetland	lake	1	<1	100
coastal	saltmarsh	1	<1	100
coastal	sandy beach	1	<1	100
coastal	brackish pools & ditches	1	<1	100

*(**Note**: Entries based on 15 or fewer species are flagged in Pantheon outputs with a warning (highlighted in red in **Table 4**), as the SQI is calculated from a very small sample size and is therefore statistically unreliable. This caution prevents over-interpretation of the conservation significance of these minor or incidental habitat assemblages.)*

Table 4 lists broad biotopes and specific habitats, together with three key metrics: number of species, percentage representation (% representation), and Species Quality Index (SQI). These provide insights into species richness, the extent to which the sample represents

characteristic species for each habitat, and the overall conservation quality of the assemblage based on rarity and threat status.

The dominant assemblage is **open habitats – tall sward & scrub**, **with 222 species (~51% of the scored species)**. This reflects the predominance of flower-rich neutral to slightly acidic grasslands across the five fields, with taller vegetation and scrub elements. The SQI of 110 is moderately above average (100 = typical assemblage of widespread species), indicating a reasonable presence of scarcer species, such as the spider *Xysticus acerbus*, the weevils *Attactagenus plumbeus* and *Protapion varipes*, the planthopper *Scottianella dalei*, and flies like *Bombylius canescens* and *Dioctria cothurnata*.

A key distinguishing feature of Wet Meadow is the wetland component, particularly **marshland** (36 species, SQI 125) and **acid & sedge peats** (23 species, SQI 100). These reflect the site's hydrological diversity, including boggy zones, seasonal and permanent streams, rushes, sedges, and pools (e.g. Pwll Pond and the new pond). The modestly elevated SQI for marshland indicates above-average conservation quality with some scarcer wetland specialists, such as the Section 7 priority ground *beetle Bembidion quadripustulatum*, and the Nationally Scarce beetle *Acupalpus exiguus*, and wetlandassociated flies (e.g. *Chrysotimus molliculus*). The % representations (4% and 2%) are modest but still significant given the rarity of good-quality wetland habitats for invertebrates in the wider landscape.

Tree-associated assemblages (**arboreal**, **shaded woodland floor**, **decaying wood, wet woodland**) collectively account for ~81 species, with SQIs at or slightly above 100 and low % representation (1-3%). These are associated with hedgerows, scrub patches, and the small oak woodland (**Coates Wood**), supporting notable species such as the Nationally Scarce beetles *Enicmus fungicola* (new for VC35), *Platyrhinus resinosus* and *Polydrusus flavipes* (new to Wales), and *P. formosus*, the Nationally Local nut-weevil *Curculio nucum*, the leafhoppers *Oncopsis avellanae* and *Zygina tiliae* (new to Wales), and the micromoth *Acrocercops brongniardella*.

Open habitats – short sward & bare ground (29 species, SQI 100) reflects grazed patches and exposed substrates, including some thermophilous species like the mining bees *Lasioglossum laevigatum*, *L. lativentre* and *L. leucozonium*, the sand wasps *Lindenius albilabris* and *Tachysphex pompiliformis*, and the beetle *Cicindela campestris* (Green Tiger beetle).

Several of the minor entries (running water, lake, wet woodland, and upland – each ≤10 species) were flagged with warnings in the Pantheon output due to very small sample sizes (≤15 species), requiring cautious interpretation. High SQIs in some cases (e.g. decaying wood 150, running water 130) are frequently driven by one or two scarce species (e.g., *Enicmus fungicola* and *Platyrhinus resinosus* – decaying wood). Minor categories like saltmarsh and brackish pools & ditches largely represent incidental or vagrant records rather than core on-site habitats (e.g., the fly *Dolichopus nubilus* – a coastal that occasionally gets recorded inland). Other minor representations from upland, lake, and wet woodland (each ≤7 species) largely reflect broader ecological tolerances rather than core on-site habitats.

Overall, Wet Meadow supports a diverse invertebrate fauna dominated by open grassland habitats (especially tall sward & scrub), with significant added conservation value from wetland elements (particularly marshland), and tree-associated features (hedgerows, scrub, and woodland). The generally low percentage representations, together with warnings for

small sample sizes in many of the categories (in red), suggest that the current dataset under-represents the site's full invertebrate potential – likely due to survey timing, coverage, methodology, or seasonal limitations.

This Pantheon analysis confirms the site's importance as a varied habitat mosaic of unimproved grasslands and wetlands, with structural diversity from scrub, hedgerows, deadwood, and water features. To maintain and enhance its invertebrate interest, management should continue to prioritise low-intensity grazing, retention of flower-rich swards, varied vegetation structure, hydrological integrity, and deadwood provision. Future, more comprehensive surveys would likely reveal even greater conservation significance.

4.2 Managing Wet Meadow for Invertebrates

The primary objective when managing species-rich meadows like Wet Meadow for invertebrates is to maintain diverse floristic composition, including wetland and grassland specialists, while providing the structural and temporal resources required by pollinators, herbivorous insects, predators, and decomposers throughout their life cycles. Given the site's mosaic of dry and wet grasslands, rushes, streams, pools, scrub, and oak woodland, management should preserve hydrological features and habitat heterogeneity to support the diverse assemblages identified, such as those in marshland, acid & sedge peats, and shaded woodland floors. Since many invertebrates live inside leaves, stems, flower heads, or seeds, cutting or grazing entire areas can remove these resources and negatively impact populations and diversity.

To provide late-season foraging, overwintering habitat, and refugia for invertebrates, 10-20% of each field (or the site overall) should be left ungrazed or uncut each year, focusing on boggy zones, stream margins, and rush-dominated areas to avoid disrupting hydrological features. The location of these refugia should be rotated annually and should include structurally diverse areas with flowering plants, rushes, and sedges to minimize loss of resources for pollinators and species like snail-killing flies (Sciomyzidae) or ground beetles (Carabidae).

Since the current management relies on cattle grazing (see **Appendices** – **Figures 28-31**), the focus should be on low-intensity, adaptive rotational or targeted grazing to promote habitat heterogeneity. Cattle create a patchy sward through selective grazing, trampling (poaching), and dung deposition, which benefits invertebrates by generating varied vegetation heights, bare ground patches for thermophilous species, and nutrient inputs that support decomposers and dung-associated fauna. The use of the satellite collars enables precise control without physical fencing, allowing managers to flexibly direct cattle to specific areas, avoid overgrazing sensitive wet zones, and respond to seasonal conditions or wildlife needs as they arise.

Grazing by cattle should attempt to avoid poaching the wetter areas, which could compact soil and damage wetland features like ponds and streams. Grazing should cease by late winter/early spring to allow regrowth, and livestock should be rotated across fields to create a mosaic of sward heights. If grazed livestock have been treated with avermectin-based anthelmintics (e.g., ivermectin), dung invertebrate communities can be severely depleted; prefer non-avermectin products, treat off-site where possible, and withhold animals for ~14 days.

Around 19 species associated with dung (**Figure 22**) was recorded at Wet Meadow. These include:

- The Large Dung Clown beetle *Hister unicolor*.
- Three species of *Sphaeridium* (dung water scavenger beetles): *Sphaeridium bipustulatum*, *S. lunatum*, and *S. scarabaeoides*.
- The Broad Centurion (or soldier fly) *Chloromyia formosa*.
- The Yellow Dung Fly *Scathophaga stercoraria*.
- The greenbottle fly *Lucilia caesar*.
- Rove beetles: *Aleochara lanuginose*, *Aleochara tristis*, *Bisnius fimetarius, Philonthus tenuicornis*, *P. splendens*, *P. cruentatus*, and *Ontholestes murinus*.
- Dung beetles: *Acrossus rufipes*, *Aphodius pedellus*, Onthophagus similis, *Otophorus haemorrhoidalis*, and *Teuchestes fossor*.

Further studies of this important dung-associated patch habitat will undoubtedly reveal many more species at Wet Meadow.

Figure 22: Showing a fresh cow pat acting as a patch habitat, perforated with numerous beetle entrance/exit holes, at Wet Meadow. Image photographed on 18th June 2025.

Structural diversity should be encouraged through a mosaic of short (<10 cm), medium (10–30 cm), and tall (>30 cm) vegetation entering winter, plus uncut / grazed field margins, hedge bases (as seen in **Figure 23**). Cut margins on a 2-3-year rotation, and monitor areas prone to scrub encroachment from Bracken and Bramble, cutting back when necessary while retaining some scrub for habitat complexity. This should help increase invertebrate richness. These intervals also benefit small rodents, whose runways, burrows, nests, debris,

and droppings support various beetles, overwintering invertebrates, and brood-rearing social bees. One study of 42 Harvest Mouse (*Micromys minutus*) nests in Poland recorded 6,544 individuals from at least 105 invertebrate species (Krawczyk et al., 2015).

No inorganic fertilisers or farmyard manure should be applied to preserve the site's lownutrient status, which supports waxcap fungi and specialist invertebrates. Persistent 'weeds' should be controlled by hand-pulling or spot treatment only, avoiding herbicides near watercourses to protect aquatic and semi-aquatic species.

Additional enhancements include:

- Installing various nest boxes around the hedgerows and woodland edges. These will provide breeding, feeding, and sheltering opportunities for a range of invertebrate species, especially if occupied by birds or rodents. Boxes should not be cleared out every year, as this may disrupt invertebrate life cycles; if clearing is necessary, retain the material on site in a makeshift box or transfer it to another.
- Creating small areas of bare ground in drier, sunny locations (e.g., by flattening molehills or using durable mats) to support thermophilous invertebrates like solitary wasps, mining bees, ground-nesting beetles, and spiders. Extend and manage current bare ground on the bank of newly installed pond (**Figures 4** and **24**)
- Repurposing cut branches and logs (as seen in **Figure 25**) from on-site management operations – or sourced nearby – around meadow edges, woodland, or stream banks to benefit saproxylic (dead-wood-dependent) species, including beetles (e.g., longhorn beetles), hoverflies, solitary bees, and wasps. Stacked in small piles or placed individually, this material supports fungi and decomposers. Reasonably sized logs (e.g., 50-60 cm long, 10-20 cm diameter) can be hung vertically or horizontally in hedgerows using sturdy rope or wire, creating elevated dead-wood habitat that mimics natural cavities and benefits species less tolerant of dampness.
- Protecting wetland features by maintaining natural hydrology: avoid drainage alterations, cow poaching, and buffer streams and ponds with uncut vegetation to filter runoff and provide habitat for odonates (dragonflies/damselflies), caddisflies, and water-associated flies.

Long-term monitoring using standardised methods is recommended to assess the success of habitat management interventions. Suitable approaches include regular transect walks under the UK Butterfly Monitoring Scheme (UKBMS) for robust data on butterfly abundance and trends (link: UKBMS), or Flower-Insect Timed (FIT) Counts as part of the UK Pollinator Monitoring Scheme (UKPoMS), a simple 10-minute survey that records flower-visiting insects on target plants and can be conducted by volunteers in suitable weather (link: UK PoMS).

Additionally, monitor wetland invertebrates through targeted surveys (e.g., pond netting for odonata larvae) and fungi in autumn to ensure management supports these key elements.

Maintaining and regularly updating a site-specific species list within Pantheon – an online analytical tool developed by Natural England and the UK Centre for Ecology & Hydrology (UKCEH) – is strongly advised. Pantheon allows users to import invertebrate records, analyse them against a comprehensive database of habitat traits, resources, conservation statuses, and ecological associations for over 11,000 species. This helps identify key habitat

features supporting the invertebrate assemblage, evaluate site quality, inform conservation priorities, and guide future management decisions to enhance biodiversity (link: Pantheon).

Sustain and refine grazing when applicable: Maintain low stocking rates with rotational or seasonal patterns to promote a varied sward structure (short turf for ground-dwelling species; tall/tussocky areas for spiders, beetles, and other taxa). Avoid heavy poaching in wet zones, **especially around Pwll Pond** (**Figure 7**), by regularly monitoring soil conditions and adjusting timing or stock numbers as necessary.

Enhance habitat mosaic: Retain and, where appropriate, expand uncut margins, wetland features, and scrub patches to provide refugia. Undertake selective hedge and scrub management (e.g., via volunteer work parties) to prevent excessive encroachment while continuing to support tree-associated species.

Protect wetland elements: Preserve streams, ponds, and boggy areas with minimal disturbance to benefit wetland specialists such as damselflies, bugs, and *Bembidion quadripustulatum*. Avoid drainage, fertiliser application, or other interventions that could alter the site's low-nutrient status.

Monitoring and adaptation: Conduct repeat targeted surveys (every 3-5 years) focusing on key groups such as Coleoptera and Hemiptera. Engage volunteers through recording events to increase public awareness and facilitate adaptive management adjustments.

Figure 23: Showing a field boundary within Wet Meadow showing a mature hedgerow and a bramble scrub understory; an important habitat for a wide range of invertebrates, birds and mammals. Image photographed on 18th June 2025.

Figure 24: Showing an area of bare ground around the newly installed pond in Roman Park – an important habitat that was occupied by a number of mining bees, Green Tiger Beetles, Western Bee-fly and others. Image photographed on 29th April 2025.

Figure 25: Showing an area of cut and stacked branches at Wet Meadow being used to create a habitat pile. Image photographed on 29th April 2025.

5.0 IDENTIFICATION KEYS

The following identification keys were used to identify invertebrate specimens collected during the survey at Wet Meadow in 2025 in addition to unpublished keys sourced from organisers of national recording schemes:

Arachnida

- Hillyard, P.D. & Sankey, J.H.P. (1989). *Harvestmen*. Synopses of the British Fauna (New Series) 4 (2nd edition). London: Linnean Society of London.
- Roberts, M. J. (2001). *Collins Field Guide to the Spiders of Britain and Northern Europe*. London: HarperCollins Publishers Ltd.

Coleoptera

- Duff, A. G. (2012). *Beetles of Britain and Ireland, Volume 1: Sphaeriusidae to Silphidae.* A. G. Duff Publishing.
- Duff, A. G. (2016). *Beetles of Britain and Ireland, Volume 4: Cerambycidae to Curculionidae.* A.G. Duff Publishing.
- Duff, A. G. (2020). *Beetles of Britain and Ireland, Volume 3: Geotrupidae to Scraptiidae.* A.G. Duff Publishing.
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Collembola

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Diptera

- Ball, S. and Morris, R. (2015). *Britain's hoverflies: a field guide*. Princeton University Press.
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- Stubbs, A. E. & Falk, S. (2002). *British hoverflies, an illustrated identification guide. Second edition.* Reading: British Entomological and Natural History Society.

- White, I. M. (1988). *Handbooks for the Identification of British Insects. Tephritid Flies, Diptera: Tephritidae, 1-134. Vol. X, Part 5(a)*. Royal Entomological Society London.

Hemiptera

- Biedermann, R. & Niedringhaus, R. (2009). *The Plant and Leafhoppers of Germany – Identification key to all species.* Wissenschaftlich Akademischer Buchvertrieb-Fründ, Scheeßel.
- Southwood, T. R. E. & Leston, D. (1959). *Land and Water Bugs of the British Isles*. Frederick Warne & Co. Ltd.
- Wilson, M., Stewart, A., Biederman, R., Nickel, H. and Niedringhaus, R. (2015). *The Planthoppers and Leafhoppers of Britain and Ireland - Identification keys to all families and genera and all British and Irish species not recorded from Germany*. Wissenschaftlich Akademischer Buchvertrieb-Fründ, Scheeßel.

Isopoda

- Hopkin, S. P. (1991). *A key to the woodlice of Britain and Ireland*. Field Studies 7, 599–650.

Hymenoptera

- Benson, R.B., 1952. *Handbooks for the Identification of British Insects. Hymenoptera, Symphyta, Vol 6, Section 2 (a-c)*. Royal Entomological Society. London.
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Neuroptera

- Plant, C. W. (1997). *A Key to the Adults of British Lacewings and their Allies*. Shrewsbury: Field Studies Council.

Plecoptera

- Hynes, H. B. N. (1977). *A Key to the Adults and Nymphs of British Stoneflies (Plecoptera) with Notes on their Ecology and Distribution.* Ambleside: Freshwater Biological Association.

Trichoptera

- Barnard, P.C. & Ross, E. 2012. *The adult Trichoptera (caddisflies) of Britain and Ireland*. Handbooks for the identification of British Insects 1 (17) 192 + iv pages.

Various

- Diptera (flies) images (genitalia etc.). [online] Available at: https://www.spessartfliegen.de/diptera/diptera.html
- Käfer Europas (beetle keys). [online] Available at: https://coleonet.de/coleo/html/start.htm
- Mike's Insect Keys. [online] Available at: https://sites.google.com/view/mikes-insectkeys
- Weevil Guides. [online] Available at: https://drive.google.com/drive/folders/0B008cp9g-Pm8fmx2aE5JUXpkX0czQ2F1bWtJZWZJb1JxM2JLM0djMi1Ea2RWUzluMHNGVGc?resourcekey=0-YMKORs4FJamr-aq3rYGOMQ

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Bladmineerders.nl. (2021). *Polydrusus flavipes*. In: Plant Parasites of Europe: leafminers, galls and fungi. Willem N. Ellis. [online] Available at: https://bladmineerders.nl/parasites/animalia/arthropoda/insecta/coleoptera/polyphaga/cucujiformia/curculionoidea/curculionidae/entiminae/polydrusini/polydrusus/polydrusus-flavipes/ [Accessed 1st Jan. 2026].

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British Bugs data. (2026b). *Eupteryx filicum* Family: Cicadellidae. [online] Available at: https://www.britishbugs.org.uk/homoptera/Cicadellidae/Eupteryx_fiiicum.html [Accessed on 8th Jan. 2026].

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British Bugs data. (2026e). *Megamelodes quadrimaculatus* Family: Delphacidae. [online] Available at:

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APPENDICES

Images taken during the Wet Meadow survey in 2025.

Figure 26: Showing a seed-collecting operation involving a quad bike and towed vacuum harvester being operated in Roman Park on 24th July 2025.

Figure 27: Showing an area previously lush with vegetation at Dew Meadow. Image photographed on 24th July 2025, at grid reference centred on SO50090604.

Figure 28: Showing a fixed cattle holding pen located in the south-eastern corner of Dew Meadow at grid reference centred on SO50110605. Image photographed on 29th April 2025.

Figure 29: Showing an information board attached to the cattle pen explaining the grazing management being undertaken by the site's cattle. Image photographed on 18th June 2025.

Figure 30: Showing one of the cows being used for conservation grazing at Wet Meadow; cow wearing a NoFence GPS collar around its neck. Image photographed on 24th July 2025.

Figure 31: Showing part of the herd resting up in the shade. Image photographed on 21st August 2025 in Dew Meadow.

Figure 32: Showing two larval burrows of the Green Tiger Beetle found along the bare bank of the newly installed pond in Roman Park. Image photographed on 21st August 2025.

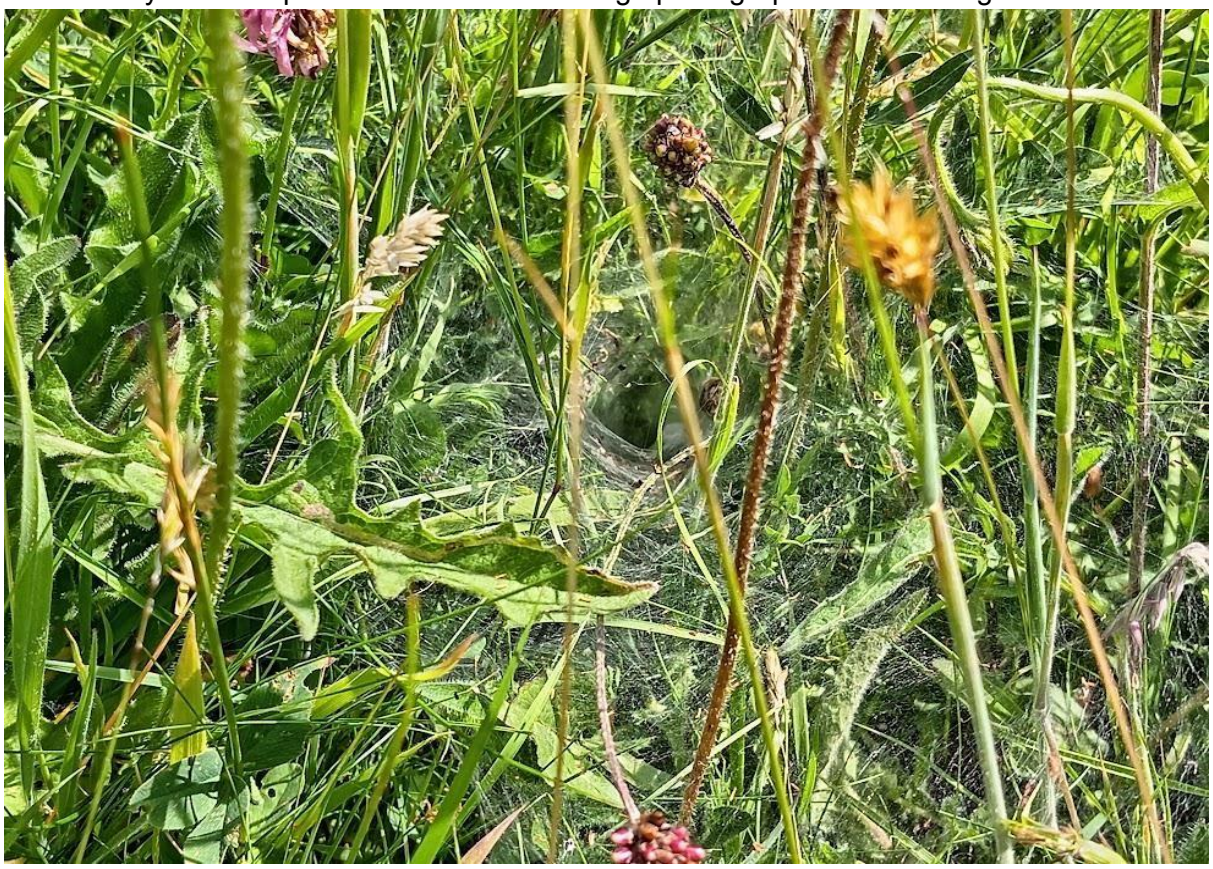

Figure 33: Showing the web of a Labyrinth Spider built within the taller vegetation in one of the field margins. Image photographed on 18th June 2025.

Figure 34: Showing a mating pair of Spotted Longhorn Beetles that were recorded at Wet Meadow on 18th June 2025.

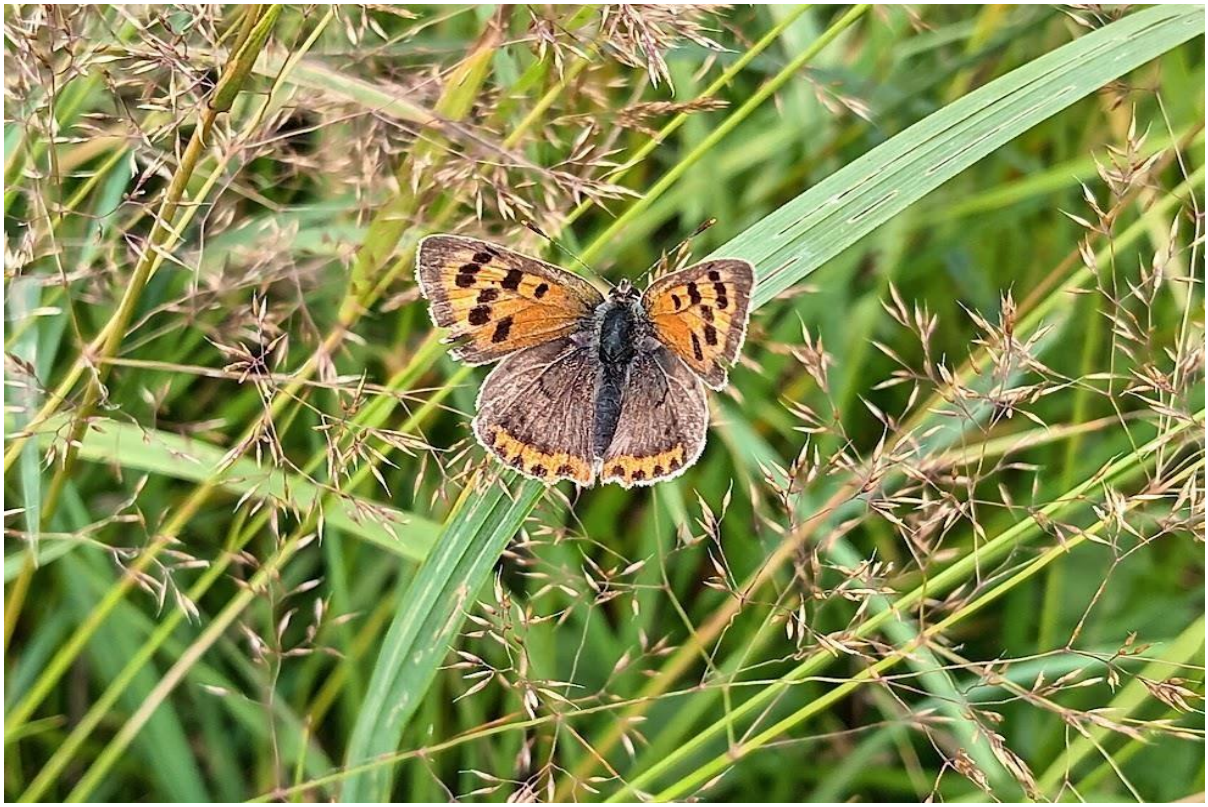

Figure 35: Showing one of a number of Small Copper's recorded in Brewery Paddock on 24th July 2025.

Figure 36: Showing an adult Oak Bush-cricket swept from the lower branches of oaks in Brewery Paddock on 24th July 2025.

Figure 37: Showing one of the adult Roesel's Bush-crickets recorded at Wet Meadow during the survey. Image photographed on 21st August 2025.

Appendix 1. Full list of invertebrate species recorded from Wet Meadow in 2025, including the specific fields in which each species was encountered – marked with an X. Species of 'conservation interest', and other species of interest (Other) are highlighted in **bold**.

Species	Family	Order	Conservation status	Roman Park	Dyer's Field	Dew Meadow	Forest Meadow	Brewery Paddock
Gammarus pulex sens. str.	Gammaridae	Amphipoda		x				
Agelena labyrinthica	Agelenidae	Araneae	Locally common	x	x	x	x	x
Agalenatea redii	Araneidae	Araneae	Locally common	x	x	x	x	x
Araneus diadematus	Araneidae	Araneae		x	x	x	x	x
Araniella opisthographa	Araneidae	Araneae					x	
Larinioides cornutus	Araneidae	Araneae		x				x
Mangora acalypha	Araneidae	Araneae	Locally common; spreading	x	x	x	x	x
Clubiona lutescens	Clubionidae	Araneae		x				
Harpactea hombergi	Dysderidae	Araneae			x			
Drassyllus pusillus	**Gnaphosidae**	**Araneae**	**Local; generally uncommon**		**x**			
Bathyphantes gracilis	Linyphiidae	Araneae		x	x			x
Erigone atra	Linyphiidae	Araneae		x	x			
Erigone dentipalpis	Linyphiidae	Araneae			x			
Gonatium rubens	Linyphiidae	Araneae						x

Microlinyphia pusilla	Linyphiidae	Araneae			x			
Neriene montana	Linyphiidae	Araneae			x			
Oedothorax fuscus	Linyphiidae	Araneae						x
Alopecosa pulverulenta	Lycosidae	Araneae		x				
Arctosa leopardus	**Lycosidae**	**Araneae**	**Very local**		**x**			
Pardosa amentata	Lycosidae	Araneae			x			
Pardosa palustris	Lycosidae	Araneae			x			
Pardosa pullata	Lycosidae	Araneae			x			
Pirata piraticus	Lycosidae	Araneae	Locally common	x	x			

Nesticus cellulanus	**Nesticidae**	**Araneae**	**Local**		**x**			
Pisaura mirabilis	Pisauridae	Araneae		x	x			x
Metellina mengei	Tetragnathidae	Araneae			x			
Metellina segmentata	Tetragnathidae	Araneae		x				x
Pachygnatha clercki	Tetragnathidae	Araneae		x	x			
Pachygnatha degeeri	Tetragnathidae	Araneae		x	x	x	x	x
Tetragnatha extensa	Tetragnathidae	Araneae		x		x		
Anelosimus vittatus	Theridiidae	Araneae				x		

Enoplognatha ovata sensu stricto	Theridiidae	Araneae				x	x	
Neottiura bimaculata	Theridiidae	Araneae		x	x			
Paidiscura pallens	Theridiidae	Araneae		x	x			x
Phylloneta sisyphia	Theridiidae	Araneae		x		x		
Theridion varians	Theridiidae	Araneae			x			
Ozyptila trux	**Thomisidae**	**Araneae**	**Local**		**x**			
Xysticus acerbus	**Thomisidae**	**Araneae**	**NR**				**x**	
Xysticus cristatus	Thomisidae	Araneae		x	x	x	x	x
Erpobdella octoculata	Erpobdellidae	Arhynchobdellida			x			
Erpobdella testacea	Erpobdellidae	Arhynchobdellida	Locally common in Wales		x			
Chordeuma proximum	Chordeumatidae	Chordeumatida			x			
Platyrhinus resinosus	**Anthribidae**	**Coleoptera**	**[Nb]**				**x**	
Eutrichapion ervi	Apionidae	Coleoptera		x				
Ischnopterapion virens	Apionidae	Coleoptera		x	x			
Perapion curtirostre	Apionidae	Coleoptera		x	x			x
Perapion hydrolapathi	Apionidae	Coleoptera		x	x			

Perapion violaceum	Apionidae	Coleoptera			x	x	x	
Protapion apricans	Apionidae	Coleoptera		x	x		x	
Protapion assimile	Apionidae	Coleoptera		x	x			

Protapion fulvipes	Apionidae	Coleoptera		x				
Protapion nigritarse	Apionidae	Coleoptera					x	
Protapion trifolii	Apionidae	Coleoptera		x			x	
Protapion varipes	**Apionidae**	**Coleoptera**	**[Nb]; Nb**	**x**				**x**
Byturus tomentosus	Byturidae	Coleoptera					x	x
Cantharis flavilabris	Cantharidae	Coleoptera		x	x	x		x
Malthodes minimus	Cantharidae	Coleoptera				x		
Rhagonycha fulva	Cantharidae	Coleoptera		x	x		x	
Acupalpus dubius	Carabidae	Coleoptera		x	x		x	
Acupalpus exiguus	**Carabidae**	**Coleoptera**	**NS**		**x**			
Acupalpus meridianus	**Carabidae**	**Coleoptera**	**Local in Wales; new for VC**					**x**
Agonum emarginatum	Carabidae	Coleoptera			x			
Agonum fuliginosum	Carabidae	Coleoptera			x			x

Amara aenea	Carabidae	Coleoptera		x				
Amara lunicollis	Carabidae	Coleoptera		x				
Bembidion articulatum	**Carabidae**	**Coleoptera**	**Local in Wales**		**x**			
Bembidion biguttatum	Carabidae	Coleoptera		x	x			
Bembidion guttula	Carabidae	Coleoptera		x	x			
Bembidion lunulatum	Carabidae	Coleoptera			x			
Bembidion mannerheimii	Carabidae	Coleoptera		x	x			
Bembidion properans	Carabidae	Coleoptera						x
Bembidion quadrimaculatum	Carabidae	Coleoptera						x
Bembidion quadripustulatum	**Carabidae**	**Coleoptera**	**NS; Section 7**		**x**			
Bembidion tetracolum	Carabidae	Coleoptera			x			
Cicindela campestris	Carabidae	Coleoptera		x				

Elaphrus cupreus	Carabidae	Coleoptera			x			
Leistus fulvibarbis	Carabidae	Coleoptera			x			
Nebria brevicollis	Carabidae	Coleoptera			x	x		
Notiophilus biguttatus	Carabidae	Coleoptera		x	x			
Paranchus albipes	Carabidae	Coleoptera		x				

Poecilus cupreus	Carabidae	Coleoptera		x			x	
Poecilus versicolor	Carabidae	Coleoptera		x				
Pterostichus strenuus	Carabidae	Coleoptera		x			x	
Stenolophus mixtus	**Carabidae**	**Coleoptera**	**Local in Wales**		**x**			
Grammoptera ruficornis	Cerambycidae	Coleoptera					x	
Pachytodes cerambyciformis	Cerambycidae	Coleoptera			x	x	x	
Rutpela maculata	Cerambycidae	Coleoptera			x		x	
Altica palustris	Chrysomelidae	Coleoptera			x			
Aphthona lutescens	**Chrysomelidae**	**Coleoptera**	**Local**		**x**			
Bruchidius varius	**Chrysomelidae**	**Coleoptera**	**Other**	**x**			**x**	
Cassida rubiginosa	Chrysomelidae	Coleoptera		x		x		
Chaetocnema concinna	Chrysomelidae	Coleoptera		x		x		x
Chaetocnema hortensis	Chrysomelidae	Coleoptera		x		x	x	x
Chrysolina polita	Chrysomelidae	Coleoptera			x			
Crepidodera aurata	Chrysomelidae	Coleoptera						x
Crepidodera fulvicornis	Chrysomelidae	Coleoptera			x			

Cryptocephalus pusillus	Chrysomelidae	Coleoptera		x				
Galerucella lineola	Chrysomelidae	Coleoptera		x		x		
Galerucella tenella	Chrysomelidae	Coleoptera		x	x	x		
Gastrophysa viridula	Chrysomelidae	Coleoptera				x		x
Lema cyanella	Chrysomelidae	Coleoptera				x		x
Lochmaea suturalis	Chrysomelidae	Coleoptera		x				

Longitarsus luridus	Chrysomelidae	Coleoptera		x	x	x	x	x
Longitarsus melanocephalus	Chrysomelidae	Coleoptera				x		x
Longitarsus suturellus	Chrysomelidae	Coleoptera		x	x			
Neocrepidodera transversa	Chrysomelidae	Coleoptera						x
Oulema melanopus	Chrysomelidae	Coleoptera	DD	x				x
Oulema obscura	Chrysomelidae	Coleoptera				x		
Phaedon cochleariae	Chrysomelidae	Coleoptera			x			
Phaedon tumidulus	Chrysomelidae	Coleoptera		x	x			x
Phyllotreta exclamationis	Chrysomelidae	Coleoptera			x		x	

Phyllotreta flexuosa	**Chrysomelidae**	**Coleoptera**	**Local; scarce in Duff**		**x**			
Phyllotreta undulata	Chrysomelidae	Coleoptera			x			
Phyllotreta vittula	**Chrysomelidae**	**Coleoptera**	**Local**	**x**				
Prasocuris glabra	Chrysomelidae	Coleoptera		x		x	x	
Psylliodes chrysocephala	Chrysomelidae	Coleoptera						x
Clambus pubescens	**Clambidae**	**Coleoptera**	**Local; new for VC**		**x**			
Adalia decempunctata	Coccinellidae	Coleoptera					x	
Coccinella septempunctata	Coccinellidae	Coleoptera		x	x	x	x	
Propylea quattuordecimpunctata	Coccinellidae	Coleoptera		x				x
Rhyzobius litura	Coccinellidae	Coleoptera		x	x	x	x	x
Scymnus haemorrhoidalis	**Coccinellidae**	**Coleoptera**	**Local**		**x**			
Subcoccinella vigintiquattuorpunctata	Coccinellidae	Coleoptera		x				

Tytthaspis sedecimpunctata	Coccinellidae	Coleoptera					x	
Atomaria rubella	Cryptophagidae	Coleoptera		x	x			

Atomaria testacea	Cryptophagidae	Coleoptera				x		
Ephistemus globulus	Cryptophagidae	Coleoptera		x				
Anthonomus rubi	Curculionidae	Coleoptera			x			
Attactagenus plumbeus	**Curculionidae**	**Coleoptera**	**Nb**				x	
Ceutorhynchus pallidactylus	Curculionidae	Coleoptera			x			
Curculio nucum	**Curculionidae**	**Coleoptera**	**Local**			**x**		
Graptus triguttatus	**Curculionidae**	**Coleoptera**	**Local; scarce in Duff**	**x**				
Hypera conmaculata	**Curculionidae**	**Coleoptera**	**Local; scarce in Duff**		**x**			
Hypera nigrirostris	Curculionidae	Coleoptera		x			x	
Hypera plantaginis	Curculionidae	Coleoptera		x				
Hypera rumicis	Curculionidae	Coleoptera						x
Leiosoma deflexum	Curculionidae	Coleoptera		x				
Mecinus pascuorum	Curculionidae	Coleoptera		x	x		x	
Nedyus quadrimaculatus	Curculionidae	Coleoptera				x		x
Phyllobius pomaceus	Curculionidae	Coleoptera		x		x		
Phyllobius pyri	Curculionidae	Coleoptera		x				

Polydrusus flavipes	**Curculionidae**	**Coleoptera**	**Nb; new for Wales**					**x**
Polydrusus formosus	**Curculionidae**	**Coleoptera**	**[Na]**			**x**		
Rhinoncus pericarpius	Curculionidae	Coleoptera		x	x			
Sciaphilus asperatus	Curculionidae	Coleoptera		x				
Sitona lineatus	Curculionidae	Coleoptera		x	x	x	x	x
Sitona obsoletus	Curculionidae	Coleoptera		x	x	x	x	x
Sitona suturalis	Curculionidae	Coleoptera		x			x	
Strophosoma nebulosum	Curculionidae	Coleoptera		x	x	x	x	x
Trichosirocalus troglodytes	Curculionidae	Coleoptera		x				
Tychius picirostris	Curculionidae	Coleoptera		x				
Dryops ernesti	Dryopidae	Coleoptera			x			
Dryops luridus	Dryopidae	Coleoptera						x
Agriotes acuminatus	Elateridae	Coleoptera						x
Agriotes obscurus	Elateridae	Coleoptera			x			
Agriotes pallidulus	Elateridae	Coleoptera		x			x	x

Athous haemorrhoidalis	Elateridae	Coleoptera		x	x			
Hister unicolor	**Histeridae**	**Coleoptera**	**Local**		**x**			
Berosus affinis	**Hydrophilidae**	**Coleoptera**	**Local**	**x**				
Cercyon impressus	Hydrophilidae	Coleoptera			x	x		
Cercyon lateralis	Hydrophilidae	Coleoptera			x	x		
Cryptopleurum minutum	Hydrophilidae	Coleoptera				x		x
Megasternum concinnum	Hydrophilidae	Coleoptera		x		x		
Sphaeridium bipustulatum	Hydrophilidae	Coleoptera		x	x	x		
Sphaeridium lunatum	Hydrophilidae	Coleoptera			x	x		
Sphaeridium scarabaeoides	Hydrophilidae	Coleoptera			x			x
Brachypterus glaber	Kateretidae	Coleoptera				x		x
Corticarina minuta	Latridiidae	Coleoptera		x	x			x
Cortinicara gibbosa	Latridiidae	Coleoptera		x	x	x		
Enicmus fungicola	**Latridiidae**	**Coleoptera**	**Notable; new for VC**		**x**			
Malachius bipustulatus	Malachiidae	Coleoptera					x	

Meligethes aeneus	Nitidulidae	Coleoptera		x	x	x	x	x
Meligethes brunnicornis	**Nitidulidae**	**Coleoptera**	**Local**				**x**	
Meligethes nigrescens	Nitidulidae	Coleoptera	Locally frequent				**x**	
Oedemera lurida	Oedemeridae	Coleoptera		x	x	x	x	x
Oedemera nobilis	Oedemeridae	Coleoptera		x	x	x	x	
Ptenidium nitidum	Ptiliidae	Coleoptera			x			x
Pyrochroa serraticornis	Pyrochroidae	Coleoptera		x	x			
Acrossus rufipes	Scarabaeidae	Coleoptera						x
Aphodius pedellus	Scarabaeidae	Coleoptera	DD			x		
Hoplia philanthus	Scarabaeidae	Coleoptera				x	x	x
Onthophagus similis	Scarabaeidae	Coleoptera				x		
Otophorus haemorrhoidalis	**Scarabaeidae**	**Coleoptera**	**Local**			**x**		
Teuchestes fossor	Scarabaeidae	Coleoptera			x	x		
Anaspis frontalis	Scraptiidae	Coleoptera			x		x	x
Anaspis maculata	Scraptiidae	Coleoptera		x	x	x		

Aleochara lanuginosa	Staphylinidae	Coleoptera				x		
Aleochara tristis	**Staphylinidae**	**Coleoptera**	**Other; rare in Wales**			**x**		
Anotylus rugosus	Staphylinidae	Coleoptera		x				
Atheta fungi	Staphylinidae	Coleoptera				x		
Bisnius fimetarius	Staphylinidae	Coleoptera						x
Bryaxis puncticollis	Staphylinidae	Coleoptera			x			
Carpelimus pusillus	**Staphylinidae**	**Coleoptera**	**Local**		**x**			
Drusilla canaliculata	Staphylinidae	Coleoptera	Locally common	x	x			
Euaesthetus ruficapillus	Staphylinidae	Coleoptera			x			
Leptusa ruficollis	Staphylinidae	Coleoptera		x				
Lesteva longoelytrata	Staphylinidae	Coleoptera			x			

Ontholestes murinus	Staphylinidae	Coleoptera			x			
Philonthus cruentatus	Staphylinidae	Coleoptera			x			
Philonthus decorus	Staphylinidae	Coleoptera						x
Philonthus splendens	Staphylinidae	Coleoptera	Locally common		x	x		
Philonthus tenuicornis	Staphylinidae	Coleoptera	Locally common	x				x

Platystethus nitens	**Staphylinidae**	**Coleoptera**	**Local in Wales**		**x**			
Pselaphus heisei	**Staphylinidae**	**Coleoptera**	**Other; new for VC**		**x**			
Reichenbachia juncorum	Staphylinidae	Coleoptera		x		x	x	x
Rugilus orbiculatus	Staphylinidae	Coleoptera						x
Sepedophilus nigripennis	Staphylinidae	Coleoptera		x				
Stenus bifoveolatus	Staphylinidae	Coleoptera			x			
Stenus bimaculatus	Staphylinidae	Coleoptera		x				x
Stenus brunnipes	Staphylinidae	Coleoptera		x				
Stenus cicindeloides	Staphylinidae	Coleoptera		x	x		x	x
Stenus clavicornis	Staphylinidae	Coleoptera		x	x			
Stenus flavipes	Staphylinidae	Coleoptera			x	x	x	
Stenus fulvicornis	Staphylinidae	Coleoptera		x	x			
Stenus latifrons	Staphylinidae	Coleoptera			x			
Stenus ossium	Staphylinidae	Coleoptera		x				
Stenus picipes	Staphylinidae	Coleoptera		x				
Stenus providus	Staphylinidae	Coleoptera		x	x			

Stenus tarsalis	Staphylinidae	Coleoptera		x	x		x	
Tachyporus dispar	Staphylinidae	Coleoptera		x	x	x	x	x
Tachyporus hypnorum	Staphylinidae	Coleoptera		x		x		
Tachyporus nitidulus	Staphylinidae	Coleoptera			x			
Xantholinus longiventris	Staphylinidae	Coleoptera			x			x

Forficula auricularia	Forficulidae	Dermaptera		x		x		x
Phytomyza ilicis (mine)	Agromyzidae	Diptera				x	x	
Botanophila brunneilinea	Anthomyiidae	Diptera				x		
Botanophila striolata s.str.	Anthomyiidae	Diptera				x		
Hylemya vagans	Anthomyiidae	Diptera						x
Hylemyza partita	Anthomyiidae	Diptera				x		
Dioctria cothurnata	**Asilidae**	**Diptera**	**NS**	**x**		**x**		
Dysmachus trigonus	Asilidae	Diptera					x	
Leptogaster cylindrica	Asilidae	Diptera				x		x
Machimus atricapillus	Asilidae	Diptera		x				

Dilophus febrilis	Bibionidae	Diptera		x				x
Bombylius canescens	**Bombyliidae**	**Diptera**	**NS**	**x**				
Bombylius major	Bombyliidae	Diptera		x				x
Eurychaeta palpalis	**Calliphoridae**	**Diptera**	**NS**				**x**	
Lucilia caesar	Calliphoridae	Diptera					x	
Chrysotimus molliculus	Dolichopodidae	Diptera						x
Chrysotus gramineus	Dolichopodidae	Diptera						x
Dolichopus festivus	Dolichopodidae	Diptera		x	x		x	
Dolichopus nubilus	Dolichopodidae	Diptera						x
Poecilobothrus nobilitatus	Dolichopodidae	Diptera		x	x			
Sympycnus pulicarius	Dolichopodidae	Diptera			x			
Empis opaca	Empididae	Diptera						x
Empis tessellata	Empididae	Diptera		x	x			x
Hilara maura	Empididae	Diptera		x				
Limnellia fallax	**Ephydridae**	**Diptera**	**Local**					**x**
Psilopa nitidula	Ephydridae	Diptera		x				

Suillia affinis	Heleomyzidae	Diptera			x			

Hybos culiciformis	Hybotidae	Diptera			x			
Calliopum elisae	Lauxaniidae	Diptera		x				
Calliopum tuberculosum	Lauxaniidae	Diptera				x		
Minettia fasciata	Lauxaniidae	Diptera						x
Minettia longipennis	Lauxaniidae	Diptera			x			x
Sapromyza zetterstedti	**Lauxaniidae**	**Diptera**	**Local; new for VC**					**x**
Lonchoptera lutea	Lonchopteridae	Diptera					x	
Coenosia tigrina	Muscidae	Diptera		x	x			x
Eudasyphora cyanella	Muscidae	Diptera			x			
Helina impuncta	Muscidae	Diptera						x
Neomyia cornicina	Muscidae	Diptera		x				x
Phaonia signata	Muscidae	Diptera					x	
Opomyza petrei	Opomyzidae	Diptera		x				x
Tomosvaryella palliditarsis	**Pipunculidae**	**Diptera**	**Local; new for VC**					**x**

Verrallia aucta	Pipunculidae	Diptera				x		
Rivellia syngenesiae	Platystomatidae	Diptera	Locally common					
Pollenia amentaria	**Polleniidae**	**Diptera**	**Local**				**x**	
Pollenia angustigena	Polleniidae	Diptera	Locally common	x				
Pollenia griseotomentosa	**Polleniidae**	**Diptera**	**Local**			**x**		
Rhagio tringarius	Rhagionidae	Diptera			x			
Norellisoma spinimanum	Scathophagidae	Diptera				x		
Scathophaga stercoraria	Scathophagidae	Diptera		x	x	x	x	x
Euthycera fumigata	**Sciomyzidae**	**Diptera**	**Other**				**x**	
Limnia unguicornis	Sciomyzidae	Diptera		x		x		
Tetanocera ferruginea	Sciomyzidae	Diptera						x

Sepsis fulgens	Sepsidae	Diptera				x		
Rachispoda lutosa	Sphaeroceridae	Diptera			x			
Chloromyia formosa	Stratiomyidae	Diptera				x		
Pachygaster leachii	Stratiomyidae	Diptera					x	

Episyrphus balteatus	Syrphidae	Diptera		x	x	x		x
Eupeodes corollae	Syrphidae	Diptera				x		
Melanostoma mellinum	Syrphidae	Diptera				x		x
Melanostoma scalare	Syrphidae	Diptera		x	x			
Meliscaeva auricollis	Syrphidae	Diptera				x		
Myathropa florea	Syrphidae	Diptera					x	
Platycheirus albimanus	Syrphidae	Diptera						x
Syritta pipiens	Syrphidae	Diptera			x		x	x
Syrphus ribesii	Syrphidae	Diptera			x	x	x	
Syrphus vitripennis	Syrphidae	Diptera					x	
Volucella pellucens	Syrphidae	Diptera					x	
Xylota segnis	Syrphidae	Diptera				x		
Haematopota pluvialis	Tabanidae	Diptera		x		x		x
Actia lamia	Tachinidae	Diptera				x		
Eriothrix rufomaculata	Tachinidae	Diptera			x	x	x	x
Phasia pusilla	**Tachinidae**	**Diptera**	**Local in Wales**					**x**

Siphona geniculata	Tachinidae	Diptera				x		x
Chaetostomella cylindrica	Tephritidae	Diptera		x				x
Tephritis vespertina	Tephritidae	Diptera		x	x	x	x	x
Terellia tussilaginis	Tephritidae	Diptera			x			
Urophora cardui	Tephritidae	Diptera		x				
Urophora jaceana	Tephritidae	Diptera			x	x		
Tipula lateralis	Tipulidae	Diptera		x	x		x	
Tipula oleracea	Tipulidae	Diptera		x				x

Tipula paludosa	Tipulidae	Diptera				x		x
Entomobrya intermedia	Entomobryidae	Entomobryomorpha				x		
Orchesella villosa	Entomobryidae	Entomobryomorpha		x	x			x
Anurophorus laricis	Isotomidae	Entomobryomorpha		x				
Pogonognathellus longicornis	Tomoceridae	Entomobryomorpha		x	x			x
Anthocoris confusus	Anthocoridae	Hemiptera						x
Anthocoris nemorum	Anthocoridae	Hemiptera		x	x	x	x	x

Orius (Heterorius) laticollis	**Anthocoridae**	**Hemiptera**	**Other**					**x**
Orius (Heterorius) majusculus	Anthocoridae	Hemiptera						x
Orius laevigatus	Anthocoridae	Hemiptera			x	x		
Orius niger	Anthocoridae	Hemiptera					x	
Aphrophora alni	Aphrophoridae	Hemiptera				x	x	
Neophilaenus lineatus	Aphrophoridae	Hemiptera		x				
Philaenus spumarius	Aphrophoridae	Hemiptera		x	x	x	x	x
Alebra albostriella	Cicadellidae	Hemiptera						x
Allygus mixtus	Cicadellidae	Hemiptera				x		
Anoscopus albifrons	Cicadellidae	Hemiptera			x			
Aphrodes makarovi	Cicadellidae	Hemiptera		x				x
Arthaldeus pascuellus	Cicadellidae	Hemiptera		x		x		
Balclutha punctata	Cicadellidae	Hemiptera						x
Cicadula quadrinotata	Cicadellidae	Hemiptera			x			
Deltocephalus pulicaris	Cicadellidae	Hemiptera		x				

Eupteryx aurata	Cicadellidae	Hemiptera						x
Eupteryx filicum	**Cicadellidae**	**Hemiptera**	**Local**					**x**
Eupteryx signatipennis	**Cicadellidae**	**Hemiptera**	**Local**		**x**			
Eupteryx vittata	Cicadellidae	Hemiptera		x				

Euscelis incisus	Cicadellidae	Hemiptera		x	x	x	x	x
Lindbergina aurovittata	Cicadellidae	Hemiptera	Locally common					x
Macrosteles laevis	Cicadellidae	Hemiptera	Locally common				x	
Macrosteles septemnotatus	**Cicadellidae**	**Hemiptera**	**Local**		**x**			
Oncopsis avellanae	**Cicadellidae**	**Hemiptera**	**Local**	**x**			**x**	
Populicerus confusus	Cicadellidae	Hemiptera						x
Psammotettix confinis	Cicadellidae	Hemiptera		x	x	x		x
Streptanus sordidus	Cicadellidae	Hemiptera				x		
Thamnotettix dilutior	Cicadellidae	Hemiptera		x				
Zygina tiliae	**Cicadellidae**	**Hemiptera**	**Local; new for Wales**	**x**				
Cixius nervosus	Cixiidae	Hemiptera				x		x

Tachycixius pilosus	Cixiidae	Hemiptera			x			
Conomelus anceps	Delphacidae	Hemiptera		x	x		x	
Criomorphus albomarginatus	Delphacidae	Hemiptera				x		
Ditropis pteridis	Delphacidae	Hemiptera		x				
Florodelphax leptosoma sensu stricto	Delphacidae	Hemiptera			x			
Javesella dubia	Delphacidae	Hemiptera		x	x			x
Javesella pellucida	Delphacidae	Hemiptera		x	x		x	
Megamelodes quadrimaculatus sensu stricto	**Delphacidae**	**Hemiptera**	**Local**		**x**			
Muellerianella fairmairei	Delphacidae	Hemiptera	Locally common				x	x
Scottianella dalei	**Delphacidae**	**Hemiptera**	**Nb; new for Wales**	**x**				
Gerris lacustris	Gerridae	Hemiptera		x	x			

Cymus melanocephalus	Lygaeidae	Hemiptera						x
Drymus (Sylvadrymus) sylvaticus	Lygaeidae	Hemiptera		x				x
Megalonotus chiragra	**Lygaeidae**	**Hemiptera**	**Local**	**x**				

Acetropis gimmerthalii	Miridae	Hemiptera	Locally common		x	x		
Capsus ater	Miridae	Hemiptera		x		x		
Closterotomus norwegicus	Miridae	Hemiptera		x	x	x	x	x
Deraeocoris ruber	Miridae	Hemiptera		x				x
Deraeocoris (Knightocapsus) lutescens	Miridae	Hemiptera		x				x
Harpocera thoracica	Miridae	Hemiptera		x			x	
Leptopterna dolabrata	Miridae	Hemiptera		x	x	x	x	x
Leptopterna ferrugata	Miridae	Hemiptera		x		x		
Liocoris tripustulatus	Miridae	Hemiptera				x		
Lopus decolor	Miridae	Hemiptera		x			x	
Lygocoris pabulinus	Miridae	Hemiptera					x	x
Lygus pratensis	**Miridae**	**Hemiptera**	**[RDB 3]**			**x**		
Lygus rugulipennis	Miridae	Hemiptera						x
Malacocoris chlorizans	Miridae	Hemiptera		x			x	
Monalocoris filicis	Miridae	Hemiptera		x				
Notostira elongata	Miridae	Hemiptera				x		

Orthotylus ochrotrichus	Miridae	Hemiptera				x		
Phylus coryli	Miridae	Hemiptera				x	x	
Pinalitus cervinus	Miridae	Hemiptera						x
Pithanus maerkelii	Miridae	Hemiptera		x			x	
Plagiognathus (Plagiognathus) arbustorum	Miridae	Hemiptera		x	x	x	x	x

Plagiognathus chrysanthemi	Miridae	Hemiptera		x	x	x	x	x
Psallus (Mesopsallus) ambiguus	Miridae	Hemiptera					x	
Stenodema (Brachystira) calcarata	Miridae	Hemiptera		x				x
Stenodema laevigata	Miridae	Hemiptera		x	x	x	x	x
Stenotus binotatus	Miridae	Hemiptera				x	x	
Trigonotylus ruficornis	Miridae	Hemiptera		x				
Nabis (Dolichonabis) limbatus	Nabidae	Hemiptera			x			x
Nabis (Nabicula) flavomarginatus	Nabidae	Hemiptera			x		x	
Nabis rugosus	Nabidae	Hemiptera					x	
Dolycoris baccarum	Pentatomidae	Hemiptera		x	x	x	x	x

Troilus luridus	Pentatomidae	Hemiptera			x		x	
Saldula saltatoria	Saldidae	Hemiptera			x			x
Anisus leucostoma	Planorbidae	Hygrophila		x	x			
Apis mellifera	Apidae	Hymenoptera		x	x	x	x	x
Bombus hortorum	Apidae	Hymenoptera				x		
Bombus hypnorum	Apidae	Hymenoptera			x		x	
Bombus lapidarius	Apidae	Hymenoptera		x			x	
Bombus lucorum agg	Apidae	Hymenoptera		x	x	x	x	x
Bombus pascuorum	Apidae	Hymenoptera		x	x	x	x	x
Bombus pratorum	Apidae	Hymenoptera		x		x		
Bombus terrestris	Apidae	Hymenoptera		x	x	x	x	x
Nomada marshamella	Apidae	Hymenoptera			x			
Nomada ruficornis	Apidae	Hymenoptera			x			
Hylaeus communis	Colletidae	Hymenoptera					x	
Lindenius albilabris	Crabronidae	Hymenoptera		x				

Tachysphex pompiliformis	Crabronidae	Hymenoptera			x			

Lasius niger	Formicidae	Hymenoptera		x	x	x	x	x
Lasius platythorax	**Formicidae**	**Hymenoptera**	**Other**		**x**			
Myrmica rubra	Formicidae	Hymenoptera		x	x			x
Myrmica ruginodis	Formicidae	Hymenoptera		x	x			
Myrmica scabrinodis	Formicidae	Hymenoptera		x	x	x	x	x
Lasioglossum calceatum	Halictidae	Hymenoptera		x			x	
Lasioglossum laevigatum	**Halictidae**	**Hymenoptera**	**Local**					**x**
Lasioglossum lativentre	Halictidae	Hymenoptera			x			
Lasioglossum leucozonium	Halictidae	Hymenoptera		x				x
Osmia bicornis	Megachilidae	Hymenoptera		x				
Athalia circularis	Tenthredinidae	Hymenoptera		x				
Athalia cordata	Tenthredinidae	Hymenoptera		x	x			
Dolerus fumosus	Tenthredinidae	Hymenoptera			x			
Pachyprotasis rapae	Tenthredinidae	Hymenoptera			x			
Strongylogaster multifasciata	Tenthredinidae	Hymenoptera					x	
Tenthredo brevicornis	Tenthredinidae	Hymenoptera				x	x	

Tiphia femorata	Tiphiidae	Hymenoptera	Locally common		x			x
Vespula vulgaris	Vespidae	Hymenoptera		x		x		
Oniscus asellus	Oniscidae	Isopoda		x	x			x
Philoscia muscorum	Philosciidae	Isopoda		x	x	x		x
Porcellio scaber	Porcellionidae	Isopoda		x	x			x
Trichoniscus pusillus sensu lato	Trichoniscidae	Isopoda		x	x	x	x	x
Tachypodoiulus niger	Julidae	Julida			x			x
Callistege mi	Erebidae	Lepidoptera		x		x	x	

Euclidia glyphica	Erebidae	Lepidoptera		x	x	x		
Camptogramma bilineata	Geometridae	Lepidoptera		x				
Acrocercops brongniardella (mines)	Gracillariidae	Lepidoptera	Local			x		
Ochlodes sylvanus	Hesperiidae	Lepidoptera			x	x	x	
Aglais io	Nymphalidae	Lepidoptera		x				x
Aphantopus hyperantus	Nymphalidae	Lepidoptera		x			x	
Maniola jurtina	Nymphalidae	Lepidoptera		x	x	x	x	

Melanargia galathea	Nymphalidae	Lepidoptera		x				
Pararge aegeria	Nymphalidae	Lepidoptera				x		
Vanessa atalanta	Nymphalidae	Lepidoptera					x	
Anthocharis cardamines	Pieridae	Lepidoptera		x	x		x	x
Pieris brassicae	Pieridae	Lepidoptera		x			x	
Pieris rapae	Pieridae	Lepidoptera		x	x		x	
Gillmeria pallidactyla	**Pterophoridae**	**Lepidoptera**	**Local**		**x**			
Celypha striana	Tortricidae	Lepidoptera				x		
Zygaena filipendulae	Zygaenidae	Lepidoptera		x			x	
Lamyctes emarginatus	Henicopidae	Lithobiomorpha				x		
Lithobius forficatus	Lithobiidae	Lithobiomorpha			x			
Lithobius variegatus	Lithobiidae	Lithobiomorpha						x
Lithobius (Sigibius) microps	Lithobiidae	Lithobiomorpha			x			x
Chrysoperla lucasina	Chrysopidae	Neuroptera	DD				x	
Cunctochrysa albolineata	Chrysopidae	Neuroptera		x		x		
Nineta flava	Chrysopidae	Neuroptera					x	

Coniopteryx tineiformis	Coniopterygidae	Neuroptera						x
Hemerobius humulinus	Hemerobiidae	Neuroptera					x	

Hemerobius lutescens	Hemerobiidae	Neuroptera			x			
Coenagrion puella	Coenagrionidae	Odonata				x		
Pyrrhosoma nymphula	Coenagrionidae	Odonata		x				
Libellula depressa	Libellulidae	Odonata		x				
Dicranopalpus ramosus sensu stricto	Phalangiidae	Opiliones		x	x	x	x	x
Oligolophus tridens	Phalangiidae	Opiliones		x				
Paroligolophus agrestis	Phalangiidae	Opiliones			x			x
Pseudochorthippus parallelus	Acrididae	Orthoptera		x	x	x	x	x
Meconema thalassinum	Meconematidae	Orthoptera						x
Leptophyes punctatissima	Phaneropteridae	Orthoptera					x	
Tetrix subulata	Tetrigidae	Orthoptera			x			
Roeseliana roeselii	Tettigoniidae	Orthoptera					x	x
Nemoura cinerea	Nemouridae	Plecoptera		x	x			

Polydesmus angustus	Polydesmidae	Polydesmida						x
Neobisium carcinoides	Neobisiidae	Pseudoscorpiones			x			
Elipsocus hyalinus	Elipsocidae	Psocodea						x
Chilenocaecilius ornatipennis	Paracaeciliidae	Psocodea			x			x
Ectopsocus briggsi sensu stricto	Ectopsocidae	Psocoptera		x				x
Graphopsocus cruciatus	Stenopsocidae	Psocoptera						x
Stenopsocus stigmaticus	**Stenopsocidae**	**Psocoptera**	**Local**				**x**	
Trichopsocus brincki	Trichopsocidae	Psocoptera						x
Deroceras invadens	Agriolimacidae	Pulmonata						x
Deroceras reticulatum	Agriolimacidae	Pulmonata		x				x

Arion (Mesarion) subfuscus	Arionidae	Pulmonata						x
Cepaea hortensis	Helicidae	Pulmonata						x
Trochulus striolatus	Hygromiidae	Pulmonata						x
Tandonia cf. cristata	**Milacidae**	**Pulmonata**	**Other**			**x**		
Aegopinella nitidula	Oxychilidae	Pulmonata		x				
Oxychilus alliarius	Oxychilidae	Pulmonata						x

Vertigo pygmaea	Vertiginidae	Pulmonata		x				
Bourletiella hortensis	**Bourletiellidae**	**Symphypleona**	**Other; new for VC**	**x**				**x**
Dicyrtomina minuta	Dicyrtomidae	Symphypleona		x				
Sminthurus viridis	Sminthuridae	Symphypleona		x	x	x	x	x
Limnephilus centralis	Limnephilidae	Trichoptera			x			
Phytoptus avellanae (gall)	Phytoptidae	Trombidiformes					x	

Appendix 2. Full list of invertebrate species recorded from Wet Meadow in 2025, including habitat preferences and associations.

Species	**Family**	**Order**	**Broad biotope**	**Habitat**	**Associations**

Gammarus pulex sens. str.	Gammaridae	Amphipoda			
Agelena labyrinthica	Agelenidae	Araneae	open habitats	tall sward & scrub	Arthropoda
Agalenatea redii	Araneidae	Araneae	open habitats		
Araneus diadematus	Araneidae	Araneae			
Araniella opisthographa	Araneidae	Araneae	tree-associated	arboreal	Arthropoda, Fagales, *Quercus*
Larinioides cornutus	Araneidae	Araneae	wetland	acid & sedge peats	Arthropoda
Mangora acalypha	Araneidae	Araneae	open habitats	tall sward & scrub	Arthropoda
Clubiona lutescens	Clubionidae	Araneae			
Harpactea hombergi	Dysderidae	Araneae	tree-associated	shaded woodland floor	Arthropoda, Plantae
Drassyllus pusillus	Gnaphosidae	Araneae	open habitats	tall sward & scrub	Arthropoda
Bathyphantes gracilis	Linyphiidae	Araneae			
Erigone atra	Linyphiidae	Araneae			
Erigone dentipalpis	Linyphiidae	Araneae			
Gonatium rubens	Linyphiidae	Araneae	open habitats	tall sward & scrub; upland	Arthropoda
Microlinyphia pusilla	Linyphiidae	Araneae	open habitats	tall sward & scrub	Arthropoda
Neriene montana	Linyphiidae	Araneae	tree-associated	shaded woodland floor	Arthropoda, Plantae
Oedothorax fuscus	Linyphiidae	Araneae			

Alopecosa pulverulenta	Lycosidae	Araneae	open habitats	tall sward & scrub; upland	Arthropoda
Arctosa leopardus	Lycosidae	Araneae	wetland	acid & sedge peats	Arthropoda
Pardosa amentata	Lycosidae	Araneae	wetland	acid & sedge peats	Arthropoda

Pardosa palustris	Lycosidae	Araneae	open habitats	short sward & bare ground	Arthropoda
Pardosa pullata	Lycosidae	Araneae	open habitats	tall sward & scrub	Arthropoda
Pirata piraticus	Lycosidae	Araneae	wetland	acid & sedge peats	Arthropoda
Nesticus cellulanus	Nesticidae	Araneae			
Pisaura mirabilis	Pisauridae	Araneae	open habitats	tall sward & scrub	Arthropoda
Metellina mengei	Tetragnathidae	Araneae			
Metellina segmentata	Tetragnathidae	Araneae			
Pachygnatha clercki	Tetragnathidae	Araneae	wetland	acid & sedge peats	Arthropoda
Pachygnatha degeeri	Tetragnathidae	Araneae			
Tetragnatha extensa	Tetragnathidae	Araneae	wetland	acid & sedge peats	Arthropoda
Anelosimus vittatus	Theridiidae	Araneae	tree-associated	arboreal	
Enoplognatha ovata sensu stricto	Theridiidae	Araneae			
Neottiura bimaculata	Theridiidae	Araneae	open habitats	tall sward & scrub	

Paidiscura pallens	Theridiidae	Araneae	tree-associated	arboreal	Arthropoda, Fagales, *Quercus*
Phylloneta sisyphia	Theridiidae	Araneae	open habitats	tall sward & scrub	Arthropoda
Theridion varians	Theridiidae	Araneae	tree-associated	arboreal	Arthropoda, Fagales
Ozyptila trux	Thomisidae	Araneae	open habitats	tall sward & scrub	Arthropoda
Xysticus acerbus	Thomisidae	Araneae	open habitats	tall sward & scrub	Arthropoda
Xysticus cristatus	Thomisidae	Araneae			
Erpobdella octoculata	Erpobdellidae	Arhynchobdellida			
Erpobdella testacea	Erpobdellidae	Arhynchobdellida			
Chordeuma proximum	Chordeumatidae	Chordeumatida	tree-associated	shaded woodland floor	Plantae

Platyrhinus resinosus	Anthribidae	Coleoptera	tree-associated	decaying wood	*Betula, Daldinia concentrica, Fagus, Fraxinus*
Eutrichapion ervi	Apionidae	Coleoptera	open habitats	tall sward & scrub	
Ischnopterapion virens	Apionidae	Coleoptera	open habitats	tall sward & scrub	
Perapion curtirostre	Apionidae	Coleoptera	open habitats	tall sward & scrub	
Perapion hydrolapathi	Apionidae	Coleoptera	open habitats	tall sward & scrub	
Perapion violaceum	Apionidae	Coleoptera	open habitats	tall sward & scrub	
Protapion apricans	Apionidae	Coleoptera	open habitats	tall sward & scrub	Trifolium
Protapion assimile	Apionidae	Coleoptera	open habitats	tall sward & scrub	Trifolium
Protapion fulvipes	Apionidae	Coleoptera	open habitats	tall sward & scrub	Trifolium
Protapion nigritarse	Apionidae	Coleoptera	open habitats	tall sward & scrub	Trifolium
Protapion trifolii	Apionidae	Coleoptera	open habitats	tall sward & scrub	Trifolium

Protapion varipes	Apionidae	Coleoptera	open habitats	tall sward & scrub	Trifolium
Byturus tomentosus	Byturidae	Coleoptera	open habitats	tall sward & scrub	*Rubus*
Cantharis flavilabris (=nigra auctt.) black scutellum	Cantharidae	Coleoptera	open habitats	tall sward & scrub	
Malthodes minimus	Cantharidae	Coleoptera	tree-associated	decaying wood	Fagales
Rhagonycha fulva	Cantharidae	Coleoptera	open habitats	tall sward & scrub	Arthropoda
Acupalpus dubius	Carabidae	Coleoptera	wetland	acid & sedge peats	Arthropoda
Acupalpus exiguus	Carabidae	Coleoptera	wetland	marshland	Arthropoda
Acupalpus meridianus	Carabidae	Coleoptera	open habitats	short sward & bare ground	
Agonum emarginatum	Carabidae	Coleoptera	wetland	marshland	
Agonum fuliginosum	Carabidae	Coleoptera	wetland	marshland	
Amara aenea	Carabidae	Coleoptera	open habitats	short sward & bare ground	
Amara lunicollis	Carabidae	Coleoptera	open habitats	tall sward & scrub	
Bembidion articulatum	Carabidae	Coleoptera	wetland	marshland	

Bembidion biguttatum	Carabidae	Coleoptera	wetland	marshland	
Bembidion guttula	Carabidae	Coleoptera	wetland	marshland	
Bembidion lunulatum	Carabidae	Coleoptera	wetland	marshland	
Bembidion mannerheimii	Carabidae	Coleoptera	open habitats; treeassociated; wetland	acid & sedge peats; shaded woodland floor; wet woodland	

Bembidion properans	Carabidae	Coleoptera	open habitats	short sward & bare ground	
Bembidion quadrimaculatum	Carabidae	Coleoptera	open habitats	short sward & bare ground	
Bembidion quadripustulatum	Carabidae	Coleoptera	wetland	marshland	Arthropoda
Bembidion tetracolum	Carabidae	Coleoptera	wetland	running water	Arthropoda
Cicindela campestris	Carabidae	Coleoptera	open habitats	short sward & bare ground	
Elaphrus cupreus	Carabidae	Coleoptera	tree-associated; wetland	marshland; shaded woodland floor; wet woodland	
Leistus fulvibarbis	Carabidae	Coleoptera	tree-associated	shaded woodland floor	
Nebria brevicollis	Carabidae	Coleoptera	open habitats	tall sward & scrub	
Notiophilus biguttatus	Carabidae	Coleoptera	open habitats	tall sward & scrub	Arthropoda
Paranchus albipes	Carabidae	Coleoptera	wetland	running water	Arthropoda
Poecilus cupreus	Carabidae	Coleoptera	open habitats	short sward & bare ground	
Poecilus versicolor	Carabidae	Coleoptera	open habitats	tall sward & scrub	
Pterostichus strenuus	Carabidae	Coleoptera	open habitats	tall sward & scrub	
Stenolophus mixtus	Carabidae	Coleoptera	wetland	marshland	Arthropoda
Grammoptera ruficornis	Cerambycidae	Coleoptera	tree-associated	decaying wood	Fagales
Pachytodes cerambyciformis	Cerambycidae	Coleoptera	tree-associated	decaying wood	*Alnus, Betula*
Rutpela maculata	Cerambycidae	Coleoptera	tree-associated	decaying wood	Fagales

Altica palustris	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	*Epilobium*
Aphthona lutescens	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Asteraceae
Bruchidius varius	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	*Trifolium*
Cassida rubiginosa	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	*Cirsium*
Chaetocnema concinna	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Polygonaceae
Chaetocnema hortensis	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Poaceae
Chrysolina polita	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	*Urtica dioica*
Crepidodera aurata	Chrysomelidae	Coleoptera	tree-associated	arboreal	
Crepidodera fulvicornis	Chrysomelidae	Coleoptera	tree-associated	arboreal	
Cryptocephalus pusillus	Chrysomelidae	Coleoptera	tree-associated	arboreal	
Galerucella lineola	Chrysomelidae	Coleoptera	wetland	marshland	Asteraceae
Galerucella tenella	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Asteraceae
Gastrophysa viridula	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Asteraceae
Lema cyanella	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	*Cirsium*
Lochmaea suturalis	Chrysomelidae	Coleoptera	open habitats		
Longitarsus luridus	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Asteraceae
Longitarsus melanocephalus	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Asteraceae
Longitarsus suturellus	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Asteraceae
Neocrepidodera transversa	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Asteraceae
Oulema melanopus	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	
Oulema obscura	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Poaceae
Phaedon cochleariae	Chrysomelidae	Coleoptera	wetland	marshland	Plantae

Phaedon tumidulus	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Apiaceae
Phyllotreta exclamationis	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	*Cardamine, Rorippa*
Phyllotreta flexuosa	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Brassicaceae
Phyllotreta undulata	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Brassicaceae
Phyllotreta vittula	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Brassicaceae
Prasocuris glabra	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Ranunculus
Psylliodes chrysocephala	Chrysomelidae	Coleoptera	open habitats	tall sward & scrub	Brassicaceae

Clambus pubescens	Clambidae	Coleoptera			
Adalia decempunctata	Coccinellidae	Coleoptera	tree-associated	arboreal	Aphididae, Fagales
Coccinella septempunctata	Coccinellidae	Coleoptera			
Propylea quattuordecimpunctata	Coccinellidae	Coleoptera			
Rhyzobius litura	Coccinellidae	Coleoptera	open habitats	tall sward & scrub	
Scymnus haemorrhoidalis	Coccinellidae	Coleoptera	open habitats	tall sward & scrub	
Subcoccinella vigintiquattuorpunctata	Coccinellidae	Coleoptera	open habitats	tall sward & scrub	
Tytthaspis sedecimpunctata	Coccinellidae	Coleoptera	open habitats	tall sward & scrub	
Atomaria rubella	Cryptophagidae	Coleoptera			
Atomaria testacea	Cryptophagidae	Coleoptera			
Ephistemus globulus	Cryptophagidae	Coleoptera			
Anthonomus rubi	Curculionidae	Coleoptera	open habitats	tall sward & scrub	Rosaceae
Attactagenus plumbeus	Curculionidae	Coleoptera	open habitats	tall sward & scrub	Asteraceae

Ceutorhynchus pallidactylus	Curculionidae	Coleoptera	open habitats	short sward & bare ground	Brassicaceae
Curculio nucum	Curculionidae	Coleoptera	tree-associated	arboreal	
Graptus triguttatus	Curculionidae	Coleoptera	open habitats	tall sward & scrub	*Plantago*
Hypera conmaculata	Curculionidae	Coleoptera	wetland	marshland; running water	
Hypera nigrirostris	Curculionidae	Coleoptera	open habitats	tall sward & scrub	
Hypera plantaginis	Curculionidae	Coleoptera	open habitats	tall sward & scrub	
Hypera rumicis	Curculionidae	Coleoptera	open habitats	short sward & bare ground	
Leiosoma deflexum	Curculionidae	Coleoptera	open habitats	tall sward & scrub	
Mecinus pascuorum	Curculionidae	Coleoptera	open habitats	tall sward & scrub	Plantago
Nedyus quadrimaculatus	Curculionidae	Coleoptera	open habitats	tall sward & scrub	*Urtica dioica*
Phyllobius pomaceus	Curculionidae	Coleoptera	open habitats	tall sward & scrub	
Phyllobius pyri	Curculionidae	Coleoptera	tree-associated	arboreal	

Polydrusus flavipes	Curculionidae	Coleoptera	tree-associated	arboreal	
Polydrusus formosus	Curculionidae	Coleoptera	tree-associated	arboreal	
Rhinoncus pericarpius (pre 2014 type revision)	Curculionidae	Coleoptera			
Sciaphilus asperatus	Curculionidae	Coleoptera	open habitats	tall sward & scrub	Asteraceae
Sitona lineatus	Curculionidae	Coleoptera	open habitats	tall sward & scrub	*Vicia*
Sitona obsoletus	Curculionidae	Coleoptera	open habitats	tall sward & scrub	*Trifolium*
Sitona suturalis	Curculionidae	Coleoptera	open habitats	tall sward & scrub	*Lathyrus*

Strophosoma nebulosum	Curculionidae	Coleoptera	open habitats	short sward & bare ground	
Trichosirocalus troglodytes	Curculionidae	Coleoptera	open habitats	tall sward & scrub	*Plantago*
Tychius picirostris	Curculionidae	Coleoptera	open habitats	tall sward & scrub	*Trifolium*
Dryops ernesti	Dryopidae	Coleoptera	wetland		
Dryops luridus	Dryopidae	Coleoptera	wetland	lake; marshland	
Agriotes acuminatus	Elateridae	Coleoptera	open habitats	tall sward & scrub	Asteraceae
Agriotes obscurus	Elateridae	Coleoptera	open habitats	tall sward & scrub	Asteraceae
Agriotes pallidulus	Elateridae	Coleoptera	open habitats	tall sward & scrub	
Athous haemorrhoidalis	Elateridae	Coleoptera	open habitats	tall sward & scrub	
Hister unicolor	Histeridae	Coleoptera	open habitats	tall sward & scrub	
Berosus affinis	Hydrophilidae	Coleoptera	wetland	marshland	
Cercyon impressus	Hydrophilidae	Coleoptera	open habitats	tall sward & scrub	
Cercyon lateralis	Hydrophilidae	Coleoptera	open habitats	tall sward & scrub	
Cryptopleurum minutum	Hydrophilidae	Coleoptera	open habitats	tall sward & scrub	
Megasternum concinnum	Hydrophilidae	Coleoptera			
Sphaeridium bipustulatum	Hydrophilidae	Coleoptera	open habitats	tall sward & scrub	
Sphaeridium lunatum	Hydrophilidae	Coleoptera	open habitats	tall sward & scrub	
Sphaeridium scarabaeoides	Hydrophilidae	Coleoptera	open habitats	tall sward & scrub	
Brachypterus glaber	Kateretidae	Coleoptera	open habitats	tall sward & scrub	Asteraceae

Corticarina minuta	Latridiidae	Coleoptera			

Cortinicara gibbosa	Latridiidae	Coleoptera			
Enicmus fungicola	Latridiidae	Coleoptera	tree-associated	decaying wood	*Fagus, Quercus*
Malachius bipustulatus	Malachiidae	Coleoptera	tree-associated	decaying wood	Fagales
Meligethes aeneus	Nitidulidae	Coleoptera			
Meligethes brunnicornis	Nitidulidae	Coleoptera			
Meligethes nigrescens	Nitidulidae	Coleoptera			
Oedemera lurida	Oedemeridae	Coleoptera	open habitats	tall sward & scrub	
Oedemera nobilis	Oedemeridae	Coleoptera	open habitats	tall sward & scrub	
Ptenidium nitidum	Ptiliidae	Coleoptera			
Pyrochroa serraticornis	Pyrochroidae	Coleoptera	tree-associated	decaying wood	Fagales
Acrossus rufipes	Scarabaeidae	Coleoptera	open habitats	tall sward & scrub	
Aphodius pedellus	Scarabaeidae	Coleoptera	open habitats	tall sward & scrub	
Hoplia philanthus	Scarabaeidae	Coleoptera	open habitats	tall sward & scrub	Asteraceae
Onthophagus similis	Scarabaeidae	Coleoptera	open habitats	tall sward & scrub	
Otophorus haemorrhoidalis	Scarabaeidae	Coleoptera	open habitats	tall sward & scrub	
Teuchestes fossor	Scarabaeidae	Coleoptera	open habitats	tall sward & scrub	
Anaspis frontalis	Scraptiidae	Coleoptera	tree-associated	decaying wood	
Anaspis maculata	Scraptiidae	Coleoptera	tree-associated	decaying wood	
Aleochara lanuginosa	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	

Aleochara tristis	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	
Anotylus rugosus	Staphylinidae	Coleoptera	wetland	marshland	
Atheta fungi	Staphylinidae	Coleoptera			
Bisnius fimetarius	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	Mammalia
Bryaxis puncticollis	Staphylinidae	Coleoptera	tree-associated; wetland	marshland; shaded woodland floor; wet woodland	Arthropoda, Fagales
Carpelimus pusillus	Staphylinidae	Coleoptera	wetland	running water	
Drusilla canaliculata	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	

Euaesthetus ruficapillus	Staphylinidae	Coleoptera	wetland	acid & sedge peats	
Leptusa ruficollis	Staphylinidae	Coleoptera	tree-associated	decaying wood	Fagales
Lesteva longoelytrata	Staphylinidae	Coleoptera	wetland	running water	Arthropoda
Ontholestes murinus	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	Mammalia
Philonthus cruentatus	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	Mammalia
Philonthus decorus	Staphylinidae	Coleoptera	tree-associated	shaded woodland floor	Arthropoda, Plantae
Philonthus splendens	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	Mammalia
Philonthus tenuicornis	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	Mammalia
Platystethus nitens	Staphylinidae	Coleoptera	tree-associated; wetland	marshland; shaded woodland floor; wet woodland	

Pselaphus heisei	Staphylinidae	Coleoptera	wetland	acid & sedge peats	Arthropoda
Reichenbachia juncorum	Staphylinidae	Coleoptera	wetland	acid & sedge peats	Arthropoda
Rugilus orbiculatus	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	
Sepedophilus nigripennis	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	
Stenus bifoveolatus	Staphylinidae	Coleoptera	wetland	acid & sedge peats	
Stenus bimaculatus	Staphylinidae	Coleoptera	tree-associated; wetland	marshland; shaded woodland floor; wet woodland	
Stenus brunnipes	Staphylinidae	Coleoptera			
Stenus cicindeloides	Staphylinidae	Coleoptera	wetland	acid & sedge peats	
Stenus clavicornis	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	
Stenus flavipes	Staphylinidae	Coleoptera	tree-associated; wetland	shaded woodland floor; wet woodland	
Stenus fulvicornis	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	
Stenus latifrons	Staphylinidae	Coleoptera	wetland	acid & sedge peats	
Stenus ossium	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	
Stenus picipes	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	
Stenus providus	Staphylinidae	Coleoptera	wetland	marshland	
Stenus tarsalis	Staphylinidae	Coleoptera	wetland	marshland	
Tachyporus dispar	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	

Tachyporus hypnorum	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	
Tachyporus nitidulus	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	
Xantholinus longiventris	Staphylinidae	Coleoptera	open habitats	tall sward & scrub	
Forficula auricularia	Forficulidae	Dermaptera			
Phytomyza ilicis	Agromyzidae	Diptera			
Botanophila brunneilinea	Anthomyiidae	Diptera			
Botanophila striolata s.str.	Anthomyiidae	Diptera			
Hylemya vagans	Anthomyiidae	Diptera	tree-associated	shaded woodland floor	Plantae
Hylemyza partita	Anthomyiidae	Diptera			
Dioctria cothurnata	Asilidae	Diptera	open habitats	tall sward & scrub	*Alnus*
Dysmachus trigonus	Asilidae	Diptera	open habitats	short sward & bare ground; tall sward & scrub	Arthropoda
Leptogaster cylindrica	Asilidae	Diptera	open habitats	short sward & bare ground; tall sward & scrub	Arthropoda
Machimus atricapillus	Asilidae	Diptera	open habitats	short sward & bare ground; tall sward & scrub	Arthropoda
Dilophus febrilis	Bibionidae	Diptera	open habitats	tall sward & scrub	Asteraceae
Bombylius canescens	Bombyliidae	Diptera	open habitats	tall sward & scrub	*Halictus, Lasioglossum*
Bombylius major	Bombyliidae	Diptera	open habitats	tall sward & scrub	*Andrena*
Eurychaeta palpalis	Calliphoridae	Diptera	open habitats	tall sward & scrub	Helicidae

Lucilia caesar	Calliphoridae	Diptera			
Chrysotimus molliculus	Dolichopodidae	Diptera	wetland	marshland; running water	Arthropoda
Chrysotus gramineus	Dolichopodidae	Diptera	wetland	marshland; running water	Arthropoda
Dolichopus festivus	Dolichopodidae	Diptera	wetland	marshland	Arthropoda
Dolichopus nubilus	Dolichopodidae	Diptera	coastal	brackish pools & ditches; saltmarsh; sandy beach	Arthropoda
Poecilobothrus nobilitatus	Dolichopodidae	Diptera	wetland	marshland	Arthropoda
Sympycnus pulicarius	Dolichopodidae	Diptera	wetland	acid & sedge peats; marshland	Arthropoda
Empis opaca	Empididae	Diptera	open habitats	tall sward & scrub	Arthropoda
Empis tessellata	Empididae	Diptera	open habitats	tall sward & scrub	Arthropoda
Hilara maura	Empididae	Diptera	wetland		Arthropoda
Limnellia fallax	Ephydridae	Diptera	tree-associated; wetland	acid & sedge peats; shaded woodland floor; wet woodland	Algae, Fagales
Psilopa nitidula	Ephydridae	Diptera	open habitats	tall sward & scrub	Arthropoda
Suillia affinis	Heleomyzidae	Diptera	tree-associated	shaded woodland floor	Fungi, Plantae
Hybos culiciformis	Hybotidae	Diptera	tree-associated	shaded woodland floor	Diptera, Plantae
Calliopum elisae	Lauxaniidae	Diptera	wetland		

Calliopum tuberculosum	Lauxaniidae	Diptera	open habitats		
Minettia fasciata	Lauxaniidae	Diptera	open habitats		
Minettia longipennis	Lauxaniidae	Diptera	tree-associated	shaded woodland floor	Plantae

Sapromyza zetterstedti	Lauxaniidae	Diptera	tree-associated	shaded woodland floor	Plantae
Lonchoptera lutea	Lonchopteridae	Diptera	open habitats	tall sward & scrub	
Coenosia tigrina	Muscidae	Diptera	open habitats; treeassociated	shaded woodland floor; tall sward & scrub	Arthropoda, *Delia antiqua*, Diptera, Fagales
Eudasyphora cyanella	Muscidae	Diptera	tree-associated	shaded woodland floor	Plantae
Helina impuncta	Muscidae	Diptera	tree-associated	shaded woodland floor	Arthropoda, *Fraxinus*, Plantae, *Quercus*
Neomyia cornicina	Muscidae	Diptera			
Phaonia signata	Muscidae	Diptera	tree-associated	shaded woodland floor	Plantae
Opomyza petrei	Opomyzidae	Diptera	open habitats	tall sward & scrub	Poaceae
Tomosvaryella palliditarsis	Pipunculidae	Diptera	open habitats		
Verrallia aucta	Pipunculidae	Diptera	open habitats		
Rivellia syngenesiae	Platystomatidae	Diptera	open habitats; wetland	tall sward & scrub	
Pollenia amentaria	Polleniidae	Diptera	wetland	marshland	Lumbricidae

Pollenia angustigena	Polleniidae	Diptera			Lumbricidae
Pollenia griseotomentosa	Polleniidae	Diptera	wetland	marshland	Lumbricidae
Rhagio tringarius	Rhagionidae	Diptera	open habitats; wetland	tall sward & scrub	
Norellisoma spinimanum	Scathophagidae	Diptera	open habitats; wetland	tall sward & scrub	*Rumex*
Scathophaga stercoraria	Scathophagidae	Diptera	open habitats	tall sward & scrub	*Bos*, Diptera
Euthycera fumigata	Sciomyzidae	Diptera	open habitats	tall sward & scrub	Mollusca
Limnia unguicornis	Sciomyzidae	Diptera	wetland	acid & sedge peats; marshland; running water	*Succinea*
Tetanocera ferruginea	Sciomyzidae	Diptera	wetland	acid & sedge peats	Mollusca

Sepsis fulgens	Sepsidae	Diptera	open habitats	tall sward & scrub	
Rachispoda lutosa	Sphaeroceridae	Diptera			
Chloromyia formosa	Stratiomyidae	Diptera	open habitats	tall sward & scrub	
Pachygaster leachii	Stratiomyidae	Diptera	tree-associated	shaded woodland floor	Plantae, *Quercus*
Episyrphus balteatus	Syrphidae	Diptera	open habitats	tall sward & scrub	Aphididae
Eupeodes corollae	Syrphidae	Diptera	open habitats	tall sward & scrub	Aphididae
Melanostoma mellinum	Syrphidae	Diptera	open habitats	tall sward & scrub	Arthropoda
Melanostoma scalare	Syrphidae	Diptera	open habitats	tall sward & scrub	Arthropoda
Meliscaeva auricollis	Syrphidae	Diptera	tree-associated	shaded woodland floor	Aphididae, Plantae

Myathropa florea	Syrphidae	Diptera	tree-associated	decaying wood	Fagales
Platycheirus albimanus	Syrphidae	Diptera			Aphididae
Syritta pipiens	Syrphidae	Diptera	open habitats	tall sward & scrub	
Syrphus ribesii	Syrphidae	Diptera			Aphididae
Syrphus vitripennis	Syrphidae	Diptera	tree-associated	arboreal	Aphididae, Fagales
Volucella pellucens	Syrphidae	Diptera	tree-associated	shaded woodland floor	Fagales, *Vespula*
Xylota segnis	Syrphidae	Diptera	tree-associated	decaying wood	Fagales
Haematopota pluvialis	Tabanidae	Diptera	wetland	acid & sedge peats	Mammalia
Actia lamia	Tachinidae	Diptera			
Eriothrix rufomaculata	Tachinidae	Diptera			
Phasia pusilla	Tachinidae	Diptera	open habitats		Heteroptera
Siphona geniculata	Tachinidae	Diptera			
Chaetostomella cylindrica	Tephritidae	Diptera	open habitats	short sward & bare ground; tall sward & scrub	*Centaurea nigra sens. lat. (=nigra/debeauxii)*
Tephritis vespertina	Tephritidae	Diptera	open habitats	tall sward & scrub	*Hypochaeris radicata*
Terellia tussilaginis	Tephritidae	Diptera	open habitats	short sward & bare ground; tall sward & scrub	*Arctium*
Urophora cardui	Tephritidae	Diptera	open habitats	tall sward & scrub	Cirsium arvense

Urophora jaceana	Tephritidae	Diptera	open habitats	short sward & bare ground; tall sward & scrub	*Centaurea nigra sens. lat. (= nigra/debeauxii)*
Tipula lateralis	Tipulidae	Diptera	wetland	running water	
Tipula oleracea	Tipulidae	Diptera	wetland	acid & sedge peats	
Tipula paludosa	Tipulidae	Diptera	open habitats	tall sward & scrub	
Entomobrya intermedia	Entomobryidae	Entomobryomorpha			
Orchesella villosa	Entomobryidae	Entomobryomorpha			
Anurophorus laricis	Isotomidae	Entomobryomorpha			
Pogonognathellus longicornis	Tomoceridae	Entomobryomorpha			
Anthocoris confusus	Anthocoridae	Hemiptera	tree-associated	arboreal	Acari, Aphididae, Fagales
Anthocoris nemorum	Anthocoridae	Hemiptera			
Orius (Heterorius) laticollis	Anthocoridae	Hemiptera	tree-associated	arboreal	Arthropoda, *Salix*
Orius (Heterorius) majusculus	Anthocoridae	Hemiptera			
Orius (Orius) laevigatus	Anthocoridae	Hemiptera	open habitats		Asteraceae
Orius (Orius) niger	Anthocoridae	Hemiptera	open habitats	tall sward & scrub	Arthropoda
Aphrophora alni	Aphrophoridae	Hemiptera			
Neophilaenus lineatus	Aphrophoridae	Hemiptera	open habitats	tall sward & scrub	Poaceae
Philaenus spumarius	Aphrophoridae	Hemiptera			

Alebra albostriella	Cicadellidae	Hemiptera	tree-associated	arboreal	*Quercus robur*
Allygus mixtus	Cicadellidae	Hemiptera	open habitats	tall sward & scrub	Plantae
Anoscopus albifrons	Cicadellidae	Hemiptera	open habitats	tall sward & scrub	Poaceae
Aphrodes makarovi	Cicadellidae	Hemiptera	open habitats	tall sward & scrub	*Cirsium, Taraxacum, Urtica dioica*
Arthaldeus pascuellus	Cicadellidae	Hemiptera	open habitats	tall sward & scrub	

Balclutha punctata	Cicadellidae	Hemiptera	open habitats	tall sward & scrub	Poaceae
Cicadula quadrinotata	Cicadellidae	Hemiptera	open habitats	tall sward & scrub	*Carex, Juncus*
Deltocephalus pulicaris	Cicadellidae	Hemiptera	open habitats	tall sward & scrub	
Eupteryx aurata	Cicadellidae	Hemiptera			
Eupteryx filicum	Cicadellidae	Hemiptera	tree-associated	shaded woodland floor	Plantae
Eupteryx signatipennis	Cicadellidae	Hemiptera	wetland	acid & sedge peats	*Filipendula ulmaria*
Eupteryx vittata	Cicadellidae	Hemiptera	open habitats	tall sward & scrub	*Glechoma, Mentha, Ranunculus*
Euscelis incisus	Cicadellidae	Hemiptera	open habitats	tall sward & scrub	Poaceae
Lindbergina aurovittata	Cicadellidae	Hemiptera	tree-associated	arboreal	Asteraceae, *Quercus*
Macrosteles laevis	Cicadellidae	Hemiptera	open habitats	tall sward & scrub	
Macrosteles septemnotatus	Cicadellidae	Hemiptera	wetland		*Filipendula*
Oncopsis avellanae	Cicadellidae	Hemiptera	tree-associated	arboreal	*Corylus*
Populicerus confusus	Cicadellidae	Hemiptera	tree-associated	arboreal	*Salix*
Psammotettix confinis	Cicadellidae	Hemiptera	open habitats	tall sward & scrub	Poaceae
Streptanus sordidus	Cicadellidae	Hemiptera	open habitats	tall sward & scrub	Poaceae
Thamnotettix dilutior	Cicadellidae	Hemiptera	open habitats	tall sward & scrub	Fagales
Zygina tiliae	Cicadellidae	Hemiptera	tree-associated	arboreal	*Alnus, Quercus, Tilia*
Cixius nervosus	Cixiidae	Hemiptera	tree-associated	arboreal	

Tachycixius pilosus	Cixiidae	Hemiptera			
Conomelus anceps	Delphacidae	Hemiptera	wetland		*Juncus*
Criomorphus albomarginatus	Delphacidae	Hemiptera	open habitats	tall sward & scrub	
Ditropis pteridis	Delphacidae	Hemiptera	open habitats	tall sward & scrub	*Pteridium aquilinum*
Florodelphax leptosoma sensu stricto	Delphacidae	Hemiptera			
Javesella dubia	Delphacidae	Hemiptera	open habitats	tall sward & scrub	Poaceae
Javesella pellucida	Delphacidae	Hemiptera	open habitats	tall sward & scrub	*Lolium*

Megamelodes quadrimaculatus sensu stricto	Delphacidae	Hemiptera			
Muellerianella fairmairei	Delphacidae	Hemiptera	open habitats	tall sward & scrub	*Deschampsia cespitosa*
Scottianella dalei	Delphacidae	Hemiptera	open habitats	tall sward & scrub	Poaceae
Gerris (Gerris) lacustris	Gerridae	Hemiptera	wetland	marshland	Arthropoda
Cymus melanocephalus	Lygaeidae	Hemiptera	open habitats	tall sward & scrub	*Juncus, Lythrum salicaria, Trifolium*
Drymus (Sylvadrymus) sylvaticus	Lygaeidae	Hemiptera	open habitats	tall sward & scrub	*Ballota nigra*
Megalonotus chiragra	Lygaeidae	Hemiptera	open habitats	short sward & bare ground	
Acetropis (Acetropis) gimmerthalii	Miridae	Hemiptera	open habitats	tall sward & scrub	Asteraceae
Capsus ater	Miridae	Hemiptera	open habitats	tall sward & scrub	Poaceae

Closterotomus norwegicus	Miridae	Hemiptera	open habitats	tall sward & scrub	Asteraceae, *Trifolium, Urtica*
Deraeocoris (Deraeocoris) ruber	Miridae	Hemiptera	open habitats	tall sward & scrub	Arthropoda
Deraeocoris (Knightocapsus) lutescens	Miridae	Hemiptera	tree-associated	arboreal	Asteraceae, *Quercus*
Harpocera thoracica	Miridae	Hemiptera	tree-associated	arboreal	Arthropoda, *Quercus*
Leptopterna dolabrata	Miridae	Hemiptera	open habitats	tall sward & scrub	Poaceae
Leptopterna ferrugata	Miridae	Hemiptera	open habitats	tall sward & scrub	Poaceae
Liocoris tripustulatus	Miridae	Hemiptera	open habitats	tall sward & scrub	*Urtica dioica*
Lopus decolor	Miridae	Hemiptera	open habitats	tall sward & scrub	Poaceae
Lygocoris pabulinus	Miridae	Hemiptera	open habitats	tall sward & scrub	*Urtica*
Lygus pratensis	Miridae	Hemiptera	open habitats		
Lygus rugulipennis	Miridae	Hemiptera	open habitats	tall sward & scrub	*Chenopodium album, Rumex, Urtica*
Malacocoris chlorizans	Miridae	Hemiptera	tree-associated	arboreal	Aphididae, *Corylus,* Fagales, Psocodea
Monalocoris filicis	Miridae	Hemiptera	open habitats	tall sward & scrub	Polypodiales, *Pteridium aquilinum*
Notostira elongata	Miridae	Hemiptera	open habitats	tall sward & scrub	Poaceae
Orthotylus ochrotrichus	Miridae	Hemiptera	open habitats	tall sward & scrub	*Urtica dioica*
Phylus coryli	Miridae	Hemiptera	tree-associated	arboreal	Arthropoda*, Betula, Corylus, Quercus*
Pinalitus cervinus	Miridae	Hemiptera	tree-associated	arboreal	*Tilia*
Pithanus maerkelii	Miridae	Hemiptera	open habitats	tall sward & scrub	Arthropoda

Plagiognathus arbustorum	Miridae	Hemiptera	open habitats	tall sward & scrub	*Urtica*
Plagiognathus chrysanthemi	Miridae	Hemiptera	open habitats	short sward & bare ground	Asteraceae
Psallus (Mesopsallus) ambiguus	Miridae	Hemiptera	tree-associated	arboreal	*Acer campestre, Alnus, Crataegus, Malus, Salix*
Stenodema (Brachystira) calcarata	Miridae	Hemiptera	open habitats	tall sward & scrub	Poaceae
Stenodema (Stenodema) laevigata	Miridae	Hemiptera	open habitats	tall sward & scrub	Poaceae
Stenotus binotatus	Miridae	Hemiptera	open habitats	tall sward & scrub	Poaceae
Trigonotylus ruficornis	Miridae	Hemiptera	open habitats	tall sward & scrub	
Nabis (Dolichonabis) limbatus	Nabidae	Hemiptera	open habitats	tall sward & scrub	Arthropoda
Nabis (Nabicula) flavomarginatus	Nabidae	Hemiptera	open habitats	tall sward & scrub	Arthropoda
Nabis (Nabis) rugosus	Nabidae	Hemiptera	open habitats	tall sward & scrub	Arthropoda
Dolycoris baccarum	Pentatomidae	Hemiptera	open habitats	tall sward & scrub	Asteraceae
Troilus luridus	Pentatomidae	Hemiptera	tree-associated	arboreal	Arthropoda, Fagales
Saldula saltatoria	Saldidae	Hemiptera	wetland	marshland	Arthropoda
Anisus leucostoma	Planorbidae	Hygrophila	wetland	marshland	Algae
Apis mellifera	Apidae	Hymenoptera	open habitats		
Bombus hortorum	Apidae	Hymenoptera	open habitats	tall sward & scrub	*Digitalis purpurea, Lonicera*

					periclymenum, Trifolium pratense
Bombus hypnorum	Apidae	Hymenoptera	open habitats; treeassociated	shaded woodland floor; tall sward & scrub	Asteraceae, Fagales
Bombus lapidarius	Apidae	Hymenoptera	open habitats	tall sward & scrub	
Bombus lucorum/terrestris	Apidae	Hymenoptera			
Bombus pascuorum	Apidae	Hymenoptera	open habitats	tall sward & scrub	Asteraceae
Bombus pratorum	Apidae	Hymenoptera	open habitats; treeassociated	shaded woodland floor; tall sward & scrub	Asteraceae, Fagales
Bombus terrestris	Apidae	Hymenoptera	open habitats	tall sward & scrub	
Nomada marshamella	Apidae	Hymenoptera	open habitats	short sward & bare ground	Apidae
Nomada ruficornis	Apidae	Hymenoptera	open habitats	short sward & bare ground	Apidae
Hylaeus communis	Colletidae	Hymenoptera	open habitats	tall sward & scrub	
Lindenius albilabris	Crabronidae	Hymenoptera	open habitats	short sward & bare ground	Miridae
Tachysphex pompiliformis	Crabronidae	Hymenoptera	open habitats	short sward & bare ground	Orthoptera
Diapriidae	Diapriidae	Hymenoptera			
Lasius niger	Formicidae	Hymenoptera	open habitats	short sward & bare ground	
Lasius platythorax	Formicidae	Hymenoptera	open habitats	short sward & bare ground	

Myrmica rubra	Formicidae	Hymenoptera	open habitats	tall sward & scrub	
Myrmica ruginodis	Formicidae	Hymenoptera	tree-associated	shaded woodland floor	Arthropoda, Plantae
Myrmica scabrinodis	Formicidae	Hymenoptera	open habitats	tall sward & scrub	
Lasioglossum calceatum	Halictidae	Hymenoptera	open habitats	short sward & bare ground	

Lasioglossum laevigatum	Halictidae	Hymenoptera	open habitats	short sward & bare ground	
Lasioglossum lativentre	Halictidae	Hymenoptera	open habitats	short sward & bare ground	
Lasioglossum leucozonium	Halictidae	Hymenoptera	open habitats	short sward & bare ground	
Osmia bicornis	Megachilidae	Hymenoptera	open habitats; treeassociated	shaded woodland floor; tall sward & scrub	Asteraceae, Fagales
Synopeas	Platygastridae	Hymenoptera			
Athalia circularis	Tenthredinidae	Hymenoptera			
Athalia cordata	Tenthredinidae	Hymenoptera			
Dolerus fumosus	Tenthredinidae	Hymenoptera			
Pachyprotasis rapae	Tenthredinidae	Hymenoptera			
Strongylogaster multifasciata	Tenthredinidae	Hymenoptera			
Tenthredo brevicornis	Tenthredinidae	Hymenoptera			
Tiphia femorata	Tiphiidae	Hymenoptera	open habitats	short sward & bare ground	Scarabaeidae
Vespula vulgaris	Vespidae	Hymenoptera	open habitats	tall sward & scrub	

Oniscus asellus	Oniscidae	Isopoda			
Philoscia muscorum	Philosciidae	Isopoda			
Porcellio scaber	Porcellionidae	Isopoda			
Trichoniscus pusillus sensu lato	Trichoniscidae	Isopoda			
Tachypodoiulus niger	Julidae	Julida			
Callistege mi	Erebidae	Lepidoptera	open habitats	tall sward & scrub	
Euclidia glyphica	Erebidae	Lepidoptera	open habitats	tall sward & scrub	Fabaceae
Camptogramma bilineata	Geometridae	Lepidoptera	open habitats	tall sward & scrub	*Rumex, Stellaria media*
Acrocercops brongniardella (mines)	Gracillariidae	Lepidoptera	tree-associated	arboreal	*Quercus*

Ochlodes sylvanus	Hesperiidae	Lepidoptera	open habitats	tall sward & scrub	*Brachypodium pinnatum, Brachypodium sylvaticum, Dactylis glomerata, Molinia caerulea*
Aglais io	Nymphalidae	Lepidoptera	open habitats	tall sward & scrub	*Humulus lupulus, Urtica dioica, Urtica urens*
Aphantopus hyperantus	Nymphalidae	Lepidoptera	open habitats	tall sward & scrub	*Brachypodium sylvaticum, Dactylis glomerata, Deschampsia cespitosa, Elytrigia repens, Plantae*

Maniola jurtina	Nymphalidae	Lepidoptera	open habitats	tall sward & scrub	*Brachypodium sylvaticum, Dactylis glomerata, Helictotrichon pubescens*
Melanargia galathea	Nymphalidae	Lepidoptera	open habitats	tall sward & scrub	*Brachypodium pinnatum, Festuca ovina, Festuca rubra, Holcus lanatus*
Pararge aegeria	Nymphalidae	Lepidoptera	open habitats	tall sward & scrub	*Brachypodium sylvaticum, Dactylis glomerata, Elytrigia repens, Holcus lanatus*
Vanessa atalanta	Nymphalidae	Lepidoptera			*Humulus, Humulus lupulus, Parietaria judaica, Urtica, Urtica dioica, Urtica urens*
Anthocharis cardamines	Pieridae	Lepidoptera	open habitats	tall sward & scrub	*Alliaria petiolata, Arabis hirsuta,*
					Barbarea vulgaris, Brassica rapa, Cardamine amara, Cardamine pratensis, Plantae, *Sinapis arvensis, Sisymbrium officinale*
Pieris brassicae	Pieridae	Lepidoptera	open habitats		*Reseda lutea, Tropaeolum majus*

Pieris rapae	Pieridae	Lepidoptera	open habitats		*Alliaria petiolata, Brassica oleracea, Lepidium draba, Reseda lutea, Sinapis arvensis, Sisymbrium officinale, Tropaeolum majus*
Gillmeria pallidactyla	Pterophoridae	Lepidoptera	open habitats	tall sward & scrub	*Achillea millefolium, Achillea ptarmica*
Celypha striana	Tortricidae	Lepidoptera			*Cirsium, Taraxacum*
Zygaena filipendulae	Zygaenidae	Lepidoptera	open habitats	tall sward & scrub	*Lotus*
Lamyctes emarginatus	Henicopidae	Lithobiomorpha	open habitats	tall sward & scrub	Arthropoda
Lithobius forficatus	Lithobiidae	Lithobiomorpha			
Lithobius variegatus	Lithobiidae	Lithobiomorpha	tree-associated	shaded woodland floor	Arthropoda, Plantae
Lithobius (Sigibius) microps	Lithobiidae	Lithobiomorpha	tree-associated	shaded woodland floor	Arthropoda, Plantae
Chrysoperla lucasina	Chrysopidae	Neuroptera			
Cunctochrysa albolineata	Chrysopidae	Neuroptera	tree-associated	arboreal	Aphididae, Coccidae
Nineta flava	Chrysopidae	Neuroptera	tree-associated	arboreal	Aphididae, Coccidae, Quercus
Coniopteryx tineiformis	Coniopterygidae	Neuroptera	tree-associated	arboreal	Aphididae, Coccidae, Fagales
Hemerobius humulinus	Hemerobiidae	Neuroptera	tree-associated	arboreal	Aphididae, Coccidae, Fagales

Hemerobius lutescens	Hemerobiidae	Neuroptera	tree-associated	arboreal	Aphididae, Coccidae, Fagales
Coenagrion puella	Coenagrionidae	Odonata	wetland	marshland	Arthropoda
Pyrrhosoma nymphula	Coenagrionidae	Odonata	wetland	acid & sedge peats	Arthropoda
Libellula depressa	Libellulidae	Odonata	wetland	marshland	Arthropoda
Dicranopalpus ramosus sensu stricto (post 2015)	Phalangiidae	Opiliones			
Oligolophus tridens	Phalangiidae	Opiliones	tree-associated	shaded woodland floor	Arthropoda, Plantae
Paroligolophus agrestis	Phalangiidae	Opiliones			
Pseudochorthippus parallelus	Acrididae	Orthoptera	open habitats	tall sward & scrub	
Meconema thalassinum	Meconematidae	Orthoptera	open habitats; treeassociated	arboreal	Arthropoda, Fagales
Leptophyes punctatissima	Phaneropteridae	Orthoptera	open habitats	tall sward & scrub	
Tetrix subulata	Tetrigidae	Orthoptera	wetland	acid & sedge peats	Plantae
Roeseliana roeselii	Tettigoniidae	Orthoptera	open habitats	tall sward & scrub	
Nemoura cinerea	Nemouridae	Plecoptera	wetland	marshland	
Polydesmus angustus	Polydesmidae	Polydesmida			
Neobisium carcinoides	Neobisiidae	Pseudoscorpiones			
Elipsocus hyalinus	Elipsocidae	Psocodea			
Psocodea		Psocodea			

Ectopsocus briggsi sensu stricto	Ectopsocidae	Psocoptera			
Graphopsocus cruciatus	Stenopsocidae	Psocoptera			
Stenopsocus stigmaticus	Stenopsocidae	Psocoptera			
Trichopsocus brincki	Trichopsocidae	Psocoptera			
Deroceras invadens	Agriolimacidae	Pulmonata			
Deroceras reticulatum	Agriolimacidae	Pulmonata	open habitats	tall sward & scrub	Asteraceae
Arion (Mesarion) subfuscus	Arionidae	Pulmonata	open habitats	tall sward & scrub	Asteraceae
Cepaea hortensis	Helicidae	Pulmonata	open habitats	tall sward & scrub	Asteraceae
Trochulus striolatus	Hygromiidae	Pulmonata	open habitats	tall sward & scrub	Asteraceae
Tandonia cf. cristata	Milacidae	Pulmonata			
Aegopinella nitidula	Oxychilidae	Pulmonata	open habitats	tall sward & scrub	Asteraceae
Oxychilus alliarius	Oxychilidae	Pulmonata	conifer or broadleaved	woodland habitat	Asteraceae
Vertigo pygmaea	Vertiginidae	Pulmonata	open habitats	tall sward & scrub	Algae
Bourletiella hortensis	Bourletiellidae	Symphypleona			
Dicyrtomina minuta	Dicyrtomidae	Symphypleona			
Sminthurus viridis	Sminthuridae	Symphypleona			
Limnephilus centralis	Limnephilidae	Trichoptera	wetland	marshland; running water	
Phytoptus avellanae	Phytoptidae	Trombidiformes			