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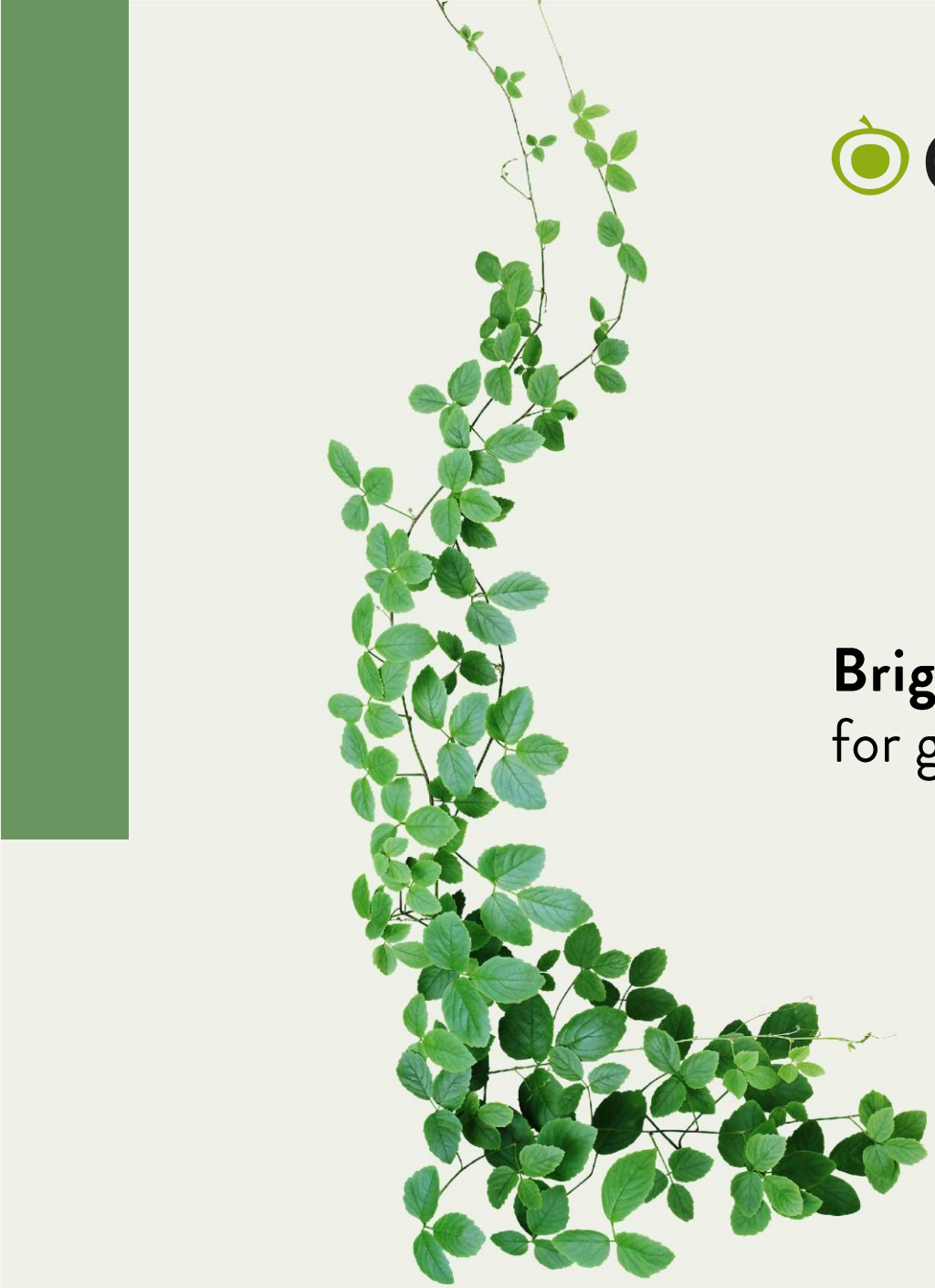



Client: Total Property Solutions

Project: Novartis Phase 3

Report: Invertebrate Survey Report

QUALITY ASSURANCE

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1.0 EXECUTIVE SUMMARY

Greengage Environmental (Ltd) were commissioned by TPS Management on behalf of Muse Development to undertake an invertebrate survey at the site known as Novartis Phase 3, Horsham, West Sussex, hear after referred to as 'the site'.

The survey work was commissioned to inform the planning application for the site (Planning Ref: DC/25/0415) which seeks *"The construction of 244 new homes (Use Class C3) with vehicular and pedestrian access from Parsonage Road, public open space, landscaping, parking and associated works."*

Greengage completed a Preliminary Ecological Appraisal (PEA)[1] of the site on 5th November 2024 and 12th February 2025, which included a site survey and analysis of records from Sussex Biodiversity Records Centre (SxBRC) within 2km of the site. Through the site survey, high suitability for the site to support common and widespread and potentially notable invertebrates, owing to the number of local records in the areas and mosaic of habitats present, was recorded. Full assessment of the site's suitability for invertebrates and the desk study records can be found within the PEA report[1].

It was initially recommended that a suite of three surveys by a specialist entomologist should be carried out across the site between May and July to confirm the presence/likely absence of any nationally scarce invertebrates on site. However, after discussion with an experienced entomologist, it was decided that a single baseline survey should first be conducted and the need for any further survey determined thereafter. Following this baseline survey, based on the advice of the suitable experienced entomologist, a second survey was then conducted to reinforce the results collected during the first survey.

This document is a report of the survey results and provides discussion around best practice enhancement measures for invertebrates on site post development.

A total of 97 invertebrate taxa were identified during the first survey and 226 during the second. Species recorded were mostly common though some notable species were also recorded, including Section 41 Priority Species and Red Data Book (RDB)[2] species.

Based on the above results mitigation measures for invertebrates are not considered necessary. Nevertheless, measures to compensate for the loss of habitat on site should be provided, this should be provided though the creation of area of species rich grasslands (meadows) maintained with areas of both long and short sward heights and areas of bare ground, as well as provision of areas of scrub.

Enhancement measures for the befit of invertebrates are also recommended for implementation post development., including provision of loggeries, habitat panels and pollinator posts. A Landscape Enhancement Management Plan (LEMP) providing greater detail on these compensation and enhancement features in accordance with British Standard 42020: 2013 Biodiversity[3],should be produced as part of a planning condition.

The data collected during the bat emergence survey is considered valid for 12-18 months in accordance Chartered Institute of Ecology and Environmental Management (CIEEM) guidance[4] and an updated survey will be required if the works have not started within this timeframe or should site conditions change significantly during this time.

2.0 INTRODUCTION

Greengage were commissioned by TPS Management on behalf of Muse Development to undertake an invertebrate survey at the site known as Novartis Phase 3, Horsham, West Sussex, hear after referred to as 'the site'.

The survey work was commissioned to inform the planning application for the site (Planning Ref: DC/25/0415) which seeks *"The construction of 244 new homes (Use Class C3) with vehicular and pedestrian access from Parsonage Road, public open space, landscaping, parking and associated works."*

This document is a report of the survey results and provides discussion around best practice enhancement measures for invertebrates on site post development.

2.1 SITE DESCRIPTION

The site extends to approximately 4.8 hectares (ha) and is centred on National Grid Reference TQ 17965 31684, OS Co-ordinates 517965, 131684.

The site comprised primarily of sparsely vegetated urban land with small extents of other neutral grassland, developed land and sealed surface and bramble scrub and a line of trees.

Residential housing is present to the north and west of the site. On the south and western boundary of the site is a railway corridor. Beyond the railway to the east is an industrial park and further residential housing. Beyond the railway to the south is the railway depot, station and a college.

Fragmented priority woodland is found throughout Horsham with the closest in Horsham Park, 650 metres (m) south. Warnham Local Nature Reserve (LNR) is located 900m northwest. Large areas of ancient woodland are located 1300m east, such as Harold Wood, and agricultural land is located 1.7 km east and south of the site, with golf courses backing onto farmland.

2.2 ECOLOGICAL BACKGROUND

2018-2022

An initial Ecological Appraisal by Hampshire County Council originally produced in 2015 and updated in 2018/2019[5] surveyed across the whole Novartis site, incorporating what is now known as Novartis Phase 1&2 and Novartis Phase 3.

A subsequent PEA was then produced by Ecology & Habitat Management Ltd[6] in 2022 which assessed the site. The Phase 1 habitats survey undertaken as part of the PEA identified the habitats of building, hardstanding, bare ground, semi-improved grassland, scrub, introduced shrub, and scattered tree across the site.

Both of these surveys recognised value for invertebrates though no further survey for invertebrates was conducted.

2024

In November 2024 Greengage completed an updated PEA[1] of the site. which identified high suitability for the site to support invertebrates, including notable invertebrates, due to the types of habitats present on site and the records returned from Sussex Biodiversity Records Centre (SxBRC). Off the back of this, it was initially recommended that a suite of three surveys by a specialist entomologist should be carried out across the site between May and July to confirm the presence/likely absence of any nationally scarce invertebrates on site. However, after discussion with an experienced entomologist, it was decided that a single baseline survey should first be conducted and the need for any further survey determined thereafter.

3.0 METHODOLOGY

The baseline invertebrate survey was completed on 23rd May 2025. The second survey was completed on 6th August 2025. The surveys were conducted in appropriate weather conditions with temperatures above 15°C and no rain.

Due to it being impracticable to survey all the potential invertebrates within any given site, only specific groups of species were examined during fieldwork. These groups are sufficiently well known as to allow meaningful comparisons to be made with other sites, both locally and nationally. They are also important as indicators of the quality of a site and the habitats present[7].

Groups covered during the survey were:

- *Mollusca* (slugs and snails)
- *Arachnida* (spiders, harvestmen & pseudoscorpions)
- *Isopoda* (woodlice)
- *Thysanura* (bristletails)
- *Odonata* (dragonflies & damselflies)
- *Orthoptera* (grasshoppers & crickets)
- *Dictyoptera* (cockroaches)
- *Dermaptera* (earwigs)
- *Hemiptera-Heteroptera* (true-bugs)
- *Hemiptera-Homoptera* (hoppers)
- *Neuroptera* (lace-wings)
- *Mecoptera* (scorpion-flies)
- *Lepidoptera* (butterflies & moths)
- *Diptera* (true flies)
- *Aculeate Hymenoptera* (ants, bees & wasps)
- *Coleoptera* (beetles)

Standard field techniques were employed to sample the terrestrial and arboreal invertebrates, namely sweep netting, beating foliage over a beating tray etc. In addition, a battery powered suction sampler was employed to sample terrestrial invertebrates.

N.B it should be noted that the results presented below are species recorded across both the Novartis Phase 3 site and the neighbouring Novartis phase 1 & 2 site. The locations of both plots are shown in Plate 3.1 below. Data is presented this way as both plots have similar habitat types and there is barrier to movement of inverts between the two sites.

Plate 3.1 Novartis Phase 1 &2 and Novartis Phase 3



3.1 COMPETENCIES

The baseline invertebrate survey was completed on 23rd May 2025 by experienced entomologist Dr Jonty Denton. Dr Denton is a freelance Chartered Ecologist with over 30 years experience, with Natural England licenses for Bats, Dormice, Great Crested Newt, Natterjacks, Sand Lizard, Smooth Snake, and White-clawed Crayfish. His clients include Natural England, the National Trust, Crown Estates, County Trusts, Butterfly Conservation, the Ministry of Defence, Royal Parks and many County and District Councils, as well as the Environment Agency and Thames Water.

The second survey was completed on 6th August 2025 conducted by Martin Townsend BSc, Zoology (Aberdeen). Martin was elected Fellow of the Royal Entomological Society and holds full Membership to of the Chartered Institute of Ecology and Environmental Management (CIEEM), British Entomological and Natural History Society, Amateur Entomologists' Society and British Ecological Society. Martin has over 20 years' experience in ecological consultancy, carrying out and managing general and targeted invertebrate surveys in the private and public sectors, for planning, conservation management, control of Invasive Non-native Species (INNS) and ecological research. Martin also has over 25 years in ecological research, conservation and scientific publishing. Recognised authority and published author of identification guides on Lepidoptera.

Jess Cole, Senior Consultant, who wrote this report, has a BSc degree in Ecology (Hons) and is an Associate member of CIEEM. Jess holds a Natural England Great Crested Newt Licence and has over seven years' experience in ecological survey and assessment.

Mike Harris, Director, who reviewed this report, has a Bachelor's degree in Environmental Biology (BSc Hons), a Natural England Great Crested Newt Licence and Dormouse Licence, is a Chartered Environmentalist (CEnv) and Full member of CIEEM. Mike has over 20 years' experience in ecological surveying and has undertaken and managed numerous ecological surveys and assessments.

Mitch Cooke, Director, who verified this report, has a degree in Ecology (Hons), an MSc in Environmental Assessment and Management, and is a Full member of CIEEM with over 35 years' experience in ecological survey and assessment. Mitch has set up and developed ecological and environmental teams for nearly 20 years and has undertaken and managed numerous ecological surveys and assessments. He is the Director at Greengage and manages the team.

This report was written by Jess Cole, reviewed by Francesca Thorley and verified by Mitch Cooke who confirms in writing (see the QA sheet at the front of this report) that the report is in line with the following:

- Represents sound industry practice;
- Reports and recommends correctly, truthfully and objectively;
- Is appropriate given the local site conditions and scope of works proposed; and
- Avoids invalid, biased and exaggerated statements.

3.2 CONSTRAINTS

The surveys were conducted at a suitable time of year by suitably qualified entomologists. All of the site was accessible at the time of the surveys.

4.0 RESULTS

A full species list from both surveys can be found within Appendix A of this letter.

4.1 SURVEY 1 - 23RD MAY 2025

A total of 97 invertebrate taxa were identified during this survey.

Of these 97, two of the species have a nationally significant status. This is not considered to be a high number for a brownfield site in southern England.

The two species identified with nationally significant status included cinnabar moth *Tyria jacobaeae* and small heath *Coenonympha pamphilus*. These are both Section 41 Priority Species, however cinnabar is considered to be a 'research only' species only, meaning the species has the potential to be under threat owing to declines or some other reason such as eradication of their foodplant (e.g. cinnabar moth and it's host plant, ragwort) but not sufficiently scarce or under threat enough yet to be classed as scarce.

Five other species recorded on site are classified as Nationally Scarce Category B - Notable B (Nb) or Nationally Scarce (NS), but do not fall within the Red Data Book (RDB)[2] these were *Diplapion stolidum, Magdalis cerasi, Orthochaetes setiger, Drilus flavescens* and *Bathysolen nubilus*.

The remaining 90 species were either nationally or locally common.

4.2 SURVEY 2 - 6TH AUGUST 2025

During the August survey a total of 226 species were recorded, of these 26 were recorded previously during the May survey, including cinnabar moth and small heath.

Of the 200 newly recorded species 12 were notable in some way. Eight were Nb or NS including Dusky Cockroach *Ectobius lapponicus*, *Rhopalus parumpunctatus, Anoscopus albiger, Protapion difforme, Protapion filirostre, Licinus punctatulus, Glocianus punctiger* and *Trichosirocalus barnevillei*. One species, *Terellia longicauda*, was classified as scarce and *Orchisia costata* and *Blaesoxipha plumicornis* was potentially NS (pNS) and potentially near threatened (pNT). Lastly. One species, *Nysius graminicola*, was listed within category 3 of the RDB[2]. Category 3 species are taxa with small populations in Great Britain that are not at present endangered or vulnerable, but are at risk.

All other 188 species recorded in August, which were not previously, recorded in May, were nationally common.

5.0 DISCUSSION & RECCOMENDATION

No further survey is considered necessary, in light of the data collected

More than twice as many species are associated with tall sward grassland and scrub compared to species associated with short sward grassland and bare ground. However, analysing species with elevated status, roughly twice as many are associated with short sward grassland and bare ground species as are associated with tall sward grassland and scrub. This pattern is not untypical of a site with these mosaics of habitat.

Based on the above results mitigation measures for invertebrates are not considered necessary. Nevertheless, measures to compensate for the loss of habitat on site should be provided, this should be provided though the creation of area of species rich grasslands (meadows) maintained with areas of both long and short sward heights and areas of bare ground, as well as provision of areas of scrub.

5.1 ENHANCEMENT

There is also opportunity to enhance the site for invertebrates through the provision of the following features. A Landscape Enhancement Management Plan (LEMP) providing greater detail on the above compensation and enhancement features in accordance with British Standard 42020: 2013 Biodiversity[3], should be produced and implemented for the site and secured through planning condition.

Loggeries

Loggeries should be created within the areas of planting. Log sizes should range from ~10cm up to ~40cm diameter with approximately one third of the logs buried. Plants such as ferns, bulbs, and other woodland understorey plants should then be planted amongst the loggeries.

Wood from broadleaved trees such as oak and beech, and from fruiting trees such as apple and pear where possible should be used, at least 100mm in diameter with the bark still on. Logs in contact with the substrate should remain damp underneath, which is vital for many invertebrates such as woodlice. Logs should be placed both vertically and horizontally in clusters; vertical standing wood should be incorporated by submerging the logs into the full depth of the substrate.

Plate 5.1 Example of loggery



Habitat Panels

Habitat panels should be located amongst areas of nectar rich planting or on areas of biodiverse green roof, so to provide a constant nectar resource for pollinators on a year-round basis. Habitat panels should be included in sunny, south-facing areas.

Panels should use untreated wood products which provide a range of opportunities for sheltering and nesting solitary bees and other invertebrates. They can be 'designed' or integrated with interpretation panels. Design of each panel should avoid providing opportunities for numerous taxa to minimise risk of parasitism.

Plate 5.2 Example of habitat panels



Pollinator posts

Similar to habitat panels, pollinator posts should be located amongst areas of nectar rich planting or installed on extensive biodiverse green roof. These should be close to planting in order to provide a constant nectar resource for pollinators on a year-round basis and located in sunny, south-facing areas within landscaped areas and public realm.

Plate 5.3 Example of pollinator posts



6.0 SUMMARY & CONCLUSIONS

Greengage were commissioned by TPS Management on behalf of Muse Development to undertake an invertebrate survey at the site known as Novartis Phase 3, Horsham, West Sussex.

Greengage completed a PEA[1] of the site on 5th November 2024 and 12th February 2025, which included a site survey and analysis of records from Sussex Biodiversity Records Centre (SxBRC) within 2km of the site. Through the site survey, high suitability for the site to support common and widespread and potentially notable invertebrates, owing to the number of local records in the areas and mosaic of habitats present, was recorded.

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A total of 97 invertebrate taxa were identified during the first survey and 226 during the second. Species recorded were mostly common though some notable species were also recorded, including Section 41 Priority Species and RDB[2] species.

Based on the above results mitigation measures for invertebrates are not considered necessary. Nevertheless, measures to compensate for the loss of habitat on site should be provided, this should be provided though the creation of area of species rich grasslands (meadows) maintained with areas of both long and short sward heights and areas of bare ground, as well as provision of areas of scrub.

Section 5 of this report also recommends enhancement measures for the befit of invertebrates post development.

A LEMP providing greater detail on these compensation and enhancement features in accordance with British Standard 42020: 2013 Biodiversity[3],should be produced as part of a planning condition.

The data collected during the bat emergence survey is considered valid for 12-18 months in accordance Chartered Institute of Ecology and Environmental Management (CIEEM) guidance[4] and an updated survey will be required if the works have not started within this timeframe or should site conditions change significantly during this time.

APPENDIX A FULL SPECIES LIST

Table A.1 Full speices list - May 2025

Species	Family	Order
Eratigena duellica	*Agelenidae*	*Araneae*
Anyphaena accentuata	*Anyphaenidae*	*Araneae*
Araneus diadematus	*Araneidae*	*Araneae*
Mangora acalypha	*Araneidae*	*Araneae*
Zygiella x-notata	*Araneidae*	*Araneae*
Brigittea latens	*Dictynidae*	*Araneae*
Dysdera crocata	*Dysderidae*	*Araneae*
Pocadicnemis juncea	*Linyphiidae*	*Araneae*
Philodromus albidus	*Philodromidae*	*Araneae*
Philodromus rufus sens. str.	*Philodromidae*	*Araneae*
Pisaura mirabilis	*Pisauridae*	*Araneae*
Euophrys frontalis	*Salticidae*	*Araneae*
Heliophanus cupreus	*Salticidae*	*Araneae*
Heliophanus flavipes	*Salticidae*	*Araneae*
Salticus scenicus	*Salticidae*	*Araneae*
Diplapion stolidum	*Apionidae*	*Coleoptera*
Exapion ulicis	*Apionidae*	*Coleoptera*
Ischnopterapion loti	*Apionidae*	*Coleoptera*
Malthodes marginatus	*Cantharidae*	*Coleoptera*
Bembidion lampros	*Carabidae*	*Coleoptera*
Syntomus foveatus	*Carabidae*	*Coleoptera*
Batophila aerata	*Chrysomelidae*	*Coleoptera*
Bruchidius cisti	*Chrysomelidae*	*Coleoptera*
Cryptocephalus moraei	*Chrysomelidae*	*Coleoptera*
Plagiodera versicolora	*Chrysomelidae*	*Coleoptera*
Coccinella septempunctata	*Coccinellidae*	*Coleoptera*
Harmonia axyridis	*Coccinellidae*	*Coleoptera*
Psyllobora vigintiduopunctata	*Coccinellidae*	*Coleoptera*
Magdalis cerasi	*Curculionidae*	*Coleoptera*
Mecinus pascuorum	*Curculionidae*	*Coleoptera*
Orthochaetes setiger	*Curculionidae*	*Coleoptera*

Species	Family	Order
Sitona striatellus	*Curculionidae*	*Coleoptera*
Tychius junceus	*Curculionidae*	*Coleoptera*
Drilus flavescens	*Drilidae*	*Coleoptera*
Cordylepherus viridis	*Malachiidae*	*Coleoptera*
Malachius bipustulatus	*Malachiidae*	*Coleoptera*
Meligethes carinulatus	*Nitidulidae*	*Coleoptera*
Oedemera lurida	*Oedemeridae*	*Coleoptera*
Oedemera nobilis	*Oedemeridae*	*Coleoptera*
Ochina ptinoides	*Ptinidae*	*Coleoptera*
Contacyphon variabilis	*Scirtidae*	*Coleoptera*
Anaspis maculata	*Scraptiidae*	*Coleoptera*
Anaspis regimbarti	*Scraptiidae*	*Coleoptera*
Drusilla canaliculata	*Staphylinidae*	*Coleoptera*
Stenus aceris	*Staphylinidae*	*Coleoptera*
Stenus clavicornis	*Staphylinidae*	*Coleoptera*
Tasgius melanarius	*Staphylinidae*	*Coleoptera*
Leptogaster cylindrica	*Asilidae*	*Diptera*
Lucilia sericata	*Calliphoridae*	*Diptera*
Chrysotoxum festivum	*Syrphidae*	*Diptera*
Eristalis pertinax	*Syrphidae*	*Diptera*
Merodon equestris	*Syrphidae*	*Diptera*
Urophora stylata	*Tephritidae*	*Diptera*
Cardiastethus fasciiventris	*Anthocoridae*	*Hemiptera*
Acericerus ribauti	*Cicadellidae*	*Hemiptera*
Bathysolen nubilus	*Coreidae*	*Hemiptera*
Tachycixius pilosus	*Cixiidae*	*Hemiptera*
Kleidocerys resedae	*Lygaeidae*	*Hemiptera*
Nysius huttoni	*Lygaeidae*	*Hemiptera*
Scolopostethus decoratus	*Lygaeidae*	*Hemiptera*
Taphropeltus contractus	*Lygaeidae*	*Hemiptera*
Centrotus cornutus	*Membracidae*	*Hemiptera*
Capsus ater	*Miridae*	*Hemiptera*
Closterotomus trivialis	*Miridae*	*Hemiptera*
Deraeocoris lutescens	*Miridae*	*Hemiptera*

Species	Family	Order
Phylus melanocephalus	*Miridae*	*Hemiptera*
Pinalitus cervinus	*Miridae*	*Hemiptera*
Psallus perresi	*Miridae*	*Hemiptera*
Psallus varians	*Miridae*	*Hemiptera*
Palomena prasina	*Pentatomidae*	*Hemiptera*
Pentatoma rufipes	*Pentatomidae*	*Hemiptera*
Kalama tricornis	*Tingidae*	*Hemiptera*
Lasius niger	*Formicidae*	*Hymenoptera*
Myrmica ruginodis	*Formicidae*	*Hymenoptera*
Amblyteles armatorius	*Ichneumonidae*	*Hymenoptera*
Ammophila sabulosa	*Sphecidae*	*Hymenoptera*
Rhogogaster viridis (after Taeger & Viitasaari, 2015)	*Tenthredinidae*	*Hymenoptera*
Tenthredo livida	*Tenthredinidae*	*Hymenoptera*
Armadillidium vulgare	*Armadillidiidae*	*Isopoda*
Euclidia glyphica	*Erebidae*	*Lepidoptera*
Orgyia antiqua	*Erebidae*	*Lepidoptera*
Tyria jacobaeae	*Erebidae*	*Lepidoptera*
Cameraria ohridella	*Gracillariidae*	*Lepidoptera*
Polyommatus icarus	*Lycaenidae*	*Lepidoptera*
Coenonympha pamphilus	*Nymphalidae*	*Lepidoptera*
Pieris rapae	*Pieridae*	*Lepidoptera*
Dichrorampha alpinana	*Tortricidae*	*Lepidoptera*
Zygaena filipendulae	*Zygaenidae*	*Lepidoptera*
Libellula depressa	*Libellulidae*	*Odonata*
Valenzuela flavidus	*Caeciliusidae*	*Psocodea*
Graphopsocus cruciatus	*Stenopsocidae*	*Psocoptera*
Arion (Arion) rufus	*Arionidae*	*Pulmonata*
Cepaea (Cepaea) nemoralis	*Helicidae*	*Pulmonata*
Cornu aspersum	*Helicidae*	*Pulmonata*
Hygromia (Hygromia) cinctella	*Hygromiidae*	*Pulmonata*
Limacus flavus	*Limacidae*	*Pulmonata*
Pupilla (Pupilla) muscorum	*Pupillidae*	*Pulmonata*

Table A.2 Full species list - August 2025

Species	Family	Order
Agalena labyrinthica	*Agelenidae*	*Araneae*
Agalenatea redii	*Araneidae*	*Araneae*
Araneus diadematus	*Araneidae*	*Araneae*
Argiope bruennichi	*Araneidae*	*Araneae*
Nuctenea umbratica	*Araneidae*	*Araneae*
Clubiona corticalis	*Clubionidae*	*Araneae*
Dysdera crocata	*Dysderidae*	*Araneae*
Micaria micans	*Gnaphosidae*	*Araneae*
Zelotes latreillei	*Gnaphosidae*	*Araneae*
Stemonyphantes lineatus	*Linyphiidae*	*Araneae*
Tenuiphantes tenuis	*Linyphiidae*	*Araneae*
Pardosa pullata	*Lycosidae*	*Araneae*
Pisaura mirabilis	*Pisauridae*	*Araneae*
Heliophanus cupreus	*Salticidae*	*Araneae*
Heliophanus flavipes	*Salticidae*	*Araneae*
Pachygnatha degeeri	*Tetragnathidae*	*Araneae*
Enoplognatha latimana	*Theridiidae*	*Araneae*
Enoplognatha ovata sens. str.	*Theridiidae*	*Araneae*
Ozyptila simplex	*Thomisidae*	*Araneae*
Chorthippus parallelus	*Acrididae*	*Orthoptera*
Chorthippus albomarginatus	*Acrididae*	*Orthoptera*
Chorthippus brunneus	*Acrididae*	*Orthoptera*
Omocestus viridulus	*Acrididae*	*Orthoptera*
Ectobius lapponicus	*Blattellidae*	*Blattodea*
Conocephalus fuscus	*Tettigoniidae*	*Orthoptera*
Anthocoris nemorum	*Anthocoridae*	*Hemiptera*
Orius majusculus	*Anthocoridae*	*Hemiptera*
Berytinus minor	*Berytidae*	*Hemiptera*
Coreus marginatus	*Coreidae*	*Hemiptera*
Cymus melanocephalus	*Lygaeidae*	*Hemiptera*
Kleidocerys resedae	*Lygaeidae*	*Hemiptera*
Nysius graminicola	*Lygaeidae*	*Hemiptera*

Species	Family	Order
Nysius huttoni	*Lygaeidae*	*Hemiptera*
Nysius senecionis	*Lygaeidae*	*Hemiptera*
Stygnocoris rusticus	*Lygaeidae*	*Hemiptera*
Stygnocoris sabulosus	*Lygaeidae*	*Hemiptera*
Taphropeltus contractus	*Lygaeidae*	*Hemiptera*
Blepharidopterus angulatus	*Miridae*	*Hemiptera*
Deraeocoris lutescens	*Miridae*	*Hemiptera*
Megacoelum infusum	*Miridae*	*Hemiptera*
Orthops campestris	*Miridae*	*Hemiptera*
Phytocoris varipes	*Miridae*	*Hemiptera*
Stenodema calcarata	*Miridae*	*Hemiptera*
Stenodema laevigata	*Miridae*	*Hemiptera*
Himacerus mirmicoides	*Nabidae*	*Hemiptera*
Nabis limbatus	*Nabidae*	*Hemiptera*
Dolycoris baccarum	*Pentatomidae*	*Hemiptera*
Palomena prasina	*Pentatomidae*	*Hemiptera*
Pentatoma rufipes	*Pentatomidae*	*Hemiptera*
Piezodorus lituratus	*Pentatomidae*	*Hemiptera*
Corizus hyoscyami	*Rhopalidae*	*Hemiptera*
Myrmus miriformis	*Rhopalidae*	*Hemiptera*
Rhopalus parumpunctatus	*Rhopalidae*	*Hemiptera*
Rhopalus subrufus	*Rhopalidae*	*Hemiptera*
Stictopleurus punctatonervosus	*Rhopalidae*	*Hemiptera*
Eurygaster testudinaria	*Scutelleridae*	*Hemiptera*
Tingis cardui	*Tingidae*	*Hemiptera*
Philaenus spumarius	*Aphrophoridae*	*Hemiptera*
Aphrophora alni	*Aphrophoridae*	*Hemiptera*
Anoscopus albifrons	*Cicadellidae*	*Hemiptera*
Anoscopus albiger	*Cicadellidae*	*Hemiptera*
Aphrodes diminuta	*Cicadellidae*	*Hemiptera*
Athysanus argentarius	*Cicadellidae*	*Hemiptera*
Cicadella viridis	*Cicadellidae*	*Hemiptera*
Conosanus obsoletus	*Cicadellidae*	*Hemiptera*
Eupelix cuspidata	*Cicadellidae*	*Hemiptera*

Species	Family	Order
Eupteryx aurata	*Cicadellidae*	*Hemiptera*
Eupteryx melissae	*Cicadellidae*	*Hemiptera*
Euscelis incisus	*Cicadellidae*	*Hemiptera*
Iassus lanio	*Cicadellidae*	*Hemiptera*
Macropsis scotti	*Cicadellidae*	*Hemiptera*
Macrosteles sexnotatus	*Cicadellidae*	*Hemiptera*
Megophthalmus scanicus	*Cicadellidae*	*Hemiptera*
Mocydia crocea	*Cicadellidae*	*Hemiptera*
Oncopsis appendiculata	*Cicadellidae*	*Hemiptera*
Populicerus confusus	*Cicadellidae*	*Hemiptera*
Psammotettix confinis	*Cicadellidae*	*Hemiptera*
Streptanus sordidus	*Cicadellidae*	*Hemiptera*
Zyginidia scutellaris	*Cicadellidae*	*Hemiptera*
Conomelus anceps	*Delphacidae*	*Hemiptera*
Dicranotropis hamata	*Delphacidae*	*Hemiptera*
Javesella pellucida	*Delphacidae*	*Hemiptera*
Aspidapion aeneum	*Apionidae*	*Coleoptera*
Eutrichapion vorax	*Apionidae*	*Coleoptera*
Ischnopterapion loti	*Apionidae*	*Coleoptera*
Oxystoma pomonae	*Apionidae*	*Coleoptera*
Protapion difforme	*Apionidae*	*Coleoptera*
Protapion filirostre	*Apionidae*	*Coleoptera*
Protapion fulvipes	*Apionidae*	*Coleoptera*
Protapion nigritarse	*Apionidae*	*Coleoptera*
Diplapion stolidum	*Apionidae*	*Coleoptera*
Demetrias atricapillus	*Carabidae*	*Coleoptera*
Harpalus affinis	*Carabidae*	*Coleoptera*
Licinus punctatulus	*Carabidae*	*Coleoptera*
Paradromius linearis	*Carabidae*	*Coleoptera*
Altica lythri	*Chrysomelidae*	*Coleoptera*
Aphthona euphorbiae	*Chrysomelidae*	*Coleoptera*
Bruchidius villosus	*Chrysomelidae*	*Coleoptera*
Bruchus rufipes	*Chrysomelidae*	*Coleoptera*
Crepidodera aurata	*Chrysomelidae*	*Coleoptera*

Species	Family	Order
Crepidodera fulvicornis	*Chrysomelidae*	*Coleoptera*
Cryptocephalus moraei	*Chrysomelidae*	*Coleoptera*
Cryptocephalus pusillus	*Chrysomelidae*	*Coleoptera*
Longitarsus flavicornis	*Chrysomelidae*	*Coleoptera*
Longitarsus gracilis	*Chrysomelidae*	*Coleoptera*
Longitarsus luridus	*Chrysomelidae*	*Coleoptera*
Phyllotreta vittula	*Chrysomelidae*	*Coleoptera*
Coccinella septempunctata	*Coccinellidae*	*Coleoptera*
Propylea quattuordecimpunctata	*Coccinellidae*	*Coleoptera*
Psyllobora vigintiduopunctata	*Coccinellidae*	*Coleoptera*
Tytthaspis sedecimpunctata	*Coccinellidae*	*Coleoptera*
Halyzia sedecimguttata	*Coccinellidae*	*Coleoptera*
Calvia quattuordecimguttata	*Coccinellidae*	*Coleoptera*
Adalia decempunctata	*Coccinellidae*	*Coleoptera*
Harmonia axyridis	*Coccinellidae*	*Coleoptera*
Rhyzobius litura	*Coccinellidae*	*Coleoptera*
Cryptophagus dentatus	*Cryptophagidae*	*Coleoptera*
Anthonomus rubi	*Curculionidae*	*Coleoptera*
Coelositona cambricus	*Curculionidae*	*Coleoptera*
Curculio glandium	*Curculionidae*	*Coleoptera*
Glocianus punctiger	*Curculionidae*	*Coleoptera*
Mecinus pascuorum	*Curculionidae*	*Coleoptera*
Sitona hispidulus	*Curculionidae*	*Coleoptera*
Sitona lineatus	*Curculionidae*	*Coleoptera*
Sitona sulcifrons	*Curculionidae*	*Coleoptera*
Trichosirocalus barnevillei	*Curculionidae*	*Coleoptera*
Tychius junceus	*Curculionidae*	*Coleoptera*
Tychius picirostris	*Curculionidae*	*Coleoptera*
Cartodere bifasciata	*Latridiidae*	*Coleoptera*
Corticarina minuta	*Latridiidae*	*Coleoptera*
Cortinicara gibbosa	*Latridiidae*	*Coleoptera*
Oedemera lurida	*Oedemeridae*	*Coleoptera*
Olibrus aeneus	*Phalacridae*	*Coleoptera*

Species	Family	Order
Olibrus affinis	*Phalacridae*	*Coleoptera*
Cypha longicornis	*Staphylinidae*	*Coleoptera*
Metopsia clypeata	*Staphylinidae*	*Coleoptera*
Philonthus cognatus	*Staphylinidae*	*Coleoptera*
Stenus fulvicornis	*Staphylinidae*	*Coleoptera*
Stenus ossium	*Staphylinidae*	*Coleoptera*
Tachyporus chrysomelinus	*Staphylinidae*	*Coleoptera*
Tachyporus hypnorum	*Staphylinidae*	*Coleoptera*
Adia cinerella	*Anthomyiidae*	*Diptera*
Anthomyza gracilis	*Anthomyzidae*	*Diptera*
Machimus atricapillus	*Asilidae*	*Diptera*
Pollenia rudis	*Calliphoridae*	*Diptera*
Stevenia deceptoria	*Calliphoridae*	*Diptera*
Chamaemyia herbarum	*Chamaemyidae*	*Diptera*
Sicus ferrugineus	*Conopidae*	*Diptera*
Physocephala rufipes	*Conopidae*	*Diptera*
Chrysotus gramineus	*Dolichopodidae*	*Diptera*
Dolichopus festivus	*Dolichopodidae*	*Diptera*
Dolichopus griseipennis	*Dolichopodidae*	*Diptera*
Scaptomyza graminum	*Drosophilidae*	*Diptera*
Discomyza incurva	*Ephydridae*	*Diptera*
Hydrellia griseola	*Ephydridae*	*Diptera*
Psilopa nitidula	*Ephydridae*	*Diptera*
Trimerina madizans	*Ephydridae*	*Diptera*
Minettia fasciata (Fallén, 1826)	*Lauxaniidae*	*Diptera*
Lonchoptera lutea	*Lonchopteridae*	*Diptera*
Coenosia infantula	*Muscidae*	*Diptera*
Coenosia tigrina	*Muscidae*	*Diptera*
Musca autumnalis	*Muscidae*	*Diptera*
Muscina levida	*Muscidae*	*Diptera*
Orchisia costata	*Muscidae*	*Diptera*
Schoenomyza litorella	*Muscidae*	*Diptera*
Geomyza balachowskyi	*Opomyzidae*	*Diptera*
Opomyza petrei	*Opomyzidae*	*Diptera*

Species	Family	Order
Chrysopilus cristatus	*Rhagionidae*	*Diptera*
Blaesoxipha plumicornis	*Sarcophagidae*	*Diptera*
Ravinia pernix	*Sarcophagidae*	*Diptera*
Sarcophaga anaces	*Sarcophagidae*	*Diptera*
Sarcophaga nigriventris	*Sarcophagidae*	*Diptera*
Limnia ungucornis	*Sciomyzidae*	*Diptera*
Pherbellia cinerella	*Sciomyzidae*	*Diptera*
Tetanocera elata	*Sciomyzidae*	*Diptera*
Sepsis fulgens	*Sepsidae*	*Diptera*
Chorisops nagatomii	*Stratiomyidae*	*Diptera*
Cheilosia pagana	*Syrphidae*	*Diptera*
Cheilosia proxima	*Syrphidae*	*Diptera*
Eristalis arbustorum	*Syrphidae*	*Diptera*
Eristalis tenax	*Syrphidae*	*Diptera*
Eupeodes corollae	*Syrphidae*	*Diptera*
Eupeodes luniger	*Syrphidae*	*Diptera*
Helophilus pendulus	*Syrphidae*	*Diptera*
Neoascia podagrica	*Syrphidae*	*Diptera*
Pipizella viduata	*Syrphidae*	*Diptera*
Platycheirus albimanus	*Syrphidae*	*Diptera*
Platycheirus scutatus	*Syrphidae*	*Diptera*
Sphaerophoria scripta	*Syrphidae*	*Diptera*
Sphaerophoria taeniata	*Syrphidae*	*Diptera*
Syritta pipiens	*Syrphidae*	*Diptera*
Syrphus ribesii	*Syrphidae*	*Diptera*
Syrphus vitripennis	*Syrphidae*	*Diptera*
Aplomya confinis	*Tachinidae*	*Diptera*
Ectophasia crassipennis	*Tachinidae*	*Diptera*
Eriothrix rufomaculata	*Tachinidae*	*Diptera*
Phasia pusilla	*Tachinidae*	*Diptera*
Siphona geniculata	*Tachinidae*	*Diptera*
Voria ruralis	*Tachinidae*	*Diptera*
Sphenella marginata	*Tephritidae*	*Diptera*
Tephritis divisa	*Tephritidae*	*Diptera*

Species	Family	Order
Terellia longicauda	*Tephritidae*	*Diptera*
Herina nigrina	*Ulididae*	*Diptera*
Bombus lapidarius	*Apidae*	*Hymenoptera*
Bombus pascurom	*Apidae*	*Hymenoptera*
Lasius niger	*Formicidae*	*Hymenoptera*
Blastobasis rebelii	*Blastobasidae*	*Lepidoptera*
Agapeta hamana	*Tortricidae*	*Lepidoptera*
Cacoecimorpha pronubana	*Tortricidae*	*Lepidoptera*
Grapholita compositella	*Tortricidae*	*Lepidoptera*
Pieris brassicae	*Pieridae*	*Lepidoptera*
Pieris rapae	*Pieridae*	*Lepidoptera*
Polyommatus icarus	*Lycaenidae*	*Lepidoptera*
Aricia agestis	*Lycaenidae*	*Lepidoptera*
Celastrina argiolus	*Lycaenidae*	*Lepidoptera*
Vanessa cardui	*Nymphalidae*	*Lepidoptera*
Vanessa atalanta	*Nymphalidae*	*Lepidoptera*
Pararge aegeria	*Nymphalidae*	*Lepidoptera*
Maniola jurtina	*Nymphalidae*	*Lepidoptera*
Pyronia tithonus	*Nymphalidae*	*Lepidoptera*
Coenonympha pamphilus	*Nymphalidae*	*Lepidoptera*
Pyrausta purpuralis	*Crambidae*	*Lepidoptera*
Agriphila straminella	*Crambidae*	*Lepidoptera*
Euclidia glyphica	*Erebidae*	*Lepidoptera*
Tyria jacobaeae	*Erebidae*	*Lepidoptera*
Acronicta rumicis	*Noctuidae*	*Lepidoptera*

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