

# Calton Hill, Edinburgh

## Report on site visit with The Friends of Calton Hill

Craig Macadam, September 2023

### Introduction

Calton Hill is a semi natural area of grasslands, broad-leaved woodland, bare ground, and rocky outcrops located in the centre of Edinburgh. Covering approximately 10 hectares, it is a popular tourist destination with panoramic views across the city and along the Forth estuary from the hilltop, various monuments and observatory, and a network of paths around and over the hill.

The Friends of Calton Hill held a series of mini-blitzes covering birds, plants and invertebrates on 10th September 2023. This report details the species found during the invertebrate session which covered the period between 13:00 and 15:30. The focus was on the west side of the hill, but other parts of the site were also visited. The weather for the visit was bright and hot with little wind. Four participants took part in the event.

Invertebrates were collected using a combination of sweeping and beating vegetation with a sweep net (30cm diameter) or catching flying insects with a butterfly net (30cm diameter). Collected specimens were examined on site with photographs taken and selected specimens retained for later identification. The purpose of the event was to introduce participants to the invertebrate life found on Calton Hill, rather than to undertake a comprehensive survey. Recommendations are however made for future surveys of the site to inform habitat management work.

Participants followed a route from the triangulation point along the west side of the hill following Hume Walk West, then along the south along Rock Path and Regent Walk before returning to the National Monument via the Parliament Cairn.

### Results

38 invertebrate species were recorded from nine orders.

The grass bug *Notostira elongata* and the Common Green Capsid (*Lygocoris pabulinis*) were found in grasslands on the hilltop together with numerous individuals of the Meadow Froghopper (*Philaenus spumarius*). Wall Butterfly was recorded on bare ground at the viewpoint to the south of the National Monument and numerous small unidentified green caterpillars were collected in the areas of long grass.

The woodland along Hume Walk West was the most productive area with three species of shieldbug recorded together with green lacewing larvae, the barkfly *Valenzuela flavidus*, and

four species of spider. Red Admiral (*Aglais io*) and Speckled Wood (*Pararge aegeria*). butterflies were also encountered here.

The Rock Path and Regent Walk have a more southerly aspect. Five species of ladybird were recorded here including the Adonis Ladybird (*Hippodamia variegata*), a relatively uncommon species in Scotland. Three species of mollusc were recorded in this area together with Large White Butterfly (*Pieris brassicae*), Black Garden Ants (*Lasius niger*), and Common Wasps (*Vespula vulgaris*).

Noticeably, there were very few flies present. The only families recorded were Tachinidae, Lauxaniidae, Tipulidae, and Psychodidae. Similarly, only two bee species were recorded, Common Carder Bee (*Bombus pascuorum*) and an unidentified *Bombus* sp. observed in flight.

It is possible that the paucity of records of these groups is due to the late season but may also be due to the extended period of dry, warm weather over the late summer.

## Conclusions

Whilst very limited, these surveys have shown that Calton Hill provides useful habitat for a variety of invertebrate species. Further surveys throughout the spring and summer would likely considerably increase the number of species recorded from the site. Targeting the surveys to particularly areas and groups of invertebrates would be the most effective approach. The following recommendations for future surveys should be considered:

1. Establish a regular butterfly transect around the site following the methodology used in the UK Butterfly Monitoring Scheme (<https://ukbms.org/get-involved>)
2. Establish a Beewalk transect around the site following the methodology published by the Bumblebee Conservation Trust (<https://beewalk.org.uk>)
3. Hold a Bioblitz during the summer, inviting specialists in various species groups to lead surveys during the day (in conjunction with The Wildlife Information Centre <http://www.wildlifeinformation.co.uk>) and / or the National Museums of Scotland ([www.nms.ac.uk/collections-research/collections-departments/natural-sciences/collections/invertebrates/](http://www.nms.ac.uk/collections-research/collections-departments/natural-sciences/collections/invertebrates/))
4. Undertake light trapping for moths (and other insects).
5. Undertake targeted surveys in the following habitats:
  - Grasslands (Bees, Butterflies, Hoverflies, True-bugs)
  - Woodland (Beetles, True-flies, True-bugs, Molluscs)
  - Rock outcrops and bare ground (Beetles, Molluscs, Bees)

## **Annotated Species List**

### **Beetles (Coleoptera)**

#### **Harlequin ladybird (*Harmonia axyridis*)**

This invasive non-native species has spread through the UK in recent years. Its larvae feed upon a wide variety of small insects including native ladybird larvae.

#### **7 spot ladybird (*Coccinella septempunctata*)**

A common and widespread ladybird species which is found in a variety of habitats where it feeds upon aphids.

#### **Pine ladybird (*Exochomus quadripustulatus*)**

A small ladybird which, despite its common name, can be found on a variety of tree species where it feeds on aphids.

#### **2 spot ladybird (*Adalia bipunctata*)**

A common and widespread ladybird species which is found in a variety of habitats.

#### **Adonis Ladybird (*Hippodamia variegata*)**

Uncommon in Scotland, majority of records are from the Edinburgh area. This relatively large ladybird species feeds on aphids and can be found on a variety of ruderal plant species on open, sandy soils.

#### **A weevil *Phyllobius* sp.**

A common genus of weevils found in a variety of habitats.

#### **A weevil *Otiorhynchus singularis***

This weevil has a rather localised distribution in Scotland. It is associated with a variety of plants in a variety of habitats including woodlands, grassland, hedgerows, gardens, etc.

### **Hymenoptera**

#### **Common Wasp (*Vespula vulgaris*)**

A common and widespread species of social wasp which preys upon a variety of other invertebrate species.

#### **Black Garden Ant (*Lasius niger*)**

A common and widespread species of ant, frequently found in urban areas.

#### **Common Carder Bee (*Bombus pascuorum*)**

This common and widespread bumblebee species is often found visiting plants such as knapweeds, thistles and clover.

#### **an Ichneumon wasp *Mastrus* sp.**

A striking genus of black and orange ichneumon wasps.

## Hemiptera

### **Hairy Shieldbug (*Dolycorus baccarum*)**

A large and distinctive shieldbug which is common and widespread in a variety of habitats, particularly woodland edges and hedgerows.

### **Gorse Shieldbug (*Piezodorus lituratus*)**

A common and widespread shieldbug most often associated with Gorse although the larvae also feed on Broom.

### **Hawthorn Shieldbug (*Acanthosoma haemorrhoidale*)**

A distinctive shieldbug which is common and widespread throughout Britain. It is typically associated with Hawthorn although a range of other deciduous trees are also used including Oak, Hazel and Birch.

### **Common Froghopper (*Philaenus spumarius*)**

A common and widespread species. The larvae produce the characteristic 'cuckoo-spit'.

### **a grass bug *Notostira elongata***

This species resembles a grass seed and is commonly found in grasslands.

### **Common Green Capsid (*Lygocoris pabulinis*)**

This is a very common species which can be found throughout the UK on a variety of plant species, particularly nettles.

### **Cottony Ash Psyllid (*Psyllopsis discrepans*)**

A small insect which feeds on Ash. It is common in Britain, particularly in northern areas.

### **Common Flower Bug (*Anthocoris nemorum*)**

A very common and widespread species which is a predator on other small insects.

## Neuroptera

### **Green Lacewing larva (*Chrysopidae*)**

Green lacewing are common insects found in a variety of habitats. Their larvae are voracious predators of small soft-bodied insects such as aphids and caterpillars.

## Araneae

### **A sac spider (*Clubiona* sp.)**

This genus of spiders is found in a variety of habitats including leaf litter, shrubs and trees.

### **Common Hammock-weaver (*Linyphia triangularis*)**

A common and widespread spider which is often encountered on bushes and vegetations in gardens and urban areas.

**Common Crab Spider (*Xytiscus cristatus*)**

A very common and widespread spider which is found in almost all open habitats.

**Lesser Garden Spider (*Metellina segmentata*)**

A widespread and very common species found in almost any habitat.

Mollusca

**Garden Snail (*Cornu aspersum*)**

A common and widespread large, distinctive snail. In Scotland it is more commonly found in coastal areas.

**White-lipped Snail (*Cepaea hortensis*)**

A common and widespread species found in grassland, woodland and urban areas.

**Discus Snail (*Discus rotundatus*)**

A common and widespread snail which lives in sheltered places under stones, logs, leaf litter, etc.

Psocoptera

**a barkfly *Valenzuela flavidus***

A common species of barkfly which can be found on a variety of deciduous tree species.

Diptera

**a Crane fly *Tipula confusa***

A very common and widespread crane fly species often found in urban areas.

**Owl Midge (*Psychodidae*)**

A family of small, distinctive flies which are associated with damp habitats.

**Tachinidae**

A large family of true flies which are parasitoids of other insects.

**Lauxaniidae**

A family of small flies typically found associated with leaf litter and damp soils. Their larvae may mine leaves or live in rotting wood.

Lepidoptera

**Large white (*Pieris brassicae*)**

A very common and widespread species of butterfly. Its caterpillars feed on a variety of plants in the Cabbage family (Brassicaceae).

**Wall Brown (*Lasiommata megera*)**

The distribution of this butterfly species is moving north with frequent records being made in the south of Scotland. The adults can be found basking on bare soil, rocks and walls. Its caterpillars feed on various grasses.

**Speckled Wood (*Parage aegeria*)**

This butterfly species is currently recolonizing many areas of Scotland. It is typically found in woodlands, hedgerows and gardens where the caterpillars feed on various grasses.

**Red Admiral (*Vanessa atalanta*)**

A common and widespread species which is found in all habitat types. The caterpillars feed on nettles.

**Peacock (*Aglais io*)**

A spectacular butterfly with distinctive eye spots on the wings. It is very common and widespread in the UK. The caterpillars feed on nettles.

**Square-spot Rustic (*Xestia xanthographa*) (caterpillar)**

A very common and widespread species found in woodland edges and suburban areas. Its caterpillars feed on a variety of grasses.