



# Project Summary

## Polli-Nightors



### Introduction

Nocturnal insects provide pollination to flowers that are / stay open at night, even attracting insects with contrasting pale colours and strong scents that can be perceived in low light. The logistics of studying nocturnal pollination are more complex than for daytime observations, so this area is less well understood. We wanted to explore the possibility of nocturnal insect projects with the Buzz Club, so we tested out several methods under the theme 'Polli-Nightors'.

### Aims / methods

**2020:** Once a week through August, 10min nighttime 'safari' in the garden; using a torch to search for insects. Used broad categories of ID like 'large moth' or 'beetle'.

**2021:** 10min counts of invertebrates at night in different places: on a lit window; near an outdoor light; on a focal plant; on a garden walk. Once a week May – September, as many as participants could do. We also asked them to try and qualify 'How Bright Is Your Night' by recording lighting conditions via categories and a light meter app.

**2022:** 15min walk around the garden, weekly May – September. Specifically searching for invertebrates found on flowering plants, recording ID of both, and noting what they were doing (ended up being resting vs. active).

### Results summary

**2020:** Moths were the most common insect spotted, with 118 records; followed by flies (not 'midge-like') at 74 and midge/ mosquitos at 64. Earwigs and spiders featured at least once for all participants (15 and 14 respectively), and most people also spotted woodlice and lacewings. Insect numbers dropped off later in August, so we decided to have an earlier start subsequently.

**2021:** Counts recorded 1433 insects, with the majority being mosquito-like flies (652) and moths (560). Most gardens were characterized as 'dim'. Light meter downloads did not work well.

**2022:** The heatwave in this year impacted the project. 539 invertebrates were recorded, with 355 being found directly on a flower. Most were doing *something*, although it was difficult to tell what! This method recorded far fewer moths and flies, but more 'walkers' – earwigs, spiders, woodlice, beetles – since we were looking for invertebrates on the plants, not flying in the torch beam.

Buddleia and sunflower plants had the most invertebrate visits, and were easy to search / observe even at night, so could be a useful focal plant for future work.

Participants reported enjoying the project and the opportunity / 'excuse' to go look for insects in the dark, but sign-up rates were low across all years; likely because of the added difficulty of nighttime observations. It was noted that 'in the dark' can be 11pm+ in summer in much of the UK, which is getting pretty late for many participants to be out recording data.

### Follow-on

We have had enquires about this – or other nighttime projects – but did not feel that Polli-Nightors had found its focus sufficiently to be run again in this form.

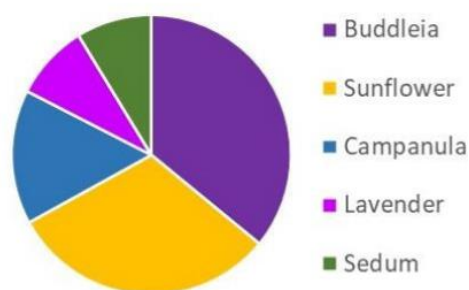


Figure 6: The flowering plants most visited by invertebrates at night.

# Example of protocol for the plant-focused garden walks

Welcome to the 2022 version of Polli-Nightors, the Buzz Club project focusing on nocturnal pollinators. This year we are looking specifically at what sort of invertebrates we can find **on plants** at night (mostly on the **flowers**). We spotted some interesting nocturnal visitors to flowers in previous years, so we are going to focus on that for this year. You don't need special equipment to take part, but you will need to have some plants outside to do the observations on.



The aim of this year's 'Polli-Nightors: Walk' is to walk around your garden after sunset with a **torch** (and ideally a **camera**), and check on any **flowering plants** that are present. Record any **invertebrates** spotted on the plants, and if they are doing anything obvious (e.g. actively feeding).

You can use the recording sheet below (print as many as you need) or a notebook. Returns of data to the project will be **by email** to [buzzclub.uk@gmail.com](mailto:buzzclub.uk@gmail.com); either monthly or all at the end of the project, depending on what works best for you.

Try to identify the insects in as much detail as you can – but if you don't recognise a species, a more general identification (such as 'beetle') is fine! Please **take photos** if you can, as that will help us to verify species identifications, since this can be tricky for many groups of invertebrates.

The aim is to do a Polli-Nightors: Walk **once a week** during spring and summer (May – September), ideally after a clear day (not after heavy rain). Don't worry if you can't do *every* week; just do as many as you can.

Example of recording sheet:

Recording sheet		UNIVERSITY OF SUSSEX			
Month: <i>June</i>					
Date of each recording: (write)	Week 1 <i>04/06/2022</i>	Week 2	Week 3	Week 4	
Approx. time of recording: (write)	<i>10pm</i>				
Weather during recording (circle)	<i>Clear</i> / cloudy <i>Warm</i> / cold	Clear / cloudy Warm / cold	Clear / cloudy Warm / cold	Clear / cloudy Warm / cold	
Insects seen (in counts / tallies). Please take photographs if you can!					
Week #	Type of invertebrate seen & how many? (e.g. ladybird x2)	Plant found on & on which part (e.g. dandelion, flower)	Invertebrate activity (Was it doing something, e.g. feeding, or resting)	Photo taken? (yes / no)	
<i>1</i>	<i>7</i> spot ladybird x2	<i>Spear thistle; flower</i>	<i>Resting</i>	<i>Yes (email)</i>	
<i>1</i>	<i>Woodlice x 3</i>	<i>Ragwort, leaves</i>	<i>Moving around</i>	<i>Yes (email)</i>	
<i>1</i>	<i>Large moth</i>	<i>Flying around; near thistle</i>	<i>Flying</i>	<i>No</i>	


# Example of protocol for the counts in different garden spaces


Welcome to the new Buzz Club project focusing on **nocturnal pollinators**, and helping participants get to know the insects that are active around their outside space at night. You don't need to invest in special equipment or have a big garden to take part (the minimum is a window).


The aim is to do a Polli-Nightors count **once a week** during spring and summer (May – September). Don't worry if you can't do *every* week: as many as you can is fantastic. Choose **at least one** of the places / methods listed below, and do a count when it has gone dark where you live.


Make a note of what you see, either using a notebook or a printed recording sheet. Since it will be dark and the insects might be moving quickly, we've included quite general categories (e.g. 'large moth' or 'midge-like fly'). If you can be more specific – **or even better, take photos** – then that's great, but don't worry if you can't!

## Places to look

 On a **window** (ideally garden-facing, or at least where it is darker outside than inside; so not right underneath a street lamp). Leave a curtain open and a light on, and see what lands on the window, attracted by the light. Since this is the most passive search, we suggest checking the window every **10 min** over the course of **an hour**.

 By an **outside light**. Insects will be attracted to and around outside lamps (e.g. security lights), so you can stand nearby and observe visitors. We suggest doing this for **10 minutes**.

 On a **garden walk**. Take a torch and walk slowly around the garden, passing the light over plants to either side of you, and see what insects you can spot. We suggest doing this for **10 minutes**, although understand that big gardens might take longer.

 On a **focal plant**. Pick a plant that should be attractive to night insects. Pale flowers and strong scent are good characteristics (e.g. jasmine or honeysuckle), or if you don't have one like that, see what still has open flowers at night. Using a torch, observe that plant for **10 minutes** and see what insects you find visiting the flowers.

If you want to do **more than one place** (e.g. on a window **and** a garden walk), then please print a **separate recording sheet** for each.

This project is intended to get an idea of abundances, and get members familiar with their visitors. We aren't aiming for a detailed species-level survey. There is excellent UK-wide work being done by specialist recorders that cover night-flying insects – particularly Butterfly Conservation's "Moth Count" – and we don't want to double up effort; so if you would like to try identifying your moths in particular in more detail, we recommend checking out <http://www.mothscount.org>.

