

THE HIGHLAND BIG POLLINATOR COUNT

2024 RESULTS



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Pied hoverfly *Scaeva pyrastris*
-observed at Stoer meadow



INTRODUCTION

Pollinator populations, crucial to biodiversity and ecosystem health, are declining worldwide, including in the Highlands. This poses significant threats to agriculture, natural habitats, and food security, necessitating urgent monitoring and conservation efforts to better understand and protect local pollinator species.

The Highland 2024 Big Pollinator Count mobilised citizens across Highland to monitor pollinator activity at 39 mini wildflower meadows planted by High Life Highland Rangers in 2023, and listed on the Highland Environment Forum website.

Participants observed and recorded insect activity in various pollinator categories, contributing valuable data through our online recording platform to inform future conservation strategies and habitat protection efforts.

ENGAGEMENT

In total, 124 people participated in the counts, which covered a combined meadow area of 1,010.5 m², with individual sites ranging from 1 m² to 100 m² in size.

Volunteers collectively spent 1,124 minutes—nearly 19 hours—observing pollinators, with each session lasting 30 minutes or less.

The 39 surveyed sites were spread across the Highlands, with 21 in Caithness, 10 in Sutherland, 6 in Ross-shire, and one each in Lochaber and Badenoch & Strathspey.

This count highlighted the crucial role wildflower meadows play in supporting pollinator populations, provided vital data for future conservation, and successfully engaged the local community in acting to protect Highland ecosystems.



METHOD

	Red Clover	White tailed Corder
Bumble bees		
Solitary Bees		
Wasps		
Hoverflies		
Other Flies		
Butterflies/Moths		
Beetles		Shield Bug
Small insects 3mm <		
Other insects		- Spiders + - Grasshoppers

The method was kept simple. Participating citizen scientist were asked to watch a site for 30 minutes and count all the pollinating insects they saw visiting. The results were submitted on our easy-to-access online form, taking around 2 minutes to complete.

People were also asked to record when and how long they counted for as well as the location and area in metres of the wildflower meadow.

Insects were recorded only SITTING on or LANDING on any of the meadow flowers, not whilst in flight.

Participants were asked to divide their observations in to ten categories:

- Bumblebees
- Honeybees
- Solitary bees
- Wasps (including ichneumon wasps)
- Hoverflies
- Other flies
- Butterflies and moths
- Beetles (larger than 3mm);
- Small insects (eg pollen beetles) less than 3mm
- Other insects.

RESULTS

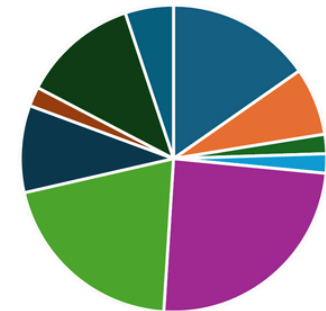


A total of 1312 insects were recorded over all the sites. The greatest category was hoverflies with 312 hoverflies seen (20% of all recorded insects). Bumblebees made up 15%, butterflies and moths 9% and honeybees 7%. Wasps made up only 2% of all insects recorded reflecting what is suggested nationally as a poor year for wasps.

The weather over the recording period 7th -13th August 2024 was generally poor over most of the Highlands. It was warm most quite wet and very breezy. For instance, taking Inverness as an example: Maximum temperatures over the period ranged from 16 -20 degrees.

Only one day was totally dry and average wind speed over the seven days was 28km/hr. There was no days when the average wind speed was under 17km/hr.

Results





KEY SPECIES RECORDINGS

Citizen Scientists were asked to identify down to species level if possible or submit photographs of insects to the Ranger Service for identification.

BUMBLEBEES

- 26 common carder *Bombus pascuorum*
- 26 garden bumblebees *Bombus hortorum*
- 7 white-tailed bumblebees *Bombus lucorum* as well

DAMSELFLIES

- 8 common blue damselflies *Enallagma cyathigerum*
- 1 emerald damselfly *Lestes sponsa*
- 1 common hawk dragonfly *Aeshna juncea*



HOVERFLIES

Of the numerous hoverflies (a very difficult family to identify at species level) 13 were identified as the bumblebee mimic hoverfly *Volucella bombylans* all at one site in Stoer, Sutherland.

There was a single Pied hoverfly *Scaeva pyrastris* and seven hoverflies in the *Cheilosia* genus (drone flies) including one tapered drone fly *Eristalis pertinax*.

BUTTERFLIES

- 10 green-veined whites *Pieris napi*
- 4 large whites *Pieris brassicae*
- 3 common blues *Polyommatus icarus*
- 2 peacock *Aglais io*
- singles of red admiral *Vanessa atalanta*, small tortoiseshell *Aglais urticae*, and meadow brown *Maniola jurti*

OTHER INSECTS

- 50 records of common red soldier beetles *Rhagonycha fulva*
- 3 Red-thighed St Mark's fly or heather fly *Bibio pomonae*.
- 19 craneflies (daddy long legs) recorded
- 3 dung flies *Scathophaga sp*
- 5 sawflies *Tenthredo sp.*

Also reported were froghoppers, shieldbugs and 3 ichneumon wasps with their long ovipositors.



Results 2024



Highland Big Pollinator Count



1011m² surveyed

39 meadows, planted in 2023 were surveyed. Together these spanned a total area of 1011 m². The survey covered various sites predominantly in Caithness, Sutherland, Ross-shire, Lochaber, and Badenoch & Strathspey.



124 people

The number of people, including families taking part in this years count



Hoverflies: 20%

Bumblebees: 15%

Butterflies: 9%

Honeybees: 7%

Wasps: 2%

1312 insects

Insects recorded. The greatest category was hoverflies with 312 hoverflies seen. Wasps made up only 2% of all insects recorded reflecting what is suggested nationally as a poor year for wasps.

1124 minutes

Participants recorded pollinating insects for a combined total of 1124 minutes, strictly in 30-minute sessions.



CONCLUSION

Despite the poorer than average weather during the chosen 2024 Big Pollinator Count week, the results were impressive. The number of people, including families and children who part was greatly appreciated. The results demonstrate just how important wildflower meadows are, no matter how small, to insects and the health of nature in the Highlands.

This initiative raised public awareness of the importance of pollinators, engaged local communities, and provided valuable data to inform future public and charity sector conservation efforts. It has highlighted the need for continued investment in pollinator habitats and inspired a commitment to repeat the count in 2025 to track trends and further conservation goals.



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THANK-YOU

Thanks to everyone who took part in this year's Big Highland Pollinator Count and we hope to add more sites and build on this success next year.