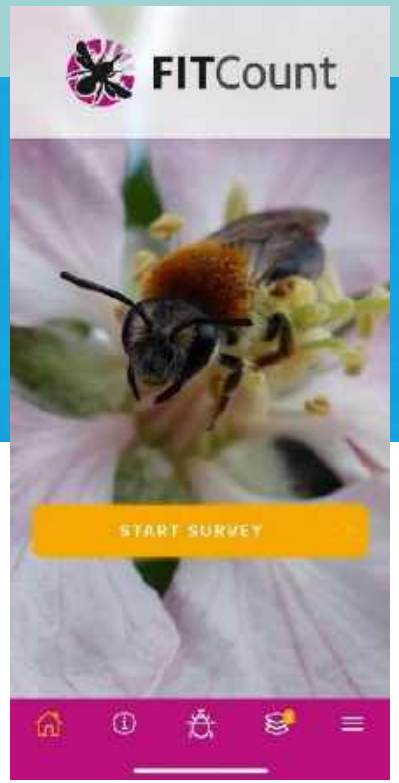
RHS

Plants for Pollinator Counts

Project annual report 2024 (Helen Bostock)

Background



The **RHS Plants for Pollinators Counts** is a citizen science project that sets out to inform the **RHS Plants for Pollinators lists**. Surveys undertaken by volunteers at RHS gardens gather data on pollinating insects visiting flowers during a **10-minute survey called FIT (Flower Insect Timed) Count***.

*Pollinator Monitoring Scheme (UK Centre for Ecology & Hydrology and Joint Nature Conservation Committee)

rhs.org.uk/pollinatorcounts

Training events

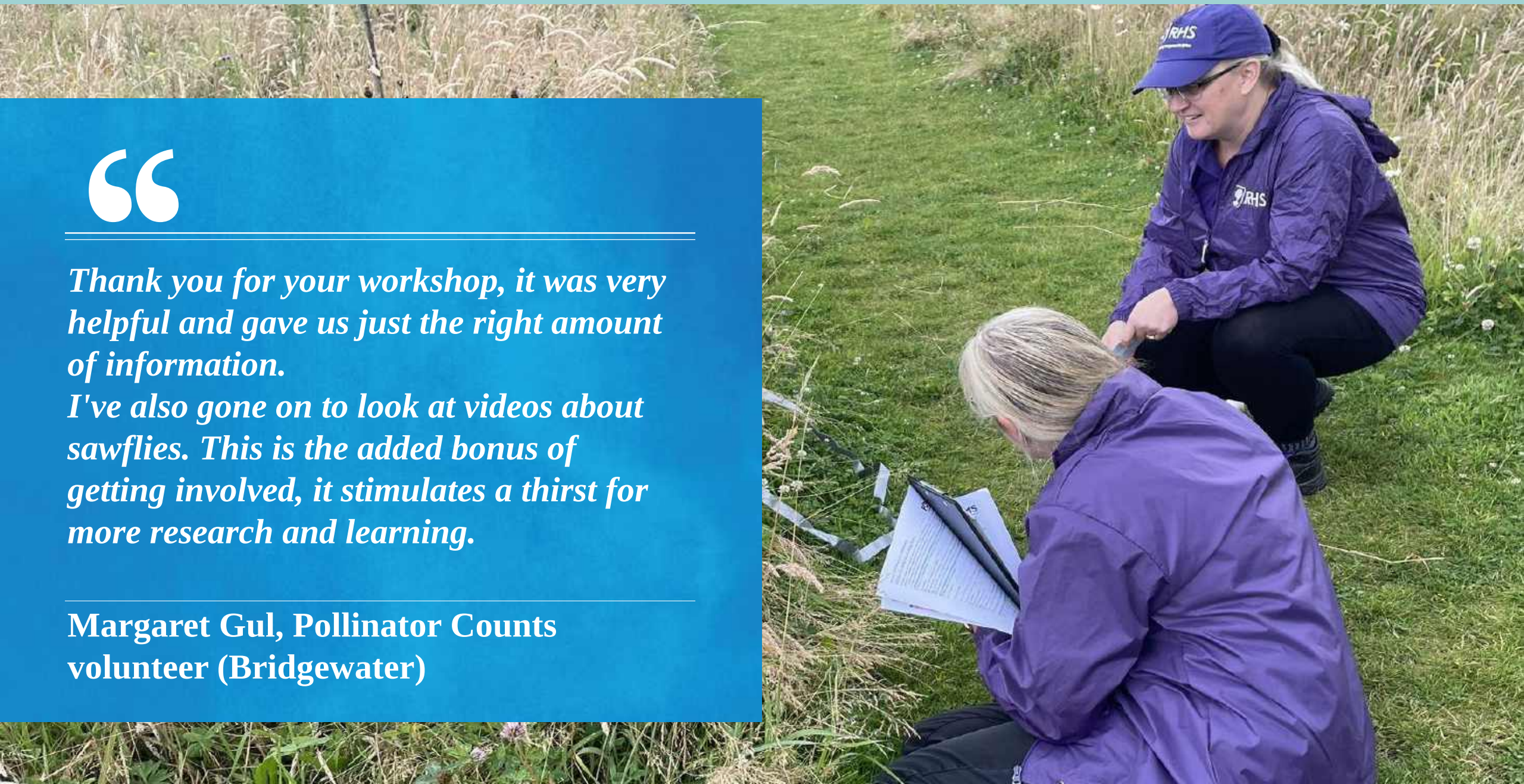
Wisley
(Sep 2023)

Hyde Hall
(Jul/Sep 2023)

Training events

Bridgewater
(Jul/Sep 2024)

Harlow Carr
(Jul/Sep 2024)



Thank you for your workshop, it was very helpful and gave us just the right amount of information.
I've also gone on to look at videos about sawflies. This is the added bonus of getting involved, it stimulates a thirst for more research and learning.

Margaret Gul, Pollinator Counts volunteer (Bridgewater)

What we achieved in 2024…

4 RHS gardens participating

Hyde Hall + Wisley (from Feb 2024), Harlow Carr + Bridgewater (from Sep 2024)

30 volunteers

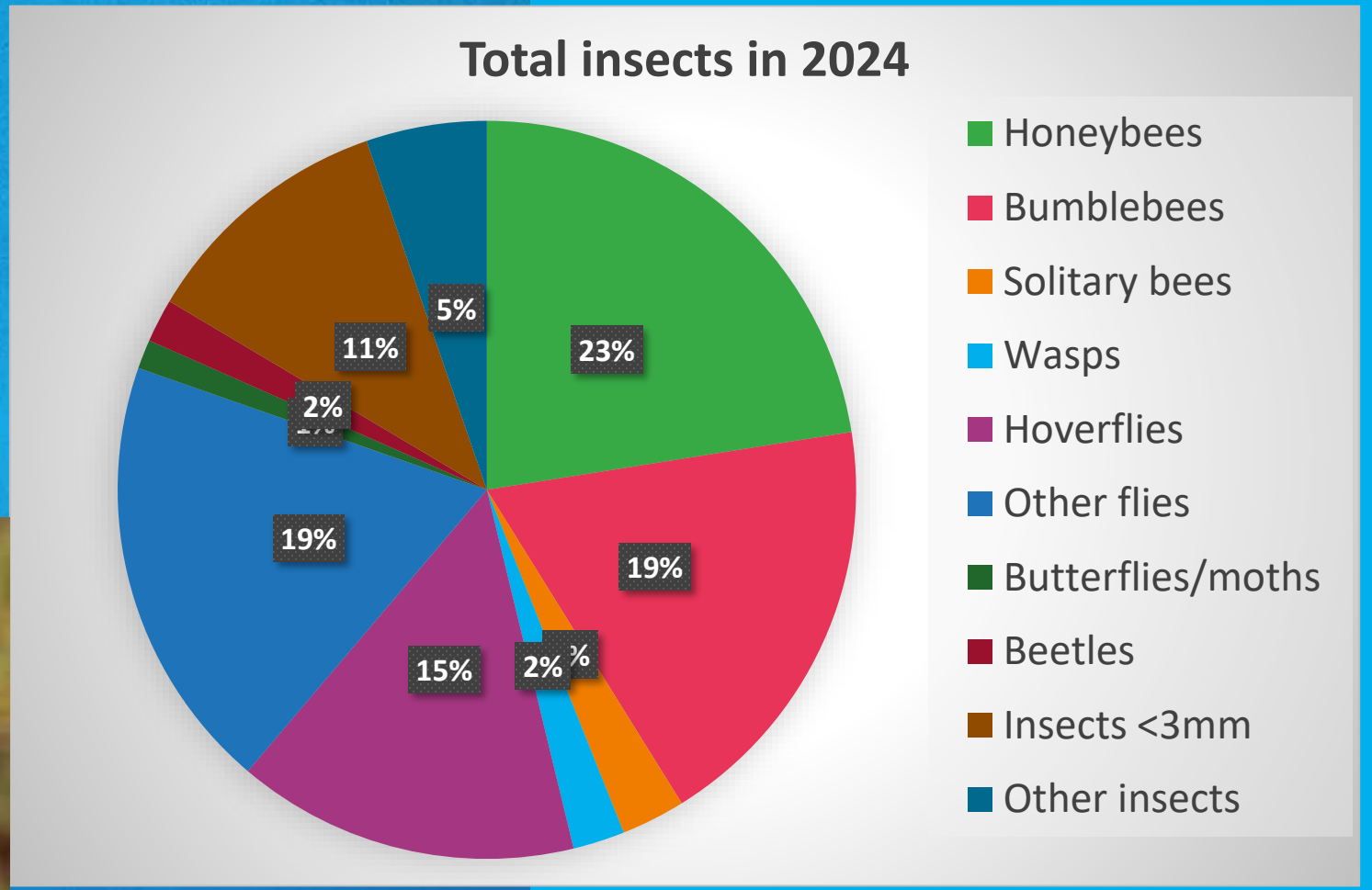
138 volunteer hours given

276 FIT counts completed

34 different plants surveyed

(11 benchmark plants; 23 target flowers)

Total number of insects recorded: 2423



Breakdown by flower (selection)

Mean number of insects per FIT Count (number in brackets are number of counts)

Benchmark plant	Benefit to pollinators	Sample size	Target flower	Benefit to pollinators	Sample size
Geranium macrorrhizum 11.50 (10)	HIGH	MODERATE	*Acer* 3.14 (7)	MODERATE	LOW
Allium 3.75 (8)	MODERATE	LOW	*Stachyurus chinensis* 2.17 (12)	LOW	MODERATE
Eutrochium maculatum 11.50 (12)	HIGH	MODERATE	*Callicarpa bodnieri* 4.00 (4)	MODERATE	LOW
Nepeta 19.91 (12)	V. HIGH	MODERATE	*Berberis* 6.06 (33)	MODERATE	HIGH
Succisa pratensis 11 (7)	HIGH	LOW	*Aconitum* 2.60 (5)	LOW	LOW
Verbena bonariensis 4.55 (40)	MODERATE	HIGH	*Delphinium elatum* 3.00 (7)	MODERATE	LOW
Symphyotrichum 13.78 (33)	HIGH	HIGH	*Ligustrum* 7.50 (18)	HIGH	HIGH
			Phlox paniculata 5.50 (8)	MODERATE	LOW
			Leucanthemella serotina 17.10 (28)	V. HIGH	HIGH
			Hydrangea viburnoides 8.58 (7)	HIGH	LOW
			X *Fatshedera lizei* 5.00 (5)	MODERATE	LOW

Results - in early stages of analysis we can say…

- We can now be more confident that autumn ox-eye (*Leucanthemella serotina*) merits its inclusion on the RHS Plants for Pollinators list and is especially attractive to flies ('other flies') and honeybees – this is a plant where previously evidence had been lacking
- Records from barberry species not currently listed on the Plants for Pollinators lists performed well, so we will now be considering including the whole genus (*Berberis*) for the list. They proved popular with bumblebees (nearly one third of the recorded insects)
- Privet, like barberry, was another plant taxa we are considering widening to cover the whole genus (*Ligustrum*). Volunteers recorded data from two species not currently listed; results from 2024 indicate they do provide a good resource for pollinating insects
- Plants we will be keen to collect more data on in future years: climbing hydrangea (*Hydrangea viburnoides*), *Stachyurus chinensis* and X *Fatshedera lizei*. We are also working with our garden teams to sow some of the annuals of interest for pollinator recording in 2025

Points to remember

- 2024 saw a very long, wet spring and cool summer so national trends for butterflies, some bumblebees (esp Garden Bumblebee and Red-tailed Bumblebee) and social wasps were down
- Poor weather delayed volunteers from being able to start recording in the spring and caused ongoing disruption throughout summer
- Bringing our fifth garden (Rosemoor, Devon) into the project (planned spring 2025), may enable us to identify if there are any geographical differences
- Sample size on many plants is still low but continuing to record in future years will overcome this

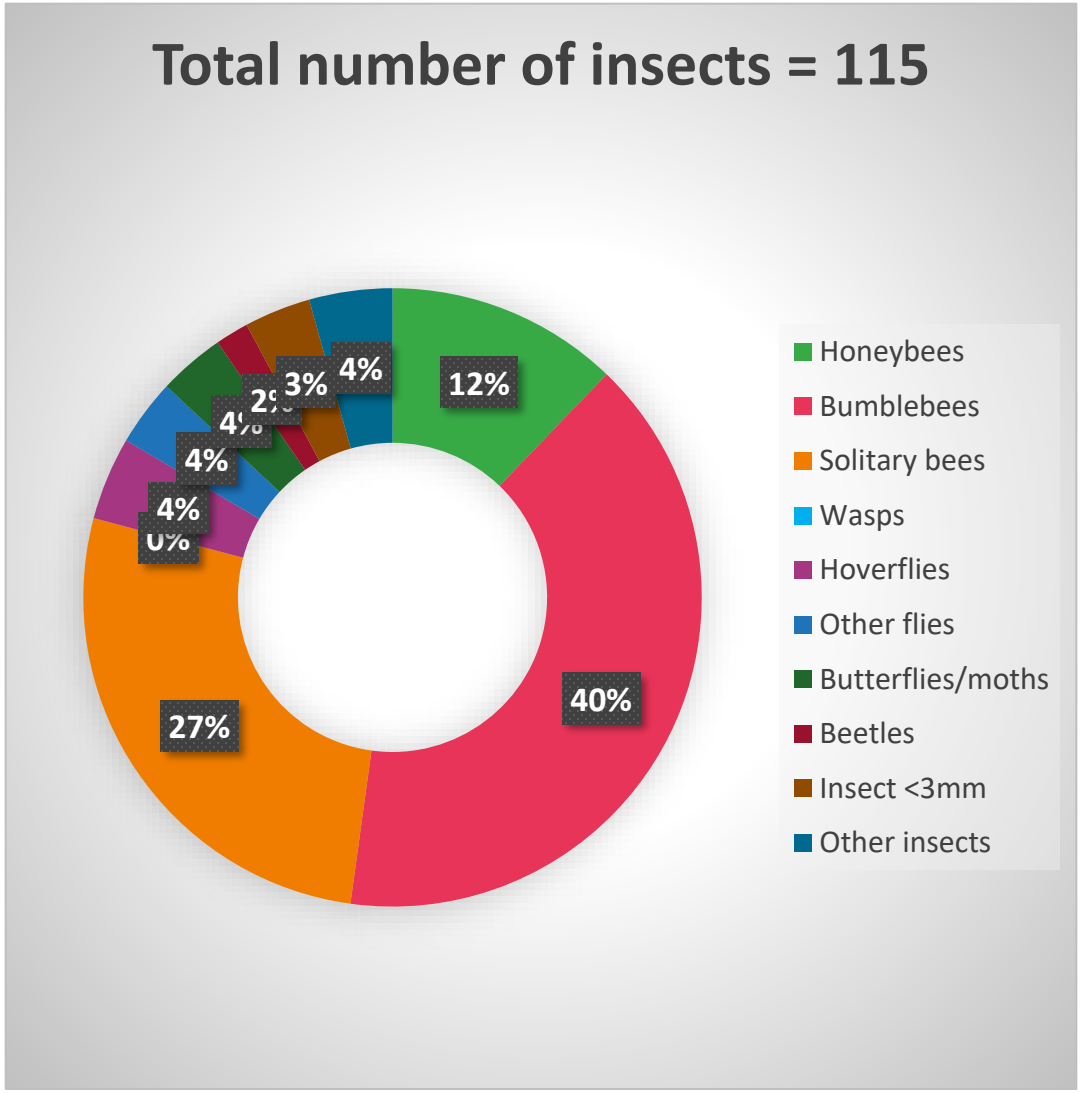
Benchmark plants

= plants on the RHS Plants for Pollinators lists with strong evidence of being good pollinator plants; by getting figures for numbers of insects visiting these we can use them to compare other plants of interest

The following slides show the mean number of insects per FIT Count (number in brackets are number of counts)

"The most enjoyable part of being involved in the Pollinator Counts project has been learning how to identify the different pollinator groups and now not being able to pass a flowering plant on a walk without stopping to check out the visitors!"

Michaela Goldberg, Pollinator Counts volunteer (Wisley)



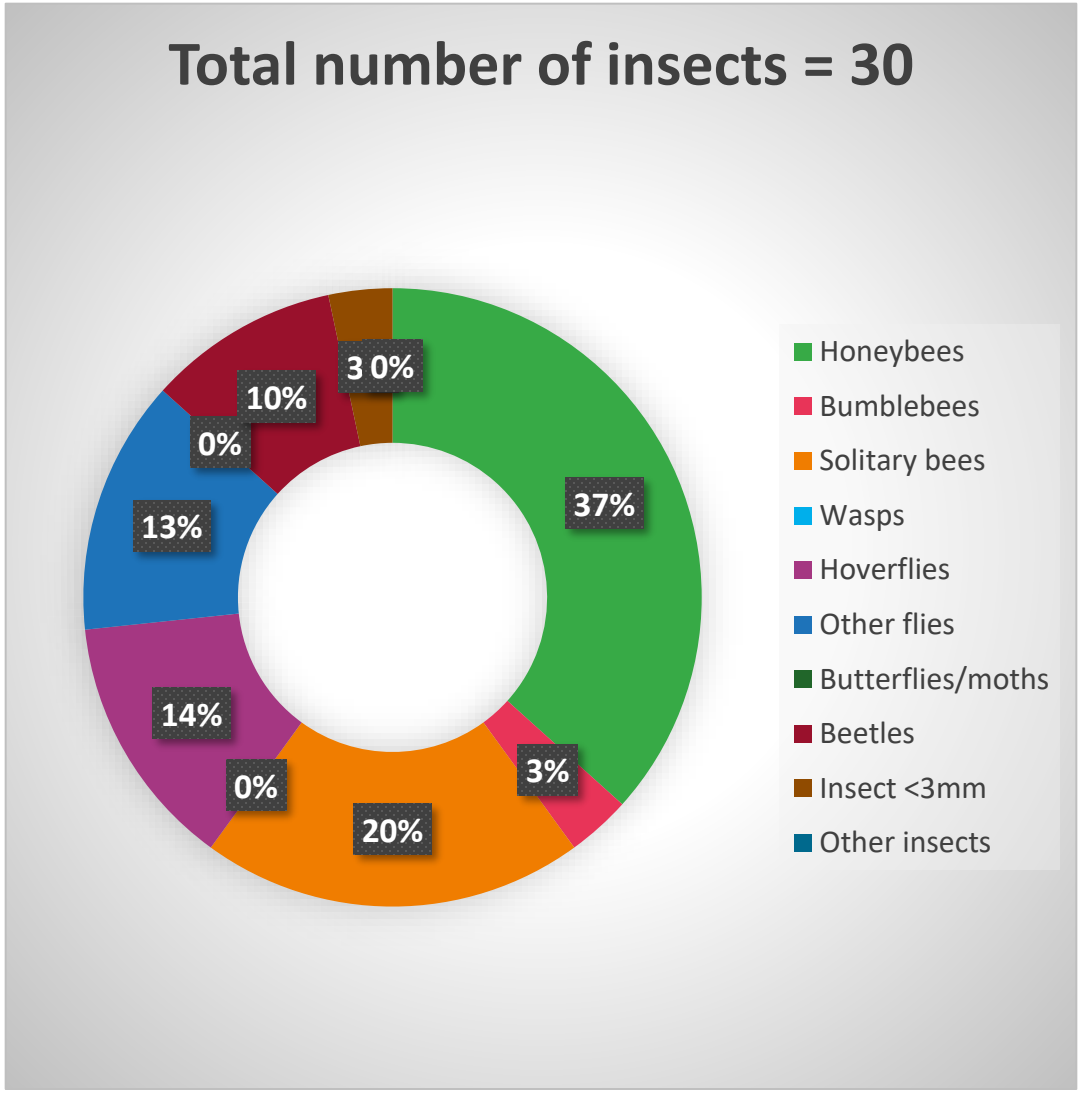
Geranium macrorrhizum big-root cranesbill (benchmark plant)

Mean no. insects per 10 min count = **11.50**

(10 counts)

Good plant for;

- Bumblebees
- Solitary bees
- Honeybees



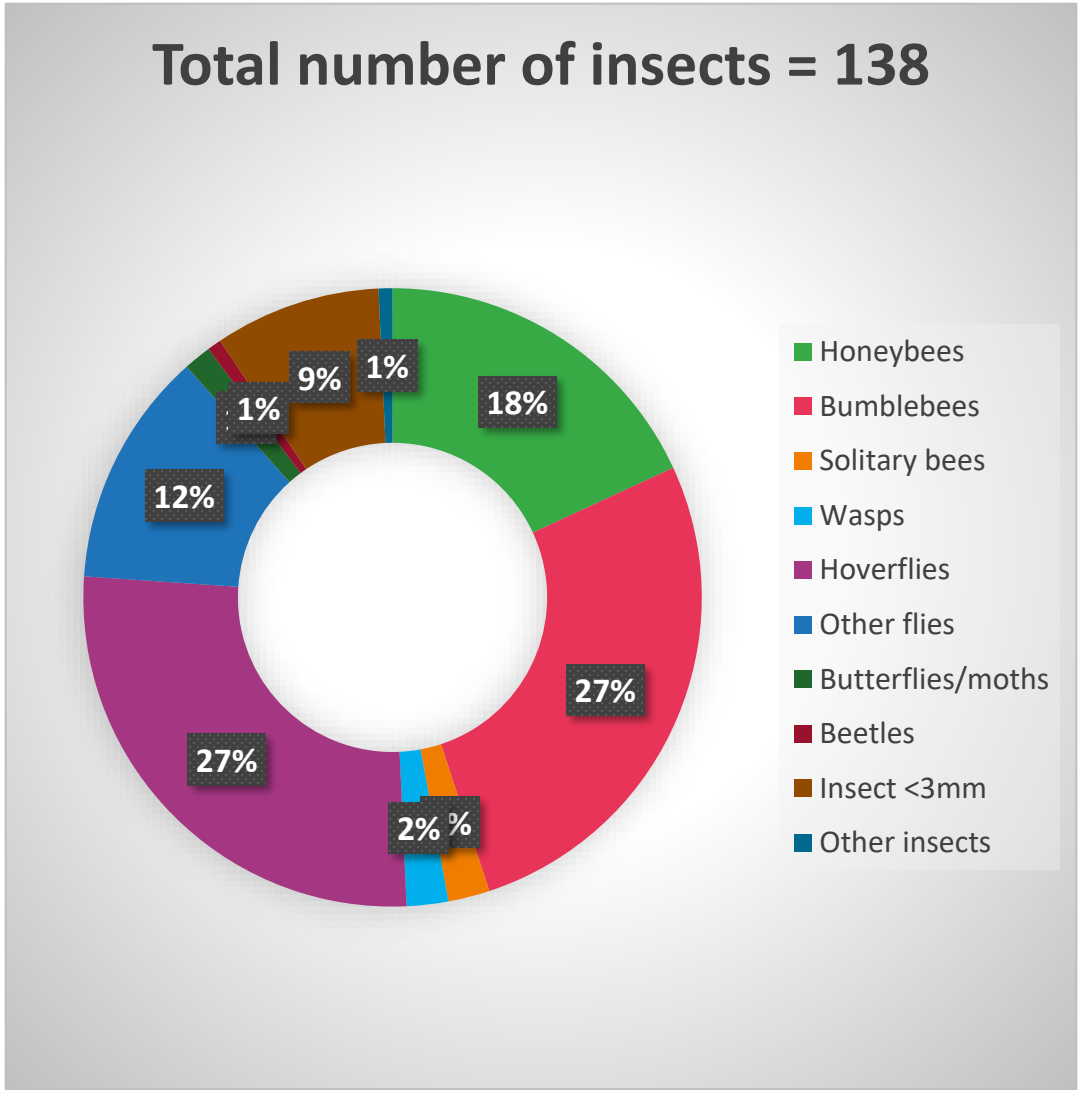
Allium
ornamental onion
(benchmark plant)

Mean no. insects per 10 min count = **3.75**

(8 counts)

Good plant for;

- Honeybees
- Solitary bees



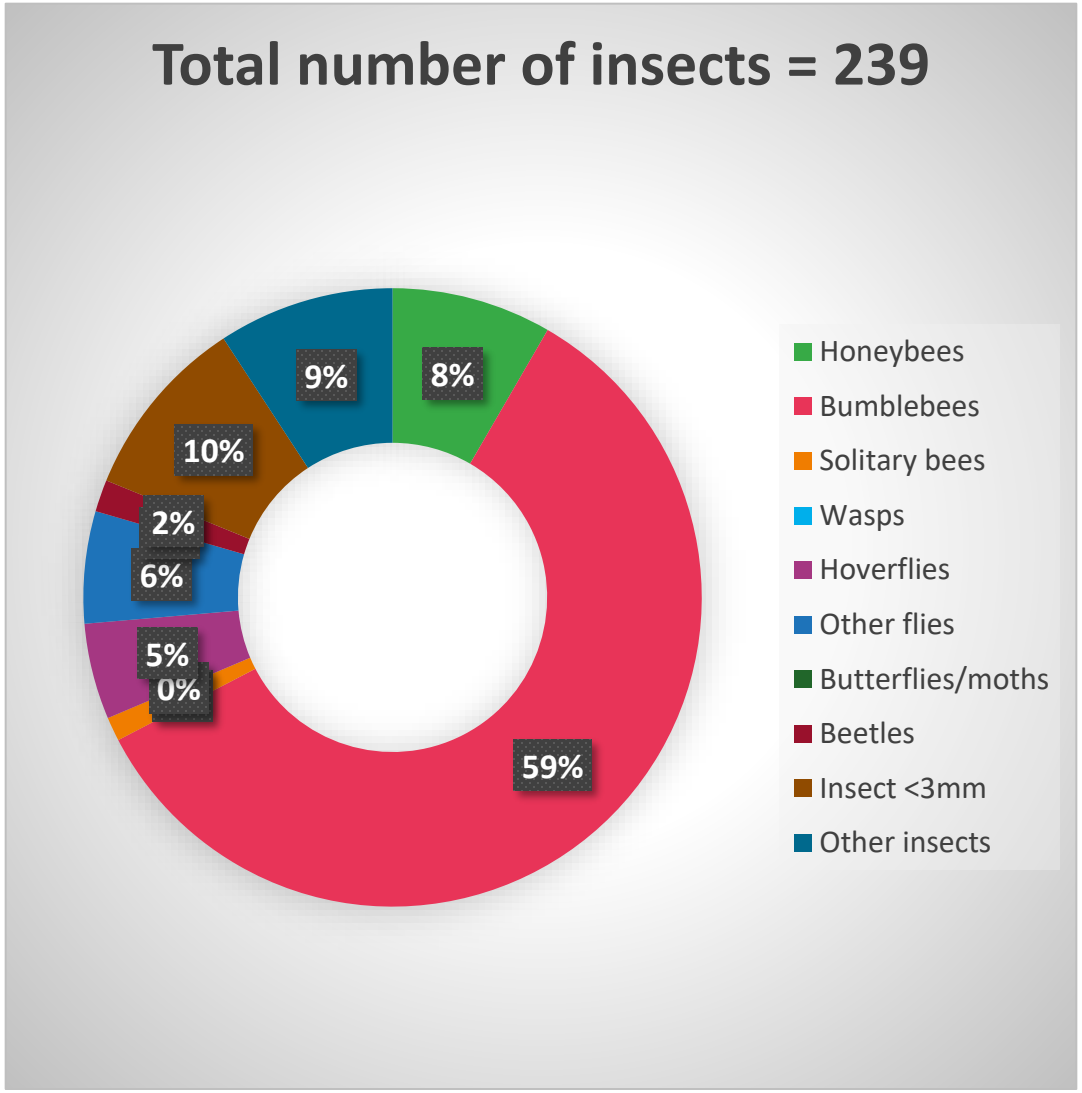
Eutrochium maculatum
Joe pye weed
(benchmark plant)

Mean no. insects per 10 min count = **11.50**

(12 counts)

Good plant for;

- Bumblebees
- Hoverflies



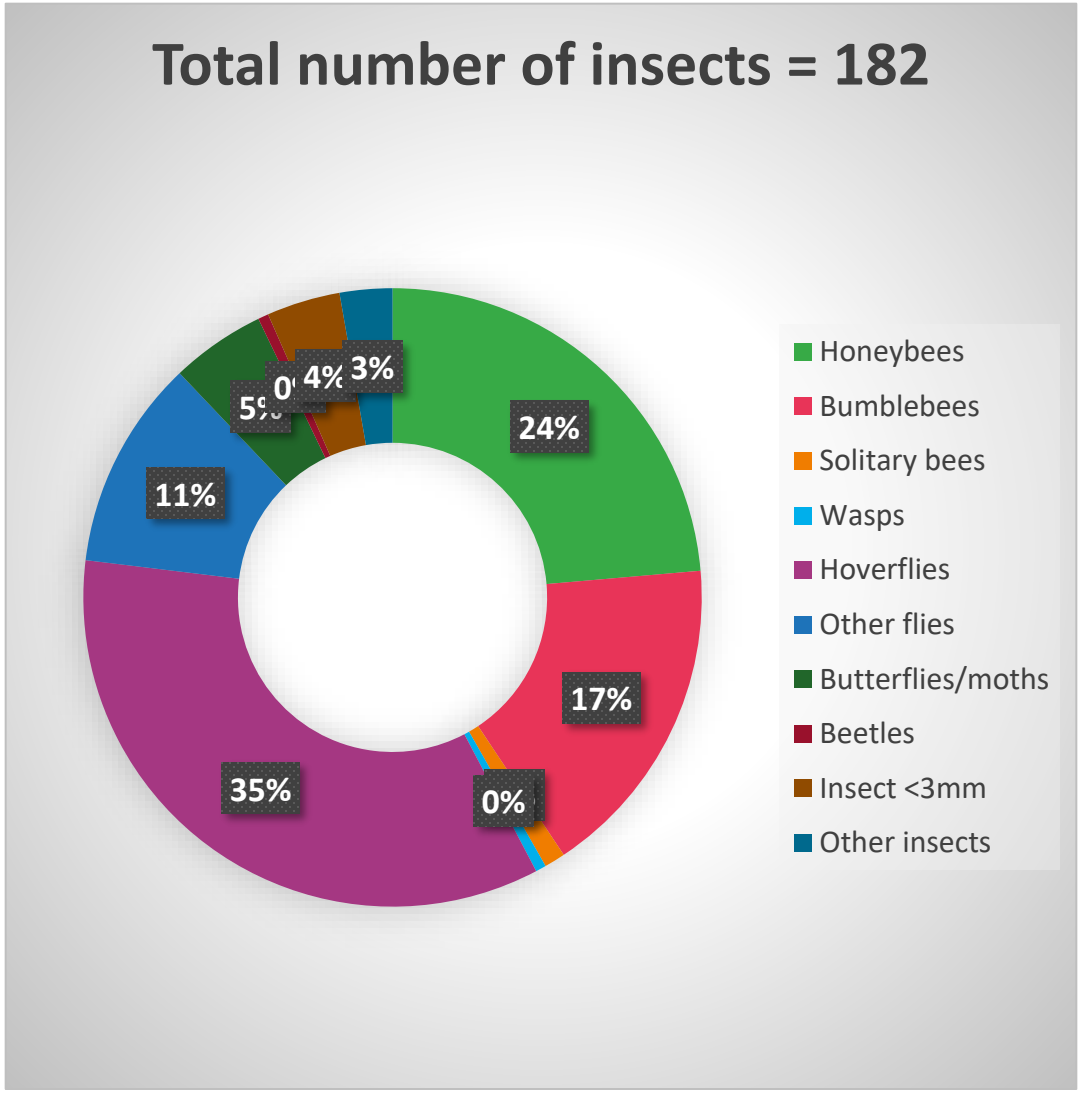
Nepeta catmint
(benchmark plant)

Mean no. insects per 10 min count = **19.91**

(12 counts)

Good plant for;

- Bumblebees



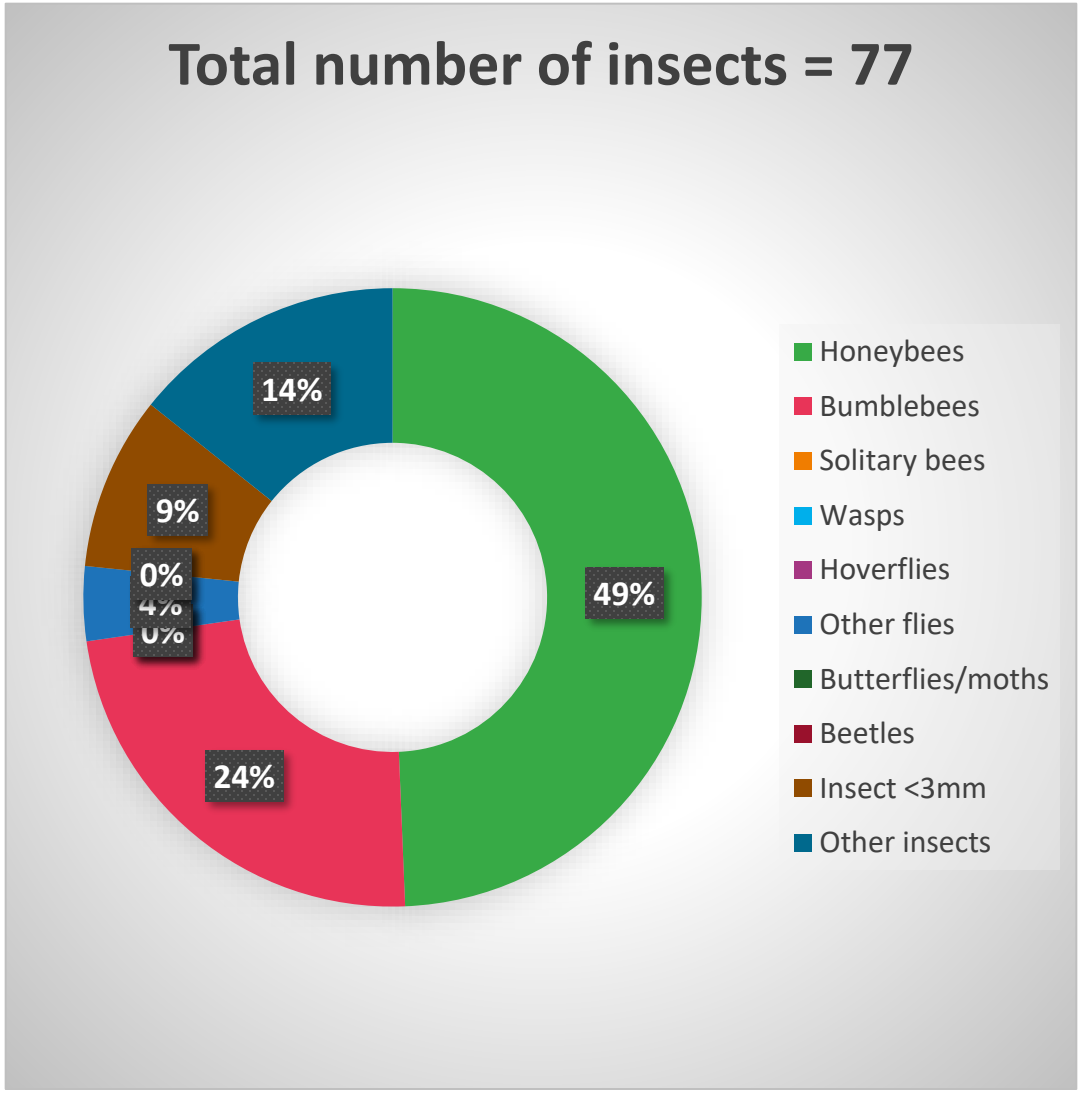
Verbena bonariensis purple top
(benchmark plant)

Mean no. insects per 10 min count = **4.55**

(40 counts)

Good plant for;

- Hoverflies
- Honeybees
- Bumblebees



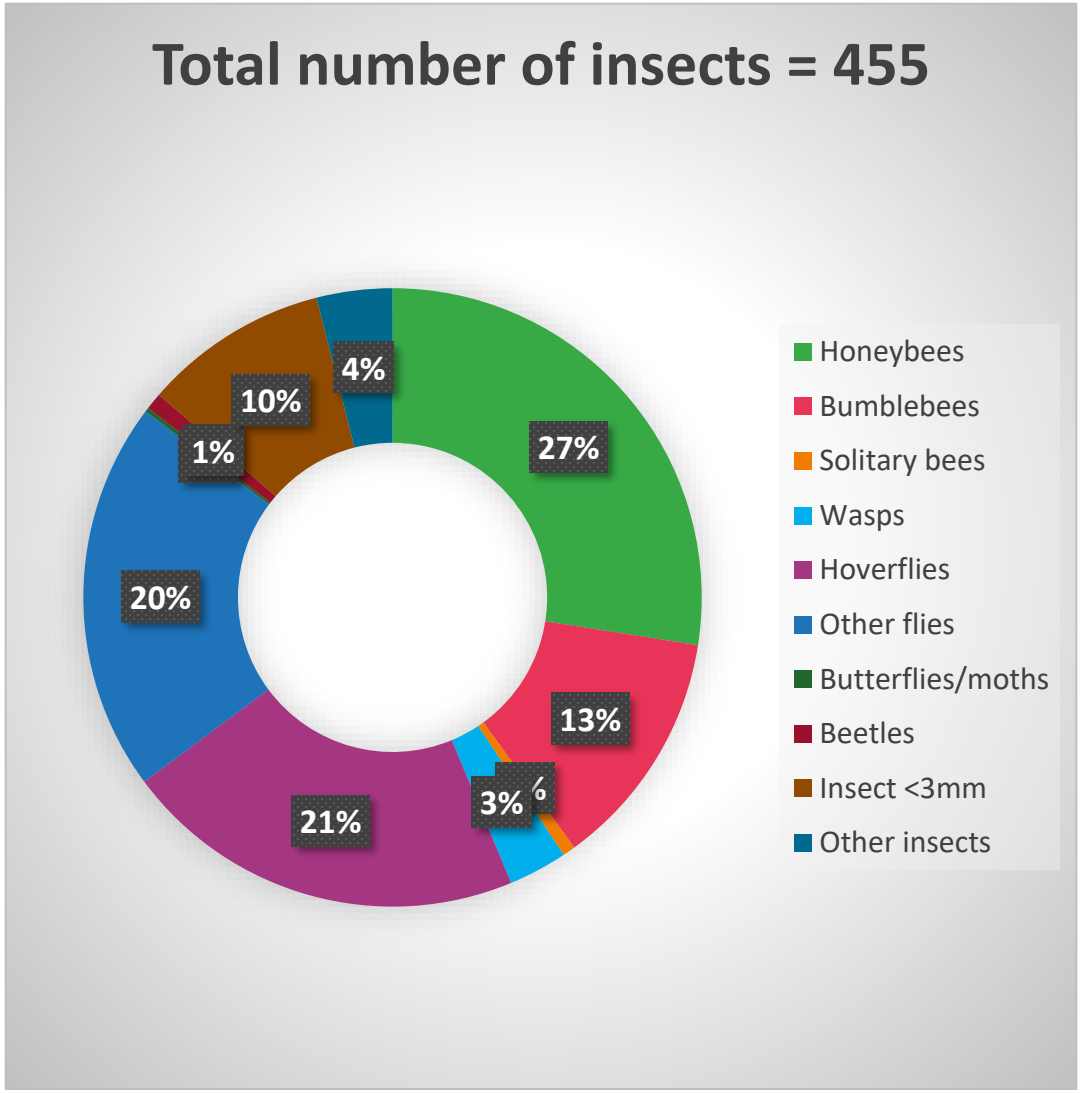
Succisa pratensis
devil's bit scabious
(benchmark plant)

Mean no. insects per 10 min count = **11.00**

(7 counts)

Good plant for;

- Honeybees
- Bumblebees



Symphyotrichum aster/Michaelmas daisy (benchmark plant)

Mean no. insects per 10 min count = **13.78**

(33 counts)

Good plant for;

- Honeybees
- Hoverflies
- Other flies

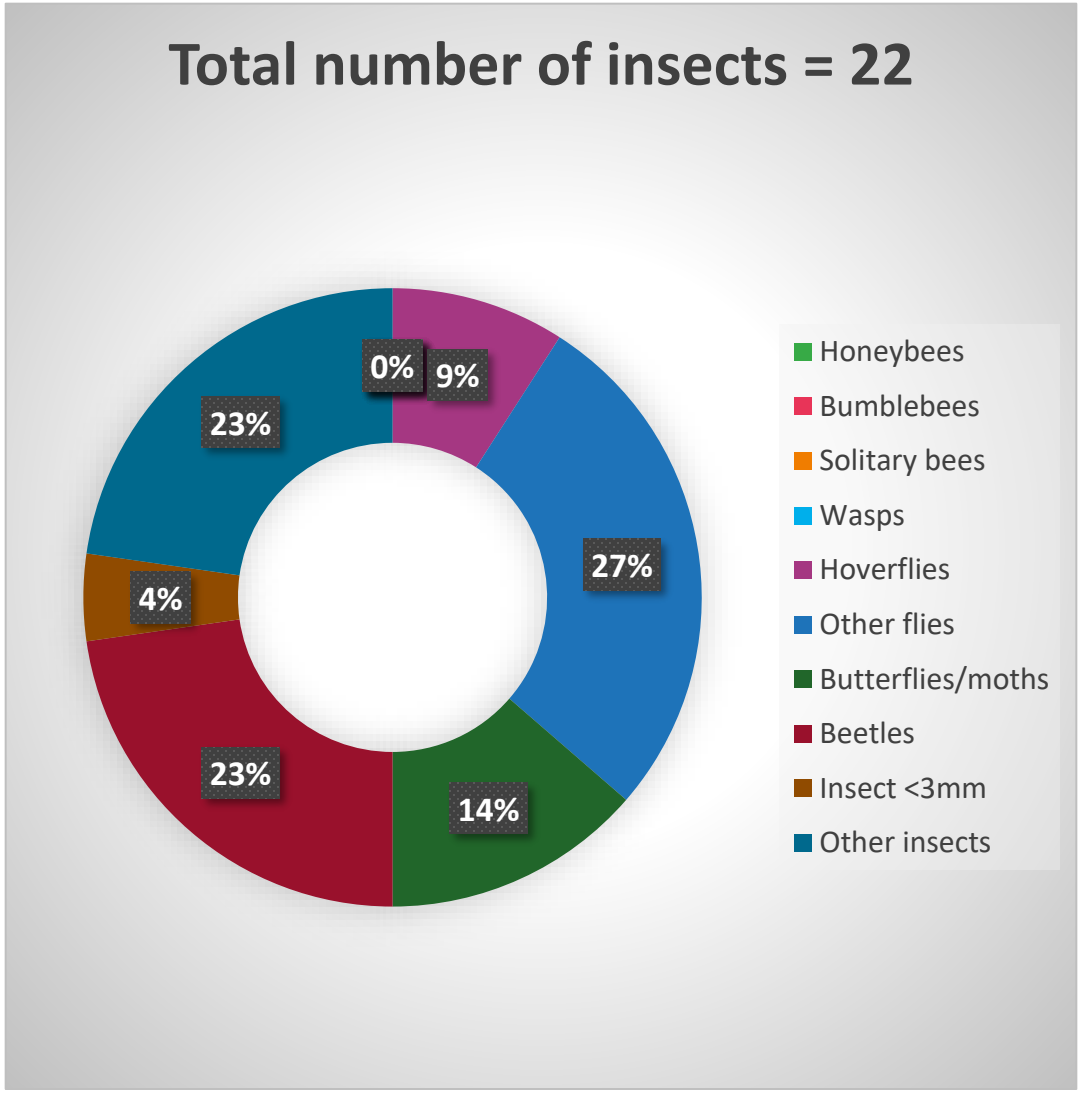
Target flowers

= plants we would like to gather more data on to decide whether to retain/add/amend on the RHS Plants for Pollinators lists

The following slides show the mean number of insects per FIT Count (number in brackets are number of counts)

"I am delighted to be able to be part of the pollinator counting project… This and the other excerpts on [tv about] pollinators have made me even more determined to do what I can in my small garden… Very much a case of 'every little helps'. "

Elizabeth Cairns, Pollinator Counts volunteer (Wisley)



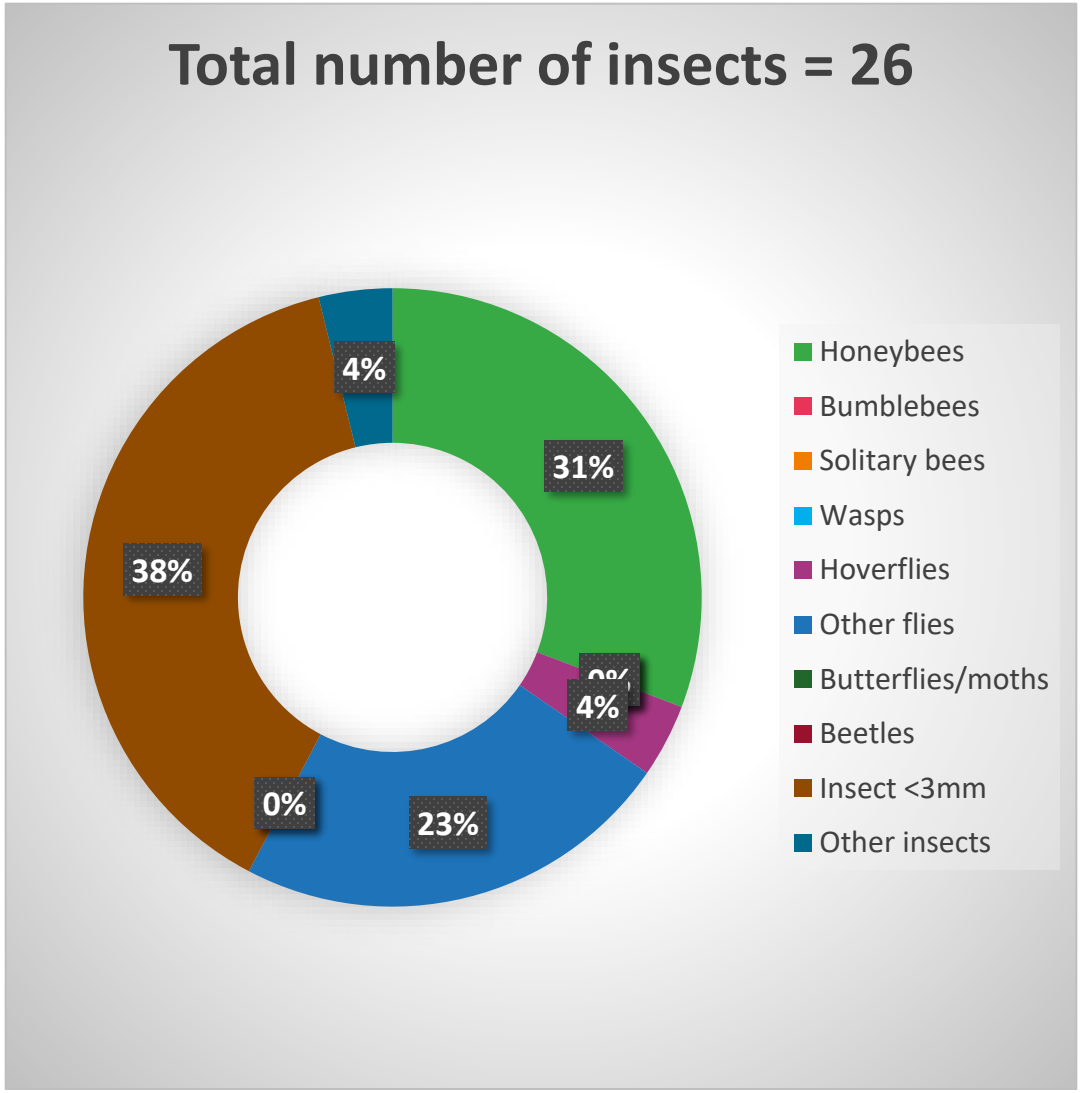
Acer
maple
(target flower)

Mean no. insects per 10 min count = **3.14**

(7 counts)

Good plant for;

- Non-bee pollinators



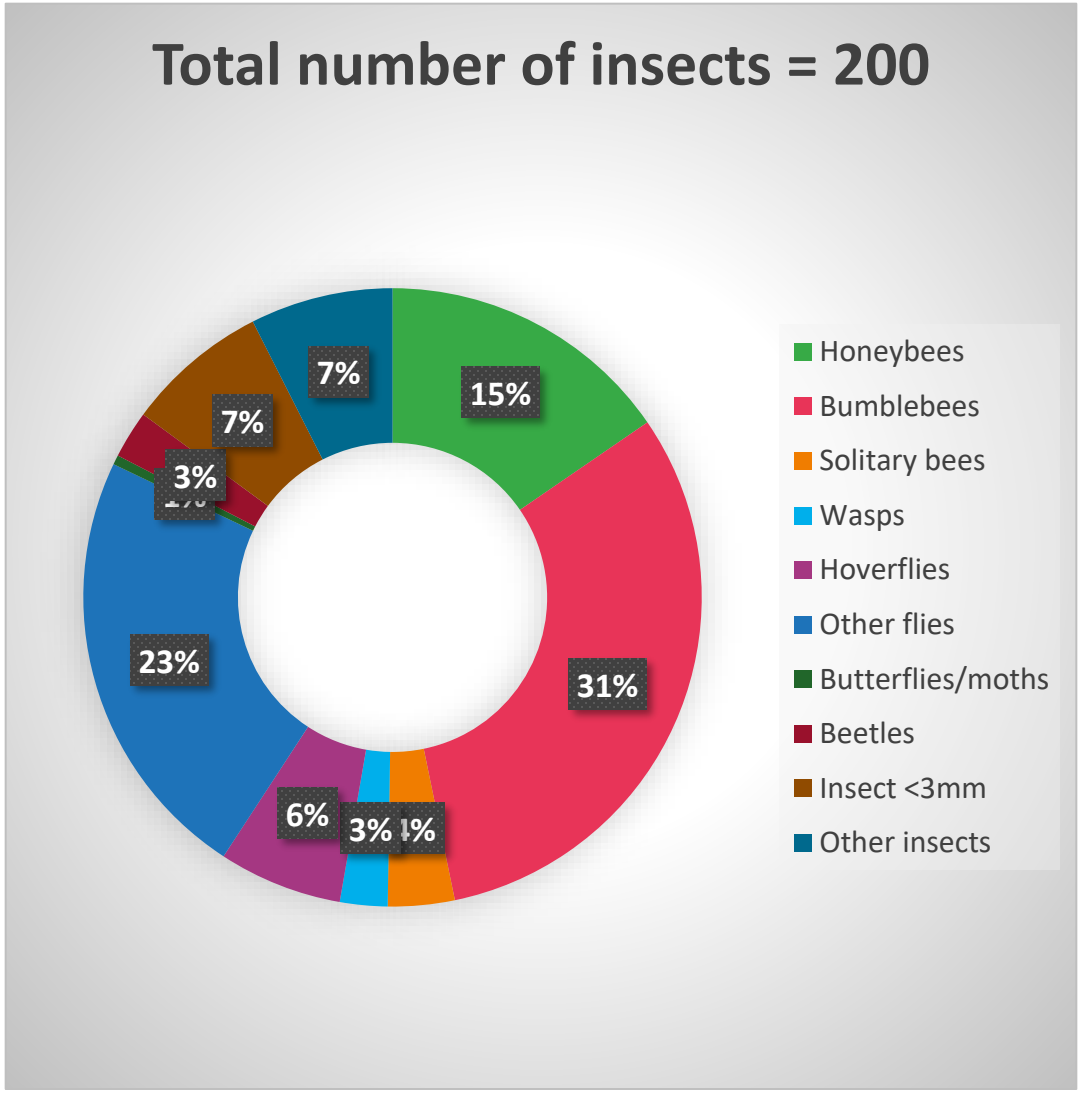
Stachyurus chinensis
Chinese stachyurus
(target flower)

Mean no. insects per 10 min count = **2.17**

(12 counts)

Good plant for;

- Small insects
- Honeybees



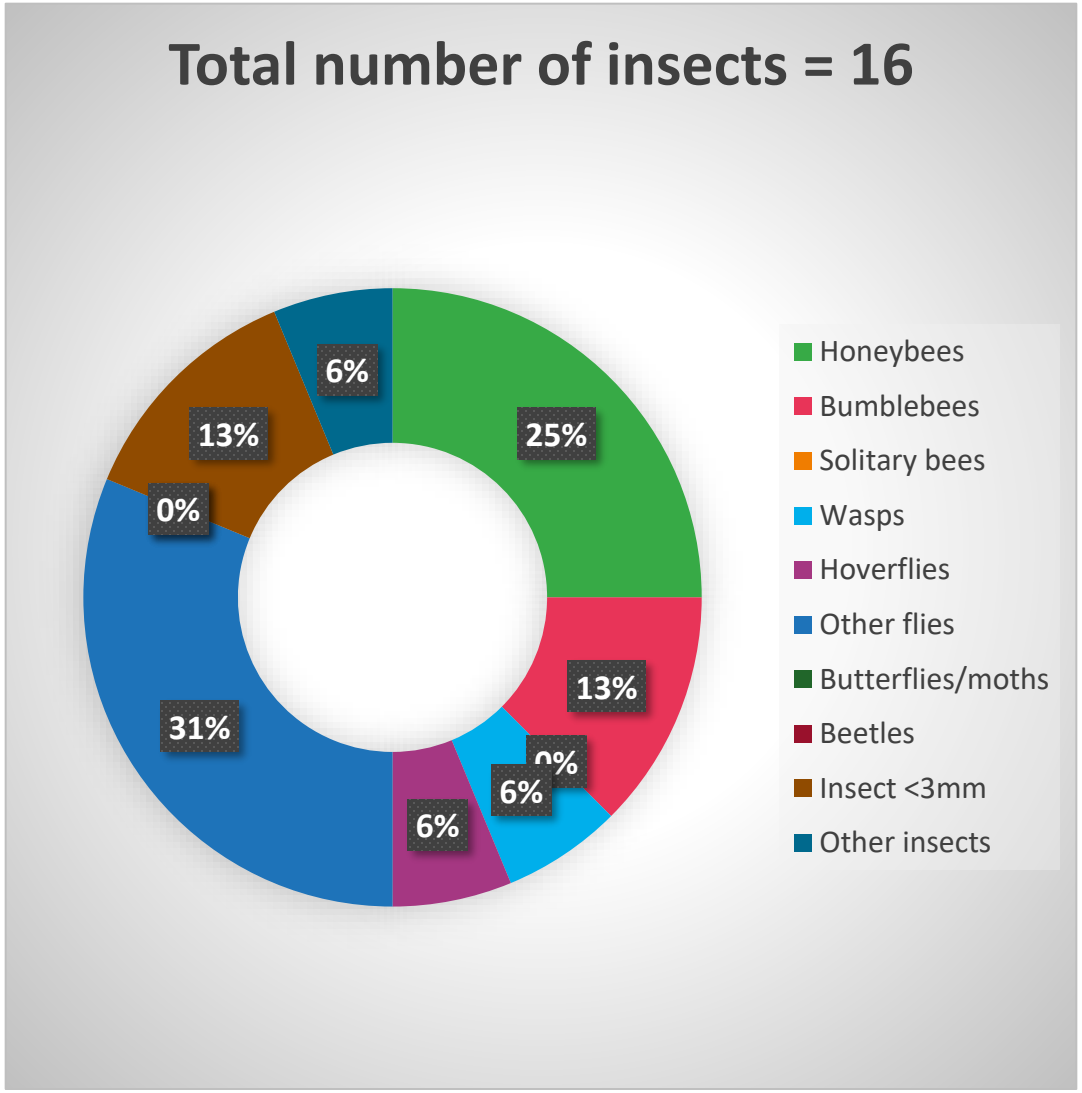
Berberis barberry
(target flower)

Mean no. insects per 10 min count = **6.06**

(33 counts)

Good plant for;

- Bumblebees
- Other flies



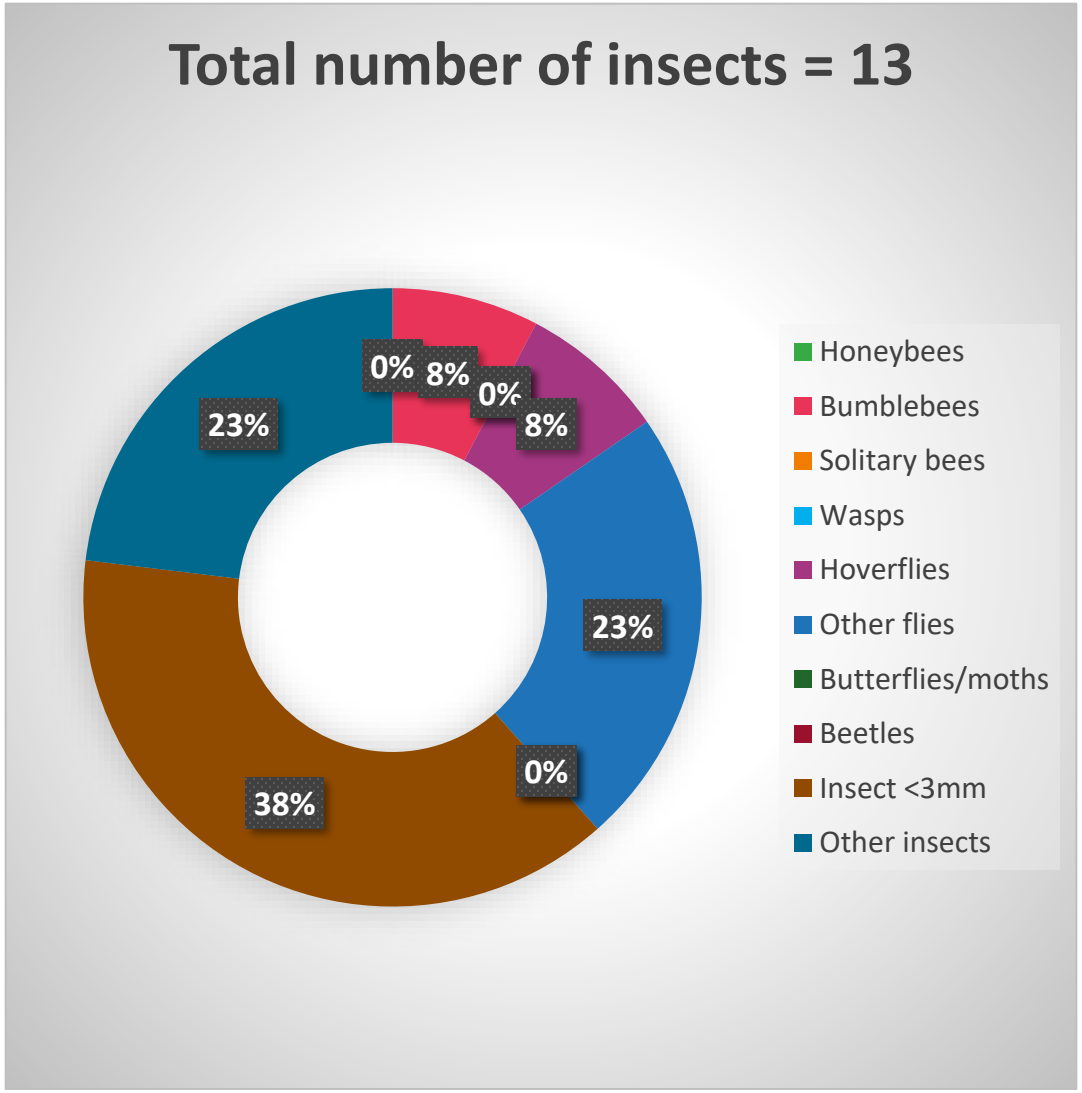
Callicarpa bodnieri beautyberry
(target flower)

Mean no. insects per 10 min count = **4.00**

(4 counts)

Good plant for;

- Other flies
- Honeybees



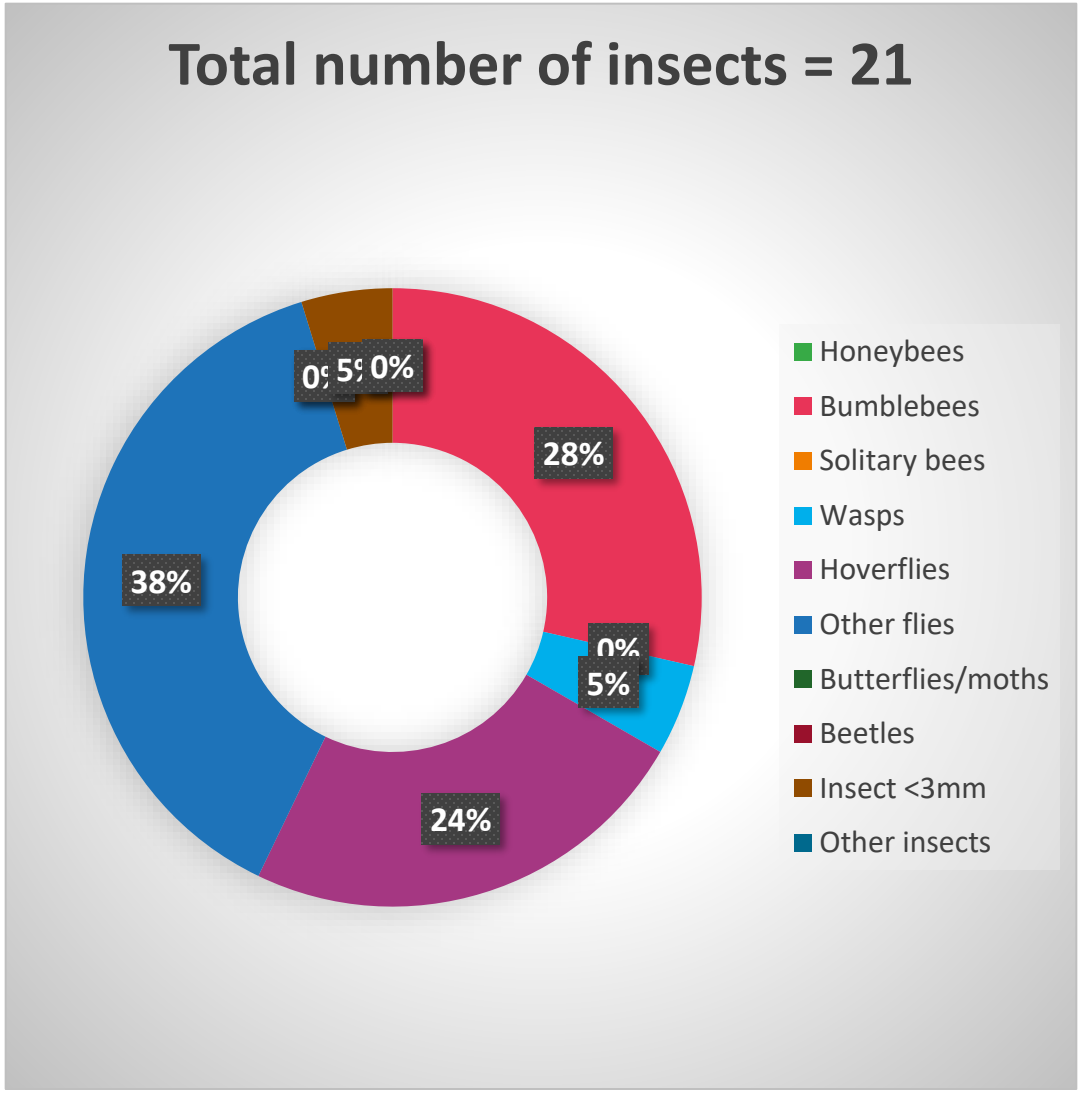
Aconitum monkshood
(target flower)

Mean no. insects per 10 min count = **2.60**

(5 counts)

Good plant for;

- Small insects
- Other flies
- Other insects



Delphinium elatum candle larkspur
(target flower)

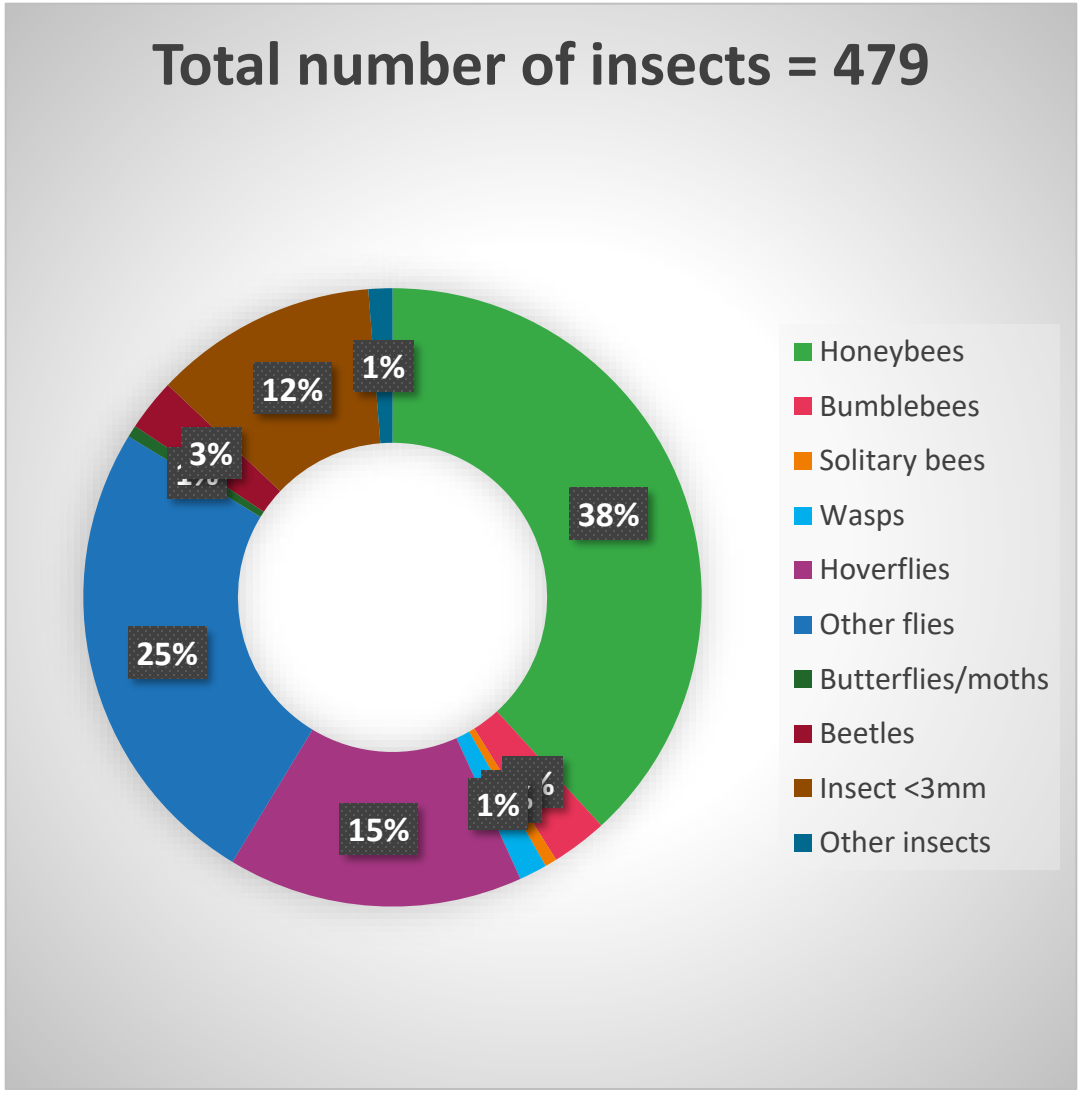
Mean no. insects per 10

min count = **3.00**

(7 counts)

Good plant for;

- Other flies
- Bumblebees
- Hoverflies



Leucanthemella serotina
autumn ox-eye
(target flower)

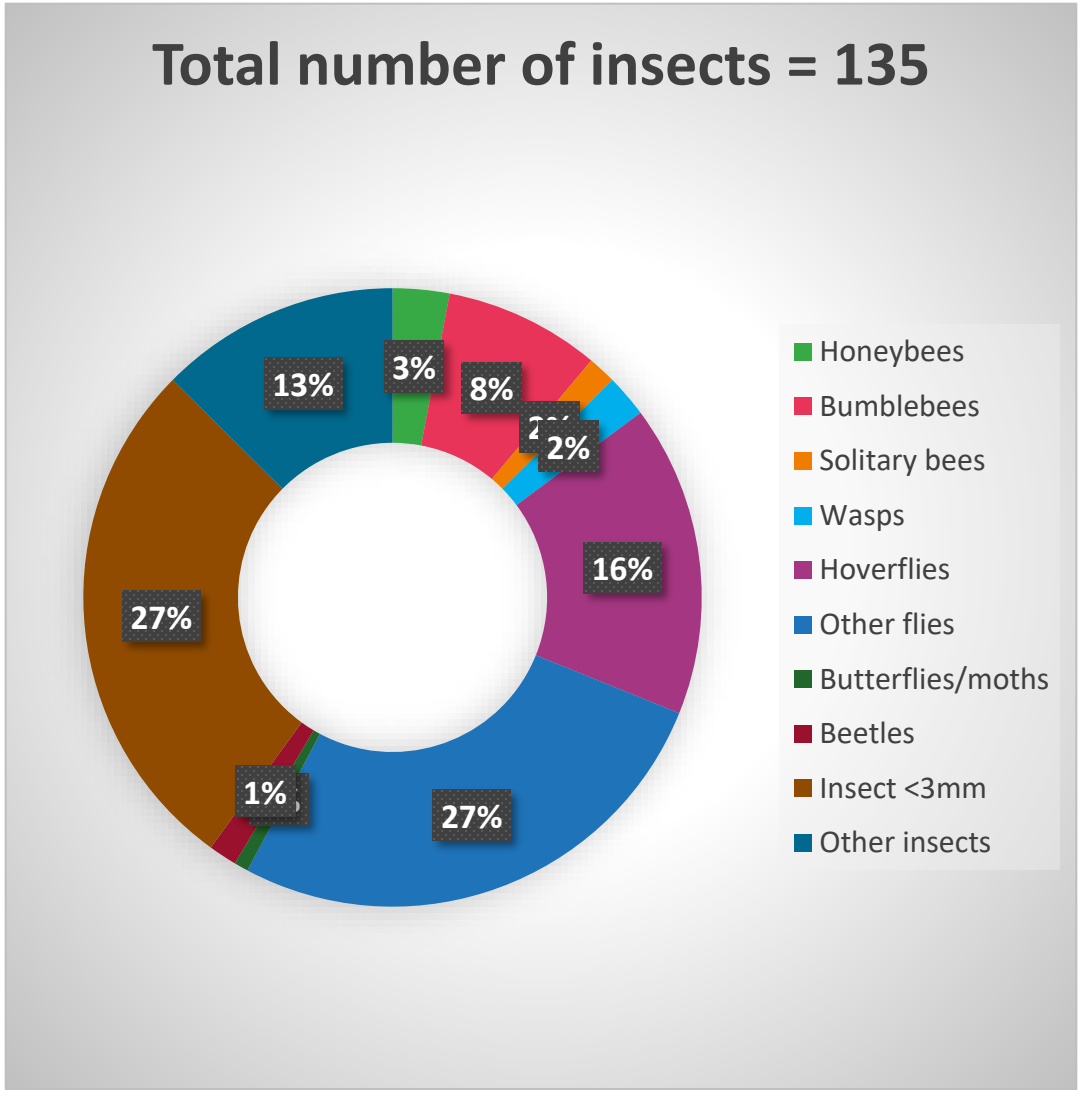
Mean no. insects per 10 min

count = **17.10**

(28 counts)

Good plant for;

- Honeybees
- Other flies



Ligustrum privet
(target flower)

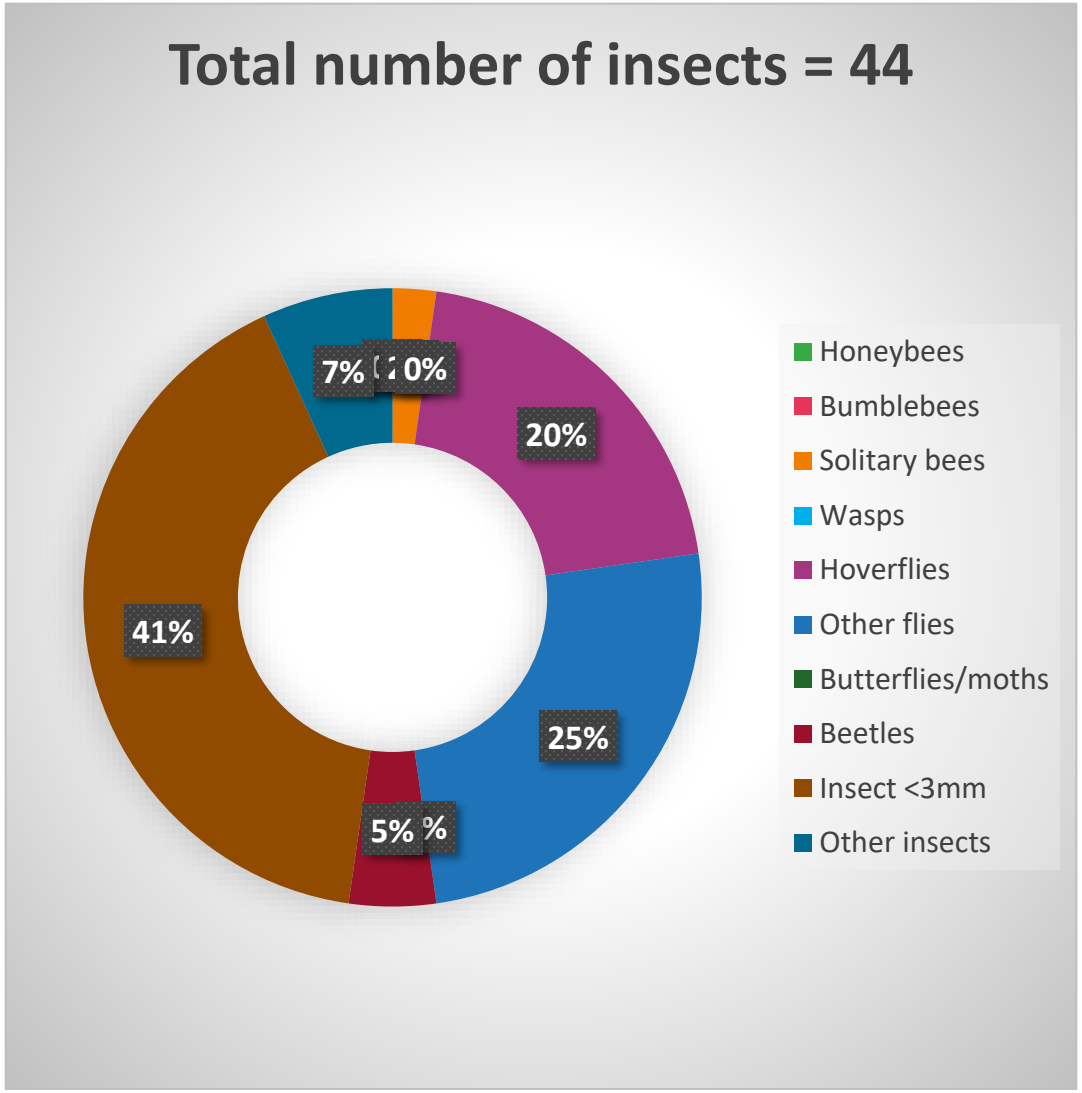
Mean no. insects per 10 min

count = **7.50**

(18 counts)

Good plant for;

- Small insects
- Other flies



Phlox paniculata perennial phlox
(target flower)

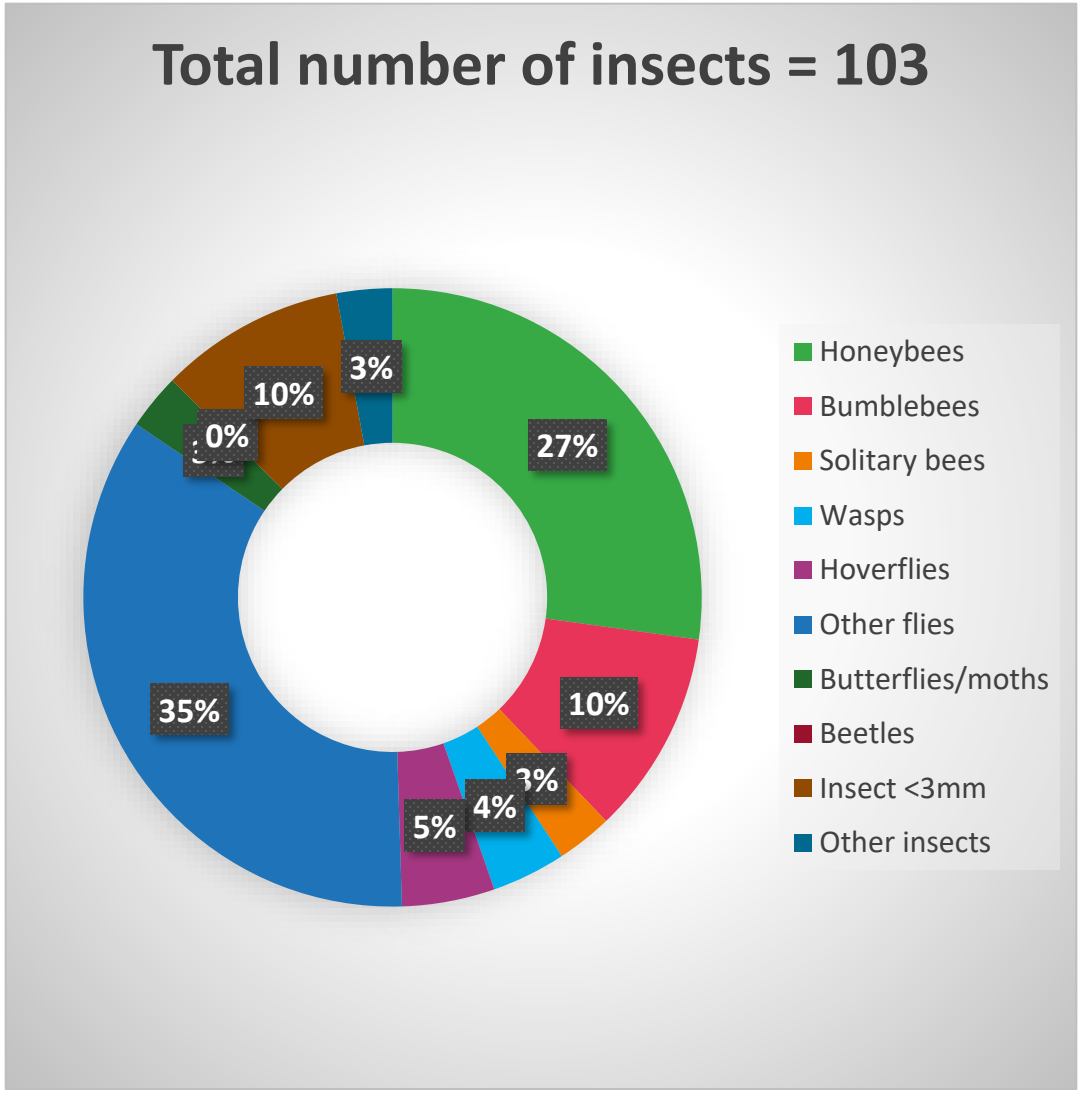
Mean no. insects per 10 min

count = **5.50**

(8 counts)

Good plant for;

- Small insects
- Other flies



Hydrangea viburnoides climbing hydrangea
(target flower)

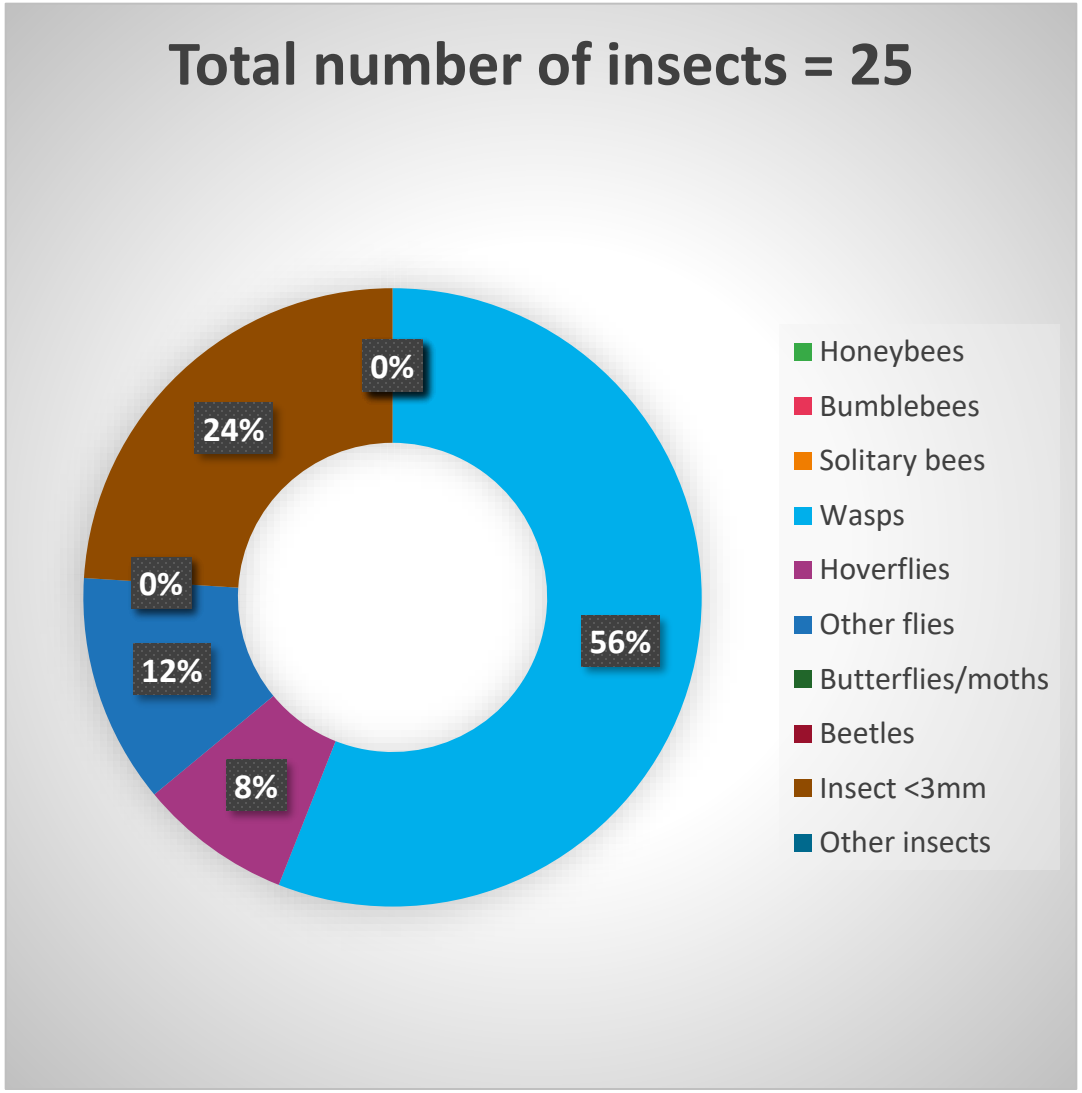
Mean no. insects per 10 min

count = **8.58**

(7 counts)

Good plant for;

- Other flies
- Honeybees



x *Fatshedera lizei*
tree ivy
(target flower)

Mean no. insects per 10 min

count = **5.00**

(5 counts)

Good plant for;

- Wasps
- Small insects

Acknowledgements

Special thanks to…

- All our incredible volunteers!
- Our Plant Record and Education staff – Jeanette Jones (Hyde Hall), Louise Grimwood, Jane Rowlands & Melanie Jones (Wisley), Carolyne Collins (Bridgewater), Kaye Collings (Harlow Carr)
- Volunteer Team – Marie Weigand, Karly Jenkins, Lissa Davenport
- RHS scientists – Stephanie Bird, Andrew Salisbury, Fay Newbery
- The Pollinator Monitoring Scheme team at UKCEH – Claire Carvell, Robin Hutchinson, Martin Harvey

PoMS
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