



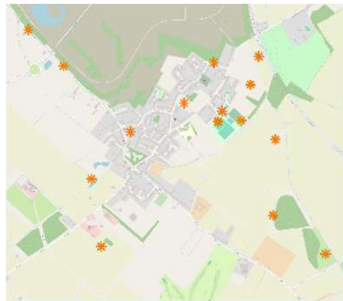
APollOW in 2026

Image credits: Kay Prince (APollOW logo); Harriet Heywood (in the field); UKCEH (FIT Count app logo)

A session on the UK Pollinator Monitoring Scheme, FIT Counts, and our local version of it – A POLLinator survey of Oakington & Westwick

APoLLOW

- What it is and we did in 2025
- What we would like in 2026
- How to help pollinators
- How to do a FIT count
(abridged)
- Quizzes



Intro:

WHAT?



Welcome to the UK Pollinator Monitoring Scheme (UKPoMS)



WHAT : A POLLinator survey of Oakington & Westwick.

APollOW is our own local implementation of a national pollinator monitoring project, called the UKPoMS

Records and counts from your efforts will hopefully, in time, help us to record changes in local pollinators.

BUT it will also help us record changes in pollinators across the UK, by virtue of the fact we are contributing to the UK Pollinator Monitoring Scheme (UKPoMS). So if we do nothing else, we can increase the number of counts that our region delivers to the national scheme – a win win.

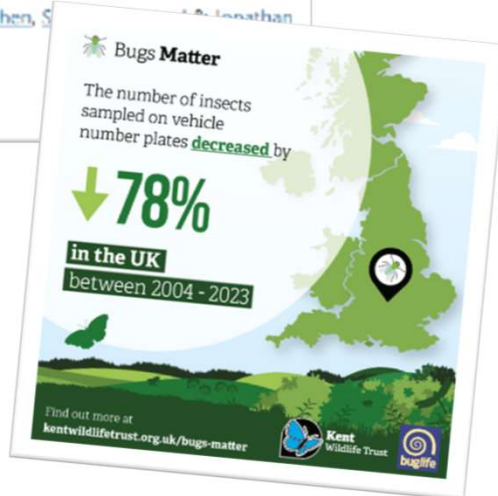
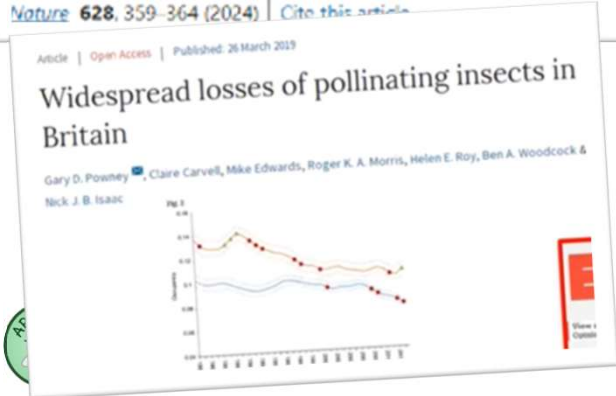
Why ?

The collapse of insects
The most diverse group of organisms on the planet are in trouble, with recent research

Disproportionate declines of formerly abundant species underlie insect loss

Roel van Klink, Diana E. Rowler, Konstantin B. Gongalsky, Minghua Shen, S. Jonathan M. Chase

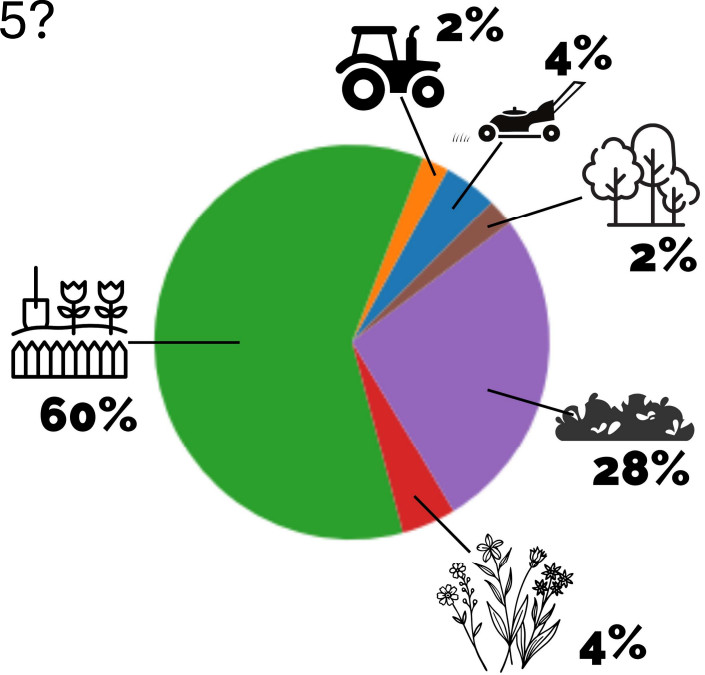
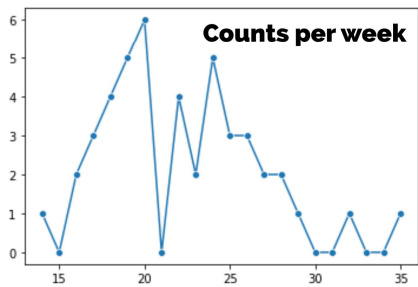
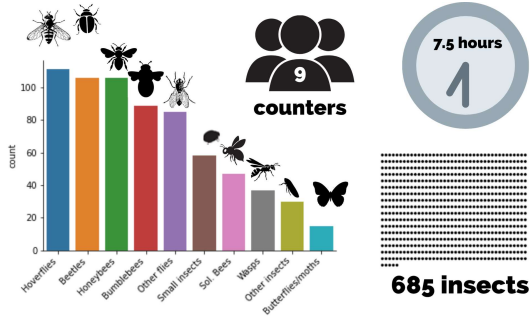
Nature 628, 359–364 (2024) | Cite this article



Why do this:

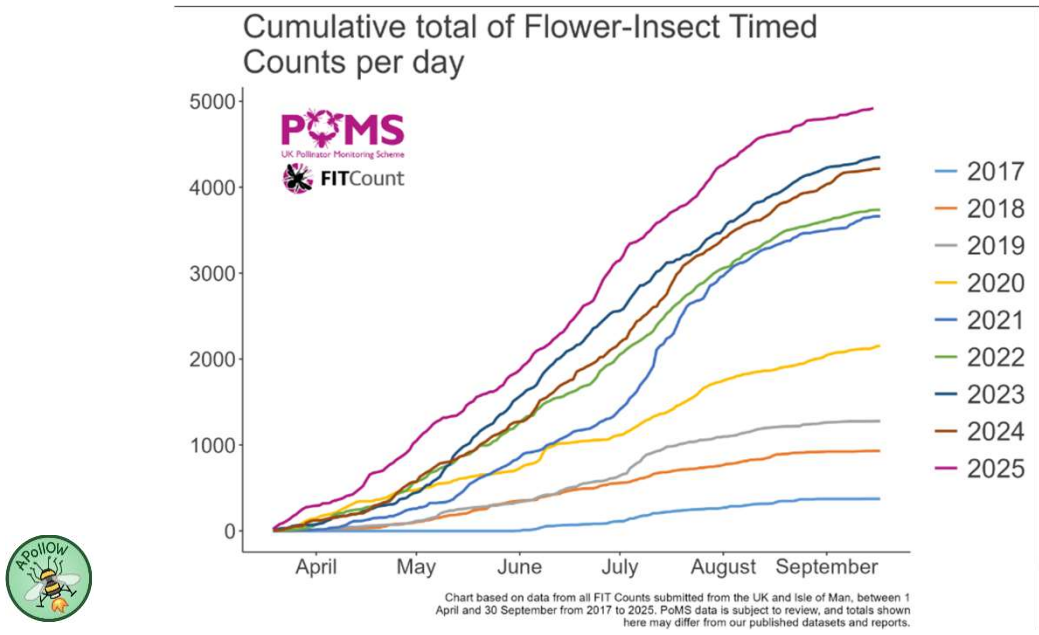
There is much evidence of insect declines and we want to add to the evidence, plus to know what works and what doesn't work.

How did we do in 2025?



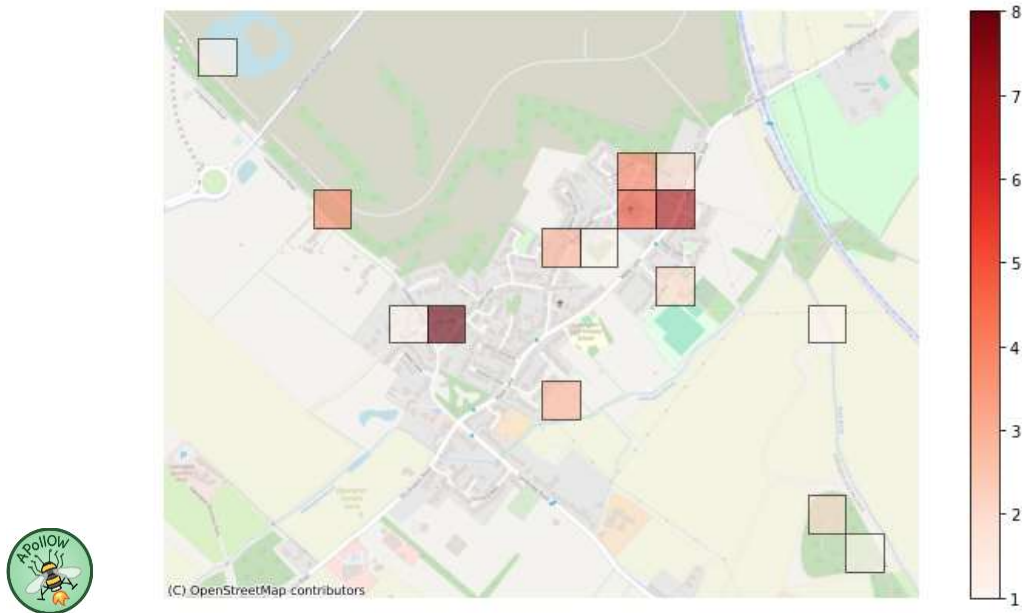
This is a summary of what APollOW participation was like in 2025

How did we do in 2025?



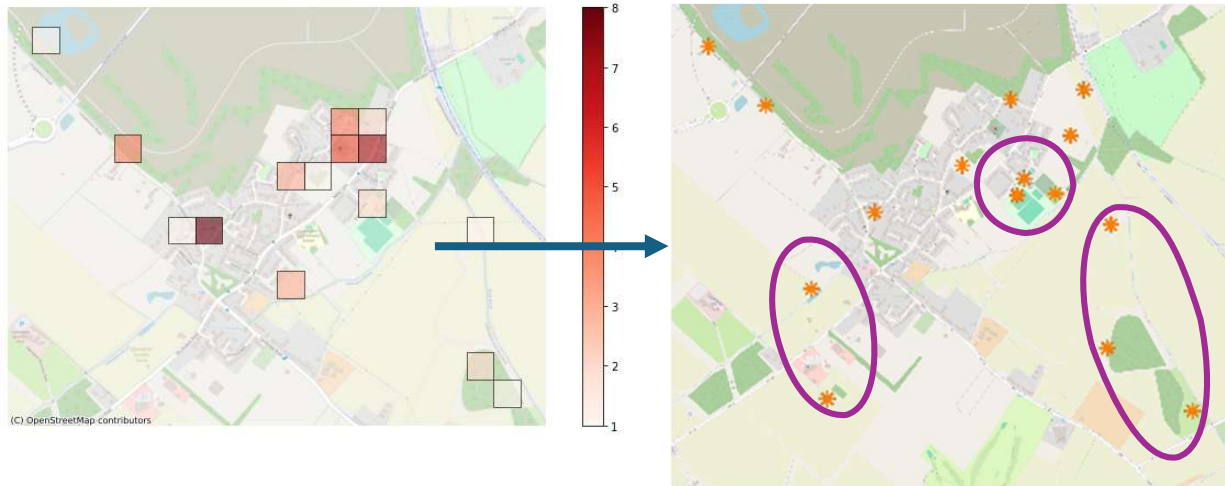
Oakington did 45, the total was ~4,500, so APoLLOW contributed 1% of the UK total in 2025. That doesn't sound much, but believe me that is quite an achievement.

Where in 2025?



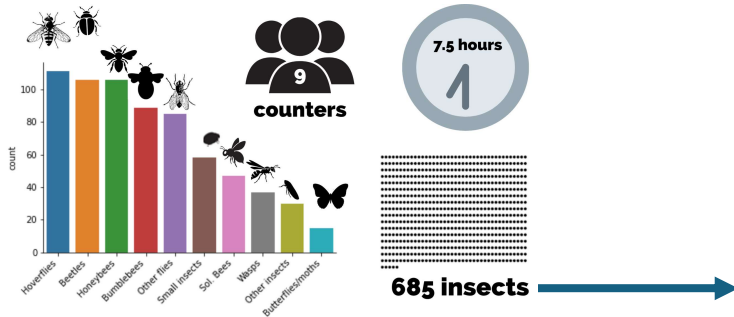
This is where the 9 counters did their counts in 2025, summarised to 100m grids. Darker reds = more counts

What about 2026?



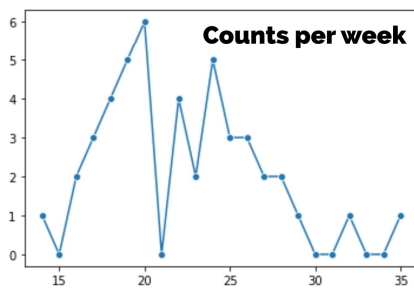
In 2026, we would like a few more counts in public areas too – field edges etc.

What about 2026?



15 Counters?

1000 insects?



70 counts?

In 2026, we would like to do more:

What about 2026?



Oakington Garden Centre – Pollination Festival - **Sat 20 June 2026**



And again we will support the POakington Garden Centre Pollinator Festival. We'd love to have some more volunteers to promote Apollow and SOW/EAG work more generally, but if there are any volunteers to help out on 20 Jun 26, we would like to know.



What can you do?



How you manage your own private spaces.
No Mow May (or how about just 'No Mow.')



What can you do?



If you still want a closely cropped lawn, it doesn't have to all be grass. Clovers intermixed
Other plants which are good at tolerating frequent cutting:

Self-heal *Prunella vulgaris*

Daisy

Dandelion



What can you do?



Road verges.

This contains a mixture of ox-eye daisy, *centaurea nigra*, *daucus carota*, common birds-foot trefoil.



Road verges.

You can get one of the signs and 'leave long for wildlife'. Contact SOW to get one.



What can you do?

Messy yards help pollinators



Encouraging 'untidy areas'. That doesn't just mean letting things grow, but not being too bothered about letting 'heaps' of things in the corner stay bare:



What can you do? – Bee Banks



It could be some left over sand from a building project.

Better still, you could go out and acquire some (how many half-used piles of sand have you seen lying around in bags. If you have the means, collect it and take it home.

South facing 'bee banks'. To retain their value they do need some disturbance during the winter, some



What can you do? – Log piles.



Dead wood – a declining habitat as a consequence of the great ‘tidying’ up.



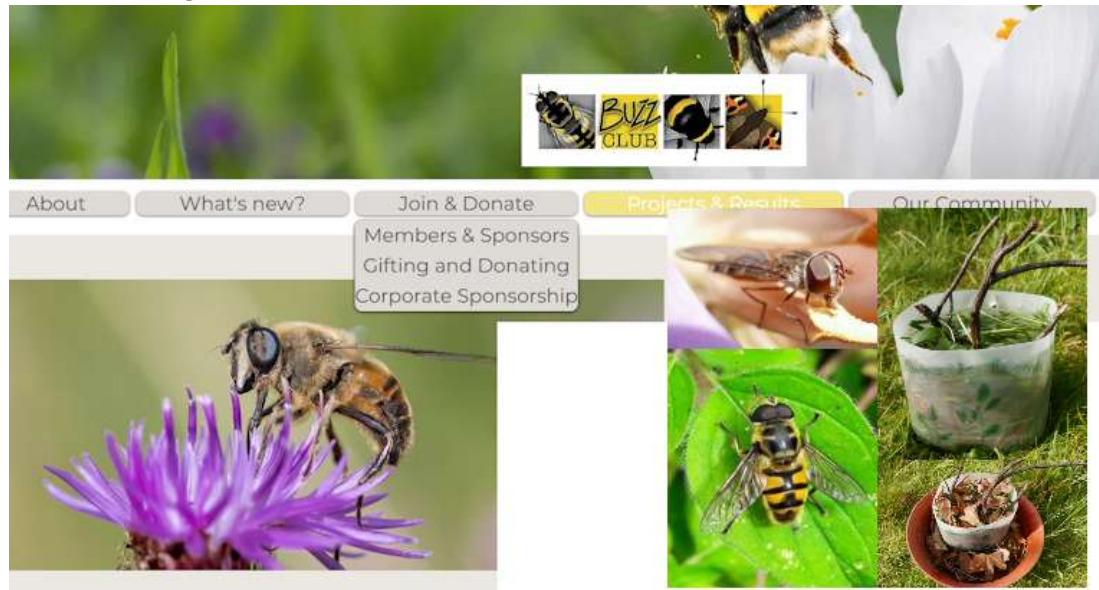
What can you do?



Water. Many, if not most, hoverflies need water to complete their lifecycles. The type of that water varies from more open waterbodies, like a pond....



What can you do?



....to smaller, more ephemeral water bodies like you get in rot holes or tree stumps

You can recreate these conditions with a so-called 'hoverfly lagoon'.



Make a hoverfly lagoon



You will need

- A container (try to recycle or upcycle something)
- A tray that fits generously underneath your container
- A drill or piercing tool
- Dried leaves
- Sticks
- Other organic garden matter
- Water

A little water can go a long way in helping hoverflies! The larvae of several species live in leaf-filled pools.

- 1 Drill or pierce holes in the side of your container about an inch from the rim, to allow drainage.
- 2 Drill or pierce holes in your tray to allow for drainage, then place your container in the tray.
- 3 Fill your container up to the drainage holes with leaves and organic garden matter, compacting the contents as you go.
- 4 Add a few sticks pushed down so they touch the bottom of the container but still poke out above the top.
- 5 Add water to the container, filling it up to the drainage holes.
- 6 Add a layer of loose leaf litter to the top of the water and to any free space on the tray.

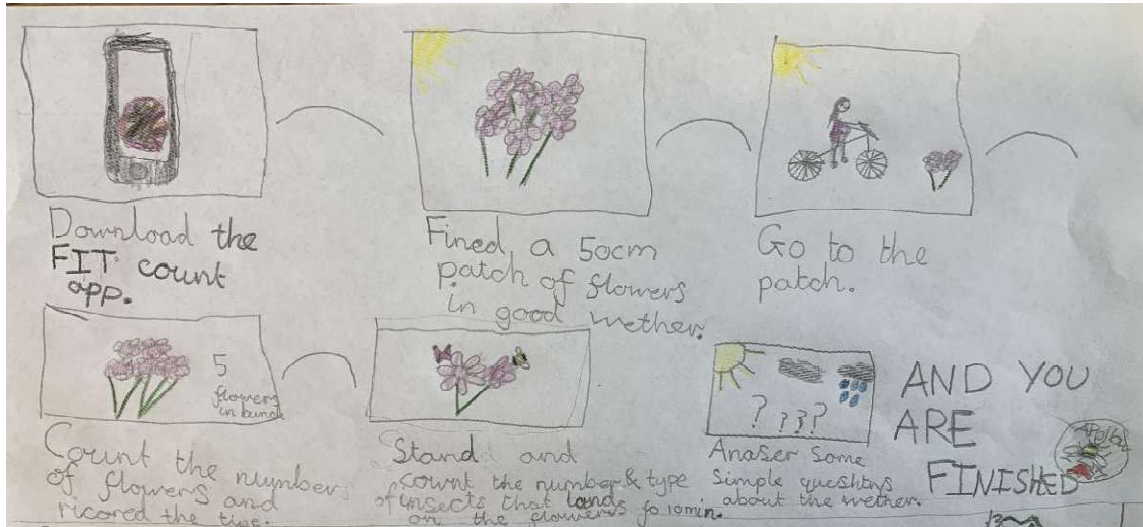
Illustration: Gertie van der Meer © Copyright Nature Society of Wales Trusts 2015

www.wildaboutgardens.org.uk

i

Here is a practical guide on how to make a hoverfly lagoon

How (i)



HOW [i]

A 7-year old's version of how to do a FIT Count – a Flower Insect Timed Count. Number 3 should be in front of number 2.

HOW (ii) A FIT Count survey for real (NOT using the app)

UK Pollinator Monitoring Scheme: ukpoms.org.uk

FIT Count field recording form VERSION 9, 2022

POMS
UK Pollinator Monitoring Scheme

A Flower-Insect Timed Count can be carried out at any time during the day from 1 April to 30 September, wherever a suitable target flower can be found, and when the weather is dry and warm:

- if sky is **clear** (less than half cloud) the minimum temperature for a count is 13°C
- if sky is **cloudy** (half cloud or more) the minimum temperature for a count is 15°C

1. About you (only needed if you have not yet registered on the PoMS website or app)

Your name: _____

I am new to identifying wildlife
 I am familiar with identifying some wildlife (e.g. birds or butterflies) but not most pollinating insects
 I am familiar with recognising the main groups of pollinating insect
 I am confident in identifying the commonly-occurring pollinating insects to species level

2. Date and location of count

Date of count: _____

Location name: _____ (e.g. flower/colony, not full address)

Grid ref if known (or select from online map later): _____

Habitat (tick one box that is the best match):

<input type="checkbox"/> garden	<input type="checkbox"/> Amenity grassland (usually mown short)
<input type="checkbox"/> school grounds	<input type="checkbox"/> Farm crops or grassy pastures
<input type="checkbox"/> Parkland with trees	<input type="checkbox"/> Upland moorland
<input type="checkbox"/> Orchard/yard	<input type="checkbox"/> Lowland heath
<input type="checkbox"/> Grassy verge or hedgerow edge	<input type="checkbox"/> Battlefield or other 'waste ground'
<input type="checkbox"/> Grassland with wild flowers (e.g. meadow)	<input type="checkbox"/> Woodland

Other habitat type (please describe): _____

3. Target flower (from the list on the left if possible)

Which target flower have you chosen? _____

Target flowers cover less than half of 50x50cm patch
 Target flowers cover about half of patch
 Target flowers cover more than half of patch

Number of flowers in patch: _____

I counted: individual flowers flower heads flower umbels flower spikes

In your 50 x 50 cm patch of target flowers:
 growing in a larger patch of the same flower
 growing in a larger patch of many different flowers
 More or less isolated

Please use one of the target flower types listed below:

- Dandelion
- Buttercup
- White Dead-nettle
- Meadow
- Primrose
- Lavender (English)
- Garden/Orchard Poppy
- Heather (Common or Dwarf)
- Poppy
- White Clover
- Field/Orchard or Cowslip
- Ragwort
- E. Field
- Rag

(or choose another insect affecting the listed types of the above are available)

Logos:

UK Pollinator Monitoring Scheme: ukpoms.org.uk

POMS
UK Pollinator Monitoring Scheme

4. FIT Count

Once you are ready to start, check your timer so that you can record for exactly ten minutes. Please count EVERY insect that you see that is SITTING on or LANDS on one of your target FLOWERS (if you're not sure what type it is just add it to the "Other insects" category). Try to count each individual insect just once, and try not to lean over the flowers you are watching (this can cast shadows and prevent insects approaching).

Time of count start (use British Summer Time): _____

Insect group	Tally of number seen: Jiff II => 7, etc.
Bumblebees	
Honeybees	
Solitary bees	
Wasps (including ichneumon wasps)	
Hoverflies (including 'non-typical' hoverflies)	
Other flies	
Butterflies and moths	
Beetles (larger than 3mm)	
Small insects (such as pollen beetles) less than 3mm long	
Other insects	

Do not count spiders or caterpillars, which are occasionally seen on flowers but are not regular pollinators.

5. Weather conditions

Sky above your location:

<input type="checkbox"/> All or mostly blue	<input type="checkbox"/> Entirely in sunshine	<input type="checkbox"/> Wind strength (for all plants in area, not just target flowers):
<input type="checkbox"/> Half blue and half cloud	<input type="checkbox"/> Partly in sun and partly shaded	<input type="checkbox"/> Leaves still/moving occasionally
<input type="checkbox"/> All or mostly cloud	<input type="checkbox"/> Entirely shaded	<input type="checkbox"/> Leaves moving gently all the time
		<input type="checkbox"/> Leaves moving strongly

Don't forget to take a photo of your target flower species, and add your counts to the PoMS website (ukpoms.org.uk) or use the FIT Count app! You can also add photos of examples of the insects you have seen, but this is optional (please don't take photos during the count as this may disturb the visiting insects).

Logos:



HOW

- If you don't want to use the app, there is a form you can use.
- Once you have done it a few times, you will probably be able to use a notebook to record your counts.

HOW (ii) A FIT Count survey for real (NOT using the app)

Enter results from your FIT Count

Please add the results from your FIT Count for any date between 1 April and 30 September. See all the counts for the current season on the FIT Counts map.

(If you are taking part in the 1 km square surveys and have FIT Count data to enter from your square please use the 1 km square FIT Count form)

This FIT Count is being submitted to the UK PoMS website. If you have a website account, please log in so that this Count appears in your 'My records' list. If you are not already registered with UK PoMS we recommend to register so that you can view your previous Counts and use all the site's facilities. If you have previously sent in FIT Counts via the iRecord website, or registered via the FIT Count app, we recommend that you register with the same email address as before, so that we can link up all your counts on this website.

Alternatively, you can continue without registering by providing your details below. We ask for these in case we need to contact you when checking the data. They will not be used for any other purpose.

Personal details

First name:

Please provide your first name

Last name:

Please provide your surname

<https://ukpoms.org.uk/enter-fit-count>

Email: *

Please provide your email. This will only be used to contact you if we require further information to verify the record.

If you are entering several counts you can use the green padlock symbols to 'lock' many of the boxes, so that you only need to enter your choice once - the setting will be remembered when you add your next count

Your name: *

Please add the recorder's name, if it is not already shown, using the format "First name Surname"



HOW

- If using paper, then please upload your results to the website.
- Don't forget to tag the count to the Oakington Project.

HOW (ii) A FIT Count survey for real (using the app)




HOW

Download the app (the FIT Count App is by the easiest way to complete the job – data is uploaded instantly).

HOW (ii) A FIT Count survey for real (using the app)



Good weather

 (>13°C – sun/ >15 °C – shade)



HOW

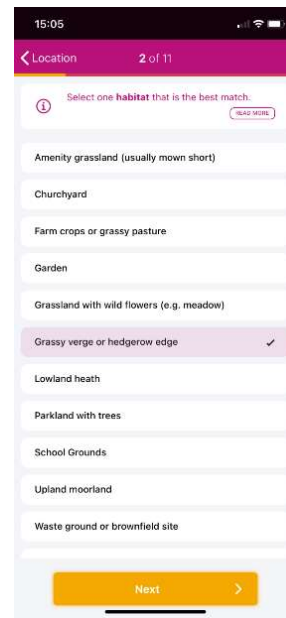
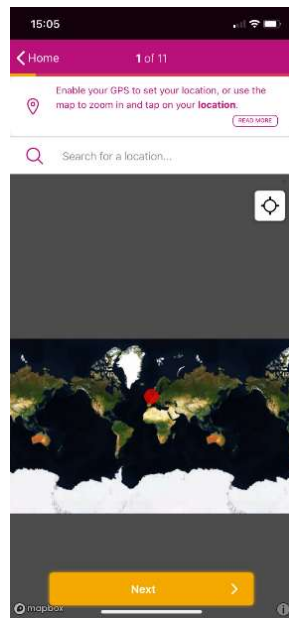
- Go and find a patch of flowers* and mark out a 50cm x 50cm quadrat**. IN GOOD WEATHER

* UKPoms (and therefore APOLLOW) recommend 14 “target flower species”, though a long list is also recommended. Ultimately, you can choose any you want.

** Quadrats can be simple bits of tape measure stuck together at the corners, canes or measured string/rope with pegs. A popular approach (right) is using duck tape, and rolls up small in a bag.

*** Good weather is defined as >13 degC in full sun or >15degC in partial sun/shade. Avoid rain, strong winds – essentially any conditions that pollinators are not going to active in – we want to measure pollinators when they are active, otherwise it might be any changes we detect are because the weather wasn't very warm on the days we counted, just by chance.

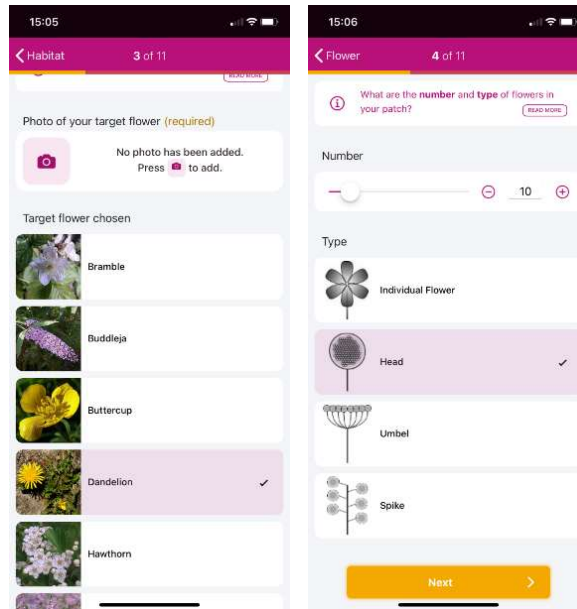
HOW (ii) A FIT Count survey for real (using the app)



HOW

- Record your location and then describe the habitat using the options available.

HOW (ii) A FIT Count survey for real (using the app)



HOW

- Choose the flower species you are counting on. NB – your square might have more than one flower species in it, but you are only counting the insects that land on just one of those species.
- If your species isn't in the list, go to 'other' and enter the name.
- Take a photo of the flower – this helps to confirm ID (this is done back at the UKCEH data centre).
- If your species is on the list, the 'flower type' will be highlighted for you. If not, you need to choose and so need to know what to choose. We deal with that later. Whatever you select/is selected, count the number of

those flower type units. (e.g., how many dandelion heads are there in the square?).

HOW (ii) A FIT Count survey for real (using the app)

15:06
15:18

< Count 5 of 11
< Cover 6 of 11

What is the target flower cover in your 50x50 cm patch?
Is your 50x50cm patch of target flowers growing?

Less than half ✓
Half of patch
More than half of patch
Not recorded

In a larger patch of the same flower ✓
In a larger patch of many different flowers
More or less isolated
Not recorded

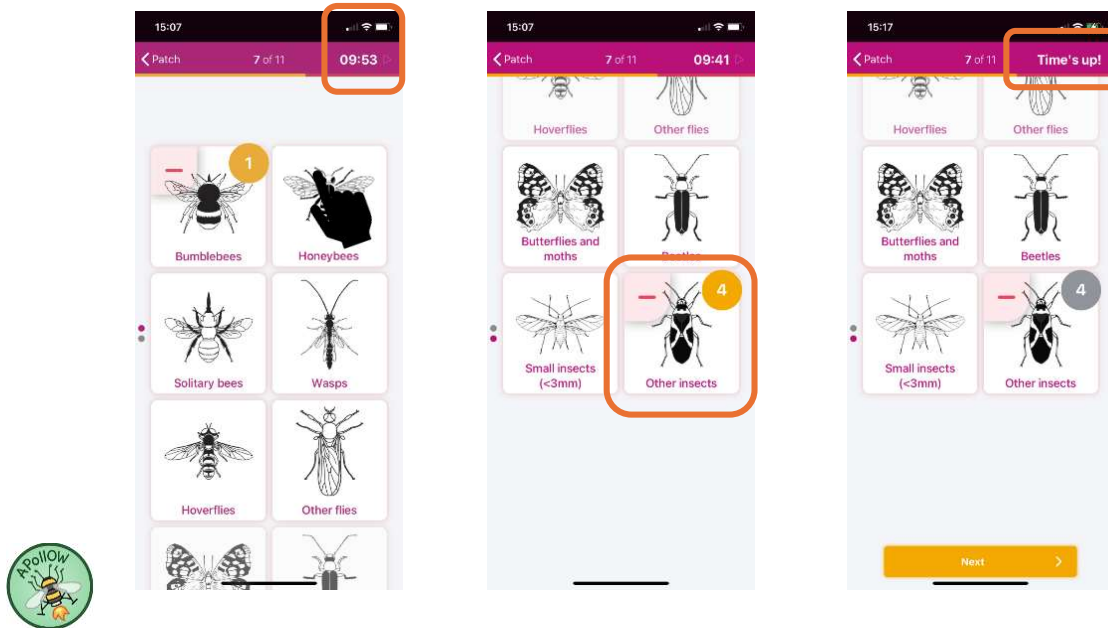
Next > Next >



HOW

- Record the coverage of the flower species (only your target flower species) in the square.
- Describe whether or not it is isolated, in a patch of the same flower or with many species.

HOW (ii) A FIT Count survey for real (using the app)



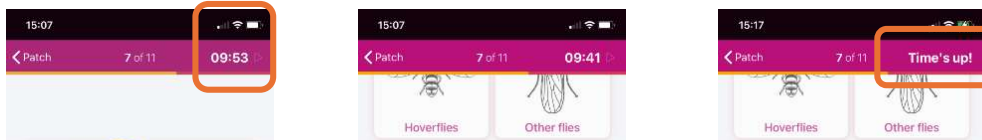
HOW

- The Count starts.
 - Record the number of different groups of insects (ID to species not required!) that land on all the flowers (target species only) in your square for 10 mins.
 - The app sets a timer for you and tells you when your time is up.
 - Simply tap on the group to add or take away.
 - Try and avoid double counting – this can be difficult, but with experience comes easier.
- Whatever approach you take, be consistent with

it.

- If you can't be sure whether an insect is new, or one that has visited before, then guess 'up' – i.e. count it.

HOW (ii) A FIT Count survey for real (using the app)



Mark **ALL** the **INSECTS** that **LAND** on the **TARGET FLOWER**

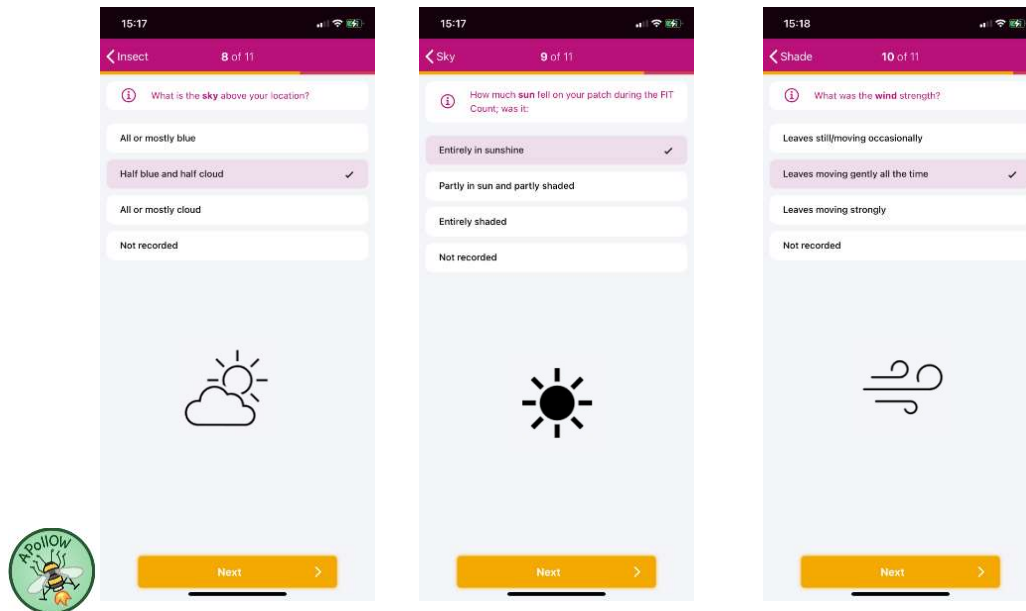
- If you are not sure what type of insect, mark as '**other**'
- **Ignore** anything that is **not an insect** (spiders etc)
- It has to **LAND** on the flower (ignore it if it hovers near it or lands on a leaf)
- **Ignore** it if it lands on **another type of flower** in the 50x50



HOW

- If you are not sure what it is, there is an 'other category'. Do use this, as at least it means the total number of pollinators can be used, if not individual groups.
- It has to be an insect (ignore spiders and the like).
- It has to land on a flower (and specifically, of the species you have chosen – if it lands on another species, then it doesn't count).
- If it lands on a leaf or stem, or hovers around, it doesn't count.

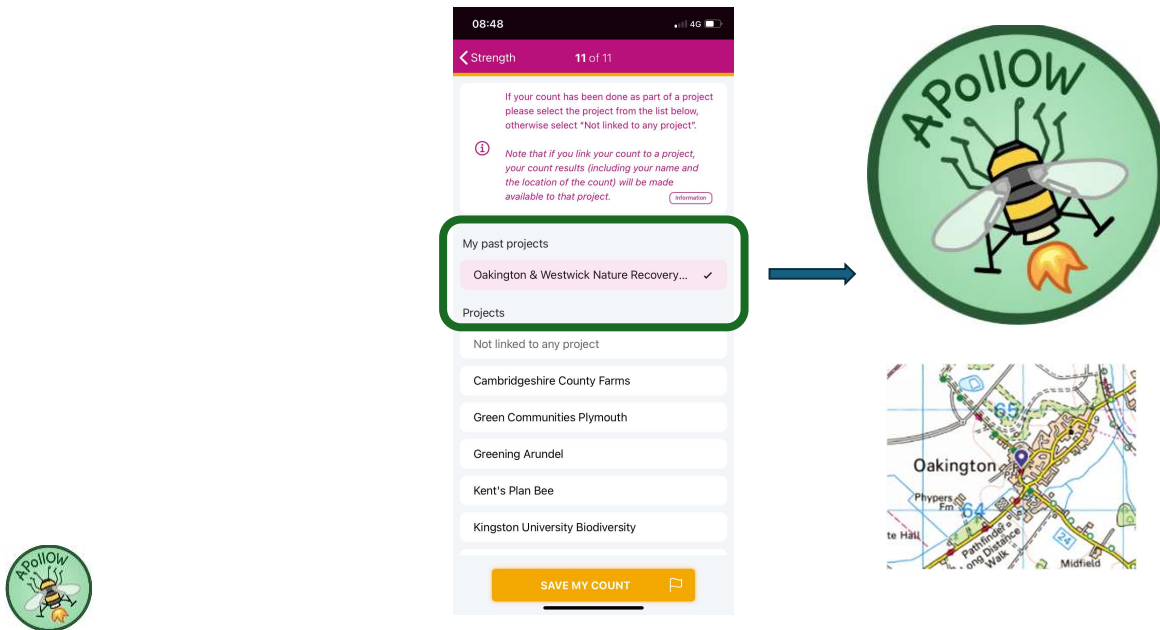
HOW (ii) A FIT Count survey for real (using the app)



HOW

- After the 10 minutes are up, answer some simply questions about the weather.

HOW (ii) A FIT Count survey for real (using the app)

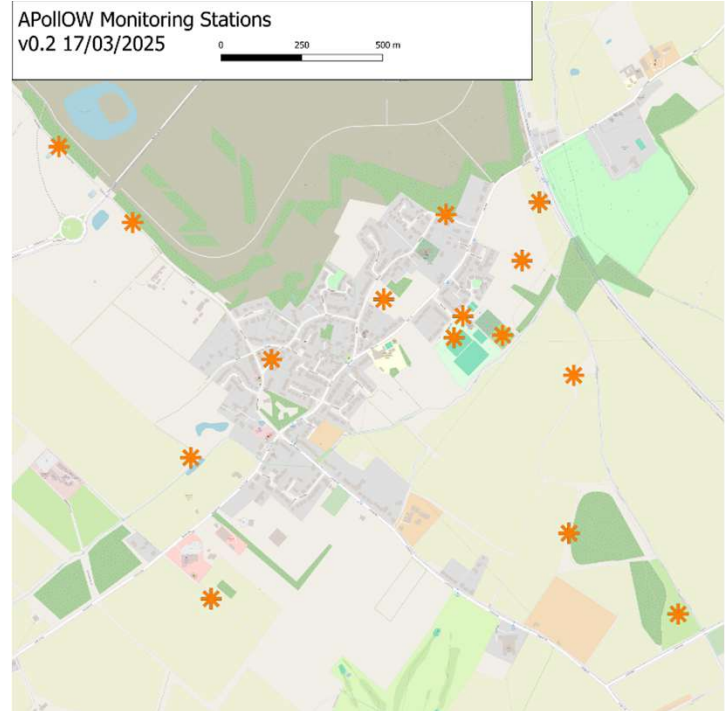


HOW

- If you are in Oakington & Westwick, don't forget to tag your count to the village project.
- Remember, FIT counts can be done anywhere, so if you are on holiday in the moors, you can do one on a patch of heather. But only use the Oakington project in Oakington.

WHERE?

- ‘Pre-defined sites’
- Anywhere
 - Garden
 - On a walk



WHERE?

- FIT counts can be done anywhere, and we encourage you to do so.
- But, if you can make a special effort to count at these set locations, it will make the data we collect more robust.
- Repeat counts at fixed locations mean changes over time can be better interpreted.
- These sites are a ‘starter for 10’. As this pilot year progresses, we may add some and take some away.
- We will also be looking to make this map interactive – so you can see which sites are good at different times of year and for which plants.

- The sites are also representative of general areas – the points along the Longstanton Road, for instance, are the whole verge.



FLOWERS

- Bramble (Blackberry) - *Rubus fruticosus*
- Buddleja
- Buttercup - *Ranunculus* species
- Dandelion - *Taraxacum officinale*
- Hawthorn - *Crataegus*
- Heathers - *Calluna* and *Erica* species
- Hogweed - *Heracleum sphondylium*
- Ivy - *Hedera*
- Knapweeds (Common or Greater) - *Centaurea nigra* or *scabiosa*
- Lavender (English) - *Lavandula angustifolia*
- Ragwort - *Jacobaea/Senecio* species
- Thistle - *Cirsium* or *Carduus*
- White Clover - *Trifolium repens*
- White Dead-nettle - *Lamium album*
- Other - please describe below



From April onwards

Dandelion, *Taraxacum officinale* agg.

Apr	May	June	July	Aug	Sept
-----	-----	------	------	-----	------



The familiar flowers of Dandelion are found in a very wide range of habitats, but prefer disturbed sites such as pastures, roadside verges, lawns, tracks, paths and waste ground.

They can be confused with other yellow composite flowers (e.g. Autumn Hawkbit, shown above) but the hollow stems and white sap are a good indication. See also "When is a Dandelion not a Dandelion?" from the Botanical Society of Britain and Ireland:

- https://bsbi.org/wp-content/uploads/dlm_uploads/2021/05/BSBI-News-147-Beginners-Corner.pdf

Flowers – flower structure.

The following slides are taken from the UK PoMS website, where you will find lots of resources on how to ID flowers and the difference between the different flower types.

Dandelions and their allies have a 'Head'. What looks like one flower is actually many 10s/100s of flowers bundled together, with only the outer ones with obvious petals.



FLOWERS

- Bramble (Blackberry) - *Rubus fruticosus*
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- White Dead-nettle - *Lamium album*
- Other - please describe below



Individual Flower

Hawthorn, *Crataegus*

Apr	May	June	July	Aug	Sept
-----	-----	------	------	-----	------



Hawthorn grows as a shrub, in woodlands or along the edges of woods, forming patches of scrub on grasslands, or as part of hedgerows. The flowers look similar to shrubs such as Blackthorn (which starts flowering earlier in the year) but the leaf shape is distinctive.

There are two species of Hawthorn: Common Hawthorn (*Crataegus monogyna*) is common throughout much of Britain, and Midland Hawthorn (*Crataegus laevigata*) that is largely confined the southern and eastern half of Britain. There is no need to distinguish the species for the FIT Count, but if you do know which species you have used then please add that information to the recording form.

Flower counts should be based on the number of **individual flowers** (indicated by circles at the top-left of the above photo collage). Where Hawthorn grows as a tall shrub or hedge the 50cm x 50cm quadrat can be positioned vertically or at a convenient angle in the shrub, as long as it clearly marks out the area of flowers that you are going to use for your count.

Flowers – flower structure

Hawthorn. You will be counting individual flowers here. There are sometimes very, very many in a 50cm x 50cm, but we cover some tricks to help estimate.



FLOWERS

Bramble (Blackberry) - *Rubus fruticosus*

Buddleja

Buttercup - *Ranunculus* species

Dandelion - *Taraxacum officinale*

Hawthorn - *Crataegus*

Heathers - *Calluna* and *Erica* species

Hogweed - *Heracleum sphondylium*

Ivy - *Hedera*

Knapweeds (Common or Greater) - *Centaurea nigra* or *scabiosa*

Lavender (English) - *Lavandula angustifolia*

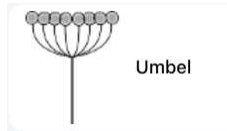
Ragwort - *Jacobaea/Senecio* species

Thistle - *Cirsium* or *Carduus*

White Clover - *Trifolium repens*

White Dead-nettle - *Lamium album*

Other - please describe below



Hogweed, *Heracleum sphondylium*

Apr May June July Aug Sept



Found in a wide range of habitats, including rough and disturbed grassland, especially on roadsides and trackways, woodland rides, scrub, river banks, stabilised dunes, coastal cliffs, montane tall-herb vegetation and waste ground.

There are a number of roughly similar umbellifer plants, but the broad leaves and especially the non-symmetrical petals help to distinguish Hogweed from its relatives.

Individual florets have the outer petals much larger than the inner



Flower counts should be based on the number of flower umbels (indicated by black circles at the top-right of the above photo collage).

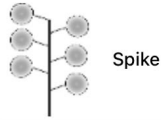
Flowers – flower structure

Hogweed (and cow parsley, wild carrot etc) are ‘Umbellifers’, which means they have clusters of flowers grouped into a ‘platform’. It is the platforms that you count (‘umbels’) not the individual flowers.



FLOWERS

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- Dandelion - *Taraxacum officinale*
- Hawthorn - *Crataegus*
- Heathers - *Calluna* and *Erica* species
- Hogweed - *Heracleum sphondylium*
- Ivy - *Hedera*
- Knapweeds (Common or Greater) - *Centaurea nigra* or *scabiosa*
- Lavender (English) - *Lavandula angustifolia*
- Ragwort - *Jacobaea/Senecio* species
- Thistle - *Cirsium* or *Carduus*
- White Clover - *Trifolium repens*
- White Dead-nettle - *Lamium album*
- Other - please describe below



White Dead-nettle, *Lamium album*

Apr	May	June	July	Aug	Sept
-----	-----	------	------	-----	------



Found in woodland, hedge-banks, waysides and rough ground, and sometimes gardens (often on fertile soils close to habitation). The white flowers have the typical shape of plants in the mint family, with the leaves looking similar to stinging nettle.

Flower counts should be based on the number of **flower spikes** (indicated by ovals at the top-left of the above photo collage).

Flowers – flower structure

Some species group their flowers into a linear structure (not a platform). We call that a ‘spike’.



COUNTING FLOWERS. How many Dandelions?



How many Dandelions would you submit in your FIT count if your quadrat was like this (Right hand side)?



COUNTING FLOWERS. How many? ~25



Maybe around 25? This raises two points. [1]
Don't worry about it too much, a few out won't make a difference. Also, only count the flowers that insects can actually land on. Un-emerged or gone-over flowers don't count.



COUNTING FLOWERS.

How many
Wild Carrot?



How many Wild Carrot would you submit in your
FIT count if your quadrat was like this?



COUNTING FLOWERS.

How many
Wild Carrot?

~60



Again, only the platforms/umbels that are open
and are 'flowering' are counted.



COUNTING FLOWERS.

How many
...?



Now a real-world example. How many Hawthorn?
We know from before that we count the individual flowers, but there are often very, very many. Can we make the job a bit easier?



COUNTING FLOWERS.

How many
...?



Either – divide up the quadrat into a more manageable chunk
Count those, then multiply up (e.g., if a quarter, x 4 to get the whole).



COUNTING FLOWERS.

How many
Hawthorn?



Or, as Hawthorn do tend towards clusters, you could count the number of clusters in your 50 x 50 and then multiply up
By the number of flowers in an average cluster. To do that, you would need to sample a few clusters.

In both cases, make sure you are being representative – don't only sample the really dense or really sparse areas to get your estimate.



FLOWERS

<https://ukpoms.org.uk/fit-counts>

Take part in the FIT Count - download materials here:

These PDF documents have been updated in 2025, but only with cosmetic changes to the documents they are fine to use.

- How to carry out the FIT Count
- Recording form to use during the count, or use the FIT Count app
- Guide to the flowers you can use for the count
- Guide to recognising the insect groups you need to count

English	Taxon	Type	Flowering	Flowering to	Flower type
Red Dead-nettle	<i>Lamium purpureum</i>	wild	January	December	flower spike
Sallow / willow	<i>Salix</i>	wild	February	May	flowerhead (catkin)
Blackthorn	<i>Prunus spinosa</i>	wild	March	May	individual flower
Lungwort	<i>Pulmonaria</i>	garden	March	May	flower spike
Ground Ivy	<i>Glechoma hederacea</i>	wild (garden)	March	June	flower spike
Comfrey	<i>Symphytum officinale</i>	garden, wild	March	June	individual flower
Veronicas	<i>Veronica</i>	wild, garden	March	September	flower spike
Apple	<i>Malus pumila</i>	garden, wild	April	May	individual flower
Wild Cherry	<i>Prunus avium</i>	wild	April	May	individual flower
Cow Parsley	<i>Anthriscus sylvestris</i>	wild	April	June	flower umbel
Lousewort	<i>Pedicularis sylvatica</i>	wild	April	July	flower spike
Green alkanet	<i>Pentaglottis sempervirens</i>	garden, wild	April	July	individual flower
Forget-me-nots	<i>Myosotis</i>	wild, garden	April	September	individual flower
Borage	<i>Barago officinalis</i>	garden, agri	April	October	individual flower
Firethorn	<i>Pyracantha</i>	garden	May	June	individual flower
Rhododendron	<i>Rhododendron ponticum</i>	parks, gardens	May	June	individual flower
Rowan / Mountain Ash	<i>Sorbus aucuparia</i>	wild	May	June	flower umbel
Bugle	<i>Ajuga reptans</i>	wild, garden	May	July	flower spike
Cranesbills	<i>Geranium</i>	garden, wild	May	September	individual flower
Calmint	<i>Nepeta</i>	garden	May	September	flower spike
Red Clover	<i>Trifolium pratense</i>	wild, agri	May	September	flowerhead
Poppies	<i>Papaver</i>	garden, agri	May	October	individual flower
Mountain Pansy	<i>Viola lutea</i>	wild	June	August	individual flower
Yarrow	<i>Achillea millefolium</i>	wild, garden, agri	June	September	flower umbel
Bellflower	<i>Campanula</i>	garden, wild	June	September	individual flower
Cornflower	<i>Centaurea cyaneus</i>	garden	June	September	flowerhead
Wild Carrot	<i>Daucus carota subsp. carota</i>	wild	June	September	flower umbel
Foglove	<i>Digitalis purpurea</i>	wild, garden	June	September	individual flower
Bell Heather/Cross-leaved Heath	<i>Erica cinerea and Erica tetralix</i>	wild, garden	June	September	flower spike
Bird's-foot Trefoil	<i>Lotus</i>	wild	June	September	flowerhead
Tormentil	<i>Potentilla erecta</i>	wild	June	September	individual flower
Common Toadflax	<i>Linaria vulgaris</i>	wild	June	October	flower spike
Sow-thistles	<i>Sanctus</i>	wild	June	October	flowerhead
Wild Angelica	<i>Angelica sylvestris</i>	wild	July	August	flower umbel
Globe Thistle	<i>Echinops</i>	garden	July	August	flowerhead
Field Scabious	<i>Knautia arvensis</i>	wild	July	August	flowerhead
Rosebay Willowherb	<i>Chamerion angustifolium</i>	wild, brownfield	July	September	flower spike
Hemp-agrimony	<i>Eupatorium cannabinum</i>	wild	July	September	flowerhead
Marjoram	<i>Origanum</i>	wild, garden	July	September	flower spike
Feabane	<i>Pulicaria dysenterica</i>	wild	July	September	flowerhead
Lamb's ears	<i>Stachys byzantina</i>	garden	July	September	flower spike
Devil's-bit Scabious	<i>Succisa pratensis</i>	wild	July	September	flowerhead
Scentless Mayweed	<i>Tripleurospermum inodorum</i>	wild	July	September	flowerhead
Himalayan/Indian Balsam	<i>Impatiens glandulifera</i>	wild	July	October	individual flower

This is the ‘long list’ of flowers. So if you can’t manage one of the 14 target species, try these. Some of those which we can easily find in Oakington are:

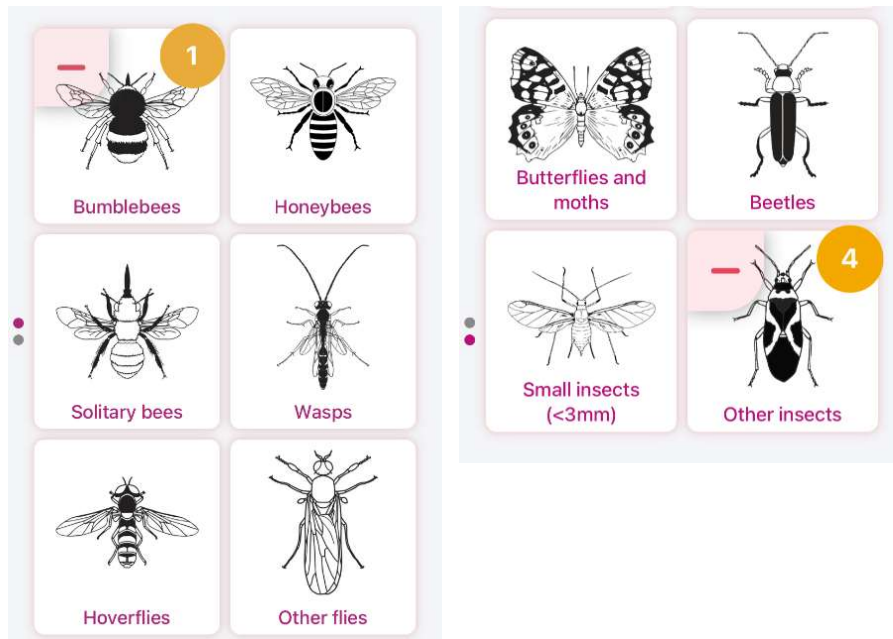
Green Alkanet (a relative of forget-me-nots) – blue flowers – count the ‘individual flowers’

Apple (in the orchards, of course) – individual flowers.

Ground Ivy. Low growing in shady areas, purple/blue flowers earlier in the season – spikes. Wild Carrot & Cow Parsley. Like Hogweed –

umbels.

Insects



How to identify the insects?


- The beauty with FIT counts is that you only have to be able to say whether or not an insect belongs to a particular group.
- There are 10 groups, including one which is for anything small (<3mm) and an 'other' group.
- Some will be familiar (Bumblebees, Butterflies/Moths).
- Others might need some time and observation to get right.
- What follows are some ID guides from UKCEH, who run the survey. The FIT Count app also

comes with built in ID details.

Insects

Bee or wasp (Hymenoptera)? – 1

Honey Bee (family Apidae, species *Apis mellifera*)
Photo © Bob Peterson/Wikimedia Commons




most bees are more hairy than wasps

wings held flat

female bees have a pollen basket, usually on the hind legs or under the abdomen

FIT count category: Honey bee

A social wasp (family Vespidae, genus *Vespula*)
Photo © Trounce/Wikimedia Commons



at rest, wings are rolled up for some wasps (not all)

less obviously hairy, and often with very contrasting colours

FIT count category: Wasp

UKPoMS

National Monitoring Scheme - FIT Count



The following slides are also lifted from the UKPoMS resources pages. They are also in the FIT count app, so the app really is a bundled up 'guide'.

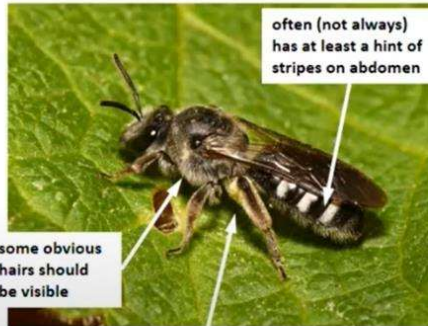
Is it a Bee or a Wasp?

Insects

Bee or wasp (Hymenoptera)? – 2

There are a number of small and dark species in both groups

A small solitary bee (family Apidae, genus *Lasioglossum*)
Photo © Dick Belgers/Wikimedia Commons



female bees have a pollen basket, usually on the hind legs or under the abdomen

FIT count category: Solitary bee

A solitary wasp (family Crabronidae, genus *Crossocerus*)
Photo © gallhampshire/Flickr CC



no obvious hairs, no pollen basket

FIT count category: Wasp



Peninsula Monitoring Scheme - FIT Count

Is it a bee or a wasp?

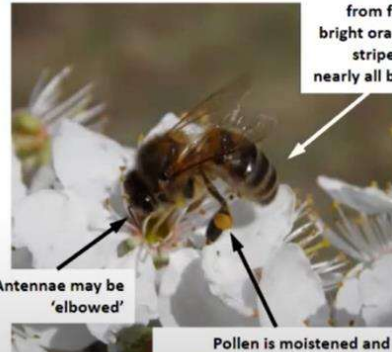
Insects

Recognising Honey bees (Hymenoptera)

Honey Bee (family Apidae, species *Apis mellifera*)
Photo © Bob Peterson/Wikimedia Commons



Honey Bee (family Apidae, species *Apis mellifera*)
Photo © Martin Harvey



POMS

FIT count category: Honey bee

Foranator Monitoring Scheme - FIT Count

If it is a bee, what sort – honey bees are a group of their own.

Insects

Bumblebee or solitary bee (Hymenoptera)?

A bumblebee (family Apidae, genus *Bombus*)
Photo © Martin Harvey



antennae often angled or 'elbowed'

- Bumblebees:**
- Very hairy / fluffy
 - Rounded, almost globular in shape, often have tail 'tucked under' when visiting flowers
 - Many have simple, contrasting colour bands
 - Queens are larger than nearly all solitary species, but workers can be smaller than the larger solitaires

A solitary bee (family Andrenidae, genus *Andrena*)
Photo © Martin Harvey



antennae more likely to point straight out

- Solitary bees:**
- Usually hairy, but usually less densely covered in hairs than bumblebees
 - Usually more elongate in shape (but lots of variety, see next sheet)
 - Colours usually more subdued and less contrasting than bumblebees
 - Smaller than queen bumblebees, but the largest solitaires are bigger than small worker bumblebees



FIT count category: Bumblebee



FIT count category: Solitary bee


Botanical Monitoring Scheme - FIT Count

Is it a bumble or a solitary bee?

Insects


Hoverfly (Diptera: Syrphidae) or bee/wasp (Hymenoptera)?

Drone Fly (species *Eristalis tenax*)
Photo © Martin Harvey



large eyes covering most of the head; shorter antennae with 3 segments

Honey Bee (family Apidae, species *Apis mellifera*)
Photo © Ken Thomas/Wikimedia Commons



eyes on sides of head, not covering it all; longer antennae with 12 or 13 segments

Hoverflies have:


- just one pair of wings
- fast hovering flight (most species)
- no pollen basket

Bees and wasps have:

- two pairs of wings (but this can be very hard to see on live insects)
- slower flight, not hovering (except in a few species)
- female bees have a pollen basket


FIT count categories:
Honey bee / Bumblebee / Solitary bee / Wasp

A hoverfly (species *Sericomyia silentis*)
Photo © Martin Harvey



FIT count category: Hoverfly

A social wasp (family Vespidae, genus *Vespula*)
Photo © Trounce/Wikimedia Commons



POMMS
POMMS Monitoring Scheme - FIT Count

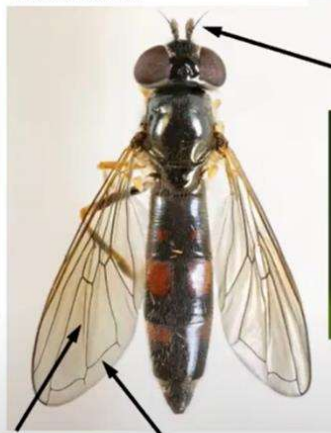


Is it a hoverfly or a bee/wasp?
 Hoverflies make their business by imitating/mimicking bees and wasps.

Insects

Recognising hoverflies (Diptera: Syrphidae)

A hoverfly (species *Platycheirus angustatus*)
Photo © Janet Graham



- Hoverflies are:
- usually shiny or reflective (not always)
 - usually black with yellow or other pale markings on the body and/or legs (not always)
 - have veins parallel to the trailing edge of the wing, forming a 'false margin'
 - have a "vena spuria" in the middle of the wing (hard to see in the field)
 - are not obviously bristly

antennae usually short - some have longer antennae but still shorter than most bees, and with fewer segments



A hoverfly (species *Chrysotoxum festivum*)
Photo © Martin Harvey

'vena spuria'

'false margin' veins

FIT count category: Hoverfly

POMS

Postmaster: Monitoring Scheme - FIT Count



Hoverflies

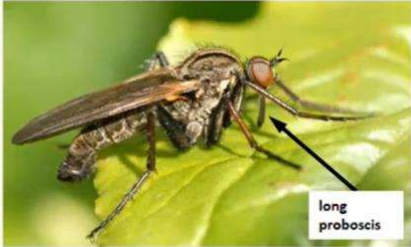
Insects

POMS

Other flies (Diptera)


There are many other families of fly that you may see – all you need to do is separate hoverflies from the rest!

A dance fly *Empis tessellata* Photo © James K. Lindsey/Wikimedia Commons




long proboscis


Calypterate flies – rounded body, very bristly on body and legs:



Yellow Dung-fly *Scathophaga stercoraria* Photo © Olaf Lellinger/Wikimedia Commons




Greenbottle *Lucilia* sp. Photo © Juan Emilio/Wikimedia Commons



broad body, wing venation different from hoverflies, moves slowly, doesn't hover

Broad Centurion soldierfly *Chloromyia formosa* Photo © Martin Harvey



Tachina fera Photo © Luc Viatour/Wikimedia Commons

FIT count category: Other fly

POMIS Monitoring Scheme - FIT Count

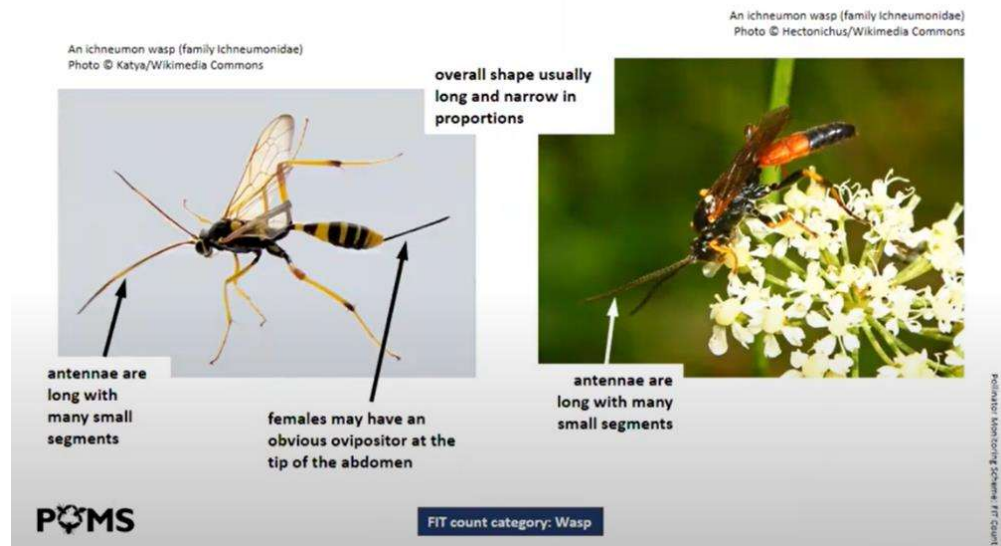
If it is a fly, but not a hoverfly, then you can put it in the 'other flies' category.



Insects

Ichneumon wasps (Hymenoptera)

Sometimes called ichneumon 'flies' but these are wasps and should be counted as wasps



Some wasps are obvious and well known (the ones that bother your picnics). They are 'social' wasps.

But some are solitary and look rather different. All of them are recorded as wasps.

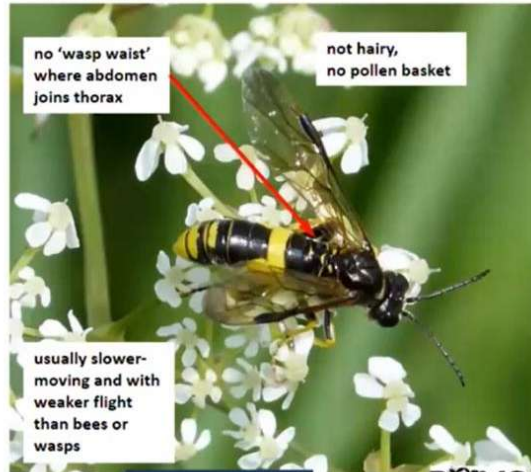
They are what we call 'incidental' pollinators – when they land on a flower, they are actually on the hunt for something else (usually other insects), not the pollen.

Insects

Sawfly or wasp (Hymenoptera)?

There are many different sawflies of differing sizes and colours – they are not true flies, and are related to bees and wasps in the Hymenoptera, but note that we are counting sawflies in the “Other” category

Sawfly (family Tenthredinidae, species *Tenthredo temula*)
Photo © gallhamshire/Flickr CC



A social wasp (family Vespidae, genus *Vespula*)
Photo © Trounce/Wikimedia Commons




Watch out for some confusion groups – sawflies are similar to bees and wasps, but go in the ‘other’ category

Insects

Beetle (Coleoptera) or true bug (Hemiptera: Heteroptera)?

Pollinator Monitoring Scheme: FIT COUNT

A leaf beetle (family Chrysomelidae, species *Gastrophysa polygoni*)



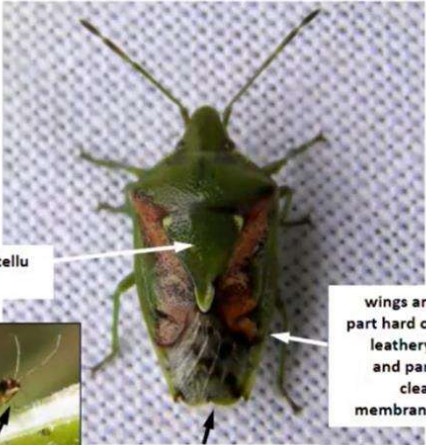
beetles have chewing mouthparts with jaws (mandibles), not a rostrum

hard wing cases (elytra), often shiny

wing cases join with a straight line down middle of insect

POMS FIT count category: Beetle

Juniper Shieldbug (family Acanthosomatidae, species *Cyphostethus tristriatus*)




scutellum

wings are part hard or leathery, and part clear membrane

wings and scutellum form an X shape on back

bugs have a long, narrow rostrum, usually held pointing back under the head

POMS FIT count category: Other



Beetles and 'true bugs' are different. Beetles (ladybirds and the like) = Beetles; Shield bugs = 'other'

Insects

Small insects

There are a number of very small (3mm or less) insects that may occur on flowers, including pollen beetles, which can be very abundant. Please provide an estimate of how many small insects you see in total on the target flower, but there is no need to identify the group (so DO NOT count pollen beetles in the "Beetles" category)

Pollinator Monitoring Scheme: FIT Count

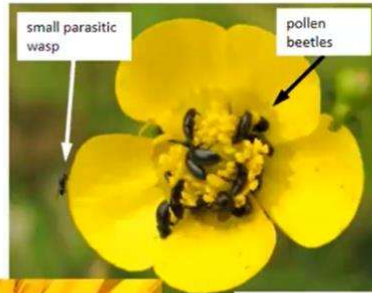


Photo © Martin Harvey



Photo © Alvesgaspar/Wikimedia Commons

FIT count category: Small insects

This is a small solitary bee, but all bees are bigger than 3mm and should be counted as bees! (This one has collected pollen on its hind legs, which is a good clue that it is a bee.)



Photo © Martin Harvey

FIT count category: Solitary bee



Small things= <3mm

Quiz time



Hoverfly

Quiz time



Bumblebee (specifically a tree bumblebee on a willow)

Quiz time



A solitary bee

Quiz time



Other fly – Bombyliidae – ‘Bee flies’

Quiz time



‘Other insect’ (this is a bug (Hemiptera, a ‘Green shield bug’)

Quiz time



Not a bumblebee, but a hoverfly – a bumblebee mimic

Buddleja (or Buddleia, or Butterfly-bush), *Buddleja davidii*

Apr	May	June	July	Aug	Sept
-----	-----	------	------	-----	------

Quiz time



What type of flower? - Spike

Quiz time



What type of flower? Umbel

Quiz time

Apr	May	June	July	Aug	Sept
-----	-----	------	------	-----	------



What type of flower? - Head

Quiz time



Ivy, *Hedera helix*

Apr May June July Aug **Sept**



A familiar evergreen plant that sometimes scrambles over areas of the ground (e.g. in woodlands) but will also climb using tree trunks or walls etc. as a support, where it can grow to a large size with woody stems. Only mature climbing plants produce flowers. The flowers are an inconspicuous pale greenish-yellow and appear in clusters in late summer, lasting into the autumn. They provide a very valuable nectar and pollen resource for insects late in the year.

What type of flower? Ivy=head. (Ivy is a target flower, so you don't have to remember.

<https://ukpoms.org.uk>

APOLLON

A Pollinator survey of Oakington and Westwick

This page describes the background and objective of this project and why we are doing it, but you can also skip straight to how to do an APOLLON count (including upcoming training sessions), the map and FAQs.



Training

If you are interested in taking part, or just want to know more about pollinators, join one of the following free training events:

- APOLLON training and Q&A at the **SOW April meeting, 30th April, 7:30pm** at Oakington church hall
- APOLLON training in Oakington community orchard, date TBA

Or watch one of these videos (some from the organisation which runs the national UKPoMS scheme):

- FIT Counts in 2 minutes (2 mins)
- How to do a FIT Count (Royal Parks) (2 mins)
- FIT Counts - learning the insect groups (8 mins)
- Beginner's Guide to Planting For Pollinators (Biological Recording Company) (23 mins)
- Monitoring Pollinators with FIT Counts (UK Centre for Ecology & Hydrology) (26 mins)
- The UK Pollinator Monitoring Scheme (45 mins)
- Polling Pollinators (75 mins)



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And don't forget the website, where there are lots of resources and videos linked.