



The LIFE 4 POLLINATORS project has received funding from the LIFE Programme of the European Union.



Involving people to protect wild bees and other pollinators in the Mediterranean – Life 4 Pollinators (LIFE18 GIE/IT/000755)



Mini BioBlitz
in the Škocjan Caves Regional Park

When? Saturday, 20. 5. 2023 between 10.00 in 16.00
Meeting point: Matavun 8, 6215 Divača, Slovenia

Applications are open until 10. 5. through <https://forms.gle/aJLgcerYP7PUGvrM9> or by scanning the qr code:

A mini-bioblitz was held in a meadow close to the Škocjan Caves on the 20th of May 2023. Participants were 49, mostly high school and undergraduate university students. The activity started in the morning, when the weather was cloudy, a little windy and temperature was around 19°C. It continued in the afternoon, with better weather conditions and 22°C mean temperature.

Activity 1 – Botanical activity

LIFE 4 POLLINATORS

Flowers vary in shape, size and colour. In this activity, observe the characteristics of your chosen flowering plant and determine the morphological group to which it belongs to.

Group: Botanists

School: _____ Grade: _____

Role: _____ Name: _____

Observer I: _____

Observer II: _____

Form filler: _____

DRAW THE FLOWER

DRAW THE LEAF

PLANT ASPECT

tree shrub herb

LEAF SHAPE

simple (1 leaf) divided into small leaflets

FLOWERS ASPECT

small single flowers clumped together in inflorescence (like a head) single flowers easy to recognize, solitary or not

STEM SECTION is:

quadrangular circular

LEAF VEINS are:

parallel not parallel

POSITION of LEAVES on the stem:

alternate opposite all basal

Is it aromatic?

yes no

Does the flower have LATEX?

yes (abundant) no

Does the flower have SEPALS?

yes (free or fused) no

FLOWER SHAPE

radial (more than 2 symmetry axes) bilateral (minor symmetry)

COROLLA with PETALS ...

completely free (separated) fused only at the base (try to break off the petals) fused for more than half length

IF you choose INFLORESCENCE:

many little flowers aggregated in "head" (looks like a single flower) umbel-like spheric none of the above

How many STAMENS do you see?

3 4 5 6 more than 6

IF PETALS are free, how many are they?

3 4 5 6 more than 6

IF SEPALS are present, how many are they?

3 4 5 6 more than 6

FLOWER COLOUR: _____

It belongs to morphological group: _____

Four field recording sheets were returned for the first activity.



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Activity 2 – Entomological activity

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Pollinators belong to various guilds. In this activity, observe a plot/pot of your chosen plant species and record the pollinators. How many can you identify?

DATE, TIME & LOCATION

Date: _____
 Start time: _____ End time: _____
 Place (postcode or lat/long): _____
 Location: _____

HABITAT

scrubs grassland
 agroecosystem forest
 gardens, parks & urban areas
 other: _____

WEATHER CONDITIONS

Temperature _____
 Cloud cover _____
 Wind _____

Group: Entomologists

School: _____ Grade: _____

Role: _____ Name: _____

Observer I: _____
 Observer II: _____
 Form filler: _____
 Photographer: _____

Plant: _____ **Area:** _____ m² **Duration of observation per plants:** 15 min

Insects	Insect guilds							Name <small>Try to identify the insect with the LIFE4POLLINATORS entomological field guides and write the name of it or describe it!</small>	Insect behaviour <small>Does the insect interact with the flowers? What do you think the insect is doing? (e.g. feeding, collecting pollen, resting, mating, patrolling, other)</small>	Photo time
	Bee	Wasp	Hoverfly	See-fly	Butterfly	Moth	Beetle			
Insect 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	<small>Number of flowers contacted in each visit</small>									
Insect 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	<small>Number of flowers contacted in each visit</small>									
Insect 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	<small>Number of flowers contacted in each visit</small>									
Insect 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	<small>Number of flowers contacted in each visit</small>									

Upload your photos here: <https://life4pollinators.eu/en>

Five sheets were returned for the second activity. Two groups observed the floral visitors on *Trifolium incarnatum*, recording 17 wild bees, 6 by bee flies, 1 by beetle and 1 by butterfly, within two 15' observation intervals (30' observation time). One group observed the insect visitors of *Ajuga reptans*, recording a beetle visiting 10 flowers, an *Osmia* visiting 10 flowers and an *Anthophora* visiting 12 flowers. Another group recorded the insect visits on *Ranunculus bulbosus* : 3 visits of a wild bee and three 1-flower visits by three different hover flies. The fifth group recorded floral visitors behaviour on *Salvia pratensis*: one bee visited 4 flowers, another bee visited 6 flowers, a third bee visited 18 flowers, a hover fly visited 3 flowers.



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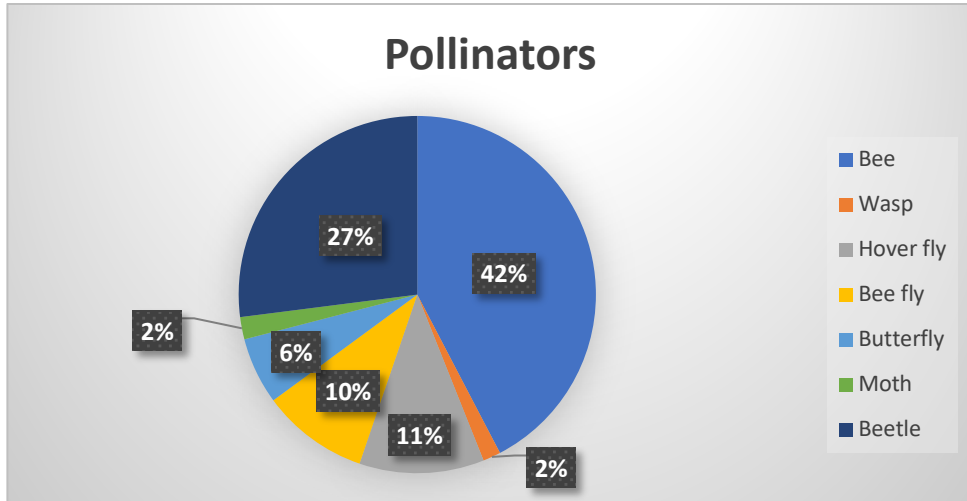


Figure 1. Pollinators seen during the third activity

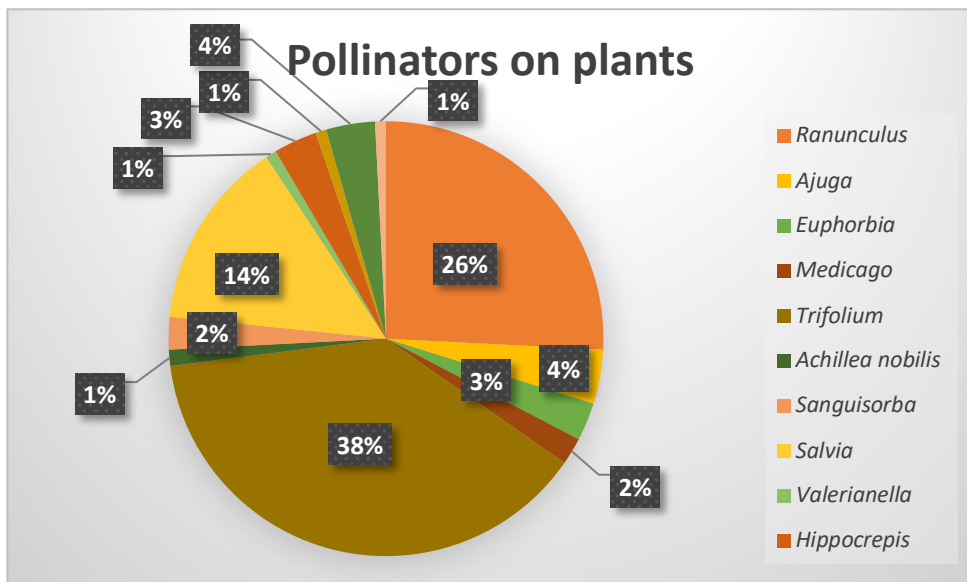


Figure 2. Total number of insect visits recorded on the flowered plants within all transects



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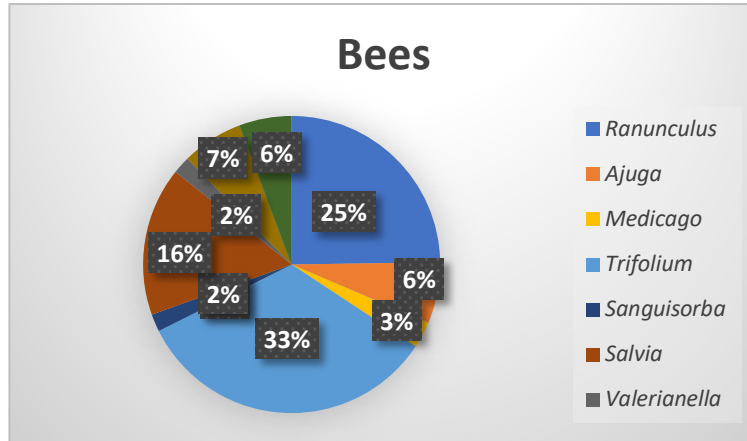


Figure 3. Plant taxa visited by bees during the third activity

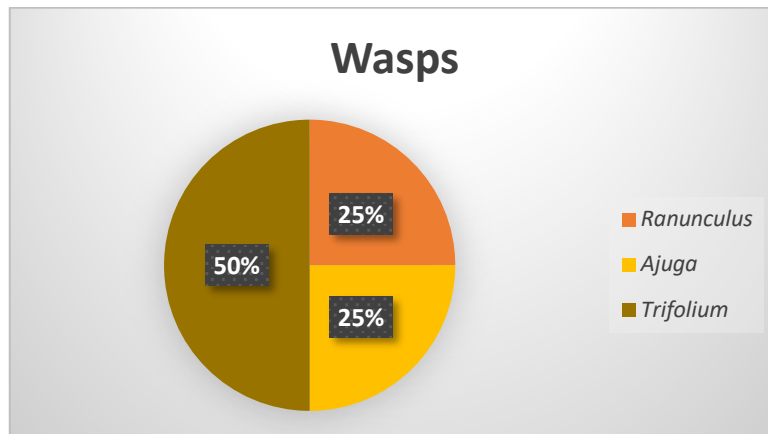


Figure 4. Plant taxa visited by wasps during the third activity

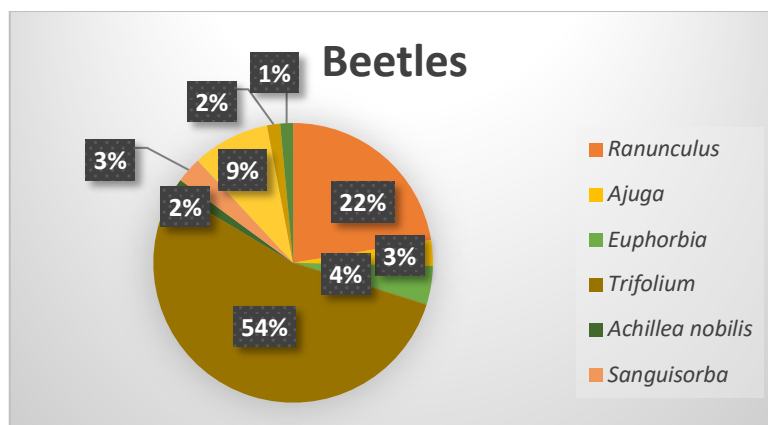


Figure 5. Plant taxa visited by beetles during the third activity



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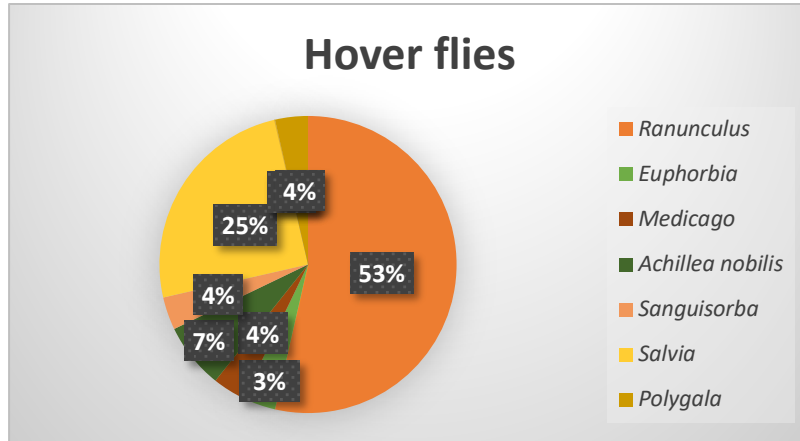


Figure 6. Plant taxa visited by hover flies during the third activity

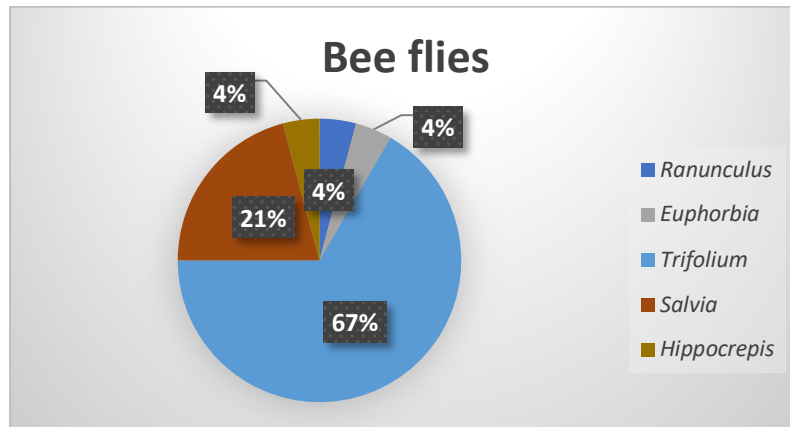


Figure 7. Plant taxa visited by bee flies during the third activity

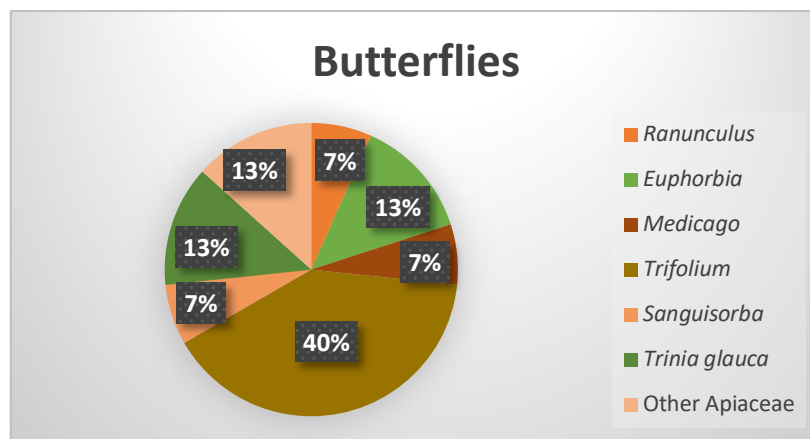


Figure 8. Plant taxa visited by butterflies during the third activity



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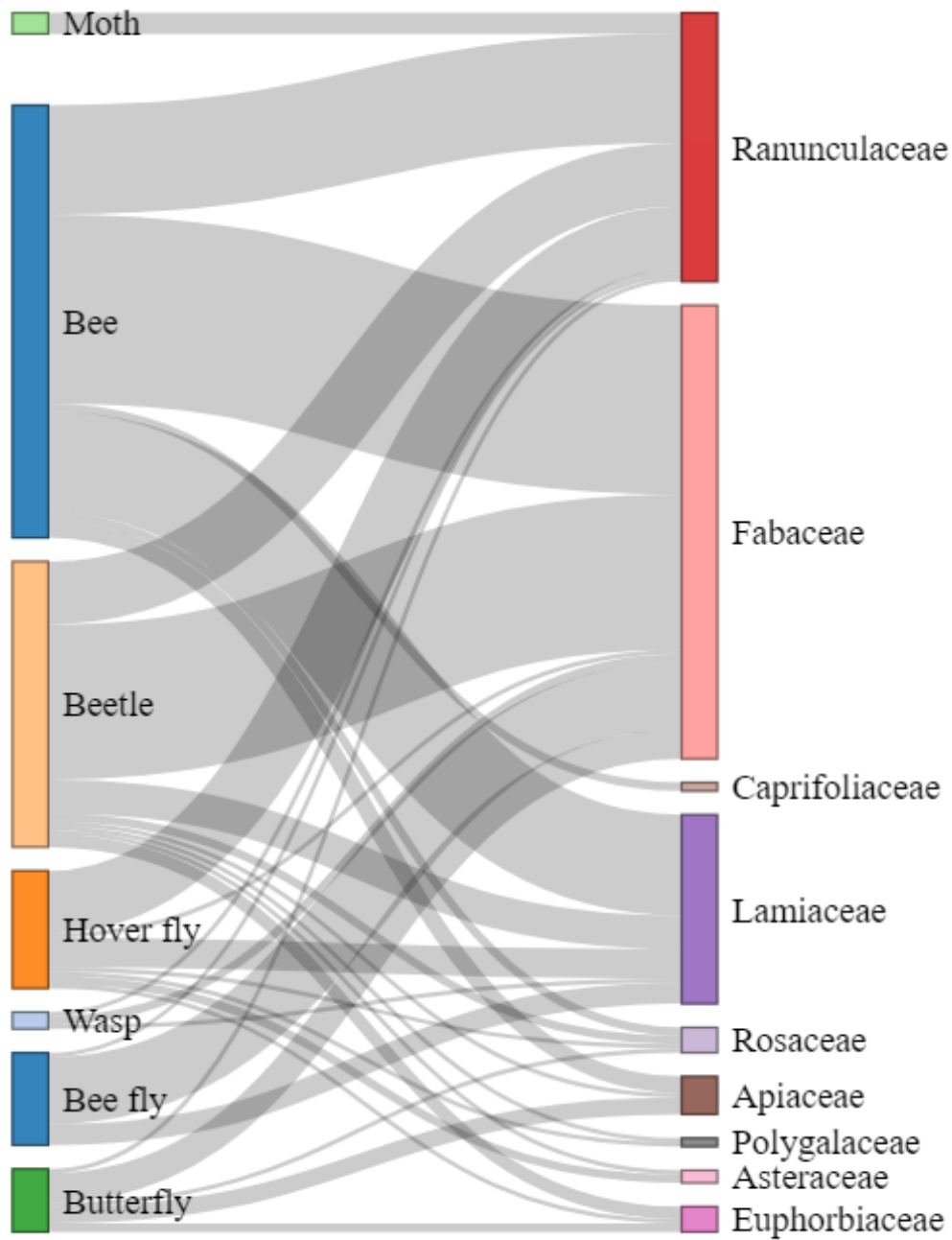


Figure 9. Network of plant-pollinator interactions recorded during the pollination activity



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Bumble bee (*Bombus* sp.) feeding nectar on clover blossom (*Trifolium incarnatum* L.)



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Two beetles (*Tropinota hirta* and *Oxythirea funesta*) on the flower head of the plant species *Gelasia villosa* (Scop.) Cass.