



Pollinator Paradise

Pesticide reduction and long-term monitoring in the Channel Islands



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Guernsey: 2017
Jersey: 2018



Education

Conservation

Campaigning

Research

Education



- 2019 - Bumblebees
- 2020 - Butterflies
- 2021 - Solitary bees
- 2022 - Beetles
- 2023 - Moths

Pollinator PROJECT.GG **20 Guernsey Bugs & Beetles** In partnership with cg/Canaccord Genuity

These species found in Guernsey. Some are not representative.

| | | | | |
|--|---|---|--|--|
| 1. 14-Spot Ladybird <i>(Propylaea quatuordecimpunctata)</i> | 2. Black Oil Beetle <i>(Meiocoelus proscarabaeus)</i> | 3. Weevil <i>(Polydrusus formosus)</i> | 4. Black Sexton Beetle <i>(Nicrophorus humator)</i> | 5. Firebug <i>(Pyrococcus apterus)</i> |
| 6. Crucifer Shieldbug <i>(Eurydema cleraceal)</i> | 7. Harlequin Ladybird <i>(Harmonia axyridis)</i> | 8. Tiger Beetle <i>(Cicindela campestris)</i> | 9. Leafhopper <i>(Euranthus interruptus)</i> | 10. Small Bloody-nosed Beetle <i>(Timarcha goettingensis)</i> |
| 11. Minotaur Beetle <i>(Tyrphaeus typhoeus)</i> | 12. Figwort Weevil <i>(Cionus hortulana)</i> | 13. Hawthorn Shieldbug <i>(Acanthosoma haemorrhoidale)</i> | 14. Cockchafer <i>(Melolontha melolontha)</i> | 15. Swollen-thighed Beetle <i>(Oedema nobilis)</i> |
| 16. Green Shieldbug <i>(Piezodorus lituratus)</i> | 17. 7-spot Ladybird <i>(Coccinella septempunctata)</i> | 18. Dock Bug <i>(Coreus marginatus)</i> | 19. Sulphur Beetle <i>(Ctenopus sulphureus)</i> | 20. Click Beetle <i>(Agrypnus murinus)</i> |

Pollinator PROJECT.GG **20 Guernsey Solitary Bees** Some bees are painted without wings or legs to help with identification

| | | | | |
|--|--|--|---|---|
| 1. Davies' Colletes <i>(Colletes diversus)</i> | 2. Orange-tailed Mining Bee <i>(Andrena haemorrhoa)</i> | 3. Cliff Mining Bee <i>(Andrena thoracica)</i> | 4. Wool Carder Bee <i>(Anthidium manicatum)</i> | 5. Pantaloon Bee <i>(Dasypoda heptemeris)</i> |
| 6. Ivy Bee <i>(Colletes hederae)</i> | 7. Ashy Mining Bee <i>(Andrena cineraria)</i> | 8. Tawny Mining Bee <i>(Andrena fulva)</i> | 9. Red Mason Bee <i>(Osmia bicornis)</i> | 10. Gooden's Nomad Bee <i>(Nomada goodeniana)</i> |
| 11. Common Yellow-face Bee <i>(Halictus communis)</i> | 12. Gwynne's Mining Bee <i>(Andrena bicolor)</i> | 13. Great Banded Furrow Bee <i>(Halictus scabrosus)</i> | 14. Patchwork Leaf-cutter Bee <i>(Megachile centuncularis)</i> | 15. Flavour Nomad Bee <i>(Nomada flavus)</i> |
| 16. Yellow-legged Mining Bee <i>(Andrena fangii)</i> | 17. Violet-winged Mining Bee <i>(Andrena violacea)</i> | 18. Common Furrow Bee <i>(Halictus confusus)</i> | 19. Silvery Leaf-cutter Bee <i>(Megachile leucosticta)</i> | 20. Hairy-footed Flower Bee <i>(Anthophora plumipes)</i> |

The Pollinator Project would like to thank Richard Levington for the use of his wonderful bee illustrations which feature in 'The Field Guide to Bees of Great Britain and Ireland' by F. & R. Levington. See www.richardlevington.co.uk for information on the artist.

Conservation



Campaigning



Forum 2019

Amnesty 2021



888

Items

51%

Unapproved

DON'T SPRAY THERE'S A BETTER WAY

EVEN SMALL AMOUNTS OF PESTICIDES, INCLUDING WEEDKILLER, CAN AFFECT OUR WATER SUPPLY AND DAMAGE ECOSYSTEMS

TOXIC TO WILDLIFE

Pesticides don't just kill the weeds and insects you don't want, but impact on the wider ecosystem too, killing beneficial insects and disrupting food chains.

CAUSES WATER SHORTAGES

On average we're unable to collect 250 million litres of water annually as a result of contamination from pesticides. As temperatures rise due to climate change, this adds extra pressure to our water resources and could result in water restrictions.

SPRAY TODAY, PAY TOMORROW

Continued use of pesticides, inc. weedkillers, may result in the need for additional and expensive water treatment systems which will have an impact on customer bills.

WHAT CAN YOU DO INSTEAD?

PREVENTION

Apply weed barriers in the form of mulch or wood chips. This will also help stop your plants from drying out and therefore reduce your need for watering.

ECO-FRIENDLY SOLUTIONS

Vinegar solutions can help fight off garden pests. Boiling water will tackle most weeds or invest in a weed torch to scorch them away.

DIY

Hand weeding is a great way to get familiar with your garden and get some exercise too.

DO YOUR BIT TO PROTECT GUERNSEY'S PRECIOUS WATER RESOURCE & ENVIRONMENT. VISIT: WATER.GG

 **GuernseyWater**
#PESTICIDFREEGUERNSEY

A glyphosate ban

2022

2025

 WE ARE GOING 
**Pesticide
Free
AND
Pollinator
Friendly** 
 **Pollinator** 
PROJECT.GG

SUPPORTED BY  **GuernseyWater**

Pesticide Free Guernsey

Pesticide Reduction - A process

Human Health

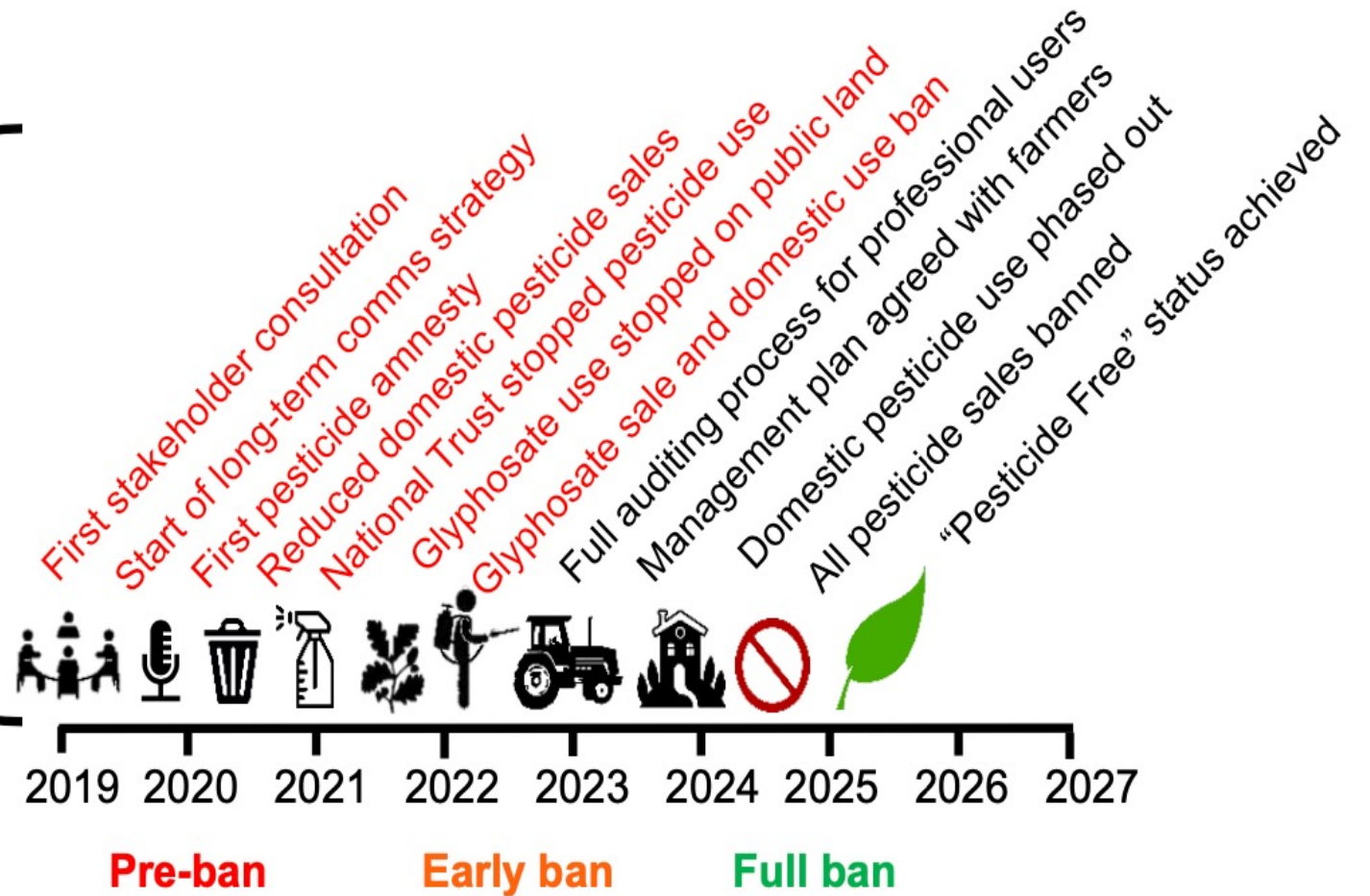
Soft power

Collaboration

Pesticide

Ban

Milestones



An opportunity!



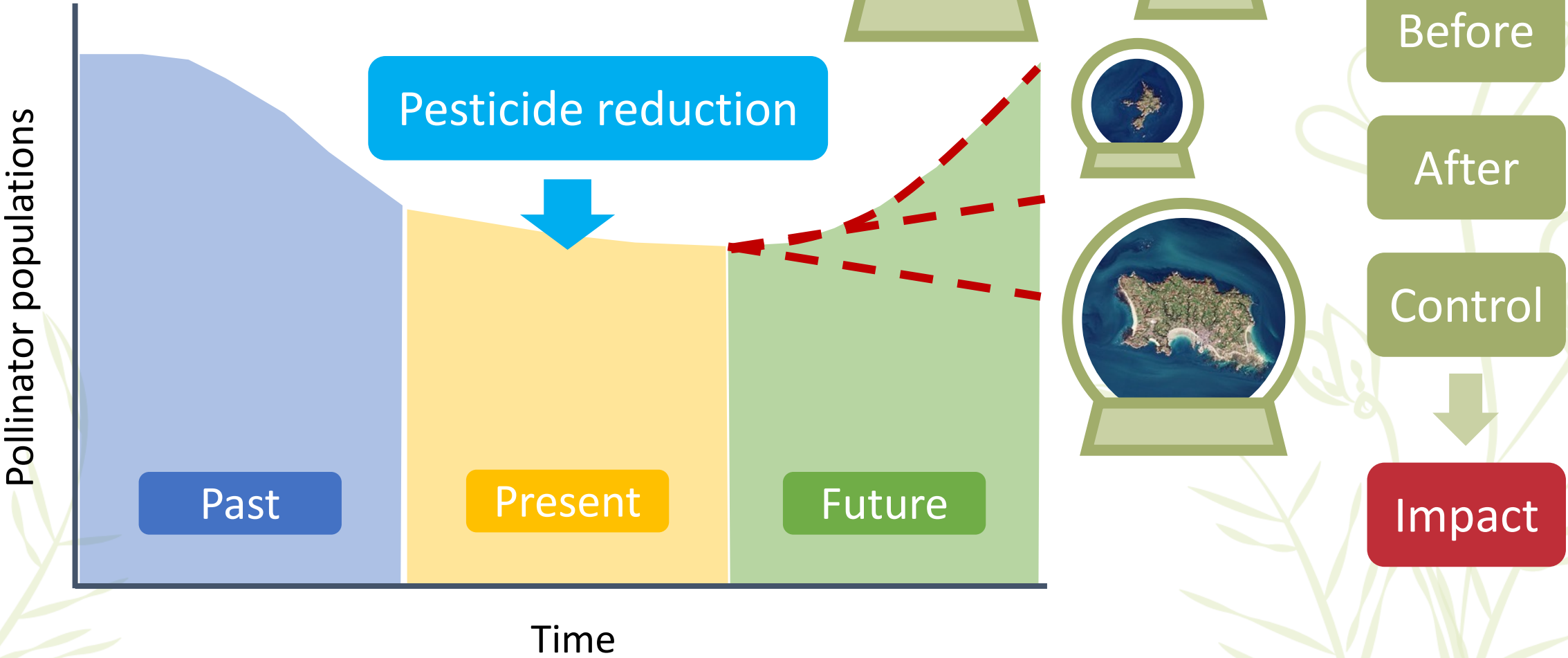
Pesticide Free Guernsey



University of
BRISTOL

Ecological impact of a
pesticide ban

Expectation



Summary methods

1. Pollinator Community
2. Bumblebee colony density
3. Cascading impacts **predators**
4. Cascading impacts **parasitoids**



Survey Methods

1. Pollinator Community

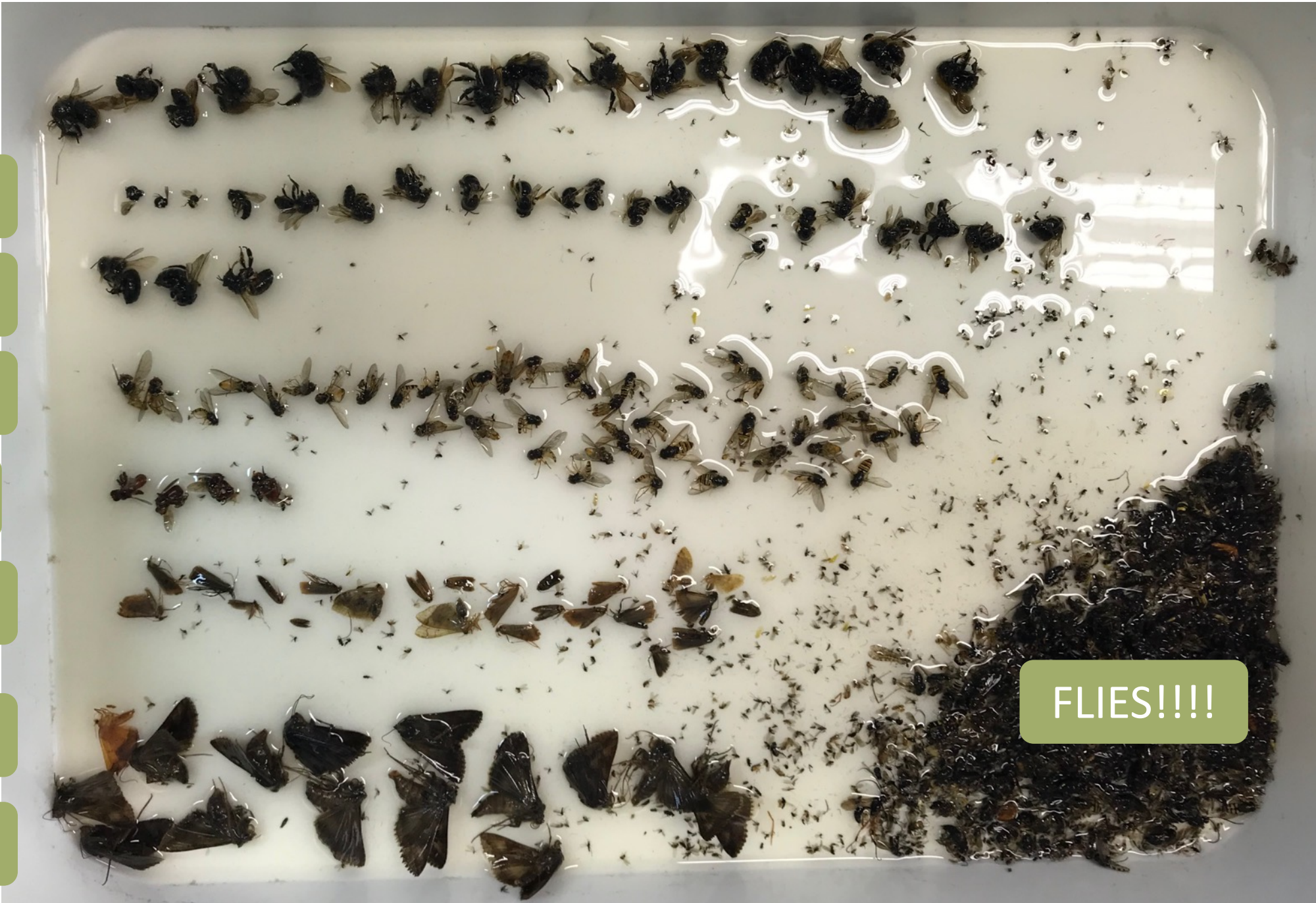
Malaise Traps

Guernsey, Jersey, Alderney and Sark
Meadow and Garden Sites



Community Structure + Hoverfly and Moth species





Bumblebees

Solitary Bees

Honey Bees

E. balteatus

Conopids

Micro moths

Macro moths

Butterflies

FLIES!!!!

Community composition and trends

Figure D1cia. Trend in the distribution of UK pollinators, 1980 to 2019.

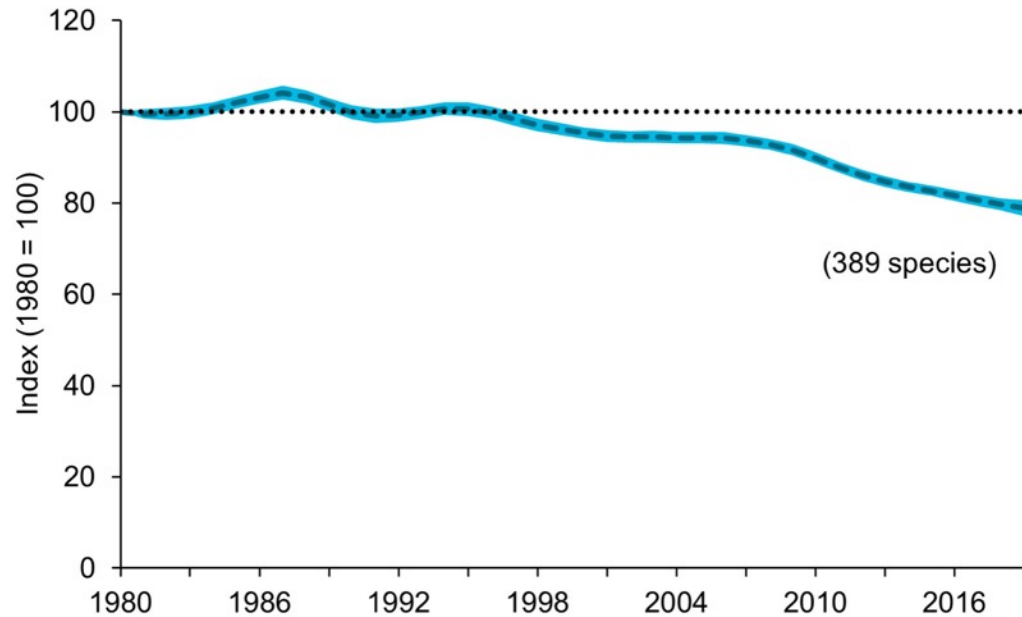
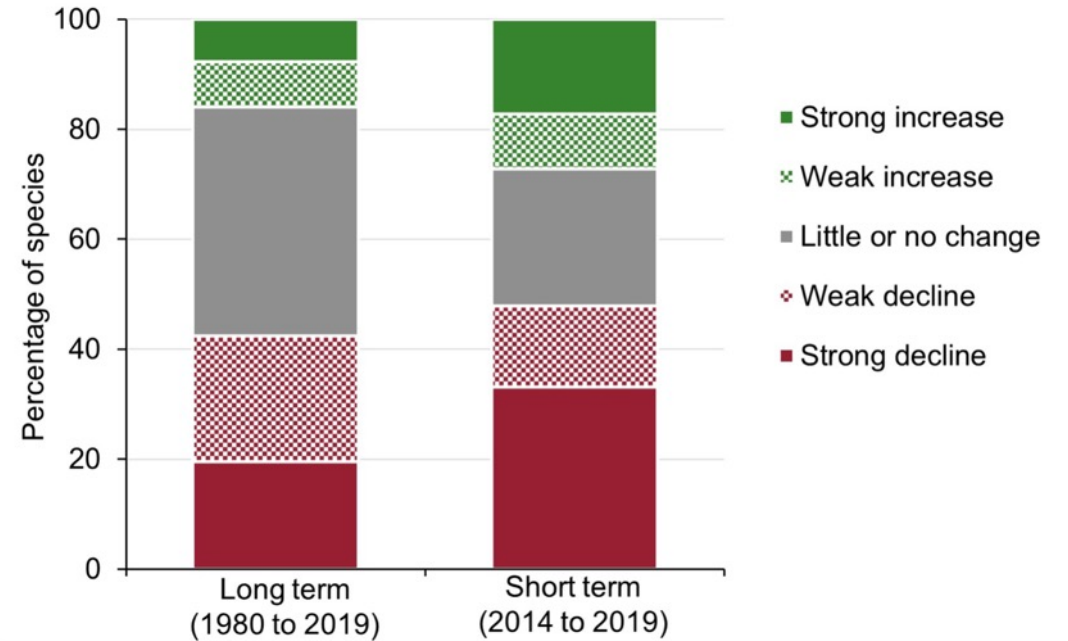
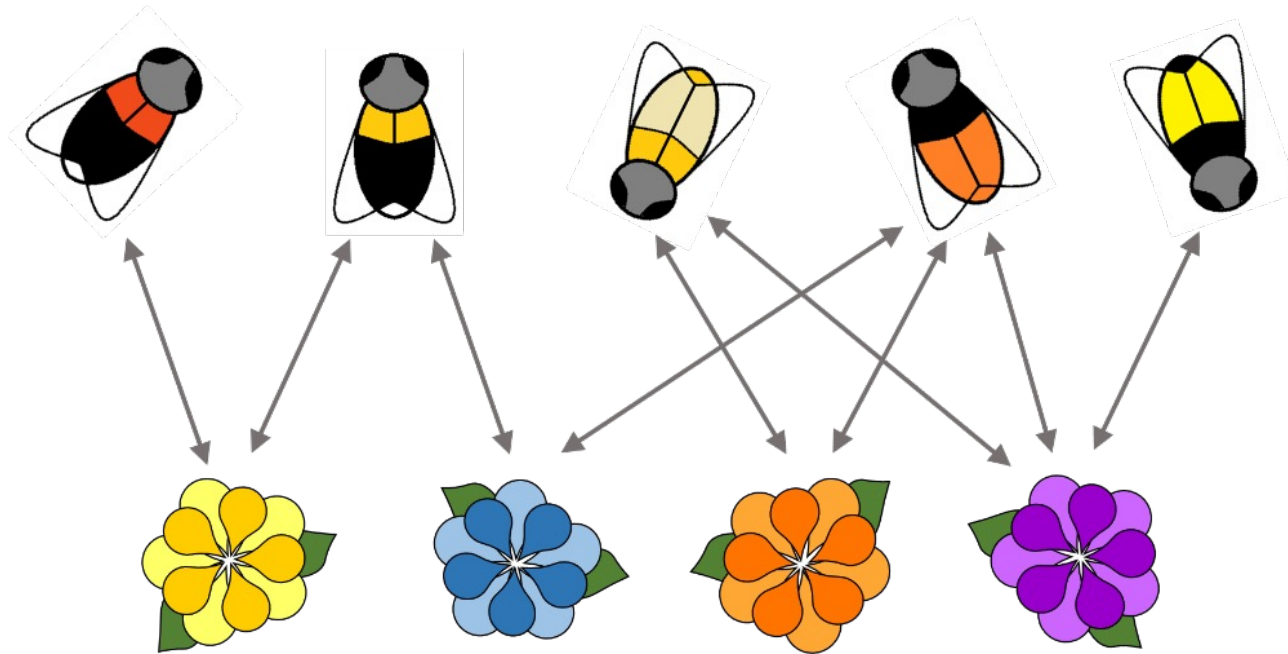


Figure D1cib. Long-term and short-term changes in individual species' trends for UK pollinators, 1980 to 2019.



(Defra 2023)

Building a network

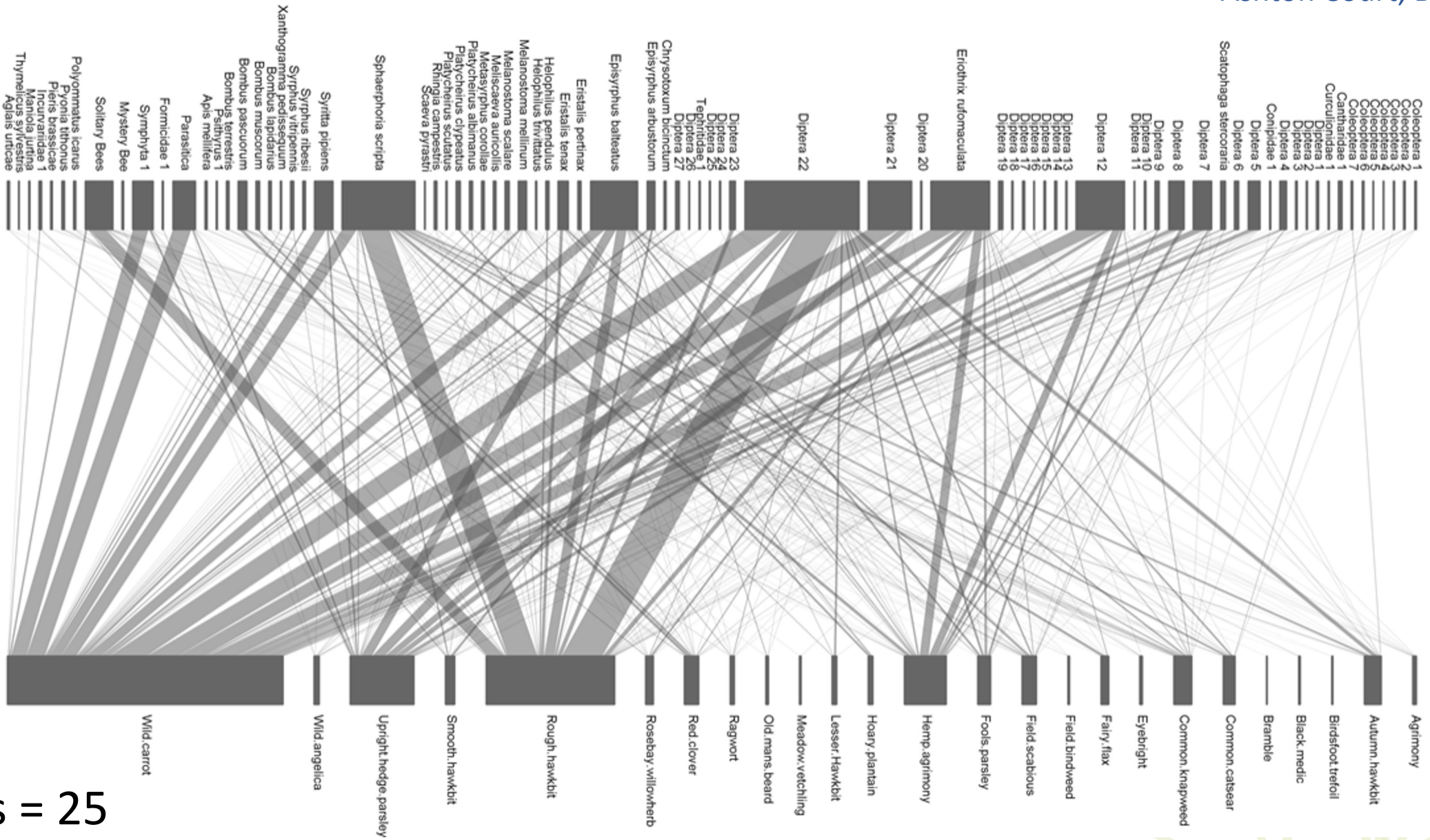


From malaise trap samples

From the literature

Pollinators = 79

Memmott 1999
Ashton Court, Bristol UK

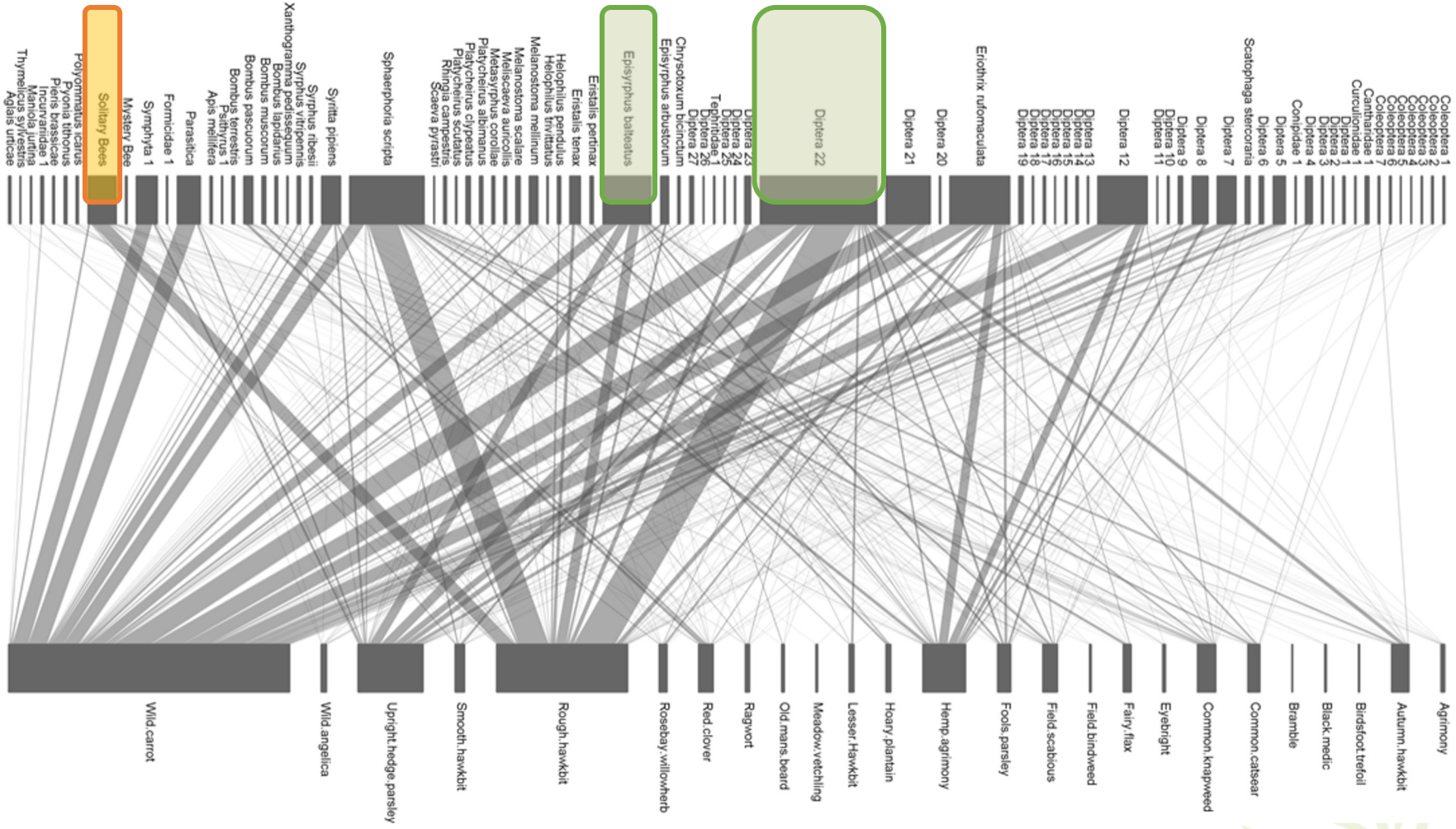


Plants = 25

Specialists vs generalists

Generalist fly species

Specialist bee species



Migratory species?

Migrants



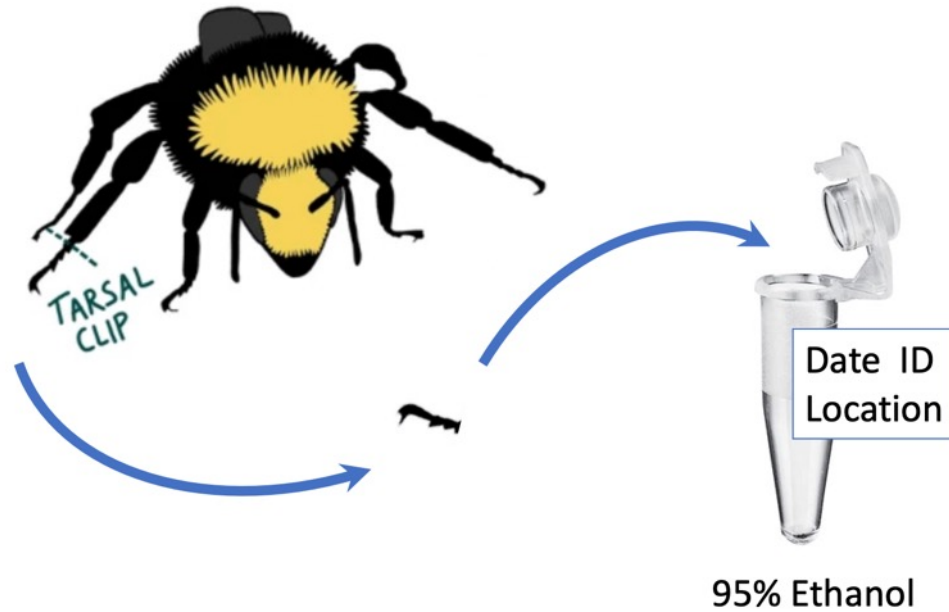
Locals



Baseline
population

Survey Methods

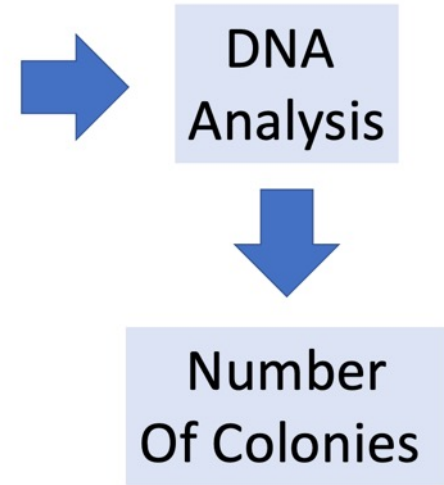
2. Bumblebee colony density



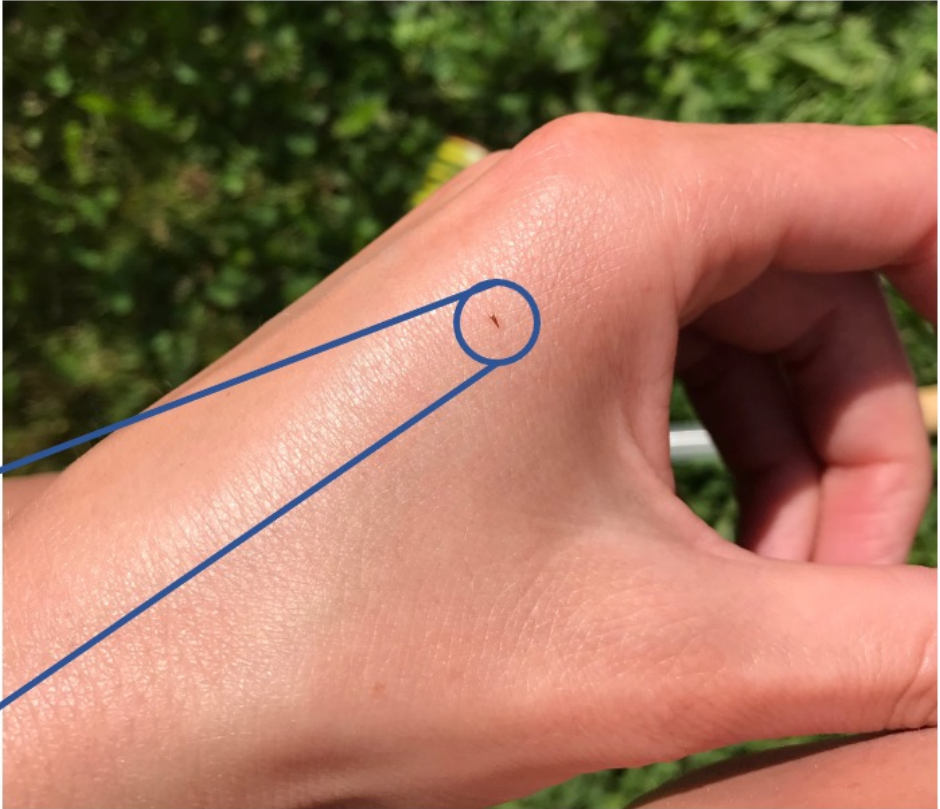
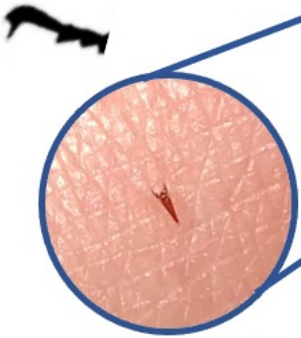
Bombus terrestris



Guernsey, Jersey, Alderney and Sark



Surveying in Sark 2023



Survey Methods

3. Cascading impacts predators

Bat detectors

Guernsey, Jersey, Alderney and Sark
Meadow and Garden Sites



Survey Methods

4. Cascading impacts parasitoids

Malaise traps

Guernsey, Jersey, Alderney and Sark
Meadow and Garden Sites



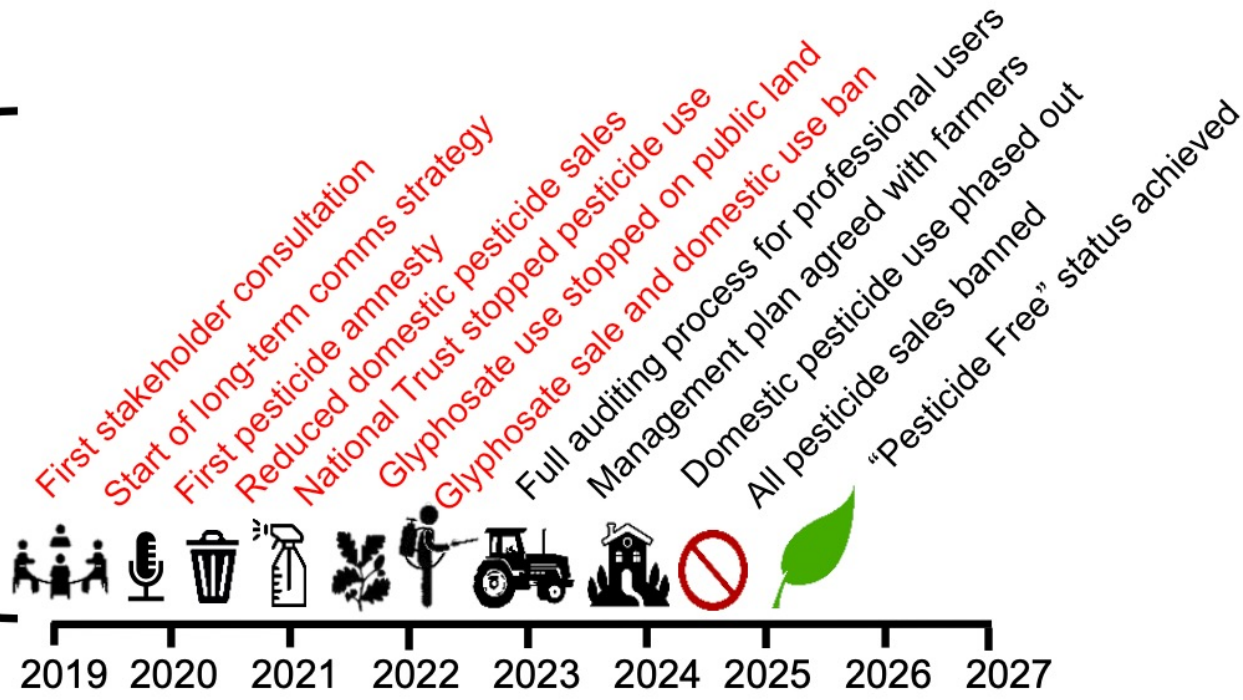
Sicus ferrugineus

Summary methods

1. Pollinator Community
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3. Cascading impacts **predators**
4. Cascading impacts **parasitoids**

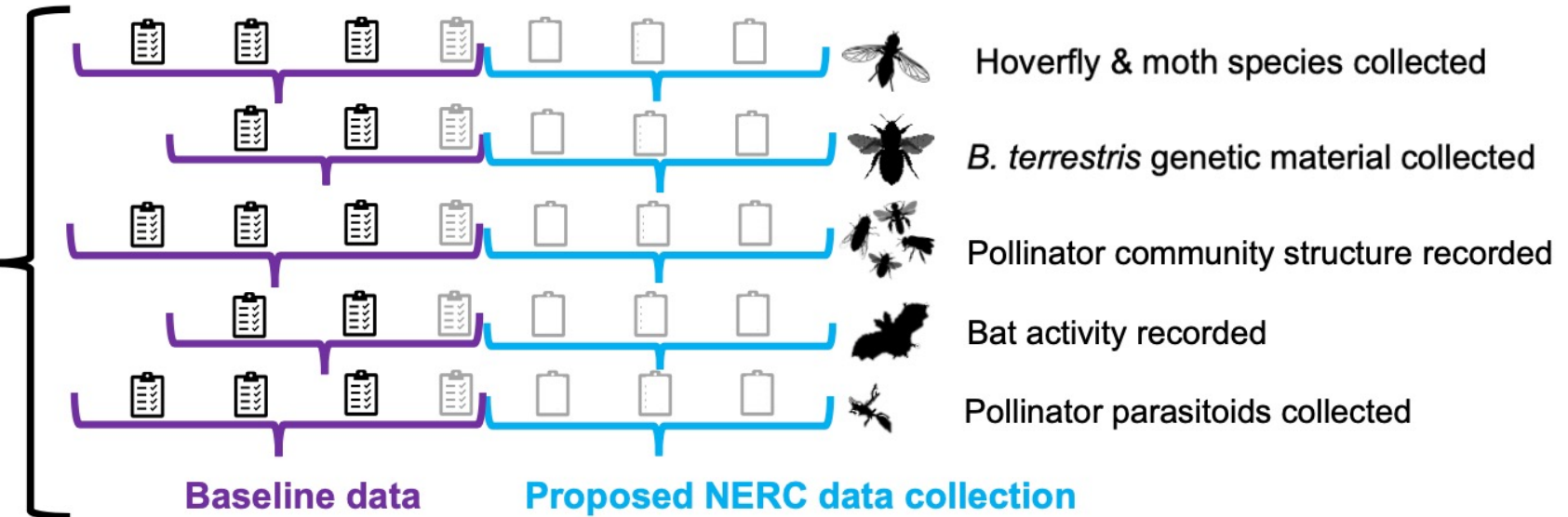


**Pesticide
Ban
Milestones**



Pre-ban Early ban Full ban

**Data
Collection**



Thank you!





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