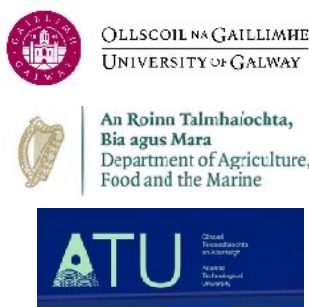
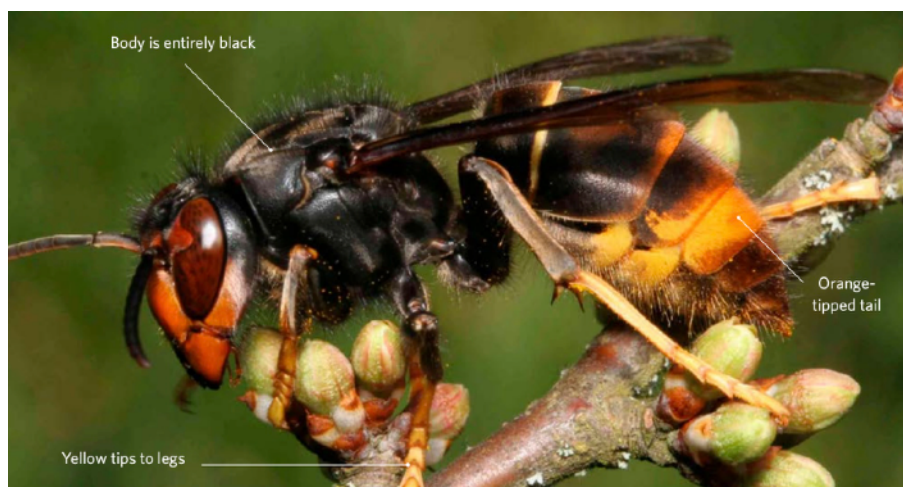




NATIONAL APICULTURE PROGRAMME NEWSLETTER



National Biodiversity Data Centre (invasives.ie)/photo credit Somerset Beekeeping Association

New Reporting system for the Asian hornet

The Asian hornet (*Vespa velutina*), a species native to Southeast Asia, has dispersed widely across continental Europe following its inadvertent introduction to France in 2004. It has potential to cause major ecological harm, particularly to native pollinators, as a single nest can cause substantial declines in honeybee populations.

Efforts to tackle invasive species are set to receive a boost through a new collaboration. The Invasive Species Bureau has been set up between the National Parks and Wildlife (NPWS) and the National Biodiversity Data Centre NBDC.

Aimed at improving monitoring and protecting native biodiversity, the initiative supports the implementation of EU regulations on invasive species while enhancing Ireland's capacity to manage them effectively.

With this a Rapid Response model for the Asian hornet, outlining a coordinated plan to prevent the species from establishing itself in the country. Minister O'Sullivan said: "Each step within this roadmap – from early detection, through to investigation, eradication strategy and deployment of all control measures – is based on the best available scientific evidence".

If a suspected sighting is made, then log onto invasives.ie. Information sourced from www.gov.ie (From: Department of Housing, Local Government and Heritage published 19th May 2026).

Have your say!

Want to get in touch or share some information?

What would you like to see in the next edition?

Contact us

website:

nationalapicultureprogramme.com

Instagram:

[national_apiculture_programme](https://www.instagram.com/national_apiculture_programme)

Facebook

National Apiculture Programme

Email:

nationalapicultureprogramme@gmail.com

Recommended Reading

The Yellow-Legged Asian Hornet

A Handbook



Dr Sarah Bunker

Second Edition of The Asian Hornet Handbook

Embryo and primary nests:

At this stage all wasp and hornet nests look similar. **Only report if seen with Asian hornet.**

**Secondary nests are larger and should not be disturbed.**

Images from left to right show secondary nests in a building, high in a tree and in a hedge. **Use binoculars to identify secondary nests from a safe distance.**



Please report Asian hornet sightings immediately with a photo

Use our online recording form:

<https://invasives.ie/asianhornetreporter>

For more information visit www.invasives.ie or email invasives@biodiversityireland.ie

Image credits unless otherwise stated: Embryo nest: John de Carteret, other nest images: NMS

Scan to report
an Asian hornet
or an Asian
hornet
nest.



In other News

It's that time of year again, the annual COLOSS survey on winter colony losses is due. The data collected is a representation of Irish beekeeping so it's important as many of you complete the survey. You can click the link here to take you to the survey monkey.



COLOSS: Honey Bee Winter Colony Loss Survey 2025/2026

<https://www.surveymonkey.com/r/coloss2026>

Recommended reading

Asian Hornet



The Beekeeper's Guide to Defences
against the Yellow-legged Hornet
Vespa Velutina

Andrew Durham

A whats app group has been established where you can keep up to date with other beekeepers across Ireland, join the link below, to the announcement group.

Please keep posts respectful, on-topic, and follow the group rules at all times.

<https://chat.whatsapp.com/KYRhKd7XbcO8EHPME7QB26?s=cl&p=i&ilr=2>

From there you can also join your regional group.

Connacht <https://chat.whatsapp.com/LsFMcrybr6QDBslba8vKW6?s=sw&p=i&ilr=2>

Leinster <https://chat.whatsapp.com/DKOZdTs8tAz7jPSxpIY1PI?s=sw&p=i&ilr=2>

Munster <https://chat.whatsapp.com/JGeVdC9hqUMLmluHactBRs?s=sw&p=i&ilr=2>

Ulster <https://chat.whatsapp.com/LqiBT8O9g66JtCMLd4ELEY?s=sw&p=i&ilr=2>

University of Galway

The National Apiculture Programme 2023-2027



Funded by the Department of Agriculture, Food and the Marine and the European Union.



An Introduction to the project, tasks involved and what we have achieved so far in **Task 4**

Grace P McCormack¹, Sheila Faherty², Vickie Henshaw¹

¹ University of Galway, ² Atlantic Technological University

NAP Tasks 2023-2027

Lead by teams in UCD and University of Galway

- TASK 1** To provide technical and advisory assistance to beekeepers and beekeeping organisations
- TASK 2** Provision and distribution of free-beekeeping resources related to beekeeping in Ireland
- TASK 3** Combat beehive invaders and diseases, particularly Varroosis(a): Field trials of alternative Varroa control methods and tests of co-infection of emerging pathogens
- TASK 4** (b): Varroa treatment-free colony assessment and daughter colony rearing
- TASK 5** (c): Pollen nutrition quality evaluation
- TASK 6** (d): Nutrition – functional metagenomics
- TASK 7** Continue Ireland's participation in the COLOSS network
- TASK 8** Investigation of possible reasons for colony losses (a): microbiome perturbation
- TASK 9** Investigation of possible reasons for colony losses (b): pesticides in comb wax
- TASK 10** Establish incidence of American Foulbrood and European Foulbrood across Ireland, and determine factors that lead to clinical infections
- TASK 11** Test of the American Foulbrood vaccine

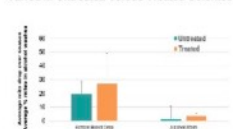
Task 4 Methods

1. Colonies established in eight apiaries from TF stock
2. Bottom board debris examined from all the hives on a monthly basis. Varro count and observation of hive activity
3. Alcohol wash as second method of varroa count
4. Examine brood frames for evidence of uncapping/recapping behaviour



Processing of bottom board samples & collection of samples of brood and bees to send to Mary Coffey at the DAFM Diagnostic services

Varroa in Untreated Versus Treated Colonies



Average daily mite drop from Jun-Dec 25 from mite boards and alcohol wash. Photo of uncapping behaviour

NAP Collaborating Institutions



Acknowledgements

Eoghan Mac Giolla Coda, Colm O'Neill, Alan Forsyth, Peter Neary, Dr Helen Mooney, Mick Vorspall, - Participating beekeeper's, Eoin MacLoughlin, University of Galway, Dr Julie Jones, Principal Investigator, Dr Mary Coffey, See diagnostics DAFM

Task 4 Treatment Free pilot study

Aim: evaluate treatment free colonies:

- ❖ Brood Pattern
- ❖ Docility
- ❖ Steadiness on the comb
- ❖ Swarming
- ❖ Propolis production
- ❖ Honey yield



Introduction to Treatment-free (TF)

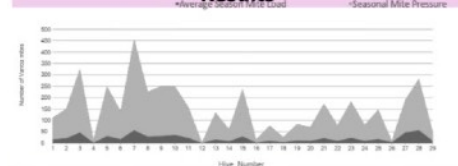
- ❖ Hygienic behaviour evolved as part of honey bee social immunity.
- ❖ Involved in resistance to American foulbrood and chalkbrood-they can detect, uncup and remove diseased brood from the nest before the organisms reach sporulating stage.
- ❖ Traits could have been coopted to deal with Varroa
- ❖ Varroa resistance honey bee populations/strains present across the world
- ❖ Trend of increasing numbers of beekeepers being treatment free



Possible Mechanisms



Results



Variable Varroa loads across colonies. TF slightly lower mite load than treated. Chalkbrood present in all colonies, Nosema in some, AFB in two. No statistically significant association between mite load and honey yield. One hive with daily drop of 35 mites in Sept 2025 yielded 53Kg honey

- | | | | |
|---|---------------------|----------------------|-----------------------------------|
| 1. Recapping rare | 2. Grooming present | 3. Uncapping common | 4. queen issues (low mite levels) |
| 5. Pupal parts present but not abundant | 6. Thriving or not? | 7. Chalkbrood common | 8. DW rare |

Dr Sheila Faherty ATU & Vickie Henshaw NAP beekeeping advisor, presenting the NAP poster at the Native Irish Honey Bee Conference.



Professor Grace McCormack receiving the Rev. Sam Miller award. This award is given to those who have shown outstanding service to the preservation & promotion of the Native Irish Honey bee. Congratulations Grace.



Vickie collecting bottom board samples for analysis.



This poster presents the progress achieved to date on Task 4 at the University of Galway. The assessment methodology was informed by Steve Riley's book 2024 (*The Honey Bee Solution to Varroa*), which details an approach beekeepers can follow. Within this task, both treated and untreated colonies were monitored over an annual cycle to assess *Varroa destructor* infestation levels. Monitoring was conducted through the analysis of bottom board debris, in combination with alcohol washes, brood sampling, and adult honey bee sampling. Collected samples were subsequently submitted to Dr Mary Coffey at the Department of Agriculture, Food and the Marine (DAFM) for diagnostic analysis.

Sampling remains ongoing to capture seasonal variation in Varroa infestation levels. Further data collection will enhance the robustness of the overall analysis.

Mean while at University of Dublin

Comparing different Varroa control treatments

Honey bees are essential pollinators, supporting biodiversity and food production. However, beekeepers continue to face major challenges from colony losses, which are often linked to several interacting stressors, including parasites, pathogens, pesticides, nutrition and environmental conditions.

One of the most serious threats to honey bee health is the parasitic mite *Varroa* destructor. *Varroa* weakens both developing and adult bees and is also an important vector of honey bee viruses. Managing *Varroa* effectively is therefore a key priority for colony health and sustainable beekeeping.

Current *Varroa* control often relies on synthetic chemicals such as amitraz. While these can be effective, repeated use raises concerns around resistance, residues in hive products, and possible effects on bee health. For this reason, there is a strong need to evaluate alternative and sustainable *Varroa* control approaches under real field conditions.



Pictured are some of the hives used in Egehan Özfen's study.

As a part of the National Apiculture Programme of Ireland, PhD student Egehan Özfen is leading a two-year field experiment involving 75 honey bee colonies in Ireland, comparing different *Varroa* management strategies. These include conventional amitraz treatment, organic acid-based treatment, drone brood trapping, treatment-free colonies with reported *Varroa*-resistant traits, and untreated/control colonies for comparison.

We are now in the second and final year of the field experiment. Throughout the project, colonies are being monitored for a wide range of health and performance indicators, including colony strength, brood development, adult bee population, honey production, queen status, *Varroa* infestation levels, pathogen presence and environmental conditions.

A key aim of the experiment is not only to assess how different strategies affect *Varroa* levels, but also to understand their broader effects on colony health, productivity and overwintering success.

Overall, the National Apiculture Programme of Ireland aims to provide practical, field-based evidence to support beekeepers in making informed decisions about sustainable *Varroa* management in Ireland.

Egehan Onat Özfen

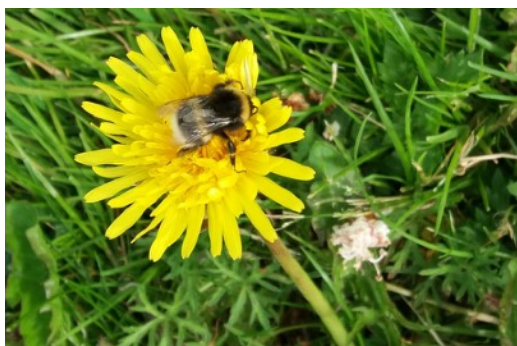
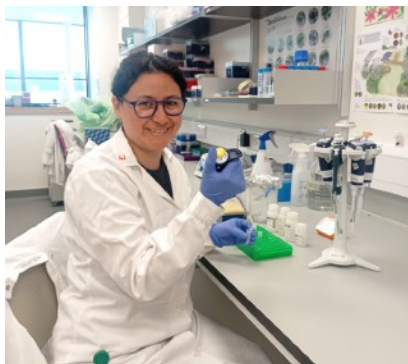
Egehan Onat Özfen is Doctor of Veterinary Medicine and PhD student at University College Dublin, focuses on honey bee health with different aspects. His work explores effects of pesticides, pathogens, and environmental stressors on honey bee colonies with field trial and genomic approaches.



As a part of the Irish National Apiculture Programme, Egehan investigates stressors, including the pesticide persistence in hive materials, the impact of major pathogens such as *Varroa* destructor and foulbrood diseases (American and European) as well as sustainable treatments, and the broader environmental factors driving disease prevalence. His research seeks to bridge between honey bee research and practical solutions, aiming to enhance the resilience and sustainability of honey bee populations.

Understanding the impact of pesticides and pathogens on bee health

Foraging bees are often exposed to environmental stressors like pesticides and pathogens. They bring these back to the hive putting their health and the whole colony at risk. As part of the NAP, PhD student Marcela Diaz is investigating how these stressors affect the gut microbial community - an essential component of bee health. The gut bacterial community in bees is known to be important for immunity, carbohydrate metabolism, and nutrient digestion, potentially affecting how bees respond to environmental stressors. In a controlled laboratory based experiment with bumblebees, Marcela found that exposure to pesticides and pathogens reduces the relative abundance of some of the gut bacterial taxa. Currently, Marcela is investigating how the gut microbiome of managed honey bees across the island of Ireland is affected by environmental stressors. These honey bee colonies have already been screened for all of the major honey bee pathogens and pesticides. Therefore Marcela's study will provide detailed information on the interaction between exposure to pesticides and pathogens, the gut microbiome, and honey bee health.



A collection of photos's from Marcela Diaz work.



Marcela Diaz

Marcela is a third-year PhD student at the School of Biology and Environmental Science in University College Dublin (UCD) working with Drs Julia Jones and Nicholas Brereton. Currently, she is investigating host-microbial interactions, particularly between bees and the bee gut microbiome. Marcela completed her MSc in Applied Microbiology at the Catholic University of Portugal and moved to Ireland to performed her research project supported by ERASMUS.



As part of the NAP-2021 and in collaboration with UCD and DAFM, she detected pesticides in honey and pollen across Ireland using liquid and gas chromatography. Marcela completed her BSc in Sciences at the Army Polytechnique School in Ecuador, her home country, with an innovative thesis project on biomolecular breeding techniques for guinea pigs. Alongside her academic training, Marcela has been an active beekeeper since 2017. Her research interests include microbial ecology and the role of the microorganisms in health and disease.