



Department  
for Environment,  
Food & Rural Affairs

# From Observation to Action:

Harnessing iNaturalist to Monitor and Elevate  
Plant Health Awareness in the UK

Duncan Allen DEFRA Risk and Horizon  
Scanning team

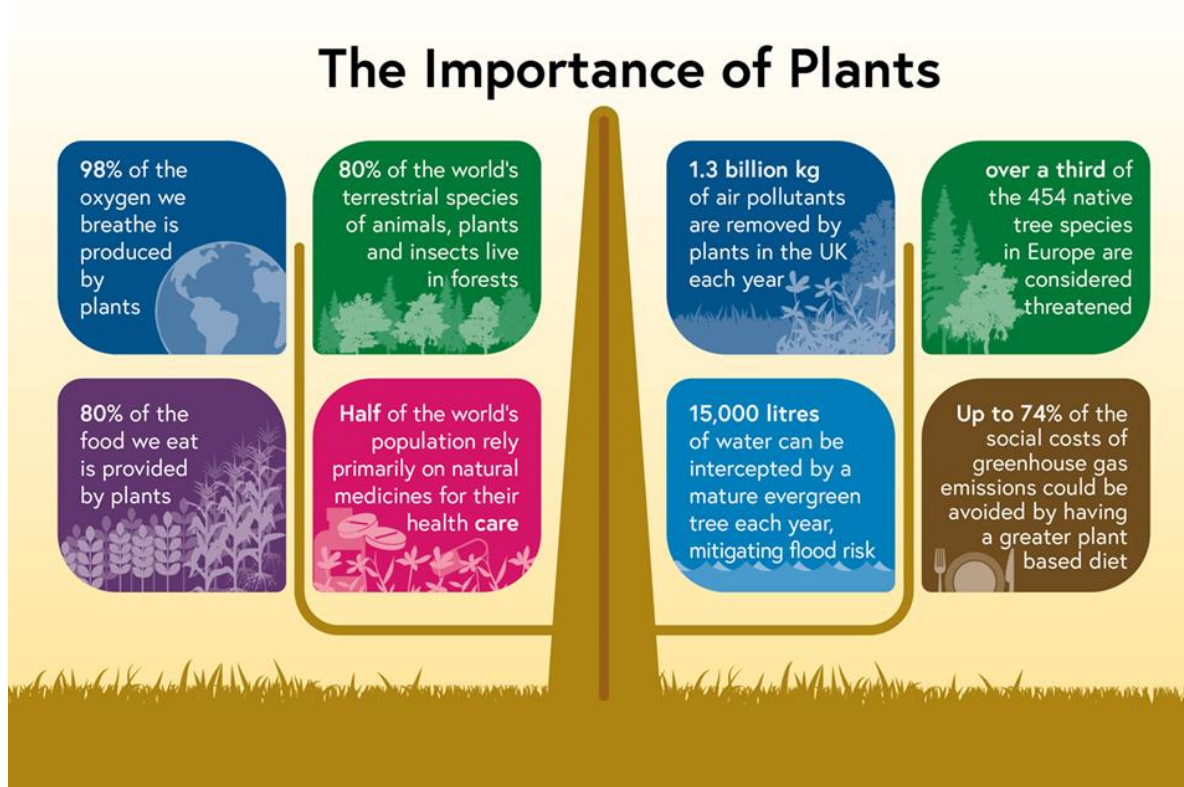
Duncan Allen – [duncan.allen\(at\)defra.gov.uk](mailto:duncan.allen@defra.gov.uk)

# Introduction

- Who am I? what am I doing here?
- Duncan Allen
- Plant Pest Specialist & Risk Analyst in Defra's Risk & Horizon Scanning Team – (spider spotter in my spare time!)
- Background in Entomology, Conservation and Diagnostics
- Worked for both Buglife and RSPB before sidestepping into a career in Plant Health

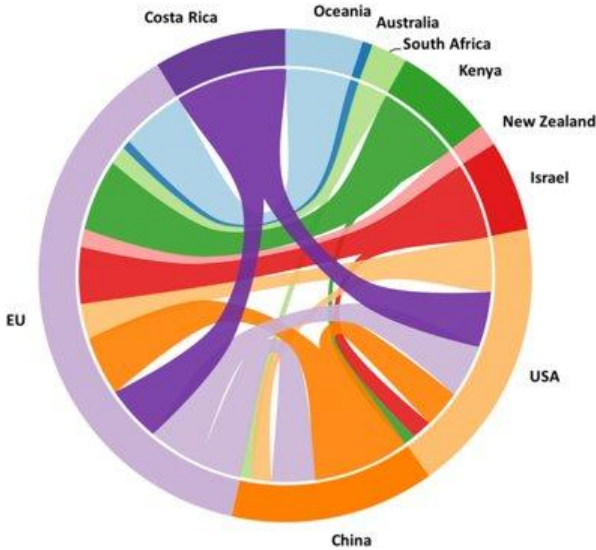


# What is plant health & why does it matter?



# Increasing pest threats reaching the UK

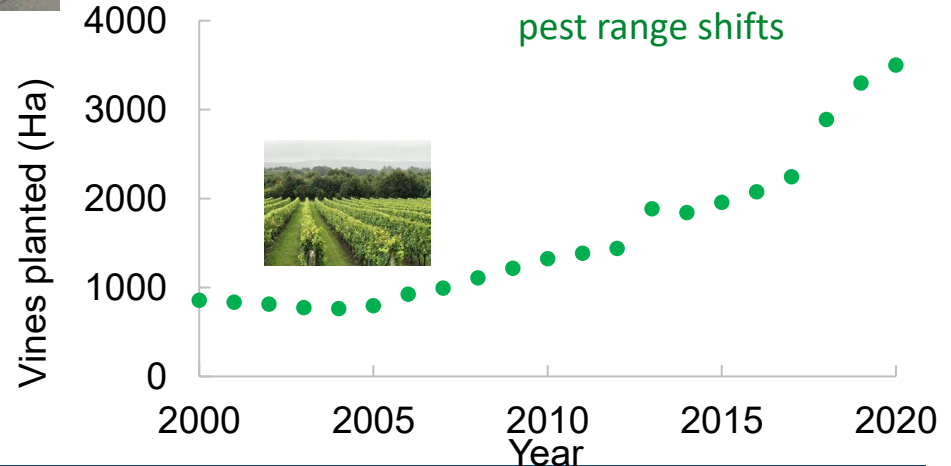
## Increasing Global Trade



**Trade of plants and plant parts:**  
widths are proportional to 2015  
import & export values.



**Climate Change:**  
Increasing production &  
pest range shifts



# Detection



Plant pests can be difficult to detect. Early on in establishment populations are often limited



While annual surveys are conducted, they cannot capture every location or instance.



Early detection is crucial for effective control/eradication.

# How Citizen Science can help



Recording community has a wealth of knowledge and experience especially in taxa that are of interest e.g. Insects and Fungi.



Passion for the environment



active in local areas, good local knowledge



More likely to notice something out of the ordinary

# Introducing iNaturalist



What It Is: Global Nature Network: A free app and website where users record and share observations of plants, animals, fungi, and more.



How It Works: Users upload observations; AI suggests species IDs, and the community helps confirm them.



Who Uses It: Nature enthusiasts, educators, scientists, and organizations worldwide. Contributions support ecological research, conservation efforts, and biodiversity mapping.



Offline Functionality allows data collection without internet access. Automatic species suggestions using AI



Integration with other biodiversity databases like iRecord and GBIF. User friendly and accessible, with active communities

# iNaturalist in Action



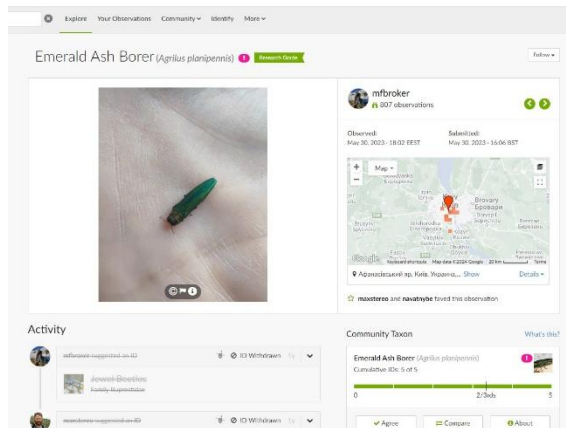
Started to use as part of Horizon scanning, Intel from other plant health organisations



Tailored searches for specific regions and taxa made it easy to find and monitor species

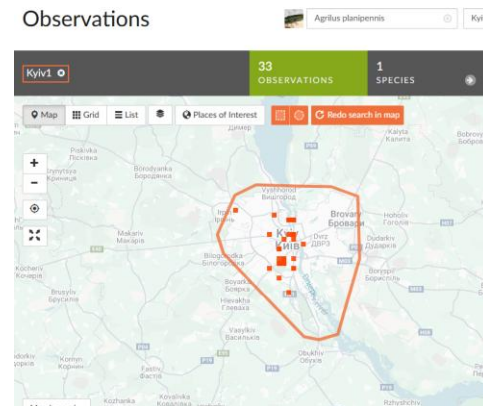
## *Agrilus planipennis*

First finding in Kyiv in 2023 from monitoring it looked to be establishing



As of 13/11/2025 there are now 33 observations of *A. planipennis* in the Kyiv region

## Observations



# Quick case study: Plane lace bug

- Plane lace bug *Corythucha ciliata* recorded 25<sup>th</sup> July 2024 in London
- Community observations helped to inform biosecurity response



da78 commented

1y ▼

Hi giulsinclair, it does look to be a *Corythucha* sp. From the photo it would be very difficult to give an accurate ID. there is potential that this could be of plant health importance (<https://planthealthportal.defra.gov.uk/assets/factsheets/Pest-alert-Corythucha-ciliata.pdf> / <https://planthealthportal.defra.gov.uk/assets/factsheets/Pest-alert-C2-arcuata-update.pdf>) do you have any more information about where and how you found this individual? it could all be useful.



giulsinclair commented

1y ▼

Hi @da78, I found it inside a bus. It was on my backpack. I had just got on the bus on Kensington Gore, though I don't know whether I brought it in or it was already in there. I remember it crawling around a lot and when I was trying to get it out of the window, it kept doing short flights and returning to backpack. I assumed it might be connected with the trees in Hyde Park? I'm not confident of the ID.



# Observations



Corythucha ciliata



Custom Boundary

7

OBSERVATIONS

1

SPECIES

## Pest Alert: Plane lace bug (*Corythucha ciliata*)



**Figs 1-4 left to right:** An adult plane lace bug. Many adults on lower surface of a plane leaf. Heavily infested trees result in the whole leaf becoming chlorotic and dropped early. Moderately infested leaves are less likely to be dropped, but often exhibit 'bronzing'. Figs 1-2 © Bugwood.org, Figs 3-4 ©Chris Malumphy Fera Science Ltd.

- The **plane lace bug** is native to North America and is now widespread in mainland Europe. It mainly **feeds on the leaves of plane (*Platanus*) trees** and adults and nymphs occur on the lower leaf surface.
- Although two previous populations of plane lace bug (in Bedfordshire in 2006) appear to have died out, in 2024 the Forestry Commission confirmed findings of plane lace bug in central London.
- Feeding on plane, lace bugs cause the leaves to show chlorotic stippling (light coloured marks) near the leaf veins. Large populations can cause the whole leaf to become chlorotic (lighter coloured) or bronzed and leaves will drop from the tree earlier than they normally would.
- The plane lace bug is most likely to come into the United Kingdom by **hitchhiking** on transportation (i.e. vehicles, ships, trains, lorries) but could also arrive on imported plane trees.
- The best time to spot plane lace bugs is in late summer, look for lighter leaves and leaf-less trees.
- In very rare cases, bites from these bugs have caused a mild rash; this is when populations of the bugs have been high and people have been in close proximity to those populations for a long time (e.g. sat under a heavily infested tree).

If you suspect the presence of the pest, please inform the relevant authority (see over for details).



Department  
for Environment  
Food & Rural Affairs



Llywodraeth Cymru  
Welsh Government



Department of  
Agriculture, Environment  
and Rural Affairs



Scottish Government  
Riaghaltas na h-Alba

## Finding of Plane lace bug

The Forestry Commission can confirm that the plane lace bug (*Corythucha ciliata*), has been identified on plane trees in central London.

*Corythucha ciliata* is not a regulated pest which means there is no requirement to take statutory action, but we are conducting swift and robust investigations alongside wider environment surveillance to determine the full scale of the issue. This is in addition to annual surveillance already conducted on the health of plane trees in the area, and mobilisation of volunteers from the tree health monitoring Observatree project.

We advise the public to remain vigilant for signs of this pest and to report any suspected findings using our online portal [TreeAlert](#).

The Defra Plant Pest Factsheet with more information on *Corythucha ciliata* is available on the [Plant Health Portal](#).



da78 commented

1y



Hi giulsinclair, just wanted to follow up on this sighting and say thank you for your help and all of the extra information you gave us for your sighting. you may well have seen the articles in the press about this pest, and the wider surveillance now taking place, your observation and input and additional information was much appreciated, and really helped the PHSI with their targeted surveys.



giulsinclair commented

1y



@da78 thanks so much for letting me know!! So glad to hear it was a useful sighting!

# A project is born!

- After the findings of *Corythucha ciliata*, an iNaturalist project was set up to monitor UK priority pests
- “Officially” launched during national plant health week 2025
- Forestry colleagues also joined the project and included priority tree pests

The screenshot shows the iNaturalist project page for 'Pest Watch - Plant and Tree Health Project'. At the top, there are two images: a caterpillar and a beetle. Below them, the project title is displayed. To the right, there is an 'About' section with a welcome message and links for 'Read More', 'Edit Project', 'Your Membership', and 'Project Journal'. Below the header, there are statistics: 735 Observations, 40 Species, 159 Identifiers, and 408 Observers. A 'Recent Observations' section shows four recent observations with images and details: Genus Hylastes (11 days ago), Xylocleptes bispinus (8 days ago), Genus Scolytus (4 days ago), and Halymorpha halys (3 days ago). Below this, there are three sections: 'Project Requirements' (listing criteria for taxa, location, users, quality grade, media type, date, and establishment), 'Stats' (a donut chart showing 735 observations with a legend for Research Grade, Needs ID, and Casual), and 'Journal' (a list of recent journal entries with dates and titles).

**Pest Watch - Plant and Tree Health Project**

**About** Members 23

Welcome to the Pest Watch Plant and Tree Health Project. This is a joint project from the UK's National Plant Health Services and Forest Research. Our goal is to help protect the health of plants and trees in the UK by spotting harmful insects that can have serious economic, social, and environmental impacts.

[Read More >](#) [Your Membership](#)

[Edit Project](#) [Project Journal](#)

**Overview** 735 OBSERVATIONS 40 SPECIES 159 IDENTIFIERS 408 OBSERVERS [Stats](#)

**Recent Observations** [View All](#)

**Genus Hylastes** 11 10 days ago

**Xylocleptes bispinus** 11 8 days ago

**Genus Scolytus** 11 4 days ago

**Halymorpha halys** 11 3 5 days ago

**Project Requirements** [Stats](#) [Journal](#)

Observations in this project must meet the following criteria:

- Taxa** *Acleris gloverianus* (Western Black-headed Budworm)  
*Acleris isabell*  
*Acleris rubra* (White-headed)
- Location** United Kingdom
- Users** Any
- Quality Grade** Research Grade, Needs ID
- Media Type** Photo
- Date** Any
- Establishment** Any

**Stats**

735 Observation

- Research Grade
- Needs ID
- Casual

**Journal**

May 6, 2025 - 10:57 AM  
**National Plant Health Week running from 5-12 of May 2025**  
National plant health week is a designated week of activity to raise awareness amongst the public, and professional

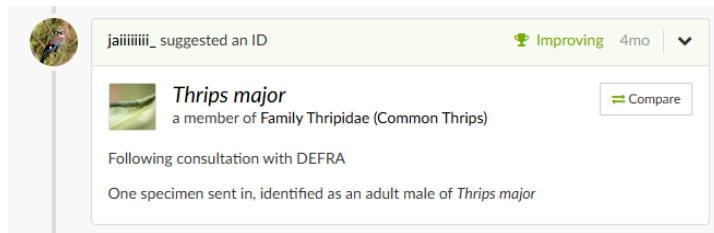
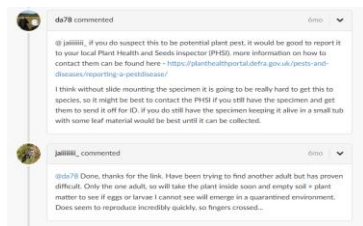
April 7, 2025 - 3:17 PM  
**Project data permissions and selecting the right permissions for you and your data**  
When you first sign up for iNaturalist you are automatically assigned a Creative Commons (CC) licence for your data. But

October 15, 2024 - 2:33 PM  
**Find out more about plant pests here at the plant health portal**  
Hi All, Thanks for your engagement and records so far, if you are interested in finding out more information about the

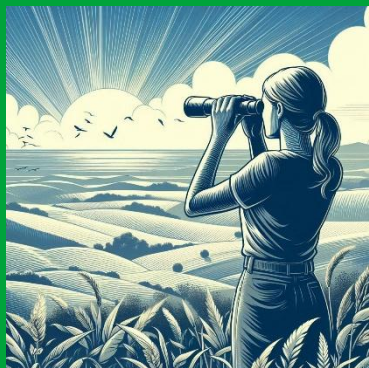
[View All](#)

# A project is born

- Initially the project focuses on insect pests
- Still early days, but has been a good way to get “eyes” on records especially around species we are interested in such as Brown Marmorated Stink Bug (BMSB – *Halymorpha halys*)
- Looking to add pathology records in the future, but getting verified records for pathology and symptoms is a bit trickier
- Also been a good place to engage with the public about plant health, sign posting to information and getting potential pests reported



# Looking forward



Want to avoid duplication of effort especially for reporting pests and diseases



Are we able to get iNaturalist data to feed into TreeAlert for reporting tree pests



Can we get signposting to reporting sites on iNaturalist



Looking at making an umbrella project to separate out tree health and plant health as well as regional reporting for devolved authorities.

# Useful links

- Plant Health Portal – <https://planthealthportal.defra.gov.uk/>
- TreeAlert – <https://treealert.forestresearch.gov.uk/>
- Report a plant pest – <https://planthealthportal.defra.gov.uk/pests-and-diseases/reporting-a-pest-disease/>
- iNaturalist Pest Watch Project – <https://www.inaturalist.org/projects/pest-watch-plant-and-tree-health-project>
- UK Plant Health Risk Register - <https://planthealthportal.defra.gov.uk/pests-and-diseases/uk-plant-health-risk-register/>

# Questions?

Thanks for listening!

duncan.allen(at)defra.gov.uk