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PHC Bulletin Newsletter



Updating you on recent activities of the Plant Health Centre

Issue 13, October 2023

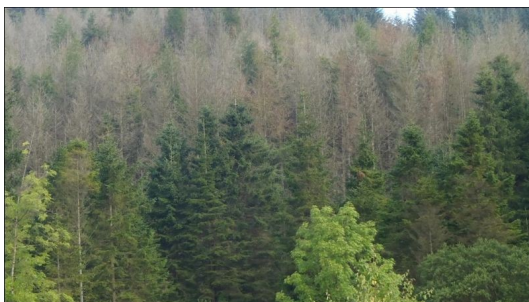
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Welcome to issue 13

Welcome to the October issue of the Plant Health Centre news bulletin. As we dive deeper into autumn, the days might be getting shorter but we are getting lots done!

As the Plant Health Centre's newly appointed Communications Officer I am delighted to bring you an update of the Centre's recent work.

In this issue we bring you our new project calls, upcoming events, ongoing projects and our recent publications. We also have a blog penned by Dr Ruth Mitchell on [Plant health and our natural environment](#).

We are excited to announce that the Plant Health Centre currently has 3 open project calls:

- PHC2023/05: The impact of agricultural policy reforms on plant health risks in Scotland: Guidance on maximizing plant health benefits.
- PHC2023/06: Scoping the risk of bulk aggregate (soil, sand, stone) movement into and within Scotland.
- PHC2023/07: A review of UK provenance seed supply capacity for tree production to meet tree planting targets in Scotland.

Full details for each call, including how to apply, are on the [website](#). Deadline for applications is 12pm on **27th November 2023**.

The PHC welcomes applications from of any individuals or research groups that have the required skills and enthusiasm to take on these projects. If that is you, then apply or share the project call details with your colleagues.

Scots pine - Talk

Interested in emerging threats to Scots pine? Join [Sarah Green](#) of Forest Research at this [talk](#) on the **16th November @ 7.30pm**.

The talk is entitled '**A New Outbreak of a Previously Rare Fungal/Insect Association on Scots Pine: What is it, why is it happening and what does it mean for our pines?**'

Research being carried out by Sarah and colleagues at Forest Research, Royal Botanic Gardens Edinburgh and Scottish Forestry is partly funded by the PHC. Read more about the [project](#) here.

Join the talk in person at the [Assynt Field Club](#) or online via [zoom](#). Email assyntwildlife@gmail.com to request the link

-Katherine O'Donnell Plant Health Centre Communication Officer

Publications



We have lots of interesting reports to read since our last newsletter, highlighting the centres work on the impact of insecticide withdrawal, Bronze Birch Borer threat and preserving Scotland's natural environment through plant health awareness.

PHC2021/06: A targeted analysis of the impact of insecticide withdrawals in Scotland, in the context of alternative control options

Insecticides play a vital role in various sectors in Scotland, from agriculture and horticulture to forestry and natural environment management. However, recent years have seen a concerning trend, with about 50% of insecticide active substances in the UK being withdrawn due to mounting concerns about their impact on human health and the environment. While alternatives may help fill the gap, their practicality and cost within Scottish conditions remain uncertain. This project set out to analyse current insecticide use, potential withdrawal risks, and gather input from stakeholders on the potential repercussions and alternative control methods.

The analysis uncovered a significant challenge: a high proportion of the insecticides used in Scotland in 2019/20 are at high or medium risk of withdrawal. Losing these key insecticides could severely impact Scottish farmers, growers, and their supply chains.

Recommendations for insecticide withdrawal mitigation

To mitigate these risks, the project recommends:

- Providing ample notice and investing in the development of varieties and Integrated

Pest Management (IPM) practices suitable for the Scottish climate.

- A gradual, phased approach could help protect employment in rural sectors and the broader Scottish economy.
- Voluntary stewardship schemes can demonstrate the commitment of farmers, growers, and foresters to reducing insecticide dependence wherever feasible.

PHC2020/06: Preliminary investigation into the threat of Bronze Birch Borer (BBB - *Agrilus anxius*) to Scotland

This project, with co-funding from Scottish Forestry and NatureScot, aimed to assess the threat posed by the Bronze Birch Borer (BBB) to birch trees in Scotland. This project was divided into three sub-projects, each addressing distinct aspects of the Bronze Birch Borer (BBB), its risks and management.

1. The present distribution of native and established *Agrilus* species in the UK in addition to the potential distribution of BBB were it to arrive in Scotland or elsewhere in the UK
2. The potential routes through which BBB might enter the UK, identifying stakeholders involved and assessing the risk levels associated with these pathways.
3. The feasibility and effectiveness of existing surveillance methods for BBB within Scotland.

Recommendations for BBB preparedness.

- **Refine trapping methods:** Explore and create traps that are better at catching the target species and not non-target species, considering the species' physical and behavioural traits.
- **Enhance tree models:** Improve models predicting where birch trees grow by accounting for land management, land use changes, and birch trees' interactions with other tree species.
- **Investigate shipment risks:** Look into the possibility of small shipments as a potential pathway for the Bronze Birch Borer to enter new areas.
- **Model economic scenarios:** Develop realistic economic and policy scenarios to understand how they might affect the import of birch products into the UK and identify potential tipping points for significant changes.

PHC2020/03 Plant health and the natural environment Fellowship

The natural environment of Scotland forms the backbone of its picturesque landscapes, rich biodiversity, rural industries, and recreational activities. However, when it comes to plant health awareness, this vital sector often takes a back seat compared to the more prominently recognized forestry, horticulture, and agriculture sectors. In a bid to bridge this crucial awareness gap, the Plant Health Centre embarked on a fellowship with NatureScot to champion the cause of plant health within Scotland's natural habitats.

A Fellowship with a threefold mission

This forward-looking fellowship had a threefold mission. First, it aimed to deepen stakeholder understanding of plant health risks concerning habitat restoration and creation. Second, it sought to identify pests and pathogens that threaten the fragile ecosystems of Scottish dwarf shrub heathlands. Third, the fellowship set out to develop a robust framework for assessing and mitigating risks to plant health in the natural environment. This framework would not only identify these risks but also provide actionable steps to reduce and mitigate them in the event that pests do establish themselves.

Recommendations for a resilient natural environment

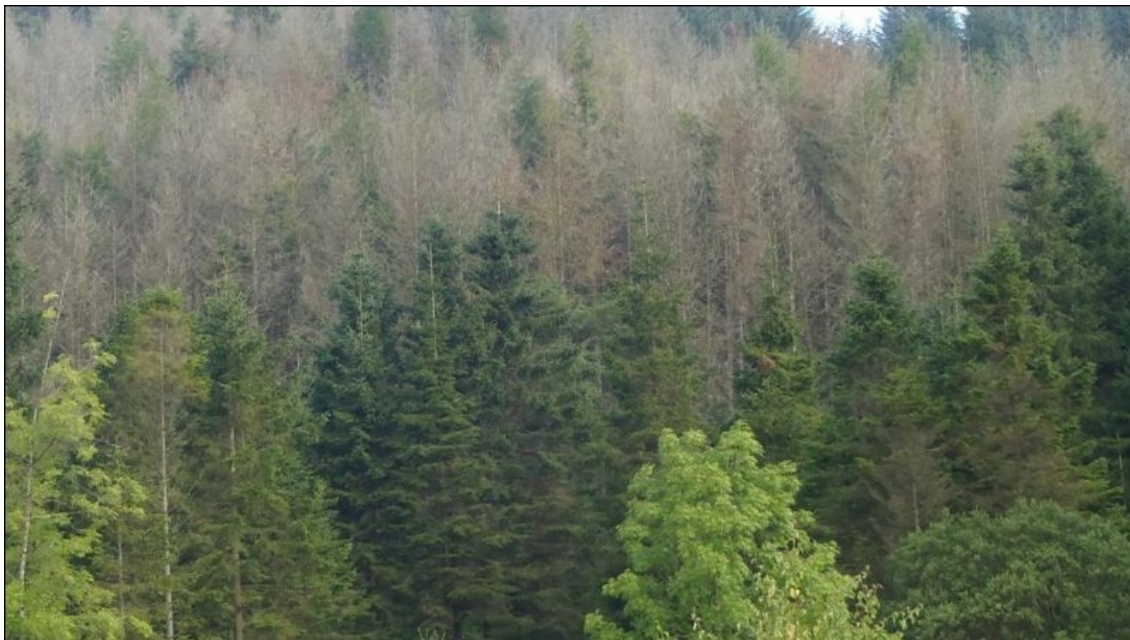
The insights gleaned from this fellowship have led to crucial recommendations for preserving Scotland's natural environment. These recommendations include:

- **Enhancing awareness and biosecurity:** It's essential to emphasize the importance of conducting plant health risk assessments and implementing biosecurity guidance and best practices in habitat creation and restoration. Furthermore, having a dedicated individual responsible for biosecurity is paramount.
- **Improving the Plant Health Risk Register (PHRR):** A call for improvements to the UK Plant Health Risk Register (PHRR) to better account for the impact of plant pests and pathogens on the natural environment.
- **Raising awareness through pest lists:** The compilation of pest lists, a significant outcome of the fellowship, serves as an invaluable tool to raise awareness about the risks that extend beyond woodland habitats
- **Clarifying roles and responsibilities:** By defining clear roles and responsibilities for plant health in the natural environment, and creating a standard operating procedure for identification and response to plant pests, we can better protect our precious natural landscapes.

This fellowship has led to the creation of a Biosecurity Best Practice for Conservation guidance document.

To read the project reports in details visit our [website](#)

Current projects



The PHC has recently commissioned 2 new projects

PHC2023/02: Improved preparedness for Phytophthora prevention in Scotland

Phytophthora species are a major threat to many of Scotland's plants due to their destructive potential. There are over 200 species in the genus *Phytophthora* and there is a current gap in knowledge on the threat that these species could cause to Scotland's native flora, especially in the natural environment.

This project will:

- Review and collate the contemporary data and evidence on *Phytophthora* discovery, species description and traits

- Use the collated data to horizon-scan and predict disease threats in Scotland
- Model and map the greatest threats to plants in specific key habitats.

PHC2023/01: Assessment and mitigation of the threat posed by root-knot nematodes to potato production in the UK

Responsible for the consumption of up to 10% of all global agricultural outputs, root-knot nematodes (RKN) are the most economically damaging plant-parasitic nematodes worldwide. Scottish soils are currently too cool to support some RKN species. However with increased soil temperatures likely due to climate change, there is an increased risk posed by RKN to the Scottish potato industry which provides 77% of the UK's seed potatoes.

The aim of this project is to assess the risk posed by RKN to the potato industry in Scotland and to identify new sources of resistance in the Commonwealth Potato Collection (germplasm collection containing 1500 accessions of about 80 wild and cultivated potato species) that will help mitigate this risk.

Blog Spot



Plant health and our natural environment – insights from the 2023 Scotland Plant Health Conference by [Dr Ruth Mitchell](#)

Our recent Plant Health Centre [Fellow](#) Dr Ruth Mitchell has written a [blog](#) which provides a fascinating insight into the 2023 Scotland Plant Health Conference workshop. The workshop shed light on the often-overlooked issue of plant health and its critical connection to our natural environment.

The blog emphasizes that while plant health is a prominent concern in forestry, horticulture, and agriculture, its significance to our natural habitats is equally profound. The health of these habitats underpins various sectors, our economy, and activities such as recreation. It highlights that there are substantial risks to plant health in semi-natural habitats, and their ecological impact can be substantial, even if the likelihood of pest establishment is low.

Crucially, the blog identifies three key knowledge gaps in monitoring plant health in the natural environment, including prioritizing locations and species, suitable monitoring

