Multi-lure and multi-trap surveillance for invasive tree pests

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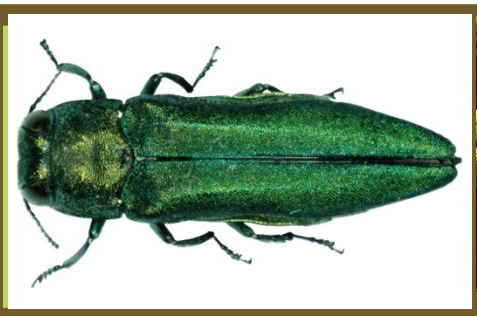

Funding

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Research consortium

Defra (GB), BMLFUW (AT), CFIA (CA), NVWA (NL), INIAV (PT), APHIS (US), CFS (CA)

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Key outputs and results

- Lures will be developed, deployed and assessed
- Development, logistics and cost-benefit analysis of multi-species lure and trapping of invasive tree pests at ports of entry and high risk sites.
- Improved detection of multiple tree pests, by incorporating visual and olfactory cues, as well as trap design (e.g. UV-light) to maximise multiplex trapping of invasive tree pests.
- Smart traps, automatic systems for collecting images via cameras remotely will also be investigated.

Goals

Early detection methods for invasive tree pests are critical for the eradication and management of these species. If invasive tree pests are not detected at or shortly after arrival, they can rapidly become established and spread. There are many potential high risk sites including ports of entry as well as importers, stone merchants and timber merchants and different pest risks depending on native climate and woodland species. All of this makes the detection of different tree pests a rather complex process. The primary objective is to extend, to other EU member countries, the multi-species surveillance techniques for alien wood-boring beetles recently completed for Italian ports under EU seventh framework (FP7) project Q-DETECT. Key questions to be addressed by the research would include: a) What traps and lures are already available, including host volatile lures, pheromone lures? b) What are the efficiencies of different lures / traps for each invasive species? Are there lures that attract more than one invasive species? c) How can we best monitor for multiple pest species most efficiently? d) What is the cost / benefit analysis of multiplex (multi-trap, multi-lure blends) detection of multiple species versus a more targeted approach to individual species? e) What are the constraints on multiplex trapping of invasive species at high risk sites (e.g. access, security, suitable locations etc.)?