

Sizing Up The Samurai Wasp For Stink Bug Control

Injecting Chemical Ecology and Behaviour into Classical Biocontrol Programmes

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BACKGROUND

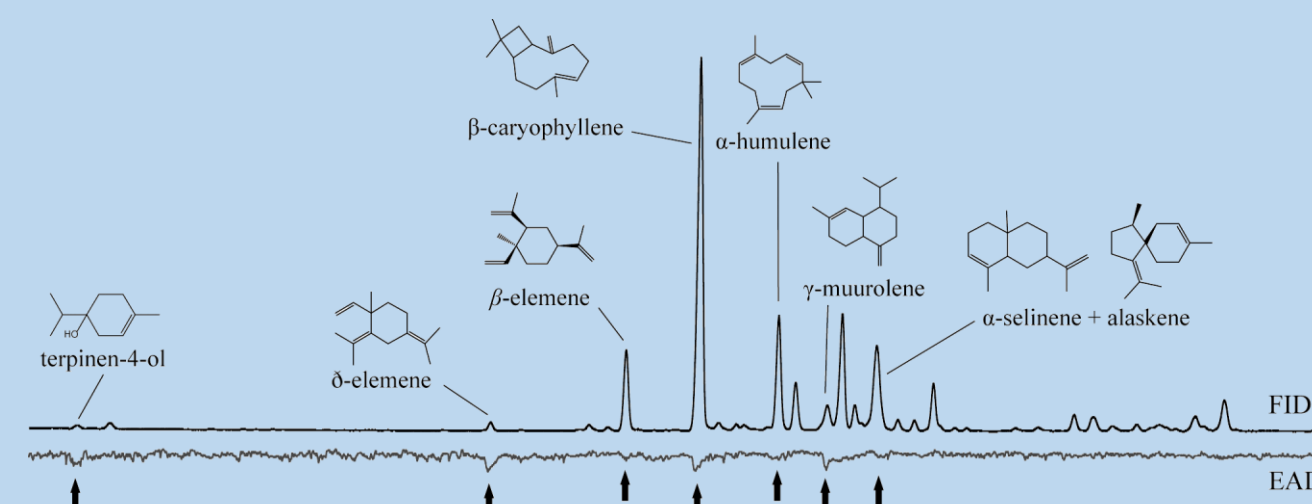
- **Brown Marmorated Stink Bug** is a serious threat to NZ horticulture.
- **Samurai wasp** has been approved for release (with controls) against an incursion.
- But what are the **non-target risks**?
- **Aim:** use chemical ecology and behaviour to improve risk assessments.

METHODS

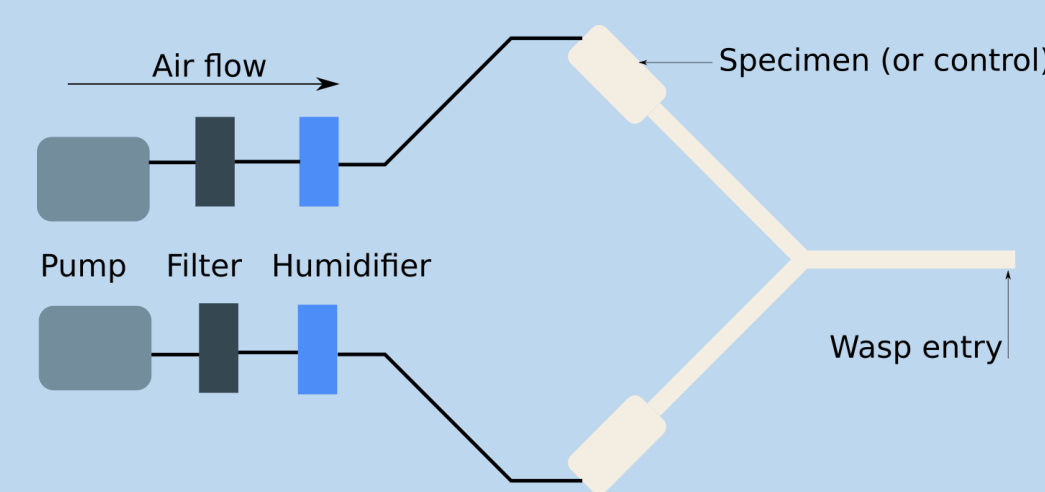
1. No-choice oviposition tests



2. Electrophysiological experiments



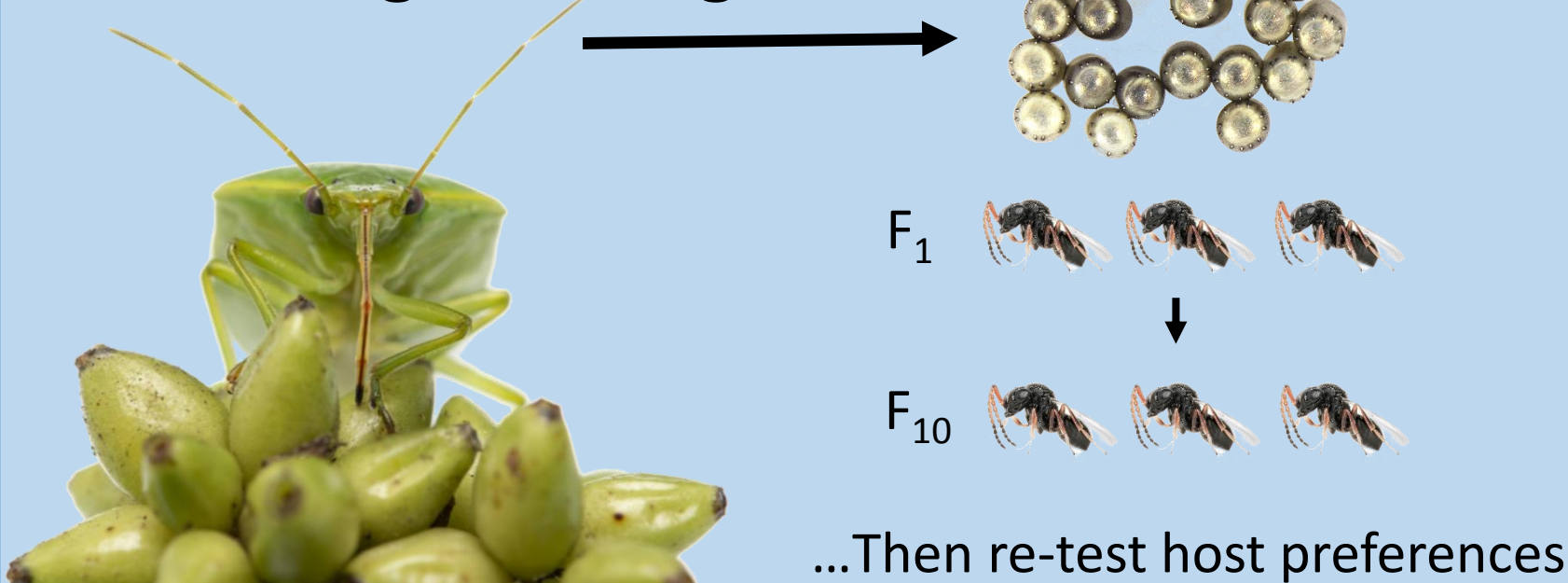
3. Olfactory bioassays



4. Competition experiments



5. Non-target rearing trial



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How do we predict the ecological host range of a classical biocontrol agent before it's released?



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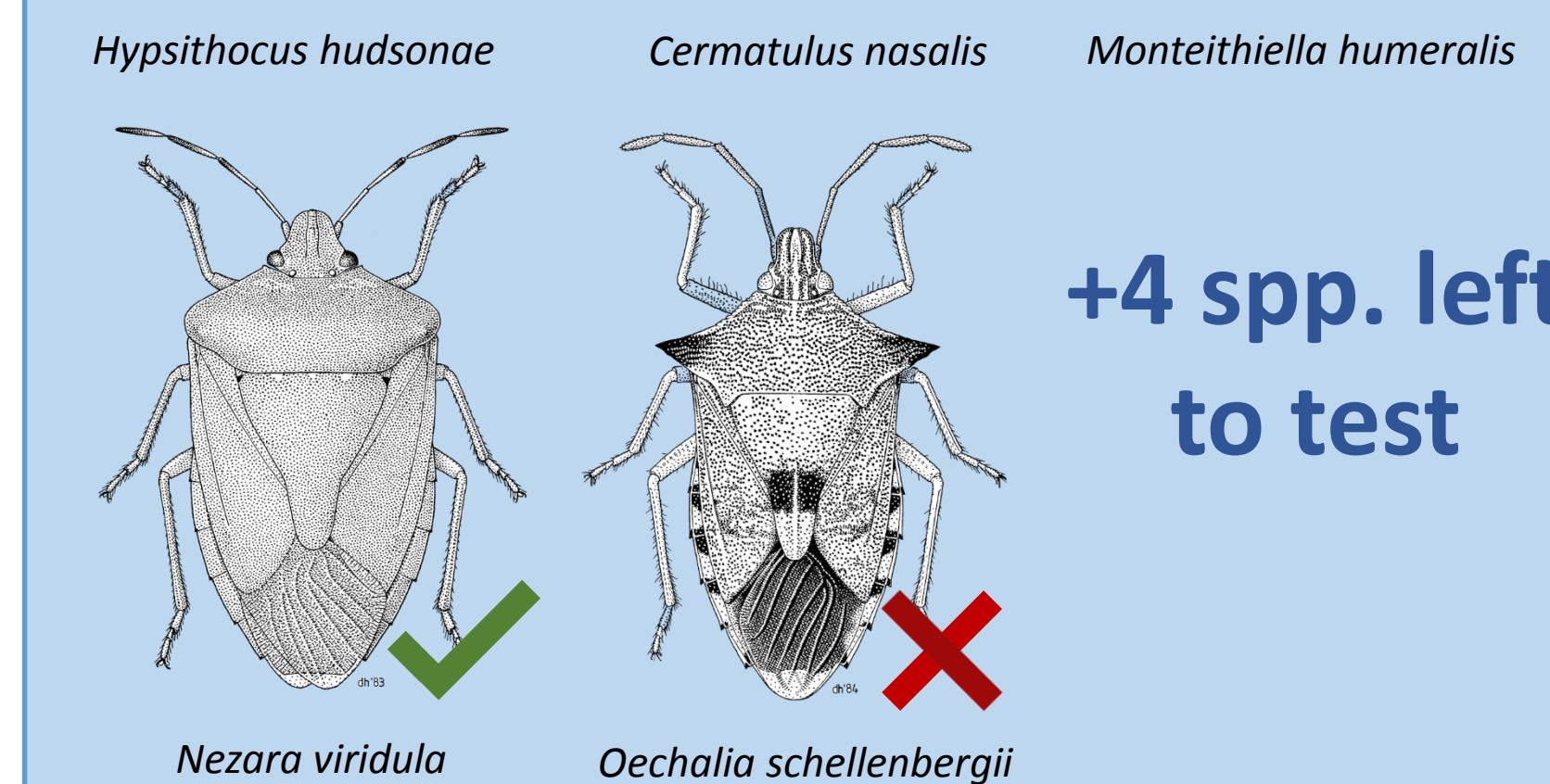
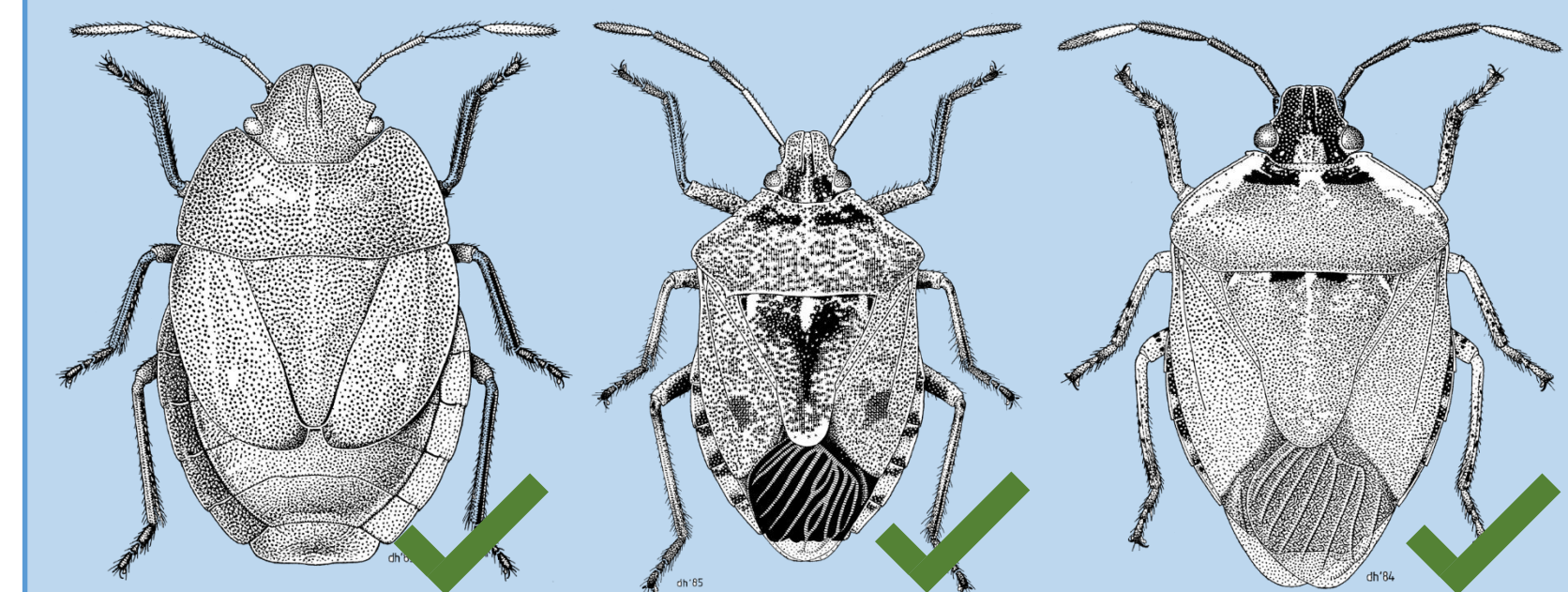
PRELIMINARY RESULTS

- Endemic alpine shield bug, *H. hudsonae*, confirmed as a physiological host

94%
parasitoid
emergence



- Wasps respond in EAG tests to stink bugs



+4 spp. left
to test

- To do: Open arena arrestment experiment

- ✓ Inoculate filter paper with host extracts
- ✓ Measure wasp retention time vs control
- ✓ Likely provides similar data to y-tubes
- ✓ Simpler, less specialised equipment

FEEDBACK

- Please get in touch if you have any comments or suggestions.

Scan to find
out more:

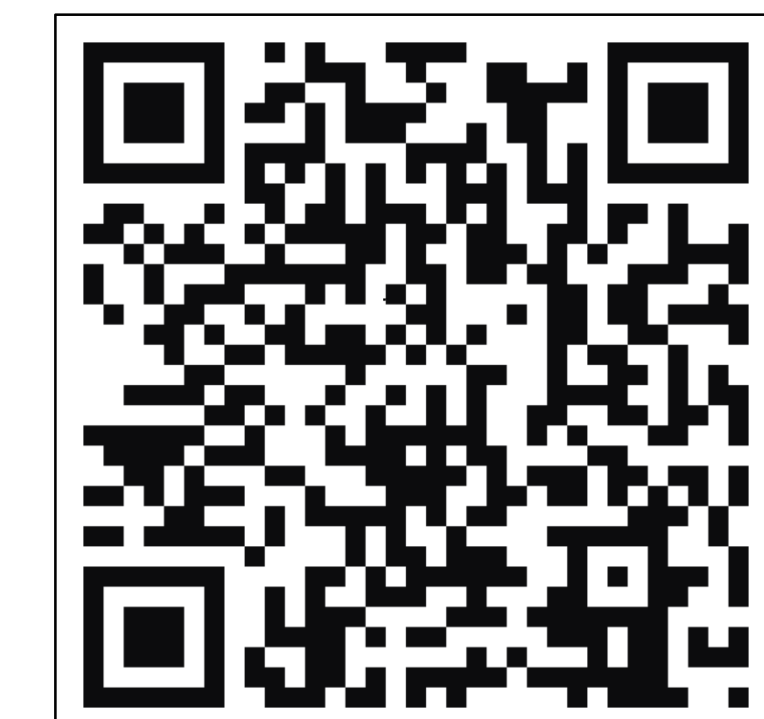


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