Concept Plan SP 2018-041

Molecular characterisation of stinking passionflower (*Passiflora foetida*)

Plant Science and Herbarium

Project Core Team

Supervising Scientist	Tara Hopley
Data Custodian	Tara Hopley
Site Custodian	

Project status as of Aug. 29, 2018, 9:58 a.m.

Pending project plan approval

Document endorsements and approvals as of Aug. 29, 2018, 9:58 a.m.

Project Team	granted
Program Leader	granted
Directorate	granted

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Biodiversity and Conservation Science Program

Plant Science and Herbarium

Departmental Service

Service 7: Research and Conservation Partnerships

Aims

This project aims to use molecular analysis of Australian collections, in the context of samples from the native range and other regions and countries where the weed is introduced, to identify and characterise the genetic entity(ies) present in the Pilbara, whether there are multiple origins of the Pilbara invasions, and to confirm the level of relatedness to native *Passiflora* species and commercial varieties.

We will test for adaptation by molecular characterisation of Pilbara populations relative to less invasive populations to identify any signal of adaption (given the high selective pressure induced by the ecological traits) and to inform which populations to preferentially target for biological control.

Expected outcome

- Provide essential information on the potential taxonomic entities and origin to inform identification of putative agents matched to the target weed.
- Guide how to prioritise the search for agents (when combined with ecological insight).
- Inform how local adaptation within invasive populations may influence the effectiveness of control between different shortlisted agents.

Strategic context

Taxonomic uncertainty for stinking passionflower will be resolved, and the implications that this has for agent selection and applicability of this biocontrol program to other invasions worldwide will be clarified.

Project outputs will deliver tangible tools for land managers to improve the effectiveness and efficiency of stinking passionflower weed control at the landscape scale.

Expected collaborations

Dr Bruce Webber, CSIRO Land & Water and CSIRO Health & Biosecurity
Dr Raghu Sathyamurthy, CSIRO Health & Biosecurity, Brisbane
Dr Louise Morin, CSIRO Health & Biosecurity, Canberra

Proposed period of the project

July 1, 2017 – Dec. 31, 2020

Staff time allocation

Role	Year 1	Year 2	Year 3
Scientist - Tara Hopley	1	1	1
Scientist - Margaret Byrne	0.1	0.1	0.1
Scientist - Stephen van Leeuwen	0.1	0.1	0.1

Indicative operating budget

Source	Year 1	Year 2	Year 3
Consolidated Funds (DBCA)			
External Funding	314,000	306,500	292,500