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Managing a stinking problem: Understanding threats and improving weed control options for Passiflora foetida in Australia (GSOP/199)

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GS29 TROPICAL BIODIVERSITY and GLOBAL CHANGES
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Info

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3. TROPICAL BIODIVERSITY and GLOBAL CHANGES

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Abstract:

Stinking Passionflower (*Passiflora foetida*) is a vine from South and Central America that has been widely introduced into many tropical regions of the world. Across the drier parts of tropical northern Australia, it is considered to be one of the most significant weed problems in landscapes of high biodiversity, cultural, and economic value. Current manual control options are costly, labour intensive, and have minimal impact on long-term control. A major impediment for developing effective control strategies for this species is that very little is known about its biology. Here we document our findings to this point in order to underpin a biological control solution for the weed. We detail impacts on high value landscapes in regard to threats for native flora and fauna, quantify climatic growth limitations, and recruitment and establishment drivers, establish genetic insights into variation between native and introduced populations globally, and outline the early stages of our search for biocontrol agents. Our findings reinforce the idea that this passionflower has traits and impacts that make it a significant weed threat, that there are multiple likely introductions into Australia from different source regions, and that there are a number of native range pathogens worth exploring in the agent refinement process. These insights will help improve the efficiency and effectiveness not only of a biological control program for Australia, but for other control approaches and other countries in which stinking passionflower is an invasion threat.

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