

Can herbivorous insects in Switzerland provide insights into the biological control of *Robinia pseudoacacia* in South Africa?

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Robinia pseudoacacia (Fabaceae) is a deciduous tree native to the Appalachian Mountains of North America but has been introduced throughout the world, including Europe and southern Africa. Since its introduction in the 17th Century it was quickly distributed over much of Europe based on its beneficial uses and still today, it is a highly valued tree in some parts. However, outside of its native range including Europe and South Africa, it is considered an invasive species with negative ecological and economic impacts. Mechanical and chemical control of invasive populations of *R. pseudoacacia* is extremely challenging, labour intensive and expensive. In this case, biological control may offer a safe and sustainable option. In Switzerland, several native North American herbivores have been inadvertently introduced and have established populations. This offers a unique opportunity to study the biology of three species of interest; the leaf curling midge, *Obolodiplosis robiniae* and two lepidopteran leaf miners, *Parectopa robiniella* and *Phyllonorycter robiniella*, to determine if they could be safely introduced into South Africa for the biological control of *R. pseudoacacia*. The study aims to determine the host specificity by exposing closely related plant species to *R. pseudoacacia* under natural and semi natural conditions over a two-year study period (2023-2024). The results from this study will guide researchers in determining if any of these species would be suitable biological control agents for eventual release in South Africa.