

Foreign Exploration and Host Testing of Brazilian Pepper (*Schinus terebinthifolius*) Biological Control Agents

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Abstract

Brazilian pepper is among the worst environmental weeds in Florida and other areas of the US. This species occupies diverse habitats causing many environmental problems including decreased biodiversity of the infested areas. Although chemical controls are known and used to control this invasive species, biological control presents an attractive alternative when practiced safely. The native range of this species includes eastern Brazil, northeastern Argentina, and eastern Paraguay. The USDA/ARS Invasive Plant Research lab with colleagues at the Universidade Regional de Blumenau in Brazil, and the South American Biological Control Lab in Argentina have been searching for and testing insects that will be safe and effective at controlling this weed in the US. Surveys in South America have discovered many new insects including new moth, wasp, and caterpillar species. Several of these species are undergoing testing to determine suitability and safety for release in the US. These include the Phlaeothripidae thrips, *Pseudophilothrips ichini* Hood, the Attelabidae beetle *Omolabus piceus* (Germar), two Gracillariidae moths *Eucosmophora schinusivora* Davis and Wheeler and *Leurocephala schinusae* Davis and Mc Kay, the Notodontidae moth *Tecmessa elegans* Schaus, the Geometridae moth *Oospila pallidaria* Schaus, and the Gelechiidae moth *Crasimorpha infusca* Hodges. Additionally several new species have yet to be described including the Braconidae wasp *Allorhogas* n. sp. and an unknown Gelechiidae stem galling moth.