Habitat analysis of the rush skeleton weed root moth, *Bradyrrhoa gilveolella* (Lepidoptera: Pyralidae)

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The root feeding moth, *Bradyrrhoa gilveolella* (Treitschke) (Pyralidae) has been recently introduced into western United States for the control of rush skeleton weed, *Chondrilla juncea* L. (Asteraceae). Previous attempts to establish this moth in other countries, e.g. Australia and Argentina, have failed. Based on life history studies of the moth and habitat types at collection sites in Europe, we hypothesize that habitat will be a critical factor in successfully establishing the moth in North America. We surveyed 19 rush skeleton weed sites in northern Greece and southern Bulgaria, with and without populations of *Bradyrrhoa*. We compared these with release sites and potential release sites located in Idaho, USA. Multivariate analysis of site characteristics, vegetation and soil properties was used to investigate similarities amongst sites. Because of the low number of sites with the presence of *Bradyrrhoa*, it was difficult to discern distinct habitat differences. Soil texture appears to be the most important site factor common with sites with moth populations.

Evaluating the performance of *Episimus utilis* (Lepidoptera: Tortricidae) on the invasive Brazilian peppertree in Florida

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Brazilian peppertree, *Schinus terebinthifolius* Raddi (Anacardiaceae), an introduced perennial tree from South America, has become widely established throughout central and south Florida because of its ability to invade a wide range of habitats from disturbed sites (e.g. along highways, canals) to natural communities (e.g. pinelands, mangrove forests). Genetic studies have identified two chloroplast DNA haplotypes of Brazilian peppertree in Florida that come from two genetically differentiated source populations in Brazil. Haplotype A is more common on the west coast of Florida, whereas haplotype B is more common on the east coast. In addition, hybridization between these two introduced populations has occurred extensively in Florida. A leaf roller from Brazil, *Episimus utilis* Zimmerman (Lepidoptera: Tortricidae), has been selected as a potential biological control agent against Brazilian peppertree in Florida. The objectives of this study were to evaluate the performance of *E. utilis* on different Brazilian peppertree genotypes and plants subjected to different environmental conditions found in Florida (e.g. saline vs. fresh environments, soil fertility and soil moisture content). The ecological significance of the results is discussed in the context of predicting suitable sites for field releases to increase the possibility of establishment and subsequent effectiveness of this candidate biological control agent.