

Project Name: Development and Evaluation of Biological Control Agents for Invasive Species Threatening the Everglades and other Natural and Managed Systems
Project ID: 2709
Lead Agency: U.S. Department of Agriculture – Agricultural Research Service
Authority: ARS

Strategic Plan Goal(s) Addressed: Primary: 2.B.3

Measurable Output(s): Number and Impacts of Biological Control Agents Developed and Released

Project Synopsis. Many of the weeds in the United States are of foreign origin, introduced without natural enemies from their native habitat. These invasive plants replace natural and cultivated plant communities, causing the disruption of ecosystem processes necessary for the sustenance of urban, agriculture, and natural areas. Although herbicides remain the primary method for controlling invasive weeds, applications are not always economically feasible and can cause collateral damage to non-target plants. The introduction of host-specific, coevolved natural enemies can be an effective part of an integrated management solution, with a stand-alone benefit:cost ratio of about 35:1. The research serves the interests of specific Federal, State, and private landowners impacted by invasive weed species. For example, without long-term sustainable management of weeds like melaleuca (*Melaleuca quinquenervia*), old world climbing fern (*Lygodium microphyllum*), downy rose myrtle (*Rhodomyrtus tomentosa*), air potato (*Dioscorea bulbifera*) skunk vine (*Paederia foetida*), Brazilian pepper (*Schinus terebinthifolius*), giant and common salvinia (*Salvinia molesta* and *S. minima*), waterhyacinth (*Eichhornia crassipes*), waterlettuce (*Pistia stratiotes*), and other invasive plants, large parts of the country, including the Everglades, will be permanently degraded causing a tremendous loss of biodiversity, with less water available for agricultural and urban needs. This research supports the Comprehensive Everglades Restoration Plan which will sustain agricultural production and improve environmental quality.

Cost: Total:
 Project Development:
 Land Acquisition: \$0 – long term lease with University of Florida
 Implementation:
 Operations and maintenance: not yet included in budget

Project Schedule:
 Start Date:
 First Agent released: 1997
 Finish Date: TBD

Detailed Project Budget Information

Agency	Obligations through June 30, 2014.
SFWMD	\$460,000
USCAE	\$160,000
Total	\$620,000

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