

Postdoctoral research associate

Biological control of invasive weeds

USDA ARS Invasive Plant Research Laboratory, Fort Lauderdale, FL

The USDA ARS Invasive Plant Research Laboratory in Fort Lauderdale, Florida is currently seeking a postdoctoral associate for a project involving the implementation and evaluation of classical biological control agents targeting Old World climbing fern, *Lygodium microphyllum*, in the greater Everglades ecosystem.

BACKGROUND

Old World climbing fern, *Lygodium microphyllum*, was first reported as naturalized in Florida in 1965. It is now widespread in wetland and mesic habitats in south and central Florida. *Lygodium microphyllum* invades both disturbed and ecologically sensitive areas, degrading habitats and reducing ecosystem services. The vine has indeterminate rachis growth and can climb 20 meters or more into trees or trail horizontally, and often forms dense monocultures. It produces incredible numbers of windborne spores that can be self-compatible. *Lygodium microphyllum* also forms a persistent rhizome, which is difficult to kill using traditional techniques such as herbicide applications or prescribed burns, resulting in re-growth post-treatment. Two biological control agents are currently available for release against *L. microphyllum* in Florida: the moth *Neomusotima conspurcatalis* (Lepidoptera: Crambidae) and the galling mite *Floracarus perrepae* (Acariformes: Eriophyidae). Both have a widespread but patchy distribution throughout the expanding range of *L. microphyllum* in Florida.

OBJECTIVE & APPROACH

The goal of this project is to increase suppression of *L. microphyllum* by establishing populations of *N. conspurcatalis* and *F. perrepae* in southern Florida as part of the Comprehensive Everglades Restoration Plan (CERP). The postdoctoral associate will manage the mass rearing, release, monitoring and evaluation of these agents. The postdoctoral scientist will also collaborate with the principle investigator on related research including an ongoing evaluation of integrating weed management techniques in this system. The successful candidate will develop contacts and interact with cooperators and land managers from a variety of agencies, participate in a field-based evaluation of impacts, and will be responsible for data collection, data analysis, and dissemination and publication of results. The Postdoctoral associate will also participate in other related research activities as directed.

POSITION DETAILS

The successful candidate must be a U.S. citizen recently awarded a Ph.D. in entomology, ecology, or a related field. This position is a GS-11 temporary 13-month funding-dependent appointment that can be renewed annually, with the total appointment not to exceed 4 years. The position is available immediately. No relocation expenses will be paid. Send CV, transcripts, and contact information for three references to Ellen.Lake@usda.gov by 5:00 PM EST on May 10, 2021.