

Subject: Post-doc USDA ARS Invasive Plant Research Laboratory

The USDA-ARS Invasive Plant Research Laboratory in Fort Lauderdale, Florida is currently seeking a post-doctoral 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 introduced to Florida for horticultural use and was first reported as naturalized 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 extend 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 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 leaf-rolling mite *Floracarus perrepae* (Acariformes: Eriophyidae). Both have a widespread but patchy distribution throughout the expanding range of *L. microphyllum* in Florida.

OBJECTIVE

The objective is to establish viable populations of *N. conspurcatalis* and *F. perrepae* on Old World climbing fern in southern Florida as part of the Comprehensive Everglades Restoration Plan (CERP). To this end, the post-doctoral associate will manage the mass rearing, release, evaluation, and monitoring of these agents. The ultimate goal is to increase suppression of Old World climbing fern throughout the CERP area.

APPROACH

The post-doctoral research associate will supervise mass rearing of the agents and collaborate with the principle investigator in developing a release and monitoring study design. The successful candidate will also develop contacts and interact with cooperators and land managers from various 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 post-doctoral associate will also participate in other related research activities as directed.

POSITION DETAILS

The successful candidate must be a U.S. citizen or a permanent resident seeking citizenship recently awarded a Ph.D. in entomology, ecology or related field. This position is a GS-11 temporary 2 year appointment, depending on funding, that can be renewed once, 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@ars.usda.gov by 5:00 PM EST March 11, 2016.