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IAPPS GOVERNING BOARD MEMBER DR. NORA ALTIER BESTOWED WITH DISTINGUISHED ALUMNUS AWARD



Dr. Nora Altier, IAPPS Regional Coordinator for South America, was awarded the **2017 Distinguished Alumnus Award** from the Department of Plant Pathology, University of Minnesota. The award is to recognize alumni who have achieved distinction in their profession and who have also made significant contributions to the welfare of the Department of Plant Pathology at the University of Minnesota.

As Senior Researcher at the Instituto Nacional de Investigación Agropecuaria (INIA) Uruguay, Dr. Altier has currently two main responsibilities, a 50% appointment as the Bioproduction Research Program Leader, and a 50% appointment as the Training and Development Program Leader of the Research Directorate. She has also an associate faculty appointment at the

Graduate School of the College of Agriculture, University of the Republic.

Dr. Altier's research is focused on developing bio-protection programs to minimize the impact of diseases and pests on forages, field and horticultural crops, and forest ecosystems and provide professional development opportunities for graduate students at the MSc and PhD levels. Her group promotes network platforms using lab facilities in biotechnology, molecular biology, soil microbiology, applied entomology and plant pathology for developing biopesticide and biofertilizer microbial products.

Since 2016, she leads a T&D program which aims to provide a variety of learning opportunities for researchers that fosters career enhancement, leadership, and professional development. In a joint

effort with the University of the Republic, INIA has accomplished a fellowship program for graduate students and postdoctoral positions, offering opportunities for Uruguayan and international citizens.

The full report can be found at

<https://plpa.cfans.umn.edu/about-us/news-events/plpa-news/alumni-spotlight-altier>

On behalf of the IAPPS Governing Board and the entire IAPPS family, I would like to congratulate Nora for this achievement.

Prof. E. A. “Short” Heinrichs

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TWO BIOCONTROL AGENTS ARE DAMAGING THE INVASIVE WEED PARTHENIUM IN THE AMHARA REGION OF ETHIOPIA

Large tracts of farmlands and pastures in the Amhara Regional State of Ethiopia are infested by the invasive weed parthenium (*Parthenium hysterophorus*). Parthenium reduces yields of major crops and replaces valuable pasture species, decreasing livestock productivity. Parthenium also makes many people sick, causing both skin and respiratory allergies, and displaces native plant species, damaging the region’s biodiversity.

In order to combat this weed, a project led by Virginia State University and funded by USAID through the Integrated Pest Management Innovation Lab at Virginia Tech has released two bioagents, the leaf-feeding beetle (*Zygogramma bicolorata*) and stem-boring weevil (*Listronotus setosipennis*). On June 20, 2017, thousands of adult *Zygogramma* and hundreds of *Listronotus* were released at several parthenium-infested sites around the town of Finote Selam.

By mid-August 2017, the bioagents were thriving and damaging parthenium. The *Zygogramma* kills parthenium by defoliating its leaves while *Listronotus* inflicts damage to the weed from inside by burrowing its stem. And native vegetation is starting to make a comeback as parthenium is weakened.



Parthenium at the time of *Listronotus* release on June 20, 2017 (l); Parthenium on August 13, 2017 after it was killed by *Listronotus*. Other broadleaf plants started to thrive once parthenium was severely damaged by *Listronotus* (r)

Zygogramma has also moved from the release site to nearby parthenium-infested fields and started to feed on the weed. *Listronotus* also started to damage nearby parthenium plants once it finished damaging the ones it was released on. At the new sites, staff observed larva and newly emerged adults of *Zygogramma*, indicating that the bioagent is reproducing and new generations are in action against the invasive weed.

The effect of *Zygogramma* on parthenium seen at Finote Selam (altitude 6000 ft) are similar to what was observed in Wollenchiti (altitude 4700 ft) after the release of this bioagent in 2016. In Wollenchiti, *Zygogramma* fed on parthenium on the spot it was released near a railway track and then moved to nearby bean and teff fields that were infested by the weed. *Zygogramma* defoliated parthenium without touching bean and teff, showing it only attacks the weed and it is safe to other plants. Biological control of parthenium using these two bioagents and others have been successful in reducing the damage caused by this weed in Australia and India.



Parthenium at the time of *Zygogramma* release on June 20 2017 (l); Parthenium on August 13, 2017 after it was defoliated by *Zygogramma*, allowing the native vegetation to recover (r)

However, this is just the beginning of the effort to manage parthenium using natural enemies in Amhara and other regions of Ethiopia where this weed is inflicting damage to food crops and livestock. It will require releasing large number of adults of the bioagents at multiple sites in different parts of the country over several years to reach the level of control achieved in Australia and India. It is unlikely that the bioagents will establish from one or two years of release because of predation by birds, ants, and other general feeders. Their numbers will also be negatively affected by extended dry season due to drought and other unfavorable weather conditions.

The time it takes for the bioagents to establish at a particular locality also affects how long the initial release spot remains undisturbed from ploughing and slashing of the parthenium. The bioagents need sites where they can remain undisturbed as adults in the soil during the dry season. They can only self-perpetuate from season to season if they can remain untouched in the soil, especially during the first few years immediately after release. This biocontrol program will require patience and effort over several years to be successful, but the potential for sustained control of parthenium in Ethiopia is very promising.

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IAPPS Mission: to provide a global forum for the purpose of identifying, evaluating, integrating, and promoting plant protection concepts, technologies, and policies that are economically, environmentally, and socially acceptable.

It seeks to provide a global umbrella for the plant protection sciences to facilitate and promote the application of the Integrated Pest Management (IPM) approach to the world's crop and forest ecosystems.

Membership Information: IAPPS has four classes of membership (individual, affiliate, associate, and corporate) which are described in the IAPPS Web Site www.plantprotection.org.

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