SOUTHERN INSECT MANAGEMENT RESEARCH UNIT

USDA-ARS Mid South Area

Mission

- *The mission of the Southern Insect Management Research Unit (SIMRU) is to generate new knowledge of arthropod pest biology, ecology and management and integrate this knowledge into contemporary farming systems that will promote economical and environmentally stable pest management practices for the southern U.S.*
- *The vision of SIMRU is to be a recognized center of innovation for negating agricultural pest problem through deployed scientific knowledge of pest biology, ecology and management options.*

CRIS PROJECT

Insecticide Resistance Management and New Control Strategies for Pests of Corn, Cotton, Sorghum, Soybean, and Sweetpotato

PROJECT INVESTIGATORS

- Clint Allen
- Randall Luttrell **(Project Leader)**
- OP Perera
- Gordon Snodgrass
- Yu Cheng Zhu

CRIS PROJECT

Control of Tarnished Plant Bugs by Biocontrol and Other Methods

PROJECT INVESTIGATORS

- Randall Luttrell
- Maribel Portilla
- **Gordon Snodgrass (Project Leader)**

CRIS PROJECT

Effect of Resistance on Insect Pest Management in Transgenic Cotton

PROJECT INVESTIGATORS

- Clint Allen
- Randall Luttrell
- **OP Perera (Project Leader)**
- Maribel Portilla

NEW PUBLICATION CONGRATULATION Dr. Katherine Parys

10 *Florida Entomologist* 96(1) March 2013

BIOLOGICAL CONTROL OF COMMON SALVINIA (*SALVINIA MINIMA*) IN LOUISIANA USING *CYRTOBAGOUS SALVINIAE* (COLEOPTERA: CURCULIONIDAE)

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ABSTRACT

Common salvinia, *Salvinia minima* Baker, is an aquatic invasive fern that obstructs waterways and impacts water quality throughout the southeastern United States. In an effort to establish populations for classical biological control of this weed, the weevil, *Cyrtobagous salviniae* Calder and Sands, was released at multiple sites across Louisiana. Many of the release sites were lost due to a variety of ecological and anthropological disturbances. In 2008, *C. salviniae* was found to have successfully overwintered on *S. minima* in Gramercy, Louisiana. Attack by *Cyrtobagous salviniae* significantly increased the number of damaged terminal buds and decreased the fresh weight biomass of *S. minima*.

Key Words: classical biological control, aquatic weed, invasive species

NEW PUBLICATION CONGRATULATION Dr. Katherine Parys

180 *Florida Entomologist* 96(1) March 2013

EVIDENCE OF ESTABLISHMENT OF *BAGOUS HYDRILLAE* (COLEOPTERA: CURCULIONIDAE), A BIOLOGICAL CONTROL AGENT OF *HYDRILLA VERTICILLATA* (HYDROCHARITALES: HYDROCHARITACEAE) IN NORTH AMERICA?

TED D. CENTER[1,*], KATHERINE PARYS[2], MIKE GRODOWITZ[3], GREGORY S. WHEELER[1], F. ALLEN DRAY[1], CHARLES W. O'BRIEN[4], SETH JOHNSON[2], AND AL CIBRIAN-TOVAR[1]
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ABSTRACT

The semi-aquatic weevil *Bagous hydrillae* was released during 1991-1996 at 19 sites in 4 states in attempts to control the aquatic weed hydrilla, *Hydrilla verticillata*. Fourteen of the sites were in Florida, 2 each in Texas and Georgia and one site in Alabama. Over 320,000 adult weevils were included in those releases. Despite the fact that a few adults were recovered as late as 4.5 yr post-release, presence of permanent, self-perpetuating populations was never confirmed. Then, during 2009 adult *B. hydrillae* were collected in southern Louisiana, at least 580 km from the nearest release site and 13 yr after attempts to establish this insect had terminated. This suggests that earlier recoveries were indicative of successful establishment and that this weevil species has persisted and dispersed widely in the southeastern USA. Nonetheless, there is no evidence that *B. hydrillae* has had a suppressive effect on hydrilla.

Key Words: aquatic weeds, *Bagous restrictus*, biocontrol agent release, biocontrol agent establishment, herbivory, phytophagous insects

NEW PUBLICATION CONGRATULATION Dr. Katherine Parys

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Larva of *Nothotrichia shasta* Harris & Armitage (Trichoptera: Hydroptilidae) from California, USA, with its phylogenetic and taxonomic implications

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Abstract

Nothotrichia Flint 1967 is a small genus of infrequently collected microcaddisflies known from Chile and Brazil in South America, Costa Rica in Central America, and the United States in North America. Previously known only from adult specimens, we provide the first description and illustration of a larva in the genus, the larva of *N. shasta* from California, USA. We provide characters to separate *Nothotrichia* from other similar genera and an updated key to larval Hydroptilidae modified from that of Wiggins (1996). Larval characters provide additional evidence for the phylogeny and classification of the genus, which we now place tentatively in tribe Ochrotrichiini (subfamily Hydroptilinae).

Key words: caddisflies, microcaddisflies, United States

NEW PUBLICATION CONGRATULATION DR. YuCheng Zhu

Journal of Invertebrate Pathology

Susceptibility of Cry1Ab maize-resistant and -susceptible strains of sugarcane borer (Lepidoptera: Crambidae) to four individual Cry proteins

Liping Zhang, Fangneng Huang, R. Rogers Leonard, Mao Chen, Thomas Clark, Yu Cheng Zhu, David S. Wangila, Fei Yang, Ying Niu

Welcome Aboard Dr. Nathan Little

The USDA ARS Southern Insect Management Research Unit is pleased to welcome Dr. Nathan Little to the Jamie Whitten Delta States Research Station. Nathan will be working with the entire SIMRU research team to investigate the biology and ecology of lepidopteran pests and their susceptibility to transgenic crops.

Dr. Little received his Ph.D. from the Department of Biochemistry, Molecular Biology, Entomology, and Plant Pathology at Mississippi State University in May 2013. He investigated the association of native (*Reticulitermes* spp.) and non-native (*Coptotermes* sp.) subterranean termites with trees and lumber inhabited by blue-stain fungal associates of the southern pine bark beetle guild. Additionally, his past research focused on the development of environmentally benign wood preservative systems with an emphasis on natural resistance of some woods to subterranean termites.

You may contact Nathan by phone at 686-5270 or by email at Nathan.Little@ars.usda.gov. In addition, his office is located in Building 1, Room 409.

WELCOME BACK SUMMER EMPLOYEES

- JULIAN BEAMON
- JOHN COLEMAN
- D'ANICE DISHMON
- ARI ESTERS
- RUSSELL GODBOLD
- SYDNEY HOLLEMAN
- JESSE KING
- CHRISTOPHER MORRIS
- CAVISHIA ROBERSON
- THOMAS SHERMAN
- LAURA SIPES
- JANA SLAY
- BAILEY TUBERTINI
- DARSHANISHA WARREN

2013

SUMMER ORIENTATION

WHEN: THURS., JUNE 6, 2013

WHERE: 1ST FLOOR CONFERENCE ROOM

TIME: 8:00 AM-10:00 AM

MANDATORY MEETING FOR ALL SIMRU SUMMER & YEAR ROUND PATHWAY EMPLOYEES

JUNE
BIRTHDAYS CELEBRATION

Nathan, Kenya, Emily, Julian, Donny, and Cavishia