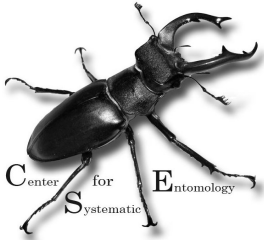


Center for Systematic Entomology
Annual Meeting and Conference
3215 Hull Road, McGuire Center for Lepidoptera and
Biodiversity, upstairs conference room
January 18th, 2020
9 am to 5:30 pm
PROGRAM



Welcome!

9:00 am: Opening and Introductions

9:05 am: Paul Skelley. A memory of Mike Thomas for the Center for Systematic Entomology.

9:30 am: Oliver Keller (presenter), Vinicius S. Ferreira, and Marc A. Branham. A new mystery to be illuminated in the Lampyridae: multilocus phylogenies suggest *Chespiritoi* new genus, a non-bioluminescent firefly, as a new *incertae sedis* tribe (Coleoptera: Elateroidea).

9:45 am: Andrei Sourakov (presenter), G. T. Austin, J. A. Hornfeldt, L. Kaminsky, and A. Y. Kawahara. What one can learn from collecting 25,000 moths in one Florida backyard.

10:00 am: Jason Williams. Global domination by crazy ants: Phylogenomics reveals biogeographic history and invasive species relationships in the genus *Nylanderia* (Hymenoptera, Formicidae).

10:15 am: Esther Serrano. Job opportunities in USDA/PPQ: a new frontier for taxonomists.

10:30 am: Coffee Break

10:45 am: Lifang Xiao. The response of insect herbivory to early Cretaceous angiosperm expansion.

11:00 am: Lily Deeter (presenter) and Muhammad "Zee" Ahmed. Evaluating a rapid identification method for the newly emerging citrus pest in Florida, lebeck mealybug, *Nipeacoccus viridis* (Coccoidea: Pseudococcidae).

11:15 am: Davide Dal Pos. The role of morphology in the genomic era.

Julieta Brambila, organizer, Julieta.Brambila@usda.gov, and jbramb@gmail.com, 352-281-0428 (text)
Joe Eger, Davide Dal Pos, moderators
CSE: <http://centerforsystematicentomology.org>
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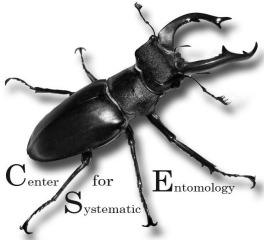
Center for Systematic Entomology

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January 18th, 2020

9 am to 5:30 pm

PROGRAM



Continuation

11:30 am: Kristin Dunn. Advanced imaging of fireflies (Coleoptera: Lampyridae) reveals new insights into light organ evolution.

11:45 am: Bryan Pfeiffer. Field photography for entomologists.

12:00 pm: Lunch (provided)

1:00 pm: Matthew R. Moore . New Florida host records for *Meloidogyne enterolobii* (Nematoda: Meloidogynidae).

1:15 pm: Kyle Schnepf. Buprestidae of the Eastern United States.

1:30 pm: Emily Gregory and Felipe Soto-Adames. Initial assessment of the springtails (Collembola) of the Kanapaha Botanical Garden.

1:45 pm: Feng Zhang, Bruno Bellini, and Felipe Soto-Adames (presenter). Contribution of first instar chaetotaxy to our understanding of the phylogeny and classification in Entomobryoidea (Collembola).

2:00 pm: You Li. Micro-CT: How it can help us understand more about bark and ambrosia beetles.

2:15 pm: Coffee Break

2:45 pm Teresa M. Cooper. Host plant effect on the Mexican bromeliad weevil.

Julieta Brambila, organizer, Julieta.Brambila@usda.gov, and jbramb@gmail.com, 352-281-0428 (text)

Joe Eger, Davide Dal Pos, moderators

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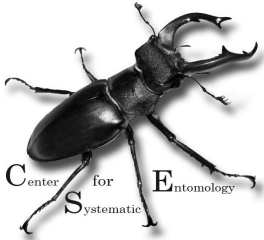
Center for Systematic Entomology

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January 18th, 2020

9 am to 5:30 pm

PROGRAM



Continuation

3:00 pm. Joe Martinez. Leps attacking Sapodilla in South Florida.

3:15 pm. Jessica Awad. The Gall of it All: Exploring *Synopeas* diversity in Papua New Guinea.

3:30 pm. Xuankun Li. Tree of the Australian fuzzball flies.

3:45 pm. Susan Halbert. Some new and actionable Hemiptera in Florida.

4:00 pm. Giovanna Ortiz (presenter) and David Serrano. Progress of the Broward College Insect Collection: current goals, focuses, and undergraduate research projects during our 3rd year.

4:15 pm. Joe Eger. Paraguay: overlooked and undercollected: results of collecting expeditions in 2016, 2017, and 2019 – Pentatomoidea (Hemiptera: Heteroptera).

4:30 pm. CSE Business meeting.

6:30 pm. Meet at Bonefish Grill Restaurant, 3237 SW 35th Blvd., Butler Plaza, 352-377-8383.

Julieta Brambila, organizer, Julieta.Brambila@usda.gov, and

jbramb@gmail.com, 352-281-0428 (text)

Joe Eger, Davide Dal Pos, moderators

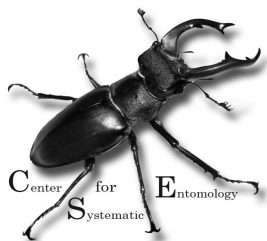
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PROGRAM WITH SUMMARIES



Welcome!

9:00 am: *Opening and Introductions*

9:05 am: *Paul Skelley*. Florida State Collection of Arthropods

(FSCA), Head Curator, Gainesville, Florida. Paul.Skelley@FDACS.gov

A memory of Mike Thomas for the Center for Systematic Entomology.

Summary: Michael C. Thomas was an early and significant leader in the CSE and with *Insecta Mundi*. This talk reviews his career and his contributions.

9:30 am: *Oliver Keller (presenter), Vinicius S. Ferreira, and Marc*

A. Branham. University of Florida, Entomology and Nematology Department, Gainesville, Florida and Montana Entomology Collection, Montana State University, Bozeman, Montana. okeller1977@gmail.com

A new mystery to be illuminated in the Lampyridae: multilocus phylogenies suggest *Chespiritoi* new genus, a non-bioluminescent firefly, as a new incertae sedis tribe (Coleoptera: Elateroidea).

Summary: In this study, we take the opportunity to describe a new lampyrid genus and tribe, followed by the description of its three new species, from the Neotropical portions of Mexico. We provide illustrations of diagnostic characters, distribution maps, and a key to all new species. We discuss the family membership and placement of the new genus within Lampyridae based on the results of our molecular phylogenies and in the morphological traits of the new taxa.

9:45 am: *Andrei Sourakov (presenter), G. T. Austin, J. A. Hornfeldt, L. Kaminsky, and A. Y. Kawahara*. McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, University of Florida, Gainesville, Florida. ASourakov@flmnh.ufl.edu

What one can learn from collecting 25,000 moths in one Florida backyard.

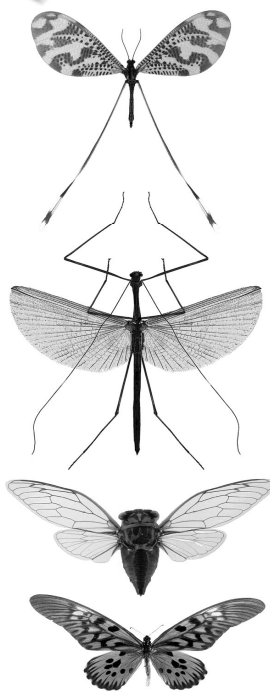
10:00 am: *Jason Williams*. University of Florida, Entomology and Nematology Department, Gainesville, Florida. JWilli81@ufl.edu

Global domination by crazy ants: Phylogenomics reveals biogeographic history and invasive species relationships in the genus *Nylanderia* (Hymenoptera, Formicidae).

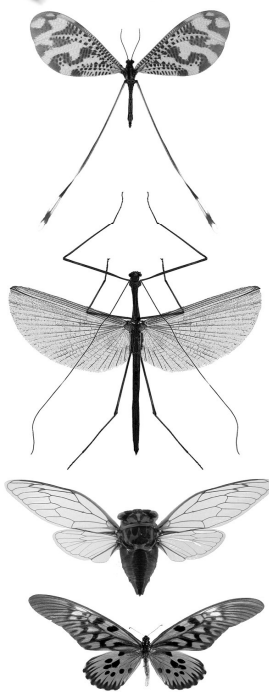
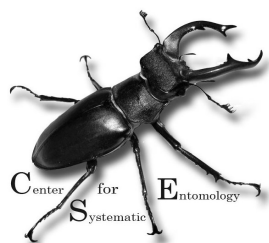
10:15 am: *Esther Serrano*. USDA-APHIS-PPQ, Port Everglades, Ft. Lauderdale, Florida. Esther.S.Serrano@usda.gov

Job opportunities in USDA/PPQ: a new frontier for taxonomists.

10:30 am: *Coffee Break*



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PROGRAM WITH SUMMARIES



Continuation

10:45 am: Lifang Xiao. Visiting researcher, Smithsonian Paleobiology, and Florida Museum of Natural History Collection at Dickinson Hall, Gainesville, Florida.

XiaoL@si.edu.com

The response of insect herbivory to early Cretaceous angiosperm expansion

Summary: Insect herbivory was related tightly with vascular plants including gymnosperms and angiosperms. In this study we focus on gymnosperm-dominated flora (Yixian formation from north of China, ca. 125 Ma) and angiosperm-dominated flora (Rose Creek locality from center of U.S.A., ca.105 Ma). Damage type diversity and surface area were used to evaluate the herbivory intensity and abundance. We tested if the angiosperm flora impede, accelerate, or have no effect on insect herbivory when compared to gymnosperm flora.

11:00 am: Lily Deeter (presenter) and Muhammad "Zee" Ahmed.

Florida State Collection of Arthropods (FSCA), Gainesville, Florida.

Lily.Deeter@fdacs.gov

Evaluating a rapid identification method for the newly emerging citrus pest in Florida, lebeck mealybug, *Nipaecoccus viridis* (Coccoidea: Pseudococcidae).

Summary: The lebeck mealybug (*Nipaecoccus viridis*) is one of the major pests of citrus worldwide. Both regulatory actions and control measurements entail its prompt identifications. The standard identification requires slide mounting of its specimens and involves several technical steps, and can cost up to an hour per sample. We are evaluating a rapid identification method for *N. viridis* to facilitate its management in Florida.

11:15 am: Davide dal Poz. University of Central Florida, Department of Biology, Orlando, Florida. Daveliga@gmail.com

The role of morphology in the genomic era.

Summary: In the last few decades, the role of morphology has changed dramatically going from a pivotal role in the Hennigian era to a marginal position in the 90s with the rise of molecular techniques. This has led to the false assumption that morphology was just an auxiliary tool, or worse, completely dead. But the reality tells another story, and with the rise of modern techniques, morphology can regain its central role in the different biological disciplines.

11:30 am: Kristin Dunn. University of Florida, Entomology and Nematology Department, Gainesville, Florida. KristinDunn@ufl.edu

Advanced imaging of fireflies (Coleoptera: Lampyridae) reveals new insights into light organ evolution.

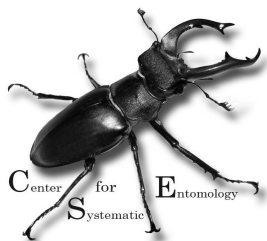
11:45 am: Bryan Pfeiffer. Field biologist, Montpelier, Vermont.

bryan@bryanpfeiffer.com

Field photography for entomologists.

Summary: Entomologists need not purchase expensive photography gear to capture compelling images for use in presentations or publications. This session will cover the essentials for field photography with ordinary point-and-shoot cameras. From cerci to setae, you'll be shocked to see what these cameras can "expose."

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Continuation

12:00 pm. Lunch (funded by CSE and presented by caterer Kristin Rossetti).

1:00 pm. Matthew R. Moore. University of Florida, Entomology and Nematology Department, Gainesville, Florida. Cyclocephala@gmail.com
New Florida host records for *Meloidogyne enterlobii* (Nematoda: Meloidogynidae).

1:15 pm. Kyle Schnepf. Florida State Collection of Arthropods (FSCA), Gainesville, Florida. Kyle.Schnepf@FDACS.gov
Buprestidae of the Eastern United States.

Summary: The Buprestidae of the Eastern United States are reviewed and the economic importance and the need for adequate identification tools are discussed. The creation and evolution of a pictorial key is presented to aid in future identification of new and established non-natives.

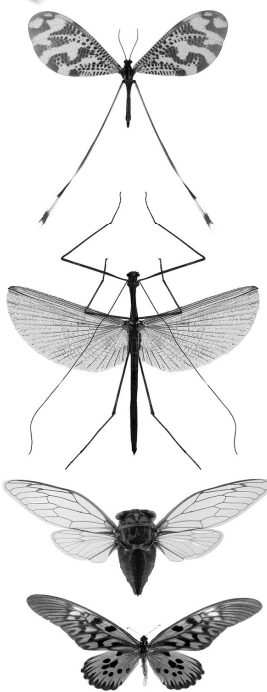
1:30 pm. Emily Gregory and Felipe Soto-Adames. Florida State Collection of Arthropods (FSCA), Gainesville, Florida. Emily.Gregory@FDACS.gov
Initial assessment of the springtails (Collembola) of the Kanapaha Botanical Garden.

Summary: We surveyed the fauna of leaf litter springtails at the Kanapaha Botanical Garden and the adjacent Broken Arrow Bluff Nature Park. Nine leaf litter samples yielded 33 species of springtails distributed among 14 families and 30 genera. Twenty-two species represent new records for Florida, including 5 new species, 1 new continental record and 16 new Florida records. Most forms appear to be native Nearctic or Holarctic. At least 5 species are evidently adventive, 2 originate in the Oriental region, 2 in the Palearctic region, whereas the origin of the fifth species is uncertain.

1:45 pm. Feng Zhang, Bruno Bellini, and Felipe Soto-Adames (presenter). Florida State Collection of Arthropods (FSCA), Gainesville, Florida. Felipe.Soto-Adames@FDACS.gov

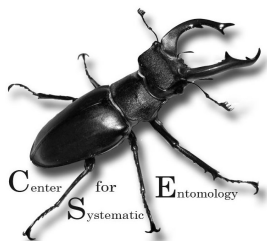
Contribution of first instar chaetotaxy to our understanding of the phylogeny and classification in Entomobryoidea (Collembola).

Summary: Morphology based phylogenetic analysis of genera in superfamily Entomobryoidea (i. e., Entomobryidae, Paronellidae, Cyphoderidae and Microfalculidae) is fraught with pitfalls arising from uncertainty in the determination of chaetotaxy homologies. All previous formal phylogenetic studies of Entomobryoidea based on chaetotaxy have used the chaetal arrangement as present in adults. In this study we provide the first formal phylogenetic analysis based on first instar chaetotaxy. As a result, we subsume Cyphoderidae and Microfalculidae into Paronellidae and propose a new classification for Paronellidae and Entomobryidae.



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Continuation

2:00 pm: *You Li*. School of Forest Resources and Conservation, University of Florida, Gainesville, Florida. yourreason@hotmail.com

Micro-CT, How it can help us understand more about bark and ambrosia beetles.

Summary: Bark and ambrosia beetles that depend on microbial mutualists have evolved a variety of organs to transport the microsymbionts while they disperse. Micro-CT scanning has shown the greatest promise in the visualization and recording of three-dimensional structures, as well as the position of these specialized organs in reference to other internal structures.

2:15 pm. *Coffee Break*

2:45 pm. *Teresa M. Cooper*. University of Florida, Entomology and Nematology Department, Gainesville, Florida. sfbcp@savebromeliads.com.

Host plant effect on the Mexican bromeliad weevil.

Summary: Several species of native bromeliads in Florida are in danger of extirpation due to the invasive bromeliad-eating weevil (*Metamasius callizona*). One of these bromeliad species, *Tillandsia utriculata*, has suffered great damage from the weevil and is most susceptible to extirpation. However, there is a thriving population of *T. utriculata* in Belize that coexists with *M. callizona*. Research was done to determine why the *T. utriculata* population in Belize is resistant to the weevil.

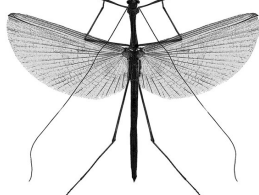
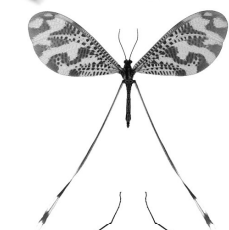
3:00 pm. *Joe Martinez*. University of Florida, McGuire Center for Lepidoptera and Biodiversity, Gainesville, Florida. JoeMartinez@ufl.edu

Leps attacking Sapodilla in south Florida.

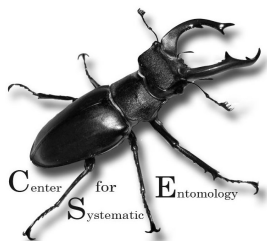
3:15 pm. *Jessica Awad*. University of Florida, Entomology and Nematology Department, Gainesville, Florida. Jessica.Awad@ufl.edu

The Gall of it All: Exploring *Synopeas* diversity in Papua New Guinea.

Summary: Parasitoid wasps in the genus *Synopeas* (Hymenoptera: Platygasteridae) attack gall midges (Diptera: Cecidomyiidae) of ecological and economic importance. Due to neglect and vandalism, the genus is in a state of taxonomic disarray. This study utilizes a collection of reared specimens from Papua New Guinea to examine the morphological, molecular, and ecological bases for species delimitation in *Synopeas*.



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Continuation

3:30 pm. Xuankun Li. University of Florida, Florida Museum of Natural History, Gainesville, Florida, Xuankun.Li@floridamuseum.ufl.edu

Tree of the Australian fuzzball flies

Summary: Bombyliinae, one of the largest subfamilies of Bombyliidae, including 78 genera assigned to four tribes, is distributed on all continents except Antarctica. Their larvae are parasitoids, and the adults are important pollinators. The purpose of this study is to establish the phylogeny of the Australian members of the subfamily Bombyliinae, including the boundaries and relationships of the genera, using morphological characters.

3:45 pm. Susan Halbert. Taxonomic Entomologist, Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville, Florida.

Susan.Halbert@FDACS.gov

Some new and actionable Hemiptera in Florida.

Summary: Florida Department of Agriculture and Consumer Services, Division of Plant Industry (DPI) employees are watching for several serious insect pests that are not established in Florida. In the past year and a half, we have detected several new Hemiptera species in Florida, some of which have been detected only once.

4:00 pm. Giovanna Ortiz (presenter) and David Serrano.

Environmental Science Program, Broward College, Davie, Florida.

DSerrano@broward.edu

Progress of the Broward College Insect Collection: current goals, focuses, and undergraduate research projects during our 3rd year.

4:15 pm. Joe Eger. Tampa, Florida. JEEger811@gmail.com

Paraguay: overlooked and undercollected: results of collecting expeditions in 2016, 2017, and 2019 – Pentatomoidea (Hemiptera: Heteroptera).

4:30 pm. CSE Business Meeting

6:30 pm. Dinner together.

Bonefish Grill Restaurant, 3237 SW 35th Blvd., Butler Plaza, phone 352-377-8383.

We need to know how many are joining for reservation purposes. Let us know by 4:30 pm on the day of the conference.

Bring friends.

Julieta Brambila, organizer, Julieta.Brambila@usda.gov, and jbramb@gmail.com, 352-281-0428 (text)

Joe Eger, Davide Dal Pos, moderators

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