

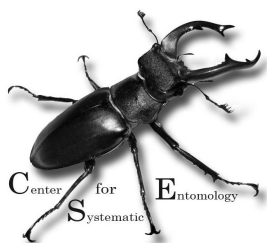
Center for Systematic Entomology

Annual Conference

April 3rd, 2021

11 am to 2:30 pm

PROGRAM



Welcome!

11:00 am: Opening and Instructions (Oliver Keller)

11:10 am: Norm Leppla. An appreciation and a review of Howard Frank's entomological history: Professor J. H. Frank, an Indomitable Entomologist!

11:30 am: Joe Eger and Cecil Smith. The Pentatomoidea (Hemiptera: Heteroptera) of The Philippines: Contributions of commercial collectors

11:45 am: James Hayden. Big, weird pyralids.

12:00 pm: Felipe N. Soto-Adames and Emily Gregory. First look at the diversity and distribution of the genus *Lepidocyrtus* (Collembola: Entomobryidae) in Florida.

12:15 pm: Elijah J. Talamas, Brian Hogg, Jonathan S. Bremer, Evelyn Hougardy, Cheryl G. Roberts, Lynn A. Combee, Zachary Lahey, Matthew R. Moore, Marie-Claude Bon. A maximalist approach to describing a biological control agent reveals it to be adventive in North America and advances the systematics of Scelionidae (Hymenoptera, Platygastroidea).

12:30 pm: Marcus Guidoti. *Baeotingis* Drake & Poor, 1939 or 'brachypterous' *Gargaphia* Stål, 1862 (Heteroptera, Tingidae)? Follow your gut, taxonomist.

12:45 pm: Emily R. Sharkey, Frédéric Beaulieu, Matthew R. Moore, Samuel J. Bolton, Gary Baughan. A tale of two synonymies.

1:00 pm: Ifeoma Ugwuanyi, Nikolai J. Tataranic and Gerasimos Cassis. Morphological phylogeny of bedbugs and their relatives, with an emphasis on their evolution of traumatic insemination

1:15 pm: Davide Dal Pos. Nearctic Ichneumoninae (Hymenoptera: Ichneumonidae): reviving Heinrich's legacy

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

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

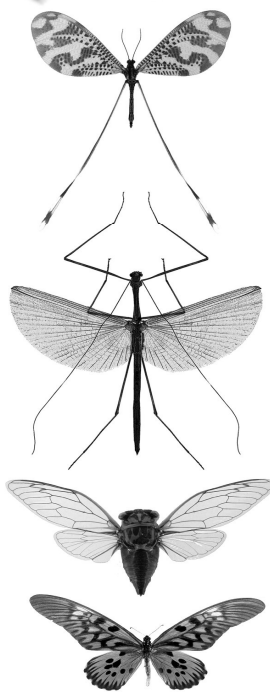
Oliver Keller, Davide Dal Pos, moderators

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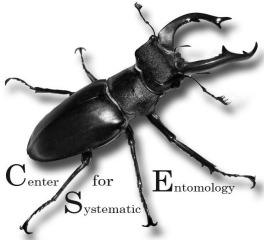
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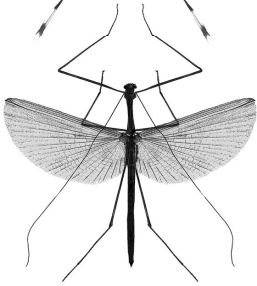
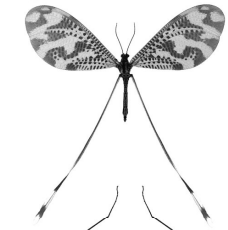
1:30 pm: R. Wills & Flowers. A very curious & unpleasant Case

1:45 pm: Kristin Dunn. Morphological differences in the light organs of flashing and non-flashing fireflies (Coleoptera: Lampyridae)

2:00 pm: David Serrano. Current and upcoming projects at the Broward College Insect Collection (BROW: BCIC).

2:15 pm: Lily Deeter, Ahmeed Muhammad. Color test of lebbeck mealybug (*Nipaecoccus viridis*, Coccoidea: Pseudococcidae)

Closing, by Davide Dal Pos



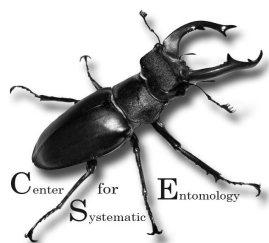
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Entomology and Nematology Department, University of Florida, Gainesville, Florida

An appreciation and a review of Howard Frank's entomological history: Professor J.

H. Frank, an Indomitable Entomologist!

11:30 am: Joe Eger¹ and Cecil Smith²

1: Florida State Collection of Arthropods (FSCA), Gainesville, Florida, USA

2: University of Georgia Collection of Arthropods, Athens, Georgia, USA

jeeger811@gmail.com

The Pentatomoidea (Hemiptera: Heteroptera) of The Pilippines: Contributions of commercial collectors

Summary: In recent years, insect specimens from The Philippines have been offered for sale on eBay. Large numbers of Heteroptera have been purchased from this site by the junior author and deposited in the University of Georgia Collection of Arthropods. Study of selected pentatomoid families (Acanthosomatidae, Cydnidae, Pentatomidae, Plataspidae, and Scutelleridae) indicate that large numbers of taxa not previously reported from The Philippines are present in these islands along with a number of apparently undescribed genera and species. We present an analysis for these families along with illustrations of some of the more interesting taxa. The results suggest that commercial collectors in these islands are adding considerably to our knowledge of the Philippine fauna.

11:45 am: James Hayden

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

james.hayden@fdacs.gov

Big, weird pyralids

Summary: Pyralidae *sensu stricto* (Lepidoptera: Pyraloidea) comprise five traditional, clearly diagnosed subfamilies. I will discuss some taxa that do not fit well in any of those groups, considering morphology and a little DNA where available. Many of them are large, odd-looking, colorful moths with unusual life histories.

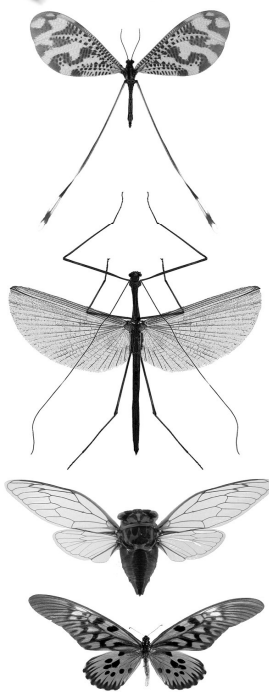
12:00 pm: Felipe N. Soto-Adames and Emily Gregory

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

Felipe.Soto-Adames@fdacs.gov

First look at the diversity and distribution of the genus *Lepidocyrtus* (Collembola: Entomobryidae) in Florida.

Summary: The genus *Lepidocyrtus* (Collembola: Entomobryidae) is the third largest genus of springtails in the World, and in North America it is represented by 18 species. Despite Florida's great diversity of habitats and climates, only three species have been reported for the state. Sampling across 16 counties yielded 12 species of *Lepidocyrtus*, including five new species, four new Florida records, and the three species previously reported. More new species and new records are expected once the Panhandle and the South-Central counties are sampled.



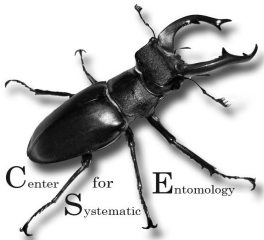
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12:15 pm: **Elijah J. Talamas¹, Brian Hogg², Jonathan S. Bremer¹, Evelyne Hougardy², Cheryl G. Roberts¹, Lynn A. Combee¹, Zachary Lahey³, Matthew R. Moore¹, Marie-Claude Bon⁴**

1 Florida Department of Agriculture and Consumer Services, Gainesville, Florida, USA

2 USDA-ARS-ISPH, Albany, California, USA

3 Department of Evolution, Ecology, and Organismal Biology, The Ohio State University, Columbus, Ohio, USA,

4 USDA-ARS-EBCL, Montpellier, France

Elijah.Talamas@fdacs.gov and Matthew.Moore@fdacs.gov

A maximalist approach to describing a biological control agent reveals it to be adventive in North America and advances the systematics of Scelionidae (Hymenoptera, Platygastroidea)

Summary: A morphological and molecular analysis of *Gryon* Haliday was conducted to provide a taxonomic and phylogenetic context for a species under evaluation as a biological control agent of *Bagrada hilaris* (Burmeister). This parasitoid was previously identified as *Gryon gonikopalense* Sharma. Our analysis revealed that *Gryon* is polyphyletic and that the biological control agent is not *G. gonikopalense*. We here describe this species as new, *Gryon aetherium* Talamas **sp. n.**, and resurrect the generic name *Hadronotus* Förster. Morphological characters that delimit our concepts of *Gryon* and *Hadronotus* are presented. Based on morphological characters and the molecular phylogeny, we determined that three presently valid scelionid genera belong within *Gryon*. This resulted in many generic transfers. Reevaluation of specimens determined as *G. myrmecophilum* in Mexico, field studies in California, and interbreeding experiments reveal that *G. aetherium* is adventive in North America.

12:30 pm: **Marcus Guidoti**

Association

marcus.guidoti@gmail.com

***Baeotingis* Drake & Poor, 1939 or 'brachypterous' *Gargaphia* Stål, 1862 (Heteroptera, Tingidae)? Follow your gut, taxonomist.**

Summary: Wing polymorphism is barely known in the true bug family Tingidae (Hemiptera, Heteroptera). In the Neotropical genus *Gargaphia* Stål, 1862, as in most of the ~300 Tingidae genera, it's not even reported. However, in other cases such as in the genus *Baeotingis* Drake & Poor, 1939 all known species are so-called 'brachypterous'. The lack of macropterous specimens recorded in *Baeotingis* ended after identifying samples from Rio Grande do Sul state, in southern Brazil, in 2017. However, among the three *Baeotingis* species, two were clearly more similar than the one with the observed macropterous specimen, and that caught my attention. Following the 'gut feeling' that these could be, in fact, the first brachypterous specimens for the genus *Gargaphia* instead of species of *Baeotingis*, I decided to perform a delicate procedure: unglue the type material, and only available specimens, of *B. silvestrii* Drake, 1948 and *B. vianai* Kormilev, 1955, both of ~2 mm of length and more than 60 years old, to observe the presence of an unique *Gargaphia* character, the heart-shaped metasternal laminae. This successful endeavor ended in an outstanding discovery that will result in a publication transferring these species, and also aiming to re-open the discussion on wing polymorphism in the group.

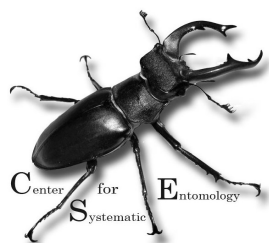
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12:45 pm: Emily R. Sharkey¹, Frédéric Beaulieu², Matthew R. Moore³, Samuel J. Bolton¹, Gary Bauchan⁴

1: Entomology Section, Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Gainesville, Florida, USA

2: Canadian National Collection of Insects, Arachnids and Nematodes, Science and Technology Branch, Agriculture and Agri-Food Canada, Ottawa, Ontario, Canada

3: Molecular Diagnostics Laboratory, Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Gainesville, Florida, USA

4: Deceased. USDA-ARS, Electron and Confocal Microscope Unit.

Matthew.Moore@fdacs.gov

A tale of two synonymies

Summary: Mite taxonomy is currently undergoing a series of important revisions. Although a million or more species of mites are likely awaiting description, many genera are likely to be synonymized as more molecular and morphological data is gathered and analyzed. We present two acts of synonymy. One concerns *Tetranychus okinawanus* Ehara, a pest on a wide variety of plants, which is treated as a junior synonym of *Tetranychus gloveri* Banks based on both molecular (COI and ITS1/ITS2) and morphological data. This synonymy was discovered based on the comparison of sequences between *T. gloveri* from Florida and GenBank sequences of *Tetranychus okinawanus* Ehara from Japan. The single morphological character that was originally used to separate *T. okinawanus* from *T. gloveri* was reassessed and shown to provide no basis for distinguishing these two species. The other synonymy concerns *Speleorchestes* Trägårdh, an extremely common genus of mite in dry soils and sands, which is treated as a junior synonym of *Caenonychus* Oudemans based only on morphology because there is only a single known specimen of the latter.

1:00 pm: Ifeoma Ugwuanyi¹, Nikolai J. Tatarnic² and Gerasimos Cassis¹

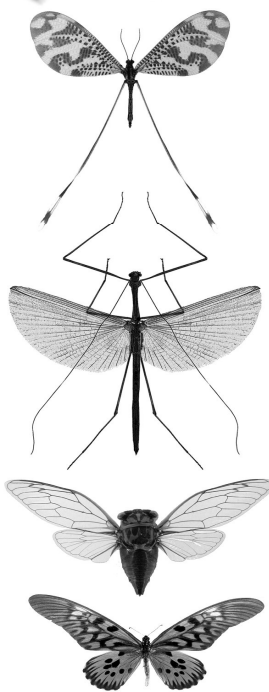
1: University of New South Wales (UNSW), Sydney, Australia

2: Western Australian Museum, Welshpool, Australia

i.ugwuanyi@unsw.edu.au

Morphological phylogeny of bedbugs and their relatives, with an emphasis on their evolution of traumatic insemination

Summary: Bedbugs and their relatives are members of the heteropteran superfamily Cimicoidea that comprise economically important species, ranging from predaceous biocontrol agents to ectoparasitic blood feeders. Beyond this lifestyle diversity, cimicoids are best known for practicing traumatic insemination (TI), where the male pierces the abdomen of the female and ejaculate directly into the haemocoel. To better understand the evolution of these sexual characters, a robust phylogeny of the superfamily is needed. Currently, knowledge of the relationships within the Cimicoidea is in its infancy, with several alternative phylogenetic hypotheses. Here we present a morphological analysis that focused on determining the relationships within the Cimicoidea. We also aimed to optimise TI character evolution in a phylogenetic context to determine their origins and diversification.



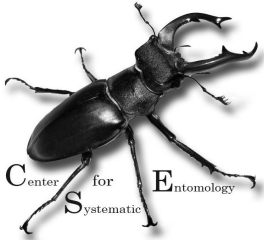
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1:15 pm: Davide Dal Pos

Department of Biology, University of Central Florida, Orlando, Florida, USA

daveliga@gmail.com

Nearctic Ichneumoninae (Hymenoptera: Ichneumonidae): reviving Heinrich's legacy

Summary: With more than 4,300 described species, Ichneumoninae is one of the largest subfamilies within Ichneumonidae (Hymenoptera: Ichneumonoidea). In North America, the subfamily has been thoroughly studied by Heinrich in the 60s and 70s, covering only the Eastern part of the continent. Since then, the subfamily has been progressively forgotten. In this study, new state records for Ichneumoninae across Eastern North America are provided, discussing possible new species and future prospects.

1:30 pm: R. Wills Flowers

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

rflowers7@earthlink.net

A very curious & unpleasant case

Summary: Genital damage, where male copulatory structures cause physical damage to females, is well known in Siphonaptera and has been recently studied in a genus of Bruchinae. I will review evidence of widespread male damage to female genitalia in the Galerucini (Chrysomelidae: Galerucinae) and speculate on sensational versus mundane explanations for its occurrence.

1:45 pm: Kristin Dunn

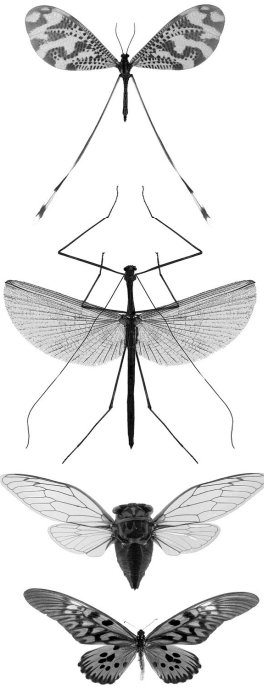
Entomology and Nematology Department, University of Florida, Gainesville, FL, USA

KristinDunn@ufl.edu

Morphological differences in the light organs of flashing and non-flashing fireflies

(Coleoptera: Lampyridae)

Summary:



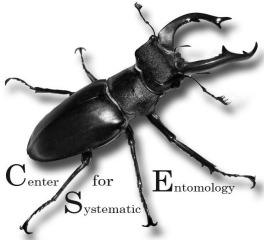
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2:00 pm: David Serrano

Associate Professor and Environmental Science BS program manager.

Broward College, Davie, Florida, USA

dserrano@broward.edu

Current and upcoming projects at the Broward College Insect Collection (BROW:

BCIC).

Summary: Background, current/future projects, and status of the Broward College Insect Collection. Possible points of collaboration and unique field sites will be presented as well.

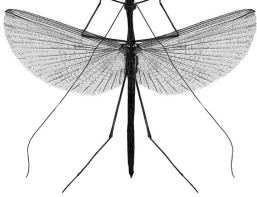
2:15 pm: Lily Deeter, Ahmed Muhammad

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

Lily.Deeter@fdacs.gov

Color test of lebeck mealybug (*Nipaecoccus viridis*, Coccoidea: Pseudococcidae)

Summary: A rapid color test identifies lebeck mealybug, a quarantinable citrus pest, to species level using specimens of all life stages. This will save time, allow early detection, monitor existing infestations, and eventually prevent its spread.



Closing, by Davide Dal Pos

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

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

Oliver Keller, Davide Dal Pos, moderators

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