

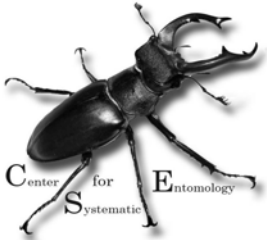
Center for Systematic Entomology

Annual Meeting and Conference

January 19th, 2019

9 am to 5:30 pm

PROGRAM



Welcome!

9:00 am: *Opening and introductions*

9:20 am: *Bob Woodruff*. A short history of the Center for Systematic Entomology.

9:40 am: *Weston Opitz*. The current state of checkered beetle systematics (Coleoptera: Clerididae).

10:00 am: *Andrei Sourakov*. Phenotypic plasticity and genetic diversity of the two iconic Lepidoptera species: the Bella Moth (*Utetheisa ornatrix* (Erebidae)) and the Io Moth (*Automeris io* (Saturniidae))

10:30 am: *Coffee Break*

10:40 am: *Oliver Keller (presenter) and Marc A. Branham*. A trip to Paris and the state of West Indian fireflies (Coleoptera: Lampyridae).

11:00 am: *Matthew R. Moore (presenter)*. CO1 barcoding *Anastrepha* fruit flies (Diptera: Tephritidae: Trypetinae: Toxotrypanini) for the enhancement of immature identification.

11:20 am: *Deborah L. Matthews (presenter) and Jacqueline Y. Miller*. Plume moths of The Bahamas (Lepidoptera: Pterophoridae).

11:40 am: *Lunch (provided) and Posters*

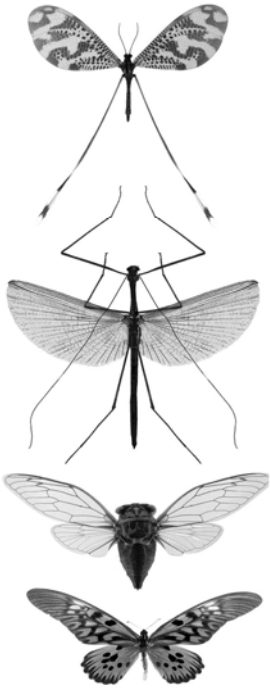
Poster:

Héctor Jaime Gasca-Álvarez and Paul E. Skelley. Pleasing fungus beetles (Coleoptera: Erotylidae: Erotylinae) of Colombia: A preliminary overview.

1:00 pm: *Jessica Awad*. Building a diagnostic framework for the genus *Synopeas* (Hymenoptera: Platygastridae) using reared specimens from Papua New Guinea.

1:20 pm: *Felipe N. Soto-Adames*. An overview of the springtails (Collembola) of Florida, including new records and new species.

1:40 pm: *Jose I. Martinez*. Review of a new genus of jaguar moth (Noctuidae: Pantheinae) from South America.



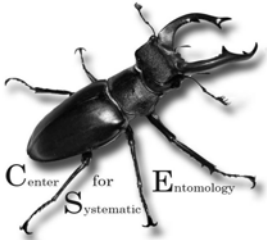
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Continuation

2:00 pm: Kristin Dunn. Developing an optimal protocol for nano-CT scanning the light organs of fireflies (Coleoptera: Lampyridae).

2:20 pm: Roy Morris. The French Guiana experience: Diversity, costs and challenges.

2:40 pm: R. Wills Flowers. Hunting leaf beetles (Coleoptera: Chrysomelidae) and mayflies (Ephemeroptera) in western Ecuador.

3:00 pm: Coffee Break

3:20 pm: Zee Ahmed. Current role and future potential of Florida State Collection of Arthropods in scale insect (Coccoidea) pest management.

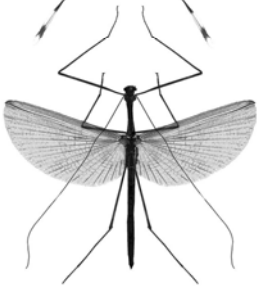
3:40 pm: Gary Steck. Current state of fruit fly (Diptera: Tephritidae) larval taxonomy.

4:00 pm: David Serrano. The Broward College Insect Collection: your new collaborator in South Florida!

4:30 pm: CSE Business meeting.

5:30 pm: End of event.

6:30 pm: Meet at a restaurant.



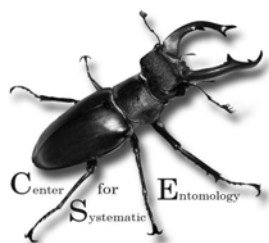
Julieta Brambila, organizer, jbramb@gmail.com, 352-281-0428

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PROGRAM WITH SUMMARIES



Welcome!

9:00 am: *Opening and introductions*

9:20 am: **Bob Woodruff**. Retired. Florida State Collection of Arthropods (FSCA), Research Associate, Gainesville, Florida.

A short history of the Center for Systematic Entomology.

9:40 am: **Weston Opitz**. Florida State Collection of Arthropods (FSCA), Research Associate, Gainesville, Florida. opitz@kwu.edu

The current state of checkered beetle systematics (Coleoptera: Cleridae).

Summary: Checkered beetles are mostly tropical predatory insects that primarily feed on wood-infesting insects. Their species abundance, tendencies towards mimicry, and the current progress in their systematics will be discussed.

10:00 am: **Andrei Sourakov**. McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, University of Florida, Gainesville, Florida.

asourakov@flmnh.ufl.edu

Phenotypic plasticity and genetic diversity of the two iconic Lepidoptera species: the Bella Moth (*Utetheisa ornatrix* (Erebidae)) and the Io Moth (*Automeris io* (Saturniidae))

10:30 am: *Coffee Break*

10:40 am: **Oliver Keller (presenter) and Marc A. Branham**.

Department of Entomology and Nematology, University of Florida, Gainesville, Florida. okeller1977@gmail.com

A trip to Paris and the state of West Indian fireflies (Coleoptera: Lampyridae).

11:00 am: **Matthew R. Moore (presenter)**, Gary J. Steck, Erick J. Rodriguez, Allen L. Norrbom, Raul Ruiz-Acre, Brian M. Wiegmann, Bruce D. Sutton, Marc A. Branham, Pratibha Srivastava, Terrance N. Todd, Cheryl G. Roberts, Henry Troya, José Eduardo Vilatuña, David Donoso, Alies Muller, Anielkoemar Gangadin, Norma Nolzco, Pedro Alexander Rodriguez Clavijo, Emilio Arévalo Peñaranda, Javier Martinez, Elizabeth Quisberth Ramos, Juan José Lagrava Sánchez, Freddy Colque. Presenter: Department of Entomology and Nematology, University of Florida, Gainesville, Florida. cyclocephala@gmail.com

CO1 barcoding *Anastrepha* fruit flies (Diptera: Tephritidae: Trypetinae: Toxotrypanini) for the enhancement of immature identification

Summary: *Anastrepha* Schiner is the most diverse genus of fruit flies (Diptera: Tephritidae) in the American tropics and subtropics with more than 300 currently recognized species, with several economic species. We present a CO1 barcoding dataset that comprises over 2,100 sequences representing approximately 260 *Anastrepha* species. Several features of the dataset are discussed, including the success of confirming species-level identifications of larval *Anastrepha* samples using the statistical package BarcodingR.



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Continuation

11:20 am: *Deborah L. Matthews (presenter) and Jacqueline Y.*

Miller. McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, University of Florida, Gainesville, Florida. dlott@flmnh.ufl.edu

Plume moths of The Bahamas (Lepidoptera: Pterophoridae).

Summary: The Caribbean plume moth fauna is poorly known, with few species recorded, for example, from Cuba (14) and Puerto Rico (21), compared to the neighboring mainland fauna of Florida (43). In the Bahamas, only five species of Pterophoridae were recorded (1980s). Our efforts to sample the total moth fauna of the Bahamas since 2011 resulted in 11 species reported after surveys on North Andros that year. Since then, 13 major islands in the Bahamas archipelago have been sampled, with the number of plume moth species now more than doubled to at least 23. An overview of the fauna and host associations will be given along with discussion of unknowns and potential new taxa.

11:40 am: *Lunch (provided) and Posters*

Poster:

Héctor Jaime Gasca-Álvarez and Paul E. Skelley (Presenter).

Presenter: Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville, Florida. Paul.Skelley@freshfromflorida.com.

Héctor Gasca: Corporación Sentido Natural, Bogota, Colombia.

hjgasca@sentidonatural.org.

Pleasing fungus beetles (Coleoptera: Erotylidae: Erotylinae) of Colombia: A preliminary overview.

Summary: An overview of subfamily Erotylinae of Colombia is provided. The Colombian Erotyline fauna includes 31 genera and 241 species (20.23% of the world diversity) assigned to tribes Megalodacnini, Tritomini and Erotylini. Three genera monotypic and are found only in Colombia. Species of the genera *Aegithus*, *Gibbifer* and *Mycotretus* are recorded for the first time in the country. The study of Erotylidae in Colombia is still scarce, so it is required to carry out collection expeditions, taxonomic reviews, and ecological and behavioral research.



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1:00 pm: Jessica Awad. Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville, Florida.

Jessica.Awad@freshfromflorida.com

Building a Diagnostic Framework for the Genus *Synopeas* (Hymenoptera: Platygastridae) Using Reared Specimens from Papua New Guinea”.

Summary: Taxonomic preparedness enables efficient response to agricultural pests. Species level taxonomy of the genus *Synopeas* Förster (Hymenoptera: Platygastridae: Platygastrinae) is in a state of confusion, preventing their effective use in biological control. *Synopeas* species parasitize gall midges (Diptera: Cecidomyiidae) of economic importance, including invasive species such as the swede midge *Contarinia nasturtii* (Keiffer) and mango midge *Procontarinia mangiferae* (Felt), as well as native North American pests like the blueberry midge *Dasineura oxycoccana* (Johnson). A lack of diagnostic tools for *Synopeas* constitutes a serious taxonomic impediment to the development of biological control programs for pest midges. The proposed work utilizes a set of reared specimens from Papua New Guinea to elucidate the morphological and molecular bases for species delimitation in *Synopeas*.



1:20 pm: Felipe N. Soto-Adames. Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville, Florida.

Felipe.Soto-Adames@freshfromflorida.com

An overview of the springtails (Collembola) of Florida, including new records and new species.

Summary: The springtail (Collembola) fauna of the Southeast US is the most diverse in the Nearctic region. The springtails of Florida, despite the state having a range of diverse habitats and communities along a north-south transect, are the least known among Southeastern States. Here I present a review of the diversity of springtails reported from Florida, including new reports and likely new species. I also discuss the biogeographic affinities of the fauna and suggest future research projects.

1:40 pm: Jose I. Martinez . McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, University of Florida, Gainesville, Florida.

joemartinez@ufl.edu

Review of a new genus of jaguar moth (Noctuidae: Pantheinae) from South America.

Summary: The genus *Lichnoptera* is comprised by 15 species distributed from North America to South America. However, this genus has not been properly studied since their discovery almost two centuries ago. Preliminary results in the phylogeny of *Lichnoptera* showed that this genus is a generic complex compressing many genera. Within these genera there is a new genus restricted to the Andes Mountains in South America that was separated by using morphological and molecular characters.

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2:00 pm: *Kristin N. Dunn (Presenter), Seth Bybee, Kathrin Stanger-Hall and Marc A. Branham*. Presenter and Marc Branham: Department of Entomology and Nematology, University of Florida, Gainesville, Florida. KristinDunn@ufl.edu. Seth Bybee: Brigham Young University. Kathrin Stanger-Hall: University of Georgia.

Developing an optimal protocol for nano-CT scanning the light organs of fireflies.

Summary: We investigate the use of nano-computed tomography (nano-CT) scanning as a means of analyzing the light organs of fireflies (Coleoptera: Lampyridae). With nano-CT we are able to assess the internal structural networks of the light organ in 3D, which allows for quantification and analyses that have not been possible with traditional microscopy techniques. Using nano-CT scanning will provide insight into the morphological variation among taxa, as well as the evolution of light organs in Lampyridae. We scanned specimens of *Photuris congener* and *Photinus pyralis* to test various staining methods and storage conditions in an effort to develop an optimal protocol for maximizing the amount of detail in scans of Lampyridae. With this protocol, we have been able to visualize the two-layer morphology of the light organ tissue, as well as the larger network of the tracheal system. Further analyses will be necessary for the segmentation and visualization of finer features, and having this standard protocol in place is a crucial first step.

2:20 pm: *Roy Morris*. Florida State Collection of Arthropods (FSCA), Research Associate, Gainesville, Florida. beetlesandbirds@gmail.com
The French Guiana experience: Diversity, costs and challenges.

2:40 pm: *R. Wills Flowers*. Florida A&M University, Tallahassee, Florida. rflowers7@earthlink.net
Hunting leaf beetles and mayflies in western Ecuador.

3:00 pm: *Coffee Break*

3:20 pm: *Zee Ahmed*. Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville, Florida. Muhammad.Ahmed@freshfromflorida.com
Current role and future potential of Florida State Collection of Arthropods in scale insect (Coccoidea) pest management.



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3:40 pm: Gary Steck. Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville, Florida. gary.steck@freshfromflorida.com

Current state of fruit fly (Diptera: Tephritidae) larval taxonomy.

Summary: General overview of fruit fly larval morphology, state of larval alpha taxonomy, and contributions to phylogenetic studies of the Tephritidae, with description of our on-going, Farm Bill-funded fruit fly diagnostics project.

4:00 pm: David Serrano. Environmental Science AS/BS program manager
Broward College, Davie, Florida. dserrano@broward.edu

The Broward College Insect Collection: your new collaborator in South Florida!

4:30 pm: CSE Business meeting.

5:30 pm: End of event.

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