



Southern Lepidopterists'
Society
and
ASSOCIATION FOR
TROPICAL LEPIDOPTERA
2010 Annual Meeting



McGuire Center for Lepidoptera & Biodiversity
Florida Museum of Natural History
University of Florida
1 – 3 October 2010



Front Cover: *Aspitha leander* (Boullet, 1912), Leander Firetip, Ecuador, ESM Chochuvi 850m x-06, M. Simon colln. MGCL 2009-38. Image by D. Matthews.

Florida Museum of Natural History, 2009. Image by Jeff Gage.

FALL MEETING OF THE SOUTHERN
LEPIDOPTERISTS' SOCIETY AND THE
ASSOCIATION FOR TROPICAL LEPIDOPTERA
OCTOBER 1-3, 2010

McGuire Center for Lepidoptera and Biodiversity Conference Room
Florida Museum of Natural History
University of Florida, Gainesville, Florida

Local Arrangements

Meeting Co-Chairs: Jacqueline Y. Miller and Deborah L. Matthews

Meeting Organizing Committee:

Charles V. Covell, Jr., Christine Eliazar, Peter Eliazar, Thomas C. Emmel, Deborah L. Matthews, Jacqueline Y. Miller, Marc Minno, Tom Neal, Brian Scholtens, Jeff Slotten, Jim & Vanessa Schlachta, J. D. Turner, Nancy Turner

Banquet/Lunch:

Jim & Vanessa Schlachta, Tom Neal, Jacqueline Y. Miller, Deborah L. Matthews

Field Trip Coordinators:

Jeff Slotten, Tom Neal, Marc Minno, James Adams, Lary Reeves

Group Photograph, ATL Photo Contest

Andrei Sourakov

Collection Access:

Andy Warren & Andrei Sourakov

Program:

Jacqueline Y. Miller and Deborah L. Matthews

Program Technical Support:

Jim Schlachta, J. Court Whelan

Slide Fest & Door Prizes:

Charles V. Covell, Jr.

Registration/Logistic Support:

Galileo Encabo, Montana Atwater, Elena Ortiz, Cassandra Romero

Security:

Kurt Auffenberg



and
ASSOCIATION FOR TROPICAL
LEPIDOPTERA

Schedule of Events

Friday, October 1

1:00-5:00 p.m.: **Registration**, Lobby, Powell Hall, Florida Museum of Natural History, UF Cultural Plaza, University of Florida.

4:00-11:30 p.m.: **Moth field trip.** Meet at front entrance of Powell Hall, Florida Museum of Natural History. The group will follow field trip coordinators to Fox Grape Farm. This is a private farm with a variety of habitats on the west side of Gainesville (20 minute drive). Water and electricity are available. Please be prepared to carpool or provide your own transportation, food, and beverages.

Saturday, October 2

8:00-9:00 a.m.: **Registration** and reception, Poster viewing, McGuire Center Conference Room

MORNING SESSION

Moderator: J. D. Turner

9:00 – 9:10: Opening remarks: Brian G. Scholtens, J. D. Turner

Southern Lepidopterists Symposium: Lepidoptera of Florida and the Southeast

9:10 – 9:30: Brian G. Scholtens

“Pyraloidea Survey of Great Smoky Mountains National Park”

9:30 – 9:50: Deborah L. Matthews

“An Update on the Plume Moths of Florida”

9:50 – 10:10: J. Court Whelan and Jaret C. Daniels

“Assessing the Impact of Roadway Mortality on Lepidoptera in North Florida”

10:10 – 10:20: BREAK

10:20 – 10:40: Montana Atwater

“Diversity and Pollination Ecology of Flower-settling Moths within Florida Sandhill Communities”

10:40 – 11:00: Julieta Brambila

“Efforts for the Early Detection of Exotic Invasive Lepidoptera in Florida”

11:00 – 11:20: Marc C. Minno

“Continued Downward Trends of Butterfly Populations in the Florida Keys”

11:20 – 11:40 a.m.: Charles V. Covell, Jr.

“The Biscayne National Park, Florida Bioblitz of 2010”

11:45 – 12:00: **Group Photo**, McGuire Center steps

12:00 – 1:00: Lunch (provided): McGuire Center

AFTERNOON SESSION

Moderator: Peter Eliazar

Association for Tropical Lepidoptera Symposium: Frontiers in Biology and Diversity of Neotropical Lepidoptera

1:00 – 1:20: Jacqueline Y. Miller, Deborah L. Matthews, Thomas C. Emmel, and Andrew D. Warren.

“Biodiversity of Lepidoptera in Honduras”

1:20 – 1:40: Bob Patterson

“Moth Photographers Group – Future Developments, Central American Moths & North American Larvae”

1:40 – 2:00: Elena Ortiz

“Butterfly Diversity in Certified and Non-certified Shade Coffee Plantations in Colombia”

2:00 – 2:20: BREAK

2:20 – 2:40: Keith R. Willmott and Andrei Sourakov

“Caterpillar Mimicry? Two Possible Examples in the Neotropical Danainae”

2:40 – 3:00: Bruce Purser

“Butterfly Zonation and its Relation to the Geological History of the Eastern Andes, Central Peru”

3:00 – 3:20: Christian Salcedo

“The Biology of *Heliconius* Night Roosting: a Foundation”

3:20 – 3:40: opening for an additional presentation

3:40 – 3:50: Announcements, Thomas C. Emmel & short break

3:50 – 4:20: Business Meeting, Southern Lepidopterists’ Society

4:20 – 4:50: Board Meeting, Southern Lepidopterists’ Society (McGuire Library)

4:20 – 6:00: Free time on your own before banquet.

EVENING EVENTS

6:30 p.m. Banquet, First Lutheran Church of Gainesville – Friendship Hall, 1801 NW 5th Avenue (see map in back of program).

7:30 p.m. Door prizes, and slidefest. Bring 5-10 of your favorite Lepidoptera-related 35mm slides or Powerpoint images to share with the group.

Sunday, October 3

8:00-9:00: Morning reception, McGuire Center Conference Room

MORNING SESSION

Moderator: Charles V. Covell, Jr.

9:00 – 9:10: Announcements

9:10 – 9:30: Thomson Paris and Andrei Sourakov

“Modern Threats to the Lepidoptera Fauna in the Florida Ecosystem”

9:30 – 9:50: Delano S. Lewis

“Phylogeny, Revision, & Historical Biogeography of *Heraclides* Hübner, 1819 (Lepidoptera: Papilionidae: Papilionini)”

9:50 – 10:10: BREAK

10:10 – 10:30: Bruce Purser

“Nature and Distribution of *Morpho rhodopteron* (GODMAN & SALVIN, 1880) on the Sierra Nevada de Santa Marta, N. Colombia”

10:30 – 10:50: Andrew D. Warren, S. Kohler, D. Nunnallee & D. G. James.

“Our Beloved Buckwheat Blues: A Review of the *Euphilotes* Fauna of the Pacific Northwest (Lycaenidae: Polyommatainae)”

10:50 – 11:10: J. Court Whelan and Thomas C. Emmel

“Lepidoptera Education and Ecotourism in the Philippines”

11:10 – 11:30: James Adams

“What Family is This Moth in Now? The Revised Classification of the Superfamily Noctuoidea”

11:30 – 11:35: BREAK

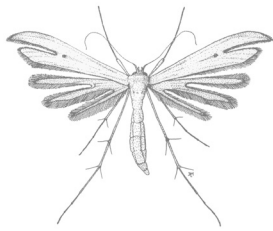
11:35 – 11:55: Kathy Malone

“Cuatro Chicas y Las Mariposas del Puerto Rico”

11:55 – 12:20: Business Meeting, Association for Tropical Lepidoptera

12:20: Conclusion of Morning Session

12:20 – 12:50: Board Meeting, Association for Tropical Lepidoptera (Director’s Conference Room)



Posters

Please take time to peruse the many posters on display in the hall and on tables outside the McGuire Center conference room. Two posters are newly on display for this meeting. New posters are listed in the abstracts section below.

Abstracts

Atwater, Montana (atwatana@ufl.edu), McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, PO Box 112710, Gainesville, FL, USA, 32611-2710

“Diversity and Pollination Ecology of Flower-settling Moths within Florida Sandhill Communities”

ABSTRACT: Moth interactions with their nectar plants are diverse and cryptic. This study investigates the diversity and natural history of small flower settling moths found within Florida sandhill communities. The objectives of this study are to survey the diversity of moth communities of sandhill habitat, document moth-flower interactions, and investigate any trends relating to flower color, architecture, or taxa. The knowledge gained from this study will help to include moth-plant interactions in the assessment and planning of priorities for plant restoration and the conservation requirements, not only of Florida's peninsular ridge, but also for other related subtropical and tropical areas.

becomes crucial to understand the effect this butterfly will have on the ecology of native fauna. By understanding the relationships within the *Heraclides* and building our knowledge of their biology and habits, we may be better able to sustainably manage this new invasive, while protecting the native fauna of Florida and the region at large.

Evaluation of phylogenetic evidence for subgroups within the *Heraclides* inferred from investigation of support for relationships among subgroups using existing genetic data, and 133 morphological characters, mainly from genital and wing pattern elements yielded the proposed group structure. A generalized wing pattern of homologous elements for *Heraclides* is proposed and the formal nomenclature, natural history, and life history of the 28 species revised. Three new synonyms are proposed: *Papilio isidorus nymphius* (Rothschild & Jordan, 1906), *Papilio rhodostictus pacificus* (Rothschild & Jordan, 1906), and *Heraclides chiansiades mossi* Brown, 1994. Additionally, distribution maps for each species and subspecies are included as well as a straightforward identification key based mainly on wing pattern for the group.

Matthews, Deborah L. (mothnut@hotmail.com), McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, PO Box 112710, Gainesville, FL, USA, 32611-2710

“An Update on the Plume Moths of Florida”

ABSTRACT: Progress and developments subsequent to the completion of MS work in 1989 are discussed. Since the publication of an annotated checklist, including 32 species of Florida Pterophoridae in 1990, additional species have been recorded. Other developments include changes in nomenclature, discovery of life histories, identification of unknowns, and description of new species. Some examples of Florida plume moths are presented, including some of the challenges in identification. An updated monographic treatment of the fauna is underway, facilitated by advances in digital imaging and processing.

Matthews, Deborah L. & Jacqueline Y. Miller, McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, PO Box 112710, Gainesville, FL, USA, 32611-2710

Brambila, Julieta (julieta.brambila@aphis.usda.gov), USDA APHIS PPQ, Gainesville, FL 32608

“Efforts for the early detection of exotic invasive Lepidoptera in Florida”

ABSTRACT: Early detection of exotic invasive plant pests and diseases is the primary task of the Cooperative Agriculture Pest Survey Program. A short review of several survey programs for Lepidoptera is presented. Some of the species included in this presentation are *Spodoptera litura*, *Epiphyas postvittana*, and *Tuta absoluta*.

Covell, Charles V., Jr. (ccovell@flmnh.ufl.edu), McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, PO Box 112710, Gainesville, FL, USA, 32611-2710

“The Biscayne National Park, Florida Bioblitz of 2010”

ABSTRACT: On May 1 and 2, 2010, about 300 scientists and several thousand adults and children from south Florida visited the Biscayne National Park to document as many living species as possible while also involving the public in research and learning. The event was sponsored by the National Geographic Society and the National Park Service. With several of our entomologist colleagues, I participated in identifying and listing as many Lepidoptera species as we could in 24 hours. Butterflies were identified as we hiked the trails on Elliott Key; and two moth species were also identified during the day. Moths were collected in a black light trap and are still incompletely identified. A tentative list of 12 butterfly and 23 moth species is presented, along with a sampling of images from this memorable event and comments.

Lewis, Delano (dlewis@ufl.edu), McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, PO Box 112710, Gainesville, FL, USA, 32611-2710

“Phylogeny, Revision, & Historical Biogeography of *Heraclides Hübner, 1819* (Lepidoptera: Papilionidae: Papilionini)”

ABSTRACT: With the recent introduction of a *Citrus*-feeding swallowtail to the West Indies from Southeast Asia, *Papilio demoleus*, it

Poster Presentation - “The Cacao Plume Moth in Honduras (Lepidoptera: Pterophoridae)”

ABSTRACT: Observations on the life history of the Cacao Plume Moth, *Michaelophorus nubilus* (Felder & Rogenhofer) in Honduras are presented along with illustrations and diagnostic features of the adults, larvae, and pupae. This species was previously unrecorded from Honduras and is one of several new records for the family resulting from a cooperative biodiversity study of the Lepidoptera of Honduras. Larvae are pests of *Theobroma cacao* Linnaeus and feed on developing leaves and occasionally flowers. Cacao beans, harvested from the mature pods of these trees, are the source of cocoa powder for chocolate products. While the impact on pod production of mature trees is minimal, substantial damage to leaves of seedling plants is a concern for nursery growers. The identity, recognition characters, and distribution of these small moths is of interest, not only as pest species, but as a natural associate of a plant of both economic and cultural significance.

Malone, Kathy (zlongwing@aol.com), 14572 NW 232 St. High Springs, FL 32643

“Cuatro Chicas y Las Mariposas del Puerto Rico”

ABSTRACT: From the beaches at the rare, dry coastal forest of Guanica, to the mountains of the unique tropical rainforest, El Yunque, the changing terrain yields some 100 species of butterflies. Puerto Rico's rich, diverse landscapes produce several specialties--including the complex and stunning Puerto Rican *Callisto* and the Puerto Rican Yellow. Yet the island is small enough to circulate in a week or less, and give the visitor a feeling that he or she has been around the world. Four butterfly friends did just that in February 2010, and are eager to share what they found.

Miller, Jacqueline Y., Deborah L. Matthews, Thomas C. Emmel, and Andrew D. Warren, McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, PO Box 112710, Gainesville, FL, USA, 32611-2710, (jmiller@flmnh.ufl.edu)

“Biodiversity of Lepidoptera in Honduras”

ABSTRACT: The biodiversity of the Lepidoptera of Honduras is the least known in Central America. An inventory of the Lepidoptera of Pico Bonito National Park and vicinity, in the Departments of Atlantida and Yoro in northern Honduras, has been initiated to obtain baseline data. Thus far, more than 1,500 species have been identified and include many new records. Based on our preliminary results, comparison with Janzen's ACG of Costa Rica inventory, and Heppner's synopsis of faunal regions (1991), the total number of Lepidoptera expected for Honduras should exceed 6,000 species. Preliminary data on the diversity per family along with some representative species will be presented. Aspects of the biogeography of Lepidoptera in Honduras will also be discussed.

Mimmo, Marc C. (mmimno@bellsouth.net), 600 NW 35th Terrace, Gainesville, FL 32607-2441

"Continued Downward Trends of Butterfly Populations in the Florida Keys"

ABSTRACT: Butterflies in the Florida Keys have continued to decline in recent years. The Zestos Skipper (*Epargyreus zestos oregon*) and rockland Meske's Skipper (*Hesperia meskei pinocayo*) are presumed extinct. Thirteen species of formerly resident butterflies including the Bahamian Swallowtail (*Herclides andraemon bohotei*), Amethyst Hairstreak (*Chlorostymon maesites*), Gray Ministreak (*Ministrymon asia*), Nickerbean Blue (*Cyclargus ammon*), Cuban Crescent (*Anhanassa frisia*), Florida Leafwing (*Anaea troglodyta floridae*), Ruddy Daggerwing (*Marpesia petreus*), Little Metalmark (*Calephelis virginensis*), Eufala Skipper (*Lerodea eufala*), Twin-spot Skipper (*Oligoria maculata*), Palmetto Skipper (*Euphyes arpa*), Hayhurst's Scallopwing (*Staphylus hayhurstii*) and Zaruco Skipper (*Erynnis zarucco*) are either gone from the Keys or are barely detectable. The endangered Schaus' Swallowtail (*Heraclides aristodemus ponceanus*) and Miami Blue (*Cyclargus thomasi bethunebakeri*) as well as the Florida Purplewing (*Eunica tatila tatilista*) and Keys Palatka Skipper (*Euphyes pilatka klotsi*) are near their minimum population viability limits. Highways and exotic predatory ants are likely to be among the main causes of the decline. De-listing may help the rarest species by providing greater flexibility in captive rearing and re-introduction.

Ortiz, Elena (eortiz@ufl.edu), McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, PO Box 112710, Gainesville, FL, USA, 32611-2710

"Butterfly Diversity in Certified and Non-certified Shade Coffee Plantations in Colombia"

ABSTRACT: Shade grown coffee plantations have been suggested to improve biodiversity conservation in comparison to sun grown coffee. Increased efforts for maintaining several properties of the original forest resulted in a decrease in plantation production but not in an increased monetary retribution. In consequence, certification programs arose to control production standards and maximize biodiversity conservation as well as economic benefits to coffee growers. The role of coffee certifications was previously studied in bird and plant communities among non-certified and two certified systems; however, no differences were found, giving low support to the certification programs. Based on those results, we tested the role of coffee certifications by evaluating butterfly communities in three different systems of shaded coffee plantations. Contrary to the previous results evidenced for birds and plants, butterfly diversity, abundance, and richness showed significant differences among systems. In conclusion, butterflies are more sensitive to coffee growing standards than birds are, and seem to respond unfavorably when increasing the chemical gradient. This study demonstrated that certification programs enhanced the conservation of highly diverse butterfly communities in contrast to the results obtained with bird communities.

Paris, Thomson and Andrei Sourakov, McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, PO Box 112710, Gainesville, FL, USA, 32611-2710 (thomsonparis@ufl.edu)

"Modern Threats to the Lepidoptera Fauna in the Florida Ecosystem"

ABSTRACT: We examine the possible threats to the Lepidoptera fauna of Florida. Factors affecting the Lepidoptera fauna in the Florida ecosystems include native and exotic parasitoids. Over 3,000 larvae of Lepidoptera were sampled in Alachua, Broward, and Miami-Dade

Counties in August 2009 - September 2010. The larvae were reared in the lab. To-date, a total of 244 parasitoids were obtained thanks to this rearing. The survey provided information about the prevalence of parasitoids on select native species and populations of Lepidoptera in Florida. The differences between host-parasitoid interactions in urban and rural settings and the possible effect of pesticides on these interactions are reported.

Patterson, Bob (BPatter789@aol.com) 12601 Buckingham Drive, Bowie, Maryland 20715.

"Moth Photographers Group - Future Developments, Central American Moths & North American Larvae"

ABSTRACT: We are contemplating establishing a library for photographs (of pinned and living specimens) of the moths of Central America. Difficulties abound due to the lack of a comprehensive regional checklist, need for database programming, and requirement for dedicated volunteer or institutional staff support to administer the project. Expressions of interest are sought.

Efforts are underway for expanding the existing database for photographs of larvae of moths and butterflies (North of Mexico). We contemplate the creation of a search engine to allow website visitors to rapidly query the database, basing the search on selected characters (patterns, colors) visible in a photograph or specimen. Photographs of identified larvae are needed.

Purser, Bruce (bruce.purser@wanadoo.fr), 39 av. de la République, 91360, Villemaison, France

"Butterfly Zonation and Its Relation to the Geological History of the Eastern Andes, Central Peru"

ABSTRACT: Detailed study of Peruvian butterflies by G. Lamas (1982) is illustrated by a series of maps delimiting biogeographic regions. When compared with the geological map of Peru and, especially, with publications (ex. Jacques, 2004) concerning the geological evolution of the Andes, there appears to be a convincing correlation. This correlation concerns ENE trending structural lineations which result from rejuvenation of old Gondwana fractures, expressed

today by river patterns and geomorphology. Evident in the Peruvian Andes, faunal variations along much of the Andene Cordillera and W. Amazon, may be conditioned, in part, by the geodynamic history of the Neotropical region.

LAMAS, G. (1982). A preliminary zoogeographical division of Peru, based on butterfly distributions, 336-357 ; in Prance, (Ed.), The biological model for diversification in the tropics ; Colombia University Press, New York.
JACQUES, J.M. (2004). The influence of intraplate structural accommodation zones on delineating petroleum provinces of the sub-Andean foreland basins. In Petroleum Geosciences, 10, 1 - 19.

Purser, Bruce (bruce.purser@wanadoo.fr), 39 av. de la République, 91360, Villemaison, France

"Nature and Distribution of *Morpho rhodopteron* (GODMAN & SALVIN, 1880) on the Sierra Nevada de Santa Marta, N. Colombia"

ABSTRACT: Endemic to this isolated mountain (5800m), *Morpho rhodopteron* has been little studied in spite of the politically secure nature of the region. *M. rhodopteron*, whose habits resemble those of the better known *M. sulkowskyi*, is represented by two subspecies (Lamas, 2004), *M. rhodopteron rhodopteron* and *M. rhodopteron schulzei*. The former (*rhodopteron*) flies near bamboo situated within open secondary forest at altitudes of about 800m, in the dry, SE parts of the massif, while *schulzei*, also associated with bamboo, occurs in the mountain forests of the northern and western parts of Santa Marta. Both forms are common during the month of April and May. Although inhabiting the same massif, their habitats (dry savanna v mountain forest) and altitude (800m v 1500m), within a mountain lacking major topographic barriers, present an unusual situation for two, supposed, sub-species of *Morpho rhodopteron*.

Salcedo, Christian (salcedo@ufl.edu), McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, University of Florida, Gainesville, FL 32611-2710

"The Biology of *Heliconius* Night Roosting: a Foundation"

ABSTRACT: Aggregative behaviors are usually adaptively important, not only in insects, but in almost every animal group.

Understanding the importance of such behavior in a megadiverse tropical group can open windows towards the better understanding of key speciation and diversification mechanisms. *Heliconius* (L.) butterflies are a successful tropical group widely used in evolution and genetic studies. Some species within the genus express nocturnal roosting. Roosts are usually formed under relatively dense vegetation mats where dry vines or branches provide a perch for the night. These sites may last for months. Despite the lack of understanding of the importance of *Heliconius* roosting, only a few studies have been made. In order to understand the importance of factors related to the expression of *Heliconius* roosting, an ethological study was made, and data on light, temperature, relative humidity, wind, use of wing color cues, predation and disturbance events, and use of foraging resources were recorded at several *Heliconius erato* and *H. sara* roost sites in Honduras, Costa Rica, and Panama. Chemical compounds from the cuticle of *H. erato* males and females were analyzed and its importance in roosting interactions was tested in bioassays. Additionally, an already identified chemical compound found in *H. melpomene*, (*E*)- β -ocimene, was tested for attraction in bioassays. The results show that roost sites offer reduced light conditions at dusk, provide a drier environment compared to its vicinity, offer protection from wind and rain, and are almost predation-free. Individuals from different broods are able to roost together. Wing color recognition under reduced light conditions at dusk is essential to successfully assemble aggregations. *Heliconius* do not learn pollen preferences at roost sites and females digest pollen overnight. In addition, a variety of volatile and non-volatile compounds from the cuticle were identified. The roles of such compounds in chemical communication remain unknown, except for (*E*)- β -ocimene, which was found to attract males and females in diurnal interactions. These findings provide the first in-depth study of *Heliconius* roosting behavior and set a landmark for future studies on this particular behavior and on similar behaviors in other insect groups.

Scholten, Brian (scholtensb@cofc.edu), Biology Dept., College of Charleston, Charleston, SC 29424

"Pyraloidea Survey of Great Smoky Mountains National Park"

ABSTRACT: Starting in 1998, I participated in the All Taxon Biodiversity Inventory in Great Smoky Mountains National Park,

concentrating on the Pyraloidea part of the survey. Major sampling efforts occurred during June 2000, May 2001, July 2002, July 2004, and August 2006. In addition I sampled individually over most of the rest of the year at various times during the survey, and gathered specimen records from historical collections. Overall, 113 species of Crambidae and 108 species of Pyralidae were documented from the park. Diversity declines with increasing altitude, and nearly all species occur between May and October. Many species are associated with cove forests, but interesting faunas are restricted to dry pine-oak woods, high elevation fields, and the very few lowland wetlands. A species of *Agriphila* confined to fields above 4500' is of potential conservation concern.

Slotten, Jeffrey R. (jslotten@bellsouth.net), 5421 NW 69th Lane, Gainesville, Florida 32653

"The Life History of *Didasys belae* Grote"

ABSTRACT: For years I had been searching for *Didasys belae*, the Tufted Wasp Moth, a dayflying arctiid. Fellow lepidopterists, namely John Calhoun, David Fine, Marc Minno, Hugo Kons and Tom Neal reported seeing one or rarely two adults on the same day. Yet, the moth has been collected in small numbers throughout the state of Florida and in Alabama. It has been found sparingly at lights and is attracted to alkaloids as discovered by Bill and Mindy Conner. Nothing had been published concerning the life history of this attractive moth. In 2007 I received an email from Don Stillwaugh that he had photographed a mating pair in Orange County, Florida. He told me where he found them. I visited the site and found an adult female fluttering around a marshy habitat. I photographed her and watched her behavior. She flew low along the vegetation and deposited an egg on the sedge *Fuirena scirpoides* (Southern Umbrella Sedge). The identification of this sedge was made by Dick Weaver at the Division of Plant Industry in Gainesville, Florida. I collected the female and she deposited eggs readily. I was able to rear several adults on various sedges as well as cuttings of the observed host. Males were observed at the site and they flew higher than the females and would land on sedge blades upside down. There were several wasps flying there and the females resembled these in their flight mode.

Warren, Andrew D.¹, S. Kohler, D. Nummallee & D. G. James. ¹McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, University of Florida, Gainesville, FL 32611-2710 (andy@butterfliesofamerica.com).

"Our Beloved Buckwheat Blues: A Review of the *Euphilotes* Fauna of the Pacific Northwest (Lycanidae: Poliommatinae)"

ABSTRACT: We review the known fauna of *Euphilotes* of the Pacific Northwest, with special emphasis on Washington and Oregon. Recent regional works have generally mapped two species of *Euphilotes* in the region, *E. enoptes* and *E. battoides*. These are now both regarded as species complexes, with multiple taxa in each complex within our region. Within the *Enoptes* Group, we review northwestern populations of *E. enoptes*, *E. columbiae* and *E. ancilla*. Within the *Battoides* Group, we review *E. "battoides"*, *E. glaucon*, *E. baueri*, and undescribed taxa.

Whelan, J. Court, Jaret C. Daniels and Geoffrey R. Gallice, McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, PO Box 112710, Gainesville, FL, USA, 32611-2710 (cwhelan@ufl.edu)

"Assessing the Impact of Roadway Mortality on Lepidoptera in North Florida"

ABSTRACT: Florida roadways currently occupy 1% of the state's total land area, but their influence extends far beyond the edge of the road, with verges and other roadside habitat altering over 20 times the area that is occupied by the road itself (Forman, 2000). Coupled with the fact that 83% of coterminous land in the US is within 1061m of a road, deleterious impacts and ecological effects of the proximity of such roads to neighboring habitats may be a serious and little understood ecological problem.

For a total of 10 weeks in the fall of 2009, the extent of Lepidoptera roadkill mortality was assessed along four different road systems in north-central Florida. Approximately 1.6 km of roadway were surveyed by researchers on a weekly basis in an attempt to determine the contribution of roadways to direct butterfly mortality due to vehicle collisions. Transects were walked by paired researchers, and as dead

Lepidoptera were encountered, the remains were collected, identified, and tallied. A total of 314 Lepidoptera comprising 6 families and 25 species were recorded during the 10-week period. Of the 25 species, seven were known seasonal migrants that make net northward or southward movements in the fall along the Florida peninsula. These seasonal migrants accounted for 78% of the total number of individuals collected, suggesting a marked impact on migrants by traffic on roadways. Casualty rates were generally highest on roads experiencing the greatest annual average daily traffic values and higher speed limits. Based on our results, state-wide butterfly casualty estimates were conservatively estimated at 6,000,000 per week, and roadway mortality during the experimental period alone was estimated to be 66,000,000 individual Lepidoptera across all of Florida.

Whelan, J. Court & Thomas C. Emmel (cwhelan@ufl.edu), McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, PO Box 112710, Gainesville, FL, USA, 32611-2710

"Lepidoptera Education and Ecotourism in the Philippines"

ABSTRACT: One of the world's most critically imperiled biodiversity hotspots, the Philippines is a country with over 7,000 islands and close to 100 million people, making it diverse, dynamic, and in constant need of conservation initiatives. The Philippines has great potential to conserve remaining samples of its varied wilderness and incredible biodiversity, both terrestrial and aquatic. With educational programs and economic incentives, this developing nation can turn towards a more environmentally sensitive direction.

In July of 2010, several workshops were organized and conducted in the Philippines by faculty, staff, and students of the McGuire Center and Florida Museum of Natural History. Concentrating on Lepidoptera and ecotourism, they were heavily attended by students and teachers in each city visited on Cebu and Negros Islands. Key partnerships were formed to initiate comprehensive Lepidoptera research programs, with a faculty and student exchange program developed and now in place. This presentation will discuss the future of Lepidoptera research and ecotourism in the Philippines, as well as recap the events that took place during the workshops. These could serve as a potential model for future short courses in other parts of the Philippines and around the world.

Willmott, Keith R.¹, Andrei Sourakov¹, and Marianne Elias.² ¹McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, University of Florida, Gainesville, FL 32611, USA; ²CNRS, UMR 7205, Muséum National d'Histoire Naturelle, 45 Rue Buffon, CP50, 75005 Paris, France (kwillmott@flmnh.ufl.edu)

“Caterpillar Mimicry? Two Possible Examples in the Neotropical Danainae”

ABSTRACT: Caterpillar mimicry is surprisingly scarce, despite many examples of apparently defended, aposematic species. Here, we report two possible examples of caterpillar mimicry in two tribes of the neotropical Danainae, the Danaini and the Ithomiini. The first example, from the Caribbean island of Hispaniola, includes two subtribes of Danaini: *Danaus plexippus* (Linnaeus), *Danaus cleophile* (Godart), *Danaus gilippus* (Cramer) (Danaina), *Anetia briarea* (Godart) and *Anetia jaegeri* (Ménétriés) (Itunina). The second example, from the upper Amazon of eastern Ecuador, involves four subtribes of Ithomiini: *Forbestra olivencia* (Bates) (Mechanitina), *Hypothyris flunonia* (Hewitson), *Hypothyris semifulva* (Salvin) (Napeogenina), *Ithomia amarilla* Haensch (Ithomiina), *Hyposcada anchiala* (Hewitson), *Oleria sexmaculata* (Haensch) (Oleriina), and *Pseudoscada florula* (Hewitson) (Godyridina). *Hyposcada illinissa* (Hewitson) (Oleriina) is a possible additional member. We suggest that precise mimicry among caterpillars may be rarer than among adult butterflies because of a lack of sexual selection to drive the initial evolution of bright colors in larvae. We also suggest that the evolution of warning colors in protected caterpillars is more difficult than in butterflies, because a novel, conspicuous caterpillar is less able to avoid capture than the more agile adult.

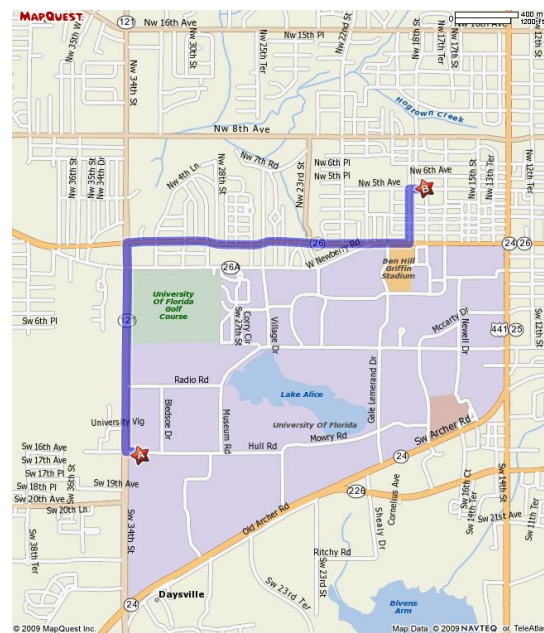
Van Zandt, Peter A., Grace Balinda, Anna Bianchi, and John-Paul Tortorich. Birmingham-Southern College, Birmingham, Alabama

Poster Presentation - “Preliminary Survey of the moths of the Cahaba River National Wildlife Refuge, Bibb Co., Alabama”

ABSTRACT: The Cahaba River National Wildlife Refuge (CRNWR) is a 14.4km² refuge located at the boundary between the Southern Ridge and Valley and East Gulf Coastal Plain physiographic regions. Although the region has historically experienced substantial disturbance through logging and mining activities, its location and diversity of habitats have made it a biodiversity hotspot for terrestrial plants as well as other terrestrial and aquatic taxa – especially fishes, mussels, and snails. However, little is known of the insect diversity of the refuge. Therefore, we undertook this preliminary survey to determine whether moth diversity showed a similar pattern of high diversity and rare species. Specimens were collected at night on 12 sampling trips by hand-collecting specimens at a sheet illuminated by a 175-Watt mercury vapor light powered by a portable generator. We typically collected from 8:00PM to midnight from two locations: one within the refuge and one adjacent to the refuge property. We estimated the total number of moth species from this area by generating a species:area curve and fitting the asymptotic species accumulation with EstimateS. To date, a total of 602 specimens, representing 179 species from 24 families have been identified. Only two are listed as rare or uncommon. Based on these surveys, we estimate that approximately 297 total species (with a 95% confidence limit up to 400 species) should be expected to occur within or adjacent to the CRNWR. These results are only a tentative estimate, as our sampling was limited to 12 nights and due to the underrepresentation of micro-moths in our samples.

NOTES:

Location for Saturday Evening Banquet & Slide Fest:



Driving Directions to: First Lutheran Church of Gainesville - Friendship Hall, 1801 NW 5th Avenue

From the Florida Museum of Natural History - McGuire Center:

- 1.) Turn **right** at SW 34th St - 1.0 mi
- 2.) Turn **right** at W University Ave - 1.1 mi
- 3.) Turn **left** at NW 22nd St - 0.3 mi
- 4.) Turn **right** at NW 5th Ave - Destination will be on the right