

Phaëton

The Official Newsletter of the Maryland Entomological Society

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EDITOR: Eugene J. Scarpulla

FACULTY SPONSOR: Frank E. Hanson and Austin P. (Bob) Platt

Department of Biological Sciences

University of Maryland Baltimore County (UMBC)

1000 Hilltop Circle Baltimore, MD 21250

Meeting Announcement

The Maryland Entomological Society's 276th regular meeting will be held Friday, October 15, 2010, beginning at 8:00 p.m., in Room 004 (one floor below the street level), Biological Sciences Building, University of Maryland Baltimore County (UMBC). Bring a friend and specimens/observations to share. Refreshments will be provided. Presentations are scheduled to begin at 8:15 p.m.

Speaker: Dr. David A. Nickle, Research Entomologist

Systematic Entomology Laboratory, Agricultural Research Service, USDA, Beltsville, MD

Title: "Seeing the Invisible: a new look at our smallest insects, the thrips (Thysanoptera)"

Thrips (Thysanoptera) include some of the smallest insects in the world. But because of their minute size, most people do not have an awareness of what their actual appearance is. They are usually known for their damage to plants and flowers, but many species are beneficial as predators. Among the smallest of thrips is the Six-spotted Thrips, a predatory species that feeds on spider mites and is used as a biocontrol agent in greenhouses. Remarkable images of this species and other thrips have been captured in high detail with the aid of cryo-scanning electron microscopy, revealing the complexity and beauty of these insects for the first time.

So far, Dr Nickle has published four parts of a five-part series that identifies the 130 species of thrips regularly encountered in commodities by port authorities since 1983. The series is entitled "Commonly Intercepted Thrips at U.S. Ports of Entry from Africa, Europe, and the Mediterranean" and the parts can be found in issues of the Proceedings of the Entomological Society of Washington.

His current research project is a "Systematic Analysis of Aphids, Mites, Scales, Thrips, and Termites with Emphasis on Invasive Species." Using morphological and molecular characters of aphids, plant-feeding mites, scale insects, termites, and thrips, the project will evaluate, characterize, and synthesize systematic information to discover and delimit new and previously described species and formulate hypotheses of relationship at higher taxonomic levels to predict invasiveness and other important biological characteristics. The project will provide detailed syntheses of information pertinent to safeguarding against new invasions or implementing strategies for controlling them and will deliver identification services to customers and maintain and grow the U.S. National Collections.

Meet for Dinner before the Lecture

If you are interested in dinner before the lecture, join Gene Scarpulla, Marcia Watson, and usually Fred Paras and the guest speaker, as well as other members, at Kibby's Restaurant and Lounge, "Home of Baltimore's Best Shrimp Salad Sandwich." Kibby's is located inside the Baltimore Beltway at 3450 Wilkins Avenue, just 15 minutes from UMBC. Coupon specials can be printed online at http://kibbysrestaurant.net. We meet at the restaurant at 6:00 p.m.

For more information concerning this meeting, please contact one of the following people:

Annapolis Area: Harold Harlan (410) 923-0173 (Home) haroldharlan@comcast.net Baltimore Area: Fred Paras (410) 374-0425 (Home) bugandrockman@msn.com

> Phil Kean (410) 944-4630 (Home)

(410) 455-2265 (Biological Sciences, UMBC) Frank Hanson

hanson@umbc.edu Southern MD: **Bob Platt** (410) 586-8750 (Home) platt@umbc.edu

A PHAËTON THANK YOU

The Maryland Entomological Society wishes to thank Harold J. Harlan for 15 years of dedicated service to the publication of the *Phaëton*, the newsletter of the MES. His annual six issues have proved interesting and informative to the entomological community of Maryland and the surrounding states. He is to be commended for his hard work assembling all of this diverse information into a cohesive publication for the Society's members. Thanks Harold for a "Job Well Done."

MAY 21, 2010 MES MEETING MINUTES

The 275th general meeting of the Maryland Entomological Society was held on Friday, May 21, 2010 at UMBC and was begun at 8:24 p.m. with a welcome by Fred Paras and then proceeded into the society business meeting. The April 2010 meeting minutes were read and approved, and then the treasurer's report was delivered, citing an MES funds total of \$100 more than in April, making the total \$2464.53. The main business for the May meeting was election of officers for next year, and this was completed with a re-election of the present slate of officers except for Newsletter Editor, a job for which Gene Scarpulla had been briefed by Harold Harlan earlier in the year after Harold announced a desire to relinquish this role. We were pleased to elect Gene to this new position as well as secure his re-election as society Journal Editor. We all expressed our praise and appreciation to Harold for his job as Newsletter Editor, a job in which he has served diligently for the past 15 years (since February 1995). Fred announced that Dr. Austin (Bob) Platt, our current faculty sponsor, has completed 32 years at UMBC as Professor and Professor Emeritus in the Biological Sciences Department. Fred will be acquiring Adjunct status at UMBC this fall to allow him to facilitate future MES meetings. Some discussion ensued concerning the Society spring field trip which was held at Green Ridge State Forest, MD on Saturday, May 15. Phil Kean and Gene Scarpulla circulated an insect list for the trip that members could check. The Appalachian Tiger Swallowtail, Papilio appalachiensis (Papilionidae: Papilioninae) was seen in numbers, and Gene Scarpulla circulated articles in The Taxonomic Report by Harry Pavulaan and David Wright on this relatively newly described swallowtail species. Harry Pavulaan will be the speaker at the November 2010 MES meeting. Tim Foard recorded at least 20 species of ants at Green Ridge from the field trip. Fred announced The Entomological Society of Washington banquet to be held as a pot-luck dinner at the Audubon Naturalist Society headquarters at Woodend in Chevy Chase on June 3, 2010. The speaker will be author Kim Todd who will discuss her new book Chrysalis: Maria Sibylla Merian and the Secrets of Metamorphosis about the famous 17th century woman naturalist of the book title. Finally, member Dr. Michael Turell announced and displayed some very striking, colorful, and accurately species-depicted insect and other natureoriented cotton T-shirts he has arranged for sale as part of his 4-H Insect Program sponsorship in Frederick, MD. A catalog was passed around from which interested members could choose and arrange orders through Dr. Turell. The main program followed these announcements. After this, the meeting ended with fine refreshments and discussion.

Respectfully submitted, Richard H. Smith, MES Secretary

MAY 21, 2010 MES LECTURE

"The Impacts of Tropical Peat Swamp Forest on Butterfly Species Richness and General Biodiversity" – Speaker: Peter R. Houlihan

Mr. Peter R. Houlihan is an undergraduate student in Behavioral Biology (expected graduation in 2012) at The Johns Hopkins University, Baltimore, MD. This being our annual MES members meeting, Mr. Houlihan was our featured member speaker. Peter spoke primarily about his research findings and experiences during his summer 2009 research tour in Indonesian Borneo. His flight to Borneo consisted of legs from New York to Korea and then to Jakarta, Indonesia and finally to Palangkaraya, Borneo. Palangkaraya is the capital city of the Indonesian province of Central Kalimantan. The population is 160,000 and the language is Indonesian and, more locally, Dayak. Religions consist of Muslim, Christianity, and the local native belief, also called Dayak. Headhunting occurred in Borneo until around 1968. The trip to the research station 20 miles south of the city was by taxi and motorized canoe. The rainforest there was primarily peat swamp and anaerobic with many trees revealing buttressed roots. Species in this habitat exhibited reduced diversity, but all were intensely endemic. Local wildfires persist on the ground for months because of the thick organic component. Unfortunately, many of the original rainforests have been destroyed to form palm oil plantations, and regeneration will take millennia. Subsistence forests do still remain, and the research station was located in one of these in the Sabangau Forest in Central Kalimantan. Established in 2004; selling game, logging, and slash-burn is illegal there although illegal logging occurs and is deterred by erection of sturdy dams in canals to deter the transport of logs. In this area, Peter studied the effects of deforestation on Nymphalid butterfly species cross-sections. Mark-recapture techniques were initiated using fruit bait traps. Seventeen sites were established, each with a trap at 2 meters and another around 8 meters in height. Sites were classified by degree of canopy cover. All traps received monitoring for two out of every three days. At least nine genera of Nymphalids were recorded. Using Simpson's Biodiversity Index, Peter was able to demonstrate that sites with high canopy cover where traps were at the lowest height from the ground had greatest species richness. Less diversity was found in the high traps, along forest edge areas, and in forest clearings. Recapture rate was high, and this indicated low dispersal. Peter also found that high species thoracic volume, measured in cubic centimeters, was

Volume 31, Number 1

correlated with high canopies, gap areas, and high traps. The open condition fostered species with more robust anatomical flight development. Species in dense, low canopy areas and from lower trap locations were more slender. Peter also became involved in Orangutan and gibbon research and the Bornean Wild Cat project while at the research station. Motion-activated night-camera traps with regular and infra-red flash were erected. Animals caught on film using this technique included the Bornean Clouded Leopard, Flat-headed Cat, Marbled Cat, Leopard Cat, Malay Civet, Sun Bear, Sunda Pangolin, Bearded Pig, mongoose sp., Otter Civet, and Western Tarsier. Peter showed the very striking photos from this project. Peter also visited an Orangutan rehabilitation center. The orphaned animals at these centers are mainly those rescued from rainforests being converted to palm oil plantations. They are usually young individuals that were removed from the wild and sold through illegal pet trade before learning foraging techniques. They are trained to secure food, but they are still only able to survive in a controlled environment. Many of these individuals have lost any fear of or aggressiveness toward humans; they live at the outskirts of local villages; and they enter villages to drink water. In the rainforest, Peter explained that wild Orangutans make aggressive displays to passing humans and become violent if you establish eye contact. Peter also showed pictures of a variety of fauna and flora taken during excursions in the area. These included sunbirds, snakes, frogs, mantids, stick insects, beetles, millipedes, spiders, ants, pill bugs, and pitcher plants. He saw flying lizards at a CO₂ monitoring station. Peter also took a 4-day boat trip into the Tanjung Puting National Park with a stay at Camp Leakey. Among many creatures here, he photographed a flower mantis, Proboscis Monkeys, and a False Gharial (a crocodilian). Peter is planning, as well as looking, for corporate sponsors for the Busang River Initiative for Conservation and Communities (BRINCC) expedition scheduled for May-August, 2011. The expedition is expecting to include 12 people including 6 guides. In this trip, he will document the insect diversity in the largely unknown Heart of Borneo and he will assess the biogeographic effects of elevation on populations by studying phenotypic and genotypic variation within Borneo's forests (i.e.: moving down the river basin from the highlands to the lowlands). The central highlands are the last conservation frontier in Borneo. Additional information can be found at www.brinccexpedition.org.

Respectfully submitted, Richard H. Smith, MES Secretary

MEMBER NEWS

Harold J. Harlan was featured on ABC News on 10 September 2010 discussing bedbugs and the colony he has been maintaining for decades. Details can be found at http://abcnews.go.com/Health/Sleep/bedbug-keepers-wisdom/story?id=11594274.

Frederick Paras has been appointed as Adjunct Assistant Professor of Biological Sciences at the University of Maryland Baltimore County.

Manya B. Stoetzel of St. Leonard, MD passed away on 13 September 2010. Manya had worked for 30 years at the USDA, ARS, Systematic Entomology Laboratory and had served as President of the Entomological Society of America in 1996. Her obituary can be found at http://somd.com/announcements/obits/report.php?rec=4020.

Robin G. Todd has been elected as the Eastern Branch Representative to the Certification Board of the Entomological Society of America.

Marcia R. Watson has been appointed as Assistant Provost at the University of Maryland University College.

(Please send member news items to ejscarp@comcast.net.)

IT'S TIME TO RENEW YOUR MEMBERSHIP

It's time to renew your MES membership for the October 2010 through September 2011 membership year. Yearly dues are \$10 (individuals), \$15 (household), or \$5 (fulltime students). Please send your check (made out to Maryland Entomological Society) and any address or other changes to:

Edgar A. Cohen, Jr., MES Treasurer

5454 Marsh Hawk Way Columbia, MD 21045 Phone: (410) 740-0481

E-mail: edcohenfam@yahoo.com

ALIEN BEES OF BALTIMORE PORT AREAS

I made a couple of trips in late summer 2010 to collect bees in the port areas of eastern Baltimore and Baltimore County, Maryland...including parts of Dundalk, Sparrows Point and near the piers where I-895 intersects with Holabird Avenue. During the second trip, Leo Shapiro, one of my collaborators and Encyclopedia of Life guru, accompanied me. Despite the industrial nature of the area, or perhaps because of it, there was a fair amount of blooming forbs...many of them aliens. Bowl traps (colored bowls of soapy water), as well as traditional netting, yielded plenty of bees, including the most non-native species I have every captured in one area. While all the specimens are not as yet processed, this list currently includes: Megachile rotundata (Alfalfa Leafcutting Bee), Megachile concinna (Pale Leafcutting Bee), Megachile apicalis, Apis mellifera (Honey Bee), Hylaeus leptocephalus, Hylaeus punctatus, Anthidium manicatum and Anthidium oblongatum.

Of special note were three very recently detected species, some not even published yet. *Coelioxys coturnix* is a likely nest parasite of the introduced *Megachile* species listed above and currently has been detected only in Northern Virginia, D.C. and Baltimore. *Halictus tectus* is a close

relative of the native *Halictus confusus* and was recently detected in Philadelphia and D.C. *Pseudoanthidium* sp. is most likely one of the common European species, but there are name problems and so the actual species is uncertain. It has also been detected in the New York City area.

I am compiling a Baltimore and Baltimore County list of bees modeled after Richard Orr's Assateague Island list and will distribute this list sometime this winter. Many gaps remain and I will be asking members to contribute specimens to fill in these gaps. So be prepared.

Sam Droege USGS Patuxent Wildlife Research Center sdroege@usgs.gov

(Editor's Note: Sam plans to publish his data from multiple Port trips in The Maryland Entomologist.)

Limenitis glorifica RESEARCH IN NEW ZEALAND

In addition to spending the summer in Montana and Wyoming, I flew to Christchurch, New Zealand, as the guest of Landcare Research (also known by their Māori name, Manaaki Whenua). Landcare Research is a provider of solutions and advice for sustainable development and the management of land-based natural resources. Dr. Quentin Paynter of Auckland invited me down to help him try to breed *Limenitis glorifica* (Lepidoptera: Nymphalidae) from Japan, in their sterile breeding facility located 14 miles west of Christchurch at Lincoln, N.Z. Dr. Paynter had previously collected about 130 eggs and larvae in Japan. From these had been reared well over 100 butterflies, most of which were pupae when I arrived in late July. Unfortunately, we were unsuccessful breeding this species in captivity.

Among the insects Quentin had collected were large numbers of females, but only a few males. Why, I have no idea! In cages and while attempting hand-pairing, the two sexes never showed the slightest interest in each other. The few males were difficult to "stun" with KCN (HCN) in collecting jars.

Once we increased the relative humidity in their cages, the females laid most of their eggs, but of course they were all infertile, since none of the females had bred.

The Landcare facilities were damaged badly during the recent 7.4 earthquake suffered near Christchurch, and most of their plant and animal biological control strains were lost. The scientists with whom I worked all have survived, but a number of people did suffer property loss and damage.

Bob Platt

University of Maryland Baltimore County platt@umbc.edu

INTERESTING PRE-RAIN BEE BEHAVIOR

I wanted to share interesting bee behavior that I observed

before sunset on the evening of 10 September 2010.

At our Seneca Habitat Restoration Project, Montgomery County, Maryland, we placed an old locust (*Robinia* sp.) stump in the middle of our heliophilic grassland habitat that we have begun to transition into almost exclusively native flora of the region.

On the above evening, several dozen male *Agapostemon virescens* (a Halictid or metallic green bee) were observed taking shelter in the crevices and craggy bark of the old locust stump in advance of the rainy weather forecast for the next two days. This was the third occasion that I have observed this behavior prior to inclement weather. I have examined the stump on stretches where no precipitation was expected and found no *A. virescens* activity on those days.

About 500 feet away from this spot are the entrances to the underground nests where the females could be observed guarding the tops of their tunnels as late as two weeks prior.

It was curious to see the males of a ground-nesting bee species engaged in this behavior aboveground. Where they spend their evening when the weather is balmy is still undetermined in our Seneca project.

Randy Pheobus Native Grassland Conservancy, Inc. RestoreHabitat@aol.com

CIRQUE DU SOLIEL - "OVO"

To quote the website: "OVO is a headlong rush into a colourful ecosystem teeming with life, where insects work, eat, crawl, flutter, play, fight and look for love in a non-stop riot of energy and movement. The insects' home is a world of biodiversity and beauty filled with noisy action and moments of quiet emotion."

"OVO" is appearing now under the Grand Chapiteau at The Plateau at National Harbor, Harborview Avenue, Oxon Hill, MD 20745, from 9 September through 24 October 2010. For more information visit

www.cirquedusoleil.com/en/shows/ovo/default.aspx

2010/2011 PROPOSED MEETING SCHEDULE

Regular MES meetings are held the 3rd Friday of each of 6 months coinciding with UMBC's academic year. Proposed meetings for the current MES membership year are:

Date Speaker Topic
Oct 15 David Nickle Our Smallest Insects – Thrips
Nov 19 Harry Pavulaan Appalachian Tiger Swallowtails
Feb18 TBA
Mar 18 TBA
Apr 15 TBA
May 21 Members' "Potpourri" Presentations
TBA Annual Field Trip

Maryland Entomological Society Field Trip to Observe Appalachian Tiger Swallowtails Green Ridge State Forest, Allegany County, MD

May 15, 2010; 1000-1800 hours

Sunny, 78° F.

Observers: Tim Foard, Phil Kean, Kevin Kirchner, Evie Marie Paras, Fred Paras, Bob Ringler, Gene Scarpulla, Debbie Terry, & Bob's dog Skippy (Skippy keeps a bird life list and a butterfly life list.)

ORDER COLEOPTERA: Beetles
Family Carabidae – Ground Beetles
Cicindela sexguttata – Six-spotted Tiger Beetle

Family Cerambycidae – Longhorned Beetles

Monochamus scutellatus – White Spotted Sawyer

ORDER MECOPTERA: Hangingflies, Scorpionflies

Family Panorpidae: Scorpionflies

Panorpa sp. – a scorpionfly

ORDER LEPIDOPTERA: True Butterflies, Skippers, Moths

Family Papilionidae: Swallowtails
Battus philenor – Pipevine Swallowtail
Eurytides marcellus – Zebra Swallowtail
Papilio polyxenes – Black Swallowtail

Papilio glaucus – Eastern Tiger Swallowtail (incl. 3 uncommon

spring-form black ♀)

Papilio appalachiensis – Appalachian Tiger Swallowtail (numerous ♂,

1 uncommon ♀)

Papilio troilus – Spicebush Swallowtail Family Pieridae: Whites and Yellows

Pieris rapae – Cabbage White
Colias philodice – Clouded Sulphur
Family Lycaenidae: Gossamer Wings
Lycaena phlaeas – American Copper
Everes comyntas – Eastern Tailed Blue
Glaucopsyche lygdamus – Silvery Blue
Celastrina ladon – Spring Azure

Family Nymphalidae: Brush-footed Butterflies

Phyciodes tharos – Pearl Crescent Nymphalis antiopa – Mourning Cloak. Vanessa virginiensis – American Lady Vanessa cardui – Painted Lady Vanessa atalanta – Red Admiral

Limenitis arthemis astyanax – Red-spotted Purple

Megisto cymela – Little Wood Satyr Danaus plexippus – Monarch Family Hesperiidae: Skippers

Epargyreus clarus — Silver-spotted Skipper Thorybes pylades — Northern Cloudywing Erynnis icelus — Dreamy Duskywing Erynnis juvenalis — Juvenal's Duskywing Erynnis horatius — Horace's Duskywing Hesperia sassacus — Indian Skipper Poanes hobomok — Hobomok Skipper

Amblyscirtes vialis - Common Roadside Skipper

Family Geometridae: Geometer Moths

Epimecis hortaria – Tulip-tree Beauty

Hydria prunivorata – Ferguson's Scallop Shell

Family Sphingidae: Sphinx or Hawk Moths

Hemaris thysbe – Hummingbird Clearwing

ORDER HYMENOPTERA: Velvet Ants, Ants, Wasps, Bees

Family Formicidae: Ants (Identified by Tim Foard)

Aphaenogaster rudis

Aphaenogaster picea

Aphaenogaster tennesseensis

Aphaenogaster fulva Aphaenogaster mariae

Camponotus pennsylvanicus - Black Carpenter Ant

Camponotus nearcticus
Camponotus subbarbatus
Camponotus americanus
Temnothorax curvispinosus
Temnothorax longispinosus
Temnothorax ambiguus
Formica pallidefulva
Formica subsericea
Formica dolosa
Formica neogagates
Formica incerta
Formica obscuriventris

Lasius alienus – Cornfield Ant

Lasius umbratus
Lasius flavus
Amblyopone pallipes
Ponera pennsylvanica
Myrmica spatulata
Myrmica pinetorum
Myrmica punctiventris
Myrmecina americana
Dolichoderus pustulatus
Solenopsis molesta – Thief Ant
Tapinoma sessile – Odorous House Ant
Tetramorium caespitum – Pavement Ant

Brachymyrmex depilis Stenamma impar Crematogaster lineolata

Family Apidae: Honey Bees, Bumblebees, Carpenter Bees

Apis mellifera - Honey Bee

APPALACHIAN TIGER SWALLOWTAIL REFERENCES

Pavulaan, H., and D. M. Wright. 2002. *Pterourus appalachiensis* (Papilionidae: Papilioninae), a new swallowtail butterfly from the Appalachian region of the United States. *The Taxonomic Report of the International Lepidoptera Survey* 3(7): 1-20.

Pavulaan, H., and D. M. Wright. 2004. Discovery of a black female form of *Pterourus appalachiensis* (Papilionidae: Papilioninae) and additional observations of the species in West Virginia. *The Taxonomic Report of the International Lepidoptera Survey* 6(1): 1-10.

October 2010

Maryland Ornithological Society Butterfly Field Trip

Eastern Neck National Wildlife Refuge, Kent County, MD

(2010 Maryland Ornithological Society Conference, Chestertown, MD)

June 11, 2010: afternoon

Sunny, 80° F.

Leader: Bob Ringler

Participants: Brent Byers, Mary Byers, *Donna Finnegan, Lynette Fullerton, Margaret Liubavicius, Dave Mozurkewich, *Gene

Scarpulla, *Jo Solem, *Marcia Watson, *Marty Wright, and additional participants

Additional Observers: *Ed Cohen, *Joy Cohen (*Maryland Entomological Society members)

ORDER LEPIDOPTERA: True Butterflies, Skippers, Moths

Family Papilionidae: Swallowtails

Eurytides marcellus – Zebra Swallowtail

Papilio glaucus - Eastern Tiger Swallowtail

Papilio troilus - Spicebush Swallowtail

Family Pieridae: Whites and Yellows

Pieris rapae - Cabbage White

Colias philodice - Clouded Sulphur

Colias eurytheme - Orange Sulphur

Family Lycaenidae: Gossamer Wings

Satryium calanus - Banded Hairstreak

Strymon melinus – Gray Hairstreak

Everes comyntas - Eastern Tailed Blue

Celastrina ladon form "neglecta" - Summer Azure

Family Libytheidae: Snout Butterflies

Libytheana carinenta – American Snout

Family Nymphalidae: Brush-footed Butterflies

Euptoieta claudia - Variegated Fritillary

Speyeria cybele – Great Spangled Fritillary

Phyciodes tharos - Pearl Crescent

Vanessa virginiensis - American Lady

Vanessa atalanta - Red Admiral

Junonia coenia - Common Buckeye

Limenitis arthemis astyanax – Red-spotted Purple

Danaus plexippus - Monarch

Family Hesperiidae: Skippers

Epargyreus clarus – Silver-spotted Skipper

Pholisora catullus - Common Sootywing

Ancyloxypha numitor - Least Skipper

Polites themistocles - Tawny-edged Skipper

Wallengrenia egeremet - Northern Broken Dash

Anatrytone logan – Delaware Skipper

Poanes zabulon - Zabulon Skipper

Poanes aaroni – Aaron's Skipper

Poanes viator - Broad-winged Skipper

Euphyes vestris – Dun Skipper

Panoquina panoquin – Salt Marsh Skipper

Family Yponomeutidae: Ermine Moths

Atteva punctella – Ailanthus Webworm Moth