



Phaëton

The Official Newsletter of the
Maryland Entomological Society

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April Meeting Announcement

The Maryland Entomological Society's 322nd regular meeting will be held **Friday, 20 April 2018**, at **8:00 pm**, in **Room 004** (one floor below the street level), **Biological Sciences Building**, University of Maryland Baltimore County (UMBC). Bring a friend, specimens, observations, or books to share. Refreshments will be provided. Presentations are scheduled to begin at **8:15 pm**.

Speaker: Maria Lourdes Chamorro, Ph.D. Research Entomologist, Systematic Entomology Laboratory, USDA, NMNH
Title: "Documenting the native and non-native weevil (Coleoptera: Curculionoidea) fauna of the Hawaiian Islands: past, present, and future"

Abstract. Weevils are among the most dominant phytophagous insects in the Hawaiian Archipelago. Highly diverse radiations have taken place in several lineages of weevils (Curculionoidea), for example, *Proterhinus* (184 species) *Oodemus* (64), *Rhyncogonus* (51), and *Dryophthorus* (20). Currently, no user-friendly resource exists to identify the weevils of the Hawaiian Islands, which limits our ability to distinguish native from alien species. The conservation status, therefore, for much of the native weevil fauna remains unknown and poorly studied. Furthermore, the classification and taxonomy of the weevils are outdated, untested and in need of revision. This project aims to provide a stable classification of Hawaiian weevils based on natural groups and to enable the public, industry, and government to reliably identify and monitor native and non-native weevils found in the archipelago via the online portal WEEVILS of the HAWAIIAN ISLANDS. The presentation will include a report on recent museum and fieldwork conducted in the Hawaiian Islands with a brief overview of weevil collecting techniques.

Maria Chamorro received her B.S. in Agriculture and Entomology at the Ohio State University in Columbia, Ohio, and her Ph.D. in Entomology at the University of Minnesota in Minneapolis. She is currently a research entomologist in the Systematic Entomology Laboratory of the USDA, working at the National Museum of Natural History in Washington, DC. Her job involves undertaking scientific research on weevils in support of U.S. agriculture and natural resources; providing identification and associated taxonomic services to federal, state, and private organizations; developing and maintaining the U.S. National Collection of Curculionoidea; and developing digital and molecular identification tools and databases of taxonomic and biological information. She is involved in various collaborations such as the 1K Weevil Project, the Weevils of North America Project and the Weevils of the Hawaiian Islands.

Meet for Dinner before the Lectures

If you are interested in meeting for dinner before the lectures, you are invited to join the guest speaker and your fellow MES members at the **Chef Paolino Café** located at **726 Frederick Rd, Catonsville, MD 21228**. If you plan to go to dinner, please email Fred Paras at bugandrockman@msn.com by noon on the day of the lecture. Fred will make a reservation for the group. Please meet at the restaurant promptly at **6:00 p.m.**

MINUTES OF THE 321ST MEETING OF THE MARYLAND ENTOMOLOGICAL SOCIETY

The meeting commenced at 8:27 PM with a welcome by President Fred Paras. In attendance were 12 members and 8 guests.

16 MARCH 2018 MES LECTURE

Speaker: Cheryle O'Donnell, Ph.D. National Taxonomic Specialist (Thysanoptera & Psylloidea), USDA-APHIS-PPQ-PM-NIS

Title: "Thysanoptera, the Good, Bad and the Ugly!"

The speaker began her talk with a brief summary of her career postings as a specialist identifying potentially invasive and/or damaging insects at United States ports of entry. She has served at Nogales, AZ, San Diego and San Francisco, CA, Blaine, WA, El Paso, TX, and Miami, FL. The Port of Miami is the largest in the U.S. and is the port of entry for South American flower imports. During the time of Dr. O'Donnell's posting there, they had 200 to 400 interceptions per day of insects.

She then asked for a show of hands of people who knew anything of thrips (a count was not taken) and stated that 'thrips' always bears an 's'; it is never 'thrip'. Thrips exact a tremendous economic toll on agricultural and horticultural products. The definition of Thysanoptera is 'fringe winged'. The group is quite diverse in color and structure; some are winged and some not; some bear ocelli and some do not. The speaker went on to show many slides illustrating the diversity and differences among the order. She started with a slide of the phylogeny published in 2014 by Gullan and Cranston. There are 2 suborders, tubulifera and terebrantia. The abdominal segment of the tubulifera is tube shaped.

Some differences between the suborders are:

- Wing differences; there are no wing veins in tubulifera. There are wing veins in terebrantia, and the wings are more structured.
- Tubulifera possess wing holding setae, terebrantia do not.
- In tubulifera, the wings at rest are atop one another; the wing holding setae in each abdominal segment keep the wings close to the body. In terebrantia, the wings at rest position are side by side.
- The ovipositor in terebrantia is saw-like. The thrips walks along a leaf, backs in and lays an egg.
- Tubulifera contain 1 family and about 3000 species. Terebrantia contain 7 families and about 1700 species.

The speaker discussed, and illustrated with slides, other interesting appearances and characteristics of the various species including:

- An atrophied mandible.
- Some feed cell by cell, across the leaf or fruit.
- A scanning electron micrograph (SEM) showing the structures of the head, eye, and mouth.
- The setae of terebrantia.
- Wing variation.
- Body structure as it relates to host and habitat.
- Terebrantia lay an egg on a host plant and move on, not tending larvae.
- Some tubulifera have a semi-social lifestyle, being involved with feeding larvae.
- A species of tubulifera herds its larvae from the domicile to a food source (lichen, fungi, et al.) and back to the domicile.
- In another species, the male wraps an appendage around the female's wings during copulation, which can last for 24 to 36 hours. The motion severs the wings from the female's body, forcing her to remain in place and tend the larvae.
- They are haplodiploid, males being haploid and females diploid. Reproduction can be sexual, asexual, or parthenogenic.
- Arrhenotoky (males from unfertilized eggs, females from fertilized eggs) and thelytoky (females, males rarely found) are also observed.
- Sexual dimorphism; the male usually dies with butt up (for unknown reasons) and males are generally lighter and smaller (except tubulifera).
- Thrips are thigmotactic meaning contact loving. They live amongst themselves, in tight spaces, thus avoiding being blown away from food sources. They are found in the bracts of flowers, growing tips of plants, between leaves of bulb stems, deep in the throats of orchids.
- Sometimes pupae and larvae drop into ant nests; wasps parasitizing ant nests also parasitize thrips larvae.

Thrips are found wherever plants exist. As an aside, the speaker stated that she holds the Alaska state record for the number of identified thrips species. She stated that identifications had not been done there since the 1940's.

"Thysanoptera, the Good, ..."

Some species of thrips feed on species of mites that destroy cotton seedlings, some prey on other thrips species, especially the larval forms, and some eat other heteroptera.

"Thysanoptera, ..., the Bad, ..."

Thrips cause much crop damage by both feeding and ovipositing. They are a disease vector for bacteria, fungi, and viruses. Common hosts for thrips are almost all of the things that we eat and use.

"Thysanoptera, ..., the Ugly!"

Dr. O'Donnell showed photos of damage to her ficus tree, to a

wheat field, and to oranges and numerous other produce items.

Thirteen known species are virus vectors - the tospoviruses in the family bunyaviridae. The 1st instar larva is the only one to acquire the virus. The adult thrips transmits the virus to plants.

Dr. O'Donnell concluded her talk with a summarization of thrips morphology and habitat preferences and their impacts upon identification and control. The thigmotactic lifestyle mentioned above, makes identification and eradication difficult.

The mission of her agency is to protect domestic agriculture and the ecosystem from invasive and economically devastating species while also facilitating trade. The complexities have increased with the volume and diversity of imports. To illustrate, she showed slides of the not very busy port of entry at Nogales, Arizona in the 1940's, and San Ysidro, California in modern times.

Due to manpower and time constraints, port inspectors are able to see less than 1% of cargo contents. They work in conjunction with international counterparts, identifying the most economically and/or ecologically significant pests, and their likely pathways from one area to another.

A brief business meeting followed the talk.

Treasurer Ed Cohen reported a balance in the Society's account of \$4,784.73. He also stated that he received dues for a new membership.

There was discussion of "It's a Bug's World" at the annual meeting of the Entomological Society of America in Annapolis on Sunday, March 18. This was described in the March issue of the *Phaëton*.

Gene Scarpulla has taken delivery of the MES display banner discussed in the last issue of the *Phaëton*. It will be displayed at the ESA meeting in Annapolis.

Phil Keane reported that an error in the plaque in memory of Dick Smith has been corrected at no charge.

As mentioned in the previous issue, Hanna Kahl is studying at UC Davis. Hanna has served as co-editor of the *Phaëton*, and the Society is grateful to her for her work in that position. We wish her well in her studies and look forward to hearing of her career progress. Co-editor Aditi Dubey is now editor, and the Society is grateful to her for continuing to serve in that position and thanks her for her efforts.

The Secretary raised the question of preserving the MES record book in an additional, alternate format. Currently, the attendance log is maintained in a bound record book, and is therefore susceptible to damage or loss due to fire, flood, or insects. Member Marcia Watson stated that the app Adobe Scan is available for the iPhone, enabling an image to be captured and stored. Member Tim Thompson has commenced recording images of the logbook.

The meeting adjourned at 11:15 PM.

CORRECTION: In the March 2018 *Phaëton*, under the minutes of the February lecture, the final sentence of the first paragraph should have read '10.2 million to 1.4 billion species.'

Respectfully Submitted,
Janet A. Lydon,
MES Secretary

WELCOME TO NEW MEMBERS

MES welcomes the following new members to the Society:

Carlos A. Blanco – Landover, MD
Etienne Estrada – Baltimore, MD
Joshua Keiple – Pasadena, MD
Cheryle A. O'Donnell – Jessup, MD

HONORING MEMBER DONORS

MES wishes to honor the following members who made charitable donations along with their recent membership renewals. These donations help with the printing and mailing of *The Maryland Entomologist*.

Etienne Estrada
Joanna Lee

INSECT PETTING ZOO AT MARYLAND DAY

The Department of Entomology at UMD College Park will host its annual Insect Petting Zoo as part of the festivities on Maryland Day, Saturday April 29th. The zoo will be held at 1161 Plant Sciences Building from 10:00 AM to 3:00 PM.

More information can be found at:
<https://marylandday.umd.edu/PlanYourDay.html>



Central Maryland Beekeepers Association

Supporting and promoting beekeepers and the viability of honeybees in central Maryland

MEMBERS MEETINGS

Tues, 1 May 2018; 7:00 p.m.

The speaker will be Sam Droege, a wildlife biologist working with the US Geological Survey in Beltsville, MD

Tues, 5 June 2018; 7:00 p.m.

Field trip to the bee yard of Bonny Wright, CMBA Secretary, on Belfast Road in Sparks. She maintains fifteen or more colonies and has planted a pollinator meadow. We'll have members stationed at locations in her apiary so small groups of our members can rotate through to learn about her set-up.

Members meetings are held at the [Oregon Ridge Nature Center, 13555 Beaver Dam Road, Cockeysville, MD.](#)

Additional information can be found at:
<http://www.centralmarylandbees.org/meetings-3/membership-meeting-schedule/>

**ENTOMOLOGICAL SOCIETY OF WASHINGTON
PUBLIC MEETING**

Thu, 3 May 2018; 7:00 p.m.

Topic: TBA

Speaker: TBA

National Museum of Natural History, Smithsonian Institution,
Washington, DC

<http://entsocwash.org/>.

**UNIVERSITY OF MARYLAND
DEPARTMENT OF ENTOMOLOGY COLLOQUIA**

Fri, 20 April 2018, 12:00 p.m.

**“The importance of neighborhood pubs and coffee breaks
to novel research findings and applications”**

Brian Federici (Department of Entomology, University of
California-Riverside)

Fri, 27 April 2018, 12:00 p.m.

**“Elucidation of novel morphological and behavioral
adaptations for host exploitation in parasitic
Mesostigmatid mites of honey bees”**

Samuel Ramsey (VanEngelsdorp Lab, Department of
Entomology, University of Maryland, College Park)

Fri, 4 May 2018, 12:00 p.m.

**“Development and evolution: Lessons from *Drosophila*
pigmentation”**

Trisha Wittkopp (Department of Ecology and Evolutionary
Biology, University of Michigan)

Fri, 11 May 2018, 12:00 p.m.

**“Spatial distribution, habitat preference, and societal
impact of the nuisance black fly, *Simulium jenningsi*”**

Rebecca Wilson-Ounekeo (Lamp Lab, Department of
Entomology, University of Maryland, College Park)

Entomology colloquia take place in 1130 Plant Sciences
Building, College Park, MD. For additional information, go
to: <http://entomology.umd.edu/seminar-schedule.html>

**EAGLE HILLS INSTITUTE NATURAL HISTORY
SEMINARS**

Steuben, Maine

During the summer, the Eagle Hills Institute offers intensive
week-long field-based seminars and workshops on the coast of
Maine taught by experts in their respective fields. This
summer, several of these courses will be related to arthropods.

June 10-16

Topic: Chironomids: Classification, Morphology,

Identification, and Lifecycles

Instructor: Armin Namayandeh

July 1-7

Dragonflies and Damselflies: Field Techniques and
Identification

Instructor: Bryan Pfeiffer and Michael Blust

July 8-14

Spiders: Identification, Biology and Ecology

Instructor: Kefyn Catley

July 8-14

Native Bees: Biology, Ecology, Identification, and
Conservation

Instructor: Sara Bushmann and Kalyn Bickerman-Martens

July 22-28

Microlepidoptera: Collection, Preparation, Dissection,
Identification, and Natural History

Instructor: Jason Dombroskie

July 29 – Aug 4

Tracks & Sign of Insects and Other Invertebrates

Instructor: Charley Eiseman

Aug 5-11

Aquatic Entomology

Instructor: Steven Burian

More information about the courses, rates and registration may
be found at:

<https://www.eaglehill.us/programs/nhs/nhs-calendar.shtml>

**OCT 2017-SEP 2018 MES MEMBERSHIP YEAR
OFFICERS**

President	Frederick Paras
Vice President	Philip J. Kean
Secretary	Janet A. Lydon
Treasurer	Edgar A. Cohen, Jr.
Historian	(vacant)
Faculty Sponsors	Frank E. Hanson & Austin P. Platt
Journal Editor	Eugene J. Scarpulla
E-newsletter Editors	Aditi Dubey

SUBMITTAL DEADLINES

MAY 2018 issue of the *Phaëton*:

Please send member news items by 12 May 2018.

Send e-newsletter drafts to Addie at aditid26@gmail.com.

SEP 2018 issue of *The Maryland Entomologist*:

Please send first drafts of articles and notes ASAP. Send
journal drafts to Gene at ejscarp@comcast.net.

MONARCH BUTTERFLY

By Edwina Reizer

Each year I await your long journeyed flight.
And magically you appear before my sight.
Strong, yet fragile you've come to stay
where the warmth will draw you towards my way.

You've left Mexico and far you've flown.
Oh if I could fly, you'd not be alone.
But to share that flight I would tire.
And all of your beauty I would desire.

Oh how lucky the flowers are in spring
to caress your form and your wing.
King of all the butterflies
you are a wonder for both my eyes.