Phaëton

The Official Newsletter of the
Maryland Entomological Society

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Meeting Announcement

The **M**aryland **E**ntomological **S**ociety's **325th** regular meeting will be held **Friday, 16 Nov. 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.**

Title: Savannahs and Mountain Jungles: A naturalists' travels through Tanzania.

Speaker: Fred Paraskevoudakis, President -Maryland Entomological Society. Professor -Natural and Physical Sciences department, vice-president Faculty Senate, Baltimore City Community College (BCCC), Baltimore, MD.

Biography: Fred Paras has been teaching primarily Microbiology at BCCC since 1992, but has also taught Environmental Science and Biotechnology courses. He hold two Bachelors from U. of Md., an MS from JHU (Environmental Science) and an MS from Towson (Biology). Fred is an active participant in the annual BCCC and Md. Collegiate STEM Symposium working closely with his students to foster research and stronger interests in sciences. His passion for insects and natural history began over fifty years ago and has continually increased throughout his life. He is frequently involved in outreach programs with MES, the Natural History Society of Md. (NHSM), BCCC and others. He is a member of numerous societies including the NHSM, the Chesapeake Gem and Mineral Society, Fossil and Lep club of NHSM, and ESW. Moreover he is an ardent traveler, photographer and prodigious collector who has been fortunate to visit many places in the world.

Abstract: Besides the vast stretches of savannah and arid lands, Tanzania has a variety of other biologically rich biomes. These include mountain forests and jungles that host a large diversity of animal and insect species. This presentation will show some of the scenic locations and biomes that are found throughout this country as well as examples of the flora and fauna. The photography will spotlight the Uluguru Mountains and the Udzungwa National Park in the southwest, the Eastern Arc Usambara Mountains, and a short peek at the great National Parks in the north such as the Ngorongoro Crater, Mt. Kilimanjaro and Lake Manyara. Finally a wonderful side trip to Zanzibar Island with its rich but dark history, and surprising biodiversity. There will be commentary on sustainable butterfly farming "cottage industries", cultural aspects, agriculture, and everyday life as the travelling begins from Dar es Salaam and goes in a circuit all around the country, with various stops along the way.

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**.

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*.

Harold J. Harlan
George H. Harman
Janet A. Lydon & Timothy W. Thompson
Kyle E. Rambo
Eugene J. Scarpulla & Marcia R. Watson
Andrew Sharp
Jeffrey W. Shultz
David R. Smith & C. Lackman-Smith
M. Alma Solis & Jason P. W. Hall

DON'T FORGET TO RENEW
IT'S MEMBERSHIP RENEWAL TIME
OCT 2018 – SEP 2019 MEMBERSHIP YEAR

Membership renewal forms were inserted in the front of the September 2018 issue of *The Maryland Entomologist*. If the date on your address label reads 2018, it is time for you to renew for the "October 2018 – September 2019" membership year. Please check that your contact information is correct and return the form along with your check (made out to Maryland Entomological Society) to: **Edgar A. Cohen, Jr.** (MES Treasurer), 5454 Marsh Hawk Way, Columbia, MD 21045.

USDA LOOKING FOR VOLUNTEER TO DIGITIZE HISTORICAL CARD CATALOG

The Systematic Entomology Laboratory (USDA ARS) is seeking volunteers to digitize a historical card catalog of scale insect (Hemiptera: Coccomorpha) host association and geographic records for the Smithsonian National Entomological Collections. Records will be snap-scanned into pdf documents and converted to readable text, so they can be deposited online in a searchable format. The project will be completed at the Beltsville Agricultural Research Center in Beltsville, Maryland.

Interested volunteers can contact Dr. Scott Schneider at scott.schneider@ars.usda.gov for more information.

OCTOBER 2018 LECTURE SUMMARY

Speaker: Michael Turell, Ph.D., Principal Investigator, United States Army Medical Research Institute for Infectious Diseases (Retired)

Title: "Global Climate Change and what History tells us about the Risk of New Vector-Borne Pathogens being introduced into the United States"

Dr. Turell began his talk with a description of various insect-borne diseases and their morbidity/mortality in human populations, and presented many illustrative slides.

One such slide portrayed the increased morbidity and mortality to humans and animals of some vector-borne pathogens. In order of decreasing severity, they are:

- Hemorrhagic fever - yellow fever, Rift Valley fever, Crimean-Congo hemorrhagic fever
- Encephalitis - Eastern equine encephalitis, West Nile virus, tick-borne encephalitis, La Crosse encephalitis
- Fevers - dengue fever, sandfly fever

The speaker discussed the virus load in different animal reservoirs of zoonotic disease and resultant transmissibility. He cited Eastern equine encephalitis, which exists in a high viral load in birds. Horses and humans have a lower viral load; therefore, transmission between and among equines and humans is less likely and they are considered dead-end hosts.

Dr. Turell presented data and interesting details about the history of some vector-borne diseases in the United States:

- In 1780, in Philadelphia, there was a "bilious fever", possibly dengue fever, described by Dr. Benjamin Rush, a respected physician of the time.
- Dr. Albert Sabin, developer of the oral polio vaccine, studied dengue fever during World War II.
- He showed a map of the U.S. in the 1850's, illustrating how common malaria was in the South at that time.
- An 1870 map showed malaria to be a major cause of death in the U.S.
- During the Civil War, there were 1.3 million cases of malaria in soldiers.
- Yellow fever was a significant cause of death in the early 1800's in Boston, New York, Philadelphia, and Baltimore.
- In 1793, 10% of the population of Philadelphia died from yellow fever.
- In Barcelona, Spain in 1821, there were more than 20,000 deaths (about 10% of that city's population) from yellow fever. That number was larger than the population of any U.S. city of that time.

Dr. Turell discussed the effect of improved socio-economic conditions on the incidence of mosquito-borne disease in the United States over the past 75 to 100 years. The introduction

and increased use of television and air conditioning in the United States made it desirable for humans to remain indoors, resulting in less exposure to biting mosquitoes. He also discussed the positive effects of sanitation improvements. In colonial times, malaria occurred as far north as Maine and southern Canada. Ships bearing open barrels of drinking water and traveling from the tropics to those more northerly ports provided habitat and transport for malaria-carrying mosquitoes. On shore, open cisterns and sewers, and availability of human hosts, enabled mosquito populations to sustain themselves until the onset of winter.

Incidence reduction of anthroponotic mosquito-borne diseases (requiring a human host), such as malaria, dengue fever, Chikungunya virus, zika virus, and Wucherian filariasis can be accomplished by reducing the mosquito population or reducing mosquito-human contact.

Zoonotic diseases (those infecting humans and other vertebrates) such as West Nile virus, Rift Valley fever, and the encephalitses (Eastern equine, St. Louis, Venezuelan equine, Japanese and La Crosse), are less amenable to incidence reduction, particularly for diseases infecting non-sheltered animals.

The speaker discussed human immunological response and resultant population resistance to mosquito-borne viruses and cited the 2014 outbreak of Chikungunya. As the population immunity increased over time, the disease incidence decreased.

Dr. Turell discussed the risk of new pathogens being imported into the U.S. As already mentioned, improved socio-economic conditions will reduce the mosquito-human contact necessary for the transmission of anthroponotic pathogens. Zoonotic disease, especially in animals not sheltered from mosquitoes, is of greater concern. He cited the example of Rift Valley fever, which affects domestic ungulates. It causes a dengue-like illness with a 1% fatality rate. In young animals, the fatality rate is much higher, and in pregnant animals, it kills the fetus, producing significant economic effects for the owner/farmer/rancher.

He concluded with delineating four steps necessary for protecting human populations:

- Mosquito control programs
- Public education (elimination of standing water mosquito breeding sites around habitations)
- Knowledge of which mosquito species to prioritize for control
- Better disease diagnostics

OCTOBER 2018 MEETING MINUTES

The meeting commenced on October 19, 2018 at 8:20 PM with a welcome by President Fred Paraskevoudakis. Eleven members and at least fifteen guests (not all signed the log) were present.

In attendance were Gloria and Warren Smith, wife and son respectively, of the late Richard (Dick) Smith, Jr. Dick was the Secretary of the Maryland Entomological Society at the time of his death and was also a long time member of the Society. President Paras presented to the Smith family a memorial plaque commissioned by the Society, in recognition of Dick's lengthy service to the organization and to the field of lepidopterology. The plaque bears a reproduction of a photograph of Dick Smith taken during one of the Society's field trips. During the presentation, Fred described Dick's activities and expertise. Long time members reminisced about their interactions with Dick, and his contributions to the field. Several members photographed the presentation.

At 8:30 PM, the speaker, Michael Turell, Ph.D. was introduced. An abstract of the talk appeared in the October 2018 *Phaëton*. A summary of his presentation, entitled "Global Climate Change and what History tells us about the Risk of New Vector-Borne Pathogens being introduced into the United States", appears elsewhere in this issue of the *Phaëton*. Dr. Turell preceded his talk with some words of advice to the students of Professor Fred Paras who were in attendance. He encouraged them to pursue something that you love; then you will never 'work' a day in your life. (not an exact quote)

A brief business meeting followed the lecture. Treasurer Ed Cohen reported a balance of $4,041.64 in the Society's account. He also reported that Gene Scarpulla, editor of *The Maryland Entomologist*, was presenting an invoice for publication and mailing costs of the most recent edition.

Discussion turned to the upcoming publication of the book, *Guide to Venomous and Medically Important Invertebrates,* co-authored by member Harold J. Harlan, Ph.D. The projected publication date is November, 2018. Several members expressed interest in purchasing a copy when it becomes available.

Member and Vice-President Phil Kean displayed the larval forms of the black swallowtail butterfly living among rue growing in his garden.

The meeting adjourned at 10:30 PM.

Submitted – Janet A. Lydon, Secretary

ENTOMOLOGICAL SOCIETY OF WASHINGTON PUBLIC MEETING

Thu, 6 December 2018; 7:00 p.m.
Topic: TBA
Speaker: TBA
National Museum of Natural History, Smithsonian Institution, Washington, DC
http://entsocwash.org/.

Central Maryland Beekeepers Association
Supporting and promoting beekeepers and the viability of honeybees in central Maryland

MEMBERS MEETINGS

Sar, 1 December, 2019; 6:00 p.m.
Holiday Potluck Dinner

Tue, 8 January, 2019; 7:00 p.m.
Dr. Deborah Delaney, Entomology Prof. at U Delaware, talks to us about honeybee reproduction.

Members meetings are held at the Oregon Ridge Nature Center, 13555 Beaver Dam Road, Cockeysville, Maryland. Additional information can be found at:

http://www.centralmarylandbees.org/meetings-3/membership-meeting-schedule/.

2018 ALL BUGS GOOD AND BAD WEBINAR SERIES

This webinar series discusses troublesome insects such as invasive ants, landscape, vegetable and household pests, as well as beneficial insects such as native pollinators. Webinars are held on the first Friday of every month at 2PM EST.

Fri, 1 December 2018; 2:00 p.m.
Topic: Pantry Pests
Speaker: Dan Suiter, UGA Extension

Information about upcoming webinars and archives of previous recordings can be found at http://articles.extension.org/pages/74590/2018-all-bugs-good-and-bad-webinar-series.

2018 ADVANCED LANDSCAPE IPM PHC SHORT COURSE

Mon-Thurs, 7-10, January 2018
Entomology Department, Plant Sciences Building, University of Maryland, College Park, MD

The annual Advanced Landscape IPM PHC Short Course is a recertification short course for arborists, landscape supervisors, IPM monitors, advanced gardeners, and others responsible for urban plant management.

Each day, the course will include a lecture from 8:00 am to 3:00 pm and an optional lab from 3.30 pm to 5.30 pm.

To find additional information and register, visit http://landscapeipmphc.weebly.com/

30TH USDA INTERAGENCY RESEARCH FORUM ON INVASIVE SPECIES

Tue-Fri, 8-11 February 2018
The Hotel Annapolis 126 West Street, Annapolis, MD.

Keynote Speakers -- Wednesday Morning
Alain Roques, INRA, Orleans, France, Emerging species and new tools to forecast future insect invasions

Jeanne Romero-Severson, Notre Dame University, Ready fire aim: millions for technology, no impact on forest health

General Session Topics -- Wednesday-Friday
• How Urban Forest Conditions Predict and Promote Invasive Species?
• Spotted Lanternfly update
• Gypsy moth: recent findings in gypsy moth population ecology
• The socio-economic component of invasion biology
In addition to the General Sessions, this year's program will include several invited and offered presentations on topics that are relevant to the issue of non-native invasive species:
• Non-native forest pest invasion hotspots
• The emergence of beech leaf disease in Ohio: Probing the plant microbiome in search of the cause
• International Symbiosis: How YOU can benefit from collaborative research on emerging forest pests
• EPPO activities on sentinel trees
• Balsam woolly adelgid in relic Canaan fir stands
• Successful Biological Control of Winter Moth
• Using the biology and behavior of the Asian longhorned beetle to help eradicate populations in the U.S
• Efforts to obtain parasitoids for the biological control of the species in the *Euwallacea fornicatus* species complex

Additional information can be found at:
https://www.nrs.fs.fed.us/disturbance/invasive_species/interagency_forum/

UNIVERSITY OF MARYLAND DEPARTMENT OF ENTOMOLOGY COLLOQUIA

Fri, 16 November 2018, 12:00 p.m.
"Vive la Resistance: Evidence that Multidrug Resistance is an Ancient Stem Cell Trait'"
Michael Markstein, Ph.D. (Assistant Professor, Biology Department of Entomology, UMass Amhertst)

Fri, 30 November 2018, 12:00 p.m.
"Novel Plant-Insect Associations: Implications of the Lack of Coevolution"
Alina Avanesyan, Ph.D. (Postdoctoral Research Associate, Lamp Lab, UMD Department of Entomology)

Fri, 2 November 2018, 12:00 p.m.
"Chemical Ecology in Pest Management, a Holistic

Approach"
Ivan Hiltpold, Ph.D. (Assistant Professor, College of Agriculture and Natural Resources, University of Delaware)

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

2018/2019 PROPOSED MES EVENT SCHEDULE

Regular MES lecture/meetings are held at the University of Maryland Baltimore County (UMBC) on the 3rd Friday of each of 6 months coinciding with UMBC's academic year. Proposed events for the upcoming MES membership year are:

Sep 30: Potluck Picnic
Oct 19: Dr. Mike Turrell
Nov 16: Frederick Paras
Feb 15: TBD Lecture
Mar 15: TBD Lecture
Apr 19: TBD Lecture
May 17: Members' & Students' Presentations & Elections
TBD Survey/Field Trip

OCT 2018-SEP 2019 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

December 2018 issue of the ***Phaëton***:
Please send member news items by 10th December 2018.
Send e-newsletter drafts to Addie at aditid26@gmail.com.

SEP 2019 issue of *The Maryland Entomologist*:
Please send first drafts of articles and notes by 1 April 2019.
Send drafts to Gene Scarpulla at ejscarp@comcast.net.

MONARCH BUTTEFLY

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.