



Phaëton

The Official Newsletter of the
Maryland Entomological Society

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Meeting Announcement

The Maryland Entomological Society's 310th regular meeting will be held **Friday, 15 April 2016**, 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: Humberto Boncristiani, Ph.D. – Research Associate, Department of Entomology, University of Maryland College Park

Title: “Honeybee Die Off from a Virology Perspective”



From a young age, Humberto Boncristiani has been intimately acquainted with honeybees, as his father is a beekeeper in Brazil. After completing his PhD research on human viruses, he was intrigued by research that showed an association between Israeli acute paralysis virus, an RNA virus, and colony collapse disorder and switched to studying viruses in honeybees. His current work focuses on Picornaviruses, a group of viruses with a wide range of hosts and a replication mechanism that leads to high mutation rates. The mutation rate results in tremendous genetic diversity that makes it difficult for hosts to develop resistance, allowing Picornaviruses to have severe effects on bee colonies. A well known example of a virus within this group is the Deformed Wing Virus, which causes developmental deformities and is spread in honeybees by the *Varroa destructor* mite which are external parasites of the . Dr. Boncristiani's current research is examining a phenomenon known as 'Black Muscle Bees',

in which the muscle tissue of symptomatic bees is entirely black compared to the pink tissue of healthy bees. In his talk, he will discuss basic concepts of virology and use data from his published and on-going research to describe how viruses affect beehives.

Dr. Boncristiani received his Masters and PhD in Molecular and Cell Biology at Sao Paulo University in Brazil. He began his research on honeybee viruses as a postdoctoral associate at the USDA Bee Research Laboratory, and continued working on this subject at the University of North Carolina and at the Chemical and Biological Defense Laboratory as a National Council Research Fellow.

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 **Kibby's Restaurant and Lounge**, “Home of Baltimore's Best Shrimp Salad Sandwich.” Kibby's is located inside the Baltimore Beltway at 3450 Wilkens Avenue, Baltimore, MD 21229, just 15 minutes from UMBC. Meet at the restaurant **promptly at 6:00 p.m.**

18 MARCH 2016 MES MEETING MINUTES

The 309th general meeting of the Maryland Entomological Society was held on Friday, 18 March 2016 at UMBC and began at 8:20 p.m. with a welcome by President Fred Paras. The meeting moved immediately into the scheduled lecture which is summarized below. After this, attendees enjoyed a period of conversation and fine refreshments. There were long discussions with the speaker and her husband, but after this few people remained for the business discussion. We obtained the current general funds balance, \$4,566.94, from the treasurer, and, since there were no new business items, the meeting was adjourned. For displays, Phil Kean brought in two drawers containing a variety of interesting Hymenoptera and Diptera. These included Ichneumon wasps (Ichneumonidae), sawflies (Symptera), horntails (Siricidae), vespid wasps (Vespidae), Midas flies (Mydidae), and robber flies (Asilidae).

Respectfully submitted, Richard H. (Dick) Smith, MES Secretary.

18 MARCH 2016 MES LECTURE

Speaker: Dr. Kirsten S. Traynor, Postdoctoral Research Associate, University of Maryland, College Park, MD; USDA NIFA ELI Fellow; Editor of Bee World, International Bee Research Association; Science writer.

Title: "Honey Bee Health: the Complex Web of Colony Decline"

Dr. Traynor began her talk by summarizing the monetary contribution that European Honeybees *Apis mellifera* L. provide to the U.S. and world economies; \$15-18 billion and \$216 billion, respectively. Honeybees come in third behind cattle and swine out of animals that contribute to national and world economies. Thus it was quite fitting that world attention was drawn to honeybee health when their numbers showed dramatic declines starting around 2006. Reasons for declines have been pinned on at least five factors.

The first was hive parasites, particularly the mite, *Varroa destructor* Anderson and Trueman, which were accidentally passed from the Asian honeybee *Apis cerana* Fabr. The mites are ectoparasites that attach to and move from bee to bee around the hive. The mite females deposit mite eggs in hive cells, and the hatchling nymphs feed on developing bee larval hemolymph. *Varroa* population is highest in late summer and early fall while the bees are trying to prepare for winter. *Varroa* infestation of hives was highest in 2012. Asian honeybees have adapted to *varroa* by abandoning affected hive cells and physically removing the mites, but European honeybees have no such natural resistances. Another damaging parasite is *Nosema apis* (Zander), a microsporidian or small, unicellular fungus and bee intestinal parasite. It causes nosemosis, also called nosema, which is the most common and widespread of adult honeybee diseases. *Nosema* infestation is highest in the winter when bees are primarily stationary and nosema spores accumulate in bee feces retained in the hive.

The second category of causes of hive decline includes a variety of bee diseases and viruses that produce disabling effects

among worker bees such as paralysis and wing deformities. Unfortunately, varroa mites are vectors of many of these viruses. *Nosema* and virus presence also seem to be highly correlated in diseased hives. Comb replacement and requeening, replacing the queen of the diseased colony, are the best practical preventative measures against viruses. Requeening is recommended for every two years to curtail hive virus propagation. However such measures are costly, as queen bees are expensive and hive worker breeding and hive productivity come to a standstill during the three weeks required for queen mating. Dr. Traynor recommends breeding of local queens, as shipping reduces their survivability.

A third reason for hive decline is habitat loss. Farmers no longer grow many flowering cover crops, so for much of the warm season, aside from the period of crop bloom that benefits from pollination, agricultural lands do not provide nutrition for bees, and the bees starve. Bees also benefit from flower and nectar diversity, which is seldom available.

A fourth reason for hive decline is climate change. During hot and cold temperature swings, which have become more severe due to climate change, worker bees must consume more honey and expend more energy to protect brood chambers. This stresses their energy and hive resources.

A fifth reason for hive decline is colony collapse disorder (CCD) for which no single factor has been isolated as a cause. Active bee colonies have declined to half their number compared to over 50 years ago. However, 35% of this loss has occurred from CCD in only the past seven years. CCD may be occurring as a result of the combination of the previous four factors as well as increased pesticide use. There has been some rebound in active bee colonies in the past ten years to combat CCD due to more frequent hive inspections and restarts by beekeepers.

The market for crop pollination currently supports the beekeepers' more expensive practices and current losses are acceptable, but there is little leeway if more expensive practices become necessary. Tractor trailers currently transport bee hives across the country every year to support crop pollination. Over 200,000 colonies are transported in this fashion, and over 10,000 colonies are deployed at one time in certain local crop areas. Unfortunately, bee parasites that are contracted during this process infect entire colony transports all at once, and the parasites further infect colonies after the bees are transported back home during the off-season. *Nosema* parasite infestation is highest in commercially transported bees and lowest in stationary hives. *Varroa* infestation is highest in stationary hives.

Dr. Traynor next addressed the role of pesticides in bee colony decline. Neonicotinoids, a group of systemic pesticides, in particular have been shown to lead to field disorientation of worker bees and reduced pollen collection efficiency as well as reduced fertility of queen bees. The chemicals are retained in pollen and eventually fed to developing bee larvae and queens back in the hive. Although this is certainly not good for honeybees, there is no conclusive proof that such pesticides alone are causing colony decline. In pollen studies in which Dr.

Traynor has been involved, trace neonicotinoids were detected in pollen samples from many states, particularly from CA, NE, NJ, and FL. However, the highest concentration of pesticides were those administered for varroa prevention. Fungicides were also detected in pollen samples. The dual presence of varroacides and fungicides was much more likely to lead to hive decline than the separate presence of these pesticides.

Remarkably, hives with a greater presence of fungicide in bee pollen had a higher percentage of fungal diseases. Also, 20% of pollen samples did not contain any pesticides. To improve honeybee health, Dr. Traynor recommended regular Varroa control with pesticides, such as oxalic acid; but she said that recommended dose limits should be strictly followed or else the chemical will hamper bee activity. However, pollination crops should seek to minimize general insect pesticide, herbicide, and fungicide use as much as possible.

Hives should be cleaned regularly, and queens should be replaced every two years. Dr. Traynor and her husband Michael who assisted with the presentation, remarked that American beekeepers are not nearly as consistent with hive cleaning as European beekeepers. European beekeepers also keep much better track of queen bee breeding history. Finally, Europeans have found that moving bees from stronger hives into weaker hives, rather than allowing the hives to decline further, will actually revive declining hives. However, the two colonies must be combined slowly and systematically so that the hive odors merge gradually. This is best done late in the summer or early in the autumn. Honey harvest should also be delayed for a longer period to allow a hive to build up and establish sufficient honey resources for the hive after the honey harvest. In addition, more season-long floral habitats should be maintained for continual bee nutrition. Public roadsides are prime sites for establishing floral habitats, but unfortunately at present few public highway departments have an interest in establishing such habitats on a scale that would be significant for pollinator health. White and crimson clover (not red clover, for which honeybees cannot reach the flower nectaries because they have shorter proboscis length than bumblebees) and buckwheat plantings and herbal cottage-type gardens would be best, as they provide flowers season-long. Some tree species can also provide valuable nectar resources. These include American Basswood and Black Locust. Dr. Traynor recommended the book *Plants for Bees: A Guide to the Plants That Benefit the Bees of the British Isles* by W. D. J. Kirk and F. N. Howes, which discusses nutrition sources for honeybees. Solitary bee species and bumblebees also provide pollination benefits, but they are less resilient to habitat changes. Bumblebees are also less effective than honeybees for pollination because the breeding period when they are not pollinating is longer.

Dr. Traynor also discussed the impact that Africanized honeybees have had on our European honeybees. Africanized honeybees are more resistant to mites and diseases than European honeybees. The drones also fly earlier. They often mate with European honeybees, and their traits are genetically dominant over European traits. Interestingly, foreign beekeepers in some countries do tend Africanized bees, but their

smoking apparatus to calm the bees during hive breakdown is much more elaborate than for European honeybees. Smoker machines that produce smoke is used to handle the bees. After sensing smoke, bees fill up on honey because they think they will need to abandon their hive. The bees do not sting in these circumstances because when full of honey they cannot manipulate their stingers. The smoke does not directly make the bees more docile. Many European beekeepers have already bred out the stinging behavior, so that smokers are hardly ever used in Europe. Africanized honeybees have not moved into Maryland latitudes yet (from Latin America where they are common) because they are more adapted to the hotter and drier climates of the southwestern U.S.

Toward the end of her talk, Dr. Traynor went on to discuss new advantages of honey in treating wounds. Honey tends to dehydrate bacteria, it prevents white blood cells from clogging bandages, some bacteria are diverted from feeding on human tissue to consuming honey sugars, honey results in less tissue scarring, and it actually kills antibiotic resistant bacteria such as MRSA. Manuka honey, produced in New Zealand by bees that pollinate the Manuka myrtle tree (*Leptospermum scoparium* J. R. & G. Forst), although not sweet, is one of the most unique and beneficial forms of honey in the world for this application. This makes it the most costly honey. There are many Manuka honey uses that range from healing sore throats and digestive illnesses to curing Staph infections and gingivitis.

Respectfully submitted, Richard H. (Dick) Smith, MES Secretary.

WELCOME TO NEW MEMBERS

MES welcomes the following new members to the Society:

Kirsten S. Traynor **Middletown, MD**
Daniel J. Greifenberger **Baltimore, MD**

INTEGRATED TICK MANAGEMENT SYMPOSIUM: SOLVING AMERICA'S TICK-BORNE DISEASE PROBLEM

Mon-Tues, 16-17 May, 2016,

Westin Washington, D.C., City Center, Washington, D.C.
A coordinated effort by ESA, IPM Institute of North America
and the CDC.

ANNUAL ELECTION OF MES OFFICERS

The annual election of MES officers will be held at the **20 May 2016 meeting**. Nominations for officers are currently being solicited. Nominations can be made by any paid member. Officers serve for a one-year term (which is renewable). If nominees run unopposed, the election slate is voted on as whole. If there are two or more nominations for an office, that office will be voted on individually by secret ballot. Please forward nominee names to the *Phaëton* Editor at aditid26@gmail.com. Members must be present at the May meeting to vote.

ANNOUNCEMENT OF NEW BUTTERFLY RECORDS FOR MARYLAND, DELAWARE, AND DISTRICT OF COLUMBIA

Observation of butterfly species in jurisdictions where they were never previously recorded is becoming a more and more difficult task, as natural history enthusiasts might well expect. One obvious reason is that our local species records, some having their first appearance in published literature as long ago as the late 19th century, are finally reaching a state of thoroughness. This is no surprise, considering the relatively larger number of citizen naturalists out surveying both near and remote field areas nowadays. The other obvious reason is the degradation and loss of natural habitats everywhere due not only to land conversions for development and modern agricultural but also due simply to increasing human population density and activity.

Nevertheless, new jurisdictional butterfly records still surface every year, and 2015 was no exception. Some come to the surface simply by remembering and digging out old records that manage to fill in still-existing blanks in published checklists. Others emerge by intentionally surveying for and finding species that are not recorded in jurisdictions where they should exist, based on records in surrounding areas. Another reason is that species populations occasionally exhibit irruptions; and especially during these times, numbers may reach levels that make them easier to encounter, or individuals may stray out of normal colony habitation areas. Lastly, although the effect of global warming may be slight on an annual basis, it may eventually lead to actual range changes. The few new records below fall into one or more of these discovery categories.

Some of the records below were obtained by reviewing recent entries on the Maryland Biodiversity Project's (MBP's) on-line resource website at <http://www.marylandbiodiversity.com/>, the NABA Recent Sightings website at <http://sightings.naba.org/>, and the MDLepsOdes online forum at <https://groups.google.com/forum/#!forum/mdlepsodes>. Entries for the sightings (and photograph(s), if they accompanied record submission) have been entered into and may be viewed at the Butterflies and Moths of North America (BAMONA) permanent national record-keeping website at <http://www.butterfliesandmoths.org/>. These may be reviewed in detail by going to this website and selecting "Regional Checklists" and then "butterfly," "United States," "Maryland," and "Apply" and then by selecting the species of interest. You will need to scroll to the U.S. map displayed at the bottom of the species discussions, zoom in the Maryland area, and click on any of the sighting dots having orange rings. These are BAMONA's "Verified Sightings." Clicking on the "More Detail" option will take you to the record information (and photo(s) too, if these were submitted). I have also updated my public on-line historical Maryland, Delaware, and DC state and county checklists and charts to include these new records. These appear at the leplog.wordpress.com website under its local listings section at

<http://leplog.wordpress.com/washington-area-butterfly-club/local-and-regional-lists-and-info/butterfly-records-for-maryland-delaware-and-the-district-of-columbia/>. The prolog at this link gives some historical background on the listing and informs the user as to how to access all state, county, and city butterfly lists and state cross-sectional county-by-county occurrence charts.

The outline below gives in the following order: the state and new county of record, the species common name, the species scientific name, the date of record, the location of record, the name(s) of the record contributor(s), and finally any record-related notes. All contributors are to be commended for their diligence in keeping a watchful eye while out in the field. Lastly, if you are aware of any new butterfly records from a county or statewide standpoint, from 2015 or earlier, that were not yet announced or I apparently overlooked, please let me know by e-mail at RichardSmith9070@verizon.net. (Note that this is a totally new e-mail address for me since my last announcement in 2015 of new butterfly records.) Also, if you are aware of any butterfly county records that actually precede those listed below, please send me that information so I can correct and amend the bookkeeping.

MARYLAND

1. Dorchester

- a. Hackberry Emperor *Asterocampa celtis*
 - i. 07/17/201
 - ii. MBP record (detailed location not available)
 - iii. Jonathan Willey
 - iv. Photo voucher on MBP
- b. Tawny Emperor *Asterocampa clyton*
 - i. 08/09/2015
 - ii. MBP record (detailed location not available)
 - iii. Jonathan Willey
 - iv. Photo voucher on MBP

2. Frederick

- a. Eastern Pine Elfin *Callophrys niphon*
 - i. 05/04/2013
 - ii. Salamander Rock, west powerline cut area, Frederick Municipal Watershed
 - iii. Beth Johnson, Rick Borchelt, and Tom Stock
 - iv. Photo voucher obtained
- b. Appalachian Tiger Swallowtail *Papilio appalachiensis*
 - i. 06/11/2011
 - ii. Gambrill Park Rd. north section, along ridge line, Frederick Municipal Watershed
 - iii. Tom Stock, Rick Borchelt, Beth Johnson, and Walter Gould
 - iv. Photo voucher obtained

3. Washington County, MD

- a. Appalachian Tiger Swallowtail *Papilio appalachiensis*
 - i. 06/05/1968
 - ii. Along C&O Canal Trail in vicinity of Hancock, MD
 - iii. Dr. William A. Andersen, Lutherville, MD 21093
 - iv. This specimen was located among papered material, currently held by MES President Fred Paras of Finksburg,

MD 21048 and collected by Dr. William A. Andersen during his statewide surveys of Maryland butterflies, in partnership with Dr. Robert S. Simmons, in the 1950s, 60s, 70s, and early 1980s.

4. Worcester
- a. Dusted Skipper *Atrytonopsis hianna*
 - i. 05/12/2015
 - ii. Mt. Olive Church Rd. nr. Nassawango Cr. crossing
 - iii. Jennifer Frye
 - iv. Photo voucher obtained

DISTRICT OF COLUMBIA

1. (No county)
- a. Dion Skipper *Euphyes dion*
 - i. 08/16/2015
 - ii. Kenilworth Aquatic Gardens
 - iii. Tom Stock and Walter Gould
 - iv. Photo voucher obtained

Respectfully submitted, Dick Smith (MES Secretary)

2016 ANNOUNCEMENT AND UPDATE ON THE BUTTERFLY UNKNOWN SPECIES STATUS PROJECT IN MARYLAND, DELAWARE, AND DISTRICT OF COLUMBIA

Butterfly populations are known to be dwindling worldwide, and that trend has been observed in some of our species locally. In an effort to promote conservation, it is important to keep abreast of which local species are showing such signs of decline, and then concerned naturalist will hopefully be able to do something about it before it gets worse. In this effort, I am circulating the accompanying charts to local naturalists who I know have toured through Maryland and Delaware in recent years and have assembled lists of butterfly species they have encountered. By filling in data in the attached charts for counties and cities where Unknown status is indicated, we will be better able to concentrate our attention onto those remaining species for which status remains Unknown and for which declines may be occurring.

On the attached charts, the check mark () indicates that a record exists for a species. For certain recorded species occurrences, A, S, and X symbols are used instead of the check marks. The A and S symbols indicate, respectively, that the species record is due either to an Accidental occurrence (i.e., accidental release or introduction) or to a Stray (i.e., species incidentally wandering far from normal range). The X indicates that based on observations of local lepidopterists and my own over a period of many years, the species apparently no longer occurs in the jurisdiction shown and is therefore considered to be eXtirpated there. The symbol U (for unknown) is entered on species that are uncommon in some of the counties and cities and for which I have received few or no records of occurrence of the species in these jurisdictions in the past 15 years. For the species marked U in a particular jurisdiction, you are asked to provide the date and location (nearest town is sufficient) of your latest observation of that species in that jurisdiction, if you have

seen it there. I publish the latest version of these Unknown Status charts once each year (usually in January or February) on the Leplog website at <https://leplog.wordpress.com/regional-lists/butterflies-of-unknown-status-in-the-dc-area/>. By citing the latest date and paying particular attention to the year, we will be able to assess how recently each of these species is known to have occurred in the area of interest. If certain species are eventually found to have disappeared from major parts of our region, conservation measures, such as protection of known habitat, will need to be implemented in surviving areas. Of course, if anyone observes a species currently identified with an X in an indicated area, this information will be vitally important; and conservation measures should be considered promptly at the sighting locality.

Since initiating this project early in 2011, I have received a large number of records from many of you for the Unknown Status Charts. Thank you all much for this. I have also obtained a lot of recent records by poring through butterfly entries on the Maryland Biodiversity Project's website at <http://www.marylandbiodiversity.com/> (these are indicated in my chart entries by "MBP"). Other on-line resources checked are NABA Recent Sightings at <http://sightings.naba.org/> and the MDLepsOdes on-line forum at <https://groups.google.com/forum/#!forum/mdlepsodes>. I am grateful for these various website resources in acting as repositories of observation records from our many very active field naturalists.

Some observations and tendencies, still apparently true since last year, are the following:

- Hoary Edge *Achalarus lyciades* – no new records, except in Western Maryland and one in Piedmont
- Dreamy Duskywing *Erynnis icelus* – no new records in Central and Southern Maryland (it does not occur on the Eastern Shore).
- Sleepy Duskywing *Erynnis brizo* – no new records, except in Western Maryland
- European Skipper *Thymelicus lineola* – no new records, except in Western Maryland, and one in 2007 in Baltimore City!
- Delaware Skipper *Anatrytone logan* – no new records in Central Maryland
- Common Roadside-Skipper *Amblyscirtes vialis* – no new records, except in Western Maryland and Soldiers Delight (Baltimore County)
- Bronze Copper *Lycaena hyllus* – already noted to be in marked decline in Maryland in the past 7-8 years. In 2015 it was reported in three counties (Caroline, Somerset, and Talbot) for which we have not had records for some time. However, all sightings were of single specimens, so there is no reason to conclude yet that this species is on a path to revival.

Some incidental improvements in status, however, were recorded for a few species in 2015 as follows:

- Black Dash *Euphyes conspiciua* – one Piedmont record, northern Harford County
- Dusted Skipper *Atrytonopsis hianna* – several new records obtained around Maryland in 2015. Evidently not in decline. Lack of recent records apparently only due to weak

sampling of species' typical barrens habitat during its brief flight period.

Pepper and Salt Skipper *Amblyscirtes hegon* – rediscovered in Frederick County (laus detur Rick Borchelt), Gambrell SP; last county record in 1960s and previously assumed county extirpated.

Fortunately, we are on the road to being reassured that several of our other native butterfly species are still occurring in the cities and counties previously known from the historical record. However, there is still an abundance of “U” entries on these charts for many species. Please send in any new data if you have it or when it becomes available, especially for the species marked “U”. Also, if anyone has later years than the existing occurrence dates in the present charts, please forward that information to me too. Finally, please inform me if you notice that I have apparently missed entering some of your contributed data. My e-mail address is

RichardSmith9070@verizon.net. (Note that this is a totally new e-mail address for me since my last announcement in 2015 of Maryland butterfly unknown species status.) Here's hoping you all have great seasons this coming year in observing butterflies and that you will be able to help replace many more U's in my charts with recent data entries.

Respectfully submitted, Dick Smith (MES Secretary)

(Footnote: for those of you who are more knowledgeable about statewide conservation activity involving butterflies, note that some (but not all) of the species omitted from my Unknown Status charts are those already considered to be rare, threatened, endangered, or extirpated in Maryland or Delaware and for which conservation considerations and measures have already been placed into action. For more on these species, please see the information and publications available at the Maryland and Delaware Natural Heritage Program websites at http://dnr2.maryland.gov/wildlife/Pages/plants_wildlife/rte/espa_a.aspx and <http://www.dnrec.delaware.gov/fw/NHESP/information/Pages/Information.aspx> .

**UNIVERSITY OF MARYLAND
DEPARTMENT OF ENTOMOLOGY COLLOQUIA**

Fri, 15 April 2016; 12:00 pm

TBA

Susan Brown, PhD (University Distinguished Professor, Division of Biology, Kansas State University)

Fri, 22 April 2016; 12:00 pm

Exit Seminar

Ryan Gott (PhD Candidate; Department of Entomology, University of Maryland)

Fri, 29 April 2016; 12:00 pm

Exit Seminar

Elanor Spadafora (PhD candidate; Department of Entomology, University of Maryland)

Fri, 6 May, 2016; 12:00 pm

TBA

Dawn Gundersen-Rindal, PhD (Research Molecular Biologist, USDA-ARS)

Fri, May 13th 2016; 12:00 pm

“Structure and Function of the Viscous Capture Spiral and its Relationship to the Architecture of Spider Orb Webs”

Sarah Stellwagen, PhD (ORAU Postdoctoral Fellow, Army Research Laboratory, Adelphi, Maryland)

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

**AMERICAN ENTOMOLOGICAL SOCIETY
PUBLIC MEETING**

April 27, 2016, Wednesday

“Philadelphia to Borneo: Insect Photography on Two Continents”

Isa Betancourt, Curatorial Assistant, Department of Entomology, The Academy of Natural Sciences of Drexel University

Location: Ewell Sale Stewart Library, Second Floor, The Academy of Natural Sciences of Drexel University, Philadelphia, PA

<http://www.thebugandthebeetle.net>

<http://darwin.ansp.org/hosted/aes/mtgSched.htm>.



Central Maryland Beekeepers Association

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

MEMBERS MEETINGS

Tue, May 3, 2016; 7:00 pm

Joe Lewis of Susquehanna Beekeepers on methods of making splits.

<http://www.susquehannabeekeepers.com/>

Tue, June 7, 2016; 7:00 pm

Karen Rennich gives us the analysis on the latest results from the Bee Informed Partnership (tentative)

<https://beeinformed.org/>

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/membershipmeeting-schedule/>

**ENTOMOLOGICAL SOCIETY OF WASHINGTON
PUBLIC MEETING**

Thu, 5 May 2016; 7:00 p.m.

Topic: TBA

Speaker: TBA

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

<http://entsocwash.org/>.

2015/2016 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:

<u>Date</u>	<u>Speaker</u>	<u>Topic</u>
Oct 16	David Rivers	Forensic Entomology
Nov 20	James Brighton	Maryland Biodiversity Project
Feb 19	Jon Gelhaus	Aquatic Insects of Mongolia
Mar 18	Kirsten Traynor	Lecture
Apr 15	Humberto Boncristiani	Lecture
May 20	Members' & Students'	Presentations & Elections
TBD	Survey/Field Trip	
Sep 18	Crab Feast/Meet-&-Greet at J. KING'S restaurant	

**OCT 2015 – SEP 2016 MES MEMBERSHIP YEAR
OFFICERS**

President	Frederick Paras
Vice President	Philip J. Kean
Secretary	Richard H. Smith
Treasurer	Edgar A. Cohen, Jr.
Historian	(vacant)
Faculty Sponsors	Frank E. Hanson & Austin P. Platt

SUBMITTAL DEADLINES

MAY 2016 issue of the *Phaëton*:

Please send member news items by May 8, 2016 to aditid26@gmail.com.

SEP 2015 issue of *The Maryland Entomologist*:

First drafts of articles and notes are due ASAP.

Send drafts for both publications to ejscarp@comcast.net.
