



Phaëton

The Official Newsletter of the
Maryland Entomological Society

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February Meeting Announcement

The Maryland Entomological Society's 330th regular meeting will be held **Friday, 21 February 2020**, 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, and books to share. Refreshments will be provided. Presentations are scheduled to begin at 8:15 p.m.

Speaker: **Ken Belt, Ph.D., UMBC, Hydrologist, Engineer and Aquatic Ecologist**
Topic: **Settlements, Cities and Bugs- The Ecohydrological Evolution of Urban Streams**

Abstract

The understanding of stream ecosystems has broadened greatly over the last three decades, as it has for urban engineering hydrology and the very concept of urban ecosystems. This talk will explore some of these advances by looking at how green and gray infrastructure affects the health of streams and their insects, as well as how new technologies are increasing their usefulness as indicators of stream ecosystem health. Historical context will provide an appreciation of legacy effects and a basis for understanding nature-based engineering solutions for urban stream degradation.

Biography

Ken has an integrative, systems view of urban ecosystems, arising from his years of research at the US Forest Service, Baltimore Ecosystem Study and Baltimore City DPW Water Quality Mgt. He is currently “retired” but is focused on using an “urban stream continuum” framework for teaching, science communication, citizen science and to help folks to develop an ecohydrological perspective as a foundation to understanding and appreciating urban stream ecosystems and their restoration.

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*.

Benjamin L. Apt
Robert L. Davidson
Kelly A. Hamby & Scott R. McCluen
Gary F. Hevel
Andrew Sharp
Jeffrey W. Shultz
David W. Webb

IN MEMORIAM: THEODORE W. SUMAN, PH.D.

Longtime Maryland Entomological Society member Theodore W. Suman, Ph.D., entomologist and retired college professor, passed away 23 January 2020 at the age of 84. I first met Ted in my undergraduate days at Towson State College (now Towson University). In my senior year, I was enrolled in three of Ted's courses: Invertebrate Zoology in the fall and Entomology and Course Research in the spring. I have fond memories of Ted's weekend-long Invertebrate Zoology fieldtrip to the University of Delaware's marine sciences lab in Lewes, Delaware for hands-on collection and study of Delaware Bay estuarine invertebrates. Ted was personable and all-the-time willing to assist students in his courses. I always looked forward to his engaging lectures and labs. Ted's obituary can be found at https://www.stardem.com/obituaries/theodore-w-suman/article_3e0ce526-28a7-514d-a62b-9719d426d0d4.html.

Submitted by Gene Scarpulla, Editor of *The Maryland Entomologist*

MINUTES OF THE 329TH MEETING OF THE MARYLAND ENTOMOLOGICAL SOCIETY 15 NOVEMBER 2019

The meeting commenced at 8:25 PM with a welcome by President Fred Paras. Eight members and nine guests attended. The speaker's biography and an abstract of his lecture appear in the November 2019 issue of the *Phaëton*. The lecture ended at 9:30 PM, and following a social period, the business portion of the meeting commenced at 10:20 PM.

Treasurer Ed Cohen reported the balance in the Society's account as \$ 4,438.19. A check for approximately \$ 900.00 was sent to Gene Scarpulla, editor of *The Maryland Entomologist*, for the printing of the recent issue of the journal. Following discussion about an earlier start time for the meetings, the membership decided to start meetings at 7:00 PM, beginning with the February 2020 session. Members wishing to meet for dinner at Chef Paolino's in Catonsville should plan to arrive at 5:00 PM.

15 NOVEMBER 2019 MES LECTURE

Speaker: James Butler, Entomologist - US Army Public Health Command (USAPHC)

Title: The Importance and Evolution of Entomology in the United States Military

Mr. Butler's responsibility with this branch of the Army is the protection of soldiers from Disease and Non-Battle Injury (DNBI). In his lecture, he traced the military response to DNBI from historical times to the present.

The speaker began his talk by describing historical incidents in which entomology played a significant role in government and military operations. In one, an assassination attempt was made on President Abraham Lincoln using yellow fever as a biological weapon. Luke Blackburn, a Kentucky doctor/politician who was treating yellow fever in Bermuda, sent clothing belonging to infected people to contacts in the North. At that time the mode of transmission was unknown, and the perpetrators no doubt thought that disease could be spread among the civilian population of the North. One batch was to be sent to the President. His co-conspirator was not paid, and he revealed the plot. Two days later, the President was shot and died from his wound.

In another, Napoleon, who was an excellent military strategist and conquered much of Europe, suffered three defeats largely caused by insects. During his Syrian campaign, soldiers contracted bubonic plague. Yellow fever severely impacted French troops involved in suppressing a revolt in the colony that became present-day Haiti. Louse-borne typhus coupled with a severe winter, was instrumental in the failed Russia campaign. In that campaign, his troop strength dropped from approximately 1 million to 100,000.

It has been widely stated that during the U.S. Civil War, more soldiers died from disease than from gunfire. Mr. Butler showed numerous slides illustrating the lack of sterility, hygiene, and sanitation that caused the high rate of DNBI in that conflict. Malaria also contributed to casualty rates. Quinine was used as a prophylaxis by the North. The naval blockade of the South curtailed its use by the Confederacy.

Walter Reed's work demonstrated the insect transmission of disease, and during World War I some pest management was used. Water and pest borne diseases were prevalent, due to trench warfare. Practices such as de-lousing, shaving of hair, and rat-catching competitions were used. An oil film was dripped into the water supplies, causing mosquito larvae to suffocate.

World War II saw the use of chemicals developed between the wars, such as the pesticide DDT, and atabrine, a synthetic antimalarial. The Japanese occupation of the Dutch East Indies, at that time the largest producer of cinchona from

which quinine is derived, severely limited the supply available to Allied troops.

During the Vietnam War, the focus was on insects, water quality, food safety, and hygiene, and during the Gulf War, on insect surveillance.

In present times, some responsibilities of military entomologists include testing of commercially available equipment for use by the military. Humanitarian missions are also undertaken, such as spraying to curtail mosquito populations in the aftermath of Hurricane Katrina.

The military combined the medical entomology and preventive functions under the Armed Forces Pest Control Board. It is now known as the Armed Forces Pest Management Board. They set policy, certify pesticide application personnel, and maintain records and data of exposures of military personnel to pesticides.

In other functions, the military and the Smithsonian collaboratively maintain a mosquito collection for research purposes.

Currently, the DNBI functions and other preventative and safety functions are combined under the U.S. Army Public Health Command. They perform tasks such as ensure food safety on military bases, ensure proper storage of pesticides, oversee the health of military animals, inspect military base day care facilities for equipment safety, train deploying personnel in identifying disease vectors typically found in areas to which they are deploying.

The speaker concluded his talk by showing slides of various preventive and safety related activities performed by the USAPHC.

ENQUIRY ABOUT PROTECTING MONARCH CATERPILLARS

Situation: In Spring, I have approximately 10 milkweed stalks in my garden which have many monarch eggs on them throughout the summer. To prevent the caterpillars from eating all their milkweed too early and to protect them from being eaten by birds, I raise them in a butterfly cage. I harvest extra milkweed from all around the area, or at least try to*, so that the cats have enough food. Doing this, I am able to release quite a few monarchs, usually through the last week of September.

(*The AA County Department of Highways seems determined to eradicate the monarchs and bees by cutting milkweed exactly when the cats are growing instead of waiting until late September. This is a separate problem that also needs to be addressed.)

Problem: Two summers ago, before I knew we were being sprayed in the night weekly throughout the season, I had

approximately 35 caterpillars go into the chrysalis. Only 20 or so survived to fly. The others died the black death in the chrysalis. Last summer, I applied for a spraying exemption. Of the 30 cats I raised, all but 5 survived to fly.

Admittedly, this is not a scientific study, but I think it might be showing something of concern. I can't help but think that this spraying is affecting everything, including making the pollinators we are supposed to be helping weak and prone to dying.

Why is this spraying going on when people can just apply mosquito repellent if they are concerned about bites? I personally do not want my tax money used to spray pesticides in my area in week after week.

Question: Is my concern unfounded?

Thank you for your time,

Sincerely,
Carol Bird
Crownsville, MD 20132
crlbrd@yahoo.com

Please send responses directly to Carol.

A SPECIAL FRIENDS OF PATUXENT PRESENTATION: CONSERVING INSECTS AND WHAT YOU CAN DO TO HELP By. Dr. Rebecca Waterworth

When: Saturday, March 7 2020, 1:00 to 3:30 PM
Where: National Wildlife Visitor Center at Patuxent Research Refuge
10901 Scarlet Tanager Loop, Laurel, MD 20708

The renowned ecologist E.O. Wilson called insects “the little things that run the world”. They aerate soil, pollinate plants, and are food sources for many animals. We need healthy insect populations for our survival. Yet recent studies suggest that many insect species are in serious decline.

Dr. Rebecca Waterworth will be discussing how beneficial insects can be saved by restoring native plants to our ecosystems. She will share online resources that you can use to determine which plants best attract these insects and are beneficial to add to your garden. She will also discuss the recent headlines on insect decline and how conserving insects in your yard can go a long way to help preserve biodiversity at a local scale.

Rebecca is an entomologist in the Office of Pesticide Programs at the Environmental Protection Agency. Prior to this, she worked with Dr. Paula Shrewsbury at the University of Maryland, Department of Entomology after completing her PhD at University of California at Riverside. With her current research, she is interested in the identification, diversity, and

conservation of beneficial insects using floral resources.

Following the presentation, please join us for a dessert social.

For questions on the event, please contact Ken Lavish at (240) 338-1209.

Please register for this event at Eventbrite link below:
<https://www.eventbrite.com/e/lecture-on-conserving-insects-by-dr-rebeccah-waterworth-tickets88744438003>

**UNIVERSITY OF MARYLAND
DEPARTMENT OF ENTOMOLOGY COLLOQUIA**

Fri, 28 February 2020, 12:00 p.m.

“TBD”

Doug Norris (Professor, Molecular Microbiology and Immunology, Johns Hopkins University)

Fri, 6 March 2020, 12:00 p.m.

“TBD”

Karen Rane (Director of the Plant Diagnostic Laboratory, UMD College Park)

Fri, 13 March 2019, 12:00 p.m.

“Changes in animal migration and consequences for infectious disease: Monarch butterflies as a case study”

Dara Satterfield (AAAS Fellow, Smithsonian Migratory Bird Center)

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

THE LEPIDOPTERISTS’ SOCIETY 2020 ANNUAL MEETING

the 69th Annual Meeting of the Lepidopterists’ Society will be held from Tuesday, June 16 – Friday June 19, 2020 in Cullowhee, North Carolina. We will be meeting in conjunction with the Southern Lepidopterists’ Society and the Tropical Lepidoptera Society. The meeting will be hosted by Western Carolina University and Dr. James Costa. WCU is the westernmost university in the UNC system, located in a valley between the Blue Ridge and Great Smoky Mountains. Online registration will be done through WCU. We encourage contributed papers and posters by anyone who is interested in presenting! Look for links for registration and abstract submissions and additional details coming soon.

Find more information at
<https://www.lepsoc.org/content/2019-annual-meeting>.

RESEARCH HIGHLIGHT

Conservation by Minimal Intervention: Odonata Refuge in Idylwild Wildlife Management Area, Caroline County, Maryland

Harold B. White III, Michael C. Moore, James F. White Jr., Rick Cheicante

Northeastern Naturalist, 27(1):1-24 (2020).
<https://doi.org/10.1656/045.027.0101>

Abstract

Over the past decade, 84 species of dragonflies and damselflies (Odonata) have been found in an area <0.6 km² (<0.25 mi²) within Idylwild Wildlife Management Area in Caroline County, MD. Eighteen of these species are species of conservation concern in both Maryland and nearby Delaware. This high level of Odonata diversity exceeds that of any other known location on the Delmarva Peninsula. We attribute this to the presence of a variety of pond, marsh, and bog habitats resulting from the unimpeded natural succession of an abandoned sand- and gravel-mining operation. This site has provided a refuge for locally rare species in a heavily agricultural region where draining of swamps and channelization of streams destroyed otherwise suitable wetland habitats for many now rare and endangered Odonata species. Deliberate planning resulted in the decision not to interfere with the ongoing natural succession in the Idylwild Wildlife Management Area, enabling colonization and persistence of Odonata species of conservation concern.

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 7 - 13

Tardigrades: Ecology, Identification, and Biology
Instructor: Emma Perry

June 28 – July 4

Native Bees: Biology, Ecology, Identification and Conservation
Instructors: Sara Bushmann and Kalyn Bickerman-Martens

July 5 - 11

Tracks and Signs of Insects and Other Invertebrates
Instructor: Charley Eiseman

July 19 - 25

Drawing from Nature: It’s All in the Details! (Textures, Techniques, and Tricks)
Instructor: Dorie Petrochko

July 26 – August 1

Moths and Butterflies: Identification, Specimen Preparation,
and Taxonomy

Instructor: Paul Dennehy

July 26 – August 1

The Poet and the Natural World

Instructor: Hayley Kolding

August 9 - 15

Spider Ecology, Identification, Biology and Photography

Instructor: Kefyn Catley

August 23 - 29

Trichoptera of Eastern North America: Morphology,
Molecular Systematics, Ecology and New Research Directions

Instructors: John Morse and Paul Frandsen

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

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

2019/2020 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:

Oct 18: The Love Bugs screening

Nov 15: James Butler (US Army) – Entomology in the
US Military

Feb 21: Dr. Ken Belt (UMBC) – Aquatic Insects

Mar 20: TBA

Apr 17 Dr. Mark Metz (USDA) – Micro Moths

May 15: Members' & Students' Presentations & Elections

Jul: MES BugBlitz

Sep: Member's Picnic

**OCT 2019-SEP 2020 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

March 2020 issue of the *Phaëton*:

Please send member news items by 13th March 2020.

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

September 2020 issue of *The Maryland Entomologist*:

Please send first drafts of articles and notes by 1 April 2020.

Send drafts to Gene Scarpulla at ejscarp@comcast.net.

SUMMER STORM

By George Foster

The heat of the day bows before the rage and power
Of the summer storm

In fact, all of nature sits in silence

Waiting for Mother to vent her rage and be done

The bee fly I watched in the heat and light of the
noon

Now sits under the eve of the porch

Waiting for Mom to get over it

The birds and cicadas

That sang vehemently earlier

Wait respectfully and mute

As she calms

And the roar of the water slowly,

So slowly, diminishes,

Powerful thunder finds distant fields.

Her children begin to sing again.