



# Phaëton

The Official Newsletter of the  
Maryland Entomological Society

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## Meeting Announcement

The Maryland Entomological Society's 280<sup>th</sup> regular meeting will be held **Friday, April 15, 2011, 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.

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**Speaker:** **Harold J. Harlan, Ph.D., B.C.E. – Entomologist**  
**Information Services Division, Armed Forces Pest Management Board, Forest Glen Annex, Silver Spring, MD**  
**Title:** **"Chagas' Disease IN the United States"**

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Dr. Harlan will present an overview of Chagas' disease, its importance, its causal organism, the typical disease cycle, and show images of some of its most important true bug (Hemiptera) vectors. Chagas' disease is named after the Brazilian physician who discovered the disease, Carlos Chagas. The disease is caused by the parasite *Trypanosoma cruzi*, which is transmitted to animals and people by the subfamily Triatominae (kissing bugs) within the family Reduviidae (assassin bugs). Chagas' disease is also known as American trypanosomiasis.

Dr. Harlan will also detail recently studied endemic areas in the United States, and concerns about recent, locally-acquired United States Chagas' disease cases. He will also display representative specimens of some competent vectors, including at least one that occurs in this country (maybe even one found in our own local area).

Harold Harlan earned a Ph.D. in 1984 from the Ohio State University with a dissertation topic on Rocky Mountain spotted fever. He retired from the Army in 1994 after 25 years as an active duty Medical Entomologist, including assignments in Vietnam, Panama, and Saudi Arabia. From August 1979 to July 1982, he lived in the Panama Canal Zone, an endemic area for Chagas' disease. For most of that period, he participated in routine surveillance, preventive outreach education and limited efforts of applied research focused on the two main Chagas' disease vector species in Panama, *Rhodnius pallescens* Barber and *Triatoma dimidiata* (Latreille). He worked as Senior Entomologist for the National Pest Management Association for 9 years, and is currently a civilian analyst for the U.S. Armed Forces Pest Management Board, focused on vectors, biologic hazards, and their avoidance and management. He has authored or co-authored 37 peer reviewed articles or book chapters, most of them on preventive medicine or public health topics.

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## Meet for Dinner before the Lecture

If you are interested in meeting for dinner before the lecture, 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 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.

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

Annapolis Area:	<b>Harold Harlan</b>	(410) 923-0173 (Home)	<a href="mailto:haroldharlan@comcast.net">haroldharlan@comcast.net</a>
Baltimore Area:	<b>Fred Paras</b>	(410) 374-0425 (Home)	<a href="mailto:bugandrockman@msn.com">bugandrockman@msn.com</a>
	<b>Phil Kean</b>	(410) 944-4630 (Home)	
	<b>Frank Hanson</b>	(410) 455-2265 (Biological Sciences, UMBC)	<a href="mailto:hanson@umbc.edu">hanson@umbc.edu</a>
Southern MD:	<b>Bob Platt</b>	(410) 586-8750 (Home)	<a href="mailto:platt@umbc.edu">platt@umbc.edu</a>

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### 18 MARCH 2011 MES MEETING MINUTES

The 279th general meeting of the Maryland Entomological Society was held on Friday, 18 March 2011 at UMBC and began at 8:22 p.m. with a welcome by Fred Paras. Due to warnings from campus officials earlier in the day that power to the entire campus would be cut off at 10:00 p.m. to complete upgrades at their power station, the meeting's main program was presented first. This is summarized below. After the main program and refreshments, which included ice cream kindly provided by Joy and Ed Cohen, the hour of 10:00 p.m. was quickly approaching, so an abbreviated business meeting was conducted to address only immediate Society issues. Due to conflicts on the third Friday of May with the Maryland Ornithological Society Annual Conference this year, it was decided to hold the MES May meeting on the second Friday of May, which is 13 May, rather than 21 May. February minutes were not read, but the Secretary was able to obtain the current General Funds balance from the Treasurer, which was \$2388.74. No other items were officially addressed at the meeting.

Respectfully submitted, **Richard H. Smith**, MES Secretary

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### 18 MARCH 2011 MES LECTURE

**"New Light on Darkling Beetles: Some Studies North and South" – Speaker: Warren E. Steiner, Jr. – Research Collaborator – Department of Entomology, National Museum of Natural History, Smithsonian Institution**

**Warren Steiner** began his talk with some general worldwide data on darkling beetles (Tenebrionidae). Although the public's main exposure to tenebrionids is through the Yellow Mealworm (*Tenebrio molitor*), the Red Flour Beetle (*Tribolium castaneum*) and the Confused Flour Beetle (*Tribolium confusum*), there are about 20,000 species worldwide in nine subfamilies. Many have overall superficial features that allow easy confusion with other families of beetles such as with Cerambycidae (because of long antennae like longhorned beetles), Scarabaeidae (because of anterior horns like scarab beetles), Chrysomelidae (because of oval bodies like leaf beetles) and Coccinellidae (because of round domed elytra as in lady beetles). Distinctive morphological features of tenebrionids include 1) a five-segmented abdomen with the three anterior segments fused and the two posterior segments hinged, and 2) an 11-segmented antenna which may be filiform (thread-like), moniliform (like a string of beads), or clavate (gradually clubbed). Some species persist in the most arid of world deserts, gleaning moisture from sea breezes, while others occur in rainforests and feed on polypore (possessing tubes & pores instead of gills) fungi. Many have fascinating elytral shapes and surface textures (e.g., smooth to velvety to bumpy) and designs and iridescent colors. Some have wing development sufficient for flight while others are flightless. A relatively thorough regional reference is *Tenebrionid Beetles of Australia: Descriptions of Tribes, Keys to Genera,*

*Catalogue of Species* by E. G. Matthews and P. Bouchard, published by Australian Biological Resources Study (2008). A more general reference containing extensive species descriptions with a chapter on tenebrionids is *Handbook of Zoology: Arthropoda: Insecta: Coleoptera, Beetles, Volume II* by R. A. B. Leschen, R. G. Beutel, and J. F. Lawrence (Editors), published by Walter de Gruyter GmbH & Co. (2010). Warren next discussed the highlights of numerous tenebrionid projects he has worked on and published papers on within the past ten years or so. A recent work was "A Checklist of the Darkling Beetles (Insecta: Coleoptera: Tenebrionidae) of Maryland, with Notes on the Species Recorded from Plummers Island through the 20th Century," *Bulletin of the Biological Society of Washington* 15: 133-140 (2008). In the paper, the diversity from Warren's backyard was compared to current and historical records from this well-studied Potomac River island. A myrmecophilous (sharing the nest of an ant colony) tenebrionid was discovered and discussed in Warren's paper "The First Records of *Bycrea villosa* Pascoe (Coleoptera: Tenebrionidae) in the United States, Central America and Colombia and Notes on Its Association with Leaf-Cutting Ants," *The Coleopterists Bulletin* 58(3):329-334 (2004). The beetle is associated with the nests of leaf-cutter ants (Hymenoptera: Formicidae), specifically *Atta mexicana* and probably other *Atta* species that have above-ground refuse dumps. Warren next discussed some of his extensive work with the tenebrionids of the Bahamas while he was visiting the Gerace Research Centre on San Salvador Island. A publication that followed from this was "New Species of Darkling Beetles (Coleoptera: Tenebrionidae) from San Salvador Island, Bahamas," *Zootaxa* 1158: 1-38 (2006). Nine new species of darkling beetles were described. All are, so far, known only from this island and are probably endemic. The majority of them are flightless. All inhabit maritime sand scrub habitats. The new taxa were: *Trientoma jilae* Steiner, *Trientoma voegeliorum* Steiner, *Branchus geraceorum* Steiner, *Adelina bacardi* Steiner, *Blapstinus kalik* Steiner, *Diastolinus this* Steiner, *Diastolinus that* Steiner, *Nautes guanahani* Steiner, and *Lobopoda deyrupi* Steiner. Warren was quite innovative naming the species of these beetles: *T. jilae* was named after his wife Jil Swearingen; *T. voegeliorum* was named after a fellow Bahamian geologist V. J. Voegeli; *B. geraceorum* was named after Dr. Donald T. Gerace, founder of the Centre; and Bacardi and Kalik are the names, respectively, of the locally famous rum and beer. (Warren states that the aedeagus of *B. kalik* is shaped like a bottle-opener!) Among such local species, there are always two groups: those that inhabit the beach sands area (e.g. *D. this*) and those that inhabit the scrub areas just behind the shoreline (e.g. *D. that*). "this" is from the Greek word meaning "shore" or "beach;" "that" is the English pronoun used to refer to the more distant one, rather than "this." For reasons not well understood, the scrub area species are always the larger of the two. Another new species from the Bahamas, *Adelina maryjoae* Steiner, was dedicated to the late Mary Jo Molineaux, a former co-worker at the Smithsonian whose

invitation to join her family's trip to Grand Bahama Island in 1987 inspired Warren's continuing studies of the Tenebrionidae there. In studying species differences between Tenebrionidae from the various Bahamian islands, Warren has found that there is an overwhelming correlation with the geologic history of the so-called Bahama Banks. These are the submerged carbonate platforms that make up much of the Bahamian Archipelago. The main platforms consist of the Great Bahama Bank around Andros Island, the Little Bahama Bank of Grand Bahama Island and Great Abaco, and the Cay Sal Bank north of Cuba. San Salvador Island lies on an isolated carbonate platform well east of the Great Bahama Bank. The Banks were dry land during past ice ages when sea level was as much as 120 meters lower than at present, and the first three banks were connected by land during this time. The limestone that comprises the Banks has been accumulating since at least the Cretaceous period, and the platforms have subsided under their own weight at a rate of roughly 3.6 centimeters per 1,000 years. Many of the Tenebrionidae, especially the flightless species, are the same among the islands on each bank and are different between the islands of different banks. The three Bahaman species of *Branchus* are flightless and exemplify this distributional distinction: *B. geraceorum* only on San Salvador, *B. saxatilis* Steiner only on Grand Bahama and Abaco, and *B. woodi* only on Andros Island. On the other hand, flightless tenebrionids existing on land masses connected over long periods of geologic history have achieved broad distributions. A North American flightless species *Ammodonus fossor* occurs from Texas to Wisconsin and Ohio and eastward to New York and the Carolinas, and recent records place it also in southern Ontario. From geological descriptions of ice age conditions, Warren believes that these distributions were probably established by expansive ice age river flows and high winds over bare scoured landscapes. Archeological expeditions have actually helped to establish the origin of certain tenebrionid species. On Egypt's Red Sea coast, Cave 3, the site of Mersa/Wadi Gawasis, which served as a staging area and harbor from which Middle Kingdom Egyptian pharaohs launched seafaring expeditions, was investigated. Insect remains of tenebrionids *Trachyderma hispida* and *Tenebroides mauritanicus* were discovered, and these findings establish these grain pests as having Old World origins. Warren locates many new species reports from people seeking identification assistance and from experienced amateurs' discussions on <http://bugguide.net/help>. In North America, tenebrionid introductions are being discovered regularly now, and even formerly recorded species have now been recognized as introductions. Along these lines, at the December 2010 Entomological Society of America annual meeting, Warren presented the paper "North American Crypticini Are Mostly South American and Spreading (Coleoptera: Tenebrionidae)." In this paper the native *Gondwanacrypticus obsoletus* is separated from two others,

*G. platensis* and *G. pictus*, identified as introductions from South America and often associated with imported fire ants, as is the related *Poecilocrypticus formicophilus*. All four species occur on open sandy soil habitats in the southeastern United States and *G. platensis* also has recently colonized southern California. A fifth species, the Asian *Ellipsodes scriptus*, was reported from Maryland in earlier literature but no specimens have been found, and it is presumably not established in North America.

Respectfully submitted, **Richard H. Smith**, MES Secretary

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#### MAY MEETING RESCHEDULED

The May 2011 MES meeting has been rescheduled to take place on the **second** Friday, **13 May 2011**. This rescheduling was done to avoid conflicting with the Maryland Ornithological Society (MOS) annual conference being held on Friday-Sunday, 20-22 May 2011. Many members of MES are also members of MOS. This year's MOS conference will be held at Western Maryland's Wisp Mountain Resort and Conference Center on Deep Creek Lake. For further MOS conference information, go to <http://www.mdbirds.org/activities/conference/annual.html>.

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#### ELECTION OF MES OFFICERS

The annual election of MES officers will be held at the 13 May 2011 meeting. Nominations for President, Vice President, Secretary and Treasurer are currently being solicited. Nominations can be made by any paid member, but need to be received at or before the 15 April meeting. 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. The names of nominees can be forwarded to the *Phaëton* Editor. Names will be published in the May issue, one week prior to the May meeting. Members must be present at the May meeting to vote. Please send nominations to [ejscarp@comcast.net](mailto:ejscarp@comcast.net).

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#### MEMBERS' "POTPOURRI" PRESENTATIONS NIGHT

Friday, 13 May 2011, will be our annual Member's "Potpourri" Presentations night. The night is generally a grouping of presentations shorter than those given on regular lecture nights. If you would be interested in giving a short presentation (~20 minutes), please contact Fred Paras at [bugandrockman@msn.com](mailto:bugandrockman@msn.com).

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#### WORKSHOP: "INTRODUCTION TO IDENTIFYING THE COMMON NATIVE BEES IN MARYLAND"

The Natural History Society of Maryland will sponsor a workshop on identifying common native bees of Maryland on Saturday, 23 April 2011, from 9:00 a.m. to 3:00 p.m. at Towson University, 8000 York Road, Towson, MD. The

instructor is MES member **Sam Droege**, Head of the U.S. Geological Survey's Bee Inventory and Monitoring Laboratory, where he designs and develops large scale surveys of animals and biodiversity. For the last 10 years he has been working on the creation of bee surveys and bee identification guides for the nation. 1) We will emphasize learning a small set of species to genus so you can spot them on the wing, with cameras, and with hand lenses; 2) We will have previously identified specimens available at the course that you can keep and use at home; 3) We will introduce you to the use of online guides to the genus and species of bees; 4) We will send you lists of resources, a state list of bee species, and manuals for working and monitoring bees; 5) We will introduce you to the use of microscopes and how to handle specimens; and 6) We will talk briefly about how to catch and process bee specimens. For further information, go to <http://www.meetup.com/marylandnature/events/16917894/>.

#### DRAGONFLY SOCIETY OF THE AMERICAS NORTHEAST U.S. REGIONAL MEETING

The 2011 Northeast Regional Meeting of the Dragonfly Society of the Americas will be held on the Delmarva Peninsula on Thursday-Sunday, 14-17 July 2011. The base of operations will be in Dover, Delaware at Delaware State University. A block of 25 rooms have been reserved at the nearby Hampton Inn for \$89/night. The room rate will be held for registrations until 22 June 2011 provided the block is not filled. A website providing registration, housing information, meeting schedule, regional information, and species lists for various habitats can be found at: <http://www.udel.edu/chem/white/NEDSA2011/NEDSA2011-HomePg.html>.

The Delmarva Peninsula includes the state of Delaware, the Eastern Shore (of the Chesapeake Bay) of Maryland, and the two Eastern Shore counties of Virginia. Except for the northernmost parts of Delaware and Maryland, the Delmarva is on the Coastal Plain with elevations less than 100 feet above sea level. While the Delmarva Peninsula is largely agricultural, there are numerous state parks and other natural areas that support interesting odonate populations and distinctive habitats. For example, the ponds produced by an abandoned sand mining area in Maryland near the border of Delaware have been surveyed extensively in recent years and have turned up the following: *Somatochlora georgiana* (Coppery Emerald), *Celithemis fasciata* (Banded Pennant), *Celithemis verna* (Double-ringed Pennant), *Erythrodiplax minuscula* (Little Blue Dragonlet), *Nannothemis bella* (Elfin Skimmer), *Libellula flavida* (Yellow-sided Skimmer), *Enallagma dubium* (Burgundy Bluet), *Enallagma pallidum* (Pale Bluet), *Enallagma weewa* (Blackwater Bluet), *Nehalennia integricollis* (Southern Sprite) and *Telebasis byersi* (Duckweed Firetail) that are not often encountered in the northeastern U.S. and should still be flying at meeting time. The Pocomoke River watershed is another area that

supports interesting species often near their northern limit of distribution on the East Coast. Then there are salt marshes and tidal fresh water areas where other species like *Libellula needhami* (Needham's Skimmer), *Brachymesia gravida* (Four-spotted Pennant) and *Erythrodiplax berenice* (Seaside Dragonlet) can be found. Nearly 130 species are known from Delmarva and hopefully new ones will be found during the Meeting. These species are discussed in MES member **Harold (Hal) B. White's** new book, *Natural History of Delmarva Dragonflies and Damselflies*, to be published in late April. The Meeting will include a book signing by Hal.

#### THE VASCULAR FLORA OF LOCH RAVEN WATERSHED, BALTIMORE COUNTY, MARYLAND

*The Vascular Flora of Loch Raven Watershed, Baltimore County, Maryland* had its roots in a Master of Science thesis completed by Donnell Earl Redman in 1980 at Towson State University (now Towson University). Since that time, Redman continued his field studies at Loch Raven for an additional 24 years. These additional studies culminated in the publishing of the above document in 2004. Redman's publication is available free of charge from the City of Baltimore's Reservoir Natural Resources Section. A copy of the 96-page document can be obtained by contacting Ms. Laura J. Bill at [laura.bill@baltimorecity.gov](mailto:laura.bill@baltimorecity.gov).

#### THE BEES OF THE WORLD, SECOND EDITION CHARLES D. MICHENER

The Johns Hopkins University Press is currently offering Charles D. Michener's *The Bees of the World* (2007 second edition) at a 59% discount, reduced from \$182.00 to \$74.62. (Hardback, 992 pages, 48 color photos, 40 black and white illustrations, 434 line drawings) This is THE definitive bee reference. The JHUP website is <http://www.press.jhu.edu/>.

#### SUBMITTAL DEADLINES

MAY 2011 issue of *Phaëton*: 29 April 2011.

SEP 2011 issue of *The Maryland Entomologist*: ASAP.

Send drafts for both publications to [ejscarp@comcast.net](mailto:ejscarp@comcast.net).

#### 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	<b>David Nickle</b>	Our Smallest Insects – Thrips
Nov 19	<b>Harold Harlan</b>	Bedbugs – Public Health Impact
Feb 18	<b>James Young</b>	Exotic Pests at Maryland's Door
Mar 18	<b>Warren Steiner</b>	New Light on Darkling Beetles
Apr 15	<b>Harold Harlan</b>	Chagas' Disease in the U.S.
May 13	Members'	"Potpourri" Presentations & Elections
Jun TBA	Field Trip & Talk:	Appalachian Tiger Swallowtails, Spruce Knob, WV with <b>Harry Pavulaan</b> (species co-author)