



# Phaëton

The Official Newsletter of the  
Maryland Entomological Society

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WEBSITE: <http://www.mdentsoc.org/>

## Meeting Announcement

The Maryland Entomological Society's 307<sup>th</sup> regular meeting will be held **Friday, 20 November 2015, 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: James Brighton (Co-Founder, Maryland Biodiversity Project)**

**Title: "The Maryland Biodiversity Project: Cataloging the living things of Maryland"**



Burgundy Bluet  
*Enallagma dubium* Root



Appalachian Jewelwing  
*Calopteryx angustipennis* (Selys)



Elderberry Borer  
*Desmocerus palliatus* (Forster)



Kings Hairstreak  
*Satyrium kingi* (Klots & Clench)

The [Maryland Biodiversity Project](#) (MBP) is a 501(c)3 non-profit organization focused on cataloging all the living things of Maryland. Their goal is to promote education and conservation by helping to build a vibrant nature study community. The project was started in June 2012 by Bill Hubick and Jim Brighton. They have already cataloged over 16,000 species, including over 6,900 species with photographs, and feature the work of more than 450 naturalists and photographers.

Jim Brighton is a lifelong resident of Maryland's Eastern Shore. He comes from a long line of boat builders and he continues in the family tradition. Jim has worked for Campbell's Boatyard in Oxford, Maryland for the past 17 years. He got into birding back in the early 1990s when he lived in Costa Rica where he ran a sugar cane farm for two years. After coming back to the Shore, Jim began birding in Maryland and has been county birding in Maryland ever since. Bill Hubick and Jim started the Maryland Biodiversity Project three years ago and they have grown into a major conservation non-profit that incorporates many of the top naturalists in the area to help spread the word on the species that surround us.

### 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.**

\*\*\*DON'T FORGET TO RENEW\*\*\*

\*\*\*IT'S MEMBERSHIP RENEWAL TIME\*\*\*

**OCT 2015 – SEP 2016 MEMBERSHIP YEAR**

Membership renewal forms were inserted in the front of the September 2015 issue of *The Maryland Entomologist* that was mailed out in last month. If the date on your address label reads 2015, it is time for you to renew for the "October 2015 – September 2016" 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.

**WELCOME TO NEW MEMBERS**

MES welcomes the following new members to the Society:

**David B. Rivers**

**Baltimore, 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*.

**Ralph O. Cullison, III**

**Frank G. Guarnieri**

**Harold J. Harlan**

**Gary F. Hevel**

**Janet A. Lydon & Timothy W. Thompson**

**Timothy M. McMahon**

**William R. Morrison, III**

**Karen D. Rennich**

**Sue A. Ricciardi**

**Richard G. Robbins**

**Chris Sargent**

**Eugene J. Scarpulla**

**David R. Smith**

**Joanne K. & Robert P. Solem**

**M. Alma Solis & Jason P. W. Hall**

**James H. Trosper**

**Robert B. Trumbule**

**WANTED: BACK ISSUES OF  
THE MARYLAND ENTOMOLOGIST**

MES occasionally gets requests for complete hard copy sets of *The Maryland Entomologist*. The latest request is from the Carnegie Museum of Natural History in Pittsburgh, Pennsylvania. MES has no hard copies of Volume 1 (Numbers 1-4), 2 (1-4), or 3 (3). If you have these or any other back issues and no longer want them, please contact Gene Scarpulla at [ejscarp@comcast.net](mailto:ejscarp@comcast.net) and he will make arrangements to obtain them. Thanks.

**16 OCTOBER 2015 MES MEETING MINUTES**

The 306<sup>th</sup> general meeting of the Maryland Entomological Society was held on Friday, 16 October 2015 at UMBC and began at 8:25 p.m. with a welcome by President **Fred Paras**. Attendance was high, the majority consisting of students from Fred's classes that he teaches at Baltimore City Community College. The meeting moved immediately into the scheduled lecture which is summarized below. After this, attendees enjoyed a period of conversation and fine refreshments, and then the MES business meeting convened. The business meeting started with the reading by Secretary **Dick Smith** and approval by attendees of the minutes from the 15 May 2015 MES meeting, and then Treasurer **Ed Cohen**'s report was delivered. The general funds total currently stands at \$2122.78 after \$857.20 was withdrawn to cover publication costs of the 2015 issue of *The Maryland Entomologist*.

Journal Editor **Gene Scarpulla** reported next that this new journal issue will be mailed out to members and subscribers during the week following this current meeting. Gene also mentioned that he had received inquiries from two MES members that might be willing to accept the responsibilities of editorship of the Society's monthly e-newsletter *Phaëton*, which Gene intends to relinquish at the end of the current calendar year. Gene also mentioned that some MES members and libraries wish to receive the complete set of past volumes of *The Maryland Entomologist* but that no back-up copies exist for Volumes 1, 2, and one issue of Volume 3. Gene plans to obtain an estimate from the current printer of what the costs would be to produce five back-up copies of these issues.

Under new business, Ed Cohen noted that the MES By-laws include the membership class of Honorary Member, of which there are no living members known to be filling this status. According to the By-laws, "Such an individual shall be at least age 60, shall be elected for life, and shall have participated in the Society for at least five consecutive years. Such members shall pay no dues, shall receive free the publications of the Society, and shall have all the privileges of active members." Vice-President and Charter Member **Phil Kean** affirmed that no one in the Society had been elected to this position for over 20 years. After due consideration of the continued contributions to the MES's well-being and growth by MES members **Dr. William Andersen** and **Dr. Austin Platt** during the entire lifetime of the Society (and additionally the critical role in the formation of the MES in the case of Dr. Platt), a motion was forwarded and approved to award Honorary Membership to these two members from this time forward. Letters will be drafted by Fred Paras to inform them of receiving this honor.

Next, Dick Smith reiterated that the office of Society Historian had not been filled in the May meeting. After some discussion of who in the membership might be well-suited for this position, we prevailed on Charter Member Phil Kean to consider filling this role. Phil agreed to seriously consider it and respond at the next MES meeting regarding his decision. Dick Smith mentioned that as Society Secretary some of the Society's

historical materials, such as photographs, had been passed to him in recent years for storage and that these should subsequently be passed to the Society Historian. Member **Gaye Williams** recommended that the Society should seriously consider using general funds to purchase a fireproof and waterproof box to hold all of these materials.

Gaye Williams also kindly brought in several of her entomologically-related books to offer to any meeting attendees who wanted them after they made a modest donation to the MES General Fund. Sums collected were \$20 from Gene Scarpulla and \$10 from Phil Kean for various references.

Under exhibits, Phil Kean brought in several Cornell drawers that included a variety of tropical lycaenid butterflies and very large tropical arachnids, coleopterans, and orthopterans. Fred Paras displayed a drawer comparing specimens of Eastern and Appalachian Tiger Swallowtails (*Papilio glaucus* Linnaeus and *P. appalachiensis* [Pavulaan and D. Wright], respectively). Ed Cohen also displayed a Schmidt box that included a northeastern United States specimen of Canadian Tiger Swallowtail (*P. canadensis* Rothschild and Jordan). *Papilio glaucus* and *P. canadensis* are the ancestral species of *P. appalachiensis*.

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

#### 16 OCTOBER 2015 MES LECTURE

**Speaker: David B. Rivers, Ph.D. (Professor, Department of Biology, and Director of the Forensic Studies Program, Loyola University Maryland, Baltimore, Maryland)**

**Title: "Silent Witnesses: Insects as Tools in Legal Investigations"**

Forensic entomology, the central topic of this presentation, is a burgeoning field of entomology in today's high-tech investigative and news-centric world. Forensic entomology is much broader than just human death investigations and in practice includes legal aspects of insects associated with food (stored product entomology), dwellings (urban entomology), pet and domestic animal abuse, wildlife poaching, and even matters of national security. Entomologists dealing with stored products must prescribe health levels and actions in response to detected insect intrusions and cuticle remains. Under urban entomology, knowledge of insect habits solved cases of mysterious deaths at a Texas hospital. The deaths were eventually connected to fire ants chewing into IV tubes of some patients. A primary focus however is potential homicide and abuse or neglect-related death investigations, since a variety of insect species use dead animals as their primary food source. By understanding which species of insects are attracted to the dead, when and where on the body they will arrive, and how long they take to complete their developments under varying environmental conditions, these species become useful pieces of physical evidence in investigations of suspicious or unexplained deaths. Using keen insect identification skills and available knowledge regarding insect biology in this deductive manner forms the basis for forensic entomology's intersection with the judicial system.

From a legal investigation aspect, hypotheses involving insects

at a crime scene must be testable, reproducible, and hinge on results that several forensic entomology experts can agree on. Two important legal questions for which forensic entomology can lend vital information are 1) what is the post-mortem period (between death and body discovery) and 2) has the body been moved to a location different than the original crime scene? Although insect development periods are well-known, an answer to the first question cannot always be ascertained precisely because the period between a victim's death and insect colonization of the body cannot be known exactly. Corpse location (city street versus country road) will often determine how quickly a body is colonized. However, the succession of insect invasion is relatively predictable. For example, as many blow flies (Calliphoridae) are anautogenous (requiring a protein meal preceding egg-laying) and oviparous, their larvae are usually the first colonizers. These are quickly followed by flesh flies (Sarcophagidae), which are ovoviviparous (i.e., depositing hatched or hatching maggots instead of eggs on carrion). Poikilothermic factors (how the body temperature varies with the temperature of its surroundings), which rely on an exhaustive range of conditions, must also be studied carefully to reach substantive conclusions on timing of insect development. Using known insect development periods has proven to be very helpful in answering the second question. In one case, the known diapause entry period of a wasp that parasitizes fly puparia (which resulted from maggots feeding on a corpse) provided evidence to indicate that the murder had occurred in Texas, but the body had been moved later and dumped at a location in Minnesota.

Other fly families important to forensic analysis are Muscidae (house and dump flies), Fanniidae (lesser house flies), Phoridae (scuttle flies), Piophilidae (skipper flies), Scathophagidae (dung flies), and Stratiomyidae (soldier flies).

Beetle species that are attracted to carrion may also be helpful in forensic analysis. However, they are not as essential because 1) few are exclusively necrophagous, 2) larval development is often indeterminate, and 3) many burrow underground below carrion rather than remain within it. Connection to a corpse is less direct, and collecting samples is more difficult. Many beetle species are attracted to dry remains; thus, they may be more helpful than flies in cases where a body is severely decomposed.

Forensic entomological investigations often start with collecting and preserving the oldest insect larvae found on a corpse. Boiling is required to freeze their growth stages and halt their decomposition so they can be produced later as physical evidence. Species identification is essential but often difficult with maggots; thus, a portion of the larval sample may be reared to adult stage for more reliable identification. Degree-day growth models, which are based on experimental rearing and which provide details on larval development and pupation timelines, exist for most common fly species. These may be used to establish at least a minimum post-mortem interval. To use these models, temperature history data at a crime site is an important ingredient in an investigation. Detailed factors in

addition to ambient temperature that determine maggot development are maggot mass temperature, infested tissue composition, competition between same and competing insect species, the victim's clothing, and the victim's blood composition. For example, it will be important to know if heroin or cocaine existed in a victim's blood because this presence is known to cause accelerated growth and larger sizes of maggots among some fly species. Some prescription medications have similar effects. Important chemical surface signatures such as gunshot residues and bomb compounds may be lost over time from a crime scene, especially outdoors, but some of them may wind up in maggot bodies and puparia from when they fed on the victim at an earlier time. Thus, it is important to collect all such insect remnants to analyze later for evidence. Some small blood spatters at a crime scene may not be from potential gunshots but instead may be regurgitate bubbles released by flies following consumption of the victim's blood and left on walls for later consumption by the flies. Such details must be made known to criminal investigators for proper interpretation of evidence and crime scene reproduction. Such evidence may also become essential if one believes the victim's body has been moved elsewhere.

The feasibility nowadays of entomological terrorism also brings crime-related insect study into the realm of national security. Terrorist measures might include releasing biting and stinging insects in high density public areas; releasing a large number of disease-bearing insect vectors; targeting certain agricultural areas with destructive foreign pests; and even genetic manipulation of insects so that they can quickly transmit deadly pathogens such as anthrax, Ebola, and smallpox to large areas. Entomological work against these possibilities is focused on the development of effective threat monitoring and surveillance techniques.

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

\*\*\* JOB OPENING \*\*\*

**USDA SYSTEMATIC ENTOMOLOGY LABORATORY  
MUSEUM TECHNICIAN/SPECIALIST (ZOOLOGY)**

NEW USDA JOB: JOA Posted – Museum Specialist (Zoology), GS-1016-07/09 FPL:9, PD#6B3179 (Washington, DC) YRCI#18223, ARS-S16E-0017

This position is located in the Systematic Entomology Laboratory located in the National Museum of Natural History in Washington, DC. Incumbent provides specialized support to Research Entomologists in connection with their systematic research and taxonomic service functions involving the classification and identification of Hymenoptera and Lepidoptera (not limited to these orders) and the curation of the Museum's extensive entomological collections of these groups.

\$43,057.00 to \$68,465.00 per year

For additional information: [ARS-S16E-0017](#).

**2015 STATE WILDLIFE ACTION PLAN REVISION:  
LIST OF SPECIES AND  
CONSERVATION & LEGAL STATUS INFORMATION**

Draft: Guide to Changes: **ADDED**

Species of Greatest Conservation Need (202)

[http://dnr2.maryland.gov/wildlife/Documents/Added\\_GCN\\_StatuList.pdf](http://dnr2.maryland.gov/wildlife/Documents/Added_GCN_StatuList.pdf)

Draft: Guide to Changes: **REMOVED**

Species of Greatest Conservation Need (92)

[http://dnr2.maryland.gov/wildlife/Documents/Deleted\\_GCN\\_StatuList.pdf](http://dnr2.maryland.gov/wildlife/Documents/Deleted_GCN_StatuList.pdf)

Submitted by MES member **Linda Davis**.

**NOTABLE SUMMER 2015 RECORDS**

High Germany Road, Green Ridge State Forest, Allegany County, Maryland, 18 July 2015

**Goes tigrinus De Geer – White Oak Borer**  
(Coleoptera: Cerambycidae)

**Citheronia sepulcralis Grote and Robinson – Pine-devil Moth**  
(Lepidoptera: Saturniidae)

**Paonias astylus (Drury) – Huckleberry Sphinx**  
(Lepidoptera: Sphingidae)

**Catocala innubens Guenée – Betrothed Underwing**  
(Lepidoptera: Erebididae)

Submitted by **Phil Kean**, MES Vice President.

**PHILADELPHIA CBP INTERCEPTS DESTRUCTIVE  
INVADER NEVER REPORTED BEFORE IN U.S.**

A 23 October 2015 U.S. Customs and Border Protection (CBP) news release reports that a United States Department of Agriculture (USDA) - Animal and Plant Health Inspection Service (APHIS) - Plant Protection and Quarantine (PPQ) identifier confirmed on 21 September that CBP agriculture specialists at the Port of Philadelphia discovered a first-in-nation longhorned beetle, *Steirastoma histrionica* White (Coleoptera: Cerambycidae), in a container of Costa Rica melons.

The full news release can be accessed at:

<http://www.cbp.gov/newsroom/local-media-release/2015-10-23-000000/philadelphia-cbp-intercepts-5-destructive-invaders>.

**UNIVERSITY OF MARYLAND  
DEPARTMENT OF ENTOMOLOGY COLLOQUIA**

**Fri, 13 November 2015, 12:00 p.m.**

**“Entomological Society of America Practice Talks”**

**Fri, 20 November 2015, 12:00 p.m.**

**“TBA”**

Paul B. Frandsen, Ph.D. (Genomics and Bioinformatics Analyst, Smithsonian Institution Office of Research Information Services [ORIS], Washington, DC)

**Fri, 4 December 2015, 12:00 p.m.**

**“Parasitoid Wasps”**

Robert R. Kula, Ph.D. (Research Entomologist, Systematic



Entomology Laboratory, USDA, Washington, DC)

**Fri, 11 December 2015, 12:00 p.m.**

**“Mosquito Immunity”**

George Dimopoulos, Ph.D. (Professor and Director of the Parasitology Core Facility, Johns Hopkins Malaria Research Institute, Baltimore, MD)

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

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**THE GEORGE WASHINGTON UNIVERSITY  
DEPARTMENT OF BIOLOGICAL SCIENCES  
SEMINARS**

**Fri, 13 November 2015, 3:30 p.m.**

**“TBA”**

**Fri, 4 December 2015, 3:30 p.m.**

**“TBA”**

Biology seminars take place in the Science and Engineering Hall, Lehman Auditorium (B1270), Washington, DC. For additional information, go to:

<http://biology.columbian.gwu.edu/seminars>.

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**WILDSPEAK:**

**Photography, Conservation, Communications**

**Mon, 16 November 2015, 9:00 a.m. – 9:30 p.m.**

WiLDSPEAK is a photo festival, communications symposium, and celebration of the power of visual media all rolled into one amazing day of presentations, discussions, and networking with some of the world’s leading conservation photographers, editors, scientists, and program implementers. Together, they will explore how photography and video are turning up the dial on conservation efforts all around the globe.

MES member **Peter Houlihan** will be serving on a panel to discuss “Beyond World Heritage Designation – Coiba Island, Panama”. Peter’s work on Coiba Island has involved an abundance of photojournalism work and also leading an entomology team to conduct a BioBlitz.

Carnegie Institution for Science, 1530 P Street NW, Washington, DC.

For additional information go to:

<http://conservationphotographers.org/wildspeak/>.

*Submitted by MES member **Peter Houlihan** (Graduate School Fellow, Department of Biology, Florida Museum of Natural History, University of Florida; Director & Expedition Leader - BRINCC: Barito River Initiative for Nature Conservation and Communities; National Geographic Explorer)*

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**Central Maryland Beekeepers Association**

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

**MEMBERS MEETINGS**

**Tue, 17 November; 7:00 p.m.**

**“Buckfast Abbey Beekeeping”**

Clare Densley (Head Beekeeper, Buckfast Abbey, Buckfastleigh, Devon, United Kingdom)

**Tue, 5 December; 6:00 p.m.- 9:00 p.m.**

Potluck Holiday Dinner, 3<sup>rd</sup> Annual Best Worst Bee Story

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/>.

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**AMERICAN ENTOMOLOGICAL SOCIETY  
PUBLIC MEETING**

**Wed, 2 December; 7:00 p.m.**

**“Centennial of the Introduction of the Japanese Beetle into North America near Philadelphia”**

Kenneth D. Frank (Author, *Ecology of Center City, Philadelphia*, Fittler Square Press, 2015)

The Academy of Natural Sciences of Drexel University, Ewell Sale Stewart Library, Second Floor, 1900 Benjamin Franklin Parkway, Philadelphia, Pennsylvania

For additional information, go to:

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

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**ENTOMOLOGICAL SOCIETY OF WASHINGTON  
PUBLIC MEETING**

**Thu, 3 December 2015; 7:00 p.m.**

Topic: TBA

Speaker: TBA

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

Additional information can be found at: <http://entsocwash.org/>.

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**87<sup>TH</sup> ANNUAL MEETING OF THE EASTERN BRANCH  
OF THE ENTOMOLOGICAL SOCIETY OF AMERICA  
held in conjunction with the**

**NORTHEASTERN PLANT, PEST, & SOILS CONFERENCE**

**Sun-Thu, 3-7 January 2016**

Society Hill Sheraton, One Dock Street. Philadelphia, Pennsylvania 19106

The Eastern Branch of the Entomological Society of America is joining forces with the Northeastern Weed Science Society, the Northeastern Division of the American Phytopathological Society, the Northeast Branch of the American Society of Agronomy, Crop Science Society of America, and the Soil Science Society of America, and the American Society of Horticultural Science-Northeast Region to hold the first-ever Northeastern Plant, Pest and Soils Conference (NEPPSC).

Additional details can be found at:

<http://www.entsoc.org/eastern/2016-eastern-branch-annual-meeting>.

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**PATUXENT BIRD CLUB  
& PRINCE GEORGE'S AUDUBON SOCIETY  
MONTHLY PROGRAM**

**Tue, 12 January 2016; 7:30 p.m. (Doors open 7:00 p.m.)  
"Do You Know Your Thrips?"**

Cheryle A. O'Donnell, Ph.D. (National Thysanoptera Specialist,  
USDA-APHIS-PPQ National Identification Services, Beltsville,  
MD)

College Park Aviation Museum, 1985 Corporal Frank Scott  
Drive, College Park, MD 20740

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**2015/2016 PROPOSED MES EVENT SCHEDULE**

Regular MES lecture/meetings are held at the University of  
Maryland Baltimore County (UMBC) on the 3<sup>rd</sup> Friday of each  
of 6 months coinciding with UMBC's academic year. Proposed  
events for the current 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	TBD	Lecture
Mar 18	TBD	Lecture
Apr 15	TBD	Lecture
May 20	Members' & Students' Presentations & Elections	
TBD	Survey/Field Trip	
Sep 18	Crab Feast/Meet-&-Greet at J. KING'S Restaurant	

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**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
Journal Editor	Eugene J. Scarpulla
E-newsletter Editor	(vacant)

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**SUBMITTAL DEADLINES**

DEC 2015 issue of the *Phaëton*:

Please send member news items by 4 December 2015.

SEP 2016 issue of *The Maryland Entomologist*:

Please send first drafts of articles and notes by 1 April 2016.

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

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