

Phaëton

The Official Newsletter of the
Maryland Entomological Society

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Meeting Announcement

The Maryland Entomological Society's 268th regular meeting will be held **Friday, April 17, 2009**; beginning at 8:00 P.M., in **Room 004** (one floor below the street level), Biological Sciences Bldg., University of Maryland, Baltimore County (UMBC). Bring a friend and specimens/observations to share. Refreshments will be provided. Presentations are scheduled to begin about 8:15 P.M.

Speaker: Dr. Richard Smith, MES Secretary

Title: "The natural history and population viability of some of Maryland's rare butterfly Species."

Many of Maryland's butterfly species are experiencing significant recent declines. Dr. Smith will outline the natural history, current status, and population viability of a select number of Maryland's rare butterfly species and indicate some of the plans either suggested or being initiated to stem their population declines. The Maryland Natural Heritage Program (MNHP), under the MD Dept. of Natural Resources, Wildlife & Heritage Service, lists approximately 50 butterfly species as being under rare, vulnerable, or watchlist conservation status in Maryland. The MNHP is currently placing an increased effort on identifying and initiating proactive measures to stem the declines of all such vulnerable animal species known to be having significant and verifiable population reductions in the state.

Dick Smith is Secretary and a past President of the *Maryland Entomological Society* and also member of *Lepidopterists' Society*, *Xerces Society*, *The Nature Conservancy*, *Natural History Society of Maryland*, *Audubon Naturalist Society*, *Maryland Native Plant Society*, *Maryland Ornithological Society*, *North American Butterfly Association*, and *Washington Area Butterfly Club*. Since 1995, he has served as butterfly records coordinator for Maryland, Delaware, and DC for the "Butterflies and Moths of North America" biological information and range mapping internet resource for Lepidoptera. He also is an instructor and field leader for *Audubon Naturalist Society* on butterfly identification and rare species conservation. He has worked as a Contractor for Delaware and Maryland Natural Heritage Programs and the National Park Service for butterfly surveys and conservation projects. Dr. Smith has published several papers and articles on local butterflies in the *Maryland Entomologist*, *Maryland Naturalist*, and *Audubon Naturalist News*.

If you want more information concerning this meeting, contact one of the following people:

Annapolis Area - Harold Harlan	(410) 923-0173 (Home)	"haroldharlan@comcast.net "
Baltimore Area - Phil Kean	(410) 944-4630 (Home)	
Fred Paras	(410) 374-0425 (Home)	"bugandrockman@msn.com "
Bob Platt	(Biol. Sci., UMBC x-2261)	"platt@umbc.edu "
Frank Hanson	(Biol. Sci., UMBC x-2265/-2228)	"Hanson@umbc.edu"

Minutes of the March 2009 MES Meeting

The 267th general meeting of the Maryland Entomological Society, on Friday, March 20, 2009 at UMBC, was begun at 8:20 p.m. Attendance was pleasantly high with over 30 members, guests, and students appearing due mainly to the popularity of the main program. The meeting proceeded immediately to welcoming of guests, introduction of the speaker, and the speaker's program, summarized below. The meeting then broke for refreshments and discussion and reconvened later for the business meeting. In the business meeting, the February 2009 meeting minutes were read and approved, and the treasurer's report was delivered, showing that the MES Funds now total \$2187.32. Fred discussed program plans for the April and May meetings and a potential speaker for the October meeting. The secretary had a number of past MES journal issues available for members who wanted additional copies. Field trip planning was postponed until the April meeting. Fred briefly discussed an article on the auditory intricacies involved in mosquito courtship; the title was "Harmonic Convergence in the Love Songs of the Dengue Vector Mosquito," which appeared in the Feb. 20, 2009 issue of *Science*. There were several announcements at the meeting. Charlie Davis discussed the planned opening of the Maryland Naturalist Center, the new headquarters, meeting hall, program center and museum collections repository for the Natural History Society of Maryland (NHSM). The 9000 sq. ft. building is located on Belair Rd. in Overlea one mile inside the Baltimore beltway. The NHSM has plans for neighborhood nature study teams and youth programs, as well as a statewide network of available natural history scholars. Fred announced plans for the Patuxent Bioblitz to be held at the Jug Bay Wetland Sanctuary in Anne Arundel County on May 30-31 this year. Fred also displayed a collection of now infrequently seen U.S. butterfly species, many of which were historical and originally collected in the early 20th century when they and their specialized habitats were widespread.

The main program, titled "The Songs of Insects," was presented by Mr. Wil Hershberger, a molecular biologist at USDA and coauthor (with Lang Elliott) of a recent popular book on Orthoptera and Cicadidae species and sounds and having the same title as his talk. The book is a masterpiece in insect photography and includes in its back flap a CD of insects sounds of all species illustrated. Several books with a similar

theme preceded Wil's book. These included a 1948 work with the same title, but long out of print, by George Pierce, and *Crickets and Katydid's, Concerts and Solos* by Vincent Dethier in 1992. However, Wil's book is the first with high resolution digital photography, full-page specimens with light shadow on a pure white background creating an almost 3-D visual effect, and including a CD of each of the insect's sounds. Lang Elliott is a nature sound specialist, well-known for his internet sound recordings and published books on bird songs and frog and toad sounds. Wil and Lang met in 2000 and proceeded to work on the photography and sound recordings for their *Songs of Insects* book through 2006. Wil made his white background photos in a large, specially constructed "white-box" with a lazy-susan turntable to quickly orient and snap photos of active specimens. Many crickets make sounds by stridulation wherein they pass a scraping organ along a toothed ridge near their wing bases. Sound is only created on the closing stroke. Wing membranes are also raised high and vibrated to create sound and mirror it outward. Since many bird and especially insect sounds are in higher frequency ranges where many people experience hearing loss with age, Lang Elliott has invented the SongFinder™ which can lower sound frequencies by one-half (one octave), one-third, and one quarter (two octaves). Using this device, most people with hearing loss can still sense all the sounds - the device is detailed at <http://www.nselec.com/>. Orthopteran hearing organs are located at the elbows of the front legs, but they are closed during sounding. Only males make the songs, which are different for each species, and females listen for and approach sounding males. Most insects make little heat and are subject to ambient temperature, orthopteran sound pitch and cadence will quicken and slow with rises and falls in temperature. However, this does not confuse females because their "sound sense" also shifts correspondingly with temperature. Many orthopterans have either fully green or fully brown color forms that aid in camouflage. Wil presented striking photos, life history facts, and clear sound recording with screen-projected sonograms for over 30 of the orthopteran and cicada species in his book. Temperature, in °F, can often be ascertained from the song of the Snowy Tree Cricket (*Oecanthus fultoni*) by counting its chirps over a 13-second period and then adding 40. During mating, many orthopteran species males not only transfer a sperm-filled spermatophore to the female; but they also provide a spermatophylax,

which is a nutrition-filled bubble-shaped secretion that the female eats during mating. Besides their songs, orthopteran species can usually be distinguished by the morphology of paired cerci on their last abdominal segment that serve as sensory organs and copulation aids. Short-winged Meadow Katydids (*Conocephalus brevipennis*) produce a very high-pitched song of around 17 kHz. Conehead Katydids (*Neoconocephalus* spp.) all have a distinct forward-pointing projection (fastigium) on top of their heads. Robust Coneheads (*N. robustus*) make a continuous harsh buzz of incredible volume that is painful to human ears at close range. Its singing chamber often reaches 15° C above ambient temp. The Common Virtuoso Katydid (*Amblycorypha longinicta*) has the most complex of U.S. orthopteran songs. Its ensemble includes a three-part rattling sequence lasting 5-10 seconds that builds into a musical crescendo and suddenly terminates in an accented shuffle. Shieldback Katydids (*Atlanticus* and *Metrioptera* spp.) appear to be heavily armored insects, and they often bite when handled. Most grasshoppers do not possess a stridulatory field. However, the slant-faced grasshoppers (*Gomphocerinae*) do produce sound by rubbing the inner surface of their hind femurs against the edges of their forewings. Band-winged grasshoppers (*Oedipodinae*), make loud snapping or crackling sounds with their wings as they fly, especially during courtship. The sound process is called crepitation, and produces sound when the wing membranes between veins are suddenly popped taut. Male cicadas produce loud buzzing songs using special organs called “tymbals” that rapidly pop within a sound resonating, hollowed-out region located on the first segment of the abdomen. North America has about 155 species of cicadas represented by 14 genera, although most are found in the West. Cicadas are day singers, many showing a preference for a particular daily period. For example, Linnaeus’ 17-year Cicada (*Magicicada septendecim*) mostly sings in the morning whereas the Northern Dusk-singing Cicada (*Tibicen auletes*) usually waits until sunset. Males of cicadas that are periodical congregate in huge singing aggregations, usually high in trees, to which females are drawn. Some entertaining samples of insect sounds may be heard at Wil’s website at:

<http://www.musicofnature.com/songsofinsects/index.html> .

Respectfully submitted,
Richard H. Smith
MES Secretary

Announcements

1. A number of unusual collections or sightings in Maryland during the 2008 season have been compiled and reported by Phil Kean and others, and are listed on the attached page (immediately after this newsletter).

2. Distributing this newsletter by e-mail saves costs of printing and mailing, and allows rapid distribution of information. Members with no current e-mail address will still be sent hard-copies for the foreseeable future. For questions, please contact any person listed at the bottom of the first page. **Also** please provide your current e-mail address. Dues for 1 Oct. 2007 through 30 Sep. 2008 , are **\$10.00/year**. Please send dues & any address or other corrections to:

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2. Regular MES meetings are held the 3rd Friday of each of 6 months each year: Oct., Nov., Feb., Mar., Apr. & May (parallel to UMBC’s academic year). The remaining meetings for the 2009 “MES year” include:

<u>month</u>	<u>date</u>	<u>speaker</u> (if known)	<u>topic</u>
Apr. 09	17 th	Dr. Dick Smith	(See First Page)
May 09	15 th	TBA	members’ “pot-pourri”

3. If you wish take part in the members “pot-pourri” at next month’s meeting, please contact Fred Paras at his e-mail address (on 1st page) to provide your topic and any other needed details.

4. The **Audubon Naturalist Society** (ANS) has lots of nature events & experiences for all ages. They are featuring a special full-day field trip, Sunday, April 19 (rain date is Sunday, 26 April). Fee: \$30 each for ANS members, \$42 each for non-members. The program title is: Spring Butterflies of Unique Southern Maryland Habitats.” This event will be under the joint guidance / leadership of Dr. Dick Smith and Stephanie Mason (both are long time MES and ANS members). For more specifics and to register, you can call their number or go to their website (both listed below) or <http://audubonnaturalist.org/Images2/registrationform.pdf> . The ANS reaches thousands of children each calendar year through special nature-oriented programs for preschool, family, scouts, schools, and camps through their 3 wildlife sanctuaries: Woodend, Rust, & Webb. They offer adult natural history classes, local outings, & national & international travel experiences. They work with various civic, environmental and

conservation groups on issues related to the watershed, rural lands, and more. They offer PDFs of local & regional Nature activities, & you can download the Naturalist News. Some classes, events, & bird walks are free, but most require pre-registration & a fee. For details, or to register, call: (301) 652-9188, ext. 10, or go to their website at: "www.AudubonNaturalist.org".

5. The **Washington Area Butterfly Club** (WABC) is quite active in local & regional nature education, observation & conservation. They are featuring a special program "Spring Bees" free for anyone 8 to adult, on Saturday, 18 April, at Long Branch Nature Center, 625 South Carlin Springs Rd., Arlington, VA. The WABC website features butterfly gardening, wildlife habitats, & youth education. The "Baltimore Checkerspot page", has been contributed to by several MES members, especially Pat Durkin. It includes lots of details & links to butterfly biology, rearing for personal interest or commercial purpose. For more details, go to: <http://users.sitestar.net/butterfly/>, or contact Pat Durkin at: (202) 483-7965, or at: plusultra@aol.com.

6. The **National Zoological Park**, 3001 Connecticut Ave., NW, Washington, DC, currently displays >4,000 species of animals for free. Main attractions include: pandas, reptiles, elephants, big cats, etc.. Many of them can be viewed on "live" web cameras. Their web site also has many articles from current & recent research, w/ related images & lots of "links" to other resources. Interesting sub-pages include the ones that feature "Invertebrates" & "Wildlife Gardening". You may wish to help support these animals by joining the Friends of the National Zoo (FONZ). For more details, go to: www.nationalzoo.si.edu or call: (202) 673-4717.

7. The **Maryland DNR** website this month has news about lots of current state programs including blue crab conservation, canoe tours, nature walks, special focus picnics, and numerous "Earth Day" programs and volunteer opportunities associated with and/or in several state parks and recreational areas. There are many details & links about hunting & fishing, bird watching and related regulations, seasons, & advice for outdoorsmen and campers. For related information, or reservations go to: www.dnr.state.md.us .

8. Warmer weather, like that we are getting now, is usually accompanied by an increased number and variety of biting (blood-sucking) and stinging outdoor critters. Several species of locally common and

sometimes very numerous mosquitoes and ticks (plus a few more kinds). There are many self-helpthings you can do to help reduce the risks of you, your family members or your pests being infected with a serious disease and of suffering lots of nuisance bites. A good website to find information and practical suggestions for preventive measures is the U.S. Centers for Disease Control and Prevention (CDC). Go to their website at: www.cdc.gov then check out such topics as Lyme disease, or West Nile Fever (or WNV), in their alphabetic list of health topics or via a search. They also offer some good images if you are asked to give a talk on such a topic to a community group, club, or school. You may wish to check linked sites, too.

9. Additional websites worth checking include:

- the USDA website, <http://soils.usda.gov/education>
- the National Aquarium (in Balto.), "www.aqua.org"
- the Maryland Science Center, "www.mdsci.org"
- The U.S. Centers for Disease Control and Prevention (CDC) www.cdc.gov (then search by topic)
- The Jug Bay Nature Center, at Jug Bay, Lothian, MD. at: www.jugbay.org, or call (410) 741-9930.

10. There are **many** opportunities to take part in a wide range of "Earth Day" festivities and events in the Baltimore, Washington and central Maryland area. Most of them take place the week-end of 18-19 April. For current details on a very wide range of other topics for central Maryland & DC; like sports, restaurants, special events, & ads, check out the "**What's Up? Annapolis**" magazine. They have a live "harbor cam". For a free subscription mailed to your home (limited to Annapolis & surrounding areas), or for specific info., contact them at: What's Up?, Inc., 929 West St., Suite 208A, Annapolis, MD 21401; by phone: (410) 267-9390; or via their website: www.whatsupmag.com .

11. Current (SocietyYear 2009) MES Officers

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