

Phaëton

The Official Newsletter of the
Maryland Entomological Society

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February 2009
Volume: 29, Number 3

Meeting Announcement

The Maryland Entomological Society's 266th regular meeting will be held **Friday, February 20, 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: Mr. Steve Johnson

Title: "Long days and sunny nights: An 11,000 mile collecting trip into Alaska and western Canada"

Steve Johnson has been collecting and studying Lepidoptera for about 20 years. His interests include collecting all Lepidoptera but focus more on all moth groups including micro moth species. He maintains an extensive collection with over 20,000 specimens representing over 2000 North American species. Additionally he also conducts faunal surveys and compiles species lists for many areas. Other interests include Odonata and Neuroptera and a keen interest in Herpetology, especially snakes. He has also been on the PA Timber Rattlesnake Den Assessment Project for the last 3 years. He is a longtime member of the Lepidopterists Society, and also a member of numerous other societies including the Kentucky and Ohio Lepidopterists, Entomological Society of PA, MD Entomological Society, Newark Entomology and Lancaster Entomology Club.

Steve resides in Pennsylvania but frequently travels across the United States to points throughout the east or west including Alaska, as well as British Columbia and Yukon, and Northwest Territories in Canada. These latter locales were the focus of his recent trip in 2006 where his collecting expectations were exceeded by his success in finding many of the strictly arctic Lepidoptera. These included many species of *Erebia*, *Oeneis*, *Boloria* and *Colias* along with many other high arctic species. His presentation will include landscape and specific biome photography of the numerous and varied sites he visited.

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"
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Fred Paras (410) 374-0425 (Home) "bugandrockman@msn.com"
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Minutes of the November 2008 MES Meeting

The 265th general meeting of the Maryland Entomological Society was held on Friday, Nov. 21, 2008 at UMBC and was begun at 8:48 p.m. Continuing from the Oct. 2008 meeting, a generous assortment of entomological study, equipment, and publication items, cleared from Dr. Platt's former lab at UMBC, were again available for free to MES members in the meeting room. The meeting began with a short business segment in which the October 2008 meeting minutes were read and approved, then the Treasurer's report was read. Society Treasurer Ed Cohen was unable to attend but passed along to the Secretary that he has progressed with signatures of MES officers for the society "Articles of Revival," a form required by the state of Maryland for nonprofit organizations to avoid tax on future society publications. The MES Funds total has leaped from \$701.34 in October to \$2253.34 in November due to a high interest in and sales to non-MES members and other organizations of the latest issue of *The Maryland Entomologist* focusing on Hart-Miller Island insects. We owe our thanks to Journal Editor Gene Scarpulla for organizing this major sale and distribution of our society journal. The meeting continued with the main program summarized below. Members remaining after the meeting, gathered with Dr. Hanson at Dr. Platt's former laboratory and office in the Biological Sciences Building for a free distribution of an additional assortment of large surplus laboratory equipment and entomological study items.

The main presentation for the meeting, entitled: "Chironomidae, the Non-biting Midges: Modest, But Not To Be Underestimated," was presented Dr. Susan E. Gresens, Assoc. Prof., Department of Biological Sciences, Towson University. This large family of small Diptera, with larvae and adults ranging in length from 2 mm. to 1 cm., has approximately 10,000 species worldwide and 2000 in North America. They are an important link in the aquatic food chain and their numbers also provide a ready tool for biomonitoring. Chironomids are mostly univoltine, spending many months as aquatic larvae and only a few days as adults during which most do not feed. Males have plumose antennae with which they detect female wingbeat vibrations; females' antennae are diminutive. Adults often emerge all at the same time and males form huge swarms into which females fly and select mates. Some are winter emerging and freeze resistant (*e.g.*, genus: *Diamasa*), as in MN where internal stream water

temperatures are above freezing, and they mate on snow banks although air temperatures are well below freezing. At least two subfamilies (*Tanypodinae* and *Chironominae*) can develop as larvae on lake bottoms, where oxygen levels are low, because the larvae have hemoglobin, which stores oxygen, in their hemolymph. Larvae of these species are bright red and they are called "bloodworms." Chironomids are an essential element in the field of paleolimnology, a scientific discipline that engages in meticulous analyses of sediment cores to reconstruct the paleoenvironments of inland waters. Densities of Chironomid larvae head capsules combined with carbon dating aid in the reconstruction of temperature profiles during time periods 5 to 10 thousand years in the past. Due to their sheer numbers, Chironomids are essential in converting detritus and algae into a food source for a host of invertebrate and vertebrate predators in aquatic environments. The pupal stage, which ascends to the water surface shortly before adult emergence, becomes a nutrition source for fish, and many fishing flies are constructed to resemble Chironomid pupae and emerging adults. Although the ascent and emergence is often at dusk or at night, fish and insect predators are still able to find and feed upon them. Chironomids survive the predation through concentrated emergences wherein their numbers are so great that predators are only able to consume a small percentage during the emergence period. However, if the abundance of large piscivorous fish is reduced in a lake, as by over-fishing, the abundance of their prey, zooplankton-ivorous fish, should increase, large zooplankton abundance such as midges should decrease, and phytoplankton biomass should decrease. This phenomenon is called a trophic cascade. In the Eel River in Northern California, steelhead trout and roach fish consume fish larvae and predatory insects. These smaller predators prey on Chironomid larvae (mainly *Pseudochironomus richardsoni*) which eat filamentous green algae (dominated by *Cladophora glomerata*). Removal of the piscivorous fish decreases the abundance of Chironomids and promotes blooms of macroalgae in succeeding time periods. Chironomid pupal exuviae float on the water's surface and facilitate bioassessment, which is a major part of Dr. Gresens' research. Many aquatic indicator insect species are missing in degraded aquatic conditions, and it would be difficult to assess water quality were it not for midge species groups that inhabit almost all aquatic environments. Dr. Gresens' research focuses on the

rural to urban water quality gradient and attempts to answer the question of how urbanization affects stream ecosystems. Urban environments sustain increased levels of sewage, metal, and salt contaminants in water. Such stressor conditions actually lead to increased Chironomid diversity, and such diversity is often linked to the human population density. Dr. Gresens has surveyed Chironomids in Baltimore County and Baltimore City streams. Chimney Branch in Soldiers Delight, which has high metal concentrations, actually had more Chironomid species (81 total) than did Baisman Run at Oregon Ridge (75 total), which has a more nominal chemical composition. Metal sensitive species had apparently adapted to the high chromium content at Soldiers Delight. On the other hand, Armistead Creek in Baltimore City, which contains high concentrations of copper, zinc, and cadmium, did have reduced Chironomid species numbers (only 27). As expected, low oxygen tolerant species were able to flourish during summer months when bacteria deplete oxygen levels. Dr. Gresens uses a statistical technique called "canonical correspondence analysis" in her research to isolate rural to urban gradients associated with water chemistry and profiles of Chironomid species. She showed several graphs of her research results identifying such trends. Results show promise that Chironomid species assemblages can be used to identify water quality stressors. A question was raised about the effect of storm water retention basins, where there is high metal and pollutant accumulation, on Chironomids. Larvae of some species can survive in these conditions, but they often suffer deformities.

Respectfully submitted,
Richard H. Smith
MES Secretary

Announcements

1. 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. 2008 through 30 Sep. 2009, are **\$10.00/year**. Please send dues & any address or other corrections to:

Edgar Cohen, Jr., MES Treasurer Phone" (410) 740-0481
5454 Marsh Hawk Way
Columbia, MD 21045 e-mail: edcohenfam@yahoo.com

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 2008 "MES year" include:

<u>month</u>	<u>date</u>	<u>speaker</u> (if known)	<u>topic</u>
Feb. 09	20 th	Steve Johnson	(See First Page)
Mar. 09	20 th	TBA	TBA
Apr. 09	17 th	TBA	TBA
May 09	15 th	TBA	members' "pot-pourri"

3. The **Audubon Naturalist Society** (ANS) offers various nature events & experiences for all ages. They reach >8,000 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 adults natural history classes, local outings, and national and international travel experiences. They work with various civic, environmental and conservation groups on issues related to the watershed, rural lands, and more. Their website includes information and contacts on local & regional nature & conservation issues & their youth education outreach program: "Green Kids". 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".

4. The **Maryland DNR** website this month has news about recent state programs in several parks and recreational areas, including the 12th annual Great Backyard Bird Count, white-tailed deer management efforts and their progress, latest details of the 2008 blue crab harvest, the 39th annual maple syrup "sugaring" demonstration at Cunningham Falls State Park (21-22 Feb.), a Winter Tree ID training class at the McKeldin Area near Marriotsville (21 Feb.), classes on animal signs, and owls. There's are details & links about hunting & fishing regulations, seasons, & advice for outdoorsmen and campers. For more or related information, go to: www.dnr.state.md.us .

5. The **Washington Area Butterfly Club** (WABC) is quite active in local & regional nature education, observation & conservation. The WABC website features butterfly gardening, wildlife habitats, & youth education. An informative subpage: the "Baltimore Checkerspot page", has been contributed to by several MES members, especially Pat Durkin. It includes extensive details & links to butterfly biology, rearing

for personal interest or even for commercial purpose. The next WABC monthly meeting will be at 7:30 P.M., Thursday, Feb. 26., at the Long Branch Nature Center, Arlington, VA. The featured speaker will be Jim Gallion, and his topic will be Butterfly Gardening. It will be free & open to the public. 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**, offers a wide variety of species (4,000+ species of animals) displayed for free. Main attractions include: pandas, reptiles, exotic birds, big cats, & more. Many specimens 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. Ed Cohen recently sent a note to report some new collection records.

a) He had recently collected an adult specimen of *Halyomorpha halys*, the brown marmorated stink bug (Hemiptera: Pentatomidae). It was found at his home, 5454 Marsh Hawk Way, Columbia, MD; “a few days before January 26, 2009”.

b) He also discovered a specimen of *Novelsis aequalis* (Coleoptera: Dermestidae) a rare species which was originally reported, by Dr. John Kingsolver and John Fales, as establishing substantial inroads in the eastern states in recent years. This specimen was found in his home’s guest bathroom sink, Jan., 2009.

c) He also wanted to record a note of the collection of a rare Stonefly, *Acroneuria covelli* (Plecoptera: Perlidae) in Allegany County, MD. This specimen had been collected in 1984, but it apparently had not officially reported until now. It had been identified by Dr. Boris Kondratieff of Colorado State University.

8. The Entomological Society of America (ESA) has expanded their emphasis on youth education and plans to re-introduce a special event (like their former “Bug Fests”) concurrent with their annual national meetings beginning with CY2009. For access to educational resources, go to their website: www.entsoc.org . It has

concise & detailed info. about Entomology, job opportunities news, & resources for students & educators, with facts, text, images & points of contact.

9. Introduced species of chewing lice, *Damalinia cervicola* & *Bovicola tibialis*, are blamed for many deaths in herds of black tailed & mule deer in Yakima & Kittitas Co.s, western Washington & Oregon. The 2 louse species are normally found on Sika & fallow deer (respectively); both imported into that area as farm animals in the 1990s. Both species are parthenogenetic & have become established on wild black tailed & mule deer. They develop large numbers on their new hosts, which develop hair loss syndrome (HLS) & excessive rubbing behavior (increasing hair loss & skin damage). The increased deaths of native deer may be due to cold stress, & increased susceptibility to diseases (“DailyRecordNews.com”, Feb. 22, 2009).

12. 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.

13. For current details on a very wide range of 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 .

14. Current (SocietyYear 2009) MES Officers

President	Fred Paras
Vice-President	Phil Kean
Secretary	Dick Smith
Treasurer	Ed Cohen
Historian	Bob Bryant
Faculty Sponsor	Bob Platt
Newsletter Editor (‘09)	Harold Harlan