Phaëton

The Official Newsletter of the
Maryland Entomological Society

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Meeting Announcement

The **M**aryland **E**ntomological **S**ociety's **258th** regular meeting will be held **Friday, October 19**, 2007; 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.

Note: These talks were postponed from the May 2007 regular MES meeting

Speaker 1: Dr. Edgar A. Cohen, Jr.

Title: **"A Road Trip to Florida: A Selection of Plants from Georgia, Florida, and the Carolinas, with some Lepidoptera from Florida".**

Dr Cohen will show images of plants from South Carolina, Georgia, and Florida, focusing on the showy individuals and the ones that serve as butterfly nectar sources. There will also be a discussion on the McGuire Center at the University of Florida at Gainesville, including moth exhibits, a general insect exhibit, and the Butterfly Rainforest, together with a few showy plants in the Butterfly House. Finally some photos from Cypress Gardens in Winter Haven, FL, Mounts Botanic Garden in West Palm Beach, and some butterflies from Plantation and Parkland, FL.

Speaker 2: Mr. Fred Paras – Professor, Baltimore City Comm. College.

Title: Coastal, lowland and mountain jungles: A trip through some of Panama's National Parks and wilderness areas.

Panama is home to some spectacular national parks and wilderness areas. This presentation will highlight locations such as La Amistad National Park in the northwest, which is shared with Costa Rica, and coastal jungles of Bastimentos Island Marine National Park in the Bocas del Toro archipelago. Additionally, a boat run through the newly founded coastal manatee sanctuary San San River Humid Forest and brief look at agriculture practices in vicinity of Volcan Baru. The presentation concludes with a close look at the spectacular pristine mountain jungles near Santa Fe, in the central part of the country.

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 May 2007 MES Meeting

The 257th general meeting of the Maryland Entomological Society was held on Friday, May 18, 2007 at UMBC and was begun at 8:40 p.m. The meeting opened with a welcome by Fred Paras and went immediately into the main program presentation, summarized below. This was followed by some fine refreshments and discussions. Phil Kean had brought to the meeting some insect collecting materials and especially several entomological books and publications from the library holdings of deceased charter member John Fales that were kindly donated to the Society by his wife Betty Fales. Due to the large number of publications, a decision was made to distribute the materials to attending members by a free rotating lottery, which proceeded efficiently at this point in the meeting. This was followed by a brief business meeting in which we agreed to send out in early June a more formal announcement for the June 16 Hart-Miller Island field trip and to phase in electronic distribution of the Society newsletter in the fall. The exact itinerary for the field trip will be decided based on the response from members after receiving the announcement. A sum of $150 will also be set aside for the MES's contribution to the annual Entomological Society of Washington banquet in June. Nominations for the Society offices were brought forward next and voted on by the attending members. As in recent years, these positions were staffed by continuations of the present officeholders, except for the office of Society Treasurer which was relinquished by Jay Sinha for the coming year. Ed Cohen, who had served as treasurer several years ago, with assistance from his wife, Joy, was elected to be the new treasurer. Dr. Platt will continue as faculty sponsor, with assistance from Dr. Hanson when Dr. Platt is away. We were reminded that the Penn State Insect Fair, sponsored by their Frost Entomological Museum, will be held again in late September.

The main program entitled "Amazing Termites of the Peruvian Amazon," was presented by Dr. David A. Nickle, Research Entomologist and expert on Orthoptera (grasshoppers, crickets, and katydids), Dictyoptera (cockroaches, mantids, and termites), and Thysanoptera (thrips) at the USDA Systematic Entomology Laboratory in Beltsville, MD. Dr. Nickle has studied the termites of northern Peru (Loreto Province frontier area) since 1986. Three sites near Iquitos were surveyed; these were the Explorana Inn, Explorana Lodge, and Explorana Camp areas. Many colorful katydid and frog species abound in these areas. Four hundred species of termites are also known from these areas, they occupy the ground everywhere, and each is distinguished by a characteristic nest and external mud-tubes. Termite tunnels and passageways are easy to break open, but the mounds often require heavy tools for penetration. In the colonies, some termite queens live 15-20 years (6-7 years average) and produce 2-3 thousand eggs per day, but soldiers and workers live only about a year. Soldier termites as well as larval young cannot feed themselves, and so, are fed by worker termites. Termites are a rich source of protein for predators (including humans) - ants and mammalian anteaters are the main termite predators. There are three main termite families found in Peru: *Kalotermitidae* or dry wood termites, *Rhinotermitidae* or subterranean termites, and *Termitidae* or grazing (dry grass-consuming) terites. Certain species of *Rhinotermitidae* have large toothed mandibles and a plug-like hole in the head called the fontenelle from which a poisonous secretion is emitted for defense. Soldiers block tunnels with their head outward so ants can't crawl into the breeding areas. The poison, which is worked into a bite by the soldiers' mandibles, is highly poisonous even to mammals, but a quantity sufficient to be deadly is usually not emitted. Some species instead use a paintbrush-like appendage on the mandibles and a head vibration motion to paint poison on an enemy predator. Among the *Termitidae*, there are three major defense mechanism used by soldiers against enemies, depending on the species; these are snapping, biting, and squirting of a glue-like or repellant substance. The substance can squirt 4"-5" from a tiny soldier. The substance can bind up an enemy sufficiently so that several soldiers can roll the enemy out of their nest. The soldiers of snapping species possess asymmetrical, distorted mandibles that the soldier will lock shut and then snap open. This action will knock enemies away and discourage them from entering nest openings. Some *Termitidae* have ice-pick-shaped mandibles that facilitate injection of painful poisons, and these are enough to deter even vertebrate predators. Dr. Nickle emphasized that the Amazonian rainforests of Peru are one of the most termite-diverse areas in the world. Species of *Termitidae* increase dramatically as one enters tropical South America although there are fewer species of *Hodotermitidae* or rotten-wood termites than are found

in North America. Rainforest termites build large muddy nests bound together with uric acid. Moths often perch on these nests to imbibe the uric acid which is valuable for nourishing their developing eggs. There are 75-80 genera of rainforest termites that tend to partition the rainforest with their niches. In the limbs and canopy there are about 40 species of carton nest-builders. Many of these squirt glue for defense. Farther down are those that nest in tree trunks; many of these snap mandibles for defense. On the forest floor surface are those that nest in dry wood, and finally there are those that nest in the soil (subterranean).

Dr. Nickle next discussed several issues involving rainforest ecology, conservation, and habitat loss. Termite species are very representative of fauna that fully pervade the rainforest system, and their responses to habitat disturbance and loss indicate effects on other faunal components. Even partial removal of rain-forests exposes reproductive swarms to sunlight and heat; they may die in a few days, and species diversity is lost. Only carton nest-builders remain after canopy destruction, and many become pest species. Also, dry-grass-eating species invade cleared areas and compete with domestic cattle for resources. Severe deforestation can harden exposed soil, making it impenetrable to many invertebrates. Humivorous termites, which extract nutrition from organic material in the soil, can undergo local extinction in cleared areas. Some conservationists entertain the notion of reestablishing rainforests where destruction has occurred. However, there are severe obstacles to this effort. In many areas there is no information on original rainforest vegetative composition. Certain important tree species are widely separated naturally, and their earlier presence may be unknown. Without a canopy of surrounding rainforest, natural succession may be reduced or not occur at all. With the loss of humivorous species, the natural recycling of organic nutrients will not occur, and the original ecosystem will not reestablish. Lastly, even if several vegetative components are restored, vertebrate food sources, like katydid species, are very slow to migrate from surrounding territories and reoccupy niches. Some 1995 statistics on rainforest loss (now probably outdated) indicated that 40% had already been lost, and 76,000 sq. km. more are lost every year. This rate could lead to total loss of the world's tropical rainforests by the year 2135. Some discussion ensued on perceptions of termite destruction. Termites feed mainly on dead plant material and cause little damage to living material. Formosan termites (*Coptotermes formosanus*) are considered highly destructive to timber because they build nests inside tree trunks. However, such termite occupation does not actually kill a tree. The *Holotermitidae* or damp-wood termites contain the largest species and damage telephone poles and fence posts from Arizona to British Columbia. Grazing termites may pose a problem in areas such as in Africa and in the Australian Outback, where they compete with cattle for food. Many of these species produce no toxins and are a ready source of protein for native peoples, so a balance with man is possible.

Respectfully submitted,
Richard H. Smith
MES Secretary

Announcements

1. At the regular MES meeting of May 18, 2007, it was decided by majority vote that the *Phaëton* (this newsletter) would be converted to a digital format (*i.e.*, electronic ONLY) beginning in Oct., 2007. The main stated reasons were to save the MES printing & mailing costs, and to allow more immediate transfer of the information in a form compatible with most members' usual communicating practices. Of course, those members who have no current e-mail will still be mailed hard-copies for the foreseeable future. If you have difficulty or concerns about this matter, you can give your input by directly contacting any of the persons listed at the bottom of the front page of this newsletter, ***AND*** please provide your preferred current e-mail address. MES annual dues cover this current 'fiscal year' of 1 Oct. 2007 ***through*** 30 Sep. 2008. Please note: annual dues are now **$10.00 per year**. Send dues & any address corrections to:

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

2. Gene Scarpulla has compiled a list of insect species collected on Hart-Miller Island during the field trip of June 16, 2007. Six MES members took part in this effort. The species list is included here as the last page of this newsletter.

3. Congratulations to Fred and Linda on the birth of their daughter, Evie Marie (7 lbs. 21 inches long), on Thursday, August 2nd, 2007.

4. 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:

month	date	speaker (if known)	topic
Oct. 07	19th	Ed Cohen & Fred Paras	members' pot-pourri (See front page)
Nov. 07	16th	John LaPolla	Ants / TBA
Jan. 08	18th	TBA	TBA
Feb. 08	15th	TBA	TBA
Mar. 08	14th	TBA	TBA
Apr. 08	18th	TBA	TBA
May 08	16th	TBA	members' "pot-pourri"

5. The **Washington Area Butterfly Club** (WABC) is very active in locally & regional nature education, butterfly observation & conservation. Their web site always has lots of current information on Lepidoptera, articles, plant sales, & "links" to other regional nature resources. For more details, directions to events go to: http://users.sitestar.net/butterfly/, or contact Pat Durkin at: (202) 483-7965 or at: "plusultra@aol.com".

6. The **Audubon Naturalist Society** (ANS) offers a wide variety of nature events & experiences for all ages. Some of their bird walks, events, & lectures are free, but most require a fee & pre-registration. For details, or to register, call (301) 652-9188 ext. 10, or go to: www.AudubonNaturalist.org.

7. The **National Aquarium**, 501 Pratt St., Baltimore, **MD** (at the Inner Harbor) has a selection of youth programs, teacher assistance resources, and educational programs for all ages. They are currently featuring marine & other aquatic mammals. You can follow a gray seal, Cookie, rehabilitated & released in May, 2007. You can get behind the scenes tours of other marine animals, their care & feeding. Some programs will be repeated periodically. For operating hours, prices, or more details; or to register, call: 410-576-3800, or go to: "http://www.aqua.org".

8. The **National Zoological Park**, 3001 Connecticut Ave., NW, Washington, **DC**, offers a wide range of species (roughly 4,500 animals) in free displays, from pandas, to big cats, to tropical birds, some are also on "live" web cameras. The zoo's web site also has many interesting articles from current & recent research, with related images & many "links" to other resources. You may wish to help support these animals by joining the Friends of the National Zoo (FONZ). For more, go to: www.nationalzoo.si.edu or call: (202) 673-4717.

9. The **Maryland Science Center**, 601 Light St., Baltimore, **MD**, (on the Inner Harbor) has many topical, science displays for all ages; educational programs, & an IMAX theater. They have "hands-on," interactive exhibits. For current details, times & prices, call: (410) 685-5225, or go to: www.mdsci.org .

10. The **Maryland Zoo** in Baltimore's, Druid Hills Park is usually open daily 10 A.M.- 4:30 P.M. (last admission 3:30 P.M.). Parking is free, & hours may vary seasonally. Children 2 years or younger are free. For more details & prices, call: (410) 366-5466.

11. The **Carrie Murray Nature Center**, at 1901 Ridgetop Rd., Baltimore, MD (within Leakin Park) has various Nature-based learning, craft events, & live displays (including many domestic & exotic species). For more on seasonal special events, related fees; or to volunteer your time & talents, call: (410) 396-0435.

12. Some additional contact web sites & pone numbers for nature events include:

a. Patuxent Wildlife Research Refuge's National Visitors' Center, for details, call: (301) 497-5887, or go to: www.fws.gov/northeast/patuxent/vcdefault.html .

b. The "other" national aquarium (in Washington, DC); Rm. B-077 of the Commerce Bldg., @14th St. & Constitution Ave., NW, Washington, **DC** 20230, call: 202-482-2825, or e-mail: info@nationalaquarium.com.

c. The **USDA web site** is: www.usda.gov , & offers a wide range of topics and education aids.

d. Maryland's DNR web site: www.dnr.state.md.us , has many monthly features, info., & contact points.

e. For current details on a wide range of topics for central Maryland & DC; like sports, restaurants, special events, & ads, call: 410-267-9390, or go to: http://www.whatsupmag.com. They even have a live "harbor cam".

Current (2007) MES Officers

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