



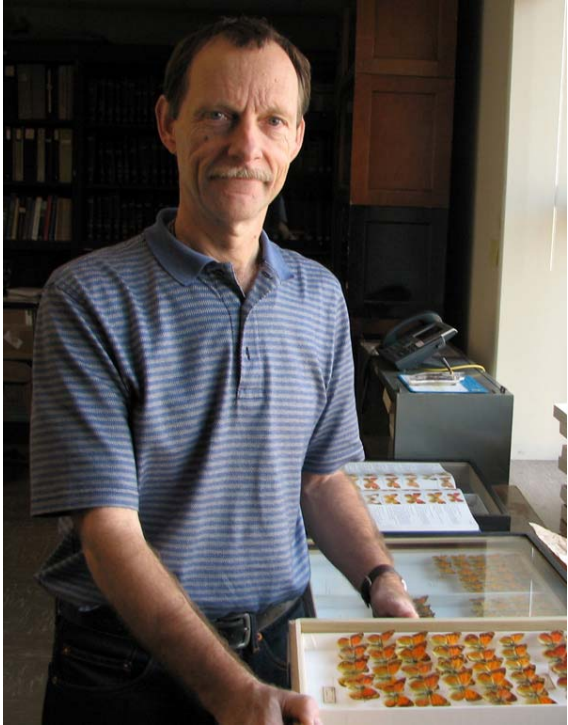
Smithsonian
National Museum of Natural History



EntNews

The Newsletter of the Department of Entomology

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Brian Harris



Eugenia Okonski



Gary Ouellette

Recently hired staff to refill position vacancies:

Brian Harris (Smithsonian), Lepidoptera and Hymenoptera

Eugenia Okonski (Smithsonian), Hymenoptera

Gary Ouellette (USDA), Diptera

ANNOUNCEMENTS:

Because of Hurricane Wilma damage in Florida, the **Entomological Society of America** meetings have been rescheduled for December 15-18. Thus, **Terry Erwin** has changed his presentation as the 2005 Founder's Memorial Award Speaker to meet that time-frame.

The 1095th regular meeting of the **Entomological Society of Washington** will convene on November 03 at 7:00 pm in the Cathy Kerby Seminar Room at the National Museum of Natural History. Gary Hevel will present the topic "Backyard Entomology," discussing his entomological survey at his residence in Silver Spring, Maryland.

The Lepidopterists have been informed that their **NSF Tree of Life proposal**, "Phylogeny of Lepidoptera: A genomics-inspired, community collaboration," has been approved for 5 years at a level of \$2,858,395. The principal investigators of the project are **Charles Mitter**, Jerry Regier, Mike Cummings, Cynthia Parr (University of Maryland), Susan Weller (University of Minnesota), and **Don Davis** (Smithsonian Institution). The focus of the research is to establish a deep level phylogeny for the Lepidoptera by sequencing 24 nuclear genes (~18kb) for multiple exemplars in all 126 families and nearly all subfamilies. A network of over 20 morphologists/group specialists ("Twig Leaders") will participate in the molecular "backbone" study by helping to guide taxon sampling and provide material. The Twig Leaders will jointly produce an illustrated glossary, with standardized terminology, of putatively homologous characters that are potentially informative about family and superfamily relationships. Lepidopterists **John Brown** and **Alma Solis** of the Systematic Entomology Laboratory, USDA, will be active collaborators on the superfamilies Tortricoidea and Pyraloidea, respectively. In addition, insect paleontologist **Conrad Labandeira** of the Smithsonian Institution will be instrumental in producing a web-documented review of the lepidopteran fossil record.

GENERAL NEWS:

A Neotropical Cerambycidae Systematics and

Faunistics Symposium is scheduled for November 10, 1:00-4:00 pm, in the Kerby Room (CE-340). Speakers include longhorn beetle researchers from California, Florida, Texas, Maryland, and Brazil. The symposium has been organized by Steve Lingafelter of the Systematic Entomology Lab, and will be the largest concentration of cerambycid workers ever assembled in one place.

PUBLICATIONS BY STAFF:

Research papers by members of the combined entomological staff who are retired will be listed, and those will be preceded by a double asterisk.

Agnarsson, I. & Kuntner, M. 2005. Madagascar: an unexpected hotspot of social *Anelosimus* spider diversity (Araneae: Theridiidae). *Syst. Entomol.* 30: 575-592.

--abstract—The spider genus *Anelosimus* Simon, 1891 (Theridiidae) currently contains over forty described species, found worldwide in tropical to warm temperate areas. American *Anelosimus* are all social, a rare trait among spiders, but social behaviour has not been reported for *Anelosimus* species elsewhere. Old World *Anelosimus* are poorly known, both behaviourally and taxonomically, and no *Anelosimus* species have yet been described from sub-Saharan Africa or Madagascar. Based on a preliminary phylogenetic analysis we predicted sociality in an undescribed Madagascar species because it grouped among social New World species. An expedition to Madagascar then found no less than five undescribed periodic-social (subsocial) *Anelosimus* species in Perinet reserve. A sixth species for the same locality is known from museum specimens and the *Anelosimus* diversity of Perinet is comparable with the most diverse single locality in the Americas. Subsocial species play a key role in understanding the evolution of permanent sociality (quasisociality). This increased pool of available subsocial study species demonstrates the utility of phylogenies as predictors of traits in species thus far unstudied. Here, *A. andasibe* new species, *A. may* Agnarsson new species, *A. nazariani* new species, *A. sallee* new species, *A. salut* new species, and *A. vondrona* new species are described. *Anelosimus locketi* Roberts, 1977 from Aldabra Atoll is a junior synonym of

A. decaryi (Fage, 1930) comb. new from Madagascar. Preliminary data on the behaviour of the new species are given, indicating a level of sociality similar to the American *A. 'arizona'*. The phylogenetic analysis supports the monophyly of the Madagascar group and places it as sister to a clade containing the *eximius* lineage from the Americas, and a pair of undescribed Tanzanian species.

Burns, J.M. & Janzen, D.H. 2005. What's in a name? Lepidoptera: Hesperiiidae: Pyrginae: *Telemiades* Hubner 1819 [*Pyrdalus* Mabilles 1903]: new combinations *Telemiades corbulo* (Stoll) and *Telemiades oiclus* (Mabilles)--and more. Proc. Entomol. Soc. Wash. 107(4): 770-781.

--**abstract**—Both the Central American skipper butterfly *Achylodes oiclus* Mabilles and the South American *Pyrdalus corbulo* (Stoll) belong to *Telemiades*. *Pyrdalus* becomes a junior synonym of

Telemiades. *Pyrdalus corbulo* *cora* Evans, which is really a species (not a subspecies), is a new synonym of *Telemiades oiclus*, new combination. Though differing sharply in wingshape and color pattern, *T. oiclus* and *Telemiades corbulo*, new combination, share a distinctive male secondary sex character and are, in both sexes, genitally similar to each other and to *T. nicomedes* (Moschler). Grown caterpillars of *T. oiclus* and *T. nicomedes* resemble each other (and suggest slugs). DNA barcoding further supports the relationship of these species. With its brown-forewing/brown-and-yellow-hindwing adult color pattern, *T. oiclus* superficially resembles 13 other species of skippers reared in the Area de Conservacion Guanacaste (ACG) of northwestern Costa Rica. Of these presumably mimetic species, one is raised from reduction to subspecific rank, and two are raised from synonymy, to gain reinstated status: *T. gallius* (Mabilles), *T. chrysorrhoea* (Godman and Salvin), and *Eracon lachesis* (Dyar). The pupa of *T. oiclus* shares distinctive features with the pupae of other species of *Telemiades*. All eight species of *Telemiades* reared in the ACG feed only on leaves of plants in the family Fabaceae. Six eat various species of *Inga* and, in a relatively few cases, species in three other mimosoid genera, whereas *T. oiclus* and *T. nicomedes* each use two species in one papilionid genus—*Dioclea* and *Machaerium*, respectively.

Debboun, M., T. J. Green, **L.M. Rueda** and R.D. Hall. 2005. Vector potential of **Aedes triseriatus** (Diptera:

Culicidae) for canine heartworm, **Dirofilaria immitis** (Spirurida: Filariidae) in Boone County, Central Missouri, USA. J. Am. Mosq. Control Assn. 21: 274-278.

Duarte, M., **Robbins, R.K.**, & Mielke, O.H. 2005. Immature stages of *Calycopis caulonia* (Hewitson, 1877)(Lepidoptera, Lycaenidae, Theclinae, Eumaeini), with notes on rearing detritivorous hairstreaks on artificial diet. Zootaxa 1063: 1-31.

--**abstract**—Details of leg, larval, and pupal morphology are described and illustrated for *Calycopis caulonia* (Hewitson). In particular, larval chaetotaxy is documented for the first time in *Calycopis*. Lab methods for inducing wild-caught *Calycopis* females to lay eggs and for rearing larvae on artificial diet are reported. These methods may be useful in several ways in resolving the basic taxonomy of *Calycopis*. Evidence concerning detritivory and myrmecophily in *C. caulonia* is discussed.

Glassberg, J. & **R.K. Robbins**. 2005. Café con leche in a Mexican forest: a rare hairstreak makes a guest appearance in Mexico. Amer. Butterflies 13:47.

Hall, J.P.W. & Willmott, K.R. 2005. A new species of *Paiwarria* (Lepidoptera: Lycaenidae: Eumaeini) from western Ecuador. Proc. Entomol. Soc. Wash. 107(4): 960-967.

--**abstract**—A new eumaeine lycaenid species, *Paiwarria chuchuvia*, new species, is described and illustrated from wet premontane forest in the western Ecuadorian Andes. Its sister species, *Paiwarria episcopalis* (Fassl), appears to be distributed allopatrically in the central and eastern Andes. The generic placement of both species is discussed.

Henry, T.J., Covell, Jr., C.V., & Wheeler, Jr., A.G. 2005. An annotated list of the plant bugs, or Miridae (Hemiptera: Heteroptera), of Kentucky. J. New York Entomol. Soc. 113(1-2): 24-76.

--**abstract**—A list of 202 species of Miridae, or plant bugs, of Kentucky is presented, based on study of more than 4,000 specimens from the University of Kentucky and University of Louisville collections and fieldwork conducted by the authors, supplemented by a review of the literature. One-hundred seventy-six species are newly recorded from the state; 26 species previously were known in Kentucky based on the most recent North American Heteroptera catalog and a few other literature

sources. The Miridae in this list are arranged alphabetically by subfamily, tribe, genus, and species. Distribution, dates, host plants, depository, and number of specimens examined are provided for each species. When a Kentucky host was not recorded, literature documenting known hosts is given, along with selected papers providing biological information.

Jaichapor, B., A. Kengluetcha, P. Rongnoparut, L.M.

Rueda, J. W. Jones and R. Sithiprasna. 2005.

Morphological variations of *Anopheles minimus* A in Tak Province, Thailand. Southeast J. Tropical Medicine and Public Health 36: 609-615.

Janzen, D.H., Hajibabaei, M., Burns, J.M., Hallwachs, W., Remigio, E. & Hebert, P.D.N. 2005. Wedding biodiversity inventory of a large and complex Lepidoptera fauna with DNA barcoding. Phil. Trans. R. Soc. B 36: 1835-1845.

--**abstract**—By facilitating bioliteracy, DNA barcoding has the potential to improve the way the world relates to wild biodiversity. Here we describe the early stages of the use of *cox1* barcoding to supplement and strengthen the taxonomic platform underpinning the inventory of thousands of sympatric species of caterpillars in tropical dry forest, cloud forest and rainforest in northwestern Costa Rica. The results show that barcoding biologically complex biota unambiguously distinguishes among 97% of more than 1000 species of reared Lepidoptera. Those few species whose barcodes overlap are closely related and not confused with other species. Barcoding also has revealed a substantial number of cryptic species among morphologically defined species, associated sexes, and reinforced identification of species that are difficult to distinguish morphologically. For barcoding to achieve its full potential, (i) ability to rapidly and cheaply barcode older museum specimens is urgent, (ii) museums need to address the opportunity and responsibility for housing large numbers of barcode voucher specimens, (iii) substantial resources need be mustered to support the taxonomic side of the partnership with barcoding, and (v) hand-held field-friendly barcoder must emerge as a mutualism with the taxosphere and the barcoding initiative, in a manner such that its use generates a resource base for the taxonomic process as well as a tool for the user.

Konstantinov, A.S. & Sprecher-Uebersax, E. 2005. Genus *Aphthona* Chevrolat in Nepal (Coleoptera, Chrysomelidae). Mitt. Der Schw. Entomol. Gesells. 78: 173-219.

--**abstract**—Twenty six species of *Aphthona* from Nepal are treated and illustrated. Six species are described as new: *A. dhruvi* (Lantang National Park), *A. dhunche* (Lantang National Park), *A. lantangi* (Lantang National Park), *A. mariki* (Terai, env. of Narayangadh), *A. mude* (env. of Jiri, Mude Pass), and *A. phalchoki* (env. of Kathmandu, Phalchoki mountains). Male genitalia of *A. archeri* Bryant, 1941 and *A. mimica* Medvedev, 1971 and female genitalia of *A. nepalensis* Medvedev, 1984 are illustrated for the first time, based on a recently discovered material. A key for adults, geographical distribution, and host plant data are provided. *Aphthonaria* Medvedev, 1990 is synonymized with *Aphthona* Chevrolat, 1836. *Aphthona almorensis* Konstantinov and Lingafelter, 2002 is synonymized with *A. dobangensis* Kimoto, 2001. Based on the study of a recently available holotype, the status of *Aphthona mimica* Medvedev, 1997 as a valid species is restored. Distributional maps and biogeographic considerations are presented.

Mawdsley, J.R. 2005. Additional historic records of *Cicindela dorsalis* Say and *Cicindela puritana* Horn (Coleoptera: Carabidae: Cicindelini) from the Chesapeake Bay region, USA. Proc. Entomol. Soc. Wash. 107(4): 808-811.

--**abstract**—Previously unpublished historic records are presented for two tiger beetle taxa of conservation concern from the Chesapeake Bay region, *Cicindela dorsalis* Say and *C. puritana* Horn. *Cicindela dorsalis dorsalis* was encountered regularly at Chesapeake Bay sites by collectors during the 1940s and 1950s, when other populations of this subspecies were experiencing a severe decline. The historic presence of *C. dorsalis media* LeConte in the southern Chesapeake Bay is documented by specimens collected in 1882. *Cicindela puritana* has been collected regularly at sites in Calvert County, Maryland, since 1911, sometimes in large numbers. Both *C. d. dorsalis* and *C. puritana* are currently listed as "Threatened" under the U.S. Endangered Species Act.

Mawdsley, J.R. 2005. book review : *A Field Guide and*

Identification Manual for Florida and Eastern U.S. Tiger Beetles, by Paul M. Choate, Jr. Proc. Entomol. Soc. Wash. 107(4): 980-981.

Razowski, J. & J.W. Brown. 2005. Review of *Oregocerata* Razowski (Lepidoptera: Tortricidae: Euliini) with descriptions of four new species. Proc. Entomol. Soc. Wash. 107(4): 903-913.

--abstract—*Oregocerata* is a poorly known genus restricted to the Andes and its associated ranges in northwestern South America (i.e., Colombia, Venezuela, Ecuador, Bolivia) usually above 2000 m. Specimens are exceedingly rare in collections; most species are known only from the holotype male. We describe and illustrate four new species: *O. triangulana* (TL: Colombia), *O. caucana* (TL: Colombia), *O. quadrifurcata* (TL: Colombia), and *O. submontana* (TL: Venezuela); and we propose a new combination, *Oregocerata chrysodetis* (Meyrick). As currently defined the genus includes 9 species. It is assigned to Euliini on the basis of the possession of a characteristic hairpencil on the prothoracic leg.

Rueda, L.M. 2005. Two new species of Anopheles (Anopheles) Hyrcanus Group (Diptera: Culicidae) from the Republic of South Korea. Zootaxa 941: 1-26.

Smith, D.R. 2005. Review of the Aulacidae (Hymenoptera) of Chile and adjacent Argentina. Proc. Entomol. Soc. Wash. 107(4): 820-834.

--abstract—Five species of Aulacidae occur in Chile: *Aulacus braoniformis* (Kieffer), *A. krahmeri* Elgueta and Lanfranco, *A. brevis*, new species, *Pristaulacus capitalis* (Schletterer), and *P. rubriventer* (Philippi). Two of these, *A. krahmeri* and *A. brevis*, occur in adjacent Argentina. *Aulacus brevis* also is recorded from the Juan Fernandez Islands. A key to species is presented and diagnoses and new distribution records are given. Hosts are woodboring beetles of the family Cerambycidae.

Smith, D.R. & Schiff, N.M. 2005. A new western Nearctic species of *Calameuta* Konow (Hymenoptera: Cephidae). Proc. Entomol. Soc. Wash. 107(4): 864-868.

--abstract—*Calameuta middlekauffi*, new species, is described from southern Oregon and California. It is the second species of *Calameuta* in North America and is differentiated from *C. clavata* (Norton) by head shape and coloration. Illustrations, descriptions, and a key are given to separate the two species. The food plant is unknown,

but Palearctic species of *Calameuta* are known to feed in grass stems.

VISITORS:

John Asher from the American Museum of Natural History, New York City, visited Ted Schultz and the Bee Collection October 20-23.

Danilo Brenes from the ALAS Project, La Selva Biological Station, Costa Rica, visited Don Davis and the Lepidoptera Collection, October 21 through November 07.

Matthew Cock from CABI, Delemont, Switzerland visited research staff and the Lepidoptera Collection October 19-22 for his research on Lepidoptera from Trinidad.

Matthew Cristofaro from Biotechnology and Biological Control Agency, Rome, Italy, visited Alex Konstantinov and the Chrysomelidae Collection October 31 through November 07.

Sam Droege from USGS in Laurel, Maryland visited the Bee Collection on October 22.

Grant Gentry from Tulane University in New Orleans visited Bob Robbins and the Lepidoptera Collection to examine Ecuadorian butterflies, November 2-3.

Ron Hodges from Oregon visited the Lepidoptera Collection and Don Davis, October 6-7.

Paul Marsh from Newton, Kansas, visited David Smith and the Braconidae Collection October 24-27.

Kelly McCabe, a Tulane University School of Public Health student, will spend the next couple of months at WRBU as part of the SI's offer of a research environment while Tulane gets back in business after hurricane Katrina.

Eric Metzler from Ohio visited the Lepidoptera Collection, October 4-7.

Jose Montero from INBio, Santo Domingo, Costa Rica began a visit with Don Davis and the Lasiocampidae (

Lepidoptera) Collection on October 28, and will conduct research through December 01.

David Wagner from the University of Connecticut visited Don Davis and the Lepidoptera Collection for research consultation, October 6-8.

The following visitors have come to the Neotropical Cerambycidae Systematics and Faunistics Symposium, and are currently visiting from November 5 through November 10:

Frank Hovore of Hovore Biological Consulting, Santa Clara, California.

Jose Mermudes from Museu Nacional, Rio de Janeiro, Brazil.

Marcela Monne from Museu Nacional, Rio de Janeiro, Brazil.

Miguel Monne from Museu Nacional, Rio de Janeiro, Brazil.

Gino Nearns from the University of Florida at Gainesville.

Ian P. Swift from Placerita Canyon Nature Center, Newhall, California.

Francesco Vitali, non-affiliated, from Genoa, Italy.

James E. Wappes, non-affiliated, San Antonio, Texas.

TRAVEL BY STAFF:

Don and Mignon Davis recently travelled to Lawrence, Kansas to help move their son Steve to the University of Kansas where he will be pursuing a PhD on weevil systematics under Steve Ashe and Bob Anderson. For the past 3 summers Steve Davis has pursued an honors degree at the University of Maryland and in our department on a Study of the subfamily Cossulinae (Lepidoptera) under the guidance of Drs. Patricia Gentili and Charles Mitter. His research was supported by grants from the Howard Hughes Foundation. This May Steve graduated with honors (and Phi Beta Kappa) from the University of Maryland. While at Lawrence, Don was able

to meet Steve Ashe and visit Charles Michener, who was chairman of the department when Don attended the University there. Don and Mignon are happy to report that Charles is as active as ever.

Pollie Rueda traveled to China, July 23-August 21, 2005: He collected mosquitoes from Jiangsu, Yunnan, Sichuan and Guizhou Provinces, and visited Chinese Academy of Sciences insect museums in Beijing, and Second Military Medical University mosquito laboratory in Shanghai.

Pollie Rueda traveled to Brussels/Mechelen, Belgium, October 12-16, as an invited participant to the Global Assessment of Aquatic Biodiversity Conference/Workshop, sponsored by the Royal Belgian Institute of Natural Sciences.

Warren Steiner attended the Second International Symposium on Tenebrionid Beetles, October 20-22, held in Lyon, France, and presented a talk entitled "Patterns of Distribution and Endemism in Bahamian Tenebrionidae (Coleoptera)." The event was organized and generously hosted by Harold Labrique and the staff of the Lyon Museum. Presentations and a luncheon were held at the Hotel du Department (Rhône) on October 20; tours of the collections of the Lyon Museum were on the following days, with examinations of specimens. The Lyon Museum has many historically important insect collections, kept as separate units by donor in their original boxes.

Gary Hevel and **Warren Steiner** will travel November 13-16 to Quito, Ecuador to package and ship thousands of vials of specimens that were previously collected by Terry Erwin in canopy fogging efforts.

was an invited speaker at a workshop/ conference in Brussels, "Global Assessment of Animal Biodiversity in Freshwaters", October 13-16.

Rick Wilkerson and **Des Foley** will travel to London for a mosquito barcode of life organizational meeting, November 20-21.