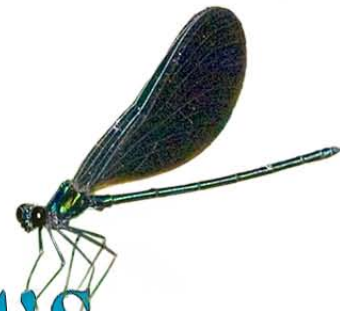




Smithsonian
National Museum of Natural History



EntNews

The Newsletter of the Department of Entomology

Vol. 24, no. 8/9, August/September 2009



Hollis (Holly) Barton Williams
1951-2009

On the cover:

Sadly, the Department of Entomology has lost another member from its ranks. Holly Williams, our dear colleague, died on August 23 after a courageous battle with non-Hodgkin's Lymphoma and pancreatic cancer. From the beginning of her time (35 years) with us at the Smithsonian, she was recognized as an exceptional person, someone who was always one of the best friends anyone could have, and as a perpetually optimistic soul. Her interests were wide, and all who knew her realized that she was always in touch with the daily news. Indeed, she always seemed to have a copy of the most recent Washington Post nearby. Energetic and athletic, she was often seen riding her bicycle to work, and was a tireless volunteer, serving with such organizations as the League of Women Voters and the Church of Jesus Christ of Latter-day Saints. Holly enjoyed travel, and joined Paul Spangler and Bill Rowe on a trip to Ecuador for a survey of insects many years ago. She also independently travelled to Iceland, and brought back insect specimens for the Smithsonian collections. She was one of the most pleasant and friendly persons ever to grace the halls of the Smithsonian Institution, and she will be painfully missed by all who were lucky enough to know her.

GENERAL NEWS:

The 1129th regular meeting of the **Entomological Society of Washington** convened on October 08 in the Cathy Kerby Seminar Room of the Natural History Museum of the Smithsonian Institution. The speaker, **John Stoffolano, Jr.**, from the University of Massachusetts, discussed "The Dipteran crop and its role in the evolution of a hyperdiverse lineage of insects." Further information on this presentation follows: "From its humble beginning, the dipteran crop has done it all: physiology to behavior. The diverticulated dipteran crop is considered a synapomorphy for the order; its significance in various dipteran groups will be discussed."

Congratulations to **Vichai Malikul**, whose original butterfly paintings from the Peterson Field Guide of Eastern Butterflies and some of his watercolor paintings named after the Royal Thai family were on display at the Thailand National Science Museum in Bangkok, September 08-24.

On September 23, **Jon Coddington** and **Sean Brady** gave a Zoology Seminar entitled "Planetary Genome Project." The Planetary Genome Project is a new NMNH initiative to build the synoptic collection of Earth's genetic resources. It is one of the three "Big Ideas" selected by the NMNH Board to be a focal point for our next 5-year plan.

Congratulations to **Ted Schultz** and **Sean Brady** who, for their work "Major evolutionary transitions in ant agriculture" were awarded one of the ten Secretary's Research Prizes presented this year. The Secretary's Research Prize is an annual award presented jointly by the Secretary and the Smithsonian Congress of Scholars in recognition of excellence in recent research by Smithsonian employees.

--Schultz, T.R. and Brady, S.G. 2008. Major evolutionary transitions in ant agriculture. *Proceedings of the National Academy of Sciences, U.S.A.* 105:5435–5440.

PUBLICATIONS:

(** retired, emeritus, or former dept. member)

Lee, S., ****Hodges, R.W.** and Brown, R.L. 2009. Checklist of Gelechiidae (Lepidoptera) in America North of Mexico. *Zootaxa* 2231: 1-39.

--**abstract**-- A checklist of Gelechiidae in America north of Mexico is provided based on additions of new taxa and nomenclatorial changes in publications since 1978. This checklist includes the addition of 253 new species and 8 new genera, 30 species and 5 genera previously unrecorded from North America, 4 species inadvertently omitted in the previous checklist, and many nomenclatorial changes. *Ymeldia* Hodge, 1963 is transferred to Oecophoridae. The following new synonymies are established: *Neoschema* Povolny, 1967, n. syn. of *Gnorimoschema* Busck, 1900; *Scrobipalpulopsis* Povolny, 1987, n. syn. of *Scrobipalpula* Povolny, 1964; *Tuta* Kieffer & Jorgensen, 1910, rev. syn. of *Phthorimaea* Meyrick, 1902; *Eupoella* Fletcher, 1940, n. syn. of *Dichomeris* Hybner, [1818]; *Eupolis* Meyrick, 1923, n. syn. of *Dichomeris* Hubner [1818]; *Aristotelia nigrobasiella* Clarke, 1932, n. syn. of *Aristotelia isopelta* Meyrick, 1929; *Aristotelia intermediella* (Chambers, 1879), n. syn. of *Aristotelia pudibundella* (Zeller, 1873); *Gelechia brumella* Clemens, 1964, n. syn.

of *Chionodes continuella* (Zeller, 1839); *Anacampsis bidiscomaculella* (Chambers, 1874), rev. syn. of *Anacampsis fullonella* (Zeller, 1873); *Aroga trachycosma* (Meyrick, 1923), n. syn. of *Aroga elaboratella* (Braun, 1923);¹ and *Dichomeris caryaefoliella* (Chambers, 1872), n. syn. of *Dichomeris georgiella* (Walker, 1866). The following new combinations are made: *Monochroa pullusella* (Chambers, 1874), n. comb., *Monochroa robusta* (Braun, 1921), n. comb., *Gnorimoschema klotsi* (Povolny, 1967), n. comb., *Gnorimoschema powelli* (Povolny, 1998a), n. comb., *Scrobipalpuloides chiquitella* (Busck, 1910), n. comb., *Scrobipalpuloides chiquitelloides* (Powell & Povolny, 2001), n. comb., *Scrobipalpuloides elaborate* (Povolny, 2000), n. comb., *Scrobipalpuloides insularis* (Powell & Povolny, 2001, n. comb., *Scrobipalpuloides isolata* (Povolny, 2000), n. comb., *Scrobipalpuloides spinosa* (Povolny, 2000), n. comb., *Scrobipalpuloides totalis* (Povolny, 2000), n. comb., *Scrobipalpuloides truncate* (Povolny, 2000), n. comb., *Scrobipalpa lutescella* (Clarke, 1934), n. comb., *Scrobipalpa lycii* (Powell & Povolny, 2001), n. comb., *Scrobipalpa physaliella* (Chambers, 1872), n. comb., and *Scrobipalpa arenaceariella* (Powell & Povolny, 2001), n. comb. New records for the Nearctic Region are given for *Carpatolechia fugitivella* (Zeller), *Carpatolechia notatella* (Hubener), *Carpatolechia proximella* (Hubener), and *Altenia perspersella* (Wocke). This checklist also provides the type localities of species based on examination of specimens and published references. Subfamilies have been divided into tribes, which has required rearrangement of genera. References that include new taxa or nomenclatorial changes since 1978 are provided.

Lingafelter, S.W. & Micheli, C.J. 2009. The genus *Leptostylopsis* of Hispaniola (Coleoptera, Cerambycidae, Acanthocinini). *ZooKeys* 17: 1-55. --**abstract**--The generic differences and similarities between *Leptostylus* Leconte and *Leptostylopsis* Dillon (Coleoptera: Cerambycidae: Acanthocinini) are discussed. *Leptostylopsis* is redescribed and the following species are transferred from *Leptostylus* to *Leptostylopsis*: *Leptostylopsis annulipes* (Fisher 1942), comb. n.; *Leptostylopsis poeyi* (Fisher 1925), comb. n.; and *Leptostylopsis viridicomus* (Fisher 1942), comb. n. *Leptostylopsis hispaniolae* (Fisher 1942) is a syn. n. of

Leptostylopsis annulipes (Fisher 1942). Seven new species of *Leptostylopsis* from Hispaniola are diagnosed, described, and illustrated: *L. basifulvus* Lingafelter and Micheli, sp. n.; *L. caliginosus* Lingafelter and Micheli, sp. n.; *L. chlorescens* Lingafelter and Micheli, sp. n.; *L. humerofulvus* Lingafelter and Micheli, sp. n.; *L. perfasciatus* Lingafelter and Micheli, sp. n.; *L. puntacanaensis* Lingafelter and Micheli, sp. n.; and *L. thomasi* Lingafelter and Micheli, sp. n. Redescriptions and distributional data are provided for the six previously described species known from Hispaniola, and a dichotomous key to all thirteen species of *Leptostylopsis* from Hispaniola is provided.

Mawdsley, J.R. 2009. Taxonomy, ecology, and phylogeny of species of *Lophyra* Motschulsky 1859, subgenus *Eriolophyra* Rivalier 1948 (Coleoptera: Cicindelidae). *Trop. Zool.* 22(1): 57-70.

--**abstract**-- A key is provided for the identification of the five species of the subgenus *Eriolophyra* Rivalier 1948 of the genus *Lophyra* Motschulsky 1859 (Coleoptera: Cicindelidae): *L. (E.) alba* (Horn 1894); *L. (E.) albens* (Horn 1895); *L. (E.) arnoldi* (Horn 1904); *L. (E.) barbiifrons* (Boheman 1848); and *L. (E.) Somalia* (Fairmaire 1882). The taxonomy of this sub-genus is reviewed and *Lophyra (Eriolophyra) barbifrons marquezae* (Peringuey 1896) is placed as a synonym of *L. (E.) barbifrons*. Information about the ecology of species of *Lophyra (Eriolophyra)* is summarized: *Lophyra (Eriolophyra) alba*, *L. (E.) albens*, and *L. (E.) arnoldi* are associated with sandy riverine areas in southern, central, and west-central Africa, respectively, while *L. (E.) barbifrons* and *L. (E.) barbifrons* and *L. (E.) Somalia* are associated with coastal sand beaches in southern and eastern Africa, respectively. Descriptions of adult foraging, thermoregulatory, reproductive, and defensive behaviours are provided for *L. (E.) alba*, based on recent observations of sites along the Letaba River in Kruger National Park, South Africa. A hypothesis of phylogenetic relationships is proposed for the five species of the subgenus *Eriolophyra* on the basis of adult morphological characteristics. Morphological characters suggest that this group forms a monophyletic clade within the broader complex of species allied to *Lophyra*.

Mawdsley, J.R. and Sithole, H. 2009. Natural

history of the African riverine tiger beetle *Chaetodera regalis* (DeJean) (Coleoptera: Cicindelidae). *J. Nat. Hist.* 43(29-32): 1891-1908.

--**abstract**—The tiger beetle (*Chaetodera regalis* (DeJean)(Coleoptera: Cicindelidae) is widely distributed throughout sub-Saharan Africa. We studied activity patterns, ecological interactions, and behavior of this species along four major rivers in Kruger National Park, South Africa. During the dry season, small numbers of adult beetles are found on sand bars along perennial rivers. In the rainy season, adults are found in large numbers on a broad spectrum of substrates (including clays, coarse and fine sands and gravels, and black organic soils) and geomorphological features (sand flats, mud flats, sand bars, beaches, riverbanks, and dry and wet sandy streambeds) in riverine areas. Predatory, defensive, thermoregulatory, and reproductive behaviours are described. This species may prove to be a useful indicator of the health of African riverine systems: adults are abundant in high-quality riverine areas; adults and larvae may be adversely affected by human activities; and adults are easily detected, even by novice surveyors.

Mound, L.A. & **Nickle, D.A.** 2009. The Old-World genus *Ceratothripoides* (Thysanoptera: Thripidae) with a new genus for related New-World species. *Zootaxa* 2230: 57-63.

--**abstract**—A key is provided to five Old World species that comprise the genus *Ceratothripoides* Bagnall, and the species *C. revelatus* (Priesner) is recalled from synonymy with *C. brunneus* Bagnall. Five New World species previously placed in this genus are here allocated to *Retanathrips* Mound & Nickle gen. n., with *Physothrips funestus* Hood as type species.

Penev, L., Sharkey, M. **Erwin, T.**, van Noort, S., **Buffington, M.**, Seltmann, K., Johnson, N., Taylor, M. **Thompson, F.C.**, and Dallwitz, M.J. 2009. Data publication and dissemination of interactive keys under the open access model. *Zookeys* 21: 1-17.

--**abstract**— The concepts of publication, citation and dissemination of interactive keys and other online keys are discussed and illustrated by a sample paper published in the present issue (doi: 10.3897/zookeys.21.271). The present model is based on previous experience with several existing examples of publishing

online keys. However, this model also suggests ways to publish, cite, preserve, disseminate and reuse the original data files to the benefit of future workers, the authors, and society in general. To be regarded as a “formal scientific publication,” and online key should satisfy the same criteria of peer review, registration, persistence, bibliographic description, etc., as with conventional publications. Keys can be published as either “static” or “dynamic” publications. We define a “static” publication as a discrete unit of information preserved in a persistent and unchangeable way on the publisher’s Web site and/or on paper and consequently in conventional/electronic libraries and archives. This contrasts with the nature of the Internet, which allows and tends to encourage updating and improvement on a continuing basis. We call “dynamic” a publication of an interactive key on a Web site where its contents can be continuously updated. “Dynamic” publications meet some of the criteria of a “formal scientific publication” (identification, citation and location), while they lack other important features of it (persistence, archiving, indexing, science metric and citation metric services). Dynamic Web-based interactive keys may benefit from publishing the first version of their underlying datasets in a form of “formal scientific publication.” We define here the minimum set of data files to be published for several different platforms (Intkey, Lucid2, Lucid3, MX) to ensure both (1) priority, identification, location and citation of the first published work and (2) future use and re-use of the keys.

Shockley, F.W. & **Vandenberg, N.J.** 2009. Catalogue of the primary types of Cerylonidae, Endomychidae and Latridiidae (Coleoptera: Cucujoidea) deposited in the National Museum of Natural History, with additional notes and clarification of the status of several types. *Zootaxa* 2229: 1-64.

--**abstract**— A checklist with critical data is provided for all primary types (n = 48) of the families Cerylonidae, Endomychidae and Latridiidae deposited in the National Museum of Natural History. Of those, 43 holotypes, 3 lectotypes, and 2 neotypes are represented. This tally includes a lectotype for *Geoendomychus punctatus* Arrow (1927) and neotype for *Rhymbomicrus stephani* Pakaluk (1987), both newly designated to promote nomenclatural

stability. Fifteen species have at least one paratype, paralectotype, or authoritatively identified non-type specimen associated with the holotype. Type specimens were compared to the original species descriptions to confirm their status, verbatim label data were recorded, and barcode labels were added. In addition to cataloguing the types, notes were made where discrepancies exist between the data labels pinned with the types and the data published with the original species descriptions.

****Smith, D.R.** 2009. An obscure sawfly, *Kerita fidala* Ross (Hymenoptera: Tenthredinidae), new to Virginia, a leafminer of Virginia Bluebell, *Mertensia virginica* (L.) Pers. Ex Link (Boraginaceae). *Banisteria*, No. 33: 53.

Solis, M.A., Metz, M.A. and Janzen, D.H. 2009. Phylogenetic analysis of *Cosmopterosis* (Lepidoptera: Crambidae: Glaphyriinae) with discussions on male secondary sexual characters and larval feeding on *Capparis* (Capparaceae) in the Pyraloidea and Lepidoptera (Insecta). *Ann. Entomol. Soc.* 102(5): 766-784.

--**abstract** – New species of *Cosmopterosis* Amsel were discovered feeding on *Capparis* L. (Capparaceae) during exploration for caterpillars in the Area de Conservacion Guanacaste (ACG), Costa Rica. *Cosmopterosis* is revised and now includes four species. Three new species, *C. hispida*, *C. jasonhalli*, and *C. spatha*, and the immature of *C. spatha* and biology for two species, *C. jasonhalli* and *C. spatha*, are described; the type species, *C. thetysais* (Walker), is redescribed. A key and illustrations for the identification of the species is provided. We propose a hypothesis for the relationship between species in *Cosmopterosis* and the placement of *Cisnioterisus* in the subfamily. The cladistic analysis, the first such analysis in the Glaphyriinae, included 21 morphological characters one of which, the radiodiscal process, a male secondary sexual character and presumably an androconial scent pouch is described and considered a autapomorphy for the genus. Male secondary sexual characters and larval feeding on *Capparis* in Pyraloidea and Lepidoptera is discussed.

Staines, C.L. & Staines, S.L. 2009. The Chrysomelidae (Insecta: Coleoptera) of the Mid-Atlantic states. pp. 349-372 In: S.M. Roble & J.C. Mitchell (eds). A lifetime of contributions to

Myriapodology and the Natural History of Virginia: A Festschrift in honor of Richard L. Hoffman's 80th birthday. *Virginia Museum of Natural History Special Publication* 16.

--**abstract**-- The Chrysomelidae of the mid-Atlantic states currently consists of 556 species and six subspecies placed in 134 genera. Brief notes on the known biology of the various subfamilies and a baseline checklist of the species recorded from each state are provided.

VISITORS:

Frederick Cherot from Belgium visited **Tom Henry** and the Miridae Collection, primarily the subfamilies Cylapine and Mirinae from September 02-09.

Sylvio Codella from Kean University (New Jersey) visited Dave Smith and the Diprionidae Collection August 19-22.

Carolos Garcia-Robedo, University of Miami, will visit Charlie Stains and the Chrysomelidae Collection October 05-12.

Harold Greeney from Yanayacu Biological Station & Center for Creative Studies, Cosanga, Ecuador, visited **Don Harvey** and the Lepidoptera Collections on September 24.

Winnie Hallwachs & Dan Janzen from the University of Pennsylvania visited **John Burns** and the Skipper Butterfly Collection on September 11.

Jenna Mabey from the University of North Dakota visited **Don Harvey** and the Arctiidae Collection September 23-25 for research on the genus *Phoenicoprocta*.

Paula Rosa from the Department of Biology, Medellin, Colombia, will visit **Rick Wilkerson** and the Culicidae Collection for systematic research on the *Anopheles oswaldoi* complex in Colombia, October 12 to December 15.

Dave Roubik from STRI, Panama, visited **Sean Brady** and the Apoidea Collection on August 14 to capture digital images of bees.

Clare Scott from the University of Florida visited **Don Harvey** and the Arctiidae Collection September 23-25 for research on the genus *Lycomorpha*.

Rebecca Simmons from the University of North Dakota visited **Don Harvey** (Arctiidae

Collection) and **Michael Pogue** (Noctuidae Collection September 23-25.

TRAVEL:

On August 10-14, **Sean Brady** travelled to the BiosystEU meetings in Leiden, Netherlands to give the following presentation at the Long-term DNA Storage Workshop: "Planetary Genome Project: Preserving a synoptic sample of genomes representing life on Earth."

Brian Harris joined butterfly collector colleagues for a butterfly survey in Peru during August. More details on this trip will appear in the next issue of **The Bug Dispatch**.

Tom Henry conducted fieldwork with A.G. Wheeler, Jr. (Clemenson, SC) in Oregon from August 08-21.

Gary Hevel travelled September 16-28 to a BioBlitz event at Robber's Cave, Oklahoma, where he participated in the one-day survey along with 300 other natural history workers and their families. He then went to western Oklahoma (Wichita Mountains Natural Refuge) to collect insects there for a few days. More details will be provided in an upcoming issue of **The Bug Dispatch**.

Gary Hevel will join a few Museum colleagues to travel to Lafayette, Louisiana October 05-08, where they will present various talks about the work done at the Smithsonian Institution. This educational outreach event, targeting 7th grade students, is being sponsored by The Smithsonian Associates.

Vichai and **Nit Malikul** were on vacation in Thailand September 1-25, during which time Vichai was invited by the Thailand National Science Museum in Bangkok to lecture on scientific illustration to university students, researchers and some school teachers, Sept. 08-11.

Ted Schultz spent several weeks in Europe during August, attended an ethology conference in Rennes, France, and presented the following invitational talk:

"The phylogeny of (eu)social behavior". In: "Understanding insect sociality with Tinbergen's four questions" (symposium, R. Gadagkar,

Chair). XXXI International Ethological Conference, Rennes, France, 23 August, 2009." More details on his trip will appear in the upcoming issue of **The Bug Dispatch**.

The Ent. News is produced by
The Department of Entomology
National Museum of Natural History
Smithsonian Institution, Washington DC 20560

Chair: Terry Erwin
Editor: Gary Hevel Coordinator: Juanita Hall

Articles should be submitted to Juanita
(hallj@si.edu) or Gary (hevelg@si.edu) no later
than the last week of the month.