new book co-authored by Jerry Louton

Manya Brooke Stoetzel
1940 - 2010

Charyn Micheli

Lourdes Chamorro
On the cover (photo credits): C. Micheli/G.Hevel; L. Chamorro/G. Hevel; Louton volume/K. Darrow; M. Stoetzel/“website”.

ANNOUNCEMENTS:

The 1138th Regular Meeting of the Entomological Society of Washington will be held at 7:00 pm on October 07 in the Cooper Room of the National Museum of Natural History. The speaker this month is Christian Rabeling, a new postdoctoral fellow in the Department of Entomology, NMNH, who will present the topic “The early evolution of ants.”

The Systematic Entomology Laboratory (USDA) is pleased to have hired Dr. Lourdes Chamorro as a 3 year Post-Doc to work on the systematics of the Agrilus planipennis species group that includes the Emerald Ash Borer (Coleoptera: Buprestidae). Dr. Chamorro received her B.S. from Ohio State University in 1998 and her Ph.D. from the University of Minnesota in 2009 on the systematics of Trichoptera. As a Smithsonian Institution Minority Postdoctoral Fellow with Dr. Terry Erwin, Dr. Chamorro studied the systematics of cryptocephaline leaf beetles. She is now concluding a six month EOL (Encyclopedia of Life) – Rubenstein Fellowship also with Dr. Erwin.

Her position with USDA is funded through the U.S. Forest Service International Programs division with support from the Systematic Entomology Laboratory (Agriculture Research Service). An important part of the project will involve capacity-building with Chinese collaborators by teaching workshops on beetle identification. There will be a significant amount of fieldwork throughout Asia in support of the project and this work will be facilitated through the Sino-American Biological Control Institute and Foreign Agriculture Service.

In addition to a great deal of valuable material for the Smithsonian Institution, the project will culminate with a well-illustrated revision and identification manual for the Emerald Ash Borer and related species.

Charyn Micheli has recently been hired to fill the position that was vacated when Warren Steiner retired earlier this year. She earned her B.S. degree in Biology from the Pontifical Catholic University of Puerto Rico, Ponce, in 2000. Although publishing her first paper on the diatoms of Mona Island, Puerto Rico, her interests shifted to entomology, and more specifically longhorned woodboring beetles, Cerambycidae. In 2006, she received an M.S degree in Entomology from the University of Maryland, College Park, under the guidance of Drs. Charles Mitter and Steve Lingafelter. Her thesis focused on a taxonomic revision of a genus of cerambycids, mostly restricted to the West Indies. She has published 6 papers on longhorned woodboring beetles, focusing mainly on taxa that occur in the Caribbean. Charyn has travelled and collected extensively in Puerto Rico, the Dominican Republic, and Bolivia. Before joining the Department of Entomology in August, she worked for the Systematic Entomology Lab, Agricultural Research Service, USDA, for nearly three years.

Manya Brooke Stoetzel, a long-time employee of the Systematic Entomology Lab, USDA, died September 13 at her residence in Summerfield, Florida. She was born April 11, 1940, in Houston, Texas, and attended Rice University. Her formal study of Entomology began at Iowa State University. When she transferred to Wisconsin State University at River Falls, she met her husband of 48 years, Faran Eugene Stoetzel. His employment took the newly-wed couple to Venezuela in 1961, where they stayed for a few years. After some time in Indiana, Manya and Faran moved to Maryland, where Manya received her Bachelor, Master and Doctorate degrees from the University of Maryland. Her professional career spanned more than 30 years at the Systematic Entomology Laboratory, USDA, ARS, where she provided systematic research and expertise on a variety of insect groups, including the biosystematics of aphids. She served as President of the Entomological Society of America in 1996, and was Research Leader of the Systematic Entomology Unit for several years. At meetings of the Entomological Society of America, Manya was well known for her annual hospitality rooms, where she was a friendly hostess to a broad array of entomologists. Manya retired from government service in 2002, and thereafter spent time with her husband and family between their retirement home in Summerfield, Florida and their beach house in Long Beach, Maryland.

GENERAL NEWS:

Gary Hevel was interviewed on August 19 by Brittany Morehouse of local television channel WUSA 09 on the subject of the benefits of eating insects, relating to a recent recommendation by the United Nations of higher use of edible insects.

--Technical abstract-- The light brown apple moth (LBAM), *Epiphyas postvittana* (Walker), is a highly polyphagous species that is an important pest of apple and citrus in many parts of the world, primarily Australia and New Zealand. The potential threat of LBAM to North American agriculture was recognized formally in 1957 by the inclusion of the species in the pest alert series "Insects Not Known to Occur in the U.S." of the Cooperative Economic Insect Report. Although LBAM was excluded from a list of the top 100 most dangerous exotic pests of concern to the United States in 1973, most regulatory entomologists continued to cite this species in risk assessments to the present. LBAM was first discovered in Berkeley, California (Alameda Co.), U.S.A. in 2006. Subsequent trapping efforts in 2007 and 2008 by the California Department of Food and Agriculture and the United States Department of Agriculture revealed its presence in San Francisco, Contra Costa San Mateo, Santa Cruz, Santa Clara, Marin, Monterey, Napa, Sonoma, Solano, San Luis Obispo, Santa Barbara, and San Benito counties, California. One individual was tapped in Los Angeles County (Sherman Oaks) in June 2007 and another in Ventura County in February 2009. The latter two captures do not fit the criteria of an established population. Previous surveys in California over the past 40 years, for LBAM in particular and for Lepidoptera in general, covering the present known geographical range of LBAM, failed to detect this species. These data suggest that LBAM arrived in California only recently. We provide descriptions, diagnoses, and illustrations to aid in the identification of this newly arrived pest, along with a history of its discovery.


--abstract-- The taxonomy of the New World species of *Polyplectropus* (Ulmer, 1905a) is revised to include detailed male and female diagnoses, descriptions, illustrations, distribution records, and keys to males of all species and species groups. A phylogenetic analysis based on 59 morphological characters, 89 of 92 (98%) New World *Polyplectropus* species, and 2 outgroup taxa was inferred using parsimony and Bayesian methods, which resulted in minor topological differences. Conflicting estimates of relationship among and within most species groups led to a less resolved Bayesian tree (vs. parsimony tree) due to high variation in rates of change among characters and an overall low number of characters. A new classification for New World *Polyplectropus* is proposed with revised characterization of 10 recognized species groups, 6 newly established. Four species remain unassigned to species group. A key to genera of New World *Polycentropodidae*, including a redescription of *Polyplectropus* is provided. The homology of the male genitalia of *Polyplectropus* is discussed. Ninety-two species are treated. The following 39 new species are described; *Polyplectopus adamsae* (Peru), *P. alatespinus* (Brazil), *P. amazonicus* (Brazil), *P. andinensis* (Argentina, Bolivia), *P. blahniki* (Venezuela), *P. bolivianus* (Bolivia), *P. brasiliensis* (Brazil), *P. brborichorum* (Ecuador), *P. cressae* (Venezuela), *P. colombianus* (Colombia), *P. comiculatus* (Peru), *P. cuzcoensis* (Peru), *P. ecuadoriensis* (Ecuador), *P. flintorum* (Venezuela), *P. gaesum* (Brazil), *P. guyanae* (Guyana, Venezuela), *P. hollyae* (Brazil), *P. hystrixosus* (Brazil), *P. insularis* (Panama), *P. juilae* (Brazil), *P. kanukarum* (Guyana), *P. maculatus* (Venezuela), *P. manuensis* (Peru), *P. matatlanticus* (Brazil), *P. minensium* (Brazil), *P. novafriburgensis* (Brazil), *P. peruvianus* (Peru), *P. petrae* (Brazil), *P. pratherae* (Brazil), *P. puyoensis* (Ecuador), *P. robertsonae* (Bolivia), *P. rodmani* (Brazil), *P. rondoniensis* (Brazil), *P. tragulaius* (Brazil), *P. tripunctatum* (Peru), *P. venezolanus* (Venezuela), *P. woldai* (Panama), *P. zamoranoensis* (Honduras), and *P. zulie* (Venezuela). *Polyplectropus buchwaldi* (Ulmer, 1911) is designated as a nomen dubium.


--abstract-- the new my pocket (*Rhyparochromidae* genus *Acrolophyses*) is described to accommodate the two new species *A. aoricolous* from Ecuador and Peru, designated as the type species, and *A. hadros* from Ecuador. The new species are diagnoses and described, and adult photographs, scanning electron photomicrographs of selected structures, and illustrations of male genitalia are provided to aid in identification. The
relationship of Acrolophyes with the genera Distichophyes and Pephysena is discussed.


--abstract—During 2003-2006, a general aphid survey was conducted in the Great Smoky Mountains National Park in the American states of Tennessee and North Carolina. The project was undertaken within the context of the All Taxa Biodiversity Inventory and funded by Discover Life in America. In all, 121 aphid species were documented. When present, attendant ants were also collected and identified, as were the aphid host plants. The aphids, their attendant ants, and host plants are listed here. In addition, a checklist of the plants of the park and a catalog of the aphids of North America were cross-referenced to create a list of aphids not actually found but likely present in the Great Smoky Mountains National Park, increasing the total number to 206. Finally, we used Chao1 statistical techniques to estimate the total number of aphid species based on our sampling to date. These produced estimates of 201-214 species.


--abstract-- The Neotropical genus Cephaloleia Chevrolat, 1837 is comprised of 209 described species. Adults usually feed and mate within the scrolls formed by the young rolled leaves of plants of Neotropical Zingiberales. This paper reports for populations of Cephaloleia belti Baly, C. dilaticollis Baly, C. dorsalis Baly and C. placida Baly at La Selva Biological Station (Costa Rica, Central America) detailed descriptions of: 1. Larval and adult diets and diet breadth; 2. Egg, larval and pupal morphology; 3. Larval development times; 4. Dimorphic sexual characteristics; 5. Adult longevity; and 6. Differences in lifespan between genders. Cephaloleia belti displays the broader diet breadth, feeding on 14 species of three families of Zingiberales. Cephaloleia dilaticollis feeds on nine species of three families of Zingiberales. Cephaloleia dorsalis and C. placida feed on four species of Costaceae and two species of Zingiberaceae, respectively. Time to pupation ranges among species from 32.8 to 59.1 days. In the four Cephaloleia species, adult females are larger than males. Genders display marked sexual dimorphism in the shape of their last abdominal sternite and the pygidium. Longevity of adults ranged from ca. 300 to 390 days. Life expectancy estimates for adult beetles reared in the laboratory ranged from 111.5 to 187.2 days. Male and female adults of C. belti and C. dilaticollis have equivalent life expectancies. However, life expectancy is longer for male C. dorsalis. Male C. placida tend to live longer than females.


-- This illustrated reference contains original, up-to-date keys to the 125 genera of Zygoptera in North, Central, and South America; descriptive text for each genus; distribution maps; and highly detailed diagnostic illustrations. Each account lists all known species and generic synonyms, information on the status of classification, and references to larval descriptions.


--abstract-- The concept of semantic tagging and its potential for semantic enhancements to taxonomic papers is outlined and illustrated by four exemplar papers published in the present issue of ZooKeys. The four papers were created in different ways: (i) written in Microsoft Word and submitted as non-tagged manuscript (doi: 10.3987/zookeys.50.504); (ii) generated from Scratchpads and submitted as XML-tagged manuscripts (doi:10.3987/zookeys.50.505 and doi:10.3987/zookeys.50.506); (iii) generated from an author’s database (doi: 10.3987/zookeys.50.485) and submitted as XML-tagged manuscript. XML tagging and semantic enhancements were implemented during the editorial process of ZooKeys using the Pensoft Mark Up Tool (PMT), specially designed for this purpose. The XML schema used was TexPub, and extension to the Document Type Definitions (DTD) of the US National Library of Medicine Journal Archiving and Interchange Tag Suite (NLM). The following innovative methods of tagging, layout, publishing and disseminating the content were tested and implemented within the ZooKeys editorial workflow: (1) highly automated, fine-grained XML tagging based on TexPub; (2) final XML output of the paper validated against the NLM DTD for archiving in PubMedCentral; (3) bibliographic metadata embedded in the PDF through XMP (Extensible Metadata Platform); (4) PDF uploaded after publication to the BioDiversity Heritage Library (BHL); (5) taxon treatments supplied through XML to Plazi; (6) semantically enhanced HTML version of the paper encompassing numerous internal and external links and linkouts, such as: (i) visualization of main tag elements within the text (e.g., taxon names, taxon treatments, localities, etc.); (ii) internal cross-linking between paper sections, citations, references, tables, and figures; (iii) mapping of localities listed in the whole paper or within separate taxon treatments; (v) taxon names autotagged, dynamically mapped and linked through the Pensoft Taxon Profile (PTP) to large international database services and indexes such as Global Biodiversity Information Facility (GBIF), National Center for Biotechnology Information (NCBI), Barcode of Life (BOLD), Encyclopedia of Life (EOL), ZooBank, Wikipedia, Wikispecies, Wikimedia, and others; (vi) GenBank accession numbers autotagged and linked to NCBI; (vii) external links of taxon names to references in PubMed, Google Scholar, Biodiversity Heritage Library and other sources.

example, ZooKeys becomes the first taxonomic journal to provide a complete XML-based editorial, publication and dissemination workflow implemented as a routine and cost-efficient practice. It is anticipated that SML-based workflow will also soon be implemented in botany through PhytoKeys, a forthcoming partner journal of ZooKeys. The semantic markup and enhancements are expected to greatly extend and accelerate the way taxonomic information is published, disseminated and used.


--Technical abstract-- Many factors, including climate, area, and habitat diversity likely influence spatial variation in species diversity along elevational gradients. In this study, we test the relative influence of energy availability, habitat diversity, mid-domain effects, and area on the diversity of noctuid moths in Great Smoky Mountains National Park, USA. We sampled noctuid moths at 121 sites ranging in elevation from 300-2100m. We found that the total number of noctuid moth species and the number of rare and common species declined with elevation. Noctuid diversity was best explained by abundance: sites with many individuals had many species, and abundance was positively correlated with amount of productive energy. The strong links among energy availability, abundance, and diversity support the More Individuals Hypothesis. When variation in abundance was accounted for, habitat diversity, rather than ambient energy, accounted for variation in diversity. In no case did either mid-domain effects or area influence diversity. Taken together, our results suggest that climatic factors, and the availability of ambient energy in particular, explain this elevational diversity gradient.


--abstract-- Five new species of Acordulecera Say are described from the southwestern United States; Acordulecera sonoita, A. grisselli, and A. whittelli from southern Arizona, and A. algodones and A. kimseyi from southern California. These are the first records for the family Pergidae from Arizona and California. A key is given for the currently recognized North American and Mexican species.

*abstract*— *Eriotrema magnificus,* n. sp., from Malaysia is described and illustrated. Current information, including some new distributional records, is given for the other 12 species currently placed in the genus, and a revised key to species is provided.


*abstract*— *Pseudodineura kasatochi* Smith, n. sp., is described from Kasatochi Island, Alaska. This is the first record of a species of *Pseudodineura* from Alaska. The specimen was collected prior to a volcanic eruption in August 2008 that nearly destroyed all life on the island. It is separated from other Palearctic and Nearctic species of the genus.


*abstract*— *Monoctenus sanchezi* Smith, n. sp., is described. It was found damaging *Juniperus flaccida* Schlechtendal (Cupressaceae) in San Luis Potosi, Mexico. This is the second Mexican species of the genus. A review of *Monoctenus* from southwestern United States, Mexico, and Central America is presented, with *M. sadadus* Smith a new country record for the United States and new records of the genus for Utah and as far south as Guatemala.


*abstract*— Type specimens of the type series of 27 North American *Herpetogramma* species names were located, mostly in European museums, verified, and dissected. *Acharana descripta* (Warren) is designated as a new synonym of *Herpetogramma phaeopteralis* (Guenee). Fifteen lectotypes and 14 paralectotypes are designated where it was deemed necessary to fix and stabilize the current concept of the name. A checklist and a key to nine North American species are provided with photographs of the adults.


*abstract*— The species of *Oxychalepus* Uhmann, 1937 are reviewed. Thirteen species are treated as valid. *Oxychalepus allenus* (Baly, 1885) is removed from synonymy; *O. angulatus* from Argentina and Bolivia is described as new; *O. insignatus* (Chapuis, 1877) is reinstated to full species status; *O. trispinosus* (Pic, 1931) is treated as *incertae sedis.* All species are illustrated and a key to the species is presented.

**VISITORS:**

Paul Arnaud and his wife, Madeline, from the California Academy of Sciences visited Oliver Flint August 09-27.

Simone Cappelari from the University of Texas at Austin visited Ted Schultz and the Formicidae Collection August 27 through September 27.

Maru Coscaron from La Plata Natural History Museum, La Plata, Argentina, is currently visiting Tom Henry and the Heteroptera Collection September 27 through October 28.


Constance Dubuc from the University of Florida, Gainesville, visited David Furth August 09-11.

Laura Flynn from the American University is currently visiting Mike Gates and the Parasitic Wasp Collection, September 13 through December 15.

Geoffrey Gallice from the University of Florida visited David Furth August 09-10.

Yuvinka Gareca from Museo Alcide D’Orbignyi, Santa Cruz, Bolivia is currently visiting Bob Robbins and the Butterfly Collection October 04-29.

Molly Rightmyer Gee from the U.S.D.A. visited Sean Brady and the Bee Collection September 07-17.

Edith Gowin from Princeton University will visit Bob Robbins and the Butterfly Collection during the period of October 04-29. He will attempt to identify moths that he has photographed, in preparation for a new book.

Nick Grishin from the University of Texas Southwestern Medical Center visited Bob Robbins and the Butterfly Collection September 15-17.
Judith S. Hall (+ 15 others) from International Technical & Regulatory Capacity, USDA/APHIS, Riverdale, Maryland, visited Steve Lingafelter for a tour.

Christopher Hamm from Michigan State University visited Bob Robbins and Brian Harris and the Butterfly Collection August 23-30.

Heidi Hopkins from the University of New Mexico visited Terry Erwin and the Coleoptera Collection August 15 through September 15.

Jan Hrcek from the Laboratory of Tropical Ecology, Institute of Entomology, visited Lauren Helgen August 26-28.

Jeya Kathirithamby from Oxford University, England, visited Gary Hevel and the Strepsiptera Collection September 21 and September 28. During her visit, Matt Buffington provided critical photography services to further her research.

Hongjing Li from the Shandong Forest Wildlife Protection Station, China, visited John Brown on August 18.

Dangjun Li from the Shandong Forest Pest Control and Quarantine Station, China, visited John Brown on August 18.

Yonghong Li from the Bureau of Forestry of Bingzhou Municipality, China, visited John Brown on August 18.

Laurence Livermore from the Natural History Museum (British Museum) in London visited Tom Henry and the Heteroptera Collection September 01-09.

Marilyn Mendoza from UNAM, Mexico City visited Tom Henry and the Heteroptera Collection September 07-18.


Arpad Nyari from the University of Kansas visited Rick Wilkerson August 23-28 for research on ecological niche modeling of mosquito vectors and related diseases.

Magdalena Ordonez Resendiz from Museo de Zoologia de la FES Zaragoza, U.N.A.M., Mexico, is currently visiting Alexander Konstantinov and the Chrysomelidae Collection, from September 15 through October 14.

Huarong Qu from Forest Protection Station of Yantai Municipality, China, visited John Brown on August 18.

Christian Rabeling from the University of Texas visited Ted Schultz and the Formicidae Collection August 27 through September 27.

Steffen Reichle from the Nature Conservancy is currently visiting Bob Robbins and the Butterfly Collection October 04-29.

Katie Riley from Wake Forest University visited Terry Erwin and the Coleoptera Collection August 09-11.

Anu Veijalainen from the University of Turku, Finland visited Terry Erwin and the Coleoptera Collection September 01-09.


Yao Wensheng from Shandong Forest Pest Control and Quarantine Station, China visited John Brown and the Systematic Entomology Lab on August 18.

Yunzhi Yao from Capital Normal University, Beijing, China is currently visiting Tom Henry and the Heteroptera Collection, September 27 through October 27.

Chuanzi Zhang from Forest Protection Station of Bureau of Forestry of Jinan Municipality, China, visited John Brown on August 18.

TRAVEL:

Gary Hevel will travel to Oklahoma October 02-11 to participate in a BioBlitz, held annually in a different locality in that state. Last year, during such an event at Robbers Cave State Park, Gary collected a schizopterid bug that represented both a state record and a westernmost extension of the distribution of the species. He also collected a membracid (tree-hopper) that was a state record for the species.