On the cover: Chalcidae workers at ESW meeting; Steve Davis at ESA meeting; Vichai Malikul (see General News). All photos, other than Vichai, taken by G. Hevel.

ANNOUNCEMENTS:

Stuart McKamey starred in versions of a documentary on the bizarre family of treehoppers (Hemiptera: Membracidae) of Ecuador. The version “Mini-monsters of Amazonia” was aired on October 16th on The Nature of Things (Canadian Broadcasting Corp.), and the version “Aliens of Amazonia: Treehoppers” was aired on November 16th and 17th on the Discovery Science Channel. In early December double-episode versions aired in France, Germany, and Belgium.

The 1131st Regular Meeting of the Entomological Society of Washington convened at the Waldo Schmitt Seminar Room of the National Museum of Natural History on November 05 at 7:00 pm. The program “Evolutionary conservatism of oak gallwasp host plant associations: its affect on the current taxonomy (Hymenoptera: cynipidae, Cynipini)” was presented by George Melika from the Pest Diagnostic Laboratory, Plant Protection & Soil Conservation Directorate of County Vas, Tankajd, Hungary.

Congratulations to staff members who recently received recognition awards in the forms of pins for lengthy service: 40 years - Gary Hevel, 30 years – Cynthia Lancaster, Linda Sims, & Warren Steiner, and 10 years – Jason Hall.

GENERAL NEWS:

Congratulations to Vichai Malikul, who has recently received the Royal Thai Medal Decoration in honor of his lifetime devoted to Thai American & Asian American Communities, promoting their Cultural Art Heritage in the metropolitan area since 1980. This medal was presented to Vichai by Ambassador Don Pramudwinai at the Thai Embassy. Earlier in the year, Vichai received the Award Order of Direkgunabhorn Silver Medal Decoration from His Majesty the King Bhumibol Adulyadej of Thailand. Vichai has been a consistent worker for cultural matters related to Thailand. Many of his friends may recall his strong activities in fund-raising after the tsunami that struck parts of Asia in 2004. He raised over $12,000 in the metropolitan area, and provided that sum to the Tsunami in Thailand life saver fund. He has been a Commissioner to the State of Maryland on Asian Pacific American Affairs 1993 to 2005, and been a busy special lecturer on scientific illustration workshops in various universities and botanical gardens in the United States, Canada and Thailand. Other major awards have been the Human Relation Gold Award from the Human Relations Association of Thailand in 1997 and the Diamond of Siam by Dhankasem University, Thailand in 2003.

Graham Stone from the University of Edinburgh presented the topic “What are oak galls for? Pattern and process in the evolution of an extended phenotype,” at an Entomology Seminar on November 13.

PUBLICATIONS:

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


--abstract -- Taxonomic and nomenclatorial changes affecting Sympha, resulting from work on a forthcoming world catalog, are proposed and explained. Dolerus zhelochovtsevi Heidemaa & Viitasaari, sp. nov. is described. One former subgenus and two former subspecies are now treated at genus or species level, respectively. Eighteen replacement names are given, 73 new synonymies and 78 new combinations are proposed, 3 synonymies are re-established, and 5 names are resurrected from synonymy. The precedence of 18 species names (nomina protecta) over their older synonymys (20 nomina obita) is explained. Type species are designated for 8 genus-group names. One neotype and 17 lectotypes are designated. Five names described as varieties are assigned infrasubspecific rank. Twenty-five genus-group names associated with Arge, Corynis, Dolerus, Trichiosoma and Xyela are unavailable. Two genus-group names and 33 species-group names are considered as unplaced taxa. An identification key is presented for the West Palaearctic species of Profenusa MacGillivray, 1914. Notes on publication dates and authorships of names of certain taxa are also included.


--abstract-- This article derives from a society-wide
symposium organized by Timothy Bradley and Adriana Briscoe and presented at the 2009 annual meeting of the Society for Integrative and Comparative Biology in Boston, Massachusetts. David Grimaldi provided the opening presentation in which he outlined the major evolutionary events in the formation and subsequent diversification of the insect clade. This presentation was followed by speakers who detailed the evolutionary history of specific physiological and/or behavioral traits that have caused insects to be both ecologically successful and fascinating as subjects for biological study. These include a review of the evolutionary history of the insects, the origins of flight, osmoregulation, the evolution of tracheal systems, the evolution of color vision, circadian clocks, and the evolution of eusociality. These topics, as covered by the speakers, provide an overview of the pattern and timing of evolutionary diversification and specialization in the group of animals we know as insects.


--abstract—Megalota Diakonoff, previously known from the Indoaustralian Region (India, Sri Lanka, New Guinea, and Australia), Madagascar, and Africa, is reported from the Neotropics for the first time. Three previously described New World species (i.e., Megalota submicans (Walsingham), n. comb.; M. delphinosema (Walsingham), n. comb.; and M. plenana (Walker), n. comb.) were concealed within incorrect generic assignments or as “unplaced” species (i.e., lacking contemporary generic assignments). Twenty-one new species are described and illustrated: M. synchysis (TL: Venezuela), M. peruviana (Peru), M. aquilonaris (Mexico), M. vulgaris (Costa Rica), M. caaculana (Brazil), M. macrosocia (Ecuador), M. ochreapex (Costa Rica), M. spinulosa (Costa Rica), M. simpliciana (Costa Rica), M. jamaicana (Jamaica), M. ricania (Costa Rica), M. ceratovlava (Venezuela), M. bicolorana (Costa Rica), M. longisetana (Costa Rica), M. deceptana (Costa Rica), M. cressana (Costa Rica), M. gutierrezi (Costa Rica), M. chamelana (Mexico), M. beckeri (Brazil), M. flintana (Brazil), and M. pastranai (Argentina). Males of the genus are characterized by three distinctive features of the genitalia: the uncus consists of a pair of greatly expanded, flattened, variably round or square lobes, densely covered with spines and setae; the valvae are narrow with an elongated, apically spined process arising from the base of the costa; and the juxta is membranous with a narrowly sclerotized U- or J-shaped posterior edge. Five species have been reared from Croton spp. (Euphorbiaceae) in Costa Rica, and this is consistent with a single record of this host for an Australian species of Megalota.


--abstract—The 11 world genera of Chlamisini Gressitt are reviewed, diagnosed, and illustrated. A key for their identification is provided. A replacement name is proposed, Kakita Chamorro-Lacayo & Konstantinov, nom. n., for Ceratochlamys Bokermann, 1961, a junior homonym of Ceratochlamys Habe, 1946 (Mollusca). Chlamisus rousei Medvedev, 1993 is designated as a junior synonym of Chlamisus straminea Suffrian, 1866, syn. n.


--abstract—Clepsis anderslaneyii, new species is described and illustrated from the “sky islands” (i.e., Chiricahua, Huachuca, and Santa Rita mountains) of southeastern Arizona, U.S.A. Superficially, it is most similar to Arygrotaenia dorsalana (Dyar 1903), but it is assigned unambiguously to Clepsis Guenee on the basis of the characteristically modified transtilla, which includes a narrow or obsolete mesal portion and a dentate subbasal swollen lobe. Among Nearctic congeners, the male genitalia of C. anderslaneyii are most similar to those of C. fucana (Walsingham 1879), but those of C. anderslaneyii can be distinguished by the more broadly pointed valve, narrower transtilla, bulbous uncus, and broader tegument. The extremely short ductus bursae of the female genitalia of c. anderslaneyii is unique among Clepsis.


--abstract—Two holarctically distributed species groups
of Sepedon, *S. fuscipennis* (5 spp.) and *spinipes* (2 spp.) are reviewed. The diagnostic characters of all species are compared and the distinguishing structures of the male terminalia are illustrated. The Palearctic *Sepedon Hecate* sp. nov. is described and compared with the Nearctic species of the *S. fuscipennis* group. The new species is distributed mainly in the East Palearctic but apparently penetrates to Central Europe. A detailed study of the male terminalia of the Palearctic *S. spinipes spinipes* (Scopoli, 1763) and the Nearctic *S. spinipes Americana* Steyskal, 1951 shows that the Nearctic taxon actually represents a well distinguished species, *A. Americana* Steyskal, 1951, stat. nov.


--- abstract — Wing venation, two-dimensional and with easily recognized reference points at vein junctions, presents an opportunity for the development of automated insect identification. Using a suite of continuous characters, I investigated the use of wing morphometry for computerized insect identification of cryptic species of the aphid genus *Mindarus*. A priori groups were determined using consistently grouped individuals of unknown taxonomic affinity with the correct a priori groups. The results suggest that diagnostic signal is present in wing morphometry, but the signal is considerably stonger with the addition of morphometry from other aphid appendages, namely, 10 leg and antennal segments. Almost all *Mindarus* collected in eastern North America have been determined as the balsam twig aphid, *Mindarus abietinus* Koch (Hemiptera: Aphididae), but molecular diagnostics reveals that the Palearctic species is not present in the Western Hemisphere. *Schizoneura pinicola* Thomas has been considered a North American synonym of *M. abietinus*. Morphometric discriminant function analysis suggests that the *Abies*-feeding eastern North American population is *M. pinicola*. The species is here reinstated with a new combination and redescribed.


Doi:10.1371/journal.pone.0007516.

--- abstract — More than 41,000 species are known with about 00-500 added each year, but for some well-known groups, such as the giant golden orbweavers, *Nephila*, the last valid described species dates from the 19th century. *Nephila* are renowned for being the largest web-spinning spiders, making the largest orb webs, and are model organisms for the study of extreme sexual size dimorphism (SSD) and sexual biology. Here, we report on the discovery of a new, giant *Nephila* species from Africa and Madagascar, and review size evolution and SSD in *Nephila*. Methodology. We formally describe *N. komaci* sp. nov., the largest web spinning species known, and place the species in phylogenetic context to reconstruct the evolution of mean size (via squared change parsimony). We then test female and male mean size correlation using phylogenetically independent contrasts, and simulate nephilid body size evolution using Monte Carlo statistics. Conclusions. *Nephila* females increased in size almost monotonically to establish a mostly African clade of true giants. In contrast, *Nephila* male size is effectively decoupled and hovers around values roughly one fifth of female size. Although *N. komaci* females are the largest *Nephila* yet discovered, the males are also large and thus their SSD is not exceptional.


--- abstract — A new species of snail-killing fly, *Dictya orthi* (Diptera: Sciomyzidae), is described from the Delmarva States (type locality: Virginia. Stafford; Aquia Harbour, Lions Park). Provided are detailed photographs, descriptions of structures of the male terminalia, a generic diagnosis, and a key to species of *Dictya* from the Delmarva and adjacent states.


--- abstract — The life history of *Haplostegus nigricus* Conde (Hymenoptera: Pergidae), a leaf-feeding sawfly of *Psidium guajava* L. (Myrtaceae), was studied in Vicosa,
Minas Gerais State, Brazil. The life history and morphology are compared with those of Haplosteagus epimelas Konow (Hymenoptera: Pergidae), another species that feeds on guava leaves. Haplosteagus nigricrus females oviposit in the midrib of guava, and larvae feed on the leaves. Late-instar larvae drop to the ground and construct a cell for pupation. Cocoons are made individually with soil particles and other substrate. Three occurrence peaks of female adults were observed for H nigricrus and two for H. epimelas. No males of H. nigricrus were found. The importance of this study to the knowledge of South American Pergidae is discussed.


---abstract---This paper, treating the tortricid subfamily Olethreutinae, represents the second in a proposed three-part series examining variation in the number of bristles in the frenulum of female tortricid moths. Based on an examination of 6,333 individuals of 1,464 species representing 188 genera of Olethreutinae, the number of bristles in the female frenulum varies from one to six, and it is sometimes asymmetrical on the same specimen (7.5% of individuals examined). A three-bristled frenulum is the most common condition in Microcorsini, Endotheniini, Bactrini, Gatesclarkeanini, Olethreutini, Enarmoniini, and Eucosmini, with varying degrees of intraspecific variation in number within each tribe. However, in both Eucosmini and Enarmoniini several genera have a predominantly or exlusively two-bristled frenulum (e.g., Gypsonomah Meyrick, Herpysist Meyrick, and Rhopalovalva Kuznetsof in Eucosmini; Hystrichophora Walsingham, Neanathamini Kawabe, and Pseudacocita Oku in Enarmoniini). In Grapholitini, two- and three-bristled frenula occur in nearly equal frequency, suggesting that this character may be of some phylogenetic significance, but an overall pattern is not immediately obvious. In contrast to the situationin Childanotinae, where the distribution of the two-and three-bristled frenulum corroborates previously proposed phylogenetic hypotheses, we conclude that variation in the number of bristles in the frenulum in Olethreutinae is not phylogenetically informative at higher levels (e.g., tribes, subtribes) owing to the high degree of intrageneric and intraspecific variation. However, the number of bristles may be of phylogenetic significance at the generic level, particularly in Eucosmini and Grapholitini.


---abstract---The eggs of six Anopheles Hyrcanus Group (An. sinensis Wiedemann, An. kleini Rueda, An. belenrae Rueda, An. pullus M. Yamada, An. lesteri Baisas and Hu, An. sineroides S. Yamada) and related species (An. koreicus S. Yamada and Watanabe, An. lindesayi japonicus S. Yamada), were described from scanning electron micrographs of specimens collected from different localities of the Republic of Korea. Morphometric measurements of egg samples of the eight species were compared and relationships analyzed by multivariate statistics. About 27 characters were selected and used as a basis for principal and discriminant function analyses. Scanning electron micrographs of various parts of the eggs were selected to illustrate interspecific differences for particular morphological features (e.g., anterior and posterior tubercles, decks, plastron, microphyles, floats).


---abstract---The present findings suggest that Anopheles (Kerteszia) homunculus may comprise more than one species. The rDNA ITS2 sequence data corroborate the presence of An. homunculus l.s. in Mata Atlantic, southern Brazil, and suggest that specimens from Trinidad may belong to an unnamed morphologically similar species. There is a need for additional studies to establish the geographical distribution of An. homunculus l.s. in continental South America and in Trinidad, especially in southern Mata Atlantic, Brazil.


---abstract---The Pergulinae occur in South America and Australia with a single genus on each continent. The Australian genus Pergula Morice was known only from a single male of Pergula turneri Morice, 1919, from the
south-western part of Western Australia. Two additional species are described, *Pergula exilis* sp. nov. from Western Australia and *Pergula xantha* sp. nov. from Queensland and New South Wales. The female of *P. xantha* is the first female described for the genus, and the species is the first record of the genus for eastern Australia. A key is provided for separation of species.


---abstract--- Ten species of Tenthredininae are now known in Australia. The subfamily Selandrinae is recorded for the first time, with the description of *Neostromboceros teres* sp. nov. *Nematus oligospilus* Forster, a *Salix*-feeding species, is recently adventive in Australia. A new Queensland record is given for *Senoclidea purpurata* (F. Smith), a species previously recorded as *Senoclidea furva* (Konow). Four of the 10 species are considered native to Australia, and six of them have been introduced. A key is provided for the 10 species.


---abstract--- The sawfly genus *Barilochia* Malaise (Tergidae: Perreyiinae) was known from a single specimen of one species, *B. brunneoviens* Malaise, from San Carlos de Bariloche, Rio Negro, Argentina. A second species from Chile, *B. longivalvula*, n. sp., is described and illustrated. A male of *Barilochia* is described for the first time. The possible host plant is *Nothofagus dombeyi* (Cahue)(Nothofagaceae).


---abstract--- Thirty-one species of Cephaloleini are assigned to new genera, creating new combinations: 19 to *Parimatidium* Spaeth, 10 to *Stilpnspis* Weise, and two to *Demotispa* Baly. *Demotispa peruana membrata* Uhmann, 1957 is raised to full species status. As the transfer of *Cephaloleia limbatum* Pic to *Demotispa* creates a homonymy, the species is renamed *Demotispa pici* nomen novum.


---abstract--- *Opatroides punctulatus* Brulle’, 1832 (Coleoptera; Tenebrionidae; Opatrini), is reported established for the first time in the New World in California near Sacramento. A key to distinguish *Opatroides* from species of similar genera is provided, with images and a brief diagnosis of *O. punctulatus*. The potential spread and pest status of the beetle should be monitored.


---abstract--- Recent field work and examination of museum collections has led to the discovery that Virginia has seven species of the Tribe Helopini (Coleoptera: Tenebrionidae), more than most neighboring states. Virginia specimen data for species of the two currently recognized genera, *Helops* Fabricius and *Tarpela* Bates, are given, with a brief diagnosis of each species. Digital images of male specimens of each species are included, with notes on life history and habitats. *Helops carolina* Manee, 1924, is a junior synonym of *Helops aereus* Germar, 1824 (new synonymy). *Tarpela americana* Beauvois, 1805, and *T. undulata* LeConte, 1866, confused in some earlier literature, are considered to be distinct species.


---abstract--- Larvae of *Xyela gallicaulus* Smith cause shoot stem galls in young pines. Lobolly pine, *Pinus taeda* L., is the most seriously damaged, but galls have been observed on slash pine, *P. elliottii* var. *elliottii* Engelm., and shortleaf pine, *P. echinata* Mill. Studies in Virginia and Georgia confirm a 2-year life cycle. Larval development takes 4 - 6 wks. After feeding larvae bore
out of the galls and drop to the ground where they form a papery cocoon in the soil to pupate, and where they remain for 22 – 25 months. Adults emerge from cells constructed in the soil from early-December to mid-January of the second year. Eggs are inserted into the vegetative buds during odd-numbered years. Insect associates found feeding in or on gall tissues are the Nantucket pine tip moth, Rhacionia frustrana (Comstock) (Tortricidae), and the weevil Conotrachelus carolinensis Schoof (Curculionidae).

VISITORS:

Lauren Buckley from the University of North Carolina visited Bob Robbins and the Butterfly Collection on October 13.

Marcelo Duarte from Universidade de Sao Paulo, Brazil visited Bob Robbins and the Butterfly Collection November 02-20.

Evan Economo from the University of Michigan at Ann Arbor visited Ted Schultz and the Formicidae Collection November 11-15 to study the ants of Fiji.

Henri Goulet, Agriculture Canada, visited Dave Smith and the Siricidae Collection October 05-09.

Nick Grishin from the University of Texas Southwestern Medical Center in Dallas visited Don Harvey and the Butterfly Collection October 21-23 for research purposes.

Bill Haines visited the Ted Schultz and the Formicidae Collection to record label data on October 16.

Gerardo Lamas from the Universidad Nacional May de San Marcos, Peru, visited Bob Robbins and the Butterfly Collection November 08-13.

Erik Zinovjev from Randolph, MA, visited Dave Smith and the Sawfly Collection November 17-18.

TRAVEL:

Erika Tucker from the United States Geological Survey in Beltsville, MD visited Sean Brady and the Wasp Collection to examine Polistes wasps.

Dave Wagner visited Don Davis and the Lepidoptera Collection to participate in a Wedge Foundation meeting October 08-09.

Carrie Wells from Clemson University visited Bob Robbins and the Butterfly Collection on October 09.

Alexey Zinovjev from Randolph, MA, visited Dave Smith and the Sawfly Collection November 17-18.

Lauren Buckley from the University of North Carolina visited Bob Robbins and the Butterfly Collection on October 13.

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TRAVEL:

Sean Brady attended the Third International Barcode of Life Conference, Mexico City (November 10-13) where he gave a talk entitled: “Applying DA barcoding and morphology toward improving the taxonomy of the cleptoparasitic bee genus Nomada.”

Terry Erwin will travel to South America from December 23 through January 06.

C.J. Geraci attended the Third International Barcode of Life Conference, Mexico City (November 10-13).

Many members of the combined entomological staff attended the Entomology Collections Network and Entomological Society of America meetings at Indianapolis, December 12-16. Staff known to have attended these meetings include: Sean Brady, John Brown, Matt Buffington, Jonathan Coddington, David Furth, Terry Erwin, C.J. Geraci, Michael Gates, Tom Henry, Gary Hevel, Shelah Morita, Jadranka Rota, Ted Schultz, Sonja Scheffer, Alma Solis, Warren Steiner, and Natalia Vandenberg.