

# HAMULI

*The Newsletter of the International Society of Hymenopterists*



volume 1, issue 1

2 August 2010

## Our new, bolder newsletter

By: Andy Deans, North Carolina State University

Well, here it is—the inaugural issue of our new Society newsletter, *Hamuli*. Before I dive too deeply into the details I want to acknowledge my associate editor, Trish Mullins, who helped organize the newsletter, and especially the talented contributors, who provided content. Thanks for helping make this enterprise happen!

*Hamuli* is an effort to revive the spirit of newsletters past—*e.g.*, *Sphecos*, *IchNews*, *Proctos*, and *Melissa*—an enthusiasm for communication that, if you've had the good fortune to read recent project newsletters, like *Skaphion* and *TIGER*, still permeates through our community. We anticipate publishing two issues per year, one in January, and another in July, and we're always accepting submissions that are relevant to ISH and Hymenoptera research more broadly, including member news (updates on projects, student opportunities, recent collecting efforts), opinion and methods pieces, notes and photos from the field, from museum visits, and from meetings, and just about any other content you can think of. *Hamuli*, much like its anatomical namesake, will hopefully remain an entity that facilitates consociation.

I hope you enjoy reading the new ISH newsletter as much as Trish and I enjoyed putting it together. Feedback is greatly appreciated, whether you have concerns about content, comments about the layout, or questions about how to contribute. Contact information is provided in the masthead on page 2. ♦



*Metalloopeus cupreiceps* Konow in Shiqu, Sichuan. See Niu and Wei's story about collecting sawflies in China on page 13.

## In this issue...

President's report (Woolley)	1
Webmaster/Archivist report (Seltmann)	3
Publishing on Hymenoptera (Agosti <i>et al.</i> )	4
Reflections on the future (Masner)	4
Report on the 7th ICH (Melika)	5
A student's impression of 7th ICH (Talamas)	5
Australian checklist (Austin & Jennings)	5
Sawfly research in China (Wei)	6
Sweeping Shrinkies (Heraty & Mottern)	7
Hints on scanning to PDF (Noyes)	8
Evaniiid oviposition behaviors (Mullins & Bertone)	10
Collecting in Măcin Mountains (Mitroiu)	11
Collecting in Kauai (Carpenter)	12
Collecting in China (Niu & Wei)	13
Jesus Santiago Moure (Dal Molin)	15
Member News	16
7th ICH photos	18
Membership information	19

## President's report

By: Jim Woolley, Texas A&M University

**Journal of Hymenoptera Research.** After a transition period this Spring, the new Editor, Stefan Schmidt, has taken over all editorial duties for *JHR* and he is busily preparing issue 19(2) to be sent to press in late summer. We also have a change in the Editorial Board, Stefan and Matt Yoder have agreed to share the duties of subject editors for taxonomic papers of Symphyta and Parasitica for *JHR*. The other subject editors remain the same: Mark Shaw (biology, Symphyta and Parasitica), Jack Neff (biology, Aculeata) and Wojciech Pulawski (systematics, Aculeata). Thus, we have a restructured editorial team to face the challenges ahead.

As most of you are probably aware, the numbers of manuscripts submitted to *JHR* has been in a steady decline in recent years. Although we continue to receive high quality papers, the numbers are at or below the critical mass necessary to continue publishing the journal. We think the

primary reasons for this are the profound changes in the scientific publishing landscape in recent years, in which we have seen the explosive growth of on-line journals featuring rapid review and turnaround, the possibility of using color plates at a nominal cost, and many other advantages. In many cases, these journals are open-access, which greatly increases access to them by the worldwide scientific community, thereby increasing citation statistics such as impact factors. In addition, the ability to enhance electronic publications using semantic mark-up methods and embedding links to external databases such as ZooBank and Morphbank is creating exciting and revolutionary new possibilities that are profoundly changing taxonomic publication in particular.

Clearly, we needed to fundamentally rethink the manner in which we publish *JHR*. Accordingly, in February of 2009 we formed a Special Publication Committee, chaired by Mike Sharkey, President-Elect, and Gavin Broad, Editor of *JHR*, and consisting of Craig Brabant, Mark Shaw, Donald Quicke and Matt Buffington. The group was charged with conducting a review of the possible options for publication of *JHR*, and with recommending a new publication model and a new business model. They solicited and evaluated proposals from *Zootaxa* and Pensoft Publications (publishers of *ZooKeys*) among others. Their recommendations were both clear and radical: *JHR* should move to an open-access, electronic publication format while continuing to publish printed copies to satisfy the publication requirements of the ICZN. Since the proposal from Pensoft Publications was substantially more favorable in many respects, the Committee recommended that ISH engage in negotiations with them to establish a new publication contract for *JHR*. These recommendations were presented and discussed at the Annual Business Meeting in December, 2009, in Indianapolis, U.S.A. and at the Annual Business Meeting held at the 7th International Congress of Hymenopterists in Kőszeg, Hungary, in June 2010. Although many members have reservations or misgivings about one aspect or another of these fundamental changes, there seems to be overwhelming support for moving *JHR* in this direction.

Accordingly, Mike Sharkey, Stefan Schmidt and I have continued to negotiate with Lyubomir Penev at Pensoft Publications, and we are close to having a new contract in place. Our goal is to begin publishing *JHR* with Pensoft under the new model in 2011, beginning with issue 20(1) of *JHR*. Although it would be premature to provide full details at this time, the new publication model will look like the following:

- *JHR* will be published electronically by Pensoft Publications and will be an open-access publication
- Printed copies will continue to be produced and deposited in libraries to satisfy the current requirements for publication in the ICZN. Printed issues will be produced as they fill. We estimate a minimum of three printed issues per year initially.
- Authors will be able to purchase printed copies of their publications on demand, according to a fee schedule established by Pensoft, which should be very similar to the rates now charged for *ZooKeys*.
- ISH members will have the ability to publish in *JHR* at cost, that is, at the rate charged by Pensoft Publications, currently €15 per page. Non-ISH-Members are welcome to publish in *JHR*, but they will pay an additional surcharge. These rates include the option of including substantial numbers of color illustrations (we estimate about half of the pages of a typical publication will have color figures) and complete dissemination of on-line content including assigning DOI numbers and sending content to indexing databases and various specialized databases such as ZooBank.
- Rates for institutional subscriptions will need to be increased, but assuming three printed issues of approximately 200 pages each, a relatively modest increase should cover the cost of producing them. Of course, under an open-access model, institutions will also have access to electronic versions of the journal.

We think the opportunity to work with Pensoft Publications will position *JHR* to be an innovator and a leader in the rapidly changing world of scientific publication. We

*Hamuli* is published by the International Society of Hymenopterists.

Contact information: Andrew R. Deans, Department of Entomology, North Carolina State University, Box 7613, Raleigh, NC, 27695, USA.  
Fax: +1 919 515 7746 Ph: +1 919 515 2833 Email: andy\_deans@ncsu.edu

**President:** James B. Woolley <JimWoolley@tamu.edu>  
**Treasurer:** Craig Brabant <brabant@entomology.wisc.edu>  
**Secretary:** Andrew R. Deans <andy\_deans@ncsu.edu>  
**Editor, Hamuli:** Andrew R. Deans <andy\_deans@ncsu.edu>  
**Associate Editor:** Trish Mullins <plmullin@ncsu.edu>

find us on the Web: <http://hymenopterists.org>

All submissions should be sent electronically to the editor, with textual contributions as .rtf, .doc, or .docx files and images as .jpg, .png, or .tif. Deadline for the first issue is December 31, while the deadline for the second issue is June 30.

Articles appearing herein should not be considered published for the purposes of zoological nomenclature.

are tremendously excited about this new venture, perhaps the most fundamental change in the way our Society does business since the publication of the first issue of *JHR* 20 years ago. If you would like to provide input or advice or share your concerns with us, please contact me at [jimwooley@tamu.edu](mailto:jimwooley@tamu.edu) or Mike Sharkey at [msharkey@uky.edu](mailto:msharkey@uky.edu).

**Distinguished Service Award.** The Distinguished Service Award was awarded to Gavin Broad at the Annual Business Meeting in Kőszeg, in recognition of “his tireless, creative and dedicated service as Editor-in-Chief of *Journal of Hymenoptera Research*, 2004–2010, for his stewardship of the Journal through a time of great changes, and for maintaining and extending its scientific scope and impact.” Congratulations, Gavin, and many, many thanks for your service to ISH!

**Venue for Next ISH Congress.** The Executive Committee is actively soliciting proposals for the 8th International Congress of Hymenopterists, to be held in 2014. We are encouraging proposals from Latin America, since we have never had a Congress there and we have many active and distinguished members in this part of the world. However, we will accept proposals from any interested parties, in any part of the world. Please contact us if you would like to begin this process.

**Endowment of the International Society of Hymenopterists.** This is managed by an Endowment Committee, consisting of Andy Austin, Chair, Brad Vinson and myself. Income to the Endowment consists of donations, Life Memberships, profits from ISH Congresses and other workshops and royalties from books resulting from them, and sales of various special items. We are happy to report that the corpus of the endowment has grown to over \$50,000. The Committee has followed an extremely conservative, risk-averse approach in managing these funds and we therefore avoided losses to the endowment during the recent financial crises. Now that the endowment has reached this level, the Endowment Committee will be recommending that we begin to utilize a portion of the interest on these funds to initiate special projects, such as a Student Award to be announced shortly. ♦

## Webmaster/Archivist's report

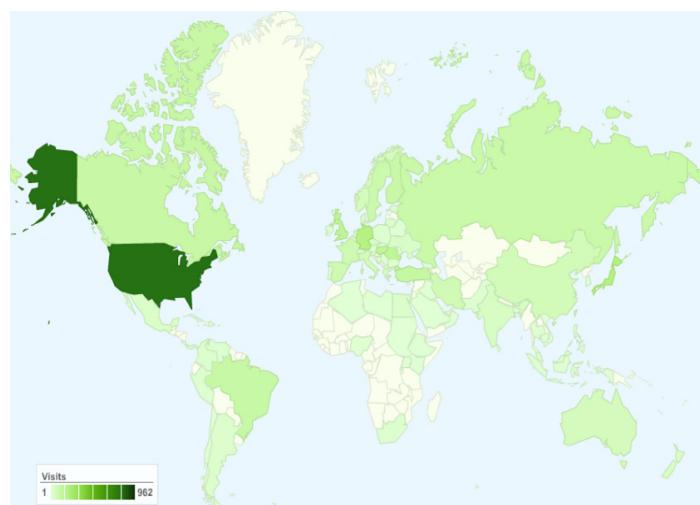
By: Katja Seltmann, North Carolina State University

Although some of the details and language of the present article are technical I hope to explain the direction we are moving regarding the website and the possibilities it presents to us as a society. Also, we are presently using a number of freely available web tools in the new site whose services might benefit ISH members in their own work

outside of the Society.

Its been an exciting year for the ISH website. We moved the site from its prior hosting company to Dream Host in August, 2009 and launched the new member's database. The database is primarily used to keep track of current members, so that they properly receive copies of the *Journal of Hymenoptera Research*. The combination of these efforts, begun by previous webmaster, Suzanne Schulmeister, pushed the society into a web savvy position and saved us quite a bit of money. DreamHost ([dreamhost.com](http://dreamhost.com)) provides free hosting for non-profits, and we are no longer using Allen Press services for our member's database. DreamHost is an interesting hosting company for a number of reasons: they are an employee owned, customer driven, green company that has been hosting websites since 1997. For ISH the flexibility they provide regarding access directly to our server was critically important as we begin to develop the member's functions.

A second development to the website is our present use of the software repository on Google Code ([code.google.com](http://code.google.com)). This is another free service for ISH because we provide our website code as ‘open source’, or available for use by other people. An external repository not only backs up the code on our entire site but also maintains the history of our online publications including images, PDF documents, and meeting agendas. The member's database is backed up only locally (not publically) to protect any private information. Google not only provides us with free repository support but we are also using other Google tools. Google Analytics JavaScript is embedded in our site to track who is visiting us and from where. Our present blog is a modified Google Blog and we use Gmail as our automatic mailer address. From Google Analytics tracking we found our pages visited by people from 89 countries since January 2010! ♦



3,956 visits came from 89 countries since January, 2010.

## On publishing on Hymenoptera, or how to find more time for thinking?

Donat Agosti, Lyubomir Penev and Terrance Catapano

Recent years have delivered tremendous changes in the way we scientists collect information regarding taxa, and with it endless debates on how best we could publish and disseminate the knowledge we produce. The debate is well beyond the traditional publication fostered through the enormous possibilities the Internet has to offer, which loosens the rigidity and constraints of traditional publications.

In our presentation on the future of publishing at the ISH conference in Kőszeg (<http://hymenopterists.org/files/HymenopteristsCongress2010.pdf>) we focused on a publishing model that on the one hand builds on the traditional peer reviewed, printed publications to satisfy the current requirements of the International Code of Zoological Nomenclature, and on the other hand includes many of the exciting new possibilities offered through the Internet, and especially Web 2.0 technologies for semantic mark up and semantic enhancements to biodiversity papers. Special emphases are given to linking content to external resources (e.g., name servers, bibliographic databases, specimens or DNA repositories) allowing access to primary data, marking up content according to its semantic meaning (e.g., names, treatments), providing access to different formats of the publication (print, PDF, XML, HTML) and the respective access (searching for an article, searching for content), archiving the journal, and finally the dissemination of the content well beyond the traditional article itself.

By changing the *Journal of Hymenoptera Research* to this model, wide opportunities to our community will be offered, that is well ahead regarding IT resources, some of which are integrated already in this venture, such as the Hymenoptera Name Server and others will hopefully integrated soon, e.g., the Hymenoptera Anatomy Ontology <http://tinyurl.com/34qwgq7>. Although the current publishing model of the journal is a limiting factor for its development, the authors may play a crucial role in transforming it into a new generation journal. Beyond their manuscripts, providing access to their underlying databases will be crucial but also offer to capitalize on the potential of what this new publishing model has to offer. The more we link all the databases by using emerging standards (e.g., LSIDs) the easier it will get to include the links and assure that they will be still alive in the next generation.

The model that is being proposed to be used for *JHR* has recently been described in depth when Pensoft announced

its implementation for its journal *ZooKeys* (<http://tinyurl.com/3xxfszz>). The development is based on a collaboration between Pensoft (<http://pensoftonline.net/zookeys/index.php/journal/index>), Plazi (<http://plazi.org>) and the National Library of Medicine (<http://dtd.nlm.nih.gov/>). ♦

## Reflections on the future of Hymenoptera research

Lubomír Masner, Canadian National Collection (CNC) of Insects, Arachnids and Nematodes

I greatly welcome the idea of an ISH Newsletter. There is, indeed, a need for such forum to instigate and accelerate the progress in our science of Hymenopterology! After all, science is an international affair, and above all, it is nice to share. We have had in the past several specialized Hymenoptera newsletters (*Proctos*, *Chalcid Forum*, *Sphacos*, *Ichnews*, *Notes from Underground*); regrettably, all are no longer in existence. Therefore, the birth of a central Hymenoptera Newsletter is hereby most welcome!

I would like to use this opportunity to ponder and ruminant about the most pressing challenges our Society is facing now and in years to come. As a concerned taxonomist I am increasingly worried about the goal of species inventory worldwide. Because of negative factors beyond our control such as the galloping environmental destruction, sprawling urbanization, desertification and (?) climate change, the loss of species diversity is much faster than our traditional system of faunal inventories. In other words we are loosing the race against the time. To make the problem even worse the small number of present taxonomists seem to shy away from active field activities, some even lacking skills or necessary tools. This trend is based on false belief that most diversity is presently under control permitting new, advanced approaches such as molecular taxonomy and phylogenetic analyses. Alas, nothing may be further from the truth!

My lifetime experience in taxonomy of microhymenoptera worldwide may serve as sobering confrontation with the reality. So, e.g. in North America we have some 1,500 species described in the old polyphyletic superfamily Proctotrupoidea s.l., that in my very conservative estimate constitutes not more than 8% of real diversity; in tropics this ratio is much smaller, say about 2%. These figures are derived from the few competent revisions by comparing the number of taxa before and after the revision. At the same time I reported (unpublished document for the Biological Survey of Canada) results of my 17 years continuous survey of 46 target species of terrestrial scelionids

in urban Ottawa (Canada); all species categorized in four groups of frequencies decreased by one or two steps leaving the tail of the curve as extirpations. Besides the names of these vanishing species we know next to nothing about their biology, behaviours, postembryonic development, hosts, distribution, etc. ... This all is biological information slipping for ever from our fingers.

Turning from lamentation and despair to positive thinking here is my idea of what can be done. We can salvage and preserve for future generations major capsules of present biodiversity by conducting targeted, large scale, intelligent bulk sampling of existing biodiversity, preferably in presumed world hot spots. To borrow time in processing this valuable biological treasure the bulk material may be kept in long term cold storage pending availability of expertise and funds. Simple underground silos in, e.g., arctic permafrost may be both ideal and inexpensive (no hydro bills!) way to accomplish this task.

To warm up my favourite pot may I suggest to try the inexpensive sampling technique of yellow pan traps (YPT). This is an ideal tool to sample almost any biotope of much neglected terrestrial insect life. For the best results please read my little article in *Skaphion*, Vol.3/No.41, October 2009, entitled "International YPT cookbook" where some 40 years of success (and failure) is summarized and illustrated. And, if you find some interesting "proctos" (actually, all are interesting!) I am always ready and keen to take a curious look. ♦

## 7th International Congress of Hymenopterists

*By: George Melika, Pest Diagnostic Laboratory, Plant Protection & Soil Conservation Directorate of County Vas, Ambrozy setany 2, 9762 Tanakajd, Hungary*

The 7th International Congress of Hymenopterists, held in Kőszeg, Hungary (June 20–26, 2010) is over. It was a great distinct pleasure to host 164 delegates, 22 Companions and 10 kids from 37 countries, from all continents (except Antarctica) in the little town of Kőszeg. 87 talks and 83 posters were represented on different topics of Hymenoptera research: morphology, bioinformatics and DNA barcoding, biological control and economic entomology, cynipoids and gall communities, taxonomy and systematics, behaviour and biology, biogeography and higher-level phylogeny of Hymenoptera. 47 participants stayed after the Congress for a 3-day collecting trip.

Photos taken by Dr. György Csóka are available for your perusal; email me for details.

This is where you can see the video clip that the Hungarian TV made: <http://bit.ly/9Buvg3> ♦

## ICH in Kőszeg: a student's perspective

*By: Elijah Talamas, The Ohio State University*

As a young member of the hymenopterist community, I found that the ISH meeting in Hungary yielded many benefits. The first of these was matching faces, personalities, and dancing styles to names that I have seen on publications or heard in conversation. The world view necessary for good taxonomy requires international collaboration, or at least interaction, and the more connections one has the more smoothly such activity is likely to be. There is no better venue than the ISH meetings to establish such relationships.

Regarding methodology, I had a productive discussion with a colleague about the lack of funding in his country that prevented him from producing molecular data for phylogenetic analysis. Consequently, he relied on morphological data with dissections of such detail and precision that I felt rather embarrassed about my own inchoate skills. Funding helps, but there is no substitute for ingenuity and persistence. Exposure to the realities of different research climates is useful to contextualize the work of others, and to have appropriate expectations when collaborating.

Unless you are vegan or have self control, prepare to fatten up during a visit to central Europe—the food is delicious, caloric and plentiful. Finally, if you want to immerse yourself in the culture, say yes to palinka! ♦

## Checklist to Australian Hymenoptera (in progress)

*By: Andy Austin and John Jennings, University of Adelaide*

Among the most valuable tools in taxonomy are checklists and catalogues to species within a particular group of regional or world scope. These help us in a myriad of ways—from helping to track down obscure literature, to checking publication dates, authors, spelling, and determining the species richness for a group or region (based on the number of described species). For many years, the Australian Biological Resources Study (ABRS) has been developing the Australian Faunal Directory (AFD) (<http://www.environment.gov.au/biodiversity/abrs/online-resources/>

es/fauna/index.html), which utilises the expertise of the Australian systematic community. The AFD is an online checklist/catalogue to the fauna of the Australian continent and marine environments to the edge of the continental shelf. It is organised taxonomically by phylum, class, order, etc. and, after approximately 15 years of development, stands at about 70% complete.

However, through a large infrastructure grant, the Federal Government has funded a project to develop the architecture for the Atlas of Living Australia (<http://www.ala.org.au/>) which, among other functions, will serve as the Australian portal to GBIF. As part of this initiative ALA has provided financial support to ABRS to have a complete and up-to-date checklist of all Australian animal species by mid 2012—essential to accelerate the completion of the AFD.

As part of this project a group of Australian Hymenopterists comprising Andy Austin, John Jennings (University of Adelaide), Steve Shattuck (CSIRO Entomology) and Ken Walker (Museum of Victoria) have been contracted to complete the hymenopteran part of the AFD, with Steve dealing with the Formicidae, Ken Walker the bees, while Andy and John will handle all other groups. This will be a huge task given that the Ichneumonidae, Pompilidae and Tiphidae are yet to be databased, and many other groups need serious updating. However, within two years, a complete checklist, with bibliographic, type and distributional data will be available online. ♦

## Ongoing and future sawfly research in China

By: Meicai Wei and Gengyun Niu, LISEB, Central South University of Forestry and Technology, Changsha 410004, China, email: [weimc@126.com](mailto:weimc@126.com)

The senior author now leads a small research group and a lab (Lab of Insect Systematics and Evolutionary Biology, LISEB) committed to sawfly systematics in Central South University of Forestry and Technology, Changsha, China. About 20 teachers and students in our group have ever worked on Chinese sawfly taxonomy since 1994. However, there are only six active taxonomy researchers in this group now: Meicai Wei, Gengyun Niu, Yihai Zhong, Zejian Li, Yuchen Yan and Haiyan Nie. There will be some new students in the future to publish a few papers on sawflies for their degree, but most of them will undoubtedly change their interest or works when they pursue a MS or PhD.

There are about 130,000 sawfly specimens including

1,015 holotypes and more than 6,000 paratypes in the collection of sawflies in Central South University of Forestry and Technology (CSCS). More than 99% specimens were collected in the past 20 years. About 3,000 sawfly species have been identified, among them more than 600 being undescribed species. We estimate that there would be about 3,500 or more Symphyta species in China.

During investigations into the sawfly fauna of Tibet, Qinghai, Yunnan, Sichuan, from May 25 to July 10, we collected about 10,000 sawfly specimens from the four provinces. Two thirds of them are now kept in the sawfly collection of Central South University of Forestry and Technology, Changsha (CSCS) and other one third deposited in the Germany Institute of Entomology (DEI). Some undescribed taxa have already been sorted, and a new genus of Cephidae will be described for publication shortly.

Sawfly inventory of Henan, China finished this year, after 14 years of effort. About 550 species have been recorded from the province. The result will be published in the end of 2010. The investigations of sawfly faunas of Shandong, Shanxi, Gansu, Guizhou, Xinjiang, Fujian, Zhejiang and Hebei Provinces finished separately in past two years. We recorded 84 species from Shandong, 268 species from Shanxi, 340 species from Gansu, 411 species from Guizhou, 90 species from Xinjiang, 360 species from Fujian, 450 species from Zhejiang and 317 species from Hebei. Special surveys (usually about 10 field collecting phases for one mountain and each collecting phase about 10 days) to some key mountains in China also finished in past three years. About 380 sawfly species from Mt. Qinling of Shaanxi Province, 420 from Mt. Shennongjia of Hubei Province, 180 from Mt. Dabie of Anhui Province, 110 from Mt. Lushan of Jiangxi Province, 180 from Mt. Mangshan, 220 from Mt. Hupingshan, 162 from Mt. Mufushan, 220 from Mt. Yuechengling, 120 from Mt.



An undescribed species of the *Tenthredo trunca* group (Tenthredinidae).

Daweishan of Hunan Province, 256 from Mt. Mao'ershan of Guangxi Province, 236 from Mt. Liupan of Ningxia Province and 85 from Mt. Changbai of Jilin Province were collected. The sawflies of Tibet (>300 species), Inner Mongolia, Sichuan (650 species) and Yunnan (600 species) are in progress.

Ongoing projects on sawfly taxonomy at LISEB include: 1) *Tenthredo s. lat.*, with Drs. Taeger and Blank of DEI, 2) Selandriinae of World, with D. R. Smith of USA, 3) the genera of Symphyta excl. Pergidae and Orussidae, with an illustrated key to known sawfly genera of world, 4) Sawfly Fauna Sinica; the 3,000 Chinese sawflies will be described in detail in about 18-20 volumes, 5) Sawflies of Southwestern China and North India, with Dr. Saini of India)

We are interested in any identified or unidentified sawfly specimens from any regions other than China. Specimens from Africa, South America and Pacific Islands are especially welcome to exchange. There are about 3,000 sawfly species and more than 300 sawfly genera in our collection, most of them are in the list for exchange. Please contact us if you want to exchange material. We also would like to exchange reprints. And finally, we are very interested in collecting in Africa, South America and Pacific Islands. If someone intends to go to these locations to collect insects, and he/she wants partners, please contact us! ♦

## Sweeping Shrinkies

By: John Heraty and Jason Mottern, Department of Entomology, University of California, Riverside

Jason and I just returned from a successful collecting trip to Brunei and Singapore. Despite the calls for incessant rains, the collecting deities helped us out and we had some great sweeping. We were pan trapping and Malaise trapping as well, but the sweeping really came up with the gems. There is nothing special about how we were sweeping, although Jason came up with one new addition that opened up the world for the vast resources of the really small parasitic insects.

Basically, we are using ultra fine mesh silk screen fabric for our nets (see *Chalcid Forum* No. 14; pg. 7; available online). We are “pooting” our wasps using a straight glass tube aspirator with a fine mesh screen embedded about 1 cm in the base of the tube with 5-minute epoxy cement. A downstream Volkswagen gasoline filter stops the dust and mould from reaching our lungs to a certain degree. Wasps are aspirated and then directly blown into 80-95% EtOH in a 2 dram vial. Nothing really new about this. However, Jason, in an epiphany, showed me his technique of aspirat-

ing the “chaff” at the bottom of the net and just filling the vials with the chaff for later sorting in the laboratory (as shown in figure at right). Compared to 1-2 vials per collection site, this ramps it up to 4-5 vials per site, and some dense material to sort through under the scope. The results were astounding. This functions like a mini screen-sweep but with a focus on the fine fraction with all of its minute goodies. In going through our samples we found several mymarommats (not often “pooted”), and many small mymarids, trichogrammatids, and an incredible diversity of Encarsia. Ceraphronids explode in this micro fraction, as do small platygastroids and diapriids. Flies have a harder time with the technique, with some breakage due to pooting and pooling with the debris from the net, but overall the net results for Hymenoptera are amazing. Specimen damage can be mitigated to some degree by removing the collection vials from your gear after each day (so you’re not carrying them around and “sloshing” them unnecessarily) and making certain that the vials are completely full of liquid before transport.



Vial of chaff next to aspirator.

Why not just bulk screen sweep? Basically, we love to see what we are collecting, and for the larger things in the net it makes collecting enjoyable and not just a factory process. As well, the time to process the smaller samples is greatly reduced and chances of discovering gems greatly increased. A single vial can be spilled, sorted, and everything extracted quickly. So far the sweep samples have far greater diversity than any of the Pan or Malaise samples for virtually everything (we will try to summarize this in the near future). The big challenge is now just finding the trichos and mymarids in the samples that barely exceed the size of an *Encarsia* head! So, don’t ignore the small stuff and give this a try next time you are in the field. ♦

# Hints on scanning documents for making high quality PDF files of scientific papers

By: John S. Noyes, Department of Entomology, Natural History Museum, London SW7 5BD, jsn@nhm.ac.uk

Most of you will be familiar with the web version of the Chalcidoidea database (<http://www.nhm.ac.uk/research-curation/projects/chalcidoids/>). In recent years I have been working hard to include PDFs of important taxonomic and other literature on the site that are available as free downloads to anybody who needs them. In this I have had some considerable help from several colleagues, most notably Mike Schauff, Jean-Yves Rasplus, Hossein Lotfalizadeh, Stefan Schmidt and Ana Dal Molin. Many others have also been helpful by sending PDFs of their recently published papers. Ultimately I would like to make these all available on the site, but unfortunately most newer publications have associated copyright problems that need to be solved.

As a result of seeing a great number of PDFs and also making a considerable number of PDFs myself I have become aware of a number of pitfalls and various problems that affect the quality of the PDFs. This is a shame because once a good PDF has been made it should be the one and only time it needs to be made. With a good many of the PDFs I have received it will ultimately be necessary to redo them. [Of course I am talking here of PDFs useful for us as taxonomists etc., not the really high resolution PDFs that archivist librarians might require.]

Below I describe the method I find best for making good quality PDFs that can be achieved using a normal "Office" flat-bed scanner and easily available image-manipulating software such as Photoshop. The resulting PDFs can be of very high quality. However, there remain two major problems of text alignment and "noise" limitation.

Of course, I have an ulterior motive for all this as I am attempting to build up a library of PDF files on Chalcidoidea literature. Where there are no copyright problems possible all files will be made available as free downloads from the UCD web site. I am hoping that most people who have an interest in chalcidoids can benefit from this. If anyone is willing to help by contributing to this project by offering PDF files of literature please contact me first, especially in cases where the offered literature is not their own. I would most appreciate offers concerning particular authors or published in particular journals (especially those not easily available to me). I can then help by providing a list of what is or what is not required.

When buying a flat bed scanner perhaps the most impor-

tant things to look for are:

**Preview scan time.** For an A4-sized flat bed scanner this should not really be more than 3 seconds. The preview scan time is a good indication of the time taken to scan an image. At 300 dpi and for a b+w image this should not be more than 4 seconds. Some of the better scanners scan an A4 sheet at this resolution in b+w in less than 2 seconds.

**Marquee.** The marquee is box that delimits the area to be scanned. With some scanners this needs to be redone or reloaded between scans which can be frustrating. With the best scanners the marque remains between each preview or scan and even better it is possible to have several marques available on screen at any time.

**Document feeder.** This is a very good option to have as it is quicker, but cannot be used with books for obvious reasons. The major drawbacks are that it is more difficult to get the b+w threshold set correctly and to ensure that each image is aligned properly. The best document feeders allow for both sides of a page to be scanned. Look for scanners that can do upwards of 15 pages a minute.

**Descreen function.** This enables grey-scale and colour images to be scanned without resulting in the moiré pattern (oblique cross-hatching) or other undesirable affects that may result from the way that some plates or pages are printed. It slows down the scan quite considerably, but it is well worth it in order to obtain high quality scans of colour and greyscale images. It is important that the descreen function can be engaged or disengaged without having to preview.

**Document on-screen image size.** Ideally this should be at least one-half screen size with a capability of enlarging it to 2X screen size without having to do a second preview. I do not know of any reasonably priced scanner that will do the latter.

The best machine that I have come across at a reasonable price is the Epson GT 15000 (in UK about £1300 with document feeder), but I am sure there are several other excellent machines on the market. In the UK, there are a good many around with document feeder at around £500. The Epson allows for scanning of A3-sized documents, is incredibly easy to use and is very, very fast. Its only drawback is that the preview image on screen is a little on the small size (about two-fifths screen size) which can make aligning documents a little more difficult.

## Scanning for PDF documents

For best results when scanning, adjust the marquee (the lines that delimit the area to be scanned) to be only 1–2 mm wider than the actual text to be scanned, but the

same height as the page. This forces you to get the text as straight as possible and also cuts out any “noise” at the side of the image if scanning a book where it is not possible to get the page completely flat on the scanner.

When trying to align text or fit the marquee it is best to do this in greyscale because sometimes with the ideal setting for b+w threshold the image is too faint. When the marquee is positioned correctly and the text aligned properly flip back to b+w scan setting for the actual image scan and capture.

Always scan text in b+w at 300 dpi. Do not be put off by the relatively poor quality of the image on screen (sometimes it will be hardly visible). It is usually necessary to view the first scanned image using the proper software before continuing to scan a document. [You can use MS Word document viewer or similar, but I prefer HP Photo & Imaging software because it is much easier to view several images at one time. These will allow you to see how the page will come out as a PDF without making a PDF.] Adjust the black/white threshold until you get a good balance between the text and the page itself. Try to get rid of the “noise”, *i.e.* flecks of black that appear on the page if the threshold is too high. Never use the “Auto” setting for setting the b+w threshold—it is always too dark, especially for scanning complex line drawings. Scan bright, glossy pages at around 145 and dingy, yellowing pages at anything down to 50, but this will depend on the print quality—very often things printed in the early 19th century can be scanned at anything down to 50 because the print quality is so good, more modern things can rarely go below 90. You need to check this in a highly magnified image in Photoshop after scanning the first page. Generally speaking any modern publication can be scanned at 130–145 without any problem.

Another advantage of scanning text in b+w is that conversion to an OCR (Optical Character Reading) document will be more successful because of the stronger contrast between the page and lettering with no intermediate shades of grey.

Take care to align the page properly—many documents are printed slightly obliquely so that when a PDF is this is emphasized and becomes very annoying, especially when viewed on screen. Of course this may mean making more than one preview of a page to get it aligned properly. Some scanner drivers have a text alignment selection, but this normally only works when scanning in colour or greyscale and not in b+w.

With grey scale or colour plates it is necessary to scan the page twice. Once in b+w at 300 dpi (to ensure the text is good) and then once in greyscale/colour at 300 dpi. Ensure that the resolution in greyscale or colour is set at 300

dpi (some machines default to 200 dpi so that when images are merged they are not the same size). Always use the “Descreen” function when scanning greyscale or colour to reduce the *moiré* pattern (oblique cross-hatching) which results from particular types of printing and may be apparent when viewing greyscale/colour plates on screen. It is a bit slower, but the result is very good. Once this is done, convert the b+w page to grey-scale (and then to RGB colour if necessary). Clean the greyscale/colour image (sometimes the page itself is yellow or mottled) and copy and paste the non-text part of the image onto the page that was originally b+w. This way you will get good text and a high quality image. Try it.

If scanning a photograph or similar in grey scale and the image from the opposite side of the page shows through try putting a piece of matt black card, or paper between the pages.

Before copying and pasting a grey scale or colour image even up the background colour to white by adjusting the greyscale/colour balance. To improve this, move the mid and lower range indicators almost all the way to the right. This emphasises any parts of the page that are darker than white. When this is so, move the high range indicator to the left until the background appears to be white (in greyscale it can be moved to about 210 without too much loss of detail). When this is achieved moved the low range indicator all the way to the left, this will drag the mid range indicator to the new mid value. If necessary adjust the mid value until a satisfactory shade is reached.

Pages scanned at only 1–2 mm wider than the text can then be made wider using Photoshop or similar (see details of how to do this below). This also means that the text will be nicely centralised. At this stage you can also clean up the images if necessary—get rid of any “noise” (dark flecks on the page) or any dark borders resulting from the marquee overlapping the page.

When saving the individual images, save them as uncompressed TIFF files. Do not be tempted to save them as JPG or GIF files. Individually the file size will be smaller as JPG or GIF or compressed TIFF files but when they are made into a single PDF file the resulting file will be smaller if they are saved as individual, uncompressed TIFF files. The PDF will also be of slightly better quality.

Please keep all the “raw” TIFF image files if possible. These can also be used to produce OCR documents if necessary.

Using this method you will get 100 pages of normal text at between 8–10 mb PDF file size. If you include colour or greyscale plates then obviously the size of the file will increase but a 12 page paper with one colour plate should come out at around 4 mb and the same with two or three

greyscale plate should be about 2 mb. This is actually smaller than the file size that is commercially produced and the plates are very nearly as good (in some cases actually better!).

Recording a “macro” in Photoshop to add a white border to an image:

1. Open file(s)
2. In “Tools” palette, ensure background colour of image is white
3. Go to “Actions” dialogue palette
4. Click on the arrow to the top right of the box
5. In drop-down menu click on “New Action”
6. In “New Action” dialogue box enter name of action e.g. “Widen border”; enter “Function key” name that you wish to use to play the action, e.g. F2; click on “Record”
7. Move to control bar and click on “Image.”
8. In drop-down menu, click on “Canvas size”
9. In resulting dialogue box, enter desired width of canvas (I usually add in 3–4 cm depending on the size of the canvas) and height if required. You can also change the “anchor” to add the extra white background to the top or bottom of the canvas.
10. Click on the “OK” button
11. Click on the cross at the top right of the canvas to close image.
12. Click on the “Yes” button in the resulting dialogue box to save the changes
13. Go to “Actions” dialogue palette
14. Click on the arrow to the top right of the box
15. In drop-down menu click on “Stop recording”

To add the same-sized white border to the next image merely clicking the function key that you chose to play the macro/action, in this case F2.

For a new different-sized canvas it is easiest to record the dimensions in this “macro” by going to the appropriate “Action” record in “Action palette” and double clicking on the “Canvas size” completing the desired dimensions in the “Canvas size” dialogue box that appears and then repeating steps 10–14 above. To play the same action with the same new dimensions for the image then click the chosen function key. This can be repeated for each of the images that make up the set chosen for the PDF. ♦

Want to join the International Society of Hymenopterists? Forget to renew this year? See page 19 for the membership form, or try the new, easy PayPal way!

<http://hymenopterists.org/purchase.php>

## Oviposition behaviors of *Hyptia thoracica* and *Evania appendigaster*

By: Trish Mullins and Matt Bertone, North Carolina State University

Evanidae are marvelous little wasps with an intriguing biology: all species appear to be solitary predators within cockroach oothecae, but we have so very little host information. Except for the common, widespread *Evania appendigaster* (Linnaeus), and, on a smaller scale, *Prosevania fuscipes* (Illiger) and *Hyptia* spp., host record information for the family is, sadly, very scarce. Here we present some observations on the oviposition behavior of two species: *E. appendigaster* and *Hyptia thoracica* (Blanchard).

*E. appendigaster* is virtually cosmopolitan but is mostly confined to urban environments. *H. thoracica* (Blanchard) collection records are from 17 states in the U.S. ranging from Massachusetts, New Jersey, and North Carolina west to Michigan and Kansas, south to Texas, Mississippi, and Florida with additional records from Brazil, Canada (Ontario), Cuba, Haiti, and St. Thomas.

Supposedly *E. appendigaster* preys upon all “illustrious” cockroach pests with the exception of *Supella longipalpa* (brown banded cockroach) and *Blattella germanica* (German cockroach); *Periplaneta americana* appears to be its main victim (Hwang and Chen 2004). In 2006, Fox and Bressan-Nascimento discovered that when *E. appendigaster* was interrupted during oviposition before 40 seconds, normal, happy, healthy immature cockroaches emerged. However when wasps were allowed to oviposit beyond 40 seconds (the presumed time of egg transfer),



*Hyptia thoracica* ovipositing into ootheca of *Parcoblatta lata*. (Photo by M.A. Bertone)

normal, beautiful adult wasps emerged instead.

*H. thoracica* preys upon *Parcoblatta pensylvanica* and other *Parcoblatta* spp. (Blattellidae: Blattellinae) and possibly on *Arenivaga floridensis* (Polyphagidae), *Latiblattella rehni* (Blattellidae: Pseudophyllocladomorphinae), and *Ischnoptera deropeltiformis* and *Parcoblatta fulvescens* (Blattellidae: Blattellinae) (Deyrup and Atkinson 1993).

MB collected a single female *E. appendigaster* in October of 2008 from an outside wall of Gardner/Bostian Hall on the NCSU State campus. The wasp was brought into the lab and exposed to several oothecae of *Periplaneta americana* in a clear plastic container in the lab. After a few minutes exploring the potential hosts (Video 1), the wasp proceeded to probe one ootheca with its long ovipositor. The entire process, from probing to withdrawal of the ovipositor, took approximately 15 minutes. Though the selected ootheca was held for observation afterward, unfortunately nothing was reared from this attempt. Whether or not the wasp was truly ovipositing is unknown.

Subsequently, in July, 2010, MB collected a female *H. thoracica* from his house and exposed her to several oothecae of *Parcoblatta lata* under laboratory conditions (Video 2). The oothecae appeared to be of different ages and she selected a less sclerotized one (lighter in color). From probe to withdrawal the entire process took approximately 15 minutes, as in *Evania*. We are still waiting to see what, if anything emerges from the (presumed) oviposition. All oothecae were from Coby Schal's lab at NC State and identification is thanks to Rick Santangelo.

In both instances, the evaniids searched and probed for a suitable ootheca for a few minutes, finally selecting one and laying her egg for (apparent) oviposition into the unfortunate host. Probing/oviposition took several minutes (about 15), after which time the wasps left, apparently exhausted. Though our sample size was small ( $n=1$  for each), both species appear to differ in their initial behaviors/actions. *Evania* appears to drum its antennae vigorously along potential oothecae as it dramatically pumps its metasoma up and down (Video 1).

*Hyptia*, on the other hand, appears to calmly/gently caress the oothecae with its antennae and does not move the metasoma (Video 2). Both also differ in the position of the body over the ootheca, with *Evania* standing high on it while *Hyptia* crouches low. This is most likely related to ovipositor morphology: *Evania* has a thin, elongate ovipositor, while *Hyptia* has a short, thick ovipositor. The adaptive forces that led to these morphologies are not currently known, though it may have to do with the general size of the host oothecae relative to the wasp's size. Oviposition took several minutes, and finally she leaves, worn-out. ♦

## References:

- Video 1. *Evania appendigaster* (as "evania2"): <http://www.youtube.com/watch?v=sB2b7fiRJhI>
- Video 2. *Hyptia thoracica* (as "Evaniidae ovipositing"): <http://www.youtube.com/watch?v=rQAa0VtD32U>
- Hwang, S-Y. & L-M. Chen. 2004. Effects of four physical treatments of oothecae of *Periplaneta americana* on parasitism and development of parasitic wasp *Evania appendigaster*. *Environmental Entomology* 33(5): 1321–1326.
- Fox, E.G.P., & S. Bressan-Nascimento. 2006. Biological aspects of *Evania appendigaster* (L.) (Hymenoptera: Evaniidae), under different densities of oothecae of *Periplaneta americana* (L.) (Blattodea: Blattidae). *Biological Control* 36: 183–188.
- Deyrup, M. & T.H. Atkinson. 1993. Survey of evaniid wasps (Hymenoptera: Evaniidae) and their cockroach hosts (Blattodea) in a natural Florida habitat. *The Florida Entomologist* 76(4): 589–593.

## Hymenoptera is number 1 in the Măcin Mountains

By: Mircea-Dan Mitroiu, Laboratory of Animal Biology  
Faculty of Biology, Alexandru Ioan Cuza University, Iasi,  
Romania

The Măcin Mountains (below) are located in the southeastern Romania and are among the oldest mountains in Europe, thus being very eroded and not higher than 467 m. The very dry climate is reflected by a specific biodiversity, unique in Europe, with ponto-submediterranean, central European and Asian elements. A Malaise trap was set up near the Măcin Mountains National Park (<http://www.parcmacin.ro/en/>) in 2004 in order to get an idea of the diversity of microhymenopterans in the area. The trap collected insects between the 25th and 27th of July resulting a total number of 4,391 captured insects. In the order of abundance these belonged to the following orders: Hymenoptera – 2,051 (46.7%), Diptera – 1,811 (41.24%), Homoptera – 328 (7.46%), Coleoptera – 78 (1.77%), Lepidoptera – 55 (1.25%), Heteroptera – 47 (1.07%), Psocoptera – 16 (0.36%), Orthoptera – 2 (0.04%), and Neuroptera – 1 (0.02%). Regarding the superfamily Chalcidoidea 303 specimens were collected, belonging to 14 families: Eulophidae – 110 (36.3%), Eurytomidae – 57 (18.81%), Pteromalidae – 53 (17.49%), Chalcididae – 39 (12.87%), Eupelmidae – 11 (3.63%), Torymidae – 9 (2.97%), Mymaridae – 8 (2.64%), Trichogrammatidae – 5 (1.65%), Perilampidae – 3 (0.99%), Encyrtidae – 2 (0.66%), Eucharitidae – 2 (0.66%), Aphelinidae – 1 (0.33%), Elasmidae – 1 (0.33%), and Ormyridae – 1 (0.33%). Regarding

the family Pteromalidae the 53 specimens belonged to 4 subfamilies: Pteromalinae – 38 (71.69%), Miscogasterinae – 10 (18.86%), Colotrechninae – 4 (7.53%), and Diparinae – 1 (1.88%). ♦



Malaise trap near the Măcin Mountains National Park, Romania.

## Collecting on Kauai

By: James M. Carpenter, American Museum of Natural History, New York

When I was working up the review of Hawaiian Vespidae published in 2008 (Carpenter, 2008, *Bishop Mus. Occ. Pap.* 99: 1-18), I was told by Neal Evenhuis, the indefatigable curator at the Bishop Museum, that alien species could be much more abundant than native ones. Given the large number of native vespid species described from Hawaii, more than 110, that is distressing. In May I spent a week on Kauai, and set out to quantify that observation. Assisted by Amy Davidson and Marc Allard, I carried out a series of ten 1-hour samples over the course of a week, recording all vespids collected or observed in 10 different sites around the island. The sites ranged from the taro fields around Hanalei Bay to the cliffs of Waimea Canyon, with clear results: in 8 out of 10 samples, adventive species were the majority or the only individuals found, and these were the only species seen below 1000 m in elevation. Native species (*Nesodynerus kirbyi* and *soror*) were only encountered on protected land, in Waimea Canyon State Park and Kokee State Park, and even at those sites two samples out of five had a predominance of adventive species. The alien species included *Delta esuriens*, *Pa-chodynerus nasidens*, *Phimenes curvatus*, *Polistes aurifer* and *exclamans*, and so most of the species seen were not native.

A limited number of samples is not all that significant in

itself, of course, but these results are confirmation of the relative abundance of adventive species. And it is unfortunately to be expected - hiking the ridges around Honolulu after visiting Kauai, one in 10 of the plant species seen were native, and even in the state parks on Kauai, we were treated to the sight of large stands of English ivy. We were told by graduate students from the University of Hawaii that about 80 years ago authorities became convinced that the native flora was doomed anyway, and so airplanes were sent out to broadcast seeds of alien plants! If the flora is a mix of native and adventive species (including deliberately introduced ones!), the fauna had to end up a polyglot too. The book *Hawai'i's Invasive Species* (Staples & Cowie, eds., 2nd printing 2004) states that more than a third of the insect species estimated from Hawaii are alien - a staggering proportion.



Jim Carpenter, hunting vespids in Kauai.

There have been some limited, local successes in getting rid of invasive species in Hawaii, and anything to encourage work along those lines should be supported - the need is obvious. ♦

### The potter wasp

Exquisitely I slip the point  
Into the tissue at the joint  
I watch the victim twist and turn  
Then hoist it off to yonder urn

— Anonymous ISH member, 2010

## Collecting in Sichuan, Yunnan, Qinghai and Tibet

By: Gengyun Niu and Meicai Wei, LISEB, Central South University of Forestry and Technology, Changsha 410004, China

The map of China likes a cock standing in southeastern part of Eurasia. A small region just in the basal part of the abdomen of the “cock” is a very famous landscape for tourism in China - the region is composed of the northwestern corner of Yunnan Province, the eastern margin of Tibet Autonomous Region, the western side of Sichuan Province, and the southeastern corner of Qinghai Province. Shangri-La, the famous “heaven on earth”, lies on this region. Imagining the scenery: three side by side, zigzag deep valley with torrential rivers, and many steep and cloud-kissing mountains covered with undefined snow in the eastern corner of Tibet and northwestern corner of Yunnan Province, the boundless and gently rolling alpine meadow with brilliant flowers in southeastern corner of Qinghai and northwestern arm of Sichuan Province, vastness and thick forest lying silently and immersed in continuous and heavy fog in southwestern side of Sichuan Province. In fact, not only the landscape of the region is fantastic, but the biodiversity is also much higher than most other regions of China. This region with the north corner of Myanmar and the northeastern corner of India was regarded as the core area of Asian biodiversity.

From May 25 to July 9, 2009, we organized a sawfly collecting trip to the core region. This is the second survey to Tibet organized by LISEB. The investigation was partially supported by the National Nature Science Foundation of China (nos. 30571504 and 30771741). Five staff



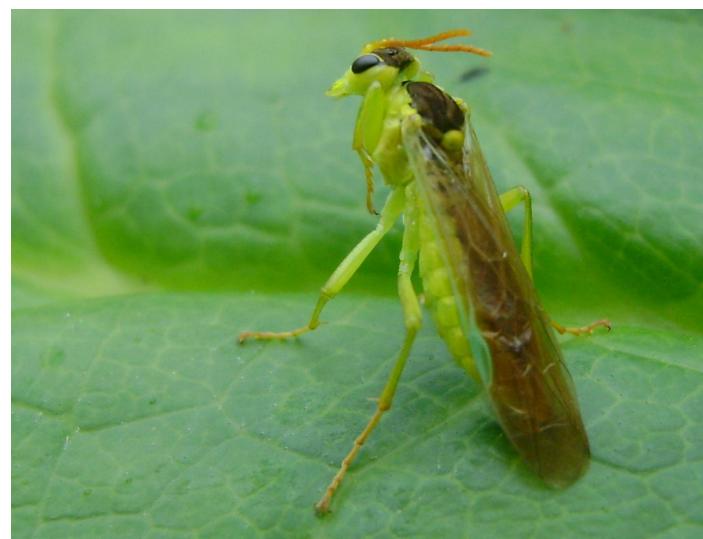
Wei in Mt. Duorela of Tibet, altitude about 3500m. The left “river” is a glacier, which is about 500m away.

from LISEB (Meicai Wei, Gengyun Niu, Wei Xiao, Yihai Zhong, Zejian Li), Dr. Jiangli Tan of Zhejiang University (Studying Braconidae and Mecoptera), Ms Yihan Qian of Yangzhou University (She is studying Plecoptera. We called her Money during the long journey because her last name is same as money in Chinese pronunciation), Dr. Andreas Taeger, Dr. Stephan Blank and Mr. Andrew Liston from DEI took part the investigation. The ten team members went to Yunnan and collected there together in the first ten days. The following investigation changed in two directions: group 1, Xiao drove a jeep and took Andreas, Stephan and Andrew with Zhong going to Sichuan



Yihai, Andreas, Stephan and Andrew (from left) walking in a street of Dali.  
(Photographed by Xiao)

from the northwestern end of Yunnan; group 2, Wei drove another jeep and went to Tibet and Qinghai with other four members. The two teams met together in Mt. Omei about 25 days later. In the 9000 km collecting trip, we collected about 10000 sawfly specimens. A glance to the specimens shows that there are many new species in the material. ♦



*Tenthredo helveicornis* Malaise stands on *Ligularia* sp. Mt. Gongga, watching for sweep nets.



*Meconopsis integrifolia* (Maxim.) Franch. in Mt. Bayankala of Qinghai. Four undescribed sawfly species were collected in this plant: a species of *Pachyprotasis*, a species of *Indostegia*, a *Tenthredo* species with 8-segmented antenna, and a short-winged species of Fernini, which is the first reported short-winged species of Allantinae



Ms. Niu is collecting in deep forest of Mt. Emei, Sichuan Province. The plant that she grasped is *Cardiocrinum giganteum*. (Photo by Wei).



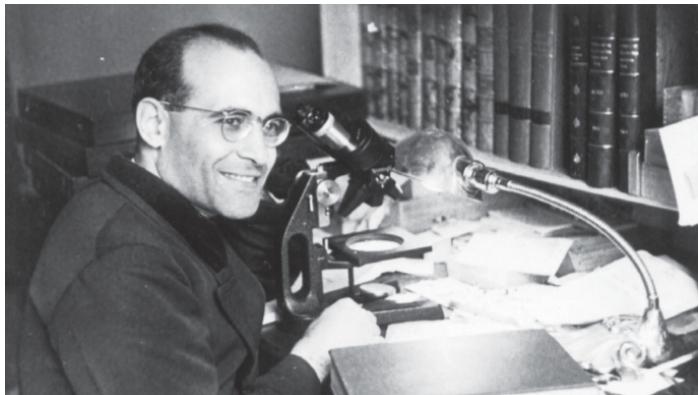
*Rhododendron* shrubs in Mt. Duorela. (Photo by Niu)



An undescribed species of the *Tenthredo lagidina* group collected from Mt. Gongga (Photo by Niu)



The valley of Jinsha River, a branch of Yangtze River. The curved white line is the national way from Yunnan to Tibet. (Photo by Niu)



## Jesus Santiago Moure (1912–2010)

By: Ana Dal Molin, Texas A&M University

We are saddened to communicate the death of Father Jesus Santiago Moure, Brazilian hymenopterist, this last July 10th, in Batatais, São Paulo State. He was buried at the Cemitério da Saudade, in the same city. Moure's health had been debilitated since a stroke he had in 2005.

Padre Moure, as he was known among both scientists and church, was born in November 2nd, 1912 in Ribeirão Preto (Sao Paulo State). He started his studies at age 12 at the Claretian Seminary in Curitiba and obtained a degree in Philosophy, Natural Science, Physics and Mathematics in 1932, at the age of 20, with a monograph on the plant survey of the Claretian Seminary in Rio Claro, *Pugillus Plantarum Rioclarensium*. Moure was named priest of the Claretian Order in 1937. His first contacts with Entomology happened during the same year, at the Museu Paulista in São Paulo. Moure started translating scientific texts from Latin and collaborated specially with coleopterist Frederico Lane, with whom he published his three first papers. He published his first work on bees, *Apoidea Neotropica*, in 1940.

Upon his return to Curitiba in 1938, Pe. Moure was well into his 65-years academic journey that led him to be not only possibly the main authority in Neotropical bees, but also an extremely important figure for Brazilian science. Moure helped to found the Faculdade de Filosofia, Ciências e Letras de Curitiba (which became part of the Universidade Federal do Paraná) (1938), Sociedade Brasileira de Entomologia [SBE] (1937), Sociedade Brasileira para o Progresso da Ciência [SBPC] (1948), the two major Brazilian funding agencies, CNPq (1951) and CAPES (1951), the Graduate Course in Entomology at Universidade Federal do Paraná (1969) and the Sociedade Brasileira de Zoologia (1978). He also started the entomological collection at Universidade Federal do Paraná (DZUP) which

today is named after him. A large part of the holdings of taxonomic literature in the same institution is also a result of his efforts to consolidate entomological research. His work with his contemporaries contributed to distinguish Brazil among other Latin American countries by the development of Graduate courses in universities.

Moure published over 200 articles and 470 species-group taxa. His notes were consolidated in 2007 with the publication of the *Catalogue of Bees in the Neotropical Region* (Moure, Urban & Melo, 2007). Among his collaborators were well-known melittologists as Dr. Charles Michener, Dr. Paul Hurd, Dr. Warwick Kerr and Dr. Paulo Nogueira Neto, besides Dr. Robert Sokal (Moure was a strong supporter of Numerical Taxonomy and gave numerous courses around Brazil on the topic). He supervised 35 MSc students and 12 PhDs, including Dr. Danúncia Urban and Dr. João Camargo. Moure also left over 1,700 pages of notes on bee types resulting from several trips to visit collections, especially in Europe. His contribution to science was recognized in several opportunities by the Brazilian Academy of Science (Costa Lima award, 1970), Sociedade Brasileira de Entomologia (1986), Sociedade Entomológica do Brasil (Bassoli award, 1987), Embrapa (Frederico de Menezes Veiga award, 1998), CAPES (2001), CNPq (Researcher Emeritus diploma, 2006) and the Brazilian Government ('Comendador da Ordem Nacional do Mérito Científico' in 1995 and 'Grã-Cruz da Ordem Nacional in Mérito Científico' in 1998, the most distinguished awards offered to a Brazilian scientist).

A Festshrift published in 2003 includes a biography (Melo & Alves-dos-Santos, 2003) and a complete catalog of the species described by him up to 2002 (Urban, 2003). A list of his publications is available at the Lattes database (<http://lattes.cnpq.br/0945262983627863>). The DZUP collection database can be accessed at the Taxonline web site (<http://www.taxonline.ufpr.br>). [The author thanks Drs. Danúncia Urban and Gabriel Melo for their input. Photo of Pe. Moure from Melo & Alves-dos-Santos (2003)] ♦

### References

- Melo, G. A. R. & Alves-dos-Santos, I. 2003. Moure 90 anos: uma trajetória em imagens. In G. A. R. Melo & I. Alves-dos-Santos (eds.), *Apoidea Neotropica: Homenagem aos 90 Anos de Jesus Santiago Moure*. Editora Unesc, Criciúma. pp. 3-10. Online at <http://zoo.bio.ufpr.br/hymenoptera>
- Moure, J. S., Urban, D. & Melo, G. A. R. (Orgs). 2007. *Catalogue of Bees (Hymenoptera, Apoidea) in the Neotropical Region*. Sociedade Brasileira de Entomologia, Curitiba, xiv + 1054 p. Online at <http://moure.cria.org.br>
- Urban, D. 2003. Catálogo das abelhas publicadas por Jesus Santiago Moure. In G. A. R. Melo & I. Alves-dos-Santos (eds.), *Apoidea Neotropica: Homenagem aos 90 Anos de Jesus Santiago Moure*. Editora Unesc, Criciúma. pp. 11-43.

## Member News —

**Mircea-Dan Mitroiu** (Alexandru Ioan Cuza University, Iasi, Romania, mircea.mitroiu@uaic.ro) would be very grateful to receive any specimens of Afro-tropical Pteromalidae (even in unsorted samples). Many thanks in advance!

**J. Kolarov** (University of Plovdiv, Bulgaria) is finishing second book on Bulgarian Ichneumonidae: *Fauna Bulgarica, Hymenoptera, Ichneumonidae, Part II: Tryphoninae, Eucerotinae, Adelognathinae, Lycorininae, Neorhacodinae, Orthopelmatinae*. Publications from last year:

Kolarov J., M. F. Gürbüz, 2009. *Aptesis cavigena* sp. nov. (Hymenoptera: Ichneumonidae: Cryptinae) from Turkey. *Entomological News* 120 (1):91-94.

Kolarov J., 2009. New and little known Tryphonini (Hymenoptera: Ichneumonidae) for Bulgarian fauna. *Acta ent. serbica* 14(1):73-82.

Gürbüz M. F., J. Kolarov & A. Buncukcu, 2009. A Survey of *Itoplectis melanocephala* (Grav.) - A New Ichneumonid Endoparasite on Wax Moth *Galleria mellonella* L. *J. Ent. Res. Soc.*, 11(2): 43-49.

Kolarov J., S. Çoruh, M. Yurtcan & M. Faruk Gürbüz, 2009. A study of Metopiinae (Hymenoptera, Ichneumonidae) from Turkey with description of a new species. *Zoology in the Middle East*. 46: 75-82.

Kolarov J., M. Yurtcan, 2009. A study of the Cremastinae (Hymenoptera: Ichneumoidae) from Turkey. *Turk. J. Zool.* 33 (2009): 371-374.

Kolarov J., 2009. New and little known Exenterini (Hymenoptera: Ichneumonidae: Tryphoninae) from Bulgaria and some adjacent regions. *Acta entomologica serbica*, 14(2): 209-218.

Kolarov J., 2009. New and little known Ichneumonidae (Hymenoptera) from Bulgaria and related regions. *Bull. Nat. Hist. Mus.*, 2: 131-136.

From **John Luhman**: I retired June 30, 2009, from the Minnesota Dept. of Agriculture because my program and position were to be cut due to the state budget crisis. Luckily I was old enough to retire! I've had no problem filling my time by simply expanding my usual interests and activities, including the time I spend several times a week curating esp. the Hymenoptera in the University of Minnesota Insect Collection (St. Paul) as an adjunct professor. The University collection is over 3 million specimens and includes about 50,000 species. With respect to Hymenoptera, it has very good collections of Ichneumonidae, Symphyta, and midwestern Mutillidae

I also just finished reading Bernd Heinrich's book, *The Snoring Bird*, a memoir and biography of Bernd and his father Gerd Heinrich of Ichneumoninae fame. I recommend it to any ichneumonologist, as well as aspiring (or expiring) taxonomists. In several respects the book is inspiring in that regard. The question of the fate and purpose of classical taxonomy

is constantly brought up through Bernd's reflections, and disagreements with his father. In light of the erosion of alpha taxonomy the past couple decades, he brings up philosophical and scientific attitudes that need to be addressed.

On another topic of interest to ichneumonologists is the subject of new classifications after revelations from ongoing molecular studies. So far it appears that the 35 some subfamilies could collapse, like the weevils, into a handful of major "subgroups." Maybe as few as four, based on ovipositor and arolet form. But certainly not anything like the proliferate number of subfamilies now. This poses the problem of how to group the many distinct, and mostly holophyletic, subgroups to make meaningful and useful classification possible. One possible scenario is to revert back to a scheme like Foerster's using "divisions" containing "subfamily" groups, containing monophyletic tribes. Certainly tribal groups will need to be employed more frequently to refer to monophyletic groups within groups (like the Orthocentriniforms in the Helictinae). If classification is to be at all useful for ichneumonids in the future, there will have to be more clever ways is showing major subgroups than the constant fragmentation of groups we now have.

From **Jim Whitfield** (University of Illinois): The Whitfield lab at Illinois has had a relatively complete turnover in personnel in the last year, so it's time for an update on the goings-on. Josephine Rodriguez finished her PhD last year and is currently an NSF Postdoctoral Fellow at the National Center for Ecological Analysis and Synthesis at UCSB, working on parasitoid food webs. We continue to work alongside **Sydney Cameron**'s lab, which is conducting large-scale field and lab studies of population declines in North American bumble bees, analyses of color pattern evolution in bumble bees, and comparative genomics of corbiculate bees more broadly.

Jim Whitfield continues to conduct descriptive taxonomic studies of braconid wasps, especially neotropical Microgastrinae. Collaborations with the large caterpillar rearing inventories of the Guanacaste Conservation Area (ACG) in Costa Rica, at Yanayacu Biological Station in Napo, Ecuador, and in Papua New Guinea supply vast quantities of new material for both descriptive and phylogenetic work. Other ongoing projects concern comparative aspects of sex determination and mating systems in *Cotesia* wasps, comparative genomics of polydnaviruses in microgastrine wasps (with Mike Strand at the University of Georgia), and large-scale molecular phylogenetics of microgastrine genera (no, we haven't finished that project yet!). After finish some collaborative work on the *Nasonia* genomes last year, we are on to beginning sequencing of the *Microplitis demolitor* genome (with Hugh Robertson in my department and Mike Strand). Much of my day-to-day work this year is wrapped up in trying to finish revising, with Sandy Purcell, the (formerly Daly, Doyen and Purcell) *Introduction to Insect Biology and Diversity* for its 3rd edition. Textbooks are an amazing amount of work!

Alex Wild is just finishing his second year in the lab as a

postdoc working with Jim and (especially) **Paul Marsh** on NSF-funded revisionary, molecular phylogenetic studies and LucID interactive keys for neotropical *Heterospilus*, a huge genus. In his “spare time” he continues to work with ants, finish off molecular phylogenetic papers with the beetle AToL project (his previous gig) and photograph and blog about insects.

Jaqui O’Connor joined the lab last fall from Newcastle University in the UK, funded by the comparative polydnavirus genomics project with Mike Strand. She continues to work with that (mainly at the moment producing a multigene molecular phylogeny of the reared ACG *Cotesia*), but is also expanding into tritrophic interaction analyses in Ecuador, and is conducting a multigene analysis of the microgastrines (especially *Parapanteles*) that attack *Eois* (geometrid) caterpillars on *Piper* spp. (both these other trophic levels are also being analyzed).

Diana Arias-Penna joined the lab last fall after a stint of university teaching in Colombia. She worked previously at the Humboldt Institute associated with Mike Sharkey’s and Brian Brown’s Colombian survey project, and for her M. S. completed a revision of Colombian *Urosigalpus* (Braconidae) along with some other projects on Chalcididae. She recently finished a taxonomic paper on New World *Venanus* (with Jim and with Claus Rasmussen, soon to appear in the *Annals of the ESA*, and is beginning studies on neotropical *Glyptapanteles*, integrating material from the ACG, Colombian and Ecuador projects.

The lab currently has funds for an NSF Research Experiences for Undergraduates student, if any of you out there know of any promising young hymenopterists who would like the opportunity. Previous REU students have all published excellent collaborative taxonomic papers in the lab.

**Vladimir Gokhman** (Moscow State University) recently published a manuscript on karyotyping in Hymenoptera:

Gokhman, V.E. 2009. Karyotypes of Parasitic Hymenoptera. Dordrecht: Springer Science+Business Media B.V. XIII+183 pp.

From **Ana DalMolin** (Parasitic Hymenoptera Research Labs, Department of Entomology, Texas A&M University, College Station, TX 77843-2475 USA): I am working with **Jim Woolley** on the taxonomic revision of the family Signiphoridae (Hym: Chalcidoidea). The more we can get our hands on, the better. Badly undersampled areas include: for the New World, U.S. midwest, Brazil (or everything South of the Tropic of Capricorn for the matter), and of course stuff from the Old World, especially Indochina.

For a bonus, we will be even happier if we can use it to perform DNA studies. We want to explore the relationships within the family and its position relative to other chalcidoids. The material we have had luck with was either very recent and kept in alcohol (+95% EtOH) in the freezer or dried with HMDS not too long after collected. We are performing non-

destructive extractions so we expect to have the specimens in slides for morphological studies afterward.

From **Trish Mullins** (North Carolina State University, Entomology, Campus Box 7613; Raleigh, NC 27695 USA, plmullin@ncsu.edu): I am beginning my graduate studies with **Andy Deans** working on systematics of Evanidae of Costa Rica. I am just beginning to make an attempt at rearing evaniids from cockroach oothecae, starting with those found in North Carolina. If anyone has rearing data available (from anywhere in the world!), I would greatly appreciate any information you can give me. Any evaniid specimens collected from anywhere in the New World, especially from Central and South America, would also be very useful to me and greatly appreciated.

**Andy Deans** (North Carolina State University) reports: Life in North Carolina is wonderful. **Heather Hines** and I just had our first child, a diploid specimen whom we named Vivian. The child of two hymenopterists, she will undoubtedly avoid the world of sawflies, bees, wasps, and ants (and probably science altogether) in pursuit of other emergent passions.

Lab life is great, as well—lots of people doing lots of great research and lining up lots of manuscripts that cover everything from ensign wasp taxonomy and phylogenetics, ceraphronoid systematics and comparative morphology, anatomy ontology development, hymenopterist-centric linguistics, and biodiversity informatics. We’re also pushing hard to get the NCSU Insect Museum Hymenoptera collection into decent shape, with respect to diversity and curation level. I’ll probably write up a more thorough description of that process (and the collection’s potential) for the next issue of *Hamuli*.

### The dainty daub

It’s hot, it’s dry  
 I’m going to fry  
 The wimpy waisted wasp complained  
 Get over it, you silly twit  
 Observed the fly  
 Just passing by  
 But it’s so long since last it rained  
 And see how now the pond has drained  
 Home repair is sorely constrained  
 The fly replied: why not a bit  
 You can simply use your spit

— *Anonymous ISH member, 2010*



Hymenopterists engaged in deep, philosophical conversations at the 7th ICH (photo courtesy of: Jim Carpenter)



Delicious Hungarian wild boar stew, served to delegates at the 7th ICH  
(photo courtesy of: Jim Carpenter)



A pile of old logs is a fine place to collect hymenopterans! (photo courtesy of: Trish Mullins)

---



7th ICH organizer and King of the Galls, George Melika (photo courtesy of: Trish Mullins)



Hymenopterists are indeed expert dancers! (photo courtesy of: Trish Mullins)

## 2010 Membership Information

- \$22 Student (requires signature of advisor: \_\_\_\_\_ )
- \$45 Regular
- \$5 Family member (requires association with another member: \_\_\_\_\_ )
- \$750 Life
- \$80 Institutional (e.g., libraries, universities)

Fees listed in US\$. Checks should be made out to *International Society of Hymenopterists*. For payment by credit card please add \$1.50 processing fee.

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

credit card #: \_\_\_\_\_

credit card type:  Visa     Mastercard

security code: \_\_\_\_\_ expiration date: \_\_\_\_\_

signature: \_\_\_\_\_

name on card: \_\_\_\_\_

Phone: \_\_\_\_\_  
Email: \_\_\_\_\_  
Interests: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**send payment to:**

Craig M. Brabant, Treasurer ISH  
Department of Entomology  
University of Wisconsin-Madison  
1630 Linden Drive, room 445  
Madison, WI 53706 USA  
+1 608.262.2078 phone +1 608.262.3322 fax  
[brabant@entomology.wisc.edu](mailto:brabant@entomology.wisc.edu)