

Hamuli

The Newsletter of the International Society of Hymenopterists



Machu Picchu, near Cusco, Peru, site of the 8th International Congress of Hymenopterists.

Greetings from your New President after the Spectacular Cusco Congress

By: Jim Whitfield, Department of Entomology, University of Illinois, Urbana-Champaign, IL, USA

Hi everyone! I just wanted to introduce myself to those of you who were not able to make it to the Cusco Congress. I work on a wide diversity of biological topics (systematics, ecology, genomics), all related to microgastrine braconid wasps worldwide, so I have a strong interest in seeing the Society both continue to internationalize (the Cusco conference was a great example of this trend) but also to expand beyond its current strong taxonomic focus. As I mentioned in a previous *Hamuli* post, I also am interested in us preserving our history more vividly,

both through our photographic archives of hymenopterists and through our Society's Archivist position.

What a spectacular success the Cusco meeting was, due to fantastic local organizers (see message from my predecessor John Heraty!), and of course due to major efforts from the other ISH officers who had a longer effort to help organize the conference than I did. Kudos to all!

Among the highlights for me (besides the great talks and posters): the day-long excursion to many sites including Saqsaywaman, the banquet with its local music and dancing, and the local interesting foods, crafts and markets. John Heraty has uploaded a lot of photos to Flickr further documenting all this. After the meetings, I headed to Machu Picchu, with its spectacular ruins (see above) and scenery. Despite the effort to get to the Congress from central Illinois (4 flights in each direction, and on the way back trains and vans as well), it

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Contact: Andrew R. Deans
Department of Entomology
Pennsylvania State University
501 ASI Bldg
University Park, PA
16802 USA.
Fax: +1 814 865 3048
Ph: +1 814 865 1895
adeans@gmail.com

President:
James B. Whitfield
jwhitfie@life.illinois.edu

Treasurer:
Craig Brabant
brabant@entomology.wisc.edu

Secretary:
Lars Krogmann
lars.krogmann@smns-bw.de

Webmaster/Archivist:
Katja Seltmann
enicospilus@gmail.com

Editor, Hamuli:
Andrew R. Deans
adeans@gmail.com

Associate Editors:
Robert Longair
István Mikó

Art Director:
Nick Sloff

Articles appearing herein should not be considered published for the purposes of zoological nomenclature.. Find us on the Web:
<http://hymenopterists.org>

Greetings ... Continued



Jim, during a 6:00 am on hike up Machu Picchu Mountain, above the archaeological site.

was all well worth it.

Soon we will be considering the locations for the next Congress in 2018 – Cusco will be a hard act to follow, but I'm sure it will be very exciting to look forward to as well. •

See more:

<https://flic.kr/s/aHsjZX3hji> (Congress)
<https://flic.kr/s/aHsjZXZojy> (Wayqecha)
<https://flic.kr/ps/2UnMob> (Society)

ISH and That

By: John Heraty, University of California, Riverside, USA

This is the last column from me in the ISH and That category. Largely this is to comment on the excellent meeting in Cusco, Peru. This was the first congress of Hymenopterists in Central or South America (and hopefully not the last). We had over 160 participants, from 28 different countries represented. The largest contingents were from Brazil (51), U.S.A. (22), and Peru (18). Travel awards were made to six students, two of which (Crystal McEwen, University of Maryland, and Erica Tucker, University of Kentucky) also won presentation and poster awards. The first-place award winners were Antônio Freire de Carvalho (Univ. Federal de São Carlos) and Miles Zhang (University of Manitoba). Of course, just being there was a great experience for everyone. There were 77 presentations, 76 posters, one wild kick-off reception (more than enough Pisco-Sours for everyone!), and a great banquet with live music and even some dancing. Local arrangements were handled by Frank Azorsa, Erick Yabar, Lidia Sulca, and a host of wonderful volunteers. Our meeting was a financial success because of the help from our meeting sponsors (Bioquip, Bugdorms, CSIRO publishing, Entosphinx, Pensoft and Princeton University Press). One of the main benefits of the meeting



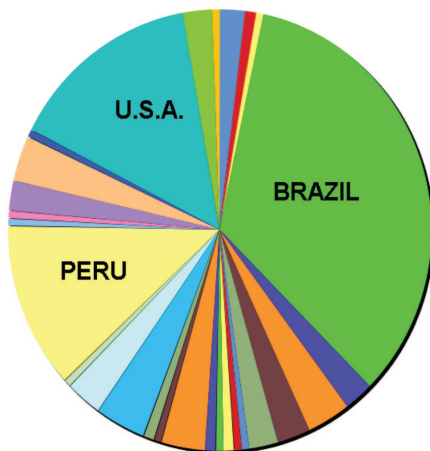
ISH and That ... *Continued*

was a big increase in our Society membership. We have a strong and healthy Society, but we ultimately need more members. This translates directly to what we can do as a Society, including making a greater number of travel awards. We are two years away from our next big meeting at the International Congress of Entomology meeting in Orlando. Hopefully we can ride the wave and support more students going to another superb meeting!

Sincerely,



- ISH Past-President



International representation at the 8th ICH. Countries represented above: Argentina, Australia, Austria, Brazil, Bulgaria, Canada, China, Colombia, Czech Republic, Denmark, Georgia, Finland, France, Germany, Hungary, Japan, Mexico, Norway, Peru, Romania, Russian Federation, South Africa, Sweden, Switzerland, USA, United Kingdom, Venezuela.

Parasitic Hymenoptera course in Switzerland

By: Hannes Baur, Natural History Museum Bern, Bernstrasse 15, 3005 Bern, Switzerland.

In the past three years I have given a one-week block course on parasitic Hymenoptera. Although taking place within

the framework of a lecture at the Institute of Ecology and Evolution, University of Berne (Switzerland), the course is open to everybody interested in the subject. Therefore, I usually have a couple of participants from other institutions (e.g., natural history museums and CABI Delémont in Switzerland), in addition to 8–10 regular students. The course is normally held in late summer; this year it took place from August 25th till 29th.

The aim is to give an overview on the diversity, systematics, and biology of parasitic wasps with a special focus on morphology and identification. Thus, at the end of the course, participants should be able to recognize the European families with the help of keys. On an excursion day the students are introduced to collecting using the Noyes sweep net, Malaise traps and yellow pan traps. The next day the collected material is mounted, either directly pinned or glued on cards. The course is supplemented by talks of external lecturers, this year for instance by Tim Haye (CABI, Delémont, Switzerland) on biocontrol and by Marc Neumann (Walterswil, Switzerland) on community ecology. Students are furthermore introduced to digital stack imaging using the Keyence photo microscope. Finally, they are expected to give a small presentation of some individual work, such as the identification of specimens at the genus or species level, investigation of a complex of sibling species, construction of a simple identification key, etc.

In the first two years, I used a simplified version of the key of Goulet & Huber (1993) *Hymenoptera of the World: An Identification Guide to Families*, restricted to European taxa. However, for this year a new key has been furnished using the Xper3 software (<http://www.xper3.fr/>). This software allows the construction of multi-access (interactive) identification tools. The program runs in a web browser

and thus does not require the installation of special software (if needed, Xper2, an earlier, java based version is available that can be installed on all platforms). Xper3 is free but has about the same functionality as, e.g., the Lucid software.

The new, electronic Xper3 key proved to be a great improvement with respect to the earlier paper version of the key, although it is essentially based on the same character matrix. Identification success was much higher and the students needed only about half the time for identifying the same sample of specimens. I thus can only recommend the use of Xper3. The key used in the course can be accessed using the following link <http://bit.ly/1AaMVMH>



Participants of the parasitic Hymenoptera course from August 25–29, 2014. Photo taken on the excursion day in Leuk, Valais (Switzerland). Front row, from left to right: Jannic Odermatt, Thomas Obrist, Louis Sutter, Dennis Quach, Lukas Lischer; back row: Marc Neumann (co-lecturer), Debora Unternährer, Katrin Luder, Sandro Meyer, Tina Dancau, Timea Szikora.



Female of *Monodontomerus* sp., taken on the Keyence digital microscope by Timea Szikora during the parasitic Hymenoptera course.

HYM Course News

By: Robert R. Kula, Matthew L. Buffington, Michael W. Gates, John T. Lill, James P. Pitts, and David B. Wahl

The fifth offering of HYM Course was held at the Eagle Hill Institute near Steuben, Maine. HYM Course is an expanded version of the Parasitic Hymenoptera Training Session that was offered for over 20 years starting in 1980. The course consisted of 19 participants from three countries. Instructors were Matthew Buffington (Systematic Entomology Laboratory,

tion. Katherine Nesheim (The Ohio State University) and Ben Smith (National Park Service) were recognized for their excellent performances on the post-course assessment.

Plans are underway to offer HYM Course in Argentina in March of 2015. The course will be advertised broadly, including on the parahym listserv. Please contact Michael Gates (Michael.Gates@ars.usda.gov) for information about the next offering of the course. Also, people interested in HYM Course can check for announcements on the course website:

<http://hymcourse.org/> •



James Pitts teaches the next generation of hymenopterists.

USDA-ARS-SEL), Michael Gates (SEL), Robert Kula (SEL), John Lill (The George Washington University), James Pitts (Utah State University), and David Wahl (American Entomological Institute). The course covered classification, identification, and natural history for the entire order. HYM Course welcomed a new instructor in 2014. John Lill, of The George Washington University, provided instruction in parasitoid ecology and behavior. Thus, students in HYM Course 2014 received an unprecedented breadth of information on wasps, bees, and ants. In addition to new content on parasitoid ecology and behavior, James Whitfield (University of Illinois) was a guest lecturer during the Braconidae portion of the course and delivered an outstanding lecture on integrative approaches for systematics research on Braconidae. The course concluded with a banquet dinner and awards ceremony where participants were given a certificate of comple-

Some thoughts after the Cusco meeting

By: Donat Agosti, Plazi, Bern, Switzerland

We hymenopterists must be doing something right if we are regarded at the International Diptera Congress as exemplars for best practices in taxonomic cyber-infrastructure (anonymous dipterist, *in litt.*). Looking at this as one of the hymenopterists involved, I take this as a sign that we are on the right track, but we also know that there is still quite a long way to go before we have an adequate cyberinfrastructure that serves us well. If we do this right, it will also be open to anyone else and this will result in much wider outreach with much greater impact.

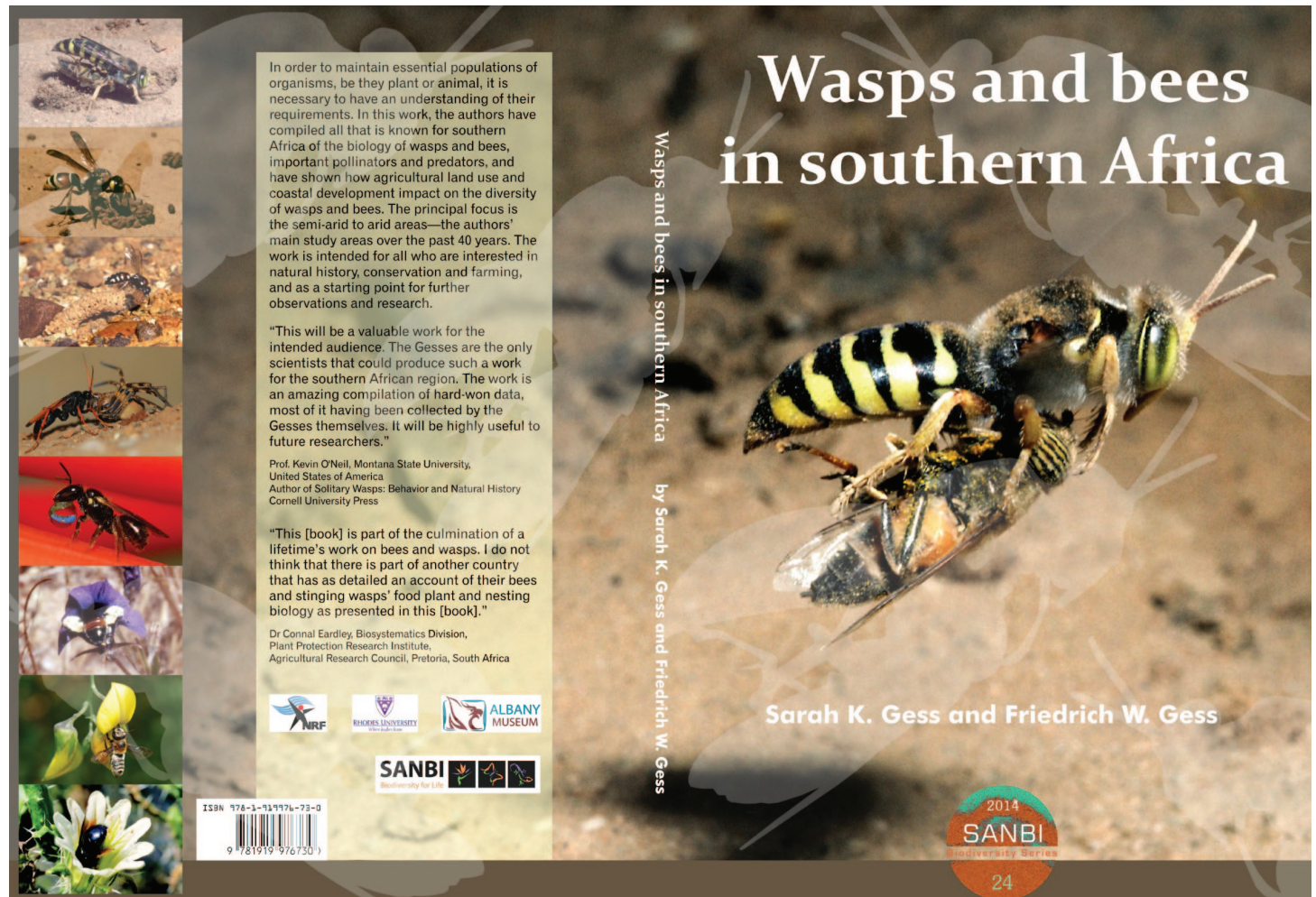
The following thoughts are not exhaustive but reflect my own interests in publication-related topics. I make a few suggestions that, with little effort, will

improve access to content and make our knowledge much more widely accessible, not least for our colleagues who are not affiliated to a scientific institution with their extensive subscriptions to publications. Many of those colleagues are where most of the natural diversity is.

Journal of Hymenoptera Research: Lyubo Penev's report on the development of the *Journal of Hymenoptera Research* presented at the Cusco meeting has been very convincing and promising, from the figures presented as well as from the participants' comments in the corridor afterwards. Now, we should be watching the really interesting developments taking place in Pensoft's next generation journal, the *Biodiversity Data Journal*. This publishes in a new and very efficient way, using a form and pull-down menu-based authoring system. Tabulated data such as observation records can be imported as XLS files. Its structure will maintain almost all of the structured data that we have on our computers. It also allows us to link to external resources, such as Zoobank for names, DOIs for bibliographic data or links to digital records of specimens. In the near future, we will be able to insert structured character data. The *BDJ* preserves structured data so that the information can be easily reused after publication. As we become familiar with this model, we may wish to move the current *JHR* format into this more advanced model. An associated bibliographic tool, Refindit, will find citations and pull in bibliographic data including DOIs that allow articles to link quickly to digital copies of the references.

Open Access. Without doubt, Open Access is the best strategy for a free and efficient exchange of data. It is a way by which we can support all colleagues from around the world especially those who work outside major institutions and in the South. Support for initiatives like the Bouchout Declaration on Open Biodiversity Knowledge Management help us to explain to funding agencies, that we, the scientists, do want Open Access and commit to it. It shows that our organizations support this effort by building up an infrastructure that will allow long-term preservation of digital content, the maintenance of persistent identifiers and tools to actually find out content more efficiently. Every signature gives this young initiative more weight!

Access to legacy literature. Most of us have on our computer drives a folder with



Wasps and bees in southern Africa

Wasps and bees in southern Africa by Sarah K. Gess and Friedrich W. Gess

In order to maintain essential populations of organisms, be they plant or animal, it is necessary to have an understanding of their requirements. In this work, the authors have compiled all that is known for southern Africa of the biology of wasps and bees, important pollinators and predators, and have shown how agricultural land use and coastal development impact on the diversity of wasps and bees. The principal focus is the semi-arid to arid areas—the authors' main study areas over the past 40 years. The work is intended for all who are interested in natural history, conservation and farming, and as a starting point for further observations and research.

"This will be a valuable work for the intended audience. The Gesses are the only scientists that could produce such a work for the southern African region. The work is an amazing compilation of hard-won data, most of it having been collected by the Gesses themselves. It will be highly useful to future researchers."

Prof. Kevin O'Neil, Montana State University, United States of America
Author of *Solitary Wasps: Behavior and Natural History* Cornell University Press

"This [book] is part of the culmination of a lifetime's work on bees and wasps. I do not think that there is part of another country that has as detailed an account of their bees and stinging wasps' food plant and nesting biology as presented in this [book]."

Dr Connal Eardley, Biosystematics Division, Plant Protection Research Institute, Agricultural Research Council, Pretoria, South Africa



Sarah K. Gess and Friedrich W. Gess



Wasps and Bees in Southern Africa can be ordered from SANBI Bookshop, Pretoria. e-mail: bookshop@sanbi.org.za. Website : www.sanbi.org or from: Van Schaik Bookstore, Grahamstown. e-mail: grahamstown@vanschaik.com

Thoughts ... Continued

digital copies of the relevant taxonomic (and other) publications dating back to the 18th century. It takes a substantial amount of research time to find, copy, and scan these publications, and to add them to specialised databases. All of our colleagues have also to find those publications, or ask colleagues for digital copies. A different approach would be to build together an open Biodiversity Literature Repository (BLR), an environment that can continually improve, and avoid the need of everyone having to repeat the same work. The publications can be placed in the BLR, a public repository – with the necessary access controls to avoid copyright-related problems - with a long term commitment for its maintenance. An example of this is Zenodo at CERN in Switzerland. Here, each publications gets a DOI that can be attached to the cited references in future publications. If published in *JHR*, at the moment you publish, not only can

everybody read your article, we deliver a huge service to the community because we provide access to all the cited work. If you are interested in getting involved, you can contact either Pensoft or Plazi for advice.

The use of persistent identifiers for as many as possible digital objects will assure that we have a mechanism to form links from publications to the data on which they are based. For example, all the ant specimens at the California Academy of Sciences can now easily be linked through the CAS' commitment that maintain stable and resolvable identifiers (URLs). With such identifiers (e.g., <http://www.antweb.org/specimen/casent0101073>), no-one needs to painstakingly search for the specimen CASENT0101073 that was cited in the materials examined section. Because of this identifier, users have a direct link to the cited specimen. Since the content in *JHR* is published in XML, machines could even read and understand these lines and thus open up new opportunities for text mining.

With new extra steps such as these, our community would not only be ahead of the pack, but we are a huge step closer to being able to study our animals more efficiently. It will save the next generation a huge amount of time to decipher its unstructured content to make it available for open knowledge management. This element complements and will integrate with all the other fantastic new tools, such as digital imaging, ontologies and genomics, to more quickly describe the still widely undiscovered diversity of hymenopterans. Find out more:

Biodiversity Data Journal
<http://biodiversitydatajournal.com/>

Bouchout Declaration:
<http://bouchoutdeclaration.org>

Journal of Hymenoptera Research:
<http://www.pensoft.net/journals/jhr>

Refindit: <http://refindit.org> •

Call for Archivist Position

We are soliciting applications for an Archivist for the International Society of Hymenopterists. A 1–2 page application letter should be sent to the ISH Executive (jwhitfe@life.illinois.edu, a.polaszek@nhm.ac.uk). The letter should include 1) a brief statement of the candidate's perspective on their goals of the position and why they are suited for the position, 2) a long term plan for storage of materials (electronic and in print), 3) a brief (one-page) curriculum vita. Applications will be accepted until January 1, 2015, with announcements made by February 1, 2015.

Call for 2018 ISH Congress Location

The ISH executive has developed a set of new guidelines and deadlines for future ISH congresses. A 1–2 page proposal will be due January 1, 2015 to President and President-Elect (jwhitfe@life.illinois.edu, a.polaszek@nhm.ac.uk). Proposals should include a brief outline of reasons for location (reasons for location: unique location or long overdue, access to a unique membership, location appeal, identification of a team of local organizers and support network, potential venue, potential registration and meeting costs, and opportunities for fieldwork. All points are to be addressed. Proposals will be evaluated by the Executive Committee and requests for successful bidders to be returned by February 1, 2015. Successful bids would be required to submit a more complete bid by May 30, 2015 that would include more details on the hotels, room charges, registration estimates and a
(see next page)

Hymenoptera at the Übersee-Museum Bremen – getting to know the pleasures and pain of a curator

By: Volker Lohrmann, Übersee-Museum Bremen, Bahnhofsplatz 13, 28195 Bremen, Germany

Welcome to the club! Now you'll get to know the pleasures and pain of a curator: You've lots and lots of interesting (often old) material and no one wants to see it.

– Colleague, upon my employment as a curator

Well, that was a start! But I should begin a little earlier. It was about the same time last year, when I was packing the stuff in Berlin preparing my move to Bremen where I was to follow in the footsteps of the well-known melittologist Johann Dietrich Alfken (1862–1945) becoming the curator for the entomological collection at the Übersee-Museum Bremen (UMB). Arriving here I soon had to find out, as some of you will certainly know, that Alfken's collection did not remain at the UMB but was transferred to the Museum für Naturkunde Berlin – quite unfortunate.

However, the UMB insect collection has a tradition of about 200 years with the oldest parts dating back in the early half of the 19th century. The most significant collection from these early days still kept at UMB is that of the merchant Adam Heinrich Norwich (1771–1851) which comprises over 4000 species of insects from around the world (Hohmann 1980; this publication provides valuable information

on the history of entomology in Bremen).

More or less recently, major extensions have been added essentially by Herbert Hohmann (e.g. from Papua New Guinea, Costa Rica, Canary Islands) and Helmut Riemann (Northwest Germany). Both of them served the collection/museum for many years and I am glad that they keep visiting the museum once a week and pass on their knowledge and experience. Today the collection holds about 600,000 insects including about 100,000 Hymenoptera and is housed in a nice new air-conditioned building.

I would like to take the opportunity to advertise our entomological collection. Thanks to a preliminary database compiled by my predecessor H. Hohmann (and colleagues) I am able to provide a short summary of the Hymenoptera collection. The taxonomic backbone, however, was adopted at that time from Brues et al. (1954), so the taxonomy of some groups is certainly outdated.

- Ampulicidae (23 specimens, 2 species)
- Anacharitidae (4 specimens, 3 species)
- Andrenidae (5688 specimens, 130 species)
- Anthophoridae (3263 specimens, 282 species)
- Apidae (1804 specimens, 106 species)
- Argidae (237 specimens, 17 species)
- Aspiceridae (2 specimens, 2 species)
- Astatidae (129 specimens, 11 species)
- Belytidae (1 specimen, 1 species)
- Bethyilidae (17 specimens, 4 species)
- Braconidae (134 specimens, 98 species)
- Cephidae (58 specimens, 8 species)
- Ceraphronidae (6 specimens, 4 species)
- Chalcididae (6 specimens, 4 species)
- Charipidae (1 specimen, 1 species)
- Chrysididae (1366 specimens, 132



Historic building of the UMB (a part of the Berlin Wall on the left) (Photo: M. Haase, © Übersee-Museum Bremen).



The new curator at UMB (Photo: M. Haase, © Übersee-Museum Bremen).

- species)
- Cimbicidae (53 specimens, 9 species)
- Cleonymidae (7 specimens, 4 species)
- Cleptidae (73 specimens, 6 species)
- Colletidae (1601 specimens, 57 species)
- Crabronidae (4226 specimens, 98 species)
- Cynipidae (908 specimen, 26 species)
- Diapriidae (9 specimens, 7 species)
- Dryinidae (9 specimens, 7 species)
- Embolemidae (1 specimen, 1 species)
- Eumenidae (1742 specimen, 201 species)
- Eurytomidae (18 specimens, 4 species)
- Evaniidae (2 specimens, 1 species)
- Figitidae (8 specimens, 5 species)
- Formicidae (1554 specimens, 38 species)
- Gasteruptionidae (132 specimens, 17 species)
- Halictidae (6605 specimens, 245 species)
- Heloridae (2 specimens, 2 species)
- Ichneumonidae (10216 specimens, 1435 species)
- Larridae (1019 specimens, 58 species)
- Leucospidae (1 specimen, 1 species)
- Masaridae (57 specimens, 9 species)
- Megachilidae (1177 specimens, 198 species)
- Melittidae (188 specimens, 13 species)
- Methocidae (26 specimens, 1 species)
- Miscogasteridae (4 specimens, 2 species)
- Mutillidae (219 specimens, 39 species)
- Myrmosidae (84 specimens, 2 species)
- Myzinidae (12 specimens, 1 species)
- Nyssonidae (1036 specimens, 45 species)
- Ormyridae (2 specimens, 1 species)
- Pamphiliidae (78 specimens, 10 species)
- Pemphredonidae (2036 specimens, 49

- species)
- Perilampidae (3 specimens, 1 species)
- Philanthidae (1067 specimens, 34 species)
- Platygasteridae (4 specimens, 3 species)
- Pompilidae (2093 specimens, 104 species)
- Proctotrupidae (4 specimens, 3 species)
- Pteromalidae (16 specimens, 10 species)
- Sapygidae (62 specimens, 4 species)
- Scelionidae (6 specimens, 5 species)
- Scoliidae (483 specimens, 40 species)
- Siricidae (73 specimens, 5 species)
- Sphecidae (829 specimens, 71 species)
- Tenthredinidae (2433 specimens, 321 species)
- Tiphiidae (138 specimens, 6 species)
- Torymidae (41 specimens, 24 species)
- Trigonalidae (7 specimens, 1 species)
- Vespidae (2809 specimens, 203 species)
- Xiphydriidae (1 specimen, 1 species)



A reference collection as part of the permanent exhibition (Photo: M. Haase, © Übersee-Museum Bremen).

Beside these ~56,000 catalogued specimens there are still ten thousands of wasps in alcohol (e.g. from Northwest Germany and expeditions to Papua New Guinea and Costa Rica) waiting for preparation and identification – Microhymenoptera in particular. If you are interested in getting further information on the collection, visiting our museum, requesting a loan, or finding a place to deposit your (para-) types and other material please drop me a short line.

The most recent news, though about odonates, might serve as a motivation for the study of “old museum specimens”: A visiting scientist discovered in our collection a series of odonates donated to the

business plan for the meeting, post-congress activities such as collecting trips, and congress activities such as visits to nearby natural areas and tourist locations, archeological or historical sites, *etc.* The successful bid will be evaluated by the Executive Committee and announced by July 1, 2015.

Call for Student Representative Position

We are calling for applications for the student and early career representative for the International Society of Hymenopterists. Send a 1–2 page cover letter with your background and goals for this position, a brief vita, and supporting letter from your supervisor to the ISH Executive (jwhitfie@life.illinois.edu, a.polaszek@nhm.ac.uk). You must be either a postgrad student or an early career researcher (postdoc). Applications will be accepted until the end of September 2014, with announcements made by October 1, 2014. The new representative will take over during the ESA meeting in Portland, Oregon.

Graduate Assistantship

The Deans Lab at the Frost Entomological Museum at Penn State is soliciting applications for a PhD-level graduate assistantship. The successful candidate will work on Ceraphronoidea systematics, as part of a 4-year, U.S. NSF-funded project. More information can be found at the following websites:

<http://deanslab.org> (lab)

<https://sites.psu.edu/frost/> (Frost Entomological Museum)

<http://ento.psu.edu/> (Penn State Entomology)

Übersee-Museum ... Continued

museum in 1875 by Baron Michel Edmond de Sélys Longchamps (1813–1900). The provenance of the specimens was tracked based on the characteristic hand writing on the labels. Not only that series comprises forgotten type specimens of nine species which have never been labeled as such but also some specimens collected by Alfred Russel Wallace (1823–1913) and Henry Walter Bates (1825–1892) (Seehausen 2014). At least someone wants to see that (old) museum stuff and I am glad that it was worth it.

Finally, this note was inspired by a similar article by Andy Deans providing a short overview of the Hymenoptera at the Frost Entomological Museum (Deans 2013). So why not take the chance to introduce some more collections in the next issues of *Hamuli* which are not so well known like the “big five”?! •



Gosh! 1, 2 ... 4 ocelli!!! What a weird wasp!!! (Photo: M. Haase, © Übersee-Museum Bremen).

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1. Brues CT, Melander AL, Carpenter FM (1954) Classification of insects. Bulletin of the Museum of Comparative Zoology 108.
2. Deans A (2013) Hymenoptera at the Frost Entomological Museum. *Hamuli* 4 (2): 22-23.
3. Hohmann H (1980) Zur Geschichte der Entomologie in Bremen. *Jahrbuch der Wittheit zu Bremen* 24: 121-152.
4. Seehausen M (2014) Forgotten duplicates from the Odonata collection of Edmond de Sélys Longchamps rediscovered at the Übersee-Museum Bremen (Germany). *International Dragonfly Fund - Report* 70: 1-15.

Parasitoid Systematics and Biology Symposium

By: Andy Polaszek, Natural History Museum, London, U.K.

A half-day symposium entitled “Parasitoid Systematics and Biology” took place on Tuesday, 5th August 2014 as part of the 10th European Congress of Entomology in York, U.K. The symposium was co-organised and chaired by Lucian Fusu (Al I. Cuza University, Iasi, Romania) and Andrew Polaszek (Natural History Museum, London). The following speakers presented these papers (speaker underlined):



Left to right: Noel Mata-Casanova, Dan Gerling, Mar Ferrer-Suay, Lucian Fusu, Helmut Fritz van Emden, Andrew Polaszek, Ilari Sääksjärvi & Miriam Gurpegui.

Plenary paper: *15 years of studying Amazonian ichneumonids – how new tropical studies affect the “anomalous” latitudinal diversity gradient of the family*
Ilari E. Sääksjärvi, Zoological Museum, University of Turku, Finland

Presentation of the Interactive Charipinae Worldwide Database (Hymenoptera: Cynipoidea: Figitidae).

Mar Ferrer-Suay^{1*}, Jesús Selfa² & Juli Pujade-Villar¹
¹ Universitat de Barcelona, Facultat de Biologia, Departament de Biologia Animal. ² Universitat de València, Facultat de Ciències Biològiques, Departament de Zoologia. Campus de Burjassot-Paterna.

Current knowledge of the subfamily Anacharitinae (Hymenoptera: Figitidae) in Europe

Noel Mata-Casanova¹, Jesús Selfa² and Juli Pujade-Villar¹.
¹. Departament de Biologia Animal, Facultat de Biologia, Universitat de Barcelona, Spain. ². Departament de Zoologia, Facul-

tat de Ciències Biològiques, Universitat de València. Spain.

Building a database to assist identification of synanthropic flies’ parasitoids using molecular and morphological data (Hymenoptera: Chalcidoidea, Diaprioidea)

Lucian Fusu, Ovidiu A. Popovici, Dascălu M. Magdalena, Mircea D. Mitroiu
Faculty of Biology, Alexandru Ioan Cuza University of Iasi, Romania

Instar-related development of Cales noacki, a parasitoid of the whitefly Aleurothrixus floccosus

Dan Gerling Department of Zoology, Tel Aviv University, Israel

Morphological and molecular taxonomic revision of Megaphragma (Hym: Trichogrammatidae) – among the world’s smallest insects

Andrew Polaszek, Gennaro Viggiani, Lucian Fusu
Dept of Life Sciences, Natural History Museum London, UK; Dipartimento di Agraria Università degli Studi di Napoli “Federico II”, Portici, ITALY; Faculty of Biology, Al. I. Cuza University, Iasi, Romania

Does the aphid parasitoid Aphidius colemani ‘immunise’ its progeny against the toxic plant allelochemicals that they are likely to encounter in their aphid host?

Helmut van Emden¹, Sophia Douloumpaka¹, Panos Vamvatsikos² and Jim Hardie²
¹School of Biological Sciences, University of Reading, UK
²Department of Life Sciences, Imperial College London, UK •

After-Congress Collecting in the Kosñipata Valley

By: John Heraty, University of California, Riverside, USA

Following the 8th Congress of the International Society of Hymenopterists in Cusco, Peru, we spent five days at the Wayqecha Biological Station (13° 10' 38"S, 71° 36' 16"W). The station is nestled into the hillside at about 2900m at the upper reaches of the Kosñipata (or Cosñipata) River. The elevation of the station property ranges from 2200 to 3700 m, and according to Wikipedia: "includes several Andean ecosystems, such as montane forests, elfin forests, montane scrub and high-Andean grassland (puna)". A more general characterization would be high-



Welcome to the cloud forest: *Orasema* systematists (Judith & Jason) with *Myrsine*.

elevation cloud forest. The steep terrain around the station and close vicinity of Manu National Park make this an ideal collecting habitat. Of course, we were there for one primary reason—to collect the host of a new species of *Orasema* (Eucharitidae). On an earlier expedition in 2011 to the same station, we were able to collect these veritable monster *Orasema* (~4 mm) with patterned wings, and associate them with the host plant *Myrsine* (Myrsinaceae), which is a small tree-like shrub. On the previous trip in December, we noted that the leaves of virtually every *Myrsine* plant from 2400 m to 3400 m were covered with egg punctures. Females deposit single eggs into egg punctures formed in the lower leaf surface using their enlarged ovipositors, and oviposit in irregular parallel rows along the leaf. On that first trip, we were able to find lots of adults, egg punctures

and planidia (active first-instar larvae), but no ant host (actually, virtually no ants at all). Of real interest as well was the finding of patches of extrafloral nectaries at the bases of the leaves, which were similar to the EFN found on desert willow, a plant associated with *Orasema simulatrix* in North America (cf. Carey et al. *JHR* 27: 47–65). Also, the Myrcinaceae literature mentions the potential use of extrafloral nectaries by the plant to divert the ants' attention away from the flowers, preventing their interference with beneficial pollinators. Sounds great, but on that first Peru trip we did not find any potential hosts (*Pheidole*), or in fact, any ants at all on the *Myrsine*. We tried tracking the ants with peanut butter baits both during the day and at night, but no luck.

Fast forward to July 2014 after the

were everywhere again. Now, back to the ants. Peanut-butter baits worked well on the ground and we found our first slow *Pheidole* coming to the night baits. We then tried some of the ant 'tricks' learned from the ant-course involving tracking trails with ground-up Keebler (https://en.wikipedia.org/wiki/Keebler_Company) pecan sandie cookies and some UV-fluorescent powder. Eventually we got the ants to "take the bait" and started narrowing in on the colony entrances, but the colonies were nestled in the dense ground thatch. We skulked out a few sites and tried gently clearing the thatch to locate nest entrance, but this just made the ants disappear. Almost by accident, we ripped up some thatch at the base of a *Myrsine* plant, and lo and behold, not just *Pheidole* brood, but also the first eucharitid pupa! A bit



Misael, Judith, and Jason digging *Pheidole* brood from under a *Myrsine*.

congress. Our 'eucharitid team' consisted of Judith Herreid, Jason Mottern and myself, all from UCR, and Misael Garate (undergrad from Universidad Nacional de San Antonio Abad del Cusco). Moral support was provided by the Brits (Natalie Day-Sky, Gavin Broad and Andy Polaszek), the Canadians (Barb Sharanowski, Miles Zhang, Patrick Piekarski), and the Estonian (Marko Prous). We crossed the high Andes and the 4500 m pass into the Kosñipata Valley with ease (no snow except in the distant mountain peaks). After a quick lunch with the hym crew headed to the Villa Carmen Biological Station (300 m) and unpacking, we hit the Perdiz trail for some afternoon collecting. It took all of about 15 minutes to collect the first *Orasema*, removing the stress over whether we could collect the same wasps in the Andean winter. Egg punctures

more ripping and we had two ant colonies, plenty of brood and all of the eucharitid immature stages. Not bad for the first day of the trip. Sweet success - almost.

Now on to the ant-plant association, and the real reason why I am writing this article. We need some help and advice. We have the ant host. We know where the *Orasema* are laying their eggs (in punctures over the lower leaf surface). Females oviposit only into two plants, likely two species of *Myrsine*. The common *Myrsine* had numerous extrafloral nectaries (EFN) at the base of each leaf, whereas the other species had only two large fluid-filled EFN at the base of the leaf. Living planidia that had emerged were found at the base of the leaf near the EFN, but never toward the apex of the leaf and never far down on the leaf stalk or plant stem. The planidia are not very active and making their way



Orasema (Eucharitidae) female on *Myrsine*; photo courtesy of Steve Marshall.

Kosñipata ... Continued

to the ground is not a likely option. Our problem is that we never found a single ant on the plants. We peanut butter-baited the shrub canopy and swept the *Myrsine*, but no ants. I think we got the odd *Camponotus*, but never *Pheidole*. *Pheidole* were common on the ground peanut butter baits, but non-existent above. The *Pheidole* were most active during the day, and less so at night, which is likely an adaptation to the cold nighttime temperatures, but still, never on the plants going after the EFN. Seasonality would not seem to be a factor, since the *Orasema* and the presence and activity of the planidia was the same in December (summer) and July (winter). What would make the *Pheidole* 'choose' to enter the *Myrsine* canopy and interact with the EFN and the associated waiting planidia? If anyone has any ideas to pass along, or is just looking for a great research question to answer in the mountains of Peru, we would be glad to hear from you!

This research was sponsored in part by NSF DEB 1257733 grant to JMH. •

ISH Business Meeting Minutes

By: Lars Krogmann, Staatliches Museum für Naturkunde, Stuttgart, German, with budget tables by Craig Brabant, University of Wisconsin, USA

These are the minutes of the ISH Business meeting 8th International Congress of Hymenopterists, Cusco, Peru July 25, 2014. 64 members were in attendance.

1. President report (John Heraty).

Election results ISH president: Dr Andrew Polaszek, NHM London, has been elected as the incoming president.

Distinguished research medal results:

Dr John Noyes, NHM London, will receive the Distinguished Research Medal Award on the basis of his outstanding research career:

- John Noyes has published 90 articles and 10 monographs on Encyrtidae and Mymaridae
- He has published 3 books on Cost Rican Encyrtidae (1,662 pages).
- He described about 1/4 of almost 4,000 species and 493 genera of Encyrtidae.
- He developed the Universal Chalcidoidea Database (>35,000 references).
- He designed the "Noyes" sweep net – the standard net for collecting microhymenoptera.
- He added 400,000 mounted and labelled specimens of Chalcidoidea to the NHM collection.

It is planned to have the award ceremony at the upcoming ISH business meeting during the ESA meeting in Portland, Oregon (16 Nov 2014).

Student travel award recipients: 19 submissions for the ISH travel awards to Peru were received. Six students were selected as winners of the ISH travel awards:

- 1st prizes (1000 US\$ plus registration waiver):
- Rebecca Kittel (University of Adelaide): "Phylogenetics and biogeography of chelonine wasps (Hymenoptera: Braconidae) based on a fossil calibrated multigene analysis"
 - Petr Jansta (Charles University, Prague): "Molecular phylogeny and evolution of the family Torymidae (Hymenoptera: Chalcidoidea) - are Torymidae really monophyletic?"

2nd prizes (500 US\$ plus registration waiver):

- Crystal McEwen (University of Maryland): "Progress in the revision of *Disholcaspis* Dalla Torre and Kieffer"
- Bernardo Santos (American Museum of Natural History): "On the road to a total evidence phylogeny of cryptine wasps (Ichneumonidae, Cryptinae)"
- Erika Tucker (University of Kentucky): "An updated phylogenetic analysis of *Cremnops* (Hymenoptera: Braconidae) incorporating the mini-barcode region of COI"

3rd prizes (registration waiver):

- Mabel Alvarado (University of Kansas): "Revision of the South American

wasp genus *Alophophion* (Hymenoptera: Ichneumonidae: Ophioninae)"

- Candice Owen (Rhodes University): "Wingless wasps in the water -What!?"
- 8th International Congress of Hymenopterists: 160+ participants from 28 countries attended in the meeting. President Heraty thanked the local organizing committee, chaired by Frank Azorza and Dr Erick Yabar, the members of the scientific committee chaired by Marcel Hermes and Angélico Asenjo, the editor of the conference book. Thanks are also due to Lidia Sulca Garro and all volunteers for taking care of the local organization. Eight sponsors provided financial support (Bioquip, Bugdorm, CSIRO, Entomological Society of America, Entosphinx, Pensoft and Princeton University Press).
- Call for proposals for the next ISH congress: The ISH executive has developed a set of new guidelines and deadlines for future ISH congresses:
- announcement to membership by email and through *Hamuli*
 - 1-2 page proposal due January 1 following the congress to President and President-Elect (next proposals due January 1, 2015)
 - proposals to include a brief outline of reasons for location (reasons for location: unique location or long overdue, access to a unique membership, location appeal, identification of a team of local organizers and support network, potential venue, potential registration and meeting costs, and opportunities for fieldwork. All points are to be addressed.
 - proposals will be evaluated by the Executive Committee and requests for successful bidders to be returned by February.
 - successful bids would be required to submit a more complete bid by May 30 that would include more details on the hotels, room charges, registration estimates and a business plan for the meeting, post-congress activities such as collecting trips, and congress activities such as visits to nearby natural areas and tourist locations, archeological or historical sites, etc.
 - the successful bid will be evaluated by the Executive Committee and announced by July 1 of the same year.

Minutes ... Continued

Discussion: There is a brief discussion concerning the length of the ISH presidency (2 years). This means that the president who handles the applications for the upcoming ISH congress will not be in charge during the congress. It also becomes clear during the discussion that also in the future a rotation of continents will be preferred.

2. Editor's Report (on behalf of Stefan Schmidt)

Journal statistics:

- Submissions, rejections, and number of published articles remained more or less stable since move to Pensoft in 2011
- Initially 4, then 6 issues per year, including 1 special issue (monograph) in 2013
- 6 issues expected in 2014, including 1 special issue
- Manuscript turnover time from submission to publication decreased from 25 weeks in 2011 to about 17 weeks in 2014, mainly due to shorter time between submission and acceptance
- Submissions, rejections, and number of published articles remained stable since move to Pensoft in 2011
- Number of published pages has been and is still increasing
- Number of colour plates increased dramatically (no additional costs) Pensoft about to launch a new editorial system Among other improvements, authors may suggest reviewers during the submission process

Discussion: A discount for publication costs of student papers would be desirable. The layout of the journal artificially inflates the page numbers. Pensoft seems to object to a larger page format. The 5 year contract with Pensoft ends in 2016. The new ISH executive under incoming president Jim Whitfield will prepare a document with suggestions to send to Lyubomir Penev.

3. Endowment Report (Jim Woolley)

The total of the ISH endowment funds is \$70,130.21 USD (\$70,130.21 savings, \$15,364.68 time account). Currently the endowment funds do not create any interest rate. A slightly less risk-conserved

strategy might be necessary to gain interest in the future.

4. Treasurers Report (on behalf of Craig Brabant):

Income	2014 (20 July)	2013
Member dues	\$9,876.43	\$6,703.64
Page charges	\$5,478.33	\$14,773.29
Other income*	\$253.97	\$496.78
Totals:	\$15,608.73	\$21,973.71

*Taxapad income, donations, interest, etc.

Expenses	2014 (20 July)	2013
JHR	\$5,422.23	\$14,659.75
Business mtng.	??	\$446.84
Travel awards	\$3,500.00	\$0
Other expenses*	\$891.66	\$1,367.87
Totals:	\$9,813.89	\$17,232.40

*Credit card processing fees, PayPal fees, wire transfer and other bank fees, postage, etc.

Current balances, working accounts	
UWCU - checking	\$4,775.42
UWCU - Money Market checking	\$7,000.00
UWCU - savings	\$5.00
PayPal	\$14.47
Total:	\$11,794.89

2014 Congress	
Registration	\$35,991.78
Corporate sponsorships	\$3,503.69
Hotel Jose Antonio	-\$22,304.97
Peru A. Travel (day trip)	-\$10,350.00
Local arrangements	-\$970.00
Awards	-\$500.00
Food & drink	-\$1,210.00
USB drives/programs/badges/bags	-\$2,569.13
Misc. expenses (poster board, etc.)	-\$350.16
Final total	\$1,241.21

5. Secretary's report (Lars Krogmann)

The number of ISH members show a very positive trend. In 2014 ISH has 285 members (191 regular, 73 student, 12 life). This is a plus of 98 members. The reasons for the membership increase are the ISH congress and probably also the increase of reminder letters. However, 13% of former ISH members (36 in total) have still not renewed for 2014.

A few suggestions from the webmaster, treasurer and secretary are put up for discussion:

Occasional special issues in *JHR*:

- These could be on special topics (may be "non-systematics" topics to attract potential members from fields that are not well covered by ISH, yet).
- A "Young Taxonomist's Issue" for student members (may be our student representative Rebecca could help editing?).
- Review article about the history of ISH
- Should also outline the mission of the society and the advantages of being a member.
- Could be a task for the new archivist.

ISH Branding: We should link more activities that already exist in our society (e.g., Hymenoptera course, workshops) to ISH.

ISH topics: We should try to attract ISH members from fields, that are not well represented: e.g., pollination, ecology, social insects. Or do we want to be a "systematics-only" society?

The balance of ISH will be around \$6,500 USD by the end of 2014. See slides of business meeting for details on income and expenses https://ishare.ucr.edu/xytho-swfs/webui/_xy-4465811_1-t_O6jnXdrp

Renewing: Members that have not renewed, now regularly receive individual reminders from the secretary. May be enable automatic renewals with PayPal.

Blog: The Blog is now open for everyone. Members can become contributors or send content to ISH officers.

Membership listserver: From now on we will maintain 2 types of lists:

- One list that comprises only the current members (i.e. those that have renewed).
- One list that comprises also the list of members that have not renewed for the current year.
- Only current members will receive hamuli. Past members will still receive renewal reminders.

Sponsorship: Should ISH sponsor meetings such as ECN?

6. Student and Young professional's report (Rebecca Kittel)



8th International Congress of Hymenopterists. Photo (and Photoshopping) by Petr Janšta.

Minutes ... Continued

Tasks: organization of student meetings at conferences. Future: poll what students want, e.g. webinars/ online meetings

Who wants to be the next Student rep? Interested students should send one page motivation letter, including goals, CV, and supporting letter from supervisor by August 31, executive Members will make a decision by October, position will commence in November (during ESA).

7. Webmaster report (Katja Seltmann)

Photos of this and previous ISH congresses can be uploaded and shared among

ISH members at:

<http://www.flickr.com/photos/hymenopterists/>

The ISH website becomes increasingly popular with hits from most countries of the world. The website should get a new look and should be part of a professional management site (groupspaces). The costs would be \$19.99/month. It is agreed to have the website managed by groupspaces.

8. New business

ISH should have an archivist position, which will be advertised by the executive.

Barbara Sharanowski suggests digitizing

the Braconid Manual and having Spanish and English PDF versions that are OCR readable and comprise hyperlinks.

A list of recently passed ISH members will be published in *Hamuli*. The following will be included: Dr Fred Gess, Dr Alan Hook, Dr Klaus Horstmann, Dr Charles Porter.

John Heraty will stay as Past President in the ISH executive and welcomes Jim Whitfield as current ISH president. Jim Whitfield thanks John for his great presidency, which included the organization of the successful Cusco meeting, and closes the ISH business meeting. •



Photo of braconid team (back row, left to right): Dave Karlsson, Julia Stigenberg, Miles Zhang, Mike Sharkey, Erika Tucker, Andrew Polaszek, Eduardo Shimbori. (front row, left to right) Lidia Sulca, Alejandro Zaldívar-Riverón, Sian de Souza Gadelha, Barbara Sharanowski, Rebecca Kittel, Jim Whitfield, Silvia Gutierrez., Carolina da Silva e Souza.

Postgrad corner

By: Rebecca Kittel, University of Adelaide, South Australia

During the registration on the first night of the ISH conference in Cusco, Peru, about 15 students gathered for a small get-together. This time, it was easier to choose a spot (compared to the inaugural student meeting in Austin, Texas), and we settled in the bar area of the conference venue. After a short introduction we talked about how to make the most of a conference, as it was the first conference for some of the students. Many shared their experiences with previous conferences and described

Postgrad ... Continued

what to expect. It was also a great opportunity to network with the colleagues-to-be and talk about ants, bees, and wasps. I hope there will be more of these meetings coming in the future! But this will be part of the next student rep, as I will be stepping down from my student rep position. I am looking forward to many applications and to meet my successor. This student meeting was kindly supported by the ISH, which should motivate my successor and other student members to organise more meetings. Unfortunately (or fortunately) at the end of the student meeting, everyone was so busy networking and deciding on dinner plans, that we missed a chance to take a hymenopterists-in-training group photo. But the postgrads were not the only people geeking out during the conference, everyone else was as well. Thus, workers on most major taxa had exclusive dinners, like the ichneumonid, the chalcidoid, the aculeate, or the braconid people. Cheers to future collaboration! •

Dr. John S. Noyes Awarded the 2014 Distinguished Research Medal

By: *John Heraty, University of California, Riverside, USA*

John Noyes has been awarded the 2014 Distinguished Research Medal from the International Society of Hymenopterists. This medal is awarded every 2–4 years by the Society to a scientist that has made outstanding contributions to research on Hymenoptera, over a lifetime of work. Over his career, John has published more than 90 publications. Of these, 10 are monographic treatments of Encyrtidae and Mymaridae of greater than 50 pages. Three of his books on Costa Rican Encyrtidae (2000, 2004 and 2010) alone total 1662 pages! Over his career, John has almost single-handedly put the systematics of Encyrtidae on a solid foundation, including keys to genera for most areas of the world. Recently he has turned to a series of monographs on the Encyrtidae of Costa Rica that are a milestone in the study of tropical biodiversity. John has described about one quarter of the almost 4000 species and 493 genera now used in Encyrtidae! John's publications are meticulous and



Dr. John S. Noyes, Natural History Museum, London, England

well illustrated, and he was one of the first to use digital imaging in his publications to better illustrate the taxa. Not one to ignore new technologies, John demonstrated in 2003 the possibility of extracting DNA from the smallest known insects non-destructively, leaving the insect intact so that the primary voucher could be directly card or slide-mounted.

Beyond his revisionary and descriptive studies, John has invested an incredible amount of time and effort into the Universal Chalcidoidea Database. What began as a card catalog at the Natural History Museum became a lifetime obsession. In 1998, he published a CD-ROM version of the database, which is based on over 35,000 references. An updated version of this was published in 2002 and then almost immediately after that, an on-line web version. Summarizing all of the taxonomic, host and geographic data for Chalcidoidea, this single achievement makes available all of this information to researchers worldwide. It has quite literally transformed the field of Chalcidology. Beyond these accomplishments, John is making strides in single-handedly making high-resolution PDFs of all of the relevant literature. Incredibly, all of this information is being made freely available.

While the above accomplishments attest to John's contributions to research and out-

reach, he is also a superb teacher and a legendary collector. Several of us have spent many hours with him in the field collecting parasitoids. He is always ready to help out, coach and offer constructive opinions on how to sort, collect, and curate insects. He is proud of his specialized screen-sweep net, and he was able to amalgamate all of his experience and thoughts in a seminal paper in 1982. Although his opportunities to direct graduate students have been limited, no graduate program in chalcidology is complete without a pilgrimage to work with John in London. He is a true educator in the classic sense.

The Society congratulates John on his outstanding and productive career! •



Encyrtid ovipositing. Photo by Gail Hampshire (CC BY 2.0) <https://flic.kr/p/mCABfk>

Hamuli Update

By: Andy Deans, Frost Entomological Museum, Penn State University, University Park, PA, USA

As you can probably tell, *Hamuli* received a style update, thanks to our new Art Director, Nick Sloff. Nick works in the Department of Entomology at Penn State, and he happens to be an InDesign (Adobe Systems Incorporated, San Jose, CA, USA) wiz. We solicited his help in solving a few layout issues that dogged us in past issues. We've also decided to try out a three-column layout, which gives us a lot of flexibility with images. What do you think? As always, feedback is greatly appreciated!

We're ready to receive content for the next issue, so please contact us with your ideas. And thank you all for your contributions to past issues! •

Have you paid your 2014 dues?

Have you renewed for 2015?

<http://hymenopterists.org>

The Ant

*Go to the ant, thou sluggard,
Consider all her ways,
And thou shalt be instructed
To live contented days.*

*Not like those fools of summer,
The Hitwasp and dragon-fly,
That flaunt their gaudy garments
For one short hour, and die.*

*But, clad in sober sables,
She goes upon her way,
A busy, little housewife,
Whose life is work, not play.*

*She heeds not sun nor shadow,
She knows not waste nor want,
But prudent is, like Nature
That loves the prosperous ant.*

— Richard Henry Stoddard,
1825–1903

Authors' Instructions

Have an article, note, opinion piece, news item, story, photo, poem, joke, or other item you'd like to publish in *Hamuli*? Current members of the International Society of Hymenopterists are welcome to submit materials for publication at no cost. Just send your text to the editor (adeans@gmail.com) as .rtf or .doc files, and please send/include images as separate .jpg or .tif files (i.e., not embedded in the word processing file). Make sure images are of a reasonable resolution: larger than 500 x 375 pixels, with a resolution of 72 pixels per inch (or 28 pixels per cm).

Not a member of ISH? No problem! You can use the form below to become a member, or you can visit our website (<http://hymenopterists.org>) to join / pay dues electronically.

Don't want to become a member, but you still want to publish in *Hamuli*? Or perhaps you want to advertise in *Hamuli*? Still not a problem! Just send an email to the editor (adeans@gmail.com) for an estimate.

2014 Membership Information (visit hymenopterists.org for more options!)

- \$15 Student (requires signature of advisor: _____)
- \$45 Regular \$50 Family
- \$750 Life \$0 Emeritus

Fees listed in US\$. Checks should be made out to *International Society of Hymenopterists*. For payment by credit card please add \$2.00 processing fee. Dues, sponsorships, *JHR* back issues, donations, and other purchases can also be paid using PayPal: <http://hymenopterists.org/purchase.php>

Name: _____

Address: _____

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Interests: _____

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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