

HAMULI

The Newsletter of the International Society of Hymenopterists



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Aline Cristina Martins, winner of the inaugural International Society of Hymenopterists Endowment Student Award

By: Aline Cristina Martins, Universidade Federal do Paraná, as solicited by the Awards Committee

I was born in Londrina, in the state of Paraná, Brazil, and I lived there until the age of nine, when I moved to the state capital, Curitiba, with my parents and brother. I studied in public schools in Curitiba until I entered university. Biology was not my first choice. I knew, at sixteen, that I liked to read and write very much, and that I



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wanted to travel and get to know many different places and cultures around the world. In high school, however, I was surprised to find that I had developed a strong interest in Biology, and especially in genetics and evolution. I then decided to study Biology and I began my undergraduate degree in 2002 at the Universidade Federal do Paraná. The research in the Botany Department in the beginning of my studies was responsible for the development of my interest in studying plant-animal relationships. For this reason, in 2004, I joined Professor Gabriel Melo's laboratory, attracted by a project of his that was focused on pollinators of passion-fruit flowers. In spite of my initial intentions, I began another research project which was focused on the detection of changes in wild bee fauna in an area going through a process of urbanization. I worked in Prof. Melo's lab until the end of my undergraduate studies, also developing other research projects. In 2007, I began my Master's studies at the Universidade de São Paulo, under the supervision of Professor Isabel Alves-dos-Santos. The main goal of my Master's project was to study the interac-

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tions between oil bees and *Angelonia* flowers in different biomes in Brazil. This research provided me with a great chance to learn more about our diverse fauna and flora.

Finally, in 2010, I began my PhD studies in Entomology, under the supervision of Prof. Melo, at UFPR. My doctoral research project investigates the evolution of Centridini oil-collecting bees, using a phylogenetic approach. It was for this project that I had the honor of receiving the ISH Endowment Student Award. Producing a robust phylogeny with a broad range of samples is the main goal of the present PhD project, as this phylogeny is a requirement for better understanding the evolution of this important group of bees. I also sampled more than 100 centridine species, for which two nuclear genes and one mitochondrial, protein-coding gene were also sequenced. For the second stage of my PhD research I am seeking DAAD-CNPq scholarship funds in order to study the timing of interactions between centridine bees and the oil-plants they visit. This study would take place in collaboration with Prof. Susanne Renner of Ludwig-Maximilians University (Munich, Germany). Professor Renner has great experience in Systematic Botany and Evolution, and has been studying the evolution of oil-bee-plant interactions for a number of years.

My reason for applying for the ISH Endowment Student Award was to acquire the funds necessary for the hiring of a technical assistant and for the purchase of laboratory supplies, in order to organize the samples of muscle tissue and entire Centridini specimens in the DZUP Entomological Collection. This organizational work is important for the current project because it makes the specimens available for successful DNA extraction for a longer period of time, it allows for the proper preservation of the specimens so that they can be further checked for identification, and it also allows information on the different specimens to be entered into a database for future consultation. The technical assistant is the Biology student Jaqueline Dittrich, who has already been hired and who has begun work. The work is being carried out in the following steps: 1. The specimens are dissected and the muscle is removed with steril-

ized forceps; 2. The muscle is stored in a freezer, in labeled cryogenic microtubes; 3. The specimens are mounted, dried and labeled; 4. Information about the specimens, such as the species' names, localities and flower hosts, is entered into a database. This award will make it possible for me to make an organized collection of this group of bees, and also to spend more time on my PhD research. ❖

Hymenopterists in Daegu

By: John Heraty, ISH president, University of California, Riverside, CA, USA

The ICE meetings are a veritable Hymenopterists paradise this year. We have our own symposium on Biological Transitions in Hymenoptera. There were also symposia on the evolution of eusociality and lots of talks on the phylogenomics of Hymenoptera. In particular, the 1Kite (1kite.org) project has a goal of 200 Hymenoptera to be included in the transcriptome analysis. As well, more and more studies are supporting Hymenoptera as the sister group of all Holometabola.

A mere 25 people were in attendance at the annual business meeting on Tuesday night. This was largely a product, hopefully, of a misguided bus service schedule. Importantly, we had a glorious reception with free Hite beer, wine and canapés (admittedly the salmon was better than the kiwi slices). Spirits were not dampened by the low numbers and we had some lively discussions. Everyone is happy with the continuing health of the Society. There were discussions of the publishing model a few major issues, including the need to get away from a paper version which is costing us money, the choice we need to make for either higher impact factor or greater general access to publication for all (Lars Krogmann brought up that this is a fine balance that we need to consider), and the need to increase student participation and support. Notably, we had the three student travel award winners (Elizabeth Murray, Jason Mottern and Elijah Talamas) in attendance, as well as the three symposium program enhancement fund recipients (Dennis Brothers, Andrea Lucky, and Donald

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

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Quicke). Announcements were made on our new executive selectees (Jim Whitfield and Lars Krogmann) and our ISH Distinguished Research Medal winner (Brad Vinson), and our Distinguished Service award winner (Andy Deans). Congratulations come from all of us here at the meeting.

This meeting has set the stage for our next international meeting in Cusco, Peru (details below) in 2014. Hopefully, we will see all of you there. ❖

8th International Congress of Hymenopterists

**Cusco, Peru
July 20–25, 2014**

**Hotel: Casa Andina
Meeting: Centro de Convenciones
Cusco**

A significant word in Aphelinid (Chalcidoidea) Taxonomy - Prof. Dr. V.A. Yasnosh passed away

By: G. Japoshvili (*Entomology and Biocontrol Research Centre, Agricultural University of Georgia, Tbilisi, Georgia*) and Ts. Chkhubianishvili (*L.Kanchaveli Institute of Plant Protection, Agricultural University of Georgia, Tbilisi, Georgia*)

In 3 August of 2011 after several months of illness we lost one of the best taxonomists in her group, Aphelinids, well known biocontrol specialist and brilliant professional, colleague and person Prof. Dr. V.A. Yasnosh.

Prof. Dr. V.A. Yasnosh was born in 9 September 1924 in St-Petersburg. She graduated Agricultural Institute, Faculty of Plant Protection in St-Petersburg in 1946 and got PhD degree in the Plant Protection Institute in 1951. Her Thesis was – “Japanese wax scale in Abkhazia (*Ceroplastes japonicus* Green, Homoptera, Coccoidea)”. In 1977 she made a thesis - “Morpho-biological peculiarities and taxonomy of Aphelinids (Hymenoptera, Chalcidoidea,

Aphelinidae)” and got Degree of Doctor of Biological Sciences. She was appointed as a professor in 1991.

Her scientific carrier was as following: Entomologist, Laboratory of Plant Quarantine Service, Tbilisi (1953-1966); Major Research Scientist, Laboratory of Biological control, Plant Protection Research Institute of Georgia (1966-1976); Head of laboratory, then - Department of Biological Control (1976-1997); Kanchaveli L. Research Institute of Plant Protection, Tbilisi, Georgia, Principal Research Scientists (1997-2010).

She was a member of the Russian Entomological Society (1949), the Georgian Entomological Society (1965) and the Georgian Academy of Ecological Science (1995).

She got several awards and honor: 1967- Medal for biological control in Georgia, Exhibition “Achievement of National Economy”, Moscow; 1968- Award of Zoological Institute Acad. of Sci., USSR, St-Petersburg as a coauthor of monograph “Aphelinids of the European Part of the USSR and Caucasus” (M. Nikolskaya, V. Jasnosh); 1992-1993- Diploma and stipend. International Sci. Foundation and Academy of Natural Sci. USSR on the problem “Biodiversity”; 2002 – Honorary Diploma, Academy of

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Prof. Dr. V.A. Yasnosh (1924–2012)

Agricultural Sciences, Georgia.

She published more than 180 scientific papers and several monographs. She was working in different fields of science such as: Biocontrol, Taxonomy, Ecology and etc., however her significant achievement was in taxonomy of Aphelinids. Her works (Nikolskaja, Yasnosh, 1966, 1968 and Yasnosh, 1953-2002) are important word in the study of Chalcid wasps. Under the supervision of Prof. Yasnosh was prepared several PH.Ds in entomology and biological plants protection, almost until the end of her life she participated at International Project on Biological Plant Protection as the Scientific Consultant.

Her colleagues from Georgia and all over the world express their condolence. ❖

Hymenopterans associated with Neotropical aroids

By: Paul E. Hanson (*Escuela de Biología, Universidad de Costa Rica*), Michael W. Gates (*Systematic Entomology Laboratory, c/o National Museum of Natural History, Washington, D.C.*), Sergio Jansen González (*Universidade de São Paulo, Ribeirão Preto, Brazil*)

There could be a much greater number of phytophagous apocritan species than is currently appreciated. We are referring to taxa whose larvae induce plant galls or feed in seeds (the distinction is not always clear), but are derived from parasitoid ancestors. Besides Cynipidae and Agaonidae, phytophagous species are known to occur in several other families of Chalcidoidea as well as in a few braconids.

We are currently focusing our attention on Chalcidoidea associated with aroids (Araceae) in the neotropical region. In temperate regions these plants are best known as house plants, but in the tropics aroids are very common and diverse; indeed, large-leaved *Monstera* and *Philodendron* are emblematic of tropical rainforests. They are readily recognizable by their unique spathe and spadix flowers, some of which produce heat to attract scarab pollinators. Aroids are, however, frustrating to sample, since the majority grow as epiphytes (or hemi-epiphytes) in the canopy.

For his doctoral research Sergio is currently comparing how reproductive plant tissues are modified by agaonids in *Ficus* (Moraceae) versus a tetrastichine eulophid in *Philodendron bipinnatifidum*. This tetrastichine was described by Ferrière (1924) as *Trichoporus gallicola*, later transferred to *Exurus* and then *Aprostocetus*, but as noted by LaSalle (2005), this species in fact represents a

new genus. In consultation with John LaSalle, the three of us are currently describing this new genus, which includes not only Ferrière's species but at least two or three (probably more) additional species associated with other *Philodendron* species. Besides Ferrière's paper, the only other published account of the biology of this tetrastichine is that by Gibernau et al. (2002; Marc Gibernau has kindly sent us specimens).

Among our long-term questions are: How host-specific are the species in this new genus? Do they occur on other genera of Araceae, or are they restricted to *Philodendron*? As noted in Ferrière's original paper, there is also a phytophagous *Prodecatoma* (Eurytomidae) associated with the same reproductive structures on *Philodendron*. Species of *Prodecatoma* appear to be much more widely distributed across plant taxa and are sometimes found in association with other phytophagous hymenopterans. Recently, we reared a series of *Prodecatoma* from fruits of *Anthurium* (Araceae), but in this case no other insects were present.

In addition to the fruiting structures, other parts of the aroid plant also harbor phytophagous hymenopterans. It is possible that all species of *Monitoriella* (Braconidae: Doryctinae) are gall-formers on the leaves of aroids (at least on *Philodendron*), although only one species is currently documented as doing so (Infante et al. 1995). Aroids also have root galls, most of which are probably formed by Cecidomyiidae, though we suspect that the rarely collected *Foutsia* (Eurytomidae) may also be a gall former on the roots. We have reared long series of tetrastichines from aroid root galls, but it remains to be determined whether these are parasitoids of Cecidomyiidae or phytophagous or some of each.

As part of this research, Paul visited Mike in Washington
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New genus of phytophagous Tetrastichinae.

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D.C. in early April of this year, and Sergio visited Paul in Costa Rica in April-May. We encourage readers who collect in the Neotropics, and curators of chalcidoid collections, to please let us know if you encounter tetrastichine eulophids or eurytomids reared from Araceae.

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An inordinate fondness of beetles, but seemingly even more fond of microhymenoptera!

By: John S. Noyes, Department of Entomology, Natural History Museum, London, UK

Asked what could be inferred about the work of the Creator from a study of His works, the British scientist J.B.S. Haldane is reported to have replied, that He has “an inordinate fondness for beetles.” It is true that more species of beetles have been catalogued than any other group with about 400,000 species (about 20% of all living organisms) having been described to date, thus on the face of it Haldane’s statement would seem to be correct. The second largest group currently being the Hymenoptera with about 130,000 described species. Yet, for the British fauna, the best known in the world, beetles represent only the third largest group (c.5,000 British species) well

behind the Hymenoptera (c.7100 species) and Diptera (c.6950 species) (Barnard, 1999). Almost all surveys of species richness using a variety of sampling techniques have concentrated in comparisons within either the Coleoptera (Alison, et al., 1997; Davis, et al., 1997; Hammond, et al., 1997; Stork, 1987, 1991) or Hymenoptera (Heraty & Gates, 2003; Noyes, 1989, Owen & Owen, 1974; Tan, et al., 1990). To date it has been possible only to make direct comparison of species richness between these two major orders in canopy fog samples made in lowland forests of Borneo (Noyes, 1984; Stork, 1987) and to a lesser extent sweep-net samples from Costa Rica (Janzen, 1973a, b). The Borneo samples produced a total of 859 species of Coleoptera whilst the ants (98 species) and Chalcidoidea (731 species) nearly equalled this figure. Indeed Grissell (1999), making play on Haldane’s statement, suggested that “. . . coleopterists suffer from an inordinate fondness for exaggeration” leading to an indignant response from a number of North American coleopterists (Carlton, et al., 2000) who clearly did not relish the thought of someone challenging the idea that there could be a more speciose group of insects than the Coleoptera even suggesting that Grissell showed a degree of “species envy”.

Recent sampling in the forests of Costa Rica using a

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Hiking between Estación Cacao and Estación Maritza (Parque Nacional Guanacaste) with dismantled sweep-net slung on rucksack.

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screen-sweep net fitted with a 4mm mesh to allow only smaller individuals (<6mm long) to pass through tends to support the view that the microhymenoptera may be globally far more species rich than suggested in previous estimates (Gaston, 1991; Gaston et al., 1996). In one case, a six hour sample provided and incredible 1286 species of microhymenoptera compared with only 504 species of smaller beetles (Tables 1 and 2). Similar comparative data were found at 8 other sites at various altitudes from 75m to 1400m across Costa Rica (Table 3). At all sites the Chalcidoidea alone represented more species than the Coleoptera (Table 3) and was by far the largest group both in terms of numbers of species and numbers of individuals, surpassing even ants. By way of comparison, Wagner (2000) gives figures for total beetles collected by canopy fogging from 1024 sq.m under the canopies of four tree species in three different forest types in Uganda. In these samples he estimated that 30,000 individuals represented approximately 1,300 species. He also gives comparative figures for samples fogged in Borneo and Venezuela, but the Uganda sample is by far the most impressive.

Comments on selected groups in the Las Selva sample:

Ichneumonidae - the low number of individuals and species is due to the size of the screen mesh on the sweep net. Most ichneumonids are more than 5mm long and therefore this may not reflect the true species richness of ichneumonids in the area. [c.25,000 described species worldwide]

Formicidae – the number of individual ants collected in the sample was much less than half the number of

chalcidoids, yet ants have long been regarded as probably the most dominant group of insects in most ecosystems. However, this balance almost certainly reflects the method of collecting since soil inhabiting ants are more or less excluded from the sample. [c.12,100 described species worldwide]

Aphelinidae – the proportion of aphelinids in the sample is incredibly high and largely due to individuals of the genus *Encarsia*, species of which are mainly parasitoids of whiteflies (Aleyrodidae) and armoured scales (Diaspididae). This must therefore reflect very high populations and species diversity in these groups. The sample included 63 species of *Encarsia* (only about 250 species known worldwide). [c.1,350 described species worldwide]

Eulophidae – An incredibly high number of species. The number of species of eulophids associated with gall-forming insects in Costa Rica is very high probably replacing the Pteromalidae as parasitoids of this group of insects. [c.5,800 described species worldwide]

Pteromalidae – A relatively low number of species compared with temperate areas. Very few species of pteromalids are associated with galls in tropical areas. [c.3,500 species described worldwide]

Signiphoridae – More species collected in this single sweep sample than are known for the entire world fauna. [78 described species worldwide]. However, it must be noted that Jim Woolley suggests that my figures for the number of species found in the samples are on the high side.

Chalcidoidea – By far the most species rich group in the samples, even surpassing the Braconidae and Platygastroidea. [c.25,000 described species Worldwide]

General comment:

Fenchel (1993) noted that, for terrestrial animals, a decrease in the average body size in a group of organisms is reflected by an increase in the number of species representing that group. It follows from this, that amongst the insects the greatest species richness would be within groups that include the greatest proportion of smaller individuals. However, according to May (2002), the size/species richness rule only holds to size categories around a few millimetres with species numbers falling away below this. From the perspective of estimate of global species richness, these are the groups that are intrinsically the hardest to sample and analyze. The results presented here would suggest that Fenchel's rule could be extended to include groups where the average body size is not more than 1.5mm.

Acknowledgements – I thank the following for their support in sorting some groups to species: Andy Polaszek

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View of the Rio Puerto Viejo from the Stone bridge at Estación Biológico La Selva.

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(Aphelinidae), Stefan Schmidt (Ceraphronoidea), Lubomir Masner (Proctotrupoidea, Platygastroidea), Matt Buffington (Cynipoidea), Jim Whitfield (Braconidae), Jack Longino (Formicidae), Christer Hansson (Eulophidae), John Huber (Mymaridae), John Pinto and Jeremiah George (Trichogrammatidae), Peter Hammond (Coleoptera).

Table 1. La Selva, 75m 360 minutes sweep sample Hymenoptera.

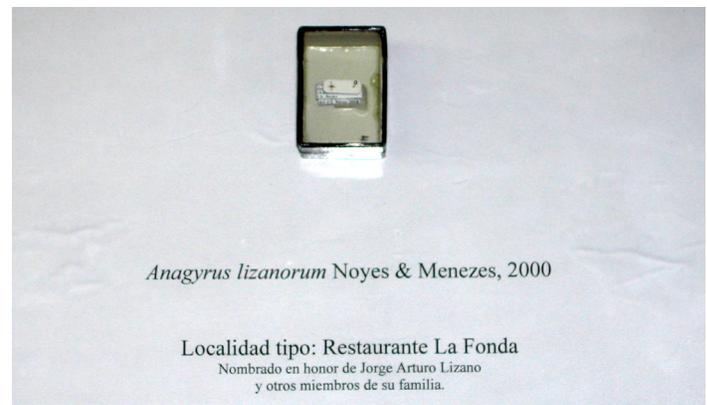
	taxon	#s	spp.
Apoidea	Sphecidae	1	1
Vespoidea	Formicidae	4299	48
	Mutillidae	1	1
Chrysidoidea	Bethylidae	30	8
	Dryinidae	12	1
Ceraphronoidea	Ceraphronidae	734	69
Ichneumonoidea	Ichneumonidae	38	25
	Braconidae	936	149
	Evaniidae	3	2
Proctotrupoidea	Diapriidae	255	44
Cynipoidea	Figitidae	240	17
Platygastroidea	Platygastridae	1258	45
	Scelionidae	1109	86
Chalcidoidea	Agaonidae	8	7
	Aphelinidae	3261	102
	Chalcididae	25	14
	Encyrtidae	652	110
	Eucharitidae	34	5
	Eulophidae	1851	283
	Eupelmidae	25	2
	Eurytomidae	74	29
	Mymaridae	1471	71
	Perilampidae	3	1
	Pteromalidae	272	33
	Signiphoridae	802	90
	Tanaostigmat.	2	1
	Torymidae	5	1
	Trichogrammat.	930	38
	Chalcidoidea	9415	790
	Totals	18331	1286

Table 2. La Selva, 75m 360 minutes sweep sample Coleoptera.

	taxon	#s	spp.
	Staphylinidae	639	99
	Coccinellidae	220	33
	Aderidae	50	26
	Chrysomelidae	408	90
	Curculionidae	427	89
	others (51)	931	167
Totals		2675	504

Table 3. Summary of other sites surveyed.

Location	Altitude	Hours collected	Hymenoptera		Coleoptera	
			Individuals	Species	Individuals	Species
Bosque Humedo	300m	1.5	1046	315	2023	109
Reserva Rincon	400m	2.0	8848	1016	732	269
PN Braulio Carrillo	450m	1.0	2828	527	225	95
PN Arenal (Peninsula)	600m	1.25	8782	922	757	149
PN Arenal (Pilon)	600m	3.0	11199	1218	1248	293
Est. Maritza	700m	1.0	1552	369	1037	134
Est. Cacao	1100m	3.0	5098	683	1263	256
Monteverde	1350m	2.5	2550	473	4945	157



A specimen of a newly described species of Encyrtidae on display at the Restaurant La Fonda at Zurqui de Moravia. The then restaurant owners, the Lizano family, ran an incredibly productive Malaise trap for us for several years on land behind the restaurant where the species was very common.

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Hymenoptera dispersal data

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For anyone interested in Hymenoptera dispersal, there is now material available. During the summer of 1980 suction traps were placed on a television tower in Värmland, Sweden. The area surrounding the tower was composed of recently cut spruce (*Picea abies* (L.) Karst) and pine (*Pinus sylvestris* L.). The surrounding areas contained living forest of spruce and pine. The suction traps were placed on the distances 2, 9, 43 and 93 m above ground. The ground level of the television tower was 354 m above sea level. The suction traps were of the enclosed cone type (Johnsson and Taylor 1955; Taylor 1955) with a metal mesh with 0,4 x 0,4 mm openings. A 50 cm axial fan provided airflow of 6000 m³ h⁻¹. The period of operation stretched from May 14 to September 15 1980 and the material from the suction traps were collected in 10- to 11-day periods. There has been previous work on this material, on Psocoptera (Svensson & Solbreck 2008) and some other groups (Coleoptera), where the results have remained unpublished.

Recently, Emma Wahlberg, a student at Stockholm University has gone through the material of Hymenoptera from the suction traps and sorted most into families, some to superfamily. Her sorting resulted in a project work that visualized the "Hymenoptera altitude profile analysis".

The Hymenoptera material is now placed at the Swedish Museum of Natural History, Stockholm Sweden. The future hope is that more altitudinal studies will be done on this material. So anyone who wants to study and identify any particular group, please contact me.

References

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- Taylor, L. R. (1955) "The standardization of air-flow in insect suction traps", *Annals of Applied Biology*, 3(43), 390-480.
- Svensson, B.W. and Solbreck, C. (2008) "Psocids in suction traps on a TV-tower in a mixed coniferous forest in South Central Sweden. Insecta: Psocodea: Psocoptera", *Entomologisk tidsskrift*, 129(1), 29-39. ❖

Member news, exchanges, and inquiries —

Chris Starr (University of the West Indies, ckstarr@gmail.com). Inquiry: WHAT ABOUT THE NAVY? I would be grateful to anyone who can put me in touch with an officer in either the US Navy or Royal Navy. I am interested in making contact with someone who can advise on recruiting standards for submarine service. Many military branches have minimum height requirements, but it is my conjecture that if there is a maximum height requirement (i.e. no recruits accepted above a certain height) anywhere it will for submarine service. In Vladivostok the other day I tried to get this kind of information out of the Russian Navy, but they weren't about to tell me anything. (If any of you is friendly with an officer in the Russian Navy, I would be happy to give it another shot, but without optimism.) The Trinidad & Tobago Coast Guard has no submarines. This related to an analogy with intraspecific allometric size scaling in bumble bees and vespine wasps.

Bob Matthews (University of Georgia). It is time for me to downsize as I have retired. Numerous older (50s, 60s, 70s, 80s) Hymenoptera systematics/behavior papers from my reprint files may be of interest to some of our members; otherwise they will go into the recycle bin. Well represented are systematics papers by HE Evans, J van der Vecht, VSL Pate, KV Krombein, L. Masner, GC Wheeler, CD Michener, PM Marsh, and various others, with principle focus on braconids, crabronids, and apoids. Hymenop behavior/ethology includes numerous papers by K Tsuneki, J. van den Assem, SF Sakagami, K Iwata, RD Akre, JS Ishay, GC Eickwort, and many others, with particular focus on nesting behavior of wasps and bees. Interested individuals should contact me via email (rwmatthews@gmail.com).

Andy Deans (Penn State, adeans@psu.edu). I moved my lab to Penn State this summer, where I serve as the director of the Frost Entomological Museum. Like the collection at the NCSU Insect Museum, the Frost is not especially strong in parasitic Hymenoptera. That will change very soon, though. **István Mikó** (istvan.miko@gmail.com) moved to PSU, as well, as did (of course!) **Heather Hines** (hnh19@psu.edu) Our plans are to substantially grow the Hymenoptera collection, from sawflies to bees and almost everything in between. In that light, we've opened several graduate opportunities, for students interested in evolutionary genomics, molecular phylogenetics, descriptive taxonomy, comparative morphology, and/or biodiversity informatics. Watch for a more formal advertisement of these opportunities soon! Some of them will even have a research/travel stipend. On a personal note, Heather and I had a son born this summer - Hugo - which is why I won't be at ESA (nor was I at the ICE). I look forward to getting back in the saddle soon!

ISH Secretary's report

By: *Andy Deans, Pennsylvania State University, Department of Entomology, 501 ASI Building, University Park, PA 16802, USA, adeans@psu.edu*

Well, here is my final report as secretary of ISH, which fills me with mixed emotions – all of which are some variation of relief. I truly relished this position, while I had it, but life seems to have filled up (temporarily) with the madness of a thousand other tasks, and I felt some of my responsibilities slipping. I never did find an effective mechanism for reminding people to renew their ISH memberships, for example. Fortunately we had two competent and organized candidates for secretary this year (congratulations, Lars Krogmann!), and I have already prepared all my materials for this transition. Below is a summary of the report I arranged for our new president, John Heraty, to present at the ICE in Daegu, Korea:

1) We ended 2012 with 30 institutional, 11 life, 156 regular, and 43(!) students. That last figure is a substantial increase over the last couple years (20 in 2011 and 14 in 2010), and I am sure it's the result of student-centric initiatives implemented since the last ESA meeting (see *Hamuli* vol. 3, issue 1).

2) We voted for a new president-elect (congratulations to Jim Whitfield!) and for secretary (congratulations again to Lars Krogmann!) If you have any feedback regarding the voting process please contact Lars. Using Google Docs made the process very easy for me! Was it easy for you?

3) Update on *Hamuli* - see my editor's report on page ??

4) The ISH symposium at ESA this year - Sunday, November 11, 2012 in Knoxville, TN, USA - will not have a proper business meeting since it was at the ICE this year, but we will have a social hour and an amazing student symposium with cash prizes for the best talks. We'll also have a chance to hear about the latest ISH business. We hope you can attend!

5) Don't forget that ISH has a blog and a Facebook page, which are updated regularly! They're easy to find using a search engine in your Web browser. ❖

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

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

Hamuli editor's report

By: Andy Deans, Pennsylvania State University, Department of Entomology, University Park, PA 16802, USA

Even though the amount of content for this issue slipped a bit I am impressed - again - by the quality our members' articles for their newsletter. This is our fifth issue of *Hamuli*, and I have received a huge amount of positive feedback (including the ISH service award this year, which is apparently due to the larger-format newsletter - Wow! Thanks!) Clearly our members have a lot of stories to tell. But what about negative feedback? Surely there are some tweaks you could make if you had control of this publication. We're still pretty young, afterall, and I have no proper publishing skills. I'd love to hear your ideas, even if most of the editor's duties transfer to our new secretary, Lars Krogmann.

Here are things I struggle with:

1) the two-column format seems to be a throw-back to the days of *printed* newsletters. (I wonder how much it would cost the Society to do that with *Hamuli*. Hmmmm...) In the last issue I put out a call for feedback about how many members use tablets o view the newsletter. I only got one response, so I don't know yet the best way to proceed. Articles are more less sequential now, which should make it easier to read. I experimented with a single column format (not ideal) and a two-column sequential article format (ugly) for computer screens. I might look into LaTeX options next (using Adobe InDesign now).

2) As you can see from this issue, I haven't figured out the best way to represent tables in InDesign. That goes for reference lists as well, which are inconsistent. Maybe it doesn't matter for a newsletter?

3) The editor definitely needs help organizing content and proofreading the final version. Anyone want to be associate editor? I think this would be a nice opportunity for a student member.

Before I sign off on this issue I want to thank you again for making *Hamuli* a success. I look forward to making sustained contributions in the future, as editor or in some other capacity. ❖

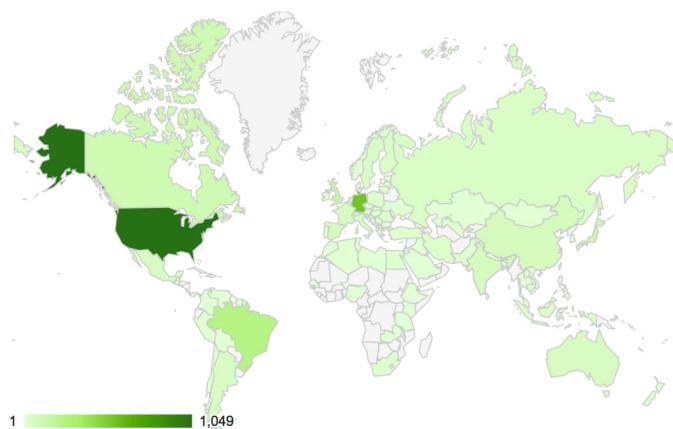


Trissolcus female with pentatomid eggs in Indonesia. Photo by Guido Bohne: <http://www.flickr.com/photos/gbohne/5220182524>

Webmaster's report

By: Katja Seltmann, American Museum of Natural History, New York City, NY, USA, enicospilus@gmail.com

Since the last issue of *Hamuli* we had over 3,470 novel visitors to the hymenopterists.org website, which is 470 additional unique visitors and fairly comprehensive global coverage (see image). The iPhone and iPad are the most highly accessed alternative devices, with 43 visits using these devices. The vast majority of the people discovering our site continues to come from organic sources, or non-referrals. This means that people are likely googling ISH or the *Journal of Hymenoptera Research* and accessing our website as one of the hits they return during the search. Please remember to link ISH to your webpages as this will increase our exposure and hopefully our membership. ❖



Map of website hits.

Treasurer's report

By: Craig Brabant, University of Wisconsin, Madison, WI, USA, brabant@entomology.wisc.edu

Below you'll find the numbers presented at the August 2012 ISH business meeting, in Daegu, Korea. ❖

Current balances, working accounts	
UWCU - checking	\$3,126.77
UWCU - Money Market checking	\$11,000.00
UWCU - savings	\$5.00
PayPal	\$20.16
Total:	\$14,151.93

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Income	2012 (08 Aug.)	2011
Reg. members	\$8,325.00	\$7,378.00
Students	\$645.00	\$780.00
Institutions	\$3,960.00	\$3,126.00
Life members	\$0.00	\$0.00
Page charges	\$7,268.38	\$7,829.86
Misc. pubs	\$30.00	\$350.00
Back issues	\$55.00	\$377.00
Taxapad	\$1,820.00	\$930.00
Interest	\$15.15	\$33.73
Donations	\$247.00	\$300.00
Totals:	\$22,365.88	\$21,104.59
Expenses	2012 (08 Aug.)	2011
JHR	\$16,011.08*	\$14,814.78
Travel awards	\$4,525.00	\$0.00
CC processing	\$485.72	\$480.95
Bank fees	\$85.00	\$91.32
PayPal fees	\$210.59	214.11
Misc. postage	\$0.00	285.26
Business mtg.	~\$500.00	\$350.00
Taxapad	\$1,638.00	\$837.00
Transfer to endowment:	~\$382.00	\$6,482.60
Totals:	\$23,837.39	\$23,556.02

*Includes \$7,500 estimated for the December invoice from Pensoft Publishers for printing and mailing the JHR.

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JOURNAL OF A peer-reviewed open-access journal
Hymenoptera
International Society of Hymenopterists RESEARCH

JHR editor's report

By: Stefan Schmidt, Zoologische Staatssammlung, Munich, Germany, hymenoptera.zsm@gmail.com

The *Journal of Hymenoptera Research* shows a positive trend in respect to submissions and published pages. In 2012 four issues have already been published, including 460 pages and 158 colour plates. This means that after eight months we have already published more articles and more pages than in 2011 (see journal statistics below). The number of published pages is well above the ten-year average of 306 pages for the years 2001–2010 before the journal moved to Pensoft and became open access (Fig. 1).

The move to open access came with several changes. One important difference compared to the previous publication model is that issues are now published at irregular intervals. Furthermore, the size of an issue is smaller than before (but can be much larger if needed) and the number of issues per year is not fixed. This flexibility is an advantage over the traditional model because it allows for shorter manuscript turnover times. Last but not least, all articles are available for download from the publisher's website on the day of publication.

The positive development in terms of published articles, pages, and issues does not come at a surprise and we are

Journal statistics for 2012 (January to August)
(In brackets figures for 2011)

Manuscript submissions: 32 (47)
Manuscripts rejected: 6 (10)
Published pages: ca. 460 (364)
Color pages: 155 (131)
Issues: 4 (4)
Published articles: 30 (21)

aware that the current arrangement in terms of physical copies for members needs to be addressed rather sooner than later. The costs for the publication of the journal will break even as long as we don't hit the upper limit of about 400 pages in four or five issues per year. Having said that, it is not to be expected that the Society will have severe fi-

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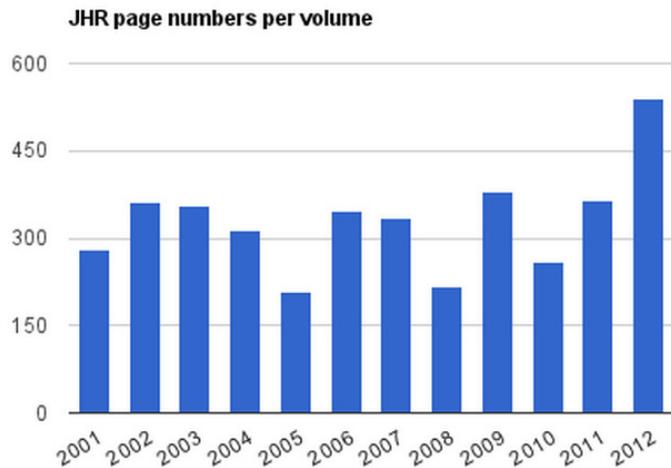


Figure 1. Number of published pages from 2001 to 2012 (2012 estimated).

financial debts at the end of this year, but a decision regarding physical copies of *JHR* probably needs to be made at some point.

A solution to the problem that has been discussed before would be to switch to PDF only. Readers who would like to obtain a printed copy can obtain it directly from the publisher. The Pensoft website facilitates an online ordering system that allows purchasing complete issues or individual articles using print-on-demand. Institutional subscribers could adopt a model similar to the one that is in place for *Zookeys*, *i.e.* by offering a subscription flat-rate. Whatever the solution will be, it needs to integrate the financial aspects of publishing the journal and the acceptance and wishes of the members of the Society.

Currently the Society receives a 30% discount on printed copies of *JHR*. The good news is that Pensoft is willing to grant this discount to Society members when they order copies directly from Pensoft. This means that in addition to reduced page charges (15 Euro for members instead of 22 Euro for non-members), members will receive an additional discount of 30% for physical copies. This is a clear benefit for members and should be a strong incentive for joining the Society, in addition to other benefits like being part of a community of people with similar interests and immediate access to an excellent newsletter. ♦

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Towards an Indonesian-German Biodiversity Network

By: Stefan Schmidt, Zoologische Staatssammlung, Munich, Germany, hymenoptera.zsm@gmail.com

Researcher from the Zoologische Staatssammlung in Munich, Germany, visited Indonesia in an effort to establish collaborative projects with universities in Sumatra and Java. Soon the collaboration will be expanded more broadly with the Indonesian Institute of Sciences (LIPI). During two weeks each at the Andalas University in Padang (West Sumatra) and Brawijaya University in Malang (East Java), Stefan and Olga Schmidt, Michael Balke, and PhD student Emmanuel Toussaint conducted courses to implement the module “DNA Barcoding of Arthropods” as part of the “Indonesian-German Network - Training of Trainers and Research Cooperation” (IGN-TTRC).

IGN-TTRC is a consortium to improve teaching, training and research collaborations within Indonesia and between Indonesia and Germany, funded by the German Academic

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A snack after collecting in Harau Valley. The taste of Durian – a mixture of rotten meat and vanilla – is not everybody’s cup of tea.



Collecting insects in Harau Valley, West Sumatra.



Who is the first to jump into the rice paddy for collecting water beetles?



Before the barcode there is lab work.



Tropical rainforest in West Sumatra, home of a myriad of new species that are awaiting discovery.



Hari Sutrisno, lepidopterist and collection manager at LIPI, and Olga discuss about biodiversity projects.



The collection hall of the insect collection at LIPI, Indonesia's major natural history institution.

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Exchange Service (DAAD). The objective of is to give an overview of the role of molecular biology methods in biodiversity research. Topics covered in the lectures include general entomology and molecular systematics, but also practical exercises in the field (collecting aquatic insects, Hymenoptera, and Lepidoptera), insect preparation, and molecular work including DNA extraction, PCR, sequencing, sequence analysis, species identification using the Barcode of Life Database (BOLD), and using DNA barcoding for molecular biodiversity assessment.

The participants of the courses came from over a dozen different universities across Indonesia, including Sumatra, Java, Kalimantan, and Sulawesi. Course subjects will be used to develop a joint curriculum leading to joint MSc programs and to establish conditions to facilitate the acceptance of Indonesian students into MSc and PhD programs at German universities. Besides the training component of the courses, the aim of IGN-TTRC is to establish research cooperation between Indonesian and German institutions with joint projects and exchange of students.

The study objects for the courses were selected according to the research areas of the German trainers and included primarily aquatic insects, microhymenoptera, and

geometrid moths. Collecting methods were as diverse as the insects of interest and included sweep netting, yellow pan traps, kitchen strainers for aquatic insects, and collecting at a light sheet.

Indonesia’s biodiversity is unique in the world. Indonesia is a country of mega-diversity, rivalled only by Brazil, Colombia, and Zaire. The 17,000 islands that comprise Indonesia occupy only 1.3% of the world’s land mass, but the country is home of about 12% of the mammals and 17% of the birds of the world. Estimates of the species richness of insects are difficult, but it is probably safe to assume that in little known groups like microhymenoptera only a tiny fraction of the species have been discovered. ❖

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).

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To pay with PayPal or to confirm the current dues please see <http://hymenopterists.org/purchase.php>

- \$15 Student (advisor’s name: _____)
- \$45 Regular
- \$750 Life
- \$120 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 \$2.00 processing fee.

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