HAMULI

The Newsletter of the International Society of Hymenopterists

volume 2, issue 2 29 July 2011

Dr. Zdenek Boucek (1924-2011), in his lab.

In this issue...

Zdeněk Bouček (1924-2011) (Noyes) 1
President's report (Sharkey) 1
Webmaster's report (Seltmann) 2
Secretary's report (Deans) 2
Carl Yoshimoto (1922-2011) (Huber) 3
Endowment report (Woolley) 7
New model for *JHR* (Woolley) 8
JHR Editor's report (Schmidt) 8
Collecting in Peru (Ohl et al.) 9
Collecting in Greenland (Rasmussen) 13
Imaging in Europe (Mullins) 14
Entomophagous insects (Whitfield) 15
Myrmilloides (Williams) 16
Pogonomyrmex nestmate recognition (Mayo) 17
New visualization methods (Ernst) 18
Wasp-mimicking mantidflies (Ohl) 20
Project LLAMA (Longino & Branstetter) 22
Bodega Bay workshop (Mullins) 25
The YPT cookbook (Masner) 26
Membership information 28

Zdeněk Bouček (1924-2011)

By: John Noyes, Natural History Museum, London, UK

Some of you will have already have heard of the death of Zdeněk Bouček on Sunday night (July 17th) after a prolonged, progressive illness. He was a very good friend to many of us and will be badly missed.

Zdeněk was one of the best known and most highly respected Hymenoptera taxonomists of the last century and early part of this one. He was born in Hradec Králové (now Czech Republic) in 1924 and moved with his family to England in 1969 as result of the deteriorating political situation in that country. In 1970 he worked for a short

continued on page 3—

President's report

By: Michael J. Sharkey, University of Kentucky, USA

Dear fellow Hymenopterists,

I thought that I would start this report by revisiting the promises that I gave during the hardly fought presidential election. There were five as I remember: 1) To develop The *Journal of Hymenoptera Research* (*JHR*) into an open access electronic format; 2) To allow for the publication of interactive keys; 3) To develop an electronic method of commenting on published articles in *JHR*; 4) To create a listserve for all the Society and; 5) To increase the membership of the Society.

Due to the effective leadership of Past-President Jim Woolley, objectives 1 and 2 were accomplished before my tenure began, and the number of submissions to *JHR*

continued on page 24—

Secretary's report

By: Andy Deans, North Carolina State University

Hello fellow ISH members! Since my last report in February we've had a significant number of members renew for 2011, which is really great. Thank you all for your support! We have 20 students so far this year, which is a huge jump from 14 students in 2010. This is especially encouraging given that ISH is preparing now to offer a student award for travel and research (see Woolley, page 7). We also welcomed 14 new members so far this year.

My goals for the next five months are to 1) work with our Webmaster to establish a system for automated dues renewal reminders (I haven't been vigilant enough in this area, I must admit), and 2) help our president (see Sharkey, page 1) think about how we can bring other hymenopterists, those who have never been members (especially students) or who haven't renewed in several years, into our community. A new dues structure should help.

The next ISH symposium and business meeting will be held at the annual Entomological Society of America meeting in Reno, NV on Sunday, November 13, 2011: 1:30 PM-5:30 PM, in Room D9 of the Reno-Sparks Convention Center. The limited time to submit talks (ESA surprised us with a deadline that was two mnths earlier than usual) left us with a rather sparse-looking program:

1:30 PM - Welcoming Remarks
1:35 PM - Highlights in Hymenoptera research from the past year, with updates on recent changes in the International Society of Hymenopterists
3:35 PM - ISH Business Meeting
4:35 PM - Foraging and Pollination

The 1:35-3:35 time slot is available for members to give talks. We already have two lined up; let me know soon if you will be at ESA and willing to present!

Although we have some sad news to report in this issue I want thank the ISH community for consistently providing rich, thought-provoking content for this young newsletter. As I stated in the last issue, *Hamuli* has vastly exceeded any of my expectations. ❖

Webmaster's report

By: Katja Seltmann, North Carolina State University

Since the last edition of Hamuli, we had 1004 visitors from 71 countries access the ISH website; 47% of these were return visitors. The majority of our visitors came from the United States (247). However, a high percentage came from Brazil, with 107 visitors. Germany had the third greatest number with 47. We are now up from 1 to 9 mobile visitors. Although these numbers are still small, mobile visitation is an exciting trend to watch with the large number of Web-enabled phones now available on the market. We plan to continue supporting mobile device access by keeping the site simple and clean, so it remains compatible as we update the style of the ISH website. Also, a substantial number (112 or 9%) of our returning visitors used dial-up services to view the ISH website. Our Dial-up users are another major consideration in the design choices we are making, as to not alienate part of our growing community.

There are two important updates to the ISH Website. First, the information for authors has changed on the journal page. This includes updated subject editors, information for ordering back issues, a link to submission information, and an article JHR RSS feed. Secondly, thanks to Vladimir Gokhman, many more names have been added to the historical photograph of the Sheffield meeting, August 11-17, 1991. Please feel free to contribute any historical ISH photograph or factoid for the Website. It is the one place where we can keep a community record of past participation, meetings, and events. Any details would be greatly appreciated! ❖

Hamuli is published by the International Society of Hymenopterists.
Contact information: Andrew R. Deans, Department of Entomology, North Carolina State University, Box 7613, Raleigh, NC, 27695, USA.
Fax: +1 919 515 7746 Ph: +1 919 515 2833 Email: andy_deans@ncsu.edu

President: Michael J. Sharkey <msharkey@uky.edu>
Treasurer: Craig Brabant <brabant@entomology.wisc.edu>
Secretary: Andrew R. Deans <andy_deans@ncsu.edu>
Webmaster/Archivist: Katja Seltmann <katja_seltmann@ncsu.edu>
Editor, *Hamuli*: Andrew R. Deans <andy_deans@ncsu.edu>
Associate Editor: Trish Mullins <plmullin@ncsu.edu>

See the last page for submission instructions. Deadline for the first issue is January 15, while the deadline for the second issue is July 15. Articles appearing herein should not be considered published for the purposes of zoological nomenclature.

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

—*continued from page 1*

time in the Hope Department in Oxford University until he took up a full time position in the Commonwealth Institute of Entomology housed in the Natural History Museum in London until his retirement in 1989. His group of interest was the Chalcidoidea, especially families that included larger species such as Leucospidae, Chalcididae, Pteromalidae, Torymidae and Eulophidae. He will be especially remembered for his mammoth tome of 800+ pages on the Australian Chalcidoidea, which is reputed to have taken one person 2 months to extract taxonomic information for Zoological Record. After his retirement and the Velvet revolution in Prague in 1989, he and Tania bought a cottage near Hradec Králové and returned to live in the Czech Republic with annual visits to the UK. Zdeněk leaves his wife Tania and daughter Jitka.

Zdeněk was known as the father of modern Chalcidoidea systematics, with more than 150 publications to his name and over 1100 taxa of Hymenoptera including 47 family group names and 281 genus group names.

In 2004, Zdeněk became an Honorary Fellow of the Royal Entomological Society and was awarded the International Society of Hymenopterists Distinguished Research Medal in 2005.

For further information on Zdeněk's life and contribution to Chalcidoidea systematics see:

- Noyes, J.S. 2005. RES Honorary Fellow scoops a further award. Dr. Zdeněk Bouček, winner of the International Society of Hymenopterists Distinguished Research Medal. *Antenna* 29(4):286-290.
- Noyes, J.S. 2005. In celebration of the 80th birthday of Zdeněk Bouček: father of modern Chalcidoidea systematics. *Acta Societatis Zoologicae Bohemoslovenicae* 69(1-2):1-10
- Sedivy, J. 2004. 80th birthday of RN Dr. Zdeněk Bouček, DrSc. *Klapelekiana* 40:173-177. ❖

Dr. Zdenek Boucek (1924-2011), at his his 80th birthday with a birthday card signed by all the chalcidologists.

Carl Masaru Yoshimoto (1922–2011)

By: John Huber, Canadian National Collection, Ottawa, ON, Canada

Carl Masaru was born on April 27, 1922, in Honolulu, Hawaii, and passed away February 25, 2011, in Calgary. He was the eldest of the three siblings. His father was an immigrant plantation worker from Hiroshima and his mother was a Hawaiian Nisei. Carl led a carefree teenage life and upon graduating from high school, he took a year off to work part time and attend commerce school to pick up a few credits. On that fateful Sunday morning of December 7, 1941, he saw squadrons of aircrafts with "hino maru" insignia flying low overhead towards Pearl Harbor, the armed service camp and air bases. Carl proceeded to join the US Engineers Department for his employment, building bunkers for the air base to camouflage aircrafts

continued—

—*continued*

beside the runways. All niseis wore a photo ID with the word "Restricted" across it. Curfew was imposed on all Japanese Americans. Being the only son in the family, his parents did not want Carl to volunteer in the armed service but wanted him to wait until he was conscripted. When his name came up in the induction process, perhaps through divine intervention, he was rushed to the hospital for an emergency appendectomy. His name was deferred and placed at the end of the list. By the end of basic training, the war was over and he was spared its horrors. After 2 years of service, he was honorably discharged. Carl took advantage of the GI Bill of Rights, which granted him the opportunity to study liberal arts for 3 years at Wesleyan College in 1950. Inspired by one of his professors, he was encouraged to pursue higher education in the field of entomology, where he graduated with his Masters from Kansas State College in 1952. He later received his PhD from Cornell University in 1955. Upon graduation, he commenced work for the US Department of Agriculture in the fruit fly lab. He was sent to Mexico City for a two-year duration. His experimentation on insect attractants led to a more serious form of discovery. Ruth Reiko Nishimura was born in Tampico, Mexico, to a pioneering father who was a Christian minister and a dentist from Kyoto. Her mother grew up in Ibaraki, Japan. At the age of seven, Ruth and her brother were sent to Japan for their formal education in Kyoto. Unable to return to her home to Mexico when the war started, she completed high school in Japan. When she was able to return home, Ruth was employed at the Japanese embassy in Mexico City. As fate would have it, both Ruth and Carl were invited to a mutual friend's birthday party. It was love at first sight. After a whirlwind courtship of three months, the handsome couple was married in 1957 before returning to Hawaii. For the next 10 years, Carl toiled for the Bemice P. Bishop Museum in Hawaii. He spent a year of sabbatical leave with the British Museum of Natural History in London, and in 1961 joined the Canadian Department of Agriculture Forestry Service as a taxonomist (Chalcidoidea) working at the Canadian National Collection of Insects and Arachnids (CNC), Ottawa. After 34 years of distinguished service, Carl retired and moved to Calgary on January 23, 2003. His field work had taken him to many countries—continental US, Mexico, Taiwan, Philippines, Fiji, Hong Kong, Amami-Oshima, Okinawa, Arctic Research Lab, Fletcher's Ice Island and Point Barrow, Alaska. His Ph.D. thesis on the nesting behavior of Pompilidae was a stepping-stone to his illustrious career. He has ninety research papers to his credit. Carl was indeed a scholar and a gentleman. He leaves us with a deep void. He will be missed at Kotobuki.

During his tenure at the CNC, Carl and Lubomir Masner co-hired Gary Gibson straight out of undergraduate biology as their technician. It was while working with Carl for nine years that Gary developed his interest in chalcidoids, which stimulated his departure in 1979 to pursue a Ph.D. in chalcid systematics and eventual return to the CNC to work alongside Carl as a second chalcidologist. Carl went on sabbatical to the University of California, Riverside in the early 1980s where he got to know John Huber. Upon his return to Ottawa, Carl kept in touch and then in 1985 hired John as a postdoctoral fellow. When Carl retired in early 1988, John was employed by the Canadian Forest Service to replace him at the CNC.

Carl is remembered at the CNC as a friendly and cheerful person with a big smile and infectious enthusiasm.

Scientific Bibliography

1. Yoshimoto C.M., and Millspaugh, D.D. 1950. A preliminary list of the Calliphorinae (Diptera) known to occur in Iowa. Bulletin of the Iowa Academy of Science 57: 545–547.
2. Evans, H.E., Lin, C.S., and Yoshimoto, C.M. 1953. A biological study of *Anoplius apiculatus autumnalis* (Banks) and its parasite, *Evagetes mohave* (Banks) (Hymenoptera, Pompilidae). Journal of the New York Entomological Society 61: 61–78.
3. Evans, H.E., Lin, C.S., and Yoshimoto, C.M. 1954. Biological notes on *Psammaecius tricolor* (Cresson) (Hymenoptera: Sphecidae: Gorytini). Entomological News 65: 6–11.
4. Yoshimoto, C.M. 1954. Notes on the species of Drosophilidae (Diptera) occurring in Kansas. Journal of the Kansas Entomological Society 27: 23–26.
5. Yoshimoto, C.M. 1954. A study of the biology of *Priocnemis minorata* Banks (Hymenoptera, Pompilidae). Bulletin of the Brooklyn Entomological Society 49: 130–138.
6. Evans, H.E. and Yoshimoto, C.M. 1955. An annotated list of pompilid wasps taken at Blackjack Creek, Pottawatomie County, Kansas (Hymenoptera). Journal of the Kansas Entomological Society 19: 16–19.
7. Evans, H.E., Krombein, K.V. and Yoshimoto, C.M. 1955. An ethological study of *Anoplius* (*Pompilinus*) *fraternus* (Banks) (Hymenoptera, Pompilidae). Bulletin of the Brooklyn Entomological Society 50: 77–84.
8. Yoshimoto, C.M. 1959. A new species of *Odynerus* from Niihau. Proceedings of the Hawaiian Entomological Society 17: 126–127.
9. Yoshimoto, C.M. and Gressitt, J.L. 1959. Trapping of air-borne insects on ships on the Pacific (Part II) Proceedings of the Hawaiian Entomological Society 17: 150–155.
10. Yoshimoto, C.M. 1959. Revision of the Hawaiian Pemphredoninae (Hymenoptera: Sphecidae) Proceedings of the Hawaiian Entomological Society 17: 128–149.
11. Yoshimoto, C.M. and Gressitt, J.L. 1960. Trapping of air-borne insects on ships on the Pacific (Part 3). Pacific Insects 2(2): 239–243.
12. Yoshimoto, C.M. 1960. Revision of Hawaiian Crabroninae with synopsis of Hawaiian Sphecidae (Hym.) Pacific Insects 2(3): 301–337.
13. Maa, T.C. and Yoshimoto, C.M. 1961. Loboscelidiidae, a new family of Hymenoptera. Pacific Insects 3(4): 523–558.
14. Gressitt, J.L., Sedlacek, J., Wise, K.A.J., and Yoshimoto, C.M.

continued—

—*continued*

1961. A high speed airplane trap for air-borne organisms. Pacific Insects 3(4): 549–555.
15. Yoshimoto, C.M. and Gressitt, J.L. 1961. Trapping of air-borne insects on ships on the Pacific (Part 4). Pacific Insects 3(4): 556–558.
16. Evans, H.E. and Yoshimoto, C.M. 1962. The ecology and nesting behaviour of the Pompilidae (Hymenoptera) of the Northeastern United States. Entomological Society of America Miscellaneous Publications 3(3): 67–119.
17. Yoshimoto, C.M. 1962. Insects of Micronesia. Hymenoptera: Eucoilinae (Cynipoidea). Bishop Museum Press 19(3): 89–107.
18. Yoshimoto, C.M., Gressitt, J.L, and Woff, T. 1962. Air-borne insects from the Galathea Expedition. Pacific Insects 4(2): 269–291.
19. Gressitt, J.L., Coatsworth, J. and Yoshimoto, C.M. 1962. Air-borne insects trapped on "Monsoon Expedition". Pacific Insects 4(2): 319–323.
20. Yoshimoto, C.M. 1962. Revision of the Hawaiian Cynipoidea (Hymenoptera: Eucoilinae). Pacific Insects 4(4): 799–845.
21. Yoshimoto, C.M., Gressitt, J.L., and Mitchell, C.J. 1962. Trapping of air-borne insects in the Pacific-Antarctic area, 1. Pacific Insects 4(4): 847–858.
22. Yoshimoto, C.M. 1962. Insects of Macquarie Island. Hymenoptera: Diapriidae. Pacific Insects 4(4): 973–974.
23. Yoshimoto, C.M. 1963. Synopsis of Polynesian Cynipoidea (Hymenoptera: Lucoilinae). Pacific Insects 5(2): 433–443. (+ corrections in later volume)
24. Yoshimoto, C.M. 1963. The genera *Leptolamina* and *Maacynips*, n.gen. from the Papuan subregion (Hymenoptera: Cynipoidea, Eucoilinae). Pacific Insects 5(3): 513–517.
25. Yoshimoto, C.M. and Gressitt, J.L. 1963. Trapping of air-borne insects in the Pacific-Antarctic Area, 2. Pacific Insects 5(4): 874–883.
26. Gressitt, J.L. and Yoshimoto, C.M. 1963. Dispersal of Animals in the Pacific, Pacific Basin Biogeography. Tenth Pacific Science Congress, Honolulu, Hawaii, Bishop Museum Press. Pp. 283–292.
27. Yoshimoto, C.M. 1964. Insects of Campbell Island. Hymenoptera: Diapriidae. Pacific Insects Monographs 7: 507–508.
28. Yoshimoto, C.M. 1964. Insects of Campbell Island. Hymenoptera: Cynipoidea: Eucoilinae. Pacific Insects Monographs 7: 509–512.
29. Kerrich, G.J. and Yoshimoto, C.M. 1964. Insects of Campbell Island. Hymenoptera: Eulophidae. Pacific Insects Monographs 7: 501-503.
30. Harrell, J.C. and Yoshimoto, C.M.1964. Trapping of air-borne insects on ships on the Pacific, Part 5. Pacific Insects 6(2): 274–282.
31. Yoshimoto, C.M. 1964. Nesting activity and larval description of *Trypoxylon* (*Trypoxylon*) *bicolor* Smith (Hymenoptera: Sphecidae) in Hawaii. Pacific Insects 6(3): 517–521.
32. Yoshimoto, C.M. and Gressitt, J.L. 1964. Dispersal studies on Aphididae, Agromyzidae and Cynipoidea. Pacific Insects 6(3): 525–531.
33. Yoshimoto, C.M. and Ishii, T. 1965. Insects of Micronesia. Hymenoptera. Chalcidoidea: Eulophidae, Encyrtidae (part), Pteromalidae. Insects of Micronesia 19(4): 109–178.
34. Yoshimoto, C.M. 1965. Nesting activity of the mud-daubing wasp, *Pison argentatum* Shuckard in Hawaii (Hymenoptera, Sphecidae, Trypoxyloninae). Pacific Insects 7(2): 291–294.
35. Yoshimoto, C.M. and Yasumatsu, K. 1965. The Eucoilinae of the Ryukyu Archipelago. (Hymenoptera: Cynipoidea). Pacific Insects 7(4): 643–660.
36. Yoshimoto, C.M. 1965. Synopsis of Hawaiian Eulophidae including Aphelininae (Hym.: Chalcidoidea). Pacific Insects 7(4): 665–699.
37. Yoshimoto, C.M. 1965. The Hawaiian Thysaninae (Hym.: Chalcidoidea: Encyrtidae). Pacific Insects 7(4): 703–704.
38. Yoshimoto, C.M. 1967. The Phylogeny and zoogeography of the endemic genera of the Hawaiian Pteromalidae (Hymenoptera: Chalcidoidea). Pacific Insects 9(2): 197–203.
39. Yoshimoto, C.M. 1969. Description of a new genus of Haw. Eupelminae with remarks on its biology (Hymenoptera: Encyrtidae). Pacific Insects 11(3-4): 627–632.
40. Yoshimoto, C.M. 1969. A biological note on *Megachile* (*Eumegachile*) umbripennis Smith (Hymenoptera, Apoidea). Proceedings of the Hawaiian Entomological Society 20(2): 465–466.
41. Yoshimoto, C.M. 1970. A new species of Astichus (Hymenoptera: Eulophidae) associated with the birch bracket fungus, *Polyporus betulinus* and woody fungus *Ganoderma applanatum* in Eastern Canada. The Canadian Entomologist 102: 656–659.
42. Yoshimoto, C.M. 1970. A new Eulophid parasite (Hymenoptera: Chalcidoidea) from eggs of the nursery pine sawfly, *Diprion frutetorum* (Hymenoptera: Tenthredinoidea). The Canadian Entomologist 102: 908–910.
43. Yoshimoto, C.M. 1970. A new Ibaliid wasp from North America (Hymenoptera: Cynipoidea, Ibaliidae). The Canadian Entomologist 102: 1196–1198.
44. Doutt, R.L. and Yoshimoto, C.M. 1970. Hymenoptera: Chalcidoidea: Mymaridae of South Georgia, in Subantartic Entomology, particularly of South Georgia and Heard Island. Pacific Insects Monographs 23: 293–294.
45. Yoshimoto, C.M. 1970. A new species of *Tetrastichus* (Hymenoptera: Eulophidae) parasitizing pupae of *Sesamia inferens* (Lepidoptera: Noctuidae). The Canadian Entomologist 102: 1607–1609.
46. Yoshimoto, C.M. 1970. A new subfamily of Cynipoidea (Hymenoptera) from Nepal. The Canadian Entomologist 102: 1583-1585.
47. Yoshimoto, C.M. 1971. A new species of the genus *Zamischus* Ashmead and description of the male *Z. braziliensis* (Hymenoptera, Cynipidae: Eucoilinae). The Canadian Entomologist 103: 979–982.
48. Yoshimoto, C.M. 1971. Revision of the genus *Euderus* of America North of Mexico (Hymenoptera: Eulophidae). The Canadian Entomologist 103: 541–578.
49. Yoshimoto, C.M. 1971. A new genus of Euderinae from South America (Hymenoptera, Chalcidoidea: Eulophidae). The Canadian Entomologist 103: 882–886.
50. Yoshimoto, C.M. 1971. A new genus of Mymarid wasp (Hymenoptera, Chalcidoidea: Mymaridae) from New Brunswick, Canada. The Canadian Entomologist 103: 1079–1082.
51. Yoshimoto, C.M. 1972. Notes of two species of Brachyscelidiphaginae (Pteromalidae: Chalcidoidea, Hymenoptera). The Canadian Entomologist 104: 969–976.
52. Yoshimoto, C.M. 1972. A new species of *Achrysocharis* (Eulophidae: Chalcidoidea) from pine needle scale (Diaspididae: Homoptera). The Canadian Entomologist 104: 1483–1485.
53. Yoshimoto, C.M. 1972. A new species of the genus *Stemmatosteres* (Encyrtidae: Chalcidoidea). The Canadian Entomologist 104: 1837–1839.
54. Yoshimoto, C.M., Kozlov, M.A., and Trjapitzin, V.A. 1972. New subfamily of Mymaridae (Hymenoptera, Chalcidoidea). Entomologeskoe Obozrenie 51(4): 878–885.[in Russian] [English translation: A new subfamily of the Mymaridae (Hymenoptera, Chalcidoidea) xx xx: 521–525]
55. Yoshimoto, C.M. 1973. A new Nearctic Derostenus (Hymenoptera: Eulophidae) parasitic on *Nepticula* (Lepidoptera: Nepticulidae) in North America. The Canadian Entomologist 105: 1053–1057.
56. Yoshimoto, C.M. 1973. Review of the North American *Chrysocha-*

continued—

—*continued*

ris (Kratochviliana) (Eulophidae: Chalcidoidea) North of Mexico, especially species attacking birch casebearer (Lepidoptera: Coleophoridae) and birch leafminer (Hymenoptera: Tenthredinidae). The Canadian Entomologist 105: 1309–1349.

57. Yoshimoto, C.M. 1973. Revision of the genus *Chrysocharis* Förster (Subgenus *Chrysocharis* s. str.) (Eulophidae: Chalcidoidea) of America North of Mexico. The Canadian Entomologist 105: 1377–1405.
58. Gressitt, J.L. and Yoshimoto, C.M. 1974. Insects dispersal studies in Northern Alaska. Pacific Insects 16(1): 11–30.
59. Yoshimoto, C.M. 1975. Cretaceous chalcidoid fossils from Canadian amber. The Canadian Entomologist 107: 499–528.
60. Yoshimoto, C.M. 1975. A new species of *Ooencyrtus* (Hymenoptera: Chalcidoidea, Encyrtidae) reared from the elm spanworm, *Ennomos subsignarius* (Lepidoptera: Geometridae). The Canadian Entomologist 107: 833–835.
61. Ryan, R.B. and Yoshimoto, C.M. 1975. Laboratory crossings with different sources of the larch casebearer parasite *Chrysocharis laricinellae* (Hymenoptera: Eulophidae). The Canadian Entomologist 107: 1301–1304.
62. Yoshimoto, C.M. 1976. *Pseudoxenufens forsythi*, a new genus and species of Trichogrammatidae (Hymenoptera: Chalcidoidea) from Western Ecuador. The Canadian Entomologist 108: 419–422.
63. Yoshimoto, C.M. 1976. Playaspalangia, a new genus of Spalagiinae (Hymenoptera, Chalcidoidea: Pteromalidae) from Mexico. The Canadian Entomologist 108: 475–478.
64. Yoshimoto, C.M. 1976. A new species of Pteromalinae (Pteromalidae: Chalcidoidea) from North America. The Canadian Entomologist 108: 557–560.
65. Yoshimoto, C.M. 1976. Synopsis of the genus *Mestocharis* Förster in America North of Mexico (Chalcidoidea: Eulophidae). The Canadian Entomologist 108: 755–758.
66. Yoshimoto, C.M. 1976. Revision of the genus *Dicladocerus* (Eulophidae: Chalcidoidea) of America North of Mexico, with particular reference to species attacking larch casebearer (Lepidoptera: Coleophoridae). The Canadian Entomologist 108: 1173–1206.
67. Yoshimoto, C.M. 1977. A new species of *Spalangiopelta* Masi in North America (Chalcidoidea: Pteromalidae, Ceinae). The Canadian Entomologist 109: 541–544.
68. Yoshimoto, C.M. 1977. A new species of *Ooencyrtus leptoglossi* (Hymenoptera: Chalcidoidea, Encyrtidae) reared from eggs of Leptoglossus corculus (Hemiptera: Coreidae). The Canadian Entomologist 109: 1009–1012.
69. Yoshimoto, C.M. 1977. The North American species of the genus *Achrysocharoides* (Hymenoptera: Eulophidae). The Canadian Entomologist 109: 907–930.
70. Yoshimoto, C.M. 1977. Revision of the Diaprinae (Pteromalidae: Chalcidoidea) from America North of Mexico. The Canadian Entomologist 100: 1035–1056.
71. Yoshimoto, C.M. 1978. Revision of the subgenus *Achrysocharella* Girault of America North of Mexico (Chalcidoidea, Eulophidae: Chrysonotomyia Ashmead). The Canadian Entomologist 110: 697–719.
72. Yoshimoto, C.M. 1978. Two new species of *Epiclerus* from the New World (Hymenoptera: Chalcidoidea, Tetracampidae).The Canadian Entomologist 110: 1207–1211.
73. Yoshimoto, C.M. 1978. Voucher specimens for Entomology in North America. Bulletin of the Entomological Society of America 24(2): 141–142.
74. Yoshimoto, C.M. 1979. Chalcidoidea. Pp. 496–497 and Cynipoidea. Pp. 497–498. In Danks, H.V (editor). Canada And Its Insect Fauna. Memoirs of the Entomological Society of Canada 108. 573 pp.
75. Yoshimoto, C.M. 1979. A new species of *Megastigmus* from Mexico (Chalcidoidea: Torymidae, Megastigminae). The Canadian Entomologist 111: 201–206.
76. Yoshimoto, C.M. and Gibson, G.A.P. 1979. A new genus of *Eurytomidae* (Chalcidoidea: Eurytomidae, Aximinae) from Brazil. The Canadian Entomologist 111: 421–424.
77. Yoshimoto, C.M. 1980. Synopsis of *Chrysonotomyia* Ashmead s. str. of America North of Mexico (Hymenoptera: Chalcidoidea, Eulophidae). The Canadian Entomologist 112: 1039–1048.
78. Gibson, G.A.P. and Yoshimoto, C.M. 1981. Redescription of *Tetracyclos boreios* (Hymenoptera: Encyrtidae), with a discussion of its placement and structure. The Canadian Entomologist 113: 873–881.
79. Yoshimoto, C.M. 1981. First record of *Thripoctenoides* from North America with description of a new species (Hymenoptera: Eulophidae).The Canadian Entomologist 113: 723–725.
80. Yoshimoto, C.M. 1983. A new genus of Tetrastichinae from the New World (Hymenoptera: Chalcidoidea, Eulophidae). Contributions of the American Entomological Institute 10: 90–93.
81. Yoshimoto, C.M. 1983. Review of North American *Pnigalio* Schrank (Hymenoptera, Eulophidae). The Canadian Entomologist 115: 971–1000.
82. Yoshimoto, C.M. 1984. The Families And Subfamilies Of Canadian Chalcidoid Wasps. Hymenoptera: Chalcidoidea. The Insects and Arachnids of Canada Part 12. Publication 1760. 149 pp.
83. Sharkey, M., Arthur, A., Bisdee, G., Yoshimoto, C., and Barron, J. 1987. The parasitic Hymenoptera associated with sunflower (Helianthus spp.) in mid western Canada. The Canadian Entomologist 119: 611–623.
84. Yoshimoto, C.M. 1990. A review of the genera of New World Mymaridae (Hymenoptera: Chalcidoidea). Flora and Fauna Handbook No. 7. Sandhill Crane Press, Gainesville, Florida. 166 pp.
85. Schauff, M.E., Yoshimoto, C.M., and Hansson, C. 1994. A new genus and species of Entedoninae (Hymenoptera: Eulophidae) from North and Central America. Proceedings of the Entomological Society of Washington 96: 607–611.

Miscellaneous Publications:

1. Gressitt, J.L. and Yoshimoto, C.M. 1960. Aerial Transport of Insects in Polar Areas, particularly in the Antarctic. International Biometeorological Congress, Pau, France.
2. Yoshimoto, C.M. and Gressitt, J.L. 1964. Dispersal studies on Aphididae, Agromyzidae, and Cynipoidea. Proceedings of the International Congress of Entomology, London, England.
3. Yoshimoto, C.M. 1973. Biography: Herbert Edward Milliron "Busy as a Bumblebee". Bulletin of the Entomological Society of Canada 5(3): 90–91.
4. Yoshimoto, C.M. 1974. Book Review: "Cone and seed insects of British Columbia" by A.F. Hedlin. Bulletin of the Entomological Society of Canada 6(3): 89.
5. Masner, L., Barron, J.R., Bisdee, H.E., Dumouchel, L., Goulet, H., Mason, W.R.M., Sharkey, M.J., and Yoshimoto, C. 1987. Order Hymenoptera. Pp. 223–252 in Lafontaine, J.D., Allyson, S., Behan Pelletier, V.M., Borkent, A., Campbell, J.M., Hamilton, K.G.A., Martin, J.E.H., and Masner, L. (Eds). The insects, spiders and mites of Cape Breton Highlands National Park. Agriculture Canada Research Branch, Biosystematics Research Centre Report 1. 302 pp. ❖

Report from the Endowment Committee

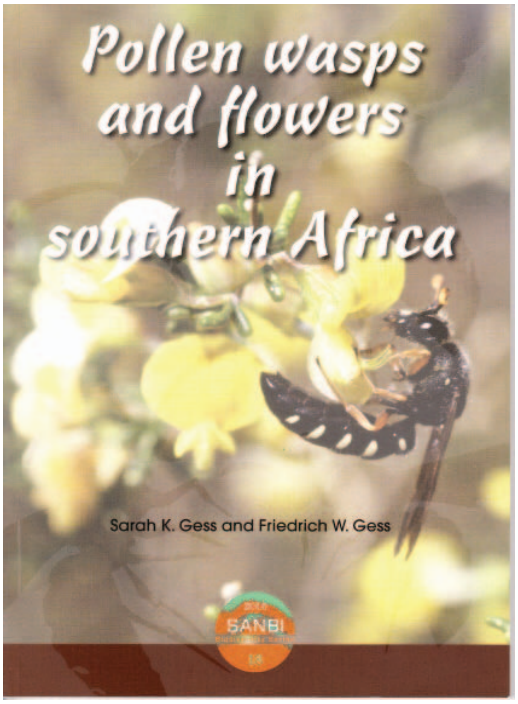
By: Jim Woolley, Texas A&M University, on behalf of the ISH Endowment Committee: Andy Austin, Chair, University of Adelaide, Brad Vinson and Jim Woolley, Texas A&M University

The ISH Endowment continues to enjoy steady growth, thanks to the generosity of ISH members, in spite of the current dismal investment environment. We have continued to take a completely risk-averse approach to managing these funds, so that even during recent downturns in worldwide financial markets, the ISH endowment has held every penny of its value. In any case, we are happy to announce that the corpus of the ISH Endowment will soon be well over $50,000 US. As a result, we will be recommending to the Executive Committee that the **ISH Student Award** be instituted as soon as possible. Pending approval of the President and Executive Committee, full details will be announced soon.

Briefly, the **ISH Student Award** is designed to encourage and support work on the systematics, ecology, physiology or some other aspect of the insect order Hymenoptera, which is being undertaken as part of a postgraduate program (normally a PhD or equivalent qualification). The awards will be advertised on a regular basis through the Society, and an individual award will be valued at US $2,500. These funds can be used for any purpose that makes a contribution to a student's research such as attendance at a conference, fieldwork, direct research costs or purchase of a piece of equipment. Although only full-time postgraduate students will be eligible, they need not be ISH members to apply. For the first competition, we hope to encourage applications from students who are a resident in any country other than the 30 most developed countries listed by the UN Development Program (currently Australia, Austria, Belgium, Brunei, Canada, Cyprus, Denmark, Finland, France, Germany, Greece, Hong Kong, Iceland, Ireland, Israel, Italy, Japan, Kuwait, Luxembourg, Netherlands, New Zealand, Norway, Singapore, Slovenia, South Korea, Spain, Sweden, Switzerland, United Kingdom, and United States).

We hope to see the machinery for the **ISH Student Award** in place soon, so that students interested in using these funds to attend the next International Congress of Entomology in 2012 will have time to apply. Eligible students interested in applying for an ISH Student Award should keep an eye on the ISH web site, and details will be emailed soon to everyone on the ISH mailing list. If you send an expression of interest now to any member of the ISH Executive Committee, they will be sure that you receive details of the application process as soon as they are announced. ❖

Call for papers: The *Iranian Journal of Entomology* (*IJE*) invites authors to submit research papers about all aspects of insects and other related arthropods, including systematics, ecology, biogeography, physiology and pest management. We welcome manuscripts from any geographic region, in particular from Asia and the Middle East. *IJE* is an online, open access, peer-reviewed and free-of-charge journal, publishing basic/applied, laboratory/field, and experimental/theoretical studies on insects and other related arthropods. The editors are specifically seeking papers that are novel and make contributions to the knowledge of entomology and pest management. IJE publishes full-length original articles, review articles and short communications. The language of publication is English. Please find the details on how to submit your manuscripts at http://ijent.ir/.



Announcement: Pollen wasps and flowers in southern Africa by Sarah and Fred Gess published in the SANBI Biodiversity Series is intended as a visually appealing useful supplementary update for Southern Africa of The Pollen Wasps by Sarah Gess published in 1996 by Harvard University Press. The book is obtainable from: SANBI Bookshop, Private Bag X101, Pretoria, 0001 South Africa. Tel. 012 843 5000. e-mail: bookshop@sanbi.org.za. Website: www.sanbi.org.

A new model for the *Journal of Hymenoptera Research*

By: Jim Woolley, Texas A&M University, past president

[reprinted from *Hamuli* vol. 2, issue 1] After over two years of exploring the alternatives, discussions with ISH members, and negotiations with potential publishers, we are happy to announce that effective January 1, 2011, the *Journal of Hymenoptera Research* (Impact Factor 0.676) will be published electronically and in print by Pensoft Publichers, Sofia, Bulgaria (www.pensoft.net/journals/jhr/). Pensoft is also the publisher of *ZooKeys*, *PhytoKeys* and *BioRisk*, as well as some other Society journals. Like these journals, *JHR* will now be open access and beginning with volume 20 (2011), it will be available on-line to anyone with an internet connection and a browser. ISH is the first scientific society to make this arrangement with Pensoft. As many of you know, Pensoft is a leader in the rapidly changing world of scientific publication. This new arrangement offers a well developed XML-based workflow for submission, editorial work, publication and dissemination, and advanced publication technologies including data publication and semantic tagging and Web enhancement of articles, while maintaining publication of hard copy required under the current ICZN (more about that: http://bit.ly/eJ7vEi). We believe that this move positions our Society to be a major innovator in the rapidly emerging technologies of electronic publication. Not the least of the benefits for us are that abundant full color plates can be included in articles, with no restrictions or additional charges involved. Here's how it'll work:

- ISH dues will remain $45 per year for members. ISH members are entitled to publish in *JHR* at a discounted rate, obtain a subscription to *Hamuli*, have access to the ISH list-server, and can vote in ISH elections.
- *JHR* will be open-access
- ISH members may publish at cost in *JHR*, the rate is currently $20 US per page. The page charges include a wide range of services on the publisher's side, including highly automated online editorial management system, mandatory registration of all new taxa in ZooBank, publishing a semantically enhanced HTML version, XML and automated dissemination of content to indexers and aggregators of biodiversity information.
- Non-members may publish in *JHR* at $30 per page
- ISH members may purchase hard copies of *JHR* for an additional $45 per year (in addition to the dues), plus $15 mailing costs. The price of $45 includes all issues with a maximum total number of 300 pages per year. Additional regular issues or supplements published within the same calendar year can be purchased from the publisher direct.
- Rates for Institutional Subscribers that desire to continue to receive hard copies will increase to $120 per year.

This is a truly revolutionary change in the way our Society does business. It positions ISH at the forefront of contemporary scientific publication, and it should revitalize our journal. Send your best manuscripts to Stefan Schmidt, the editor, at Hymenoptera@zsm.mwn.de! We should also recognize that there are some unknown terms in the business equation, that will only be solved as the next year or two unfolds and we have a better idea of the size of the new issues, *etc*. Since the cost of publication of hard copies of the journal now depends entirely on the size of issues, the rates for hard copy and institutional subscriptions in particular may need to change. ❖

JHR editor's report

By: Stefan Schmidt, Zoologische Staatssammlung München (ZSM), Germany

It is a little over half a year now since the *Journal of Hymenoptera Research* changed its publication platform and moved to Pensoft as a new publisher. The first issues were published in January and March, and the next issue is on its way and will be out shortly. The two published issues include nearly 40 colour pages, and the disciplines cover taxonomy (8 articles, 3 with identification keys) and behavioural ecology (2 articles). All articles are published under the open access model and can be downloaded from the publisher's website (www.pensoft.net/journals/jhr/archive). Printed copies of each issue are available and can be purchased from Pensoft directly (http://www.pensoft.net/journals/jhr).

Currently, there are 13 manuscripts at various stages of the publication process, 11 of them being under review. Compared to 2010, the number of submissions increased from 9 manuscripts that were submitted during the second half of 2010, to 17 manuscripts that were received during the first six months of 2011. This year there will be 4-5 issues with about 80 pages each, resulting in a total number of 300-400 published pages in 2011.

The move to Pensoft came with a change in the way manuscripts are submitted and handled by the authors, editors, and reviewers. All manuscripts have to be submitted through the publisher's online submission system, and although subsequent steps are managed by semi-automatically generated emails, personal messages between authors and editors and between editors and reviewers will con-

continued—

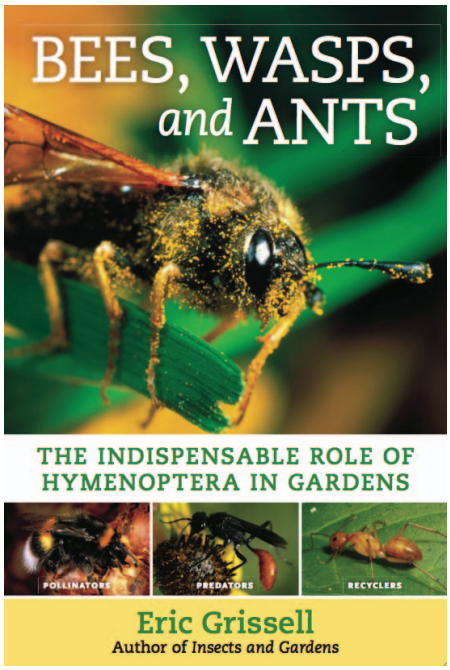
—continued

tinue to have their place in the publication process.

If you have a suitable manuscript, please consider publication in the *Journal of Hymenoptera Research*. It is affordable and the benefits include maximum dissemination of your research results, including immediate distribution to scientific databases, indices, and search engines like Zoological Record, Web of Science, Google Scholar, CAB Abstracts, DOAJ Content, and others. There is no additional charge for colour plates, neither in the online nor in the printed version, and publication in several formats, including PDF and a semantically enhanced version, is available.

It is expected that the open access publishing model will lead to an increased impact factor. The IF that has just been released (0.500) is close to the 5-year impact factor of the journal (0.505). However, since the calculation of the current IF is based on the years 2008 and 2009, it is too early to see any trend that may relate to the change of the publishing model.

For the latest news, follow the journal on Twitter (http://twitter.com/#!/HymenopteraJour), Facebook (http://www.facebook.com/pages/Journal-of-Hymenoptera-Research/170306833007412), and Mendeley (http://www.mendeley.com/groups/744911/journal-of-hymenoptera-research/). ❖



Announcement: "*Bees, Wasps, and Ants, The Indispensable Role of Hymenoptera in Gardens*", by Eric Grissell, 2010, Timber Press, Portland Oregon; 336 pages, 146 color images. Reviewed by: New, Tim R. 2011 *J. Insect Conservation*, 15:609-610.

Collecting in the Peruvian deserts

Michael Ohl, Stefanie Krause, Laura Breitkreuz, Museum für Naturkunde, Berlin

After collecting sphecids (a paraphyletic waste basket of 10,000 described species worldwide, which we prefer to call apoid wasps) in various parts of New World deserts, we decided to cross the Andes for the first time. For various reasons, which do not include any particular taxon-specific interest other than 'apoid wasp diversity', we spent three weeks in April/May 2011 in the southwest of Peru. The trip was funded by the German Science Foundation (DFG) to Michael as part of a project on the morphology and phylogenetic significance of antennal sensillae in apoid wasps, which is Stefanie's dissertation project. Laura, another student in Michael's lab, was a significant contribution to the Peru-team, because she speaks Spanish fluently and has already been to the country a few times.

continued—

The Peru-team on day 1 in Lima. From left to right: Laura, Michael, Stefanie.

—continued

Quite recently, Claus Rasmussen has published a checklist of wasps (*sensu lato*) of Peru, which contains very helpful information for preparing a collecting trip to Peru (Zookeys 15, 2009). He lists 301 species of apoid wasps from Peru, most information having been extracted from the literature. A quick search revealed that the majority of wasps have been recorded form the tropical part of Peru east of the Andes. Typical wood-nesting species in the Pemphredoninae and Crabroninae are particularly rich in Peru. Claus Rasmussen also provided a map of Peru with the collecting density of aculeate wasps indicated by color density for each political department in Peru. This clearly shows that the coastal areas in Peru do not inhabit the largest part of the apoid wasp diversity of the country. Not suprisingly except for the Lima department, which is clearly a collecting artifact due to intensive collecting activities around the capital city.

After spending two days in Lima, busy with driving to the natural history museum and the office of the Ministerio de Agricultura to sign and receive collecting and export permits, we picked up a 4WD-rental car and drove south on the Panamericana. Within the next few days we traveled all the way down to Puerto Inca, which is about 700 km south of Lima. Most of the time we drove though a landscape like the surface of the moon. Completely dry and almost sterile. On the way, we tried to collect as often as possible in all available creeks and canyons, which were usually the only places with at least some vegetation. Unfortunately, these sites also attract people, so that most of the smaller or larger rivers streams are bordered by at least some agricultural areas for many kilometers. In many cases this results in unfortunate amounts of waste everywhere and considerable destruction of most natural habitats.

We frequently found quite a few large bushes of *Baccharis* in a river beds, which is one of the best wasp plants across the New World. We collected large numbers of *Microbembex*, which is one of the fast-flying bembicine genera, which seem to disappear when sitting on the ground. There are currently two species recorded from Peru, but the taxonomy of this New World genus is still in bad shape at least in South America. For some reasons, the overall wasp diversity was quite low, with only a few *Tachysphex*, isolated *Sphex*, *Prionyx*, and *Sceliphron*, some *Oxybelus*, and a few other wasps. Here and elsewhere, the bee diversity was much larger than in wasps. Other aculeates (pompilids, tiphiids, and others) ware almost completely missing.

This unfortunate situation continued through almost the

continued—

A typical habitat of the Peruvian desert in lower altitude east of Nazca.

Evolution in action (on the way to the Canta valley))!

Somwhere along the Panamericana.

—*continued*

(pompilids, tiphiids, and others) ware almost completely missing.

This unfortunate situation continued through almost the entire collecting trip in the coastal desert. In order to reach more humid climates, we frequently travelled uphill from the Panamericana to higher elevations in the Andes. On elevations higher than 1500 m, shrubs and small bushes appear, and above 2000 m, many of them were in bloom. The general situation changed completely on the way uphill, and we very much hoped to have more collecting success here. Here we collected *Trichostictia* for the first time (ever, at least for me), a beautiful genus of bembicines with only three species included. We found *Trichostictia brunneri* in relatively large numbers, which J. Parker described in 1929 based on a small series of specimens from Peru (Arequipa). There are only a few records of this species in the literature compared to the other two, but this can also be a collecting artifact due to a limited distribution of *T. brunneri* in southwestern Peru and northwestern Chile.

We also collected on even higher elevations up to 3300 m near the city of Puquio. The landscape was great! Humidity was generally high, and the plant diversity impressive. On the way we crossed the Reserva Nacional Pampa Galeras, with numerous Vicuñas all over the place. Near Puquio, collecting was again totally different from all other collecting sites. We collected long series of very large chrysidids, beautifully blue-metallic, large ichneumonids, and, as usual, numerous large bees in several species. Unfortunately, apoid wasps were rare again. Most interestingly, we collected relatively large numbers of nice black-red wasps of the crabronine genus *Podagritus* in at least two species. The males have irregularly flattened antennae, and there are 14 genus-group names published in the genus for Peru. We still don't know what we collected.

An interesting taxonomic side-project came up when we collected the first *Stictia* in the Nazca area and in large numbers on the sandy river bed of the Rio Yauca. I already saw specimens of this species in the collection of the Museo de Historia Natural in Lima, which were identified as *Stictia signata*, one of the most widely distributed and locally most common species of Bembicini in South America. However, the color pattern of the Peruvian morphotype is quite significant, and the taxonomic identity still needs to be worked out.

After two weeks travelling thousends of kilometers in the southwestern deserts, we slowly headed back to Lima to bring Laura to the airport, because she had to return

continued—

Sceliphron nests, but where is the owner?

A sandy river-bed east of Nazca with flowering *Baccharis*.

On the way to Puquio at an altitude of about 4000m

Flowers, sand, sun, but hardly any wasps.

—continued

to Germany a few days earlier. Unfortunately, we were stopped in Pisco, because angry cotton farmers, frustrated about decreasing cotton prices, blocked the Panamericana and even smaller roads with burning tires, and we stumbled right across some of the first blockades set up directly in front of us. The farmers, holding large rocks in their hands, seemed not to be willing to let three tourists pass their blockade. This situation continued for three days, which forced us to stay in Pisco much longer than we wanted. However, one of the famous attractions of Pisco (and Pisco is quite poor in attractions) is the Pisco Sour and its variations, and the cotton farmer blockade gave us time to test many of them.

Upon a recommendation by a colleague from the museum in Lima, we spend another two days in the Canta valley quite close to Lima. The landscape was great again, and aculeate collecting as bad as usual. The most remarkable zoological discovery was my first guinea pig for lunch! We also set out light traps here (I am a neuropterologist, when wasps stay away from me), and we managed to collect a series of nice dobson flies at night. Sitting around a light trap at night with friends and a beer in my hand is always an amazing experience!

So we finally ended up with only a few hundred apoid wasps, only a few of which were exciting or appear to provide any new information with respect to any of our projects. Anyway, Peru is a nice country to travel around, but my next collecting trip to the arid areas of South America will certainly take place somewhere else. ❖

A good catch for lunch. Guinea pig in the Canta valley

There once was a *Chrysis* from Pest,
who invaded a *Sceliphron* nest.
Her back end did guide her
to a butt-load of spiders,
which her offspring proceed to digest.

—anonymous ISH member

Collecting in High-Arctic Greenland

By: Claus Rasmussen, Aarhus University, Denmark, currently again in NE Greenland

Most of my past activities have been in the tropics due to a natural combination of an interest in tropical stingless bees (insects in general) and a warm climate. However, as times-are-a-changing and we are facing global climate change, so my research has expanded to include climate changes in the perhaps most fragile ecosystem on earth, the high-Arctic. One of the major challenges is to predict effects of global environmental changes on higher organizational levels in nature, e.g., at the level of entire ecological networks, encompassing hundreds of species and their interactions. Such effects are of course complicated to track, because they show cascading, multiplicative effects, and their study requires strong analytical tools, such as general network theory.

My Carlsberg (our national brew) supported postdoctoral fellowship at the Aarhus University, Denmark, is set out to explore changes over the last 15 years in an ecological network; the network being studied is that between any flower species and their insect visitors during the short flowering season at the Zackenberg research station in NE Greenland (74º28' N, 20º35'W). Previous interaction data are available from a PhD study undertaken from 1996-1997 (*e.g.*, as published in *Ecology*, 89: 1573-1582) and my current study is sampling flower-visiting insects from 2010-2011. Though during the last c. 15 years, the station area has experienced less snow and an average rise in temperature of about a couple of degrees. Some flower species even appear up to three weeks earlier now, when compared to the 1996-1997 seasons.

When I first arrived in early June 2010 in Greenland, I soon collected all bee species ever reported from the country. There are only two bumble bees, and as almost typical for the genus, they are so similar that they are practically impossible to tell apart in the field (*Bombus* (*Alpinobombus*) *polaris* and *B*.(*A*.) *hyperboreus*). The latter species, interestingly enough, represents a social parasite different from the usual *Psithyrus* subgenus. Hymenoptera typically encountered in flowers elsewhere, the aculeates, are basically missing from Greenland. Even the ever-present ants are not found in Greenland, not even an introduced fire ant. However, the limited Lepidoptera fauna in Greenland is of course a paradise for parasitic microhymenoptera. We have at the most 20 different Lepidoptera species here in NE Greenland, and although I do not collect and rear parasitoids from caterpillars, I do get a number of nectar-feeding and sun-loving microwasps from the flower-cups. These include a few braconids (mostly *Cotesia*) and many ichneumonids (e.g., *Aoplus*, *Atractodes*, *Buathra*, *Cryptus*, and *Stenomacrus*). Other than these, I have caught a small number of eulophids (*Aprostocetus*) and pteromalids (*Pachyneuron*).

However, the real insect treat in the high-arctic NE Greenland turns out to be flies. Here, many diverse families and genera are present. The first ones on the wing, together with the *Bombus*, are fragile swarms of chironomids (e.g., *Chironomus pilicornis*), quickly followed by buzzing callophorids (*Protophormia terraenovae*), anthomyiids (*Fucellia ariciiformis*), and, as it turned out, the biggest problem during my sessile insect observation periods - sneaking *Aedes impiger* and *A. nigripes* (mosquitoes). Both species are extremely common from late June through July. Not even in the wettest part of the Amazon did I ever see a comparable number of mosquitoes as here. The only relief, of course, is that high-Arctic mosquitoes are only a nuisance and not disease vectors. I am now back in Greenland for the 2011 field season, where the late June temperature is about 5-10 degrees C, insects are active (still a few mosquitoes), and I am looking forward to eventually comparing the data from the four different seasons. Then, maybe, I will have an idea of what the climate change has done and will do to the flower visitors of NE Greenland. ❖

Imaging Adventures in Europe

By: Patricia Mullins, North Carolina State University

I have just returned from a fantastic 3-week trip to the Natural History Museum in London and the Museum für Naturkunde in Berlin, where I spent my time imaging type specimens of Evaniidae using the Passport Storm Portable Digital Imaging System by Visionary Digital (http://www.visionarydigital.com/IntegratedSystems3.html). My goal was to image each type specimen for three standard views – dorsal habitus, lateral habitus, and anterior face.

The system comes equipped with a Canon 7D Digital Camera, Canon MP-E 65mm (5X magnification) and 50mm f2.8 macro lenses, and an ST-E2 IR Flash Transmitter coupled with 2 RH Canon 430 EX II Speedlite flashes. All of these items can be positioned on a durable metal copy stand equipped with a macro-focusing rail and many other accessories.

In total, I took just over 35,000 images of 128 types; that's an average of nearly 300 images per specimen, or 100 images per standard view! I sure hope the old saying that a good photographer gets one good photo out of every 100 is true! I had a 16 GB high-speed compact flash card in the camera, and moved the files to a larger drive every night. The total memory all these images took up on my computer? 150 GB.

It is definitely true that the most important part of photography is the lighting. Reducing shine from the flashes on specimens is a good first step, and I placed the wasp in a diffusion ring for all of the photos. In some lighting conditions related to flash position, only setae are visible, while in others the setae seem to disappear and only the surface sculpture is visible. For quick pictures, with no focus stacking, you can close the aperture (higher f number) and increase the depth of field, yielding an image that has all planes in focus. However, because of the longer exposure needed, image stabilization becomes an issue, especially at high magnifications where any shake from the stand and the long lens are apparent. If you have time and the software to stack the images (Automontage, Combine Z, *etc*.), you can open the aperture (lower f number) decreasing the depth of field, and take several (usually from 15-30) layers of clean, crisp images to combine later into one. I did both of these, and under multiple lighting conditions; the results can be seen below in Figs. 1-4.

When there weren't bright lights flashing in my eyes from the camera, I had some time to explore London and Berlin. I saw parts of the Berlin Wall and took a long run around Tiergarten. I found that Germans do not joke about

continued—

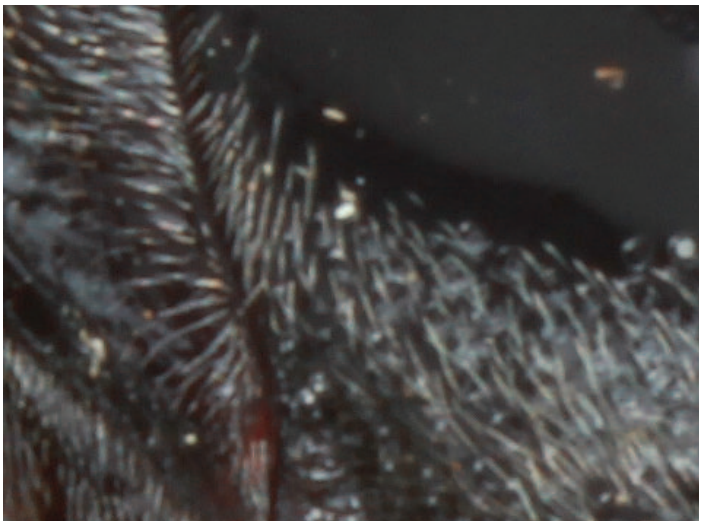


Fig. 1. *Evania fumipennis* taken with the aperture set at f16, with a closeup of a section of the mesosoma.

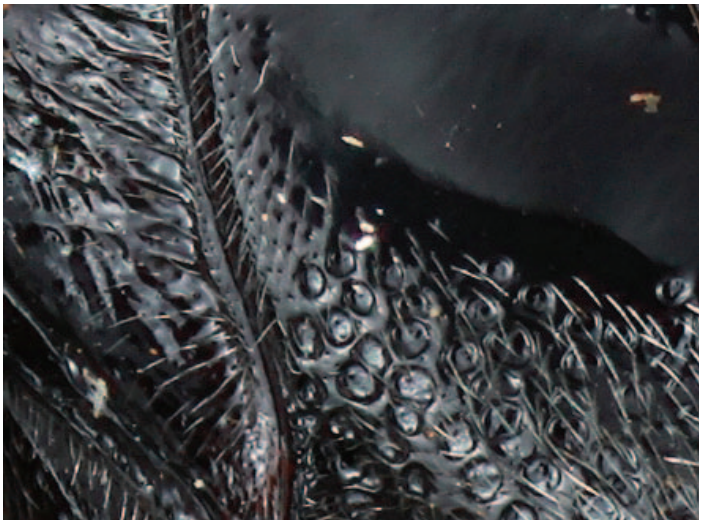
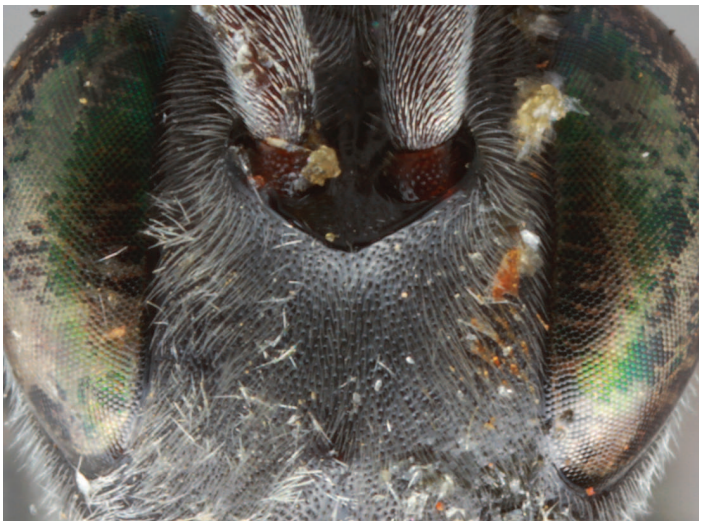


Fig. 2. *Evania fumipennis* taken with the aperture set at f4, showing the same closeup, but with more clarity.

Fig. 2a. *Evania fumipennis* taken with the aperture set at f16.



Figs. 3 (top), 4 (bottom): *Evania oculata* head under different lighting conditions (note surface sculpturing vs. setae visibility).

—continued

their beer; when you ask for the biggest beer available, you get the biggest beer available. In London, Gavin Broad introduced me to Tessa Farmer, a brilliant artist who creates tiny fairies from plant and tree roots and gives the fairies wings from parasitoid wasps. I especially enjoyed the phaal, a fiercely hot Indian curry dish, which I was warned was so spicy that it might "blow my head off"! Luckily for me, it did not, but the tears, sweat, pain and numbness from the spice did finally subside.

I was treated very well both in London and Berlin! My sincere thanks for a great experience go to Gavin Broad, David Notton, John Noyes, and many others at the NHM, as well as Michael Ohl and all of his students (Volkler Lohrmann, Silke Mosel, Lukas Kirschey, Stefanie Krause, and Laura Breitkreuz). Looking forward to a return visit one day to identify the New World evaniid species! ❖

Report on the 2011 Entomophagous Insects Workshop

By: Jim Whitfield, University of Illinois

For several decades, one of the highlights of my meeting attendances has been the Entomophagous Insects Workshop, a North American-organized conference typically featuring about 100-120 attendees presenting talks on all aspects of insect parasitoids and predators – genetics, systematics, ecology, biological control and behavior. Attractive features of the workshop were that the size was of a scale where one could actually meet everyone there, as well as the non-concurrent sessions, which allowed one to sample all aspects of parasitoid and predator biology in a highly interactive atmosphere. While the meetings were in fact advertised, most attendees tended to be loyal repeats who were on the mailing list from the last one. Fifteen such meetings were held, usually at 4-year intervals. A large percentage of those at the meetings were international, despite the North American organizational origin.

Over a slightly shorter period of time, the European Workshop on Insect Parasitoids developed, featuring a somewhat similar model and even many of the same attendees. After the 10th of these was held in 2007 in Sicily,

continued on page 17—

The cliffs at Cap d'Antibes.

Mysterious *Myrmilloides*: Confusion in Colorado

Kevin Williams, Utah State University

Annoying alliteration. I'm sorry, I can't help myself - I'm sick.

Recently, I was able to collect in the Pawnee National Grasslands of Colorado. Walking on dirt roads in a shooting range, I collected 55 mutillids on the afternoon of June 24, 2011. Twenty-five of these individuals were *Myrmilloides grandiceps* and all 25 were female.

The sexual dimorphism of Mutillidae often causes collecting methods to skew observed sex ratios. If, for example, you run malaise traps or light traps, the sample will contain more of the flying male sex. If you run pitfall traps or walk around dirt roads, your sampling will lean toward flightless females. Perhaps the only collecting method that eliminates sex-bias is trap-nesting. *Myrmilloides* is a fascinating mutillid genus, however, because the males are brachypterous and incapable of flight. This makes it possible to eliminate sex-bias with traditional collecting methods, like plucking them off the dirt.

Because collecting methods do not cause sex-bias in *M. grandiceps*, I am absolutely confident that females are more abundant than males … in the Pawnee Grasslands … on the afternoon of June 24, 2011. To see how extensive this pattern was, I examined the sex ratio of *Myrmilloides* in the Utah State University and Colorado State University insect collections. The CSU insect collection has 12 *M. grandiceps* specimens, and only one is male. Our collection in Logan, UT has 22 females and five males. So, over the last two weeks, I have examined 57 females and only six males, roughly a 10:1 ratio in favor of the fairer sex (the sex that will sting your face off). In three available species that were collected by unbiased methods (Frank Parker's awesome trap-nests), there is roughly a 1:1 sex ratio. The female bias in *Myrmilloides* seems unique among North American Mutillidae, i.e., among the roughly 5 North American species that have sufficient natural history data. So far, I've come up with two hypotheses for the strong skew.

The first hypothesis is that males are shorter lived than females. If there were equal numbers of males and females in a population, but the females were alive and active ten times longer than the males, then ten times more females would be collected. If there was any synchronization of male activity, then, after the "mating season", multiple females could be obtained without seeing any males (fairly common in *Myrmilloides*).

The second hypothesis is that males mate with their sisters shortly after emergence. In some chalcidoids, like *Melittobia*, skewed sex ratios and male brachyptery are associated with this mating system. If this is true of *Myrmilloides*, fewer males would be collected because of their behavior (majority of time spent near emergence site) and a reduced ratio of unfertilized (male) eggs laid.

Supporting evidence for either hypothesis could be obtained through long hours of natural history observations and host rearing. Sadly, I'm trapped in the mountainous frozen wasteland of Utah, where no self-respecting *Myrmilloides* would show its face.

If your collection has a sex-ratio bias in this species, if you've observed anything wacky about their behavior, or if you have any hypotheses that I've missed, please, shoot me an email at: kevin.williams@usu.edu ❖

Female *Myrmilloides* grandiceps from Texas.

Flightless male *Myrmilloides grandiceps*

—continued from page 15

it was decided to merge the two workshops into the International Entomophagous Insects Conference, and to hold it every 2 years, alternating location between North America and Europe. The first was held at the University of Minnesota in 2009.

The second conference was held 20-23 June 2011 in Antibes, France. Almost 150 attended, the number surely bolstered by the spectacular location along the Cote d'Azur (see picture from Cap d'Antibes on page 15) despite the high costs of air travel.

The local organizational team, led by Eric Wajnberg, did a spectacular job hosting the event. Attendees mostly were housed in beachfront (or near) hotels in Juan-les-Pins or Antibes, both famous resorts studded with not only Mediterranean beaches and hopping cafes but also with historical treasures from Roman times through Picasso. A bonus was that the meeting spanned the Summer Solstice, which in France means music festivals – there was a spectacular and diverse one in Antibes one of the evenings.

The meetings themselves were held at the Sophia Antipolis hilltop campus near Antibes, served by a daily bus. As with the earlier meeting model, there were no concurrent sessions, and a wide variety of topics were covered by 90 talks presented by speakers from 30 different countries. Highlights for me were the sessions on behavioral ecology, systematics and interactions with polydnaviruses and genomics, but many other angles were featured as well (although it must be admitted that parasitoid talks vastly outnumbered predator talks!). The catered lunches were spectacular in variety and Provencal-herbed tastiness.

Keep your eyes out for the next International Entomophagous Insects Conference, planned for 2013 in Montreal, Canada! ❖

Group photo from the 2011 Entomophagous Insects Workshop

Research Notes on Nestmate Recognition in *Pogonomyrmex comanche* (Hymenoptera: Formicidae)

By: Ann B. Mayo, Department of Biology, University of Texas-Arlington

In 2009, I began studying certain aspects of the foraging of the harvester ant *Pogonomyrmex comanche* (Hymenoptera: Formicidae) in the tall grass prairies of the Fort Worth Nature Center & Refuge in Fort Worth, Texas and the Southwest Nature Preserve in Arlington, Texas. I was eager to document everything and so took photographs of the ants foraging and returning to their nests. I happened to catch the following photo, with one *P. comanche* attached to the post petiolar area of another (Fig. 1). The intact ant was wandering around the nest crater. You will note that the gaster of the grasping ant is missing. At the time I had no idea what had happened nor why. It was quite a curiosity.

Later, I carried out an initial test of nestmate discrimination by introducing a forager to a particular colony. I used a forager from the same, a near neighbor and a distant colony to test if colonies could distinguish their own nestmates from those of near colonies with whom they

continued—

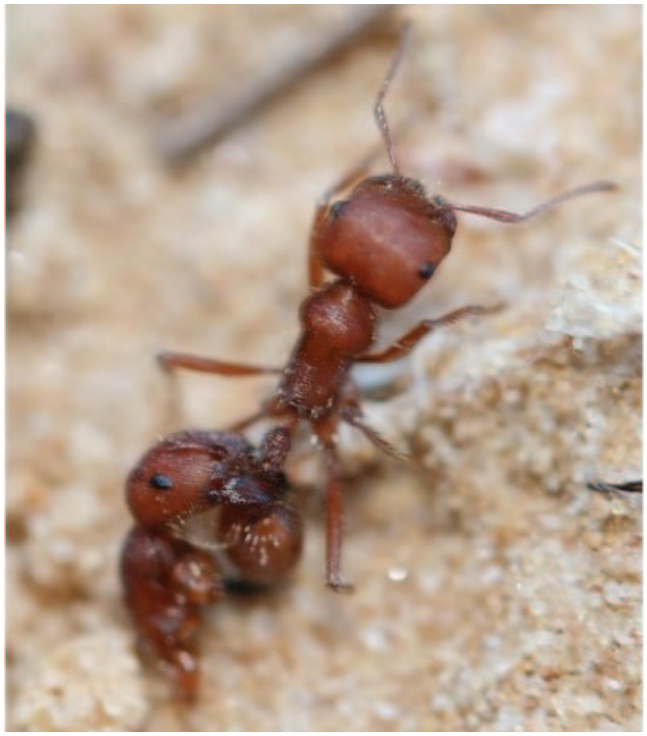


Fig. 1

Fig. 2

Fig. 3

—continued

were most likely to compete. The results of 120 encounters showed a 100% distinction between nestmates and non-nestmates, with aggressive encounters only occurring between non-nestmates. These encounters were staged on the external nest structure, so the encounters can be considered a nest defense response.

I decided to continue this kind of behavioral assay at the external nests but also to expand the type of encounter to include encounters among foragers away from the nest. I set bait stations about 0.3 m from a colony and allowed 10 minutes for the ants to locate the bait and set up a foraging trail there (this is a bit unusual for *P. comanche*, whom I believe has a diffuse foraging strategy but constructs recruitment trails to locally abundant, desirable foods. I am still uncertain if there is a pheromone trail and to what extent visual cues may play a role in orientation. I am working on it). I then collected foragers as before from the same and near neighbor colonies. Typically, the introduced foragers foraged on the bait and left before any encounter occurred. But when an encounter did occur, the introduced ant was forcibly removed and finally released.

In one observation this removal was done by one ant, which took hold of the post petiolar region of the introduced ant. A second ant helped with the removal by holding onto the introduced ant's antenna. Could this grasping of the antennae be a form of communication – a warning? The introduced ant immediately stopped all movement. She did not appear injured in any way, but she did not move, did not struggle, did not fight, nor try to escape. Also, note the introduced ant's posture – legs pulled in and abdomen slightly curled inward. This posture appears similar to the posture of a pupa, a posture also employed by some species when nestmates are carried to other places. The introduced ant was removed about 0.5 m from the bait station in the direction opposite of the nest of the other ants and then released (Figs. 2, 3).

There are some interesting differences between these encounters and the ones on the nest itself. For instance, interactions with near neighbor foragers introduced to another colony's nest sometimes escalate into fights with attempts at stinging. I have not observed this in the interactions between foragers at baits. Also, when ants are removed from the nest area, the introduced ants do not take on the pupa-like posture. I will be further investigating these nestmate discrimination behaviors and hope to have some more discerning data soon.

For now, I think the story behind the initial photo (Fig. 1) may have been along the lines of these forager interactions but obviously with a twist – someone nipped off the attacking ant. And come to think of it, did the surviving forager manage to get back into her nest with her added accoutrement? Besides the awkward size, the attacking ant probably had a distinctive nest odor, so this poor forager would have been tainted with that as well. What a battle scar – that ant may have won the day but now she's a perpetual outcast. Yet, another example of the superorganism: the forager as an expendable caste that can easily die in the protection of the colony and queen. ❖

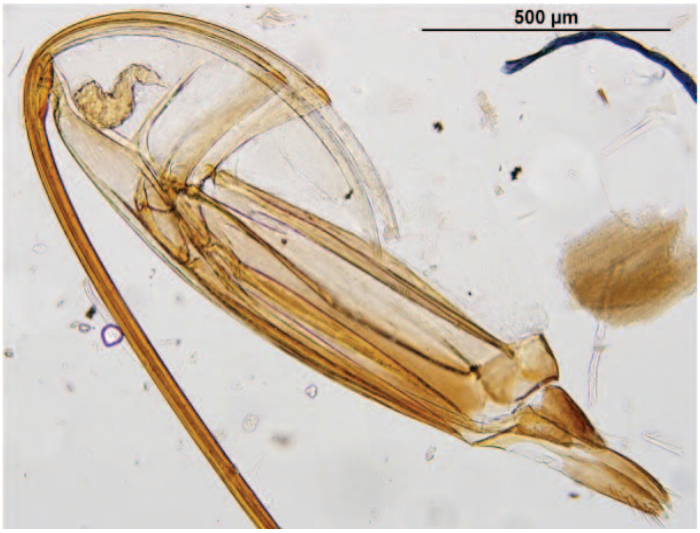
Exploring New Methods of Visualization

By: Andrew Ernst, North Carolina State University

Describing morphological structures, especially when working with extremely small specimens, can be a difficult and often frustrating endeavor. The most difficult part is visualizing three-dimensional structures.

What is the best imaging method? The answer is not trivial. There is no one method that we can use for all structures in all circumstances. There are various methods of imaging we can utilize, whether we want to see surface

continued—



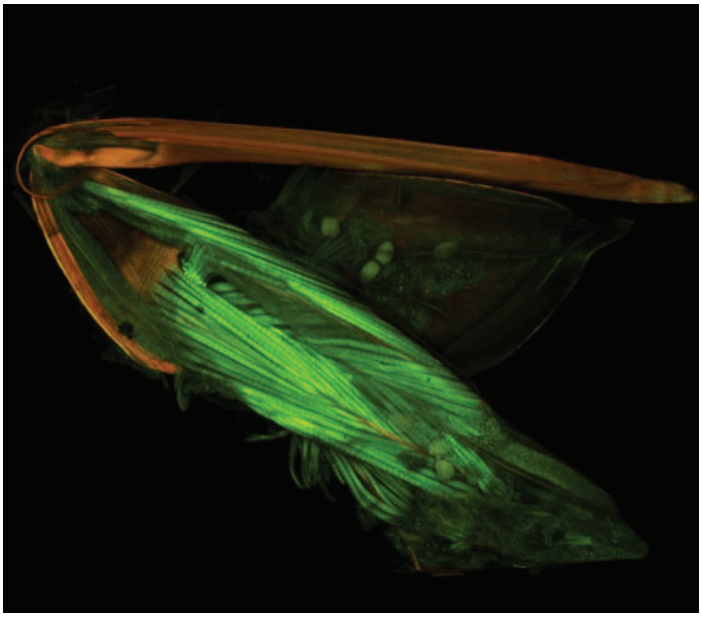
Trassedia luapi Cancemi, cleared using proteinase K, bright field montage image, using Olympus ZX41 compound scope and Olympus DP71 camera with the Combine ZP montage software.

—continued

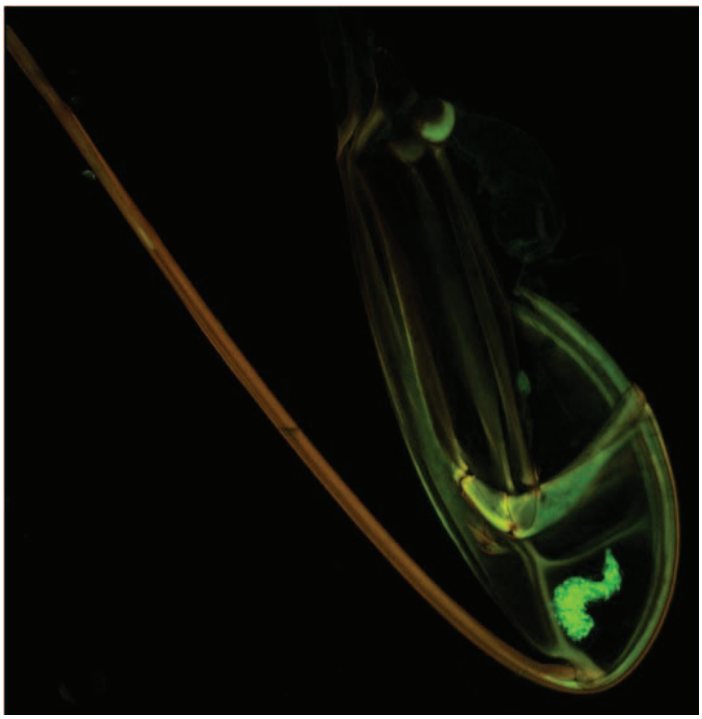
sculptures, relative position of structures, muscles, or any other object we might need to visualize. Scanning electron microscopy is excellent for examining surface sculpture, but we can't see past the surface of a structure, nor can we see color with this method. Bright field microscopy using a stereo or compound microscope allows us to see color, and using transmitted light, we can see through transparent structures. Using laser scanning confocal imagery, we can highlight various materials which fluoresce at different wavelengths, which we can display in different colors. This allows us to see the limits of different materials such as muscles and sclerites, which fluoresce at slightly differing ranges of wavelengths. The point of imaging a structure is to help us visualize it but we also use images to help us describe these structures to other people, because a picture is worth a thousand words.

In the Deans lab we have recently explored some methods for visualization that help us to see the shape and relative position of structures. Below are images of the ovipositor structure of *Trassedia luapi* Cancemi and *Megaspilus armatus* (Say) using both bright field microscopy and laser scanning confocal microscopy. Because of the high magnification we use to view these tiny structures, the range of focus is extremely narrow. To account for this, a series of images are taken so that all parts of the structure are captured in focus. Using the appropriate software, the series of images are montaged to build a single image where all parts of the structure are in focus. This is an excellent method for visualizing all parts of a three-dimensional structure, however, it can be difficult to determine the arrangement of structures on top of one another.

Using the same set of images that we use to build a montage, we have created videos that move progressively through the set of images. This visualization technique gives us a perspective of depth. With the images we have captured with the laser scanning confocal microscope, we can produce a rotating three-dimensional model of the structure. ❖



Megaspilus armatus (Say), median view of bisected ovipositor, confocal image, made using Zeiss LSM710 Laser scanning microscope.



Trassedia luapi Cancemi, cleared using proteinase K, confocal image, made using Zeiss LSM710 Laser scanning microscope.

A remarkable *Stenancistrocerus hispanicus* (Vespidae: Eumeninae) nest aggregation in Aragón Spain (May, 2011).

Detail of nests of *Stenancistrocerus hispanicus*, showing turrets over nest entrances.

Leopoldo Castro and Jim Carpenter in front of a huge nest aggregation of *Stenancistrocerus hispanicus* (Vespidae: Eumeninae), Aragón, Pr.Huesca, río Valcuerna, 22 May 2011

Don't forget to *RENEW* your ISH membership for 2011!

Wasp mimicking mantidflies – A quest for material and observations

By: Michael Ohl, Museum für Naturkunde, Berlin, michael.ohl@mfn-berlin.de

Although most of my research is devoted to apoid wasps, one of my professional side-interests is Mantispidae (Neuroptera). This is a lacewing family of only about 350 currently recognized valid species with worldwide distribution. The taxonomy is not fully understood, and even genus identification is virtually impossible in Africa and Southeast Asia! As a hymenopterist, I was immediately attracted by some genera of mantispids, which seem to mimic vespids. All these mimicking mantispids are handsome, showy creatures with wingspans of 30-50 mm! The similarity of model and imitator is striking and even includes longitudinally bicolored wings in the mantispid, which resemble the folded wings of the wasp model. Many entomologists from the U.S. know *Climaciella brunnea*, the only wasp mimicking species from that area. All these wasp mimicking mantispids are examples of Batesian mimicry, but sometimes those mimicry complexes can comprise more than two partners (see the image of an *Euclimacia* mimicking *Polistes sagittarius*). The larvae of the majority of mantispids are apparently predators on spider egg sacs, which is a very unusual mode of life. The larvae are well known for their hypermetamorphotic development, with the first instar with long legs and highly

continued—

Euclimacia mimic (left) and its vespid model (right)

Undescribed *Euclimacia* from Burma.

—continued

mobile and active, whereas the last two instars are maggot-like and immobile. The active first instar is able to enter spiders of a large variety of families, staying on the spider until it builds a cocoon. Then the larva enters the cocoon and feeds on the spider eggs. This kind of behavior has been generally known as 'spider-boarding'. In the cocoon, the first instar develops to the endoparasitic maggot-like morphotype of instars 2 and 3.

Southeast Asia has an enormous diversity of mantispids, most of which are unknown. Wasp mimics occur in a handful of genera, with by far most species in the genus *Euclimacia*. One of my current projects is a taxonomic revision of this genus. A serious problem of the wasp mimics is not only the enormous intraspecific variability but also the apparent scarcity of the species. Therefore, it is still unknown if species of *Euclimacia* are also spider egg predators and if there is any close interaction between the mantispid and its wasp model. Recently, an undescribed *Euclimacia* has been reared from a spider cocoon from Malaysia, but this first and only host record is still unpublished. There are also species in the genus with a totally different wing color pattern (see the image of *Euclimacia horstaspoecki*), and I still wonder if these species mimic wasps or anything else in Southeast Asia.

So many of you have already collected in Southeast Asia and might have been fooled by mantispids when looking out for vespids and other aculeates. I would very much appreciate any material of wasp mimicking mantispids, particularly from Southeast Asia AND also of their wasp models! Also, observations of the behavior of these bizarre creatures are most welcome. Any specimen and any bit of information counts! ❖

Euclimacia horstaspoecki

Euclimacia mimic (bottom) and its vespid model (top).

Fame is a bee
by Emily Dickinson

Fame is a bee.
It has a song—
It has a sting—
Ah, too, it has a wing.

Life Through a 5mm Mesh: Project LLAMA

By: John T. Longino, Lab I, The Evergreen State College, Olympia, WA 98505 USA. longinoj@evergreen.edu; Michael G. Branstetter, Department of Entomology, University of California, Davis CA 95616 USA. mgbranstetter@ucdavis.edu

MICHAEL! PROFESSOR! BIEN!? The dawn greeting of Fidel echoes across our cloud forest camp. Wood smoke drifts from beneath the tarp of the makeshift kitchen, where Adriana has coffee bubbling and tortillas frying. The LLAMA crew, thankful that no branches fell on them during the night, stumble from their tents, settling on the buttresses of a large tree that serves as dining hall. Behind us is the comforting sight of 100 white mini-Winkler bags slung beneath a tarp-covered shelter, the results of yesterday's arduous litter-sifting bonanza. Students are talking about last night's activity at the mercury vapor lamp, fractured Spanish vying with fractured English. Malaise traps are scattered in the forest around us, quietly working. Bait cards, beating sheets, and collection codes are prepared for the day's sampling. Life is good. We are at our high camp in Saslaya National Park, a remote mountain site in northeastern Nicaragua that has primary forest from bottom to top, a rarity in these parts. Our entry point was the nearby town of Hormiguero (no joke!) and Fidel (José Fidel Vega Elsther) is our guide. Fidel is a wiry, almost superhuman woodsman who knows all the trails and has a remarkable ability to construct a small village in the forest in less than an hour with only a machete. Pretty soon we learned to respond to his shouted greetings with our own FIDEL!'s, energized by his infectious enthusiasm.

LLAMA is an acronym for Leaf Litter Arthropods of MesoAmerica, a 5-year NSF grant to survey litter arthropod diversity from southern Mexico to Nicaragua and, as we like to say, "to sift where no one has sifted before." In wet forest ecosystems, the leaf litter and rotting wood beneath our feet is a remarkable zone, the interface between vegetation and soil. All the above ground biomass gets transformed there in a thin layer of concentrated biological activity. The arthropod fauna in this layer is not very colorful (ecologists call the biota here the "brown food-web"), but it is spectacularly diverse. The Winkler method — shaking huge volumes of litter and rotten wood above a screen and extracting arthropods from the small stuff that passes through — is a highly efficient way to survey the brown food web. The LLAMA project has two focal taxa, ants (yes, they are Hymenoptera) and weevils (co-PI Bob

continued—

Project LLAMA sample sites. Credit: J. T. Longino.

Group photo of Project LLAMA, Saslaya high camp, May 2011. Credit: M. G. Branstetter.

Guardian of the latrine at Saslaya low camp. Credit: Januar Emilton López.

MiniWinkler samples at Saslaya low camp. Credit: M. G. Branstetter.

Sample sorting at Zamorano. Credit: M. G. Branstetter.

—continued

Anderson), and several non-focal groups that are distributed to a network of collaborating taxonomists.

Each year LLAMA has worked in a different country, starting in Chiapas, Mexico in 2008, Guatemala in 2009, Honduras in 2010, and our just completed fieldwork in Nicaragua this year. The PIs and two graduate students plan and organize the fieldwork, and each year we recruit a new team of undergraduate-level participants, half from the U.S. and Canada, half from the host country where we are working. We have an intense 2-month field season during which the 10- to 15-person team visits nine sites (typically), carrying out a rigorous protocol of standardized sampling at each site. We search for remaining areas of mature wet forest (not an easy task), usually national parks and reserves, and we attempt even coverage of low, middle, and high elevations. Four days are spent at each site, yielding 100 mini-Winkler samples (Winkler samples from transects of $1m^2$ plots), numerous maxi-Winkler samples (additional non-quantitative samples of sifted litter), samples from 5-6 Malaise traps, baiting samples of ants, and beating samples from low vegetation. After field sampling, we retreat to a host institution for a 10-day sample sorting workshop, where students process the 900 mini-Winkler samples, sorting them into the major taxonomic fractions. At the host institution we also organize a one-day symposium that focuses on Central American biodiversity. Talks are given by local researchers and project participants.

This year's work in Nicaragua was adventurous, fun and highly successful. We flew, drove, boated and hiked to seven sites spread around the country, many having never been sampled for litter arthropods until now. Instead of seven, we surveyed nine sites, because there are no mountains in our typical high elevation range (above 2000m) and getting to some of the low elevation sites was more costly than in previous years. We sampled in Reserva Natural Musún, Parque Nacional Saslaya (low and middle elevation sites), RN Datanlí-El Diablo, RN Kilambé, Cerro Jesus (a private coffee farm on the border with Honduras), and RN Kahka Creek in the Caribbean lowlands north of Pearl Lagoon. After field sampling, we all decamped to the Escuela Agrícola Panamericana, Zamorano in Honduras, which has a great insect collection and excellent facilities for sample processing. The samples are all back in our respective labs now, in the continual process of getting sorted, organized, labeled, and distributed to collaborators.

All non-ant Hymenoptera are pooled for each transect of 50 mini-Winkler samples. The result is a vial crammed with thousands of microhyms. The non-ant Hymenoptera also get sorted from the Malaise samples, resulting in the usual mix of larger ichneumonids et al. and microhyms. Mike Sharkey is the point person for all non-ant Hymenoptera and acts as the distribution center, so if you are interested in any of this material you should contact him.

LLAMA has successfully carried out its sampling protocol at 34 sites scattered across Chiapas, Guatemala, Honduras, and Nicaragua, but selecting and traveling to those sites has been sobering. It is dismaying how few mature

continued on page 28—

Announcement: The International Biogeography Society is pleased to announce its upcoming Early Career Conference, "Advances in Biogeography", from 23-25 September 2011, at the University of Oxford, UK. A special opportunity exists for attendees to also join Oxford University's Biodiversity Institute Symposium on "Biodiversity conservation beyond protected areas" (21st - 22nd September) which immediately precedes the IBS Early Career Conference.

The Early Career Conference will focus on post-graduate students and those who have recently completed their doctorates (up to five years) and are interested in biogeography. The aim is to provide a forum in which early career biogeographers will have an opportunity to present and discuss their work through formal presentations (oral and posters), and to encourage the formation of informal peer-to-peer networks. Evening mixer events will be attended by IBS board members and other senior biogeographers. For more information about the conference & symposium, and to register, please visit
http://www.biogeography.org/html/Meetings/2011Oxford/index.html
If you have any questions, please write to the organizing committee at ibsearlycareerconference@gmail.com

SCHEDULE (September 2011):
Friday 23rd September - afternoon workshop, evening mixer
Saturday 24th & Sunday 25th - contributed oral presentations and posters, keynote addresses, and evening mixers

Keynote addresses:
Lawrence Heaney - Oceanic Island Biogeography: Emerging Perspectives and Questions
Catherine Graham - Untangling the Mechanisms Influencing Hummingbird Assemblages: New Tools to Answer Old Questions
Ken Feeley - Advances in predicting the impacts of climate change on tropical forests
Michael Dawson - Advances in Marine Biogeography

Free workshop: "Communicating Biogeography: Science writing, practical and ethical issues of collaborative working, and the peer review process" led by Robert J. Whittaker, Editor-in-Chief for the Journal of Biogeography

The INTERNATIONAL BIOGEOGRAPHY SOCIETY (IBS; http://www.biogeography.org/) is a non-profit organization, founded in 2000, with the mission to:
- Foster communication and collaboration between biogeographers in disparate academic fields.
- Increase both the awareness and interests of the scientific community and the lay public in the contributions of biogeographers.
- Promote the training and education of biogeographers so that they may develop sound strategies for studying and conserving the world's biota.

—continued from page 1

has spiked with the introduction of our new publication outlet. I expect to have news for you in the next issue concerning the blog and the listserve. I believe that the proposed *JHR* blog would be a good avenue for commenting (and sometimes correcting the content of) on published papers. The blog could be scanned several times a year for text that is worthy of publication. Although there are several listserves that facilitate communication amongst subgroups, *e.g.*, Parahym, the proposed listserve is necessary because there is little to unite all Hymenopterists (*Hamuli* excepted).

Concerning increased membership, we (the executive) are considering lowering the costs of membership. We have not decided on exact figures yet, but are considering a $10 annual fee for students and a reduced rate for regular members. You should be hearing more about this soon, and expect some changes for next year. Any other ideas are most welcome.

In the very near future, all members of ISH will be sent a link to all *JHR* articles as they are published online. Not to worry, those of you who do not like the idea of being sent an email can opt out easily. At this point I would like to encourage all of you to consider submitting manuscripts relating to Hymenoptera to our journal (*JHR*). At present, I am a subject editor for *ZooKeys*, and I see many manuscripts that would make good content in *JHR*. Now that we are online and published by Pensoft (the same publisher as *ZooKeys*), we offer all of the advantages of *ZooKeys*, and more.

Great news: The quadrennial meetings of the International Society of Hymenopterists will be held in Cusco, Peru in 2014, sometime near the end of June and the beginning of July. More on this in the next issue of Hamuli, but for now note that Cusco is a city rich in history and culture and is next door to the famous Inca ruins of Machu Picchu. ❖

Want to join ISH? Forget to renew this year? See page 35 for the membership form, or try the easy PayPal way!
http://hymenopterists.org/purchase.php

Bodega Bay Phylogenetics Workshop

By: Patricia Mullins, North Carolina State University

I was fortunate enough to recently attend the Bodega Bay Phylogenetics Workshop in California, where 41 graduate students with broad interests in phylogenetic methods came from around the world to explore problems for which modern phylogenetic approaches are being applied. The one-week course covered a wide range of topics in phylogenomics, ecology, functional morphology, macroevolution, character evolution, and speciation. The workshop included equal parts lecture, discussion and software training. Alas, the majority of students attending were not Entomologists; there were only 4 students who studied insects, and only two Hymenopterists (myself included). Most students were ichthyologists or herpetologists.

We heard from 16 phylogeneticists, including John Huelsenbeck (UC Berkeley), Rich Glor (University of Rochester), Brad Schaffer, Bob Thomson, and Jonathan Eisen (UC Davis). They delivered presentations about continuous-time Markov models, Bayesian inference, model selection, maximum likelihood, divergence time estimation, species and gene tree estimation, and continuous and discrete character trait evolution (in R). We were advised to spend the same amount of time, or longer, analyzing the data we collect that we spent collecting the data.

But we didn't only listen to lectures and practice our new skills in phylogenetics programs! We took an afternoon trip to the beautiful Redwoods and saw oodles of banana slugs and salamanders, the 1400 year old tree, "Colonel Armstrong", towering over us at 308ft tall, and visited a gorgeous, rocky beach. I learned the hard (and COLD!) way what Dr. Schaffer meant when he told us never to turn our backs to the ocean…

On our last morning, things took an interesting turn. It was Friday morning (March 11, 2011) when the tsunami triggered from the massive 8.9-magnitude earthquake that devastated Japan hit the northern coast of California. One particular individual in our group was scared enough to wake everyone up at 4am by screaming, "Wake up! We need a radio! This is an emergency!" Fortunately for us, it was not an emergency. The waves were forecast to be just less than 10 feet high, so the marine laboratory just beside the ocean, where we held presentations each day, was closed. Students still had to give presentations that morning, and it was an adventure seeing them in the cafeteria instead, on over 20 individual laptop computers!

Overall, I learned quite a bit about new phylogenetic methods. The workshop was very beneficial to a budding phylogeneticist, and I highly recommend students to apply in 2012!

This link to the Bodega Bay Workshop has a lot of interesting information: http://bodegaphylo.wikispot.org/ ❖

The coastal (top) and redwood forest (bottom) habitats near the Bodega Bay Marine Lab. Banana slug (right), almost as cool as a hymenopteran.

The International YPT Cookbook

By: Lubo Masner, Canadian National Collection, Ottawa, Canada

[Note: This article was originally published in Skaphion *3 (41) 12 October 2009 and is republished here, as per Lubo's suggestion and with the editor's enthusiastic support, in case the members of ISH find it useful.]*

The yellow pan trap (YPT) has a relatively short history; it is still rather unknown, misunderstood or underestimated collecting technique in entomology. This may be, at least partly, due to wrong ways and strategies under which it has been used. This includes myself over the long years of experimenting, struggling and failing... The aim of this short blurb is to share with you the results of my accumulated experience, furthermore, to warn you not to make the same mistakes but enjoy the happy pan trapping!

The greatest advantage of YPT is in both its simplicity and economy. The YPT can be placed (almost) anywhere, exactly in the desired microhabitat, hereby yielding valuable ecological data as it lures/intercepts species from the nearest niche, often in both sexes. Since its cost is almost negligible it can be exposed into relatively risky environments, compared to expensive traps of various kinds (Malaise, intercept, light, *etc*.).

The following points (YPT Commandments) summarize my own experience as well as many of my colleagues; it is not the final word and I would like to encourage you all to share your ideas through *Hamuli*.

1 – Type and size of YPT

Sunflower or lemon yellow colours is best for most microhymenoptera and shiny surfaces are more productive than the dull ones. For portability as well as rapid setting the nesting 5 inch bowls are the best I tried sizes from thimble-like cups to 5 feet baby yellow wading pools with only problematic results. The former main producer of 5 inch bowls was the SOLO Comp. in Urbana (Illinois) but they discontinued the production; Hallmark and some other companies make similar 5 inch bowls.

2 – Number of YPT in site

The most productive strategy is to set a large number of pans (*e.g*. 100 or more) over short period of time (24-48hrs.), with only water and a few drops of unscented detergent (or surfactant). In tropics or during the rainy season the short cycle of 24 hours is recommended for high quality of specimens. Small number of pans with preservatives (salt, propylene glycol) operated over longer periods are less productive and vulnerable to elements.

3 – Setting

For best results and highest diversity select natural, undisturbed microhabitats with rich flora, rich leaf litter, along fly passes and in sheltered situations (*e.g*. leeward spots in open habitats such as grasslands of tundra, paramo, *etc*.). After 48hrs re-set pans to fresh sites as most of the nearby fauna was already depleted. YPTs in open water must have a floating support (Styrofoam or bubbles) and have to be anchored (*e.g*. with fishing line). In aquatic microhabitats look for presence of water striders (Gerridae), water scorpions (Nepidae), *etc*.; in creeks look for small rapids near rocks and exposed roots of riparian trees (*i.e*. host oviposition sites); beware of sudden changes of weather, storms, floods; wear protective neoprene water

continued—

—continued
booties; always set pans upstream to avoid murky waters caused by wading.

4 – Hazards

Greatest dangers are humans (vandals, but also children and curious locals), wildlife (raccoons, monkeys, cattle), and elements (heavy rains, floods, high tides, strong winds); generally watch for weather (forecast). Set traps away from human traffic, preferably in sites with difficult access (*e.g.* marshes) in spots hidden from direct view.

5 – Cleaning/rinsing

Use scoop nets with very dense mesh (brine shrimp net); scooped material MUST be rinsed thoroughly in fresh water to flush out all residual detergent and accumulated excrets (proteins) BEFORE transfer into 70% ethanol. Failing to skip the rinse cycle will result in coagulation of excreted protein on bodies by alcohol; this whitish deposit is very difficult to clean later on.

6 – Storage, transport, shipping

Keep containers (whirl packs, jars) with clean material in 70% ethanol in dark, cold places (if possible in fridge). Before transport or shipping reduce the amount of ethanol to minimum or replace by fresh/stronger alcohol and eliminate air bubble (whirl packs) to avoid sloshing and damage to material. For shipping place whirl packs into strong protective cover (*e.g.* mailing tube)

7 – Equipment & tools

Use whirl packs of good quality for storage or shipping; 2 strong plastic containers (10 litres/2 gals.) to carry water, dense mesh scoop nets /*cf.* left/, plastic pipets for target extraction from pans, plastic dispenser for detergent, high quality paper & alcohol resistant pen for labels; small backpack to carry your tools & keep hands free. Wash thoroughly pans in fresh water before next trapping; dirty pans are less attractive and tend to stick together and break when nested.

8 – Useful hints

Set the traps more or less in direct line, at visible intervals for easier recovery. Walk the trap line after setting to correct setting (tilting) and get an early impression about productivity. Do not despair if you see just a few specimens; the actual catch is usually much better than seen as most minute individuals are blending with detritus, etc. You will discover this only later (too late) under scope in the lab.

9 – Ethics

With pan traps you will always collect more than you need or can process; the residuum may be of interest to your colleagues -nonhymenopterists- around the World, do not waste biodiversity! Remember, it is nice to share!

10 – Fun!

I can assure you that pan trapping is a great fun! All you need is to develop hunter's instinct and pride, the excitement of the vast unknown, the desire to catch the Unicorn. Good luck everybody, let's go pantrapping! ❖

Ode to a pan trapper

like Christo,
you pepper the Earth with color—
a trap line of soapy snares,
fulvous
to
lemony,
ribbon through the grasslands
meadows
shorelines
and forests
under logs
next to rocks
floating in water ...

grizzled and chiseled,
you chase the
mother lode,
desperately panning for black gold
sometimes rubies,
sometimes sapphires,
sometimes emeralds ...
always little jewels

—anonymous ISH member

Want to join ISH? Forget to renew this year? See page 35 for the membership form, or try the easy PayPal way!
http://hymenopterists.org/purchase.php

—*continued from page 23*

and elevational coverage gave way to site selection by what was left (and not too death-defying to access). We travel across entirely human-altered landscapes to arrive at the tiny green islands, sometimes no more than a hilltop. We have hope that many of these parks and reserves can survive as biodiversity reservoirs, but there is also the stark recognition that some of them will not. Along with the delight of looking at our samples and discovering new species, there is a sense of responsibility for the long-term curation and preservation of these samples. They may be the only snapshot future generations will have of what was.

For collection data, site descriptions, expedition photos, and some preliminary results visit the Project LLAMA website: llama.evergreen.edu. ❖

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.

2011 Membership Information (visit *hymenopterists.org* for more options!)

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

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

Name: _____
Address: _____
_____
_____
_____
_____
Phone: _____
Email: _____
Interests: _____
_____
_____
_____

credit card #: _____
credit card type: [ ] Visa [ ] Mastercard
security code: _____ expiration date: _____

signature: _____

name on card: _____

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