

Hamuli

The Newsletter of the International Society of Hymenopterists



Tree house in Pucón and its view of Lake Villarica at sunset.

Collecting in Chile

By: Bernardo F. Santos, Richard Gilder Graduate School, American Museum of Natural History, USA; bsantos@amnh.org

As I start to write this story, I am staring at a breathtaking sunset over Lake Villarica, comfortably sat on the mattress of the little treehouse that is my bedroom in Pucón, the lovely lakeside village that is one of the major tourism destinations in Chile. However, this isn't a vacation

getaway but a short rest after two weeks of intensive fieldwork. My hands are full of bruises and scratches, my knees hurt and and my neck and arms have been suffering sunburns incessantly since the beginning of this trip.

As a Ph.D. student at the American Museum of Natural History, I am used to see my colleagues depart in well-organized, large scale and often multi-institutional field trips. In contrast, I decided to come to Chile by myself, having only my girlfriend, Babi Lassance, as a companion. My main



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<http://hymenopterists.org>



Collecting in Chile ... Continued

goal was to collect cryptine wasps (Ichneumonidae, Cryptinae) for my thesis project. For my phylogenetic work on the tribe Cryptini, I have been able to amass specimens from all over the world, thanks to the support and help from dozens of curators and researchers from institutions worldwide. However, I still lacked material from the highly endemic Chilean fauna. Surely enough, the AMNH has thousands of specimens of Hymenoptera from Chile, but most of the material is decades old and all pinned. The best way to get fresh specimens for DNA sequencing was to go after them myself.

After much thinking I decided to concentrate efforts in only two National Parks. First, I went to La Campana National Park, about 60 km east of Viña del Mar. The park is part of the Chilean Matorral ecozone, with a Mediterranean climate and vegetation mostly composed of woodlands and scrubs. The area is home to one of the last forests of the Chilean Wine Palm (*Jubaea chilensis*). The park also has historical importance for a naturalist: Charles Darwin climbed Cerro La Campana during his HMS Beagle voyage.

The park did not have lodging for researchers, other than camping sites, so we decided to stay in a hostel in Viña del Mar. The drive between the places was about one hour long, and the very long summer days meant I could still sit by the beach and enjoy a pisco sour after returning from

fieldwork.

As a field site, La Campana National Park was problematic. Numerous cows roam inside the park; they have some serious mountain skills and reach absolutely all places, rendering the whole area covered by cow dung. Visitors also take their dogs to the park, which helps to



Cows at La Campana park.

further alter the environment. In addition, the whole region seems to be experiencing a prolonged drought ("tres años de sequía", a local woman told me) – definitely too dry for ichneumonids, though invasive yellowjackets (*Vespula vulgaris*) and paper wasps (*Polistes dominula*) seem to be doing just fine. I did get some material in my yellow pan traps, but the Malaise trap samples were very meagre even after 17 days in the field. I did have one very nice catch in the park – check out the yellow pan trap on the next page – but I would not recommend it as a sampling site to other hymenopterists.

I did find naturalists' gold, however, after driving 850 km south to Conguillío National Park, in the Araucanía region. The park has an incredible scenic beauty: the Conguillío Lake sits between two volcanoes, Llaima and Sierra Nevada. The former is one of the most active volcanoes on the planet, and its eruption in 2008 left an impressive landscape of ash and volcanic rock in one of the sides of the park. The vegetation is a mixed forest of several *Nothofagus* species and Araucarias; the dark, somber look of these lush forests led the producers of the BBC show Walking with Dinosaurs to choose the park as one of their

The author, collecting wasps in La Campana National Park, Chile.

Collecting in Chile ... *Continued*

filming sites, and the area indeed has a prehistoric look. Lodging in the park is outsourced to a private company, which manages both camping sites and a cozy, charming cabin lodge. The cabins are a bit steep, but I received a generous researcher discount from the administration. They are a good option for researchers as we need a bit more infrastructure than can be found in a camping site – storage space, light to sort our samples at night, kitchenware... not to mention they have barbecue grills and wooden heated baths outside! Besides, they are conveniently located in the heart of the park; lodging options outside the park would require driving at least half an hour on dirt roads to get to the sampling sites.



One of my best catches in the park: a pompilid wasp and its spider prey, captured in the same yellow pan.

The insect fauna made justice to the beauty of the area – both Malaise and yellow pan traps were packed with insects day after day of hard work. I was able to sample the various landscapes that the park has to offer – from dry, open areas with sandy soils, to *Araucaria* forests so dense they are always dark, as well as garden-like areas with abundant understory.

The fun and success of the trip were only interrupted by our poor car choice. Driving 3,780 km in the Chilean summer inside a tiny Chevy Spark was not the best idea, especially because the car had no air conditioning (“just get the cheapest option”, I thought; “it will be just fine”) and UV radiation levels were at their peak. To make things worse, we had a series of car-related incidents: a battery breakdown in Viña del Mar; a flat tire at the Conguillío; and one night in Temuco, someone broke into our car and stole many valuable be-



Collecting a Malaise trap sample in *Araucaria* forest at the Conguillío park.



Another picture from our days resting in Pucón.

longings. We had stopped at a restaurant to have dinner, and made the terrible mistake of leaving a field bag and backpack inside the car – which by the way had no alarm. Most importantly, though, the specimens were safe in the fridge of our hotel room!

I finish writing this in the peace of my

office, watching snow flakes fall over the AMNH building and gardens. The air is filled by the smell of ethanol plus insect grease that we all know so well, and I’m having the greatest time sorting countless wasps from my samples. All is well. •

How much we forget ...

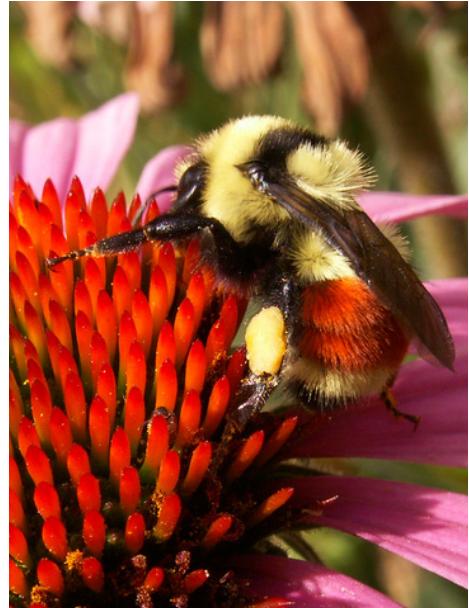
By: Mark R. Shaw, National Museums of Scotland, Edinburgh, Scotland, UK

I am often dismayed to see in a publication the claim that some observation or other is being made “for the first time” when I know full well that it has been published before, often long ago. It is, of course, difficult for even the best active scientist (or perhaps especially for him or her) to keep aware of what is already in the literature in these pressured times, but I do sometimes feel that if it is not readily accessible via the simplest search on the www, published information is far too widely treated as non-existent.

Here, anyway, is an example of my own forgotten knowledge. On 16 January 2014, deep in the heart of the Scottish winter, I was dissecting some overwintering ichneumonoid cocoons resulting from a survey of oak-feeding macrolepidoptera conducted by Jim Connell and colleagues near Vienna (Austria) during May 2013, to see at exactly what stage the contents were passing the winter. One such was a cocoon of *Scirteutes robusta* (Woldstedt) (Ichneumonidae: Campopleginae), a univoltine species that flies early in the year and commonly parasitizes larvae of the *Orthosia* and not especially related *Cosmia* (both Noctuidae) species feeding on the “spring flush” foliage of oak and other trees over much of Europe (actually the *Cosmia* mostly eat other caterpillars). It is well known that many temperate ichneumonoids that parasitize hosts available very early in the year overwinter as unemerged but fully-formed adults in their cocoons, as this enables them to be ready for action in early spring

without having to spend precious degree-days on metamorphosis (it is a surprisingly common alternative to overwintering as a free adult). And indeed *Scirteutes robusta* is one such species. However, in the cocoon of it that I opened I found a living and perfectly formed male *Perilampus ruficornis* (Fabricius) (Chalcidoidea: Perilampidae) [teste R. R. Askew], evidently performing the same trick. Although *Perilampus* species as a whole have quite a span of hosts, this species is a well-known “true” secondary parasitoid of Lepidoptera caterpillars through Ichneumonoidea and also Tachinidae (Diptera), contacted by its planidial larva. Nothing new there, but I was very interested to find the adult overwintering in this way, I believed “for the first time”. So I asked one or two people particularly knowledgeable about chalcidoid biology and behaviour, and they told me they had not heard of it either. But before writing my little “for the first time” note on it, I fortunately consulted C. P. Clausen’s (1940, reprinted 1972) wonderful compendium, *Entomophagous Insects*, where I learned (or rather re-learned, for I had read it from cover to cover at least twice in the early 1970s... and clearly ought to do so again!) that H. S. Smith (1912: U.S. Bureau of Entomology Technical Series 19(4): 33-69) had deduced as much for the N. American *Perilampus hyalinus* Say, and Clausen himself adds “The European *P. cuprinus* Foerst. has this habit” (without giving a reference).

So there we are. The observation that had so interested me was not “for the first time” at all, at least as far as the genus is concerned, and I am glad to have avoided claiming that it was. Come on, though, be honest – how many of you chalcidologists already knew, or remembered, that? •

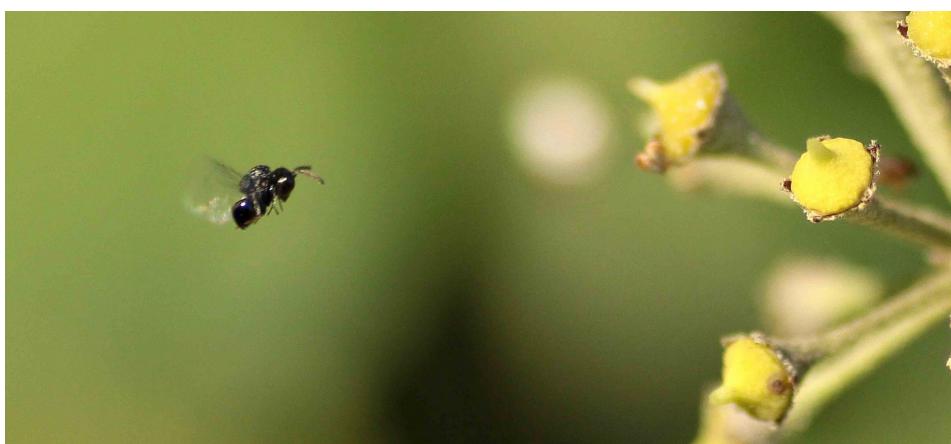


Female *Bombus melanopygus*, probably(!), foraging in Idaho, USA. Photo by Phil (CC BY-NC-SA 2.0) <https://flic.kr/p/2Dc1tr>.

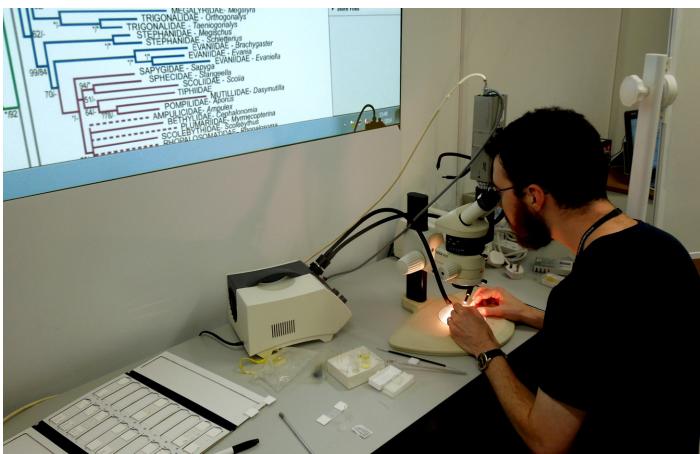
Specimens needed for Color Genetics Research

By: Heather M. Hines, Departments of Biology and Entomology, Pennsylvania State University, University Park, PA, USA

The Hines lab at Penn State University (<http://www.personal.psu.edu/hmh19/>) is currently seeking specimens for several research projects related to color pattern genetics. This includes bumble bees, especially *Bombus melanopygus* males to be used for whole genome sequencing (ethanol preserved in last 8 years or frozen) and recently collected specimens in the *Bombus* s.s. subgenus in any state of preservation (e.g., *B. moderatus*, *B. occidentalis*, *B. lucorum*, *B. cryptarum*, *B. terrestris*, *B. sporadicus*, *B. ignitus*, *B. hypocrita*) to be used for genotyping of pigment loci. As a large undergraduate research initiative, the lab is also initiating pigment identification surveys across insects and is seeking groups of specimens of any insect of bright pigmentation. Preferably this would include at least 3 or 4 individuals. Preservation is not as important, although recently collected is preferred, frozen is best, and specimens preserved in liquid may have pigments already partially leached. Please contact Heather Hines (hmh19@psu.edu) if you can help with obtaining these specimens. We can pay shipping costs. •



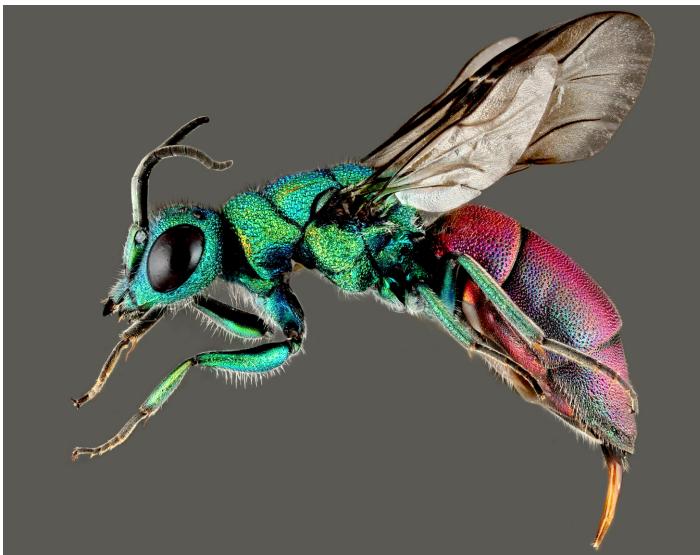
Perilampus visits flowers in France. Photo by Alain C. (CC BY-NC-SA 2.0) <https://flic.kr/p/dng03H>



Course participant Dylan Hodgkiss (Royal Holloway University). Photo by Chris Jeffs.



Course instructor Natalie Dale-Skey (NHM) with students Siobhán Porter (Queen's University Belfast) and Gemma Baron (Royal Holloway University). Photo by Chris Jeffs.



Chrysura refulgens from Crete, photographed during the course by Thomas Ayshford.

Ecosystem service providers: Taxonomy and biology of parasitoids & pollinators

By: Christopher Jeffs, Oxford University, and Andy Polaszek, Natural History Museum, London, UK

This training course, designed for UK Research Council-funded PhD students involved in parasitoid and/or pollinator focused research, lasted 10 working days and covered Hymenoptera taxonomy, phylogenetics and biology in depth. The course focused on the aspects of Hymenoptera that the instructors were uniquely placed to deliver – *i.e.* content that cannot be found in books or on the web, but comes from the instructors' experience.

The 12 trainees were given a variety of resources, including a very user-friendly

hard-copy identification key to all apocritan superfamilies, pdfs of standard texts (*e.g.* the Canadian “bible”), and an online Lucid key to European bee genera. They were also given a reference collection of specimens of the major parasitoid families, as well as common European bee genera.

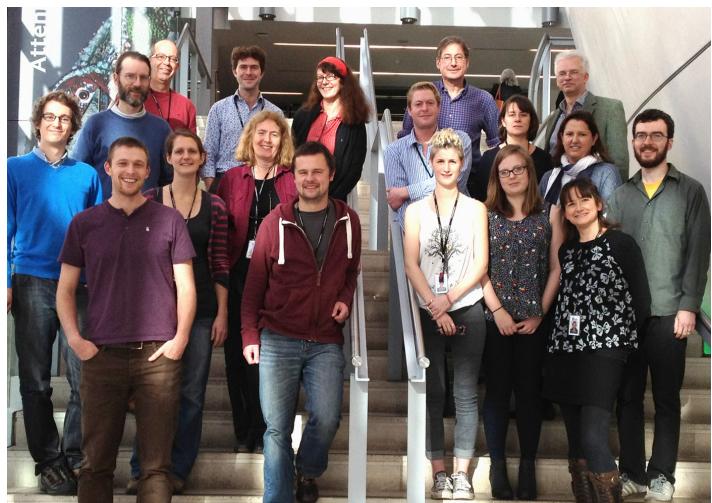
Instruction covered all methods of collecting, most techniques for mounting, including slide-mounting of DNA-extracted specimens. The course also covered the legal and quasi-legal aspects of collecting and exporting/importing specimens; databasing and KeEMu (databasing software) were also addressed.

The timing of the course precluded fieldwork, but future courses – very probably divided into separate parasitoid- and pollinator-focused courses, will certainly

include fieldwork and identification of the specimens collected by the students themselves.

One participant in the course, Catherine Carrick, a PhD student at Hull University, said: “The course was intense, but had me captivated throughout. It was very well-organised with friendly staff, suitable accommodation, tasty food, and an array of useful equipment and specimens to take home. I would highly recommend this course”.

Course instructors were: Andy Polaszek (course organiser and coordinator); Gavin Broad (Ichneumonoidea); Michael Kuhlmann, David Notton, Paul Williams (bees); Sue Ryder (collections, databasing); Natalie Dale-Skey (general support); John Noyes (mounting Chalcidoidea). •



Course instructors and participants In Darwin Centre 2, NHM. Front row L-R: Tom Godfrey, Liam Crowther, Catherine Carrick, Siobhán Porter, Nicola Prehn, Dylan Hodgkiss; 2nd row L-R: Christopher Jeffs, Gemma Baron, Caroline Tyler, Thomas Ayshford, Suzanne Ryder, Helen Kelly; back row L-R: David Notton, Michael Kuhlmann, Gavin Broad, Natalie Dale-Skey, Andy Polaszek, Paul Williams.



New JHR Editor

After 5 years of expert editing of the *Journal of Hymenoptera Research*, Stefan Schmidt is stepping down (thanks for your great service, Stefan!), and a new Editor is starting this Spring: Hannes Baur (above) of the Naturhistorisches Museum Bern. Welcome to Hannes, and we look forward to more superb publications on our favorite groups!

— Jim Whitfield

New ISH Archivist and Student Representative

After a selection process this (Northern Hemisphere at least!) winter, we have a new ISH Archivist – Rebecca Kittel (below; previously Student Representative – thanks for your service, Rebecca!), now in Japan on a postdoc with Kaoru Maeto.



Undergraduate and graduate students inspect one of the Monvero Sand Dunes around *Ephedra* plants (more dunes are located on the hills shown in the distance).

Dunes in All the Wrong Places

By: Lynn Kimsey, Department of Entomology, University of California, Davis, CA, USA

At the invitation of the U.S. Bureau of Land Management a group from the Bohart Museum of Entomology and the Entomology Club at the University of California, Davis, visited the Monvero Dunes in late May in 2014. We went with Mike Powers from the BLM to visit and collect on the dunes. The dunes are located on the west side of Fresno County, a few miles west of the town of Mendota, between 1500 and 3000 feet on top of the Monocline Ridge, in the inner central Coastal Range. Unlike most sand dunes these are not wind deposited, they are hilltop sand accumulations, resulting from erosion of underlying sandstones rich in kaoline clay, which gives the dunes an odd slippery texture.

It's not easy to reach the dunes. From Davis you drive south on Interstate 5, exit on an obscure freeway off-ramp that goes nowhere, go through two locked farm gates, and park beneath power lines that are part of the Pacific DC Intertie (electric power transmission line). Right below where we parked paleontologists had several years earlier excavated a plesiosaur

skeleton, which is pretty unusual for California. From there it's a forced march 900 feet up a steep, slippery slope to the top of the ridge. Once you get to the top you're suddenly in sand dunes topped by *Ephedra* "trees".

The geological history of the Monvero Dunes is also unusual. The San Joaquin Valley to the east of the dunes was formed as an inland sea basin in front of the Sierra Nevada Mountains and marginated to the west by an arc of islands beginning as early as the end of the Cretaceous. This inland sea was rich in marine life and resulted in extensive fossil and oil deposits. By the late Miocene, some 20 million years ago, the region now occupied by the Monvero Dunes was exposed coastal dunes on the west side of low mountains and east of an island arc. Eventually, subduction of the Pacific Plate elevated mountains to the west of these dunes and beneath the dunes themselves. Subduction and compression formed them into sandstone deposits, which are now in the process of eroding into sand dunes again.

There are several unusual features of this site. First, it is common to find marine fossils in these dunes, such as clams and scallops, and then there are the plants. The vegetation is an odd mixture of Mojave and Colorado Desert species, with those more typical of the Coastal Range. The



Surveying under the Mormon tea (*Ephedra californica*) shrubs.

dunes are home to some of the largest individual Desert Tea (*Ephedra californica*) plants I've ever seen with trunks up to 7 or 8 inches in diameter. This is one of the northwestern-most locations of the species. Other woody shrubs include several species of *Eriogonum nudum* var. *indictum*, *E. fasciculatum* var. *polifolium* and *E. vestitum*, *Gutierrezia californica*, and *Atriplex spinifera*.

A number of protected species occur on these dunes including the blunt-nosed leopard lizard (*Gambelia sila*) and the San Joaquin woolly-threads plant (*Monolopia congdonii*), San Joaquin kit fox (*Vulpes macrotis mutica*) and the Ciervo aegalian scarab beetle (*Aegialia concinna*). The dunes had never been surveyed for insect taxa other than beetles until we visited late last spring.

This site was also used extensively by tribal people. They planted a number

of food plants including Dock (*Rumex hymenocaulis*), which are still growing in the dunes, and left behind stone tools, flints and other materials.

May is usually well into the dry season and collecting becomes difficult. Although it was already quite dry (and hot) we collected 38 species of insects some of which have been identified at this point, including species of Andrenidae (*Perdita*), Bethylidae, Braconidae, Chalcidae, Chrysidae (*Holopyga*, *Parnopes*), Crabronidae (*Bembix*, *Microbembix*, *Philanthus*, *Tachysphex*), Platygastridae, Pompilidae and Sphecidae (*Ammophila*).

We plan to go back in early spring this year, and will be setting up one or more Malaise traps and monitoring them throughout the rest of the spring and summer. So if you have an interest in any family let us know! •



Heading back to the vehicles (and shade and ice water).



Also chosen was our new Student Representative, Katherine Nesheim (above), currently in Norm Johnson's lab at the Ohio State University. Thanks (and congratulations) to both Rebecca and Katherine . We look forward to implementing your ideas this year in ISH!

— Jim Whitfield

ISH at ICE 2016

We plan to hold an ISH symposium during the 25th International Congress of Entomology in Orlando, Florida:

<http://ice2016orlando.org/>

If you have a proposal for a hymenoptera-related symposium that you would like to organize please contact our president (jwhitfie@life.illinois.edu) and president-elect (A.Polaszek@nhm.ac.uk) as soon as possible but not later than 28 Feb 2015. Please send a symposium title, list of speakers and preliminary titles for oral presentations.

Next International Conference in Japan!

By: Jim Whitfield, Department of Entomology, University of Illinois, USA

After a selection process this winter, an application from Japan has been selected as the next site of the ISH Quadrennial Conference: Matsuyama, Japan (Ehime University). Some details follow below (courtesy Kazuhiko Konishi). We will be in touch as further details develop.

Reasons for location.—The past eight international congresses have been held twice in North America, twice in Europe, once in Australia, once in Africa, once in South America and once in Asia. The last congress in Asia was in Beijing in 2002 and then more than 10 years have passed. The next congress is the turn of Asia. In the recent two congresses, the number of participants from Japan was the highest among Asian countries. Thus, the next congress should be held in Japan.

Matsuyama is a local city located in southwestern Japan. This city is suited as a venue of the international congress. The facilities of Ehime University, which is in Matsuyama City, are available for use. The potential venue is Nanka Kinen Hall of this university. A wide range of accom-

modation, from luxury to budget, caters to all needs. Even participants staying in the lower cost accommodation can expect spotlessly clean rooms with excellent facilities. Moreover, Matsuyama is surrounded by mountains of altitude over 1000m with natural forests, and there are many secondary lowland forests in the city. It is easy to access subtropical broadleaf forest, summergreen mixed forest and subalpine coniferous forest from Matsuyama City.

Access to hymenopterous collections.—Ehime University, where the congress will be held, houses Tachikawa Collection (Encyrtidae and Bethylidae). Some other important hymenopteran collections in Japan can be visited before or after the congress: Uchida Collection (mainly Ichneumonidae), Watanabe Collection (mainly Braconidae), Kamijo Collection (Chalcidoidea) in Hokkaido University in Sapporo, Hokkaido; Shinohara Collection (Symphyta) in National Museum of Nature and Science, Tsukuba; Yasumatsu Collection (mainly Aculeata) Hirashima Collection (bees), Tadauchi Collection (Andrenidae) in Kyushu University in Fukuoka.

General hymenopterous collections in National Institute for Agro-Environmental Sciences, Tsukuba and Meijo University, Nagoya are also important.

Location appeal.—Matsuyama is the

largest city on Shikoku and the capital of Ehime Prefecture. At the heart of the city stands Matsuyama-jo, an original castle built in 1854. Dogo Onsen Hot Spa, one of Japan's oldest hot spring resorts with an old-fashioned public bath house, located on the northeastern outskirts of the city. Matsuyama in which the famous haiku poet, Shiki Masaoka, lived has much to offer in the way of curious literary and cultural assets.

Local organizers and support network:

Kaoru Maeto, Chair, Kobe University

Kazuhiko Konishi, Ehime University

Kenzo Yamagishi, Meijo University

Yoshihisa Abe, Kyushu University

Yoshimitsu Higashiura, Yamaguchi

Prefectural Agriculture & Forestry

General Technology Center

Rikio Matsumoto, Osaka Museum of

Natural History

Kyohei Watanabe, Kanagawa Prefectural

Museum of Natural History

Kazunori Matsuo, Tokushima Agricul-

ture, Forestry, and Fisheries Tech-

nology Support Center

Potential registration and meeting costs

US\$400 / person or less. •



Matsuyama, Japan, photographed by Jeremy Hall (CC BY 2.0) <https://flic.kr/p/8eRWL>

Hamuli Update

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

As you may have noticed, *Hamuli* was a bit delayed in its publication this issue, thanks in large part to software issues. We use Adobe InDesign to put this newsletter together, and file corruption has been a problem. We're exploring LaTeX now—<http://www.latex-project.org/>—which is *free* and *incredibly* robust. If any readers have experience with this publishing environment we'd love to get your input!

We're also looking for more stories from the field, especially if you have photos that rival those of Bernardo Santos (page 1)! Contact the editors with your ideas. •

Have you paid your 2015 dues?

<http://hymenopterists.org>

Inscriptive Anathema, For the Entrance to a Shrubbery

*If he who through this Coppice steers,
Should harm its native choristers, Or
younglings seize, or nests destroy;
May sylvan plagues his peace annoy.
Him may the sounding Hithornet scare
With dart and gilded coat of war;
Him may the fleet gnat slily sting
While dors against him dash their wing;
Across his path may paddocks sprawl,
Around his couch let ear-wigs crawl;
His wells may water-newts infest,
May screech-owls break his midnight rest,
And should he doze at morning gray,
Let his shrill herald be the jay!*

— Thomas Park, 1759–1834
(from *Sonnets and Other Small Poems*
(1797))

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.

2015 Membership Information

(visit hymenopterists.org for more options!)

\$15 Student (requires signature of advisor: _____)

\$45 Regular \$50 Family

\$750 Life \$0 Emeritus

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

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