

Hamuli

Newsletter of the International Society of Hymenopterists



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25 volumes of the *Journal of Hymenoptera Research* – a success story

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With the 53rd issue published in December 2016, the 25th volume of *Journal of Hymenoptera Research* (*JHR*) was completed. First appearing in August 1992, *JHR* has since become a distinguished, international journal focusing on original research articles on Hymenoptera systematics, taxonomy, ecology, morphology, and biology. It is thus certainly time to briefly review some of the stages in *JHR*'s development and hence to delve into some stats and figures. The report also highlights the incredible boost *JHR* has experienced after changing from a print product to a mainly digital medium and Open Access.

The journal started with two issues and an average

of 313 pages per year during its first period from 1992 to 2010. From 2011 to 2016, after switching from a solely printed edition to Pensoft's online platform and Open Access (Schmidt *et al.*, 2013), page numbers more than doubled with an average of 727 pages per year. Last year, the number of published pages was exceptionally high, as the 25th volume hit an all-time record of 1139 pages (Figure 1). Currently, six issues of *JHR* are produced each year, appearing strictly at the end of every second month (February, April, ... December).

Not only the number of pages, but also the average number of contributions increased considerably from 23 to 40 articles published per year (see Figure 1). At the same time, the rejection rate first remained more or less constant at around 32%, but then increased in the last two years to almost 40% (Figure 2; unfortunately, no figures were available for the years before 2011). Hence, the growth in published papers was clearly not at the expense of the quality of the individual articles.

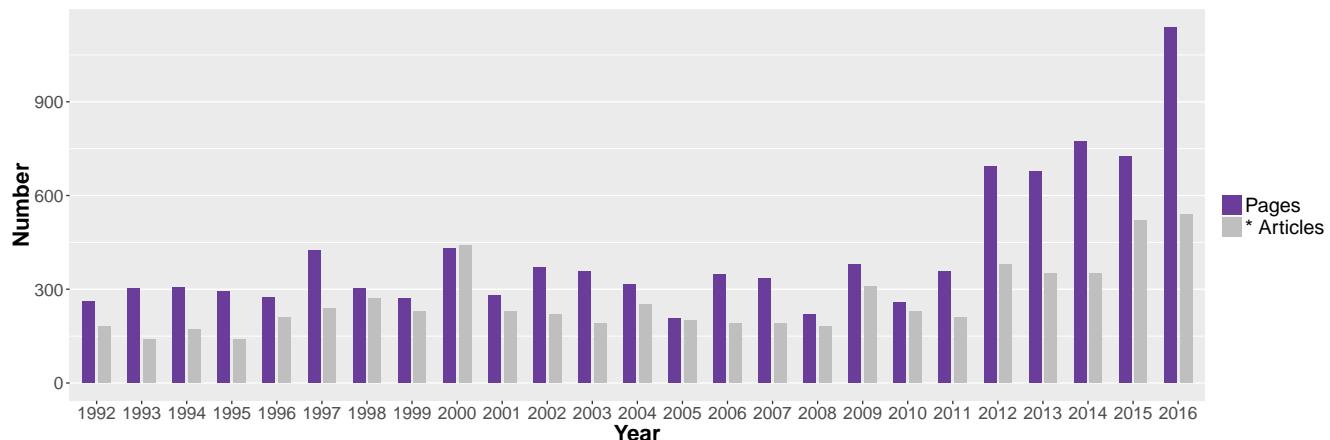


Figure 1. Number of pages and articles published in *JHR* from 1992 to 2016. Note that the number of articles was multiplied by a factor of 10 to enhance the visibility of the bars in the graph.

This was reflected by the Impact Factor, which was still in the same league as for some larger journals such as *Zootaxa* and *ZooKeys* (Figure 3), especially when self citations were omitted (Figure 4). This is indeed remarkable for a journal with such a narrow focus as *JHR*. It should also be mentioned that the most recent slight drop in Impact Factor (Figure 3) was mainly due to its linear dependence on the number of published papers, which evidently increased in the last few years (see Figure 1).

For authors, the time elapsed after submission is one of the key figures of a journal (Figure 5). In this respect, the performance of *JHR* has constantly improved in recent years. In 2011, the duration from submission to publication was slightly more than six months. Then it steadily decreased to slightly less than four months in 2016, reducing production time by more than one third. This was only made possible because of the great support by the subject editors as well as the production team at Pensoft.

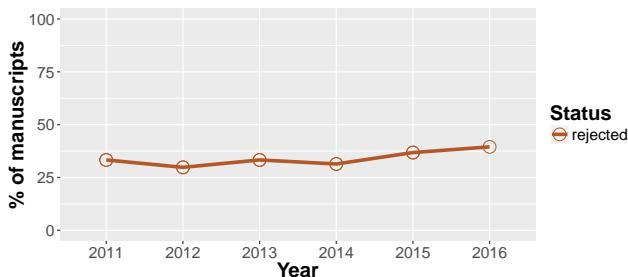


Figure 2. Percentage of rejected manuscripts for *JHR* from 2011 to 2016

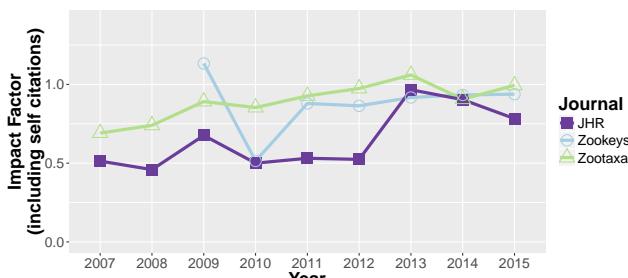


Figure 3. Impact Factor including journal self citations for *JHR*, *ZooKeys*, and *Zootaxa* from 2007 to 2015



Figure 4. Impact Factor excluding journal self citations for *JHR*, *ZooKeys*, and *Zootaxa* from 2007 to 2015

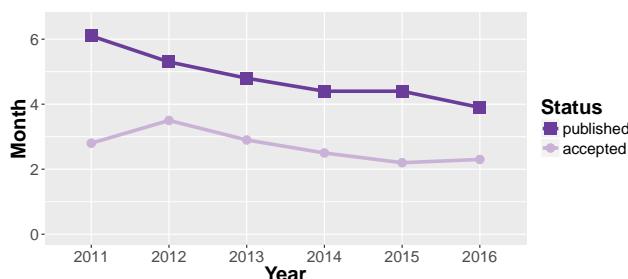


Figure 5. Elapsed time after submission of a manuscript to *JHR* from 2011 to 2016

Indeed, when I took over the position as editor-in-chief from Stefan Schmidt in February 2015, I found the Journal in perfect shape and encountered highly motivated people. I would therefore like to thank all my colleagues in the editorial team for their great effort and excellent support. These are Gavin Broad, Jack Neff, Justin Schmidt, Mark Shaw, Christopher Starr, and Matthew Yoder, who have served for many years as subject editors. I am also grateful to Jose Fernandez-Triana, Francisco Hita Garcia, Petr Jansta, Petr Klimeš, Michael Ohl, and Marko Prous, who have joined the editorial board during my tenure. Finally, my sincere thanks go to the editorial team of Pensoft, in particular Lyubomir Angelkov, Yordanka Banalieva, Alice Bangyozova, Teodor Georgiev, Bozhin Karaivanov, Plamen Pankov, Lyubomir Penev, and Pavel Stoev, for their active and constant support during production of the issues of *JHR*. The journal as well as the International Society of Hymenopterists also profited from the help of Pensoft's PR team, namely Iva Kostadinova and Iliyana Kuzmova.

Reference:

Schmidt S, Broad G, Stoev P, Mietchen D, Penev L (2013) The move to open access and growth: experience from *Journal of Hymenoptera Research*. *Journal of Hymenoptera Research* 30: 1–6. doi: 10.3897/jhr.30.4733

ICE 2016 ... Big, cold and exciting

By: Michael Haas, Stuttgart State Museum of Natural History, Germany; michael.haas@smns-bw.de

Traveling to Orlando for the International Congress of Entomology 2016 brought many firsts with it, at least for me. First time crossing the Atlantic. First time being in the US. First time attending an international congress and therefore also the first time presenting my own work to a broad audience. Not to forget, the first time meeting many of the people in person, previously only known from scientific papers of one's everyday routine as a student researcher. Well what to say, other than it was very exciting and a valuable experience for me.

Kicking it off by meeting many of the Society's students at the student lunch on Sunday, the week started with getting to know a lot of interesting and new people. Since I haven't attended an ISH meeting before, being in the "business" of hymenopteran research for only one and a half years now, this was the first time meeting young international scientists with similar interests. The student lunch (thanks for organizing Katherine Nesheim) was a great opportunity to get an insight into the research goals of fellow peers and getting to know them on a more personal level. Subsequently the ISH business meeting took place in the convention center of Orlando. There most of the upcoming time of the week would be spent, listening to interesting talks and freezing due to extremely cold air-conditioning, at least for European standards. In this regard the ICE 2016 was fully living up to its name. The business meeting was quite interesting for me as a junior hymenopterist, getting some insights in the society and its structures. Since there has been a transition of power, I want to thank the parting president Jim Whitfield and president-elect Andrew Polaszek for their work in the society as well as Lars Krogmann for his work as secretary and surely to all the rest, keeping the society up and running. I want to congratulate Barb Sharanowski as newly elected president and wish her well in the upcoming years, as well as Natalie Dale-Skey in her new position as secretary. After talking business, the meeting was relocated to satisfy the demand of drinks and food. For me the first day concluded with the attendance of the official ICE 2016 welcome reception, meeting up with friends, strolling the vast exhibition hall and thinking of the days to come.



Proof there is beauty within the Chalcidoidea. Male Spintherus dubius (Nees, 1834), family Pteromalidae

The following days were spent listening to talks and carefully planning out the personal schedule, which itself was a time consuming task, due to the seemingly endless variety of symposia, paper sessions, plenary talks, student competitions, poster presentations and so on. The congress started on a high note, with a symposium of the most beautiful and interesting insects there are ... the Chalcidoidea.

The Chalcidoid symposium was organized by James B. Woolley and John M. Heraty and featured a variety

of different topics and groups. Especially interesting being the systematic and taxonomic contributions. After the symposium had concluded, there was a little get together by the hotel pool, with the Who's Who of chalcidoid research, resulting in some interesting conversations and new insights.



Speakers of the chalcidoid symposium from left to right: Keith R. Hopper, John T. Huber, Andrew Polaszek, Marco Gebiola, Lars Krogmann, James B. Woolley, Erica J. Kistner, John M. Heraty, Astrid Cruaud and Jean-Yves Rasplus

As the week drew on, the list of attended presentations grew larger. Since I was lucky enough to present on the last day, tension grew as well. As this was my first attendance at a congress and presenting my work, I wasn't quite sure how it would be up there on the boards that mean the world of science. Prepared as well as I could in times of late nights out and an overdose of science, I went up there contributing my part. In retrospect I have to say, I enjoyed it quite a bit. I hope I was able to convey to the audience the importance and need of my work, as well as showing them something new and exciting.

On the same day the farewell dinner marked the end of the ICE 2016, granting one last chance to catch up with people and letting the impressions collected over the week sink in. On the next day I left Orlando with the feeling of being part of a great society of researchers and friendly colleagues. I can't wait to meet you all again at the next hymenopterists meeting in Japan in 2018. At last I want to thank the ISH community and the committee for granting me the student travel award, enabling me to take part at the ICE 2016 and allowing me to make all those invaluable experiences for me as a junior scientist. Thank you! o

Notable specimens from under-sampled environments: undocumented braconid diversity in Wyoming's shortgrass prairie

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At 168,000 square miles (435,000 square kilometers), western shortgrass extends from northwest Texas

to southeastern Wyoming and far-western Nebraska, with the Rocky Mountains as its western boundary (Cook *et al.* 2016). If you were to drive across it, a great deal of this enormous strip of the American West would appear pristine, but that is a mirage. Less than 23% of shortgrass remains in native vegetation and nearly all of that 23% is used for grazing (Cook *et al* 2016). The prairie dogs and the millions of bison that shaped this eco-region are mostly gone, replaced by fences and livestock (USDA 1995; Wohl 2009).

The National Grasslands Management Team (USDA 1995) wrote that maintenance of biological diversity is “one of the most important emerging issues” in American Grasslands. Prairies have probably lost significant biodiversity due to human activity and that loss is likely accelerating (McIntyre 2003). By now, identifying biodiversity before we lose it has become completely cliché, but that does not diminish the importance of finding out what organisms occupy particular habitats (Purvis and Hector 2000). This kind of information is essential for the future of land management.



Figure 1. Shortgrass prairie – 9th Street study site

The only notable large-scale insect survey of shortgrass was conducted in the Pawnee Grassland (Kumar *et. al.* 1976), a shortgrass reserve in Colorado. Although far more limited than the Pawnee study, my research to date has uncovered at least four times as many species of Braconidae as did the Pawnee survey.

Methods

Malaise trap samples were taken through each summer from 2013 to 2016. In 2013, 2014 and 2016, a single Malaise trap was set up on private property in a 200 foot-wide, ungrazed corridor between horse pastures a few miles north of Laramie (9th street site: Figure 1); two traps were used at the same location in 2015. A second location was added to the study in 2016 in the Hutton Lake National Wildlife Refuge, about 12 miles SE of Laramie (Hutton Lake site). Although at the same elevation (about 7200 feet or 2200 meters), there are major differences in soils and vegetation between the two sites, and the Hutton Lake site also has major wetlands. The second site was chosen to test if there might be large differences in diversity due to differing local habitats in shortgrass.

Samples were removed from traps weekly during the sampling period and brought back to the Entomology laboratory at the University of Wyoming to sort out Braconidae. The braconids were chemically dried and point-mounted for identification and preservation. The specimens will be identified to species, or morphospecies (Derraik *et al.* 2010).

Results and Discussion

As of spring, 2015 over 1700 specimens from the 9th Street site have been dried, mounted and sorted to subfamily. Of these subfamilies, only Alysiinae has been sorted to genus and morphospecies. Seventy-five alysiine specimens yielded 15 genera and 26 species, with 5 of those likely undescribed. It is doubtful that these numbers can be used to estimate the number of species within the entire sample, but based on previous sampling of braconid diversity in Wyoming (Haimowitz and Shaw 2012; Lockwood *et al.* 1999, Shaw 2002), a conservative estimate is 150 species, with half of them being new distribution records, including at least a dozen undescribed species.

Notable specimens from the 9th Street site:

Neoneurus new species 1 (Figure 2). There are only seven described Nearctic species of *Neoneurus*. To illustrate the rarity of this genus, as of 1992, when the Nearctic species were described, there were only eleven total specimens of *Neoneurus* in the US National Collection, and only one species was known from Wyoming (Shaw 1992).



Figure 2. *Neoneurus* new species 1

Deuterixys, likely *pacifica*. *Deuterixys* is a rare genus of microgastrine braconids. All three described Nearctic members of the genus have been reared from leaf miners in the genus *Bucculatrix* (Lepidoptera). *D. pacificus* has been reared from *Bucculatrix* in *Artemisia* (Whitfield 1985). Wyoming specimens have been found in Malaise samples from shortgrass habitats with *Artemisia nova* (black sagebrush) present.

Cosmophorus, likely new species. *Cosmophorus* is a Holarctic genus belonging to the braconid subfamily Euphorinae; known hosts are adult bark beetles. This is a smallish genus (Taxapad lists 30 species described world-wide), mostly from forested habitats, so it is quite unusual to find one in a prairie.

Exodontiella species, one of the rarest insects known. Because of its rarity and morphological dissimilarity to other braconids, there is a lot of uncertainty in the taxonomic placement of *Exodontiella*. As recently as 2006, there were about two dozen known specimens in institutional collections worldwide (Wharton *et al.* 2006), so even a single specimen is important.

Unknown genus from subfamily Opiinae (Figure 3): This specimen is so different from anything I found in the literature, that it is likely a new genus (or it may not even be an opiine). Opiines attack the larvae of flies.



Figure 3. Anyone recognize this weird opiine? Is it even an opiine?

Caenophanes new species. The first species of *Caenophanes* from North America to be described was found in Wyoming in 2012. This second Wyoming species was discovered in 2014. The known hosts of *Caenophanes* are wood-boring beetles, so I believe this species is likely associated with one of the shrubs at the site (there are no nearby trees). *Caenophanes* has been thought a rare genus with limited distribution, but it appears more cosmopolitan than once believed (Haimowitz *et al.* 2014).

Although most of the braconids from 2016 are not yet mounted, I did notice that the species composition of the Hutton Lake sample was much different than that of the 9th Street sample. These two sites represent different local habitats in shortgrass prairie near Laramie. Since there are many such local habitats, there is likely a much higher diversity than could be guessed at by sampling from a single locality, affirming the wisdom of sampling a range of habitats in a given ecosystem. A few highlights from the Hutton Lake specimens:

Neoneuris new species 2. Finding two new species so close together (and the single described Wyoming

species actually makes a third species within a 20-mile radius of Laramie) suggests the possibility that there are many undescribed *Neoneuris* species in the Nearctic.

Opiinae, likely another new species. This one may also turn out to be an undescribed genus.

A braconid species (Figure 4) that neither I, nor any of my colleagues at the University of Wyoming, could place into a subfamily with certainty. One possibility is a new genus in the subfamily Ichneutinae.

This work in shortgrass illustrates the extent of undescribed diversity in under-sampled, temperate environments. All it took was a small grant from Prairie Biotic Research (<http://prairiebioticresearch.org/>) to buy some Malaise traps, along with a little bit of my time for sampling. True, I have a great deal of taxonomic work ahead of me, which will take more than just a little bit of my time. But what a great adventure of learning and discovery! And if any readers have expertise and are inspired by some of my more exotic finds, please contact me.



Figure 4. Am I an ichneutine?

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The Swedish Malaise Trap Project 2.0

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Launched in 2002, the Swedish Taxonomy Initiative (STI) is widely regarded as one of the world's most ambitious and successful All Taxa Biodiversity Inventories (ATBI; Miller 2005). STI was created to explore and describe the complete multicellular fauna of Sweden. Consequently, a large-scale insect inventory project—The Swedish Malaise Trap Project (SMTP; Karlsson *et al.* 2005)—covering practically all of Sweden, was initiated in 2003. The SMTP, funded through STI by the Swedish Species Information Centre (ArtDatabanken), has during the years developed into an enterprise of its own and has now inspired to a new collecting campaign: the SMTP 2.0.



SMTP sorting crew, summer 2016

The SMTP 1.0 is still ongoing due to the sheer abundance of collected specimens and the incredible species diversity they represent (Karlsson *et al.*, in prep.). The total SMTP catch is from 75 Malaise Traps placed at 54 localities during 2003–2006. The catch is comprised of about 2,000 samples containing an estimated 80 million insect specimens. The ultimate goal of the SMTP is to process every single specimen caught in the trapping campaign, and to make the material available on demand to taxonomic experts. As of 1 January 2017, after more than 12 years of sorting, more than 80% of SMTP's total catch had been sorted at the first tier. The second-tier sorting of Hymenoptera and the third-tier sorting of Ichneumonidae are at almost the same stage, and about 55% of Braconidae and 35% of Chalcidoidea have also been sorted in this third step.



A rough estimation reveals that 15% or so of the total catch of SMTP's 80 million insects are wasps. Most are now sorted into more than 120 manageable taxon units. (Photo: Station Linné)

SMTP has thus become a dominant source of study material for research into the taxonomy and biodiversity of Swedish insects, thereby making a significant contribution to the overall outcome of STI. Per our statistics, SMTP material has been used for more than 50 scientific publications (articles and books, many with a focus beyond the Swedish fauna) and more than 50 student reports, theses and popular scientific publications. In total, more than 120 experts in 25 countries on four continents have contributed to the work.

tinents have thus far contributed to the species identifications of SMTP material. Study of the project's material has resulted in the discovery of more than 2,000 species new to Sweden, approximately 50% of which are new to science (many of them still not described). A recent attempt to use data from the SMTP to estimate the size and composition of the Swedish insect fauna indicates that there may be some 4,000 morphospecies of Swedish insects still left to discover, and possibly another 4,000 cryptic species that can yet only be identified by molecular methods (Ronquist *et al.*, in prep.)

But nothing is so good that it cannot be improved. We estimate that the total catch of SMTP 1.0 includes between 50% and 60% of all Swedish insect species. To improve this figure, the SMTP 2.0 will be initiated during 2017. Complementary trapping methods such as suction traps, yellow pan traps, light traps, and interception traps in combination with Malaise traps and sweep netting will be used at some 10 or so of the most rewarding trap sites from SMTP 1.0. An additional 10–15 localities representing environments and habitats missing in the first collecting campaign will be added. As with SMTP 1.0, Hymenoptera and Diptera will be the two focus orders, with especially poorly known or rarely collected taxa being primary targets.

The success of the SMTP depends largely on volunteer efforts and external taxonomic expertise, that over the years have been provided by well above two hundred collaborators. We regularly send undetermined specimens from more than 300 different higher-level groups to specialists all around the world; many of the deliveries have also contributed to studies and theses on different levels. If you are an expert, student, or an enthusiastic amateur, we welcome you to help us meeting the challenge described above – and you are certainly also welcome to visit us on our home ground; the SMTP sorting and collection are housed at Station Linné (after Linnaeus) on the beautiful Baltic island of Öland, that itself is worth the trip!

Read more about Station Linné and the SMTP at <http://www.stationlinne.se/en/smtp>, and more about the island of Öland at <https://www.oland.se/en>.

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A few recommendations on recording host information for reared parasitoids

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Without wishing to be either sanctimonious or unduly prescriptive, but in the important interests of improving our understanding of the host relations of parasitoids at the species level, I'd like to recommend some good practice that is far from always followed, and complain about some bad practice that is all-too common. So this comes in two parts: first good practice for what to put on specimen data labels (and what to preserve); and second what not to put in publications—or, for reviewers and editors, what not to allow to be published.

First, what to put on data labels. It may be that you do not yourselves rear parasitoids, but if you have contact with those who do you could still have a beneficial influence. It is all to do with expressing how certainly the identity of the actual host was known. A particular issue arises in the appropriate labeling of parasitoids that result from substrate-rearings for which, unfortunately, there seems to be no established tradition. By substrate-rearings I mean parasitoids reared from a bulk substrate in which the remains of the exact host individual cannot be, or anyway has not been, located and recovered and when critical reflection would concede some doubt (however small) as to the identity of the real host. Notwithstanding the multitude of other sources of error that I seem to spend my life moaning about (e.g., Shaw, 1994), the information we think we have on the host associations of parasitoids is pretty universally blighted by incorrect presumptions of the true host, and especially so in the case of parasitoids of concealed hosts, such as those developing in wood or similarly intractable substrates. When parasitoid cocoons with host remains cannot be recovered I try to adopt and promote the practice of labelling parasitoid specimens reared in this way as "ex [substrate] with [names of potential hosts that were also reared]". The use of "with" warns that the indicated host was not certainly known. To best illustrate the wisdom of this, it might be noted here that the only modern record (van Achterberg, 2002) generally regarded as credible of a microgastrine braconid parasitising a non-lepidopteran host, the terrestrial trichopteron *Enoicyla pusilla* (Burmeister), was in fact the undeclared result of a substrate-rearing, in this case a quantity of lichens and perhaps other decaying debris among which the presumed host was certainly living (Cees Gielis, pers. comm.). Nothing was recovered to be preserved with the adult parasitoid that emerged from this material (Kees van Achterberg, pers. comm.), and it is unclear what else might have been present. A *Diadegma* species (Ichneumonidae: Campopleginae) was also described as reared from the same source and host (Horstmann, 2004). These records seem to me to

be highly questionable, especially following my failure (along with Jeroen Voogd) to rear either parasitoid from a large collection of the host in good quality habitats in the same country (The Netherlands), although a long series of the adult trichopteron resulted; also my rearing of a single male of the same microgastrine from an unknown but probably case-bearing host (that I can say for certain was not *E. pusilla*, now that I have familiarity with that species) collected many years ago with lichen on aerial *Prunus spinosa* twigs in France (Shaw, 2012) ... but I, too, had failed to recover the host remains. Obviously the idea of what is and isn't a potential host requires a bit of knowledge and judgement—being big enough is an obvious criterion (satisfied in both the above cases), as is at least a pointer of being within the known higher taxon host range of the parasitoid concerned (which was not satisfied but did not trigger adequate suspicion and interrogation in either case). Of course, even with the host remains there would remain the tricky issue of how regular, for the parasitoid, this host usage was: part of its true host range or just a one-off freak event that might more sensibly be excluded from such a concept (Shaw, 1994).

To return to labelling, a further refinement might be to give the numbers of each potential host also reared from the substrate, especially if there was more than one (adding the number of specimens of the parasitoid reared would obviously also be useful)—and holding onto the substrate for long enough to give everything present time to emerge is also important. Widening this to any situation in which the host identity is not certain the bottom line is always to express any doubt fully, because unequivocally recording false positives is so powerfully destructive to our understanding of reality. If indeed it turns out to be the case, how nice it would be to be able to state with reasonable certainty the likely truth that as far as is known Microgastrinae only parasitise Lepidoptera! Or, conversely, to be sure that that is not so. In any case, taking more care with rearing and labeling will, in the long run, be helpful to people trying to evaluate the realised host ranges of particular species: if only there had been a long and satisfactory tradition of that, we would be far better off than now (see also Shaw, 1997).

In the general context of specimen preparation and labeling, some other easily incorporated and helpful things often don't happen. One is always to preserve the remains of the actual host individual (not just another example of the supposed host) and the parasitoid cocoon(s) with the specimen(s) if at all possible (dry, in gelatine capsules carried on the same pin as the adult, is good; but do not separate the individual cocoons of gregarious broods). That provides the evidence that a mistake was not made—or, if it was, a possible means to correct it; also, the cocoon (if there is one) will contain the parasitoid's larval skin, and indeed might show that the parasitoid reared is actually a hyperparasitoid.

Another desirable practice is to be explicit about dates: often people give only one date on data labels, without making it clear if it was a date of collection (coll.) or a date of emergence (em.). On enquiry, I find that about half of the single dates accompanying reared parasitoids sent to me refer to dates of collection and the other half to dates of emergence, so there is no simple intuition. Obviously giving both dates, and also the date of host death or parasitoid cocoon formation (if applicable), is the most helpful for building a picture of the parasitoid's biology and phenology (making clear if the rearing was under laboratory rather than outdoor conditions is also of value).

The second of my points is a major moan, directed towards authors (and, just as importantly, at reviewers and editors): do not cite hosts for a parasitoid species that you have not personally witnessed in some direct way without making it absolutely clear that you are simply repeating already published "knowledge" (or misinformation, as it might well be). People often flesh up their faunistic papers by listing (as if new information, or at any rate in a way easily confused with that) a string of all the recorded [recorded is not the same as verified!] hosts, which can be found in a couple of clicks in abstract resources such as (for ichneumonoids) Yu *et al.* (2012), against the name of a species of which they simply swept a specimen somewhere. For all their undoubted value, compilations such Yu *et al.* (2012) are no more than unfiltered abstracts of the entire published record, and include an undifferentiated and unassessed mixture of accurate, questionable, incorrect and plumb crazy perceptions. So reiterating all this is not only pointless, but more seriously also immensely destructive to the real knowledge-base, as these citations will tend to be abstracted afresh as new records of rearings from those hosts, illegitimately reinforcing perceptions that were probably largely erroneous in the first place (Shaw, 1993, gives a brief case study). Adding these details to faunistic papers without good reason seems to sucker journal editors and their reviewers time and time again; any extraneous sources of the records given should always be made explicitly transparent—and if an author did that, the editor might more easily see transcription from databases such as Yu *et al.* (2012) for the superfluity that they are and get rid of them. Reviewers have a real role here, not just in rejecting this approach but also in explaining to editors exactly why this is such a needless and ultimately destructive practice. Finally, if new host data are being presented, that should be made clear—and it really helps if new or re-assessed rearings are expressed quantitatively (Shaw, 1994).

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Member news

In December 2016, Dr. **Jason Gibbs**, a bee systematist and ecologist, started a new position as assistant professor at the University of Manitoba, Department of Entomology. Dr. Gibbs is the new curator for the J. B. Wallis / R. E. Roughley Museum of Entomology (<http://www.wallisroughley.ca/>). Visits to the collection and loan requests are welcome. Bees, particularly in the family Halictidae, are also welcome. ◦

The Wasp

Wrapt in Aurelian filth and slime,
An infant wasp neglected lay;
Till having doz'd the destin'd time,
He woke, and struggl'd into day.

Proud of his venom bag and sting,
And big with self-approved worth:
Mankind, he said, and stretch'd his wing,
Should tremble when I sally forth.

In copious streams my spleen shall flow,
And satire all her purses drain;
A critic born, the world shall know
I carry not a sting in vain.

This said, from native cell of clay,
Elate he rose in airy flight;
Thence to the city chang'd his way,
And on a steeple chanc'd to light.

Ye gods, he cry'd, what horrid pile
Presumes to rear its head so high—
This clumsy cornice—see how vile:
Can this delight a critic's eye?

With pois'rous sting he strove to wound
The substance firm: but strove in vain;
Surpris'd he sees it stands its ground,
Nor starts thro' fear, nor writhes with pain.

Away th' enraged insect flew;
But soon with aggravated pow'r,
Against the walls his body threw,
And hop'd to shake the lofty tow'r.

Firm fix'd it stands; as stand it must,
Nor heeds the View previous hitwasp's unpitied fall:
The humbled critic rolls in dust,
So stunn'd, so bruis'd, he scarce can crawl.

— Francis Hopkinson (1737–1791)

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