

# HAMULI

NEWSLETTER OF THE INTERNATIONAL SOCIETY OF HYMENOPTERISTS  
VOLUME 14 - ISSUE 1, SUMMER 2023



## In This Issue:

Q&A with President-Elect  
Juanita Rodriguez

ISH 40th Anniversary

The WaspID Course

Meet Hamuli's New Editors

**And more!**



# CONTENTS

Featured Hymenopteran. . . . .	3
New Editorial Staff. . . . .	4
From the President. . . . .	6
President Elect Q&A. . . . .	8
Artist - Justina Kierat. . . . .	10
Artist - Dan Blamey. . . . .	11
Celebrating 40 Years. . . . .	12
At the Heart of ISH - JHR. . . . .	17
WaspID Course. . . . .	20
Imaging Microhymenoptera. . . . .	22
Social Wasps in Uruguay. . . . .	24

**Cover illustration:** A carrot wasp (*Gasteruption* sp.) illustrated by ISH member Dan Blamey.

Hamuli (ISSN 2224-2791) is published by the International Society of Hymenopterists.

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

Current Officers:

**President** José Fernández-Triana  
**President-Elect** Juanita Rodriguez  
**Past President** Lars Krogmann  
**Secretary** Natalie Dale-Skey  
**Treasurer** Craig Brabant  
**Webmaster** Erinn Fagan-Jeffries  
**JHR Editor** Michael Ohl  
**Student Representative** Jessica Awad  
**Social Media Officer** Miles Zhang  
**Hamuli Editors** Emma Kärrnäs, Cristina Vasilita, & Louis F. Nastasi  
**Archivist** Rebecca Kittel

**Some brief humor from ISH member Josef Berger:** Is there any significant difference in pronunciation between the joyful exclamation “A mymarid!” and the doubtful realization “Am I married?”

# FEATURED HYMENOPTERAN: CARROT WASPS

LOUIS NASTASI, HAMULI LAYOUT EDITOR

“Featured Hymenopteran” is a new recurring column written by one of Hamuli’s editors. This column will briefly introduce the hymenopteran featured on that issue’s cover. This issue’s cover features a carrot wasp (Evanioidea: Gasteruptiidae), a slender creature with a fascinating life history!

The carrot wasp family Gasteruptiidae contains around 500 described extant species which are classified in two subfamilies and six genera. These interesting insects are found worldwide, and are sometimes jokingly referred to as “bellbottom wasps” due to the swollen metatibiae that closely resemble bell-bottom jeans. The more frequent moniker “carrot wasp”

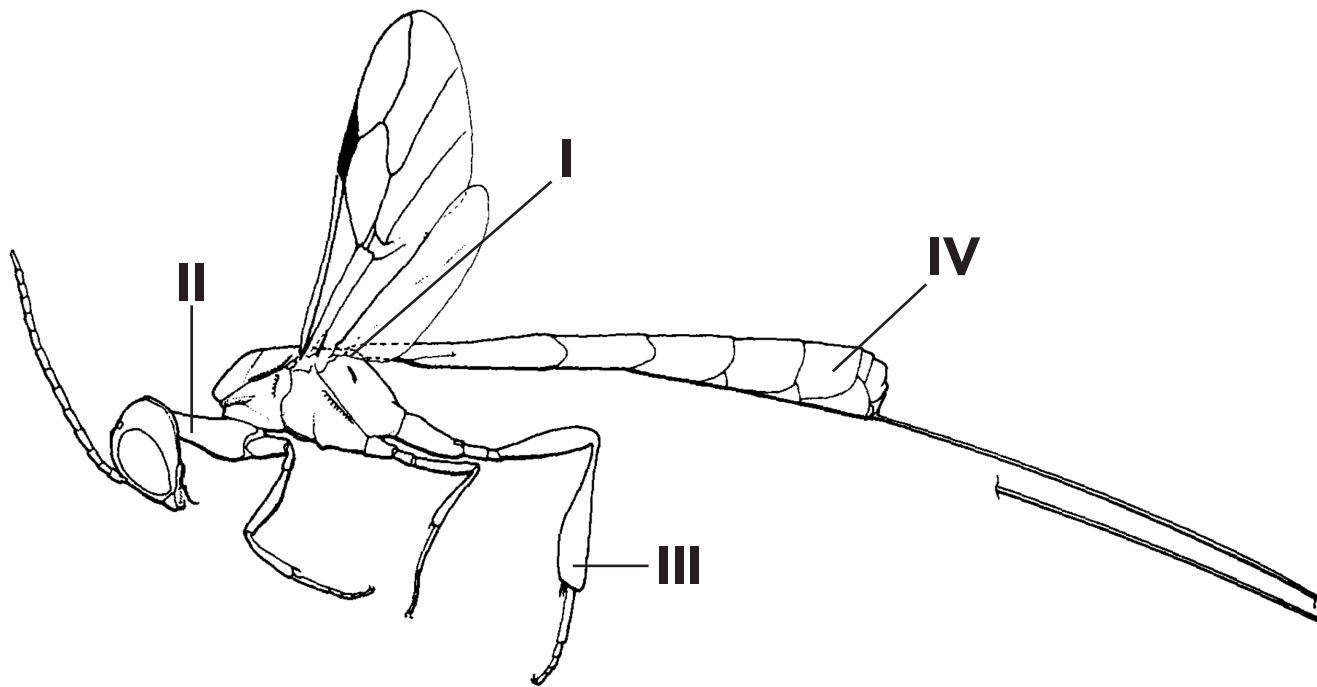
comes from the frequent observation of gasteruptiids on carrot flowers, although this association is more anecdotal than a strict indication of the family’s biology.

Members of this family are primarily predator-inquilines of twig- or wood-nesting hymenopterans, especially Apoidea. As predator-inquilines, carrot wasps lay their eggs in the nests of an appropriate host. After the eggs hatch, the carrot wasp larvae consume the food intended for the host’s offspring.

## Identifying Gasteruptiidae

Gasteruptiid wasps are easily identified by the following combination of characters (see below figure modified from “Hymenoptera of the World”):

- I. Metasoma inserted high upon propodeum;
- II. Propleuron extended into elongate “neck”;
- III. Metatibiae greatly enlarged distally;
- IV. Metasoma elongate and subcylindrical.



## References:

Mason, W. R. M. in Goulet, H. & Huber, J. T. (1993) Hymenoptera of the World: An Identification Guide to Families. Agriculture Canada.

Parslow, B.A., Schwarz, M.P., and Stevens, M.I. (2020b). Review of the biology and host associations of the wasp genus *Gasteruption* (Evanioidea: Gasteruptiidae). *Zoological Journal of the Linnean Society*, 1–18. <https://doi.org/10.1093/zoolinnean/zlaa005>

Parslow, B. in Nastasi, L. F. et al. (eds.) (2023). *Biodiversity and Classification of Wasps*, 1st Edition. Frost Entomological Museum, The Pennsylvania State University. Release date: 2022-01-02. <https://doi.org/10.26207/ax00-rk88>

## INTRODUCING HAMULI'S NEW EDITORIAL STAFF

While *Hamuli* has primarily been edited and prepared by a single individual in the past, we have recently transitioned to an editorial team with three members: an editor-in-chief, a submission editor, and a layout editor. Continue reading to meet our three new editors!

### Editor-in-Chief Emma Kärrnäs

Truth to be told, I am still new to the world of Hymenoptera! The incredible diversity found in nature has always deeply fascinated me, but I knew rather little about hymenopterans until recently – to be more precise, until I embarked on my PhD studies at Lund University in Sweden. My PhD project here is to do a taxonomic revision of two genera of parasitoid wasps, *Oomyzus* and *Quadrastichus*, in the family Eulophidae. Right before I started a year and a half ago, I took the first online WaspID course given and I was instantly swept away by the marvelous variety and striking beauty of hymenopterans! There and then, I realised I had made an excellent choice of group to study – parasitoid wasps such as eulophids are very fascinating, yet we still know so little about them!

After that, I immediately joined ISH. I later found out about the possibility of joining the editorial board of *Hamuli* and I am thrilled to now have become a part of it! At the moment, I am especially excited to go to my very first ISH conference in Iași, Romania, in July

– I hope to meet many of you members there! And of course, I am equally excited to now present the very first issue of *Hamuli* edited by us, the new editorial board! I hope you enjoy it as much as we did putting it together! Happy reading!

### Submission Editor Cristina Vasilita

I am a PhD candidate at the Stuttgart State Museum of Natural History in Germany and I am interested in developing tools and techniques for the study of hyperdiverse groups, currently focusing on Platygastridae. I was introduced to the beautiful world of parasitoid wasps by Ovidiu Popovici when I was a 2nd year undergrad student in Iași, Romania and I fell in love with their striking diversity right away. My connection to ISH and *Hamuli* is short (I only became a member in 2020), but eventful!

I like being in contact with people, brainstorming and developing ideas together, which is why I was motivated to become the submission editor of the newsletter. I believe in the scientific COMMUNITY, I believe in COLLABORATION and CONNECTIVITY. I love how the society brings together people from different backgrounds, joined in ISH by different goals and interests, all with their beautiful uniqueness. I am honoured to serve on the editorial team of *Hamuli* and help enable a platform for communication and expression for all of our members, present and future. I am excited to get in touch with all of our members who consider sharing their art, their humour, their treasurable expertise and their thrilling collecting adventures with us!

## Layout Editor Louis F. Nastasi

I am about to begin my fourth year as a PhD candidate at Penn State's Frost Entomological Museum, where I am studying systematics of gall wasps (Cynipidae) with an emphasis on the tribe Aulacideini. My current research involves revisionary taxonomy of herb gall wasps and phylogenomics that will assist us in understanding the incredible transitions that gall wasps have made from parasitism to gall induction and back again!

Wasps have long been my favorite insects, but my fascination with them was cemented during an internship working on ichneumonoids with Bob Kula (USNM-SEL). Since then, I've begun graduate school, where I developed the WaspID Course (see our article elsewhere in this issue) to bring the splendor and excitement of wasps to a global audience. If I've learned anything from being a hymenopterist this far, it's that there are so many incredible things to learn about these insects, and we all need to work hard to bring attention to these often-maligned insects.

As I approach the later stages of my graduate education, the crucial role hymenopterists play in the world has never been clearer to me. In the face of climate change, biodiversity loss, and other unprecedented events, those who lay the groundwork for further understanding life on Earth will play pivotal roles in defining our future, and the great folks of ISH are providing a space in which these amazing developments can take place. Through the support of ISH and the broader hymenopterist community, I hope I can instill in others the passion

for wasps that drove me to pursue an editorship with *Hamuli*. Many thanks to all who have contributed to this first issue under our care, and many thanks to all who have made ISH a welcoming and exciting environment. While I will not be attending this summer's meeting in Romania, I am looking forward to supporting ISH with my service as *Hamuli's* new layout editor.



**Top:** Emma Kärrnäs (Editor-in-Chief). **Lower right:** Cristina Vasilita (Submission Editor). **Lower left:** Louis Nastasi (Layout Editor).

# FROM THE PRESIDENT: IT IS A GREAT TIME TO BE A HYMENOPTERIST!

JOSÉ FERNÁNDEZ-TRIANA

I would argue that ANY time is a good time to be a hymenopterist (but then, of course, I am totally biased!). With so many interesting species to study, so many pending and at times urgent questions to answer about ecology, diversity, conservation, phylogeny, etc.... there is so much to do! The International Society of Hymenopterists (ISH) provides the perfect opportunity to share your research results, explore ideas, learn from other experiences, get involved into some new and cool research project, or just having a great time with colleagues that share one's passion and love for this amazing group of insects.

ISH celebrated 40 years a few months ago, and it was great to hear stories of how much has been done over these years, and how many great researchers have contributed to this success. But history goes hand in hand with new protagonists, the next generation of hymenopterists who are taking up ISH with their energy and enthusiasm. ISH is renovating and reinventing itself because of what everyone brings to the table. The new technologies also help, of course, and the online meetings via Zoom we have had over the past three years or so have allowed many fellow hymenopterists to showcase their work. This choice was not possible a few years ago, but it has turned out to be the great equalizer, as meetings are no longer the dominion of researchers with enough funding to attend them; now if one has access to the internet, it is then possible to engage more actively with ISH. Of course, online meetings are

not the same as in-person gatherings, and we ideally want to keep both choices. But online meetings at least allow ISH to truly reach out to all its members. And we want to improve and expand those possibilities more in the near future!

Our society also continues efforts to be more inclusive and representative. For example, the current ISH executive is composed by the same number of women and men, from five different countries and from different career stages.

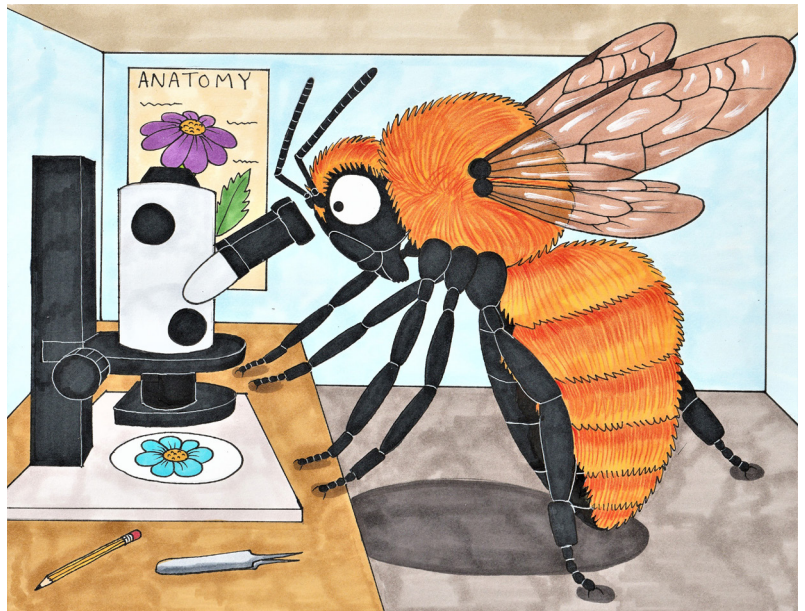
We have been lucky to have three women and excellent researchers recently join our JHR editorial board: Ankita Gupta (ICAR-National Bureau of Agricultural Insect Resources Bengaluru, India), Jovana Jasso-Martínez (Mexico, currently in the National Museum of Natural History, Smithsonian Institution, USA) and Tamara Spasojevic (Natural History Museum Basel, Basel, Switzerland). And we welcome and encourage more women to become part of the editorial board: feel free to contact us at any time if you want to be part of it!

Similarly, our Hamuli newsletter now has a brand-new editorial team which includes two women, Emma Kärnäs (Lund University, Sweden), and Cristina Vasilita (Stuttgart State Museum of Natural History, Germany), as well as Louis Nastasi (Pennsylvania State University, USA). And we were lucky to have others volunteering to help with the newsletter: Yasfir Nadat (North West University, Potchefstroom, South Africa), Dawn Painter (Natural History Museum, London, UK), and Rob Longair (Canada). Another talented woman, hymenopterist and artist, Devon Henderson (Canada) has graciously provided Hymenoptera-related cartoons (see the following page!). We look forward to seeing more contributors and volunteers at any time!

It is also important to provide more opportunities for researchers from the Global

South to be able to overcome funding limitations and better access what ISH has to offer. While this is still a work in progress where more can always be accomplished, great progress has been done for the past few years. For example, we have expanded the possibilities to be sponsored as an ISH member, with annual calls for applications being considered at the beginning of each year. And we will soon be able to provide sponsored pages to publish in JHR, something we expect to happen as soon as early next year. As the current ISH president, but also as a person originally coming from the Global South, I am particularly sensitive to this issue; and I will make an extra effort to try prioritizing those topics. We welcome your suggestions and any advice you can share to help improve our work.

The bottom line is that we want to continue to build a truly global community of people with a common interest in Hymenoptera and any and all facets of its study. Feel free to pass this message to any person you may know and that might be interested in joining ISH and contributing their talents. This is a great time to be a hymenopterist, so let us share this message with everyone out there!



**Right column:** Illustrations by Devon Henderson.

**Top:** *Sphinctus serotinus* (Ichneumonidae) curating an entomological collection.

**Center:** *Bombus dahlbomii* (Apidae) observing with a microscope.

**Bottom:** *Tremex columba* (Siricidae) in the field with a Malaise trap.

## Q&A WITH PRESIDENT-ELECT JUANITA RODRIGUEZ

**1. What is your history with Hymenoptera research?** During my undergraduate studies at Universidad Nacional de Colombia, I began working on Hymenoptera after being accepted into Fernando Fernandez's lab. He offered me the opportunity to contribute to the revision of *Odontomachus* trap jaw ants from Colombia, which sparked my interest in Hymenoptera research. Fernando played an instrumental role in my academic journey, providing me with unwavering support and encouragement, and even suggesting that I pursue a master's degree in ant research. It was thanks to Fernando that I learned about an NSF-funded PhD opportunity in James Pitts' lab at Utah State University, which I applied to and was accepted into. The rest, as they say, is history!

**2. What is your history with ISH?** As a PhD student at Utah State University, I joined the International Society of Hymenopterists (ISH) under the guidance of my advisor, James Pitts. He encouraged all of us to participate in the annual Entomological Society of America (ESA) meetings and get involved with the society. I vividly recall attending a few ISH business meetings during ESA, where I was truly inspired by the ground-breaking research being conducted in the field of Hymenoptera. Meeting prominent researchers, whose names I had only heard of before, and having the opportunity to chat and socialize with them over a drink was particularly exciting. Being a part of ISH provided me, as a student, with an exceptional opportunity to connect with researchers from different institutions, potentially finding collaborations, future job prospects, and other opportunities. Moreover, as presenters, students have the chance

to showcase their passion and skills, gaining visibility among peers and potential collaborators within the society.

**3. What motivated you to run for President of ISH?** To be completely honest, I have a history of shying away from leadership roles. Perhaps this stems from my introverted personality or the imposter syndrome I experience as a Latina woman. Nevertheless, I have always tried to face my fears rather than avoid them. When I was nominated for this role, I carefully weighed the pros and cons, and ultimately decided that being a voice for minorities in the executive outweighed the cons. As a member of a minority group, namely Latin American women who are not usually visible in STEM, let alone in leadership roles, I believe that my presidency will provide a platform to represent these underrepresented voices. By sharing my own experiences and the obstacles faced by minorities, non-English speakers, and researchers from middle and low-income countries, I can help build a more inclusive society that is better equipped to overcome these challenges. Additionally, I believe that my presidency will encourage other minority groups to see themselves reflected in the executive, making them feel like valued members of the society.

**4. What is, in your opinion, society's best accomplishment?** Since its founding, the International Society of Hymenopterists (ISH) has been dedicated to promoting Hymenoptera research and supporting members from diverse backgrounds all around the world. The society has made significant efforts to foster an inclusive environment, especially for students and early career researchers from low- and middle-income countries. The commitment and dedication of the executive board to sustain and grow the society is truly remarkable. In my opinion, the society's most significant achievement has

been its unwavering dedication to continuous improvement. This dedication has allowed the society to evolve and improve, resulting in the robust community of Hymenoptera researchers that we have today.

**5. What is one thing that you plan to bring to ISH in the next few years?** I want to be transparent and admit that I am still in the process of defining my priorities as president. Nevertheless, one of my primary objectives is to be a vocal advocate for underrepresented groups and advance the society's efforts towards diversity and inclusion, not just within our organization but across the entire STEM community. I am deeply committed to identifying ways to support minority students and early career researchers, with a particular focus on tackling the unique challenges they face. In the near future, I plan to engage with the membership to understand their greatest obstacles and how the society can support them. By doing so, I hope to develop an actionable plan that addresses these challenges effectively.

**6. ISH celebrates its 40th anniversary, what is your message for those who laid the foundation of the society?** I want to express my profound gratitude for establishing a welcoming and inclusive community for Hymenoptera researchers from across the globe. Thanks to your efforts, we have a place to belong, connect and receive support.

**7. What is the best reason to do research?** For me, the most satisfying aspect of research is the ability to contribute to the advancement of knowledge. I find the entire process of scientific inquiry rewarding, from formulating intriguing questions to devising innovative methods to answer them. What's particularly fulfilling is that our work produces outcomes that not only inform future research but also have real-world applications and benefits for society.

**8. If you had to single out one moment and call it the most crucial moment in your professional development, what would it be?**

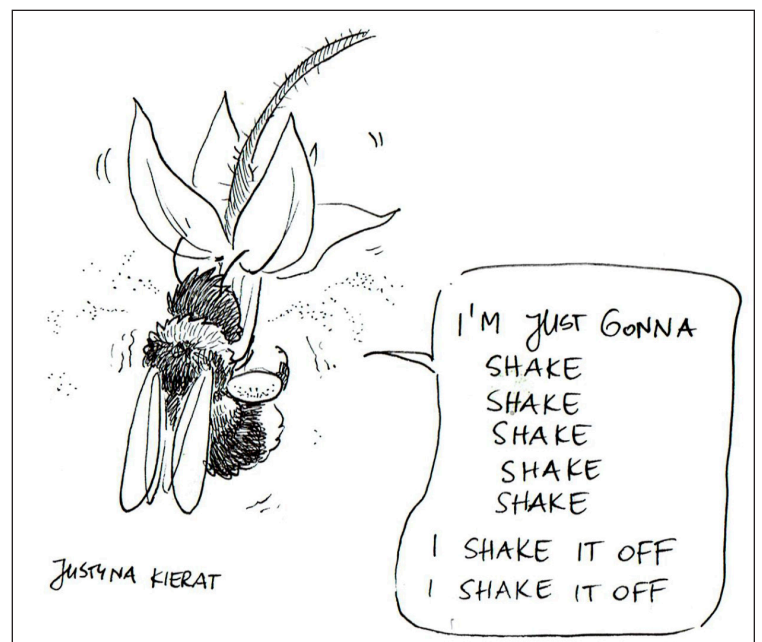
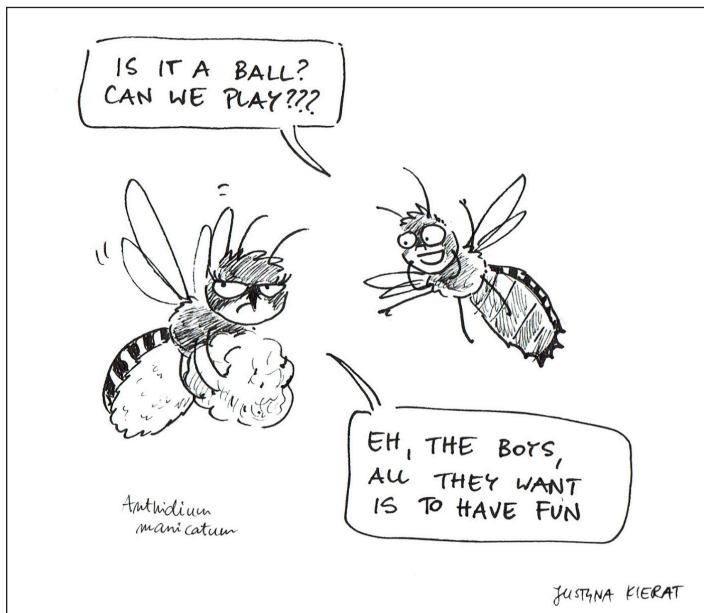
I find it challenging to identify a specific moment since several factors have influenced my journey. Fortunately, I acknowledge the existence of layers of privilege, and I was fortunate to be privileged among the less fortunate. In Colombia, only a small percentage of people have access to higher education and English as a second language in "bilingual" schools. I was able to overcome many of the obstacles faced by low- and middle-income country researchers because I had access to excellent education early on and had English as a second language classes since I was five years old. This enabled me to secure a place at a top university in Colombia and find timely opportunities abroad, thanks to the support of my undergrad supervisor Fernando Fernandez. All of this allowed me to pursue my graduate studies in the US. Moreover, the support from lab mates, supervisors, and mentors was pivotal, along with my focus on maintaining my mental and physical health throughout the years (although I realize I could have done a better job at that).

**9. In your campaign profile it is mentioned you take mentoring seriously, what is the one message/lesson you would give to anyone who comes to you for advice or looks up to you?** I would say, always strive to maintain a work-life balance, as it is crucial to your mental and physical health throughout your career. Although easier said than done, it is hard work on top of the already demanding workload, but completely worth it. In addition to your career, you must prioritize building your safety net of family, friends, hobbies, and personal growth.

**10. (Unofficially) which is the best hymenopteran?** Oh no! I think I don't have favourites. Let's leave it at that :D

# ARTIST FEATURE: JUSTYNA KIERAT

"I got my MSc and PhD at the Jagiellonian University in Kraków, Poland, working mainly on the reproductive biology of the red mason bee (*Osmia bicornis*). Since then, I became more and more interested in wild bees, their life histories and identification of species. Now I share my time between looking for bees in the field, identifying them for some scientific projects in the laboratory and educating the public about them. My drawings help me draw attention to bees and the need to protect them. I wrote and illustrated a book whose title can be translated from Polish as "Honey and non-honey bees". Recently I set up a Facebook page, "Non-honey bees", the name relating to the book, where I post cartoons about bees."



## ARTIST FEATURE: DAN BLAMEY

"I'm a latecomer to the world of Hymenoptera, having recently reignited a childhood curiosity of both insects and art as I crossed into my 40's. This was sparked by hastily taking a photo of a fascinating beetle (*Lemodes coccinea*) while on holiday and proceeding to hunt online for an ID. I found [ALA.org](http://ALA.org) and reached out for ID help, dismayed to then be informed that this was unfortunately not a novel discovery, but excited that an expert reached out to help and that a whole world of expertise and record was out there. A growing interest in parasitoid wasps and engagement with iNaturalist has been further inspired by observing a lack of broader interest and expertise in the Australian fauna, so I hope to one day provide useful contributions to

parasitoid research and knowledge. I keep busy outside of my day job and time with family by photographing insects, drawing and painting (mainly) wasps and identifying Australian wasps on iNaturalist. I like to paint my own observations, but I'm not that good at photography yet so sometimes I use other interesting observations that inspire me. The most difficult thing is that the wasps are generally so small I have to paint from photos rather than directly from life and so have to paint from limited views, but photos still allow for exploration of the beautiful complexity of these tiny creatures."

Dan's artwork is featured on this issue's cover, and an additional example of his work (a gorgeous painting of a helconine braconid wasp) can be seen below. Look out for more examples of Dan's work in future issues of *Hamuli*!



# CELEBRATING OUR FIRST 40 YEARS

ANDY AUSTIN

University of Adelaide, Australia

## The Beginning

This being the 40th year of the International Hymenopterists's Society, it is worth reflecting on our history as a way of considering how we might best plan for a successful future for the society. Here I briefly describe the origins of the Society, the way in which we communicate our science formally and informally, how we recognize great science and service, and what we might consider to be important issues for the future.

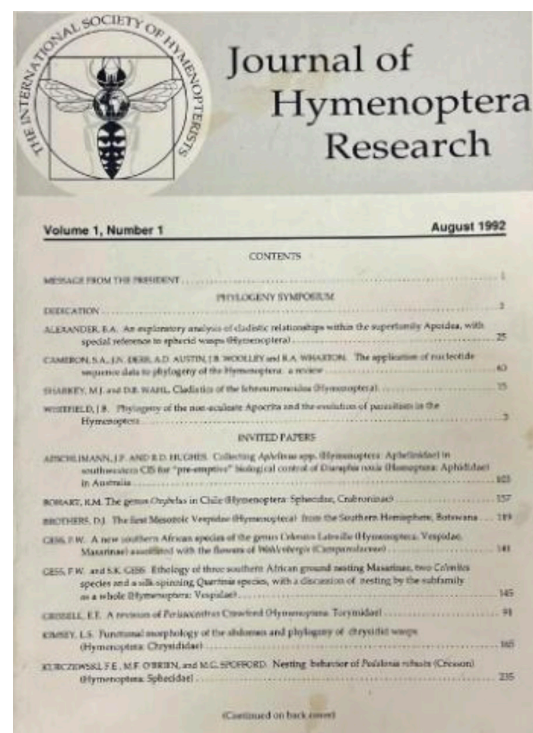
The Society was formed in December 1982 at a meeting held during the Entomological Society of America meeting held in Toronto. It was attended by some 45 hymenopterists (see below photo). Lubomir Masner, based at the Canadian National Collection in Ottawa, was nominated as Acting President in that year and elected as the first President in 1985. There was undoubtedly much enthusiasm for an international society devoted solely to the study of Hymenoptera, but we were late in doing this compared with other systematic groups.



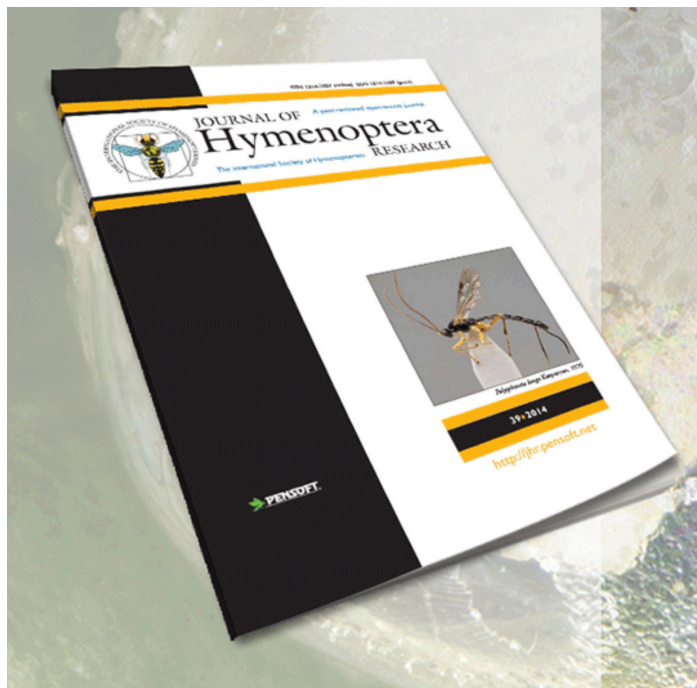
Every society needs a logo and following a contest requesting graphical submissions in 1991, the winning design was submitted by Michael Prentice, and this has served as our logo to the current day (as seen on the front cover of the journal). In that same year, the Society was incorporated in the state of Washington, D.C., and this provided the beginnings of a sound financial basis for the society.

## Our Journal

A priority in the early days of the society was to develop and publish a journal that was solely dedicated to all aspects of Hymenoptera. To this end, an editorial board was elected by the membership in 1990 with David Smith, at the USDA Systematics lab in Washington, D.C., becoming the first editor. The first issue was published in 1992 and featured a series of invited papers on hymenopteran phylogenetics. Over the next 18 years, 22 hard-copy volumes were published with one or two issues per year by Taylor & Francis as our publisher. The journal was free to publish in for ISH members, with membership fees covering the publication costs.



Although this publication model had served the society well, there was a move to reassess how the journal was published, particularly in regard to making its contents open-access. After much consideration, the Society moved the journal to Pensoft, which offered a more modern platform which included open-access and more extensive abstracting and bibliographic services, among other benefits. One major change resulting from this move was that the open access charges (referred to as Article Processing Charges – APC) would be paid for by the authors. Although the APC has remained reasonably modest, the down-side was that it penalised authors who did not have funds to cover the APC charges. Since moving to Pensoft, papers have been packaged into single issues (volumes 23-95) with five to seven issues being published per year.



It is fair to say that since its inception the Journal of Hymenoptera Research has been at the heart of our Society. It is held in high esteem by the membership, and has been expertly guided by the current editor, Michael Ohl and his editorial team.

## The Newsletter

Newsletters have been an important venue for communicating informal information on Hymenoptera. For Hymenoptera, newsletters started with several taxon-specific outlets, Proctos, Chalcid Forum, Sphecos, but ISH recognised the need for a broader communications forum, and thus the publication of the ISH newsletter started in 1997. Up to 2009, it was produced as one or two issues per year in hard copy and mailed out, but thereafter from 2010 was published as an on-line pdf and was very aptly named 'Hamuli'. The long time editor, Andy Deans, developed Hamuli into a great platform for informal communication among members and has been a stalwart of the Society.

# HAMULI

*The Newsletter of the International Society of Hymenopterists*



---

volume 1, issue 1
2 August 2010

### Our new, bolder newsletter

*By: Andy Deans, North Carolina State University*

Well, here it is—the inaugural issue of our new Society newsletter, *Hamuli*. Before I dive too deeply into the details I want to acknowledge my associate editor, Trish Mullins, who helped organize the newsletter, and especially the talented contributors, who provided content. Thanks for helping make this enterprise happen!

*Hamuli* is an effort to revive the spirit of newsletters past—e.g., *Sphecos*, *IchNews*, *Proctos*, and *Melissa*—an enthusiasm for communication that, if you've had the good fortune to read recent project newsletters, like *Skaphion* and *TIGER*, still permeates through our community. We anticipate publishing two issues per year, one in January, and another in July, and we're always accepting submissions that are relevant to ISH and Hymenoptera research more broadly, including member news (updates on projects, student opportunities, recent collecting efforts), opinion and methods pieces, notes and photos from the field, from museum visits, and from meetings, and just about any other content you can think of. *Hamuli*, much like its anatomical namesake, will hopefully remain an entity that facilitates consociation.

I hope you enjoy reading the new ISH newsletter as much as Trish and I enjoyed putting it together. Feedback is greatly appreciated, whether you have concerns about content, comments about the layout, or questions about how to contribute. Contact information is provided in the masthead on page 2. ♦

### In this issue...

President's report (Woolley)	1
Webmaster/Archivist report (Seltmann)	3
Publishing on Hymenoptera (Agosti <i>et al.</i> )	4
Reflections on the future (Masner)	4
Report on the 7th ICH (Melika)	5
A student's impression of 7th ICH (Talamas)	5
Australian checklist (Austin & Jennings)	5
Sawfly research in China (Wei)	6
Sweeping Shrinkies (Heraty & Mottern)	7
Hints on scanning to PDF (Noyes)	8
Evaniid oviposition behaviors (Mullins & Bertone)	10
Collecting in Macain Mountains (Mitroiu)	11
Collecting in Kasai (Carpenter)	12
Collecting in China (Niu & Wei)	13
Jesus Santiago Moure (Dal Molin)	15
Member News	16
7th ICH photos	18
Membership information	19

### President's report

*By: Jim Woolley, Texas A&M University*

**Journal of Hymenoptera Research.** After a transition period this Spring, the new Editor, Stefan Schmidt, has taken over all editorial duties for *JHR* and he is busily preparing issue 19(2) to be sent to press in late summer. We also have a change in the Editorial Board. Stefan and Matt Yoder have agreed to share the duties of subject editors for taxonomic papers of Symphyta and Parasitica for *JHR*. The other subject editors remain the same: Mark Shaw (biology, Symphyta and Parasitica), Jack Neff (biology, Aculeata) and Wojciech Palawski (systematics, Aculeata). Thus, we have a restructured editorial team to face the challenges ahead.

As most of you are probably aware, the numbers of manuscripts submitted to *JHR* has been in a steady decline in recent years. Although we continue to receive high quality papers, the numbers are at or below the critical mass necessary to continue publishing the journal. We think the



Metallogous cupripalpis Kowon in Shiou, Sichuan. See Niu and Wei's story about collecting sawflies in China on page 13.

**Far left (p. 12):** The 1982 meeting that founded ISH. **Center left (p. 12):** Journal of Hymenoptera Research, Volume 1, Number 1 (August 1992). **Center right (p. 13):** The new, modern look of JHR. **Far right (p. 13):** An example issue of the Hamuli newsletter.

## Recognizing the 'Best of the Best'

An important milestone for the Society was setting up two awards, the first of which, the Distinguished Research Medal, recognises individuals who have made significant and distinguished research contributions to the study of Hymenoptera. Importantly, nominees for this award do not have to be members of the Society, allowing for research working on a broader range of areas, such as genetics, physiology and molecular biology, to be considered. The criteria and selection process for the award are enshrined in the Society's constitution, which took some time to develop and approve given it was required to be voted on by the membership as a mailed out ballot. The first award was made in 2008 to Alexandr Rasnitsyn (Russia) and since then has been bestowed every two years, the other recipients being Zdenek Boucek (UK), Charles Michener (USA), Bradleigh Vinson (USA), John Noyes (UK), Mark Shaw (UK), Jean-Yves Rasplus (France) and Donald Quicke (UK), representing a seriously impressive array of talent and research areas.

## Service Awards

The second award set up by the Society is the Service Award which recognizes individuals who have made significant contributions in service to the Society that goes well beyond normal expectations. Officers and former officers of the Society can be considered, but obviously the award is not restricted to these individuals. The recipients of this award have provided incredible service to ISH and have been essential to the smooth running of the Society. They have included Natalie Dale-Skey (2020), Katja Seltmann (2018), Lars Krogmann (2016), Andrew Deans (2012), Gavin Broad (2010), Andrew Austin (2008) and Jim Woolley (2002).

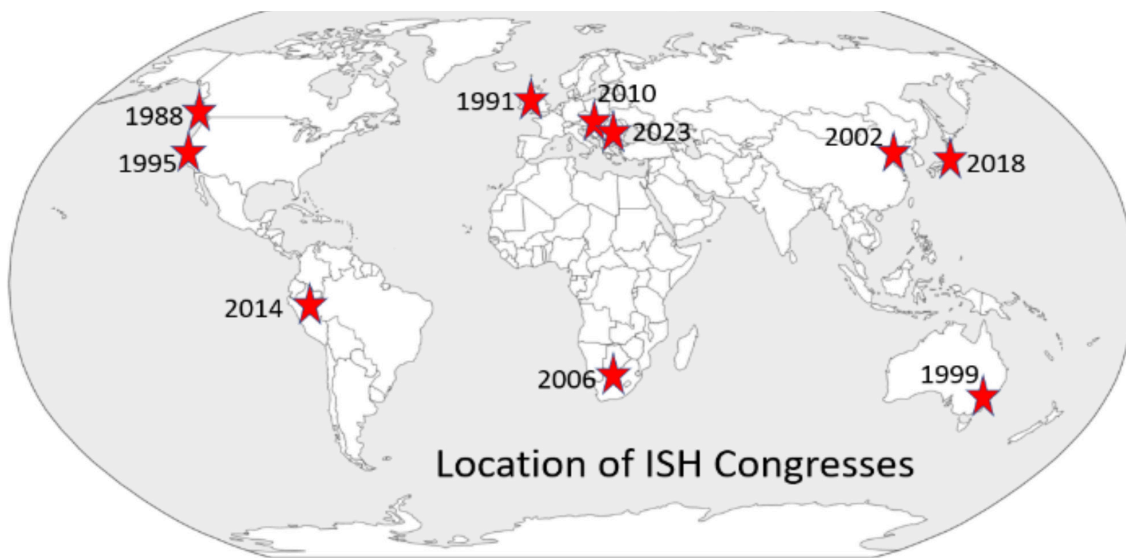
## Student Awards

Awards for student presentations have been bestowed either at the quadrennial ISH conference or at ISH symposia held during ESA meetings, since the Canberra ISH Conference held in Canberra in 1999. These function to recognize students who have made significant contributions to Hymenoptera research, and they have served the younger membership of the Society very well. There are too many recipients to mention here, but in looking through the list of awardees it is gratifying to see so many that now hold significant research positions; Sean Brady, Juanita Rodriguez, Jason Mottern, Erika Tucker, Miles Zhang and Carly Tribull among others.

A disadvantage of student presentation at these conferences was that it favoured students who could attend them, and this undoubtedly penalised students from developing countries who do not have the same access to travel funds. However, one of the few benefits of the Covid-19 pandemic was that the Society learnt quickly how to use on-line platforms such as zoom to run virtual meetings and facilitate better global communication. And so, for the last three years ISH has run very effective online symposia including Hymathon watched by a much larger audience, with a greater geographic distribution. This approach to running scientific meetings has also provided other benefits including a larger number of members being able to participate in ISH business meetings.

## The ISH Congresses

A highlight of the Society's calendar is our quadrennial congresses. These provide an opportunity for the membership to gather together for several days to share their research, socialize and talk nothing else other than Hymenoptera! These meetings have spanned the globe



**Above:** Locations of ISH Congresses (1988-2023) including one in Africa, one in Australia, five in Eurasia, two in North America, and one in South America.

and serve to emphasize the international span of the Society. There will be much anticipation for those members who will be attending the 10th ISH Congress in Iași, Romania, at the Alexandru Ioan Cuza University on 24-29 July.

### Recent Initiatives

There have been a number of new activities and initiatives that are a sign of a progressive and healthy Society, which bode well for the future. These include an updated and revised Constitution and By-Laws which provide a clearer set of guidelines for running the Society. Linked to this is a new Code of Conduct which provides a framework for a membership *“with the most varied and diverse backgrounds possible [and a Society that is] committed to providing a friendly, safe, and welcoming environment for all, regardless of gender, sexual orientation, ability, ethnicity, socioeconomic status, and religion.”*

Important recent initiatives have also included social media networking for students and early career researchers via Facebook and Twitter, formation of Women in ISH (WISH) as a mechanism for fostering communication among female members of the Society. This

group has held two excellent recent meetings with great presentations by Barb Sharanowski (USA) and Juanita Rodriguez (Australia). Also, holding virtual business meetings and scientific forums such as Hymathon has provided mechanisms for a broad and more inclusive involvement of the membership in Society activities, and it will be interesting to see how these are expanded in the future.

### Towards a Bright Future for ISH

From modest beginnings in the early 1980s, our Society has grown over the last four decades into a vibrant scientific enterprise focused on hymenopteran research, supporting students and ECR postdocs, and communicating relevant information. Also pleasing is that there is a new generation of hymenopterists taking the reins of the Society as the group that started the Society and ran it for the best part of three decades have or are approaching retirement.

As the current and future Executives navigate a way forward for the Society, there are a number of things that are worth their consideration. First, what the Society can provide for its members is directly related to its financial position – the more funds in the bank, the

more there is to use for various initiatives. This requires a healthy income stream which, currently, is quite modest and is mostly derived from membership fees. The fees for ISH are quite low compared with other Societies, for example ESA, and progressive increases in them would provide a base for more activity within the Society. Such increases could be restricted to full members from developed countries so as not to penalise those members from less wealthy nations.

In the longer-term, the ISH Endowment will provide greater resources for specific activities and, in this regard, a more concerted effort should be made to increase the Endowment to a point where it provides a consistent revenue stream.

In my talk to the Society at the December 2022 Business Meeting I raised two additional issues which I believe the Society needs to address. The first is that the Society is too systematics focused. Although this has provided a wonderful forum for discussing the taxonomy and phylogeny of Hymenoptera at various meetings, it may also serve to dissuade students and researchers from joining the Society who work on other aspects of hymenopterology – physiology, genetics, biological control, etc. One way that may help attract people with

more diverse interests is to invite people to organize symposia in these areas at meetings and conferences. This would certainly be easier to achieve with virtual meetings.

The other issue is that the Society is too North American- or Holarctic-centric. Although this was more the case in previous times, and is understandable given the origins of the Society, it is still evident today and, over the 40 years of the Society, is clearly apparent by the location of 17 ISH Presidents.

Yet an examination of recent publications shows that there is a significant increase in work on Hymenoptera from Central and South America, the Indian subcontinent and China. Strategies to attract these workers to join ISH and eventually take on leadership roles would benefit the Society greatly.

*My thanks to Jim Woolley and Erinn Fagan-Jeffries for reading a draft of this article. But any errors or omissions are solely mine.*

**Below:** Nationalities of ISH presidents, including one from Africa, two from Australia, three from Europe, and eleven from North America.



# AT THE HEART OF ISH: JOURNAL OF HYMENOPTERA RESEARCH JOINS THE CELEBRATIONS

JHR TEAM, PENSOFT PUBLISHERS

Nine years had flown by since that memorable meeting of the [Entomological Society of America](#) in 1983 in Toronto, Canada - which marked the beginning of a solid and devoted community of all-things-hymenopteran aficionados - when the International Society of Hymenopterists (ISH) was officially incorporated as an official, state-registered entity.

Yet, in their hearts, any ISH member would rather associate 1992 with another milestone: the launch of the [Journal of Hymenoptera Research](#) (JHR) and the publication of its first issue in August. From this moment on, this scholarly outlet has always sat at the core of the Society, as they began a shared journey into the wide world.

What started as a rather niche journal took a couple decades to grow into a title recognised by hymenopterists and researchers in related fields from all around the globe.

As of the time of writing, thirty-one years into its existence, the journal has published a total of 96 volumes (here's another anniversary

coming up very soon!) and over 600 articles, whose pages have given to science the formal description of more than 300 species of wasps, bees, ants and sawflies.

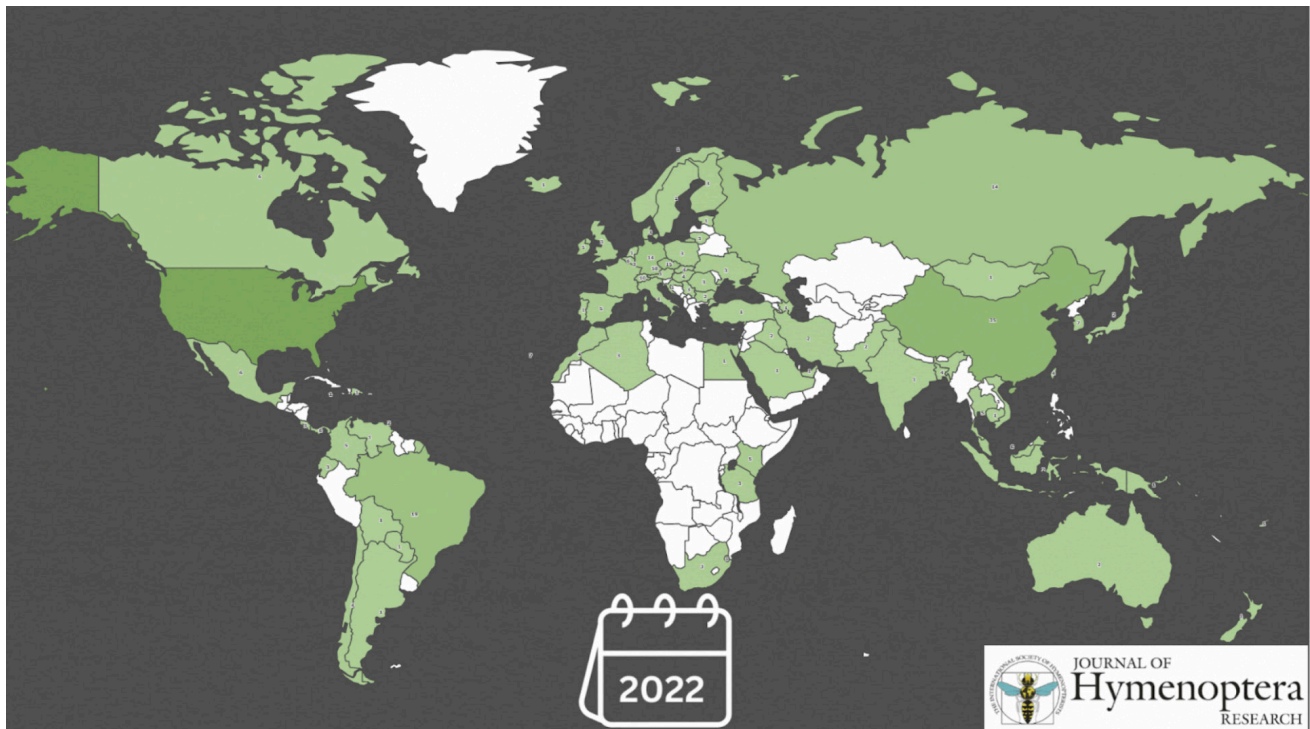
Looking back, the year 2011 was a watershed for JHR as the Society made the decision to open up the journal to the world, joining the open-access scholarly publisher Pensoft, which, as highlighted by former Editor-in-Chief Dr Stefan Schmidt ([Bavarian State Collection for Zoology](#), Germany) in [a 2013 editorial](#), quickly translated into a twofold increase in published content. Unsurprisingly, the journal began to also expand its geographical coverage reaching to new countries and continents.

To put this in perspective, prior to 2011, JHR had only seen 19 of the 96 issues out of the press as of April 2023. Before the journal joined [Pensoft's](#) open access scholarly portfolio, it averaged 300 pages annually between two issues per year. Both numbers doubled by 2012.

What's more important here, however, is that JHR is far from slowing down. In 2022, the journal published a total of 1,720 pages and six issues, while also topping its all-time highest Journal Impact Factor (JIF) for a fourth consecutive year.

Currently standing at 1.76, the JIF places JHR in Q2 in the Entomology category on Web of Science. With a 2021 Scopus CiteScore of 2.2, JHR is also in Q2 in all three Scopus categories: Insect Science; Ecology, Evolution, Behavior and Systematics; and Animal Science





**Above:** International coverage of authors in Journal of Hymenoptera Research, 2022. View an animated version of this graphic [here](#).

and Zoology.

The readership of the journal has also shot up over the past decade, thanks to the free access to the journal's content, but also due to persistent communication, dissemination and teamwork efforts of the Society, the journal's authors and editors and the publisher.

Ever since JHR signed with Pensoft, the journal has been enjoying extra outreach and visibility for its content by means of full-text automated dissemination, indexation and archival for each published article at all major databases; as well as the communication efforts of Pensoft's PR and marketing team. For over a decade now, press campaigns, blog posts and social media activity have been making sure that no article published in JHR stays out of the Internet's sight.

What all of this visibility means in numbers is that, as of April 2023, the journal's email newsletter is being received by 1,155 people, while its social media accounts on [Twitter](#) and [Facebook](#) are followed by >1,600 and >3,600

people, respectively. The Twitter account of the journal averaged ~20,000 impressions a month so far in 2023.

In the meantime, according to the data from [Altmetric](#) (accessed in April 2023), out of 597 articles published in JHR and tracked by the platform, 583 have been mentioned online, thus generating a total of 9,000 mentions, including 840 news stories, 158 blog posts, 421 Wikipedia entries and about 7,000 mentions on Twitter.

Behind a significant proportion of this public attention are exciting papers that deservedly drew the attention of the world's top news media, such as [Scientific American](#), [The New York Times](#), [Forbes](#), [The Independent](#), [Der Welt](#) and [El Periodico](#).

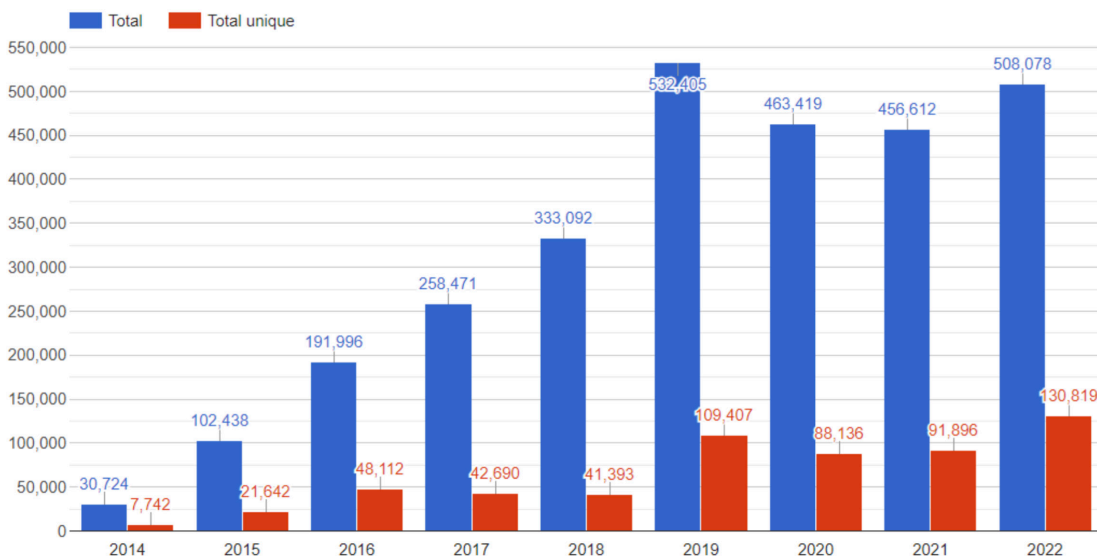
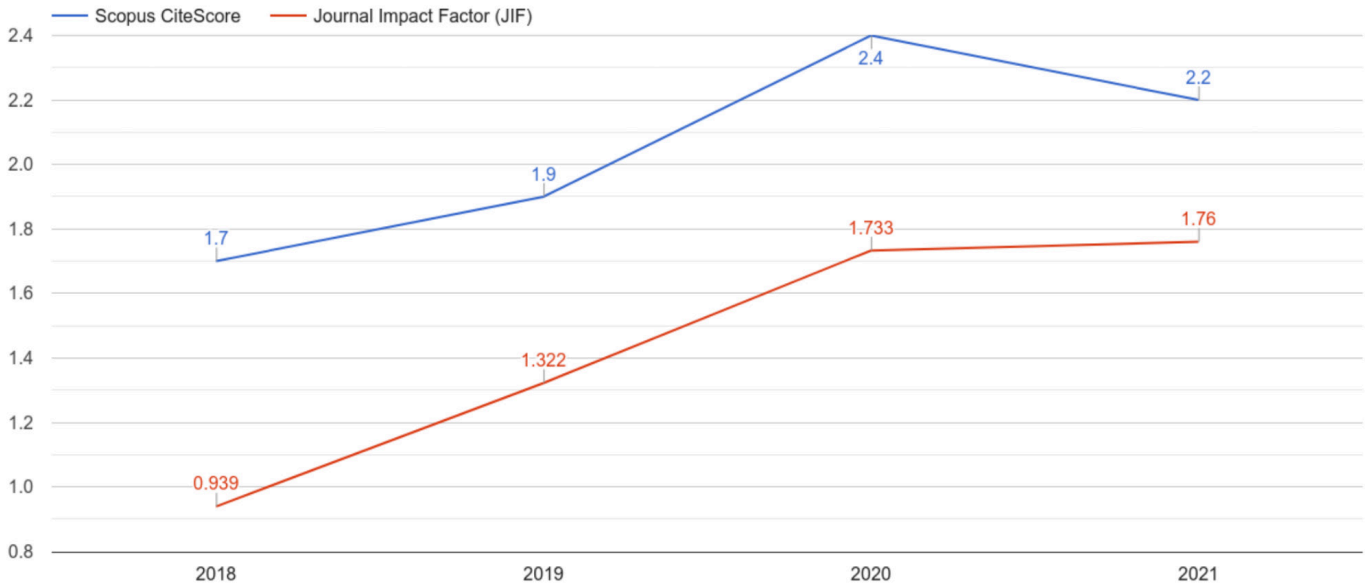
Recent favourites include last year's [paper by Dillane et al.](#), reporting on the first recorded occurrence of the Asian hornet in Ireland and suggesting a single phylogenetic lineage of contemporary populations of the invasive species in Europe; [Prendergast's 2022](#)

[description](#) of a rare Australian bee with an unusual “dog-like snout”; and the [2020 study by Dorey et al.](#) reporting the first observation of Australian bees foraging at night.

The collaboration with the publisher Pensoft continues to this date, with the partners having just recently renewed their contract for another five years confident that they are yet to achieve and celebrate many more milestones and successes together.

Don't forget to follow Journal of Hymenoptera Research on social media and subscribe to its email newsletter.

Interested in being a part of JHR? You are welcome to apply to be a Subject Editor or Reviewer, or propose a special issue using the application forms on the journal's homepage: [jhr.pensoft.net](http://jhr.pensoft.net).



**Top:** [News story](#) on Scientific American reporting on a [2020 research paper](#) published in JHR (Dorey JB et al.). **Center:** JHR impact factor, 2018-2021. **Bottom:** Yearly article (total and unique) views for JHR, 2011-2022.

# THE WASPID COURSE: TO WASPFINITY AND BEYOND!

LOUIS F. NASTASI<sup>1</sup>, R. LUKE KRESSLEIN<sup>2</sup>,  
KENDRICK O. FOWLER<sup>3</sup>, SOFÍA R. FERNÁNDEZ  
FLORES<sup>4</sup>, & SLOAN TOMLINSON<sup>5</sup>

<sup>1</sup>Frost Entomological Museum, The Pennsylvania State University, University Park, PA, USA

<sup>2</sup>Department of Entomology, University of California, Riverside, CA, USA

<sup>3</sup>Hawthorne Valley Farmscape Ecology Program, Chent, NY, USA

<sup>4</sup>Colección Nacional de Insectos, Instituto de Biología, Universidad Nacional Autónoma de México, México, D.F México

<sup>5</sup>Freelance Science Communicator, Hatfield, MA, USA

The WaspID Course was originally conceived to deliver an accessible and practical taxonomic understanding of global wasp biodiversity to a worldwide audience through the virtual classroom. Our pilot session in January 2022 welcomed over 300 students from around the world, introducing brave, budding hymenopterists to the incredible world of wasps. Intended as a spiritual successor to the USNM-SEL's HYM Course, we aimed to train students to identify all of the world's extant wasps to the superfamily and family levels.

Naturally, the transition from in-person learning to the virtual classroom was an enormous challenge. We strove to make learning wasps in a virtual setting as engaging as possible by recruiting 19 instructors from around the world to deliver 24 lectures over Zoom. We focused on recruiting junior, early-career hymenopterists so that we could offer our students the opportunity to learn from individuals actively working on the course's subject matter. At the same time, this arrangement offered our instructors an opportunity to hone their teaching and communication skills. Course lectures ranged from introductory topics including wasp morphology, phylogenetics, life history, and collecting techniques to taxonomic surveys of

every single extant wasp family.

When teaching identification, there is nothing more beneficial for students than hands-on practice. Given the online-only nature of the WaspID Course, we could not offer students the opportunity to test their skills on real specimens, but we nevertheless wanted to do more than merely lecture about wasp identification. Thus, in hope of replicating the experience of studying specimens as closely as possible in a virtual format, we supplemented our lectures with six interactive workshops where students were tasked with identifying wasps from high-resolution image series. We further aimed to replicate observing actual specimens by integrating [innovative, browser-based specimen models](#), which were graciously provided by Rick Wherley and Nicole Gunter at the Cleveland Museum of Natural History via the Ento360 platform. As with the lectures, these workshops were held over Zoom; students participating in the workshops were randomly assigned to breakout rooms and worked together to complete the activities. In this way, students not only were able to practice their skill at wasp identification, but also engage with like-minded peers from around the globe.

We designed the WaspID Course with accessibility in mind in terms of participation, course content, and even cost. Students were able to engage with the course either synchronously through live sessions via Zoom or asynchronously through pre-recorded lectures, allowing them the flexibility to participate in the course on their own schedule and at their own pace. All lectures were accompanied by written transcripts to further enhance accessibility, and all course materials remain available to students indefinitely after the course ends so that students can continue to use them as a resource. We also created our introductory lectures to provide a strong conceptual foundation for stu-

dents of all backgrounds—including those with little prior experience in entomology—to begin learning to identify wasps. Lastly, in terms of registration fees, we offered multiple price tiers for registrants to choose from, including discounted registration fees for students, and overall helping us to make the course available to people of limited financial means. In 2023, we also introduced an option for students to take a graded version of the course (at extra cost), which made it possible for some students to receive credit for taking the course through their home institutions.

The WaspID Course recently embarked on its second session in January 2023, delivering an improved curriculum that broadly surveyed the family-level biodiversity of wasps. This session welcomed over 400 students from nearly 50 countries, greatly surpassing the registration of our first session. We also produced an [open access course manual](#), *Biodiversity & Classification of Wasps* (Nastasi et al., 2023) to aid student learning during this session and serve as a general introduction to wasp biodiversity, natural history, and identification.

Over our two sessions, we've built a strong community of wasp enthusiasts that reaches beyond the limits of the course itself. We have an [active Discord server](#) devoted to discussion of wasps, with 140 members contributing an average of 800 posts monthly, and an active Facebook group. These communities serve not only as a resource for students past and present, but as a source of feedback and innovation for future sessions of the course.

Since establishing these groups, we have and are still experiencing tremendous growth in our circle of wasp fanatics!

In its two years of existence, the WaspID Course has enrolled 706 students from 59 countries. Based on this demand and feedback obtained directly from our students, we aim to continue and to grow that success going forward, and are excited to announce that we will be offering the next session of the WaspID course from 15-26 January, 2024! The 2024 session will expand upon our existing curriculum, and in particular will introduce students to the newly-revised families of Chalcidoidea that resulted from the recent and groundbreaking revisionary work of Burks et al. (2022). This development will make our course one of the first resources available for individuals wanting to learn to identify those taxa. We also plan to release a revised and updated second, peer-reviewed edition of our course manual. We are honored by the support the WaspID Course has received from wasp fans around the world, and eagerly anticipate its return in 2024!

Inquiries regarding the WaspID Course should be directed to course director Louis Nastasi ([lnastasi@gmail.com](mailto:lnastasi@gmail.com)).

#### References:

- Burks, R., M. D. Mitroiu, L. Fusu, J. M. Heraty, P. Janšta, S. Heydon, N. D. S. Papilloud, R. S. Peters, E. V. Tselikh, J. B. Woolley, S. van Noort, H. Baur, A. Cruaud, C. Darling, M. Haas, P. Hansen, L. Krogmann, J.-Y. Rasplus. (2022). From hell's heart I stab at thee! A determined approach towards a monophyletic Pteromalidae and reclassification of Chalcidoidea (Hymenoptera). *Journal of Hymenoptera Research* 94: 13–88. <https://doi.org/10.3897/jhr.94.94263>
- Nastasi, L. F., Kresslein, R. L., Fowler, K. O., Fernández Flores, S. R., Editors. (2023). *Biodiversity and Classification of Wasps*, 1st Edition. Frost Entomological Museum, The Pennsylvania State University. Release date: 2022-01-02. <https://doi.org/10.26207/ax00-rk88>



**WaspID**  
**2024**  
**15-26 January, 2024**

# IMAGING MICROHYMENOPTERA IN HAND SANITISER: EXAMPLES WITH *ABLERUS* (AZOTIDAE)

DAWN PAINTER<sup>1</sup> & SUHAIB YATOO<sup>2</sup>

<sup>1</sup> Scientific Associate, Insects Division, Natural History Museum, London, UK

<sup>2</sup> MSc Candidate, Natural History Museum and Imperial College, London, UK

Increasing quality of both hardware (microscopes, cameras, lenses) and software (chiefly image stacking software) has dramatically improved our ability to generate high-quality images of some of the smallest insects. Here we briefly describe our techniques for imaging microhymenopterans; in this case the beautiful *Ablerus*, averaging 1 mm or less from frons to ovipositor tip.

Images were created using a Canon 850D camera body, zoom lens and Mitutoyo objectives. We used alcohol gel to hold the specimen in place; air bubbles were easily removed by lifting with a pin. Between 80 and 100 images are taken to produce the best stack; we used an MJKZZ focus stacking rail and vertical stand with an x, y, z stage for any minor adjustments. The specimen size dictates step size but it is usually something like 5-20  $\mu\text{m}$ . Aperture F5.6 works well with 1/125 shutter speed. Flash settings can vary but 1/16 is a good place to start and adjust according to background and specimen. Helicon Focus 7.6.3 was used to blend the stack of images.

High-definition photography of minute alcohol-preserved insects requires an ideal medium that, without compromising image quality, is able to hold the specimens in place. To

produce such a medium, hand sanitiser gel was mixed vigorously with an equal volume of absolute ethanol, and kept standing overnight to minimise the bubbles within the solution, to prevent artefacts when taking pictures. A small drop of the prepared medium was placed at the centre of a glass cavity slide, with the specimen to be photographed placed inside it using a fine-tipped synthetic paint brush. In the case of larger specimens, where the less viscous gel was unable to hold the specimen in place, specimens were allowed to stand inside the medium for an extra 3-5 minutes before positioning the specimens for photography. This exposure to air allows some amount of alcohol to evaporate and makes the medium slightly more viscous.

Images of the specimens were captured using a Canon 70-300 mm lens, coupled with Mitutoyo 10X fixed-aperture, infinite microscope objective lens, mounted together on a Canon 850D camera body. To achieve all-in-one fully focused images, multiple images were captured at different depths using Helicon Remote 3.9.12 W with a stacking rail, and combined in Helicon Focus 8.0.4 software to create one final fully-focused image. Besides the main camera setup, Canon Macro Twin Lite MT-24EX - Speedlite Flash was used to illuminate the subject from different angles. To prevent hot spots and ensure proper diffusion of light, a home-made diffuser made of Styrofoam was used.

**Figures (Right): 1-4.** *Ablerus atomon* (Walker). AUSTRIA: University Botanical Garden, Vienna 1.ix.2022 (A. Polaszek col). **5-6.** *Ablerus* spp. females. SOUTH AFRICA: Western Cape Banghoek Valley 11.xii.2015 (S. van Noort col.). **7.** *Ablerus* sp. male. SOUTH AFRICA: Northern Cape Fynbos 2 site 13.x.2000 (S. van Noort col.). **8.** *Ablerus* spp. females. SOUTH AFRICA: Northern Cape 30km N. Calvinia 29.ix.2010 (S. van Noort col.).



# SOCIAL WASPS IN URUGUAY

CHRISTOPHER K. STARR

Department of Life Sciences, University of the West Indies, St. Augustine, Trinidad & Tobago; ckstarr@gmail.com

Uruguay is a small country in the Southern Cone of South America. Lying between 30-35° south latitude, it has a warm temperate climate and is well watered. Depending on the region, annual rainfall tends to be between 1000-1500 mm with no pronounced dry season. It is topographically undistinguished, consisting mostly of rolling hills with a maximum elevation of 524 m and very little above 200 m. It is bordered on the north by Rio Grande do Sul state of Brazil and on the west by Corrientes, Entre Ríos and Buenos Aires provinces of Argentina. Aside from the topographically diverse Rio Grande do Sul, the neighbouring territories are similar to Uruguay in this respect.

According to Carpenter (unpubl.) and Richards (1978), 11 species have been recorded from Uruguay (Table 1). Photos posted on iNaturalist convincingly add one more: *Polybia occidentalis*. Published sources record three species from both west and north of Uruguay, but not from Uruguay: *Mischocyttarus drewseni*, *Polistes biguttatus* and *P. brevifissus*. It seemed reasonable, then, to seek them also in Uruguay.

I spent about a week in well-vegetated city parks of Montevideo and another two weeks in other parts of the country from the far south to near the northern boundary. My expectation, based on field work in other lowland areas of South America, was that in fairly short order I would find some of the 12 known species and hopefully at least several new records.

To say that this expectation was not met is a major understatement. In all I found six colonies of *Polistes cavapyta* (Figure 1) at two localities in the same general area and one of *Polybia ignobilis* (Figure 2). Nothing more. I never saw individual foragers away from the nest. It seems very probable, then, that the 12 species of social wasps recorded from throughout Uruguay are very close to the true total.

This apparent extreme paucity was not restricted to social wasps. The only sphecoid wasps that I saw were two *Sceliphron* females, busily nesting, and the only bees were foraging honey bees. Nothing more. No halictids, megachilids, *Trypoxylon* or *Xylocopa*, all of which I would certainly expect.

The data shown in the table do not by any means depict Uruguay as a dead zone for social wasps in between territories of plenty. However, they do show surprising poverty, given its climate and topography. And this calls for explanation. This situation is evidently not due to pollution. There is next to no polluting indus-

**Table 1.** Social wasps recorded from Uruguay and from adjacent states/provinces of Brazil and Argentina.

Territory	Land area (x1000 km <sup>2</sup> )	Independent-founding species	Swarm-founding species	Total species
Uruguay	175	6	6	12
Rio Grande do Sul	282	17	18	35
Corrientes	86	7	7	14
Entre Ríos	79	7	5	12
Buenos Aires	308	9	5	14

try in Uruguay, and in the vast agricultural areas I saw no indication of extensive pesticide use.

The explanation is almost certainly found in what one sees driving about the country. The “vast agricultural areas” are of two kinds that occupy perhaps the bulk of the land area. First, there is rangeland that in many places extends from horizon to horizon, occupied by cattle and sheep that have stripped much of it to very short grass, with almost no flowering shrubs or herbaceous plants to be seen. Second, there are eucalyptus – and to a lesser extent pine – plantations scattered over much of the country, sometimes extending to the horizon. I have seen plenty of eucalyptus in Ecuador and Peru, but only to a small fraction of the magnitude that one sees in Uruguay. Both kinds of tree plantations have very sparse undergrowth and are almost never fringed with substantial numbers of shrubs or herbaceous plants. Together, these two factors make the landscape inhospitable to wasps and bees. This overall landscape situation, observed in large part from a moving car over a few weeks, would seem to account for the unexpectedly small number of known social wasp species.

My suggestion to others thinking of collecting land arthropods in Uruguay is to concentrate on the eastern side of the country. In addition, it seems to be a favoured destination for birding, so that some attention to reports from bird-watching visits would be worthwhile. However, I must note that my attempts to gain a collecting/export permit from the government were met with no success at all, despite plenty of advance notice, and it has been unofficially suggested to me that such permits are almost impossible to obtain. Note that the relevant government office did not refuse my application; they simply did not proceed with it. All interactions were marked with courtesy and good grace, just not with success.

**Figures: 1 (top).** *Polistes cavapyta* de Saussure, 1853.  
**2 (bottom).** *Polybia ignobilis* (Haliday, 1836).



**References:** Carpenter, J.M. Unpubl. Tribe Epiponini Lucas, 1867. Richards, O.W. 1978. The Social Wasps of the Americas, Excluding the Vespinae. London: British Museum (Natural History) 580 pp.