

The newsletter of the European Society of Arachnology

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Secretariat of the European Society of Arachnology
Department of Molecular Biology and Genetics, Democritus University of Thrace
Dimitras 19, 68100 Alexandroupolis, Greece
E-mail: maria.chatzaki@gmail.com

Editor: Marco Isaia, E-mail: marco.isaia@unito.it
Co-editor: Elena Piano, E-mail: elena.piano@unito.it



From the Presidents – past to present

Dear Fellow Arachnologists

After seven years it is time to step back as president of the ESA. I enjoyed it very much to interact with the council of the Society and with its members. Together, we could achieve a few necessary changes such as new by-laws of the society, moving the website to a new server, a new membership administration, a moderate increase of the membership fees and the proposal of a European Year for Spider Biodiversity Research. I always felt a strong support from all and I thank you very much.

My special thanks go to the past congress organizers in Torino, Brno, Nottingham, Vac, and Greifswald, and my special greetings go to the new president, Gabriele, I wish you much success and enjoyment in your work.

Wolfgang Nentwig
Former President of the European Society of
Arachnology

Dear Arachnologists

On behalf of the council, I would like to thank Wolfgang Nentwig for his great engagement in the European Society of Arachnology over many years and I assume I am allowed to thank him on behalf of all members, too. The council will also have to continue without Ferenc Samu, who hosted a wonderful conference in Vac (Hungary), set up the Facebook account and filled it with information over the last years. A proper thank you to both Wolfgang and Ferenc will be extended next time we meet in person. For the next two years, I see the following topics on the society's agenda:

- increasing visibility of the society
- expanding social media outreach and exchange among members

- attracting researchers working on all arachnid taxa
- creating a platform for early career researchers to present their work
- encouraging members to get involved in specific ESA projects
- continuing and providing funding for the Program European Year of Spider (Arachnid) Biodiversity research

As to social media, the new council will expand the connection to our members via a social media scheme - there is a new team with fresh ideas on the matter. The team will present their new scheme soon. It will be a means to network and learn about research in other labs connected to the ESA and in arachnid research in general. To make it a success, all members are asked to contribute their knowledge and news from their work and labs.

As to the Program European Year of Spider Biodiversity research, the work by Donard Geci in Kosovo will be supported in 2022.

We have been going through a tough time with lots of restrictions due to the Covid Pandemic and we might need to endure the situations longer than we had imagined. At this point, it is unclear if we can host the next congress in person in Greifswald as planned. This would be a pity, but we will host another online congress if need be. Please already save the dates in your calendar!

As a society lives from the input of their members, please do not hesitate to contact us if you have a concern or like to propose an idea or an initiative.

Gabriele Uhl, new President of the European Society of Arachnology, on behalf of the council



Congress Report

By Elena Piano and Marco Isaia

Due to the restrictions imposed to contain the Covid-19 pandemic, the 32nd European Congress of Arachnology was organized as a virtual event by Gabriele Uhl, Peter Michalik and their team from 23 to 26 August 2021. Thanks to their efforts and the use of virtual platforms, we have been able to overcome the distance among us. After more than one year of social restrictions, we could remotely meet new friends and be reunited with old ones.



A nice ballooning spider (that also looks like a baseball cap) designed by Peter Michalik was the logo of the 32nd European Congress of Arachnology

The congress venue for the oral presentations was the well-known Zoom platform, hosted by Aarhus University, whereas the poster session, the topical meetings and the social events were held in Gather. This platform allowed us to create an *avatar* (we could also choose to change the colour of the hair or pretending to wear the strangest clothes) and to virtually interact among each other: in fact, we could hang around in the rooms with our *avatars*, like in a videogame! And when crossing the path of another participant, the microphone and the camera automatically turned on and we could talk with the other people, it was great!

Congress organizing is always a team effort, and this event was no exception. Throughout the event, the organizing team made sure that everything was working with the virtual platforms, made us laugh with funny hats or sunglasses during breaks, and organized social meetings and “virtual aperitifs” at the end of each congress day.

The Congress was attended by 131 participants from 31 countries. All arachnologists were invited to attend the virtual meeting. However, as students and early career researchers have been most penalized by the pandemic restrictions, their contributions have been given priority over those of senior contributors. Also, plenaries given by senior researchers were replaced

by keynote talks by early career postdocs. Overall, four keynote talks, 50 oral contributions and 14 posters were presented, most of which were authored or co-authored by students. The scientific program itself was split into 14 sessions over four days of talks held in the afternoons. As always there were many fascinating new studies contributed by others throughout the meeting.

Arachnological Science

The conference was opened by our hosts, Gabriele Uhl and Peter Michalik.

The scientific program itself was split into 15 sessions over four days of talks. Each day contained a keynote talk and a wide range of contributed talks. The talks of this first virtual edition of our Congress featured a wide range of topics ranging from sexual selection to ecology, from systematic to biogeography and covered spiders from all over the world.



Gabriele Uhl and Peter Michalik were the host of the the 32nd European Congress of Arachnology

The keynote talks spanned across a wide range of topics, including some less explored research areas. Anna-Christin Joel gave the first keynote talk, telling us about the silk of Cribellate spiders and how mimicking its structure can provide significant improvements in the production of artificial nanofibers.

The second keynote talk was given by Massimo De Agrò, who made us discover that secondary eyes of jumping spiders allow them to discriminate between biological and nonbiological motion, thanks to an



experimental structure specifically set to test this ability.

Elena Piano's keynote talk on the third day described the selective mechanisms exerted by urbanization on both taxonomic diversity and functional traits of spider communities.

Finally, the last keynote talk given by Darko Cotoras shed light on the mechanisms that determines the diversification of web types of the endemic spider *Wendilgarda galapagensis*, by combining together genetic analyses and transplant experiments.



Instead of plenaries given by senior researchers, the four keynote talks of this year's congress were given by early career postdocs (from top left to bottom right): Anna-Christin Joel (RWTH Aachen University), Massimo De Agrò (University of Padova), Darko Cotoras (Senckenberg Museum and California Academy of Sciences) and Elena Piano (University of Torino).

The first day of the congress opened with a presentation about the behavioural plasticity in the prey attack strategy of *Zelotes* and *Drassodes* species (Narmin Beydizada). We then discovered that the egg sacs of the brown widow spiders (*Latrodectus geometricus*) are more easily parasitized than those of the white widow spiders (*Latrodectus pallidus*) (Monica Mowery) and that the parasitism rate may depend on environmental variables (Valeria Arabesky). In the second session, the composition of multiple chemical spider components was unraveled, spanning from the venom composition of araneophagous white-tailed spider (*Lampona* sp.) (Ondřej Michálek), the cuticular hydrocarbons composition of cribellate capture threads and its interaction with insect prey (Lucas Jäger), to the role of silk-borne chemicals that facilitate gift acceptance in *Pisaura mirabilis* (Julia Mangliers). In the third session, we moved toward studies where DNA-related techniques were applied to unravel ecological

questions about the diet of spiders in permanent grasslands (Anja Melcher) and long-term changes in the canopy associated arthropod communities (Sven Weber). Two oral presentations were then dedicated to the effects of urbanization on orb-weaving spiders, namely *Eriophora biapicata* (Nikolas Willmott) and *Araneus diadematus* (Bram Vanthournout). The last session of the day focused on systematics, with new insights into species delimitation of some jumping spider in Sri Lanka (Abira Satkunanathan), of the spider genus *Ischnocolus* in the Western Mediterranean area (Jan Korba) and of the scorpion genus *Othochirus* in Central Asia and Iran (Victor Fet).

After the day's talks, we moved on Gather where we socialized and assisted to the topical meeting hosted by Stano Pekár, who presented the World Spider trait Database initiative.

During the first session of talks of the second day we heard talks about the competitive processes determining mating success of *Steatoda grossa* (Andreas Fischer), *Latrodectus geometricus* (Lenka Sentenská) and *Pisaura mirabilis* (Magdalena Matzke). During the second session (Ecology), we learnt about the top-down control exerted by spiders on herbivores (Amelia Joyce Philip), the colonization-extinction process of habitat patches in alpine areas by spider communities (Francisco Emmanuel Mendez-Castro) and the mechanisms that allow the coexistence of intraguild predators (Radek Michalko). The talks from the third session provided new insights into morphological adaptive evolution of the Ram's horn organs in pseudoscorpions (Gabriel Kirchmair), the prosomal modifications in dwarf spiders (Shou-Wang Lin), the calamistrum of Cribellate spiders (Marco Meyer) and cheliceral modifications in *Tetragnatha versicolor* (Darko Cotoras).

When the last session was over, we moved on Gather to assist to poster presentations, spanning across multiple topics, like fossil harvestmen (Christian Bartel), the spider fauna from Kosovo (Donard Geci), jumping spiders from Nepal (Kiran Thapa Magar), the genus *Pardosa* in Iran (Sepideh Shafaie), *Arctosa cinerea* in Latvia (Inese Cera), the genus *Mastigusa* (Filippo Castellucci), the genetic diversity of the North African scorpion *Buthus occitanus* (Abdelwaheb Ben Othmen), the reproductive mode of parthenogenetic Opiliones (Tyler Brown) and on the possible adaptation to subterranean habitats of *Loxosceles rufescens* in Eastern Mediterranean areas (Zeana Ganem). In other posters, we learnt about variations of the orb weaving spiders' silk properties in relation



to climate change (Charlotte Hopfe), the structure of tip-pore leg sensilla that allow spiders to taste and smell in *Argiope bruennichi* (Carsten Müller), the adhesion of the capture thread of *Larinioides sclopetarius* (Nadja Nyffenegger), the effects of urbanization on the microbiome in *Araneus diadematus* (Clémence Rose) and the use of spiders in mud dauber nests in mercury monitoring studies (Madeline Hannappel).

The first session of talks of third day gave us the chance to learn about the effect of visual cues in the modulation of the attentional focus response of jumping spiders (Davide Giacomazzi and Federico Ferrante), as well as about the different brain processes occurring in cursorial spiders and web building hunters (Philip Steinhoff). Then, there were talks on the role of spiders in food webs, with specific focus on their predatory pressure in orchards (Domagoj Gajski), in a glacier foreland area (Ejgil Gravesen) and in young forest plantations (Warbota Khum). In the following talks we discovered about niche segregation of *Meta* spiders on the Etna Volcano (Giuseppe Nicolosi), the role of phenotypic plasticity and genetic adaptation in the response of *Argiope bruennichi* to variations in winter conditions (Monica Sheffer), the molecular and microbiome response to climate change in the social spider *Stegodyphus dumicola* (Anne Aagaard) and the invasive potential of the troglomorphic spider *Nesticella morigera* (Francesco Ballarin). The phylogeny of troglomorphic *Tegenaria* species in Israel (Shlomi Aaron), the genus *Lycosa* in the Mediterranean area (Igor Armiach Steinpress), the *Pardosa lugubris* species group (Evgenia Propistova) and wolf spiders in the Hawaiian archipelago (Ka'ina Privet) completed the day.

The Gather event of the third day was the topical meeting hosted by Bram Vanthournout and Elena Piano, who updated us about the status of the research on spiders in urban areas. The project "SPIN CITY for scientists" was also presented to recruit new collaborators.

The final day included several talks on the environmental drivers determining spider diversity in protected raised bogs in Scotland (Andrada Opris) and in maritime heatlands in Western France (Axel Hacala), and the distribution of the myrmecophile scorpion *Birulatus israelensis* (Yoram Zvik). The second session featured studies on the modulation of male vibratory courtship (Monika Eberhard) and the role of female's silk during mating (Michelle Beyer) *Pisaura mirabilis*, and on the differences in silk composition of

three Cribellate spiders (Margret Weißbach). The final talks session on the last day focused on conservation issues, and included talks providing an overview on the conservation status of spiders in Europe (Filippo Milano) and on the effects of greening measures in agricultural areas on Linyphiids (Fredrik Arvidsson).

Award Ceremony

The audience celebrated the best students during the Award Ceremony at the end of the meeting. The student talks and posters were all outstanding and the judging committee had a difficult task to select winners.

Monica Sheffer (First prize for Best Talk), Andreas Fischer (Second Best Talk) and Margret Weißbach (Third Best Talk) were the winners this year. Madeline Hannappel, Clémence Rose and Filippo Castellucci won the 1st, 2nd and 3rd prizes for their posters, respectively.

Thank you, Greifswald!

Our thanks go to the organizers of the congress – particularly to Gabriele Uhl and Peter Michalik – to make us feel the magic atmosphere of the arachnological congresses again. Although being in a virtual form, this experience refreshed our hearts after more than one year of pandemic and social restrictions. We hope to meet on person in Greifswald next year!

News from ESA general assembly

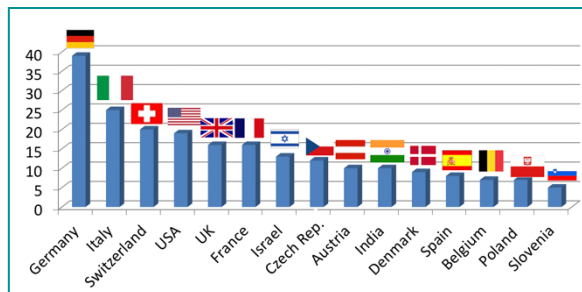
By Marco Isaia

Our President (Gabriele Uhl) opened the General Assembly by reminding us that according to the Society rules, the Council needs to be renewed and asked to all ESA members to vote for the election of the new Council. The electronic voting was managed by Jason Dunlop and Theo Blick in September, and in late October the new roles have been assigned. The new Council is now composed by Gabriele Uhl (President, Germany), Sara Goodacre (Vice-President, UK), Maria Chatzaki (Communication Secretary, Greece), Jason Dunlop (Membership Secretary, Germany), Christian Kropf (Treasurer, Switzerland), Holger Frick (Vice-Treasurer, Switzerland), Marco Isaia (Newsletter Editor, Italy) have all been re-elected, while Matjaž Gregorič (Webmaster, Slovenia), Vladislav Ivanov (Social Media, Finland) and Elena Piano (Newsletter co-Editor, Italy) joined as new Council members.

Our Society is now made of 301 members from 52 different countries. The new 66 members (from seven more countries) are mostly students, which makes us feel even more younger! We also noticed a



remarkable increase of non-European members, which makes us feel even more international! Germany, Italy and Switzerland are the most represented countries, followed by USA, UK and France.



The current ESA membership by countries (only the most represented countries are shown, other countries have less than 5 members).

One minute of silence was devoted to Eric Duffey (honorary member) who died during the course of 2019.

The financial state of the society is in order, but to keep finance stable we need to urge 31 members, who are still in payment arrears. Please provide payments as soon as possible!

Despite arrears, the Society still supports European projects such as 'Araneae Spiders of Europe', and gives support to Congress Organizers.

Our Treasurer (Christian Kropf) presented a financial report attesting a balance of 12,495 Eur. For this year's virtual congress there was an expense of 600 Eur for Student Prizes, 1,000 to 'Araneae Spiders of Europe' and 200 for the Website maintenance.

The President shared with the assembly that the council had approved the support to different projects, including The Spider of the Year, Araneae-Spiders of Europe and the European Year of Spider Biodiversity Research (2022-2023, Kosovo). The ESA also supports local organizers of the Congress and offers student fees /waiver applications.

Holger Frick presented a report about the website activities, with some interesting data about the use of our website: we had 20,000 visitors and 1,500,000 visits. The top 5 pages are the Proceedings, the Conferences, the Spider of the Year page and the Registration Page (new members). The assembly meeting was then closed with a vote of thanks to Gabriele Uhl and Peter Michalik and their team for hosting such an excellent congress. Theo Blick confirmed during the closing ceremony that the congress proceedings will be published in AraMit in April 2022 (deadline Nov. 30, 2021). Further details of

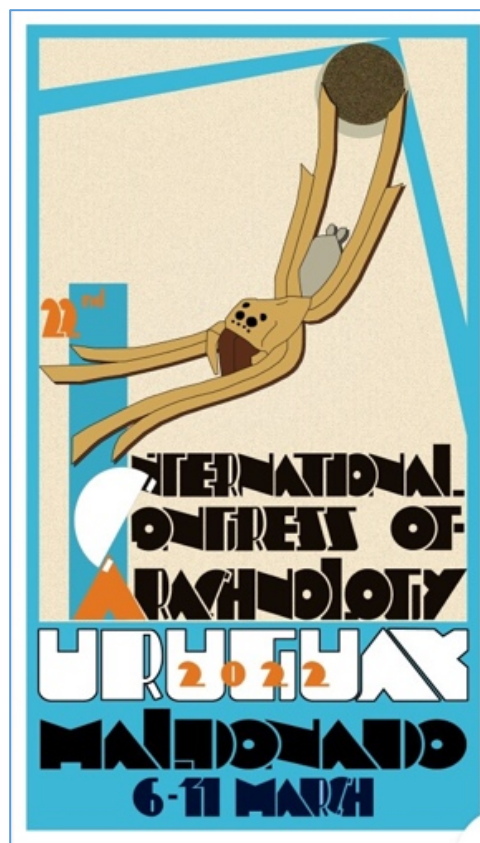
the General Assembly can be found on the Society website.

See you soon in Germany (again, but in person!)

The next European Society meeting will be in Greifswald (Germany) in 2022, organized by Gabriele Uhl and Peter Michalik. If we meet in person, the Congress will be held from Sunday September, 4th (icebreaker) to Friday September, 9th (evening dinner). The accompanying excursion will be a PRE congress excursion from the 1st to the 4th of September. If we will have to meet online, the date will change slightly, from Monday September, 5th to 8th (half days)

Announcements

- **The 22nd International Congress of Arachnology:** will be held in Piriápolis Maldonado, Uruguay, March 2023 (Organizer: Anita Aisenberg).



Next International Congress of Arachnology will be held in March 2023, in Uruguay.

- **The 34rd European Congress of Arachnology** will be held in 2024 in Dublin (Ireland), hosted by Myles Nolan).
- Julien Pétilion confirmed that the **35rd European Congress of Arachnology** will be held in Saint Malo, France.



- **New entry!** The Editorial team of the ESA Newsletter is planning the **Newsletter's special issue** dedicated to students. The special issue aims at collecting the abstracts of all arachnological theses (bachelor, master and PhD) defended in the previous year. It will be edited by the ESA Council and disseminated once a year, in Spring. We invite all students and their supervisors to submit the abstracts of the theses disserted in 2021 at the following link:

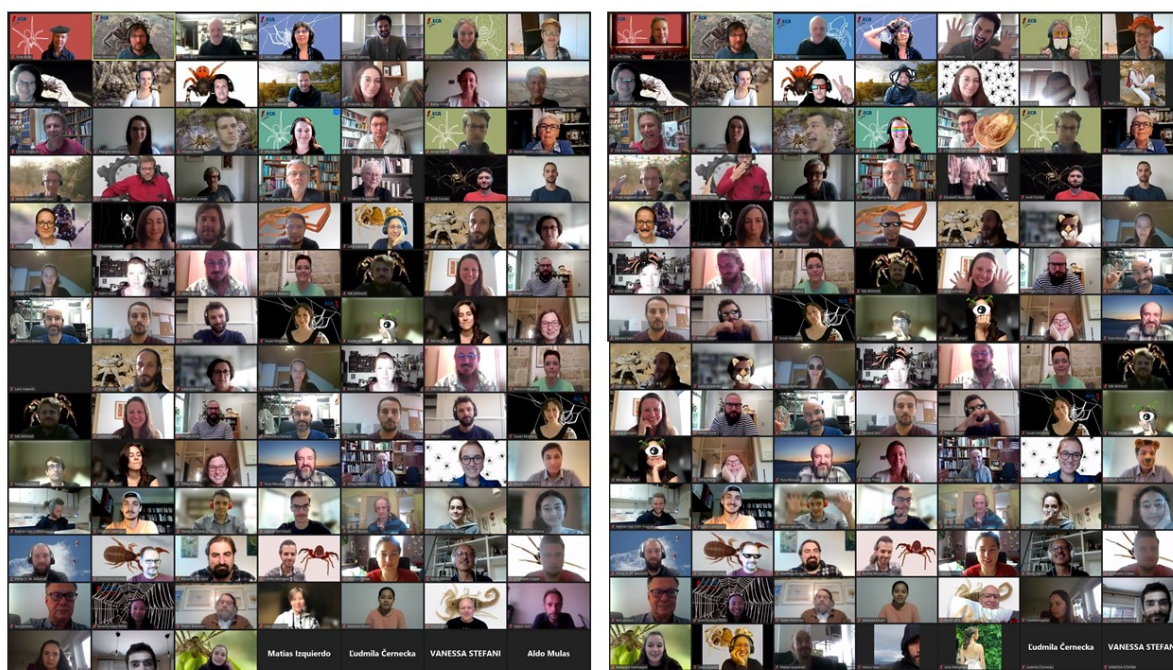
<https://forms.gle/Ff57Z95u3VcYULdr8>.

The deadline to submit the abstracts is January 31st. We hope many of you will participate in this initiative!

-  More than 1300 people are following the Facebook page of our Society since its opening in 2012. Thanks to all followers!
-  In addition, our new Council members Vladislav Ivanov and Matjaž Gregorič just opened a new Twitter account.

Any suggestions and requests from members are welcomed!

Follow us @ESArachnology!



Virtual Congress Photo in 2021, two versions: one serious version on the left and a funnier one on the right. Or vice versa?

