24th European Congress of Arachnology Bern, Switzerland, 25th–29th August 2008

by Dmitri Logunov

The 24th European Congress of Arachnology (ECA) was held in Bern, the capital of Switzerland and the fourth most populous city of the country. The Congress' venue was in the main historical building (Hauptgebäude) of the University (Figs. 1–2). Although being European by its official title, the Congress was by no means restricted to European researchers. It was attended by 167 participants and 13 accompanying persons from 35 countries and from all continents, including colleagues from such distant countries as Japan (Hirotsugu Ono from the National Museum of Nature and Science in Tokyo), Australia (Aaron Harmer from the Macquarie University in Sydney) and Brazil (Cristina Rheims from the Laboratorio de Artropodes, Instituto Butantan in São Paulo). For the first time ever, participants from Iran and Pakistan took part in the ECA: Shahrokh Navidpour from the Laboratory of Scorpion Research (Ahvaz, Iran), Negar Nikbaht and collaborators from the University of Isfahan (Iran), and Hafiz Muhammad Tahir from the University of Punjab (Lahore, Pakistan). To my great surprise, only two arachnologists came from the UK and Ireland, myself and Myles Nolan (Dublin).

I arrived in Bern, by mistake, on the afternoon of 25th August (Monday) and thus missed the opening ceremony and morning session of the Carl Clerck symposium, which mostly concerned spider systematics and phylogeny. Most speakers reported on their data gained using a combined morphological and molecular approach, followed by a cladistic analysis. Of the ten presentations I missed, I would like to mention three. The keynote talk, by Christoph Muster (Leipzig, Germany), was an overview of phylogeographic studies on spiders. I was surprised to learn that to date only 41 such studies have been published for spiders, with over 60% of them being undertaken in North America and Australia. Most of these studies dealt with molecular taxonomy rather than having been geared towards answering specific biogeographic questions, such as colonisation routes, the occurrence/significance of refugia, etc. The session continued with a talk by Torbjörn Kronestedt (Stockholm, Sweden), who discussed the role of Carl Clerck and the current status of his spider names (53 altogether). It is worth mentioning that the Linnean Society of London is considering publishing an English translation of Clerck's work '*Svenska spindlar*' (1757) originally written in Latin and published a year before the famous work of C. Linnaeus; Torbjörn is involved in this project. Peter Jäger (Frankfurt, Germany) demonstrated the effectiveness of micro-computer tomography (μ-CT) for the studying of copulatory mechanics in spiders, as exemplified by *Holconia* sp. (Sparassidae). Of the remaining afternoon session (four contributions), I particularly remember the talk by Norman Platnick (New York, USA) on the Planetary Biodiversity Inventory (PBI) of Oonopidae. This large-scale international project is run by a group of 45 taxonomists and is based on an intensive internet-based collaboration via an impressive database (keys, complete data and digital images for all species). The idea of the project is to revise the entire family within the shortest possible time. This presentation was followed by a well-illustrated talk by Peter Michalik (Greifswald, Germany) on the male genital system of Oonopidae (9 species were studied), with lots of electronic images and nice colourful reconstructions. The unpaired testis was hypothesized to be a new synapomorphy for the goblin spiders.

Figure 1. Hauptgebäude, the venue of the 24th European Congress of Arachnology. © D. Logunov.

Monday concluded with the welcome party (Fig. 3) by the mayor of the city of Bern in the town hall, with an excellent buffet supper and local beer and wine, followed by guided city tours for all the participants. The city of Bern is named after the bear, which is its mascot. They say that bears have been kept here since 1480. The old town of Bern is listed as a UNESCO Cultural World Heritage Site, and is well-worth visiting by everyone reading this report.

Tuesday (26th of August) opened with an interesting, invited lecture by Trite Bilde (Aarhus, Denmark) on kin and sexual selection in sub-social spiders. Reasoning from phylogenetic analyses, a multiple origin of sociality in spiders (e.g. nine times in Theridiidae and three times in Eresidae) was suggested. A number of direct benefits (e.g. increased survival, alloparental care, kin cooperation, etc.) and costs (e.g. inbreeding, increase of parasitic load, etc.) of spider cooperation was discussed. The morning session continued with four contributions in a symposium on the dispersal of spiders. Yael Lubin (Ben-Gurion University, Israel) analysed the role of male pre-mating dispersal in social spiders (Eresidae, in particular) on gene flow among neighbouring colonies. If I understood correctly, male dispersal can hardly be considered a possible mechanism to avoid incestuous mating in social spiders. Two of the subsequent presentations, by Odile Bruggisser (Fribourg, Switzerland) and Gilles Blandenier (Neuchâtel, Switzerland), were devoted to ballooning spiders, trying to find links between meteorological factors (such as temperature, wind, precipitation, global radiation, etc.) and the dynamics of ballooning, and the correlation between the trapped ballooners and the epigeal spider community. Both presentations were based on impressive material of some 15,400 ballooning individuals (103 species) collected during 11 years by a 12 m high suction trap, plus 51,629 individuals (251 species) collected by pitfall traps. A number of observations and trends were discussed: e.g. that the abundance of ballooning spiders depends directly on temperature and, in some species

Figure 2. Prof. Wolfgang Nentwig (Bern, Switzerland), the organiser of the Congress, near the poster with the congress logo. © D. V. Logunov.

(*Oedothorax retusus*), on the activity of epigeal spiders. However, I feel that some of the conclusions presented were rather provisional. The rest of the morning and the first half of the afternoon session dealt with scorpions and smaller arachnid orders, with nine contributions altogether. Of those, I would like to mention two. As usual, Jason Dunlop (Berlin, Germany) provided a vibrant and clear talk, rich in content; this time on a new species of *Opilioacarus* sp. (an opiloacariform mite) from Baltic amber. Among other things, this talk contained a brief overview of recent works on the phylogenetic position of the mites and their subdivisions. Martina Hrušková-Martišová (Brno, Czech Republic), a young collaborator of Stano Pekár, reported on the forced copulation of the camel-spider *Galeodes caspicus subfuscus*, complemented with elements of its luring behaviour. The talk included impressive video footage and, as a result, it won the first prize in the 'Young scientist award for outstanding talks' competition. The late afternoon session was devoted to spider ecology (six contributions altogether), with research subjects ranging from spider phenology by Jean-Pierre Maelfait (Brussels, Belgium) and adaptive radiation of the wolf spider genus *Hogna* in the Galapagos by Charlotte de Busschere (Ghent, Belgium) to sex-ratio distortion in *Oedothorax gibbosus* by Bram Vanthournout (Ghent, Belgium).

This working day ended with the congress dinner at the Natural History Museum. We were treated to a number of delicacies and generous amounts of champagne and local beer. The organizers of the congress prepared a surprise, as the beer was served in bottles with four kinds of arachnological labels (Fig. 4), depicting four species that have particular meaning for the organisers of this ECA: *Caracladus* sp. (Linyphiidae), a new species to be described by Holger Frick (Bern, Switzerland); *Comaroma simoni* Bertkau, 1889 (Anapidae), the research subject of Christian Kropf, one of the main organisers of this ECA; *Cupiennius salei* (Keyserling, 1877) (Ctenidae), the current research object of Wolfgang Nentwig, the main organiser of this ECA; and *Ischnothyreus* sp. (Oonopidae), a new species to be described by Yvonne Kranz-Baltensperger (Bern, Switzerland) in the framework of the PBI project on goblin spiders described by Norman Platnick (see above). Yet, the participants also surprised the organisers, for they effectively consumed over 850 bottles of delicious beer, showing a great and equal professional standing both in pursuing arachnological challenges and in jolly socialising (Fig. 5). Personally, I slightly regret that there was no chance to see the museum 'behind-the-scenes', as we were only able to browse through the public display area.

The following day (Wednesday, 27th August) was spent on an excursion to the Alps, viz. to the Gantrisch area of Bern County. Depending on difficulty, at least four options of various routes were offered to the participants, ranging from an easy promenade to mountaineering. I decided to join the most demanding and, as it happened, the most attended hike to mount Gantrisch (2175 m a.s.l.) and was quite satisfied in getting to the summit with others and viewing various alpine habitats and picturesque landscapes. The excursion day concluded with the traditional Russian party at the Zoological Institute. To the surprise of its organiser, Yuri Marusik (Magadan, Russia), and myself, this event was officially included in the congress programme for the first time, after 15 years of it having a sort of 'illegal' status. The great selection of spirit drinks was unprecedented. Thanks to everyone who contributed! I do hope that nobody was disappointed after testing a great variety of top-quality spirits/beer with salted caviar and smoked wild salmon, of which some was personally cooked by Yuri himself.

Following the excursion day, on Thursday (28th August), the morning session opened with an invited talk by Pierre Escobaus (Valbonne, France) on spider venoms. This was a very impressive insight into what the author called the world of 'combinatorial libraries of bioactive peptides'. Some 1000 venom peptides, mostly from tarantulas, have been studied already using a specially developed method of mass spectroscopy. Yet, all of them are species-specific (peptide 'fingerprints'). I also got the impression that the 3D-structure of these toxins, not just their peptide sequences, may be the reason for their great diversity. This excellent talk was followed by presentations on spider ecology and behaviour (eight contributions altogether). I was able to attend only four of these, as due to the very intensive day-programme, there were two parallel sessions in different lecture halls. The second one consisted of a symposium on biogeography and faunistics, with 10 contributions. The following are just a few personal impressions. Ecology-behavioural presentations covered a number of topics, such as flood avoidance and flood resistance of saltmarsh wolf spiders (by Julien Pétillon; Rennes, France), some adaptive trade-off for ant-mimicking gnaphosid and corinnid spiders (by Stano Pekár; Brno, Czech Republic), the courtship

Figure 3. Axel Schönhofer (Mainz, Germany; left), Peter Jäger (Frankfurt, Germany; centre) and Hirotsugu Ono (Tokyo, Japan; right) at the welcome party by the mayor of the city of Bern. © D. Logunov.

behaviour of *Pardosa wagleri* and *P. saturatior* (by Alberto Chiarle; Torino, Italy), and others. The second invited lecture of the day was given by Søren Toft (Aarhus, Denmark), who delivered a well-grounded talk on the role of nutrition in spider physiology, ecology and behaviour. Various aspects of spider life (e.g. food utilisation, feeding behaviour, individual growth, sexual selection, etc.) were discussed in this respect, with the concise conclusion, if I may, being that all spiders need a mixed diet although their demand for nutrients may change during their lifecycle. From the simultaneous taxonomic-faunistic session, three presentations were retained in my memory. Peter Schwendinger (Geneva, Switzerland) introduced us to the ongoing revision of the diplurid genus *Phyxioschema*, which displays a surprisingly distinctive distribution: Central Asia and Thailand. Domir De Bakker (Tervuren, Belgium) talked about the spider fauna of the canopies of savannah trees from four localities, which yielded 372 morphospecies in 23 families (two thirds of them are likely to be new to science). Salticidae, my favourite group, accounted for only one-eighth of the entire diversity, whereas Oonopidae and Corinnidae were the most abundant. Yuri Marusik (Magadan, Russia) gave a nice presentation about spider species diversity of the Asian part of Russia (east of the Urals) and the people who have been studying it. The current recorded fauna of such a huge territory numbers some 1800 species in 28 families, of which over 400 species have been described during the last 20–25 years.

The afternoon session contained 10 presentations in symposia on toxicology and physiology, and on agroecology of spiders. I saw future potential in two contributions on spider physiology by young colleagues: viz., one about the immune defence mechanisms against microbial infections in *Cupiennius salei* by Tommy Baumann (Bern, Switzerland) and another about the presence of intracellular symbionts, such as *Wolbachia* and *Cardinium*, in spiders and their interstadial transmission by Jan Engelstädter (Zurich, Switzerland). Both topics are being studied intensively in insects, yet to date spiders have remained a neglected object of such research; but no longer as I see it. Wolfgang Nentwig (Bern, Switzerland) gave an overview on how spiders use their venoms, as exemplified by experiments on *Cupiennius salei*. It was shown that spiders inject venom (0.01 to 10 µl), depending on prey-size and its sensitivity; a spider always seems to know how much venom is to be injected. Traditionally, all European and international congresses contained special sessions on agroecology, and one was organised in Bern as well. This symposium opened with a talk by Ferenc Samu (Budapest, Hungary) on the large-scale landscape experiments undertaken by him and his collaborators. The provisional results of this study clearly indicate that the abundance of spiders on agricultural fields can be enhanced by the inclusion of natural habitat patches in the agricultural landscape. Other agroecological papers covered a number of subjects, such as the effect of agricultural crops on the spider communities of neighbouring desert habitats by Itai Opatovsky (Ben-Gurion University, Israel); the diversity of epigeic spiders in clover habitats under various managerial regimes by Reidun Pommeresche (Tingvoll, Norway); the possible role of three spider species in rice ecosystems of Pakistan by Hafiz Muhammad Tahir (Lahore, Pakistan), and others, to name but a few.

Figure 4. Examples of the bottles with 'arachnological' beer, empty of course. © Logunov.

This working day ended with the General Assembly to consider the problem of the ECA website, production of the ECA Proceedings, and other matters. All suggestions for improving/modifying the ECA website should now be sent to Samuel Zschokke (Basel, Switzerland). From now on all the European arachnological meetings will be called congresses, not colloquia as they used to be earlier. It was agreed that the ECAs, if called 'congresses', may attract support and sponsorship more easily. There is still some uncertainty with regard to the best way of producing standardised proceedings for future ECAs. Such proceedings often do not reflect the real content of the meetings, for younger authors prefer to publish their results in journals with high, or at least with an impact factor. This problem, to my mind, is mirrored in the current decrease of submitted manuscripts to the B.A.S. Bulletin and needs to be seriously analyzed and addressed in the very near future. I was also impressed by the current statistics of the development of the membership of European Society of Arachnology (ESA) during the last two years, which increased by over 20% (from 179 members in 2006 to 218 at present). By a minute's silence, the congress commemorated our friends and colleagues who passed away during the last year: Michael I. Saaristo (Turku, Finland), Tamara S. Mkheidze (Tbilisi, Georgia) and Sergei V. Ovtchinnikov (Bishkek, Kyrghyzstan); may their memory live forever among fellow-arachnologists. It was finally decided that the next ECA will be held in Alexandropolis (Greece) at the end of August or during the first week of September; the organiser – Maria Chatzaki. The next international arachnological congress will be held in Poland (Siedlce) in 2010; the organiser – Marek Żabka.

Friday (29th August) morning started with a book vernissage, followed by a symposium on conservation and management. Four new or forthcoming books on spiders were presented: 'Theridiidae of Romania' by Ioan Duma (Timisoara, Romania), a comprehensive taxonomic synopsis of the comb-web spiders, with keys to and illustrations of all species; 'Spiders of India' by Sebastian Pothalil (Kochi, India) and co-authors, a most up-to-date annotated checklist, with a complete bibliography; 'Catalogue of the spiders of Piemonte and Lombardia' by Marco Isaia (Torino, Italy) and co-authors, a

Figure 5. Milan Rezák (Prague, Czech Republic; left), Galina Azarkina (Novosibirsk, Russia; centre) and Yuri Marusik (Magadan, Russia; right) during the congress dinner. © D. V. Logunov.

comprehensive local catalogue of Italian spiders, which was presented by Marco; and 'Fossil and extant spiders' by Jörg Wunderlich (Hirschberg, Germany), *c*.850 page edition with some 400 colour photos, with 14 different contributions by the author, of which I am particularly interested to see the identification key to the European genera of Salticidae. The morning symposium on conservation was the last session of the ECA and included seven interesting contributions on various topics, such as the import of alien spiders to Europe, by Manuel Kobelt (Bern, Switzerland), the factors affecting spider assemblages in the Terai Conservation Area of India by V. P. Uniyal (Dehradun, India), the conservation of riparian spider species by Kevin Lambeets (Ghent, Belgium), etc. In particular, I would like to mention two talks. Myles Nolan (Dublin, Ireland) reported on developing a predictive system for assessing habitat quality based on an existing database of the Irish spider fauna. As an example, Myles demonstrated the usefulness of *Pirata piscatorius* as an indicator of the raised bogs in Ireland. Christian Komposch (Graz, Austria) presented an interesting report on the wolf spider coenoses of alpine riverbanks based on a 10-year study in six alpine rivers and included qualitative data on 10 to 12 ripicolous lycosid species. The talk contained a lot of detailed information on the diversity and variation of local assemblages of Lycosidae, colonisation of restored riverbanks, indicator species, etc. This well-balanced presentation effectively concluded the scientific programme of the ECA.

This congress did not have a dedicated poster session, but poster visits were possible at least three times a day during coffee and lunch breaks, giving plenty of opportunity to see and discuss the poster presentations. In total, 48 posters were presented. One cannot mention all of them, but the posters covered a great variety of subjects, such as the taxonomic revisions of the genus *Polybetes* (Sparassidae) by Cristina Rheims and co-authors (São Paulo, Brazil) and the linyphiid genus *Caracludus* (Linyphiidae) by Holger Frick (Bern, Switzerland); the spider fauna of the oceanic islands of Japan by Hirotsugu Ono (Tokyo, Japan); the intraguild predation of *Anyphaena* and *Philodromus* during overwintering by Stanislav Korenko & Stano Pekár (Brno, Czech Republic); the karyotypes of four wolf spiders by Petr Dolješ and co-authors (Prague, Czech Republic); etc. Two posters were devoted to the history of arachnology: Seppo Koponen (Turku, Finland) presented historical notes on arachnology in Finland, from E. Laxmann (18th century) to P. Palmgren (20th century); and I presented brief information on the famous Russian zoologist, Vladimir Wagner (1849–1934) and his contribution to arachnology.

The Closing Ceremony included presenting prizes for the best posters and papers presented by young arachnologists and for the winners of the photo competition. This time the prizes were certificates and cash awards for the first, second and third places. The prizes for best posters, sponsored by the British Arachnological Society, went to Angelo Bolzern (1st prize; Basel, Switzerland), for his contribution on the generic revision of the European Agelenidae (12 genera); Stanislav Korenko (2nd prize; Brno, Czech Republic), for his poster on the life-history of a parthenogenic oonopid spider, *Triaeris stenaspis*; and Axel Schönhofer (3rd prize; Mainz, Germany), for his contribution on a species of *Leiobunum* sp. (Opiliones) rapidly invading Europe starting from 2000. The prizes for best talk, sponsored by the ESA and the University of Bern, went to Martina Hrušková-Martišová (1st prize; Brno, Czech Republic), who reported on the forced copulation of *Galeodes caspicus subfuscus*; Kajsa Mellbrand (2nd prize; Stockholm, Sweden), for the talk on the diet of terrestrial arthropod predators occurring on Baltic Sea shores; and Holger Frick (3rd prize; Bern, Switzerland), who reported on the phylogenetic study of the members of the *Savignia*-group (Linyphiidae). All of the aforementioned poster presentations and talks were co-authored by the authors' supervisor(s). The winners of the photo awards, sponsored by Arachnologische Gesellschaft, were Carsten Kamenz (1st prize; Berlin, Germany), with a nice surrealistic photo of a scorpion; Mauro Paschetta (2nd prize; Torino, Italy); and Beata Eichenberger (3rd prize; Bern, Switzerland).

To sum up, the whole Colloquium was very well organised, creating an enjoyable workable environment and a friendly atmosphere for all sorts of discussions and socialising. Our sincere thanks for such splendid organisation go to Wolfgang Nentwig, Christian Kropf and Martin Schmidt and to the rest of the organising committee.

The Manchester Museum, Oxford Road, MANCHESTER, M13 9PL; e-mail: dmitri.v.logunov@manchester.ac.uk

NOTE FROM THE EDITOR

With winter fast approaching, please make sure you find the time, on those dark evenings, to write up your observations, notes and articles for the Newsletter.

Photographs and line-artwork are always appreciated, since they help fill gaps during typesetting. Many digital cameras have a macro setting as standard, so it's well worth giving it a shot!

Richard