



# **4-8 September 2011**



BEN-GURION UNIVERSITY OF THE NEGEV

BLAUSTEIN INSTITUTES FOR DESERT RESEARCH

Sede Boger Campus, Midreshet Ben-Gurion, Israel

#### ORGANIZING COMMITTEE

Yael Lubin – Chair

Efrat Gavish-Regev - co-chair

Dorit Korine - Congress Manager

Huda al-Beiruti

Eitan Amiel

Nirit Assaf

Reut Berger-Tal

Na'ama Berner-Aharon

John Herrmann

Valeria Hochman-Adler

Pao Shen Huang

Yael Kaplan

Iris Musli

Itai Opatovsky

Iara Sandomirsky

Phyllis Weintraub

### SCIENTIFIC COMMITTEE

Yael Lubin - Chair

Efrat Gavish-Regev - co-chair

Trine Bilde

Ariel Chipman

Jason Dunlop

Eran Gefen

Ally Harari

Yuri Marusik

Stano Pekár

Mor Salomon-Botner

Ferenc Samu

Phyllis Weintraub

Sergei Zonstein

## CONGRESS SPONSORS

The Jacob Blaustein Center for Scientific Cooperation

The Jacob Blaustein Institutes for Desert Research

Mitrani Department of Desert Ecology

Office of the President & Office of the Rector, Ben-Gurion

University of the Negev

The Ben-Gurion Heritage Institute

BioBee

Ramat Negev Regional Council

Nekudat Chen

Jewish National Fund (Keren Kayemet L'Israel)

Israel Nature and Parks Authority

The Zoological Society of Israel

European Society of Arachnology

# STUDENT STIPENDS

### & VISITING SCIENTIST AWARDS

Ambassade de France, Bureau pour la Science et la Technologie

British Arachnological Society

Israeli Academy of Sciences and Humanities

# STUDENT PRIZES

European Society of Arachnology Arachnologische Gesellschaft

Cambridge University Press

Oxford University Press

Yale University Press



- 65 Chen-Pan Liao (Taiwan) - 66 Chien-Wei Yeh (Taiwan) - 67 Laia Mestre (Spain) - 68 Csaba Szinetár (Hungary) - 69 Ferenc Samu (Hungary) - 70 Sara Goodacre 75 Christa Deleeman-Reinhold (Netherlands) - 76 Philip Stoutjesdijk (Netherlands) - 77 Christian Komposch (Austria) - 78 Léon Baert (Belgium) - 79 Martine Vanvolsem 6 Alain Pasquet (France) - 7 Yong-Chao Su (United States) - 8 Jason Dunlop (Germany) - 9 Ren-Chung Cheng (Taiwan) - 10 Raymond Leborgne (France) - 11 Terrie · 33 Martin Forman (Czech Republic) - 34 Peter van Helsdingen (Netherlands) - 35 Jiří Král (Czech Republic) - 36 Tatjana Piterkina (Russia) - 37 Barbora Formanova - 43 Christophe Hervé (France) - 44 Marij Decleer (Belgium) - 45 Robert Bosmans (Belgium) - 46 Elvira Sereda (formerly Melnichnova) (Germany) - 47 Tharina Bird United States) - 48 Yael Lubin (Israel) - 49 Hirotsugo Ono (Japan) - 50 Christina Holm (Denmark) - 51 Carles Ribera (Spain) - 52 Lena Grinsted (Denmark) - 53 Virginia l Lucia Nentwig (Switzerland) - 2 Shalom Braha (Israel) - 3 Wolfgang Nentwig (Switzerland) - 4 Mari Pesek (United States) - 5 Deborah Smith (United States) -Huang (Taiwan) - 12 Siegfried Huber (Germany) - 13 Andrei Tanasevitch (Russia) - 14 Jesper Bechsqaard (Denmark) - 15 Theo Blick (Germany) - 16 Matjaž Gregorič 28 Manuel Cardenas Guerrero (Spain) - 29 Stanislav Korenko (Czech Republic) - 30 Marco Isaia (Italy) - 31 Maydianne Andrade (Canada) - 32 Miriam Schaider (Austria) (Czech Republic) - 38 Peter Gajdoš (Slovakia) - 39 Simona Kralj-Fišer (Slovenia) - 40 Jérôme Murienne (France) - 41 Irina Marusik (Russia) - 42 Sergei Zonstein (Israel) Settepani (Denmark) - 54 Paula Cushing (USA) - 55 André Walter (Australia) - 56 Maria Albo (Denmark) - 57 Detlev Cordes (Germany) - 58 Hsien-Chun Liao (Taiwan) 59 Chao-Chia Wu (Taiwan) - 60 Vera Opatová (Spain) - 61 Guadalupe Corcobado (Spain) - 62 Yun-Jia Lo (Taiwan) - 63 Tai-Shen Lin (Taiwan) - 64 I-Min Tso (Taiwan) (United Kingdom) - 71 Mu-Yun Wang (United Kingdom) - 72 Gudrun Horak (Austria) - 73 Christian Kropf (Switzerland) - 74 Nollie Hallensleben (Netherlands) -Belgium) - 80 Anna Šestáková (Slovakia) - 81 Boris Leroy (France) - 82 Lenka Sentenská (Czech Republic) - 83 Pao-Shen Huang (Taiwan) - 84 Ondrej Košulič (Czech Republic) - 85 Arthur Decae (Netherlands) - 86 Petr Dolejš (Czech Republic) - 87 Manar Saria (Israel) - 88 Jana Niedobová (Czech Republic) - 89 Elisa Mora (Spain) -90 Milan Řezáč (Czech Republic) - 91 Vladimir Hula (Czech Republic) - 92 Eva Líznarová (Czech Republic) - 93 Roman Bucher (Germany) - 94 Ulla Thyssen (Denmark) 95 Søren Toft (Denmark) - 96 Judith Wunderlin (Switzerland) - 97 Reut Berger-Tal (Israel) - 98 Wendy De Haan (Netherlands) - 99 Peter Koomen (Netherlands) -100 Catherine Geay (France) - 101 Camille Toscani (France) - 102 Itai Opatovsky (Israel) - 103 Mylene Anotaux (France) - 104 Efrat Gavish-Regev (Israel) - 105 Nirit Assaf Israel) - 106 Anton Nadolny (Ukraine) - 107 Holger Frick (Liechtenstein) - 108 Mikhail Omelko (Russia) - 109 Nina Polchaninova (Ukraine) - 110 Yuri Marusik (Russia) 22 Gilad Lev (Israel) - 23 Ingi Agnarsson (Puerto Rico) - 24 Dimitar Dimitrov (Denmark) - 25 Alberto Chiarle (Italy) - 26 Eitan Emiel (Israel) - 27 Mauro Paschetta (Italy) (Slovenia) - 17 Matjaz Kuntner (Slovenia) - 18 Rudy Jocqué (Belgium) - 19 Peter "Otto" Horak (Austria) - 20 Helga Heiling (Austria) - 21 Peter Jäger (Germany)

# **Preface**

doi: 10.5431/aramit4301

The 26<sup>th</sup> European Congress of Arachnology (4-8 September 2011) was held for the first time in Israel, and for the first time outside the European continent. The meeting was hosted by the Blaustein Institutes for Desert Research, at the Sede Boqer Campus of Ben-Gurion University of the Negev.

The Congress drew 130 participants and 11 accompanying persons from 27 countries from all continents. The countries with highest number of participants were Israel (30), Czech Republic (13), Germany (11), Taiwan (9), Denmark (8), France (8), and the USA (6). For many of these people it was their first visit to a desert, and their first time in Israel. Overall, 118 participants (more than 90 %) contributed presentations, with 80 oral presentations and 44 posters from 38 participants. Fifteen manuscripts were submitted for evaluation for publication in the current Proceedings volume, of which 11 were accepted for publication after peer review of two or three referees.

The Congress included four invited plenary talks, one in each of the four intense days of oral and poster presentations, six symposia and nine regular sessions covered all aspects of arachnid taxonomy, systematics, ecology, physiology, genetics, and behaviour.

Outstanding plenary talks were given by Lorenzo Prendini of the American Museum of Natural History (New York, USA), who opened with a presentation on the Assembling the Scorpion Tree of Life; on the second day, I-Min Tso of Tunghai University (Taiwan) lectured on The Coloration of Spiders; Sara Goodacre, University of Nottingham (England) on Dispersal in Spiders on day four; and on the last day, Maydianne Andrade of the University of Toronto (Canada) presented a talk titled Sexual Selection and Ecology Shape Plastic Development & Behavior of Spiders. The third day of the Congress was devoted to

excursions. Symposia were organized on specific themes: arachnid systematics in the 21<sup>st</sup> century, prey-specialized spiders: ecological and evolutionary mechanisms, behavioural ecology of foraging and signals, spiders in agro-ecosystems at local and landscape scales, mating behaviour and ecology, and social spiders.

Over half of the participants presenting their work were students. We were able to obtain a large number of contributed prizes for student presentations. Awards were given for 16 outstanding oral and poster presentations in three areas: Arachnology (The European Society of Arachnology (ESA), The Arachnologische Gesellschaft (AG) and Yale University Press (YUP)), Arachnid Ecology (Oxford University Press (OUP)) and Arachnid Behavioural Ecology (Cambridge University Press (CUP)). First prizes for oral presentations went to: Chao-Chia Wu (Taiwan, ESA), Boris Leroy (France, YUP), Miriam Schaider (Austria, AG), Christina Holm (Denmark, OUP) and Ren-Chung Chen (Taiwan, CUP). First prizes for posters were awarded to: Alberto Chiarle (Italy, AG), Chen-Pan Liao (Taiwan, OUP) and Mu-Yun Wang (England, CUP). Second prizes for talks were awarded to: Vera Opatova (Czech Rep., AG), Itai Opatovsky (Israel, OUP), Yong-Chao Su (USA, CUP) and Marija Majer (Denmark, CUP). Second prizes for posters went to: Olena Iaroshynska (Ukraine, AG), Huda Al-Beiruti (Israel, OUP) and Na'ama Berner-Aharon and Reut Berger-Tal (Israel, CUP).

A highly successful social program gave local flavour and excitement to the Congress. This included a reception on the edge of the Zin Canyon followed by the traditional Russian party, an Israeli light dinner followed by a night excursion in the desert, and half-day excursions to the desert springs Ein Aqev and Ein Avdat, to the

archaeological site of Byzantine Avdat, and to the agricultural R&D station at Ashalim. The excursion day ended with relaxation at a local spa and a picnic dinner at a local park. The gala dinner at Farkhan's Bedouin tent was accompanied by a performance of the renowned group, "Jaaman". Finally, a group of about 30 people remained after the Congress to enjoy a tour to the Dead Sea and Jerusalem.

The General Assembly of the ESA members closed the ECA27 meeting. The assembly discussed varied issues such as publication in the proceedings, renewing of the society web site, and the support of the "araneae – Spiders of Europe" Web Project. New elections to council were performed and several new members joined the council: Holger Frick, Efrat Gavish-Regev, Marco Isaia and Maria Chatzaki. Ferenc Samu was confirmed as president and Seppo Koponen and Søren Toft were designated as honorary members.

All of this could not have been arranged and executed without financial help from numerous sources both within and outside BGU and the hard work of all of our students and volunteers. We take the opportunity to thank all of these people, as well as the session chairs, judges of student presentations, the scientific committee, and members of the European Arachnological Society and of course all of the Congress participants.

The papers in this volume of Arachnologische Mitteilungen represent a sample of the topics discussed at the Congress: taxonomy, palaeontology, biogeography, ecology and behaviour. We thank all of the referees for their careful reviews. Last but not least, the proceedings volume would never have been published without the professional attention of Theo Blick, Oliver-D. Finch, Detley Cordes, and Jason Dunlop.

Yael Lubin & Efrat Gavish-Regev, co-organizers

When citing the whole volume, please use:

LUBIN Y., E. GAVISH-REGEV, T. BLICK & O.-D. FINCH (Eds) (2012): European Arachnology 2011. Proceedings of the 26th European Congress of Arachnology, Sede Boqer, 4–8 September 2011. – Arachnologische Mitteilungen 43: 1-89

The contributions to this volume are online available at http://arages.de/aramit and at http://www.european-arachnology.org/collo/index.shtml and at http://cmsprod.bgu.ac.il/Eng/Units/bidr/Faculty\_Members/Lubin.htm

The abstract volume (PDF) and the congress photo (JPG) are available at http://www.european-arachnology.org/collo/index.shtml and at http://cmsprod.bgu.ac.il/Eng/Units/bidr/Faculty\_Members/Lubin.htm