

Institut für Spezielle Botanik
und Botanischer Garten



**21st International Symposium
"Biodiversity and Evolutionary Biology"
of the German Botanical Society (DBG).**

September 16th – 19th 2012



Onosma arenaria



Mainzer Sand

Fotos: Ralf Omlor

Program

Sunday, 16th September

- 14.00 **Excursion to the „Mainzer Sand“ (relict steppe flora)**
17.00 onwards **Welcome and registration with „Weck, Worscht und Woi“
in the Botanic Garden**
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Monday, 17th September

- 08.15 **Address of welcome:**
Prof. Hans Zischler
Dean of the Faculty of Biology, JGU Mainz
Prof. Dirk Albach
President. Section Biodiversity and Evolution of the
German Botanical Society
- 08.30-09.00 **Symposium: Evolution of Mountain Floras**
Invited speaker: **Christian Körner**/Basel:
Why is biological diversity in mountains higher than in lowlands?
- 09.00-09.20 **Presentations:**
Sebastian Gebauer, Martin Röser, Julian Starr, **Matthias Hoffmann**:
Why are there so few high mountain species in a highly diverse and
speciose sedge group?
- 09.20-09.40 **Gerald Schneeweiss**, Ruth Flatscher, Michaela Sonnleitner, Manuela Winkler,
Pedro Escobar Garcia, Jan Suda, Hanna Weiss-Schneeweiss, Karl Hülber,
Peter Schönswetter:
A short history of nearly everything: evolutionary patterns in the Alpine
polyploid complex *Jacobaea carniolica* (*Senecio carniolicus*; Asteraceae).
- 09.40-10.00 **Salvatore Tomasello**, Christoph Oberprieler:
Phylogeography of the polyploid complex of *Leucanthemopsis
alpina* (L.) Heywood (Compositae, Anthemideae).
- 10.00-10.20 **Simon Pflanzelt**, Bostjan Surina, Helena Einzmann, Dirk Albach:
Bridging the Alps and the Middle East: Phylogeny and systematics of
the genus *Wulfenia* Jacq. (Plantaginaceae).
- 10.20-10.40 **Nicolai M. Nürk**, Berit Gehrke, Marcus Koch:
Multiple migrations shaped the composition of African
Hypericum – phylogenetics and biogeography of St. John's wort.
- 10.40-11.00 **Heidi Meudt**, Jessica Prebble, Carlos Lehnebach:
Endemic New Zealand *Myosotis* (Boraginaceae): Phylogeny and
species limits in a recently radiated genus with a high proportion of
threatened species.

- 11.00-11.15 **Coffee break**
- 11.15-12.00 **Plenary talk – Birgit Gemeinholzer/Giessen:**
Accessing and sharing biodiversity data – the next generation research.
- 12.00-13.00 **Lunch and poster hanging**
- Symposium: Next Generation Sequencing in Plant Systematics and Evolution**
- 13.00-13.30 Invited speaker: **Thomas Hankeln/Mainz:**
Next-Generation sequencing: a technical introduction.
- 13.30-14.00 Invited speaker: **Aaron Liston/Corvallis:**
Next generation sequencing for plant systematics and evolution.
- Presentations:**
- 14.00-14.20 **Elvira Hörandl, Marco Pellino, Thomas Schmutzer, Uwe Scholz, Heiko Vogel, Diego Hojsgaard, Timothy Sharbel:**
Genome evolution in the apomictic *Ranunculus auricomus* complex: examining the effects of hybridization and mutation accumulation via transcriptomics.
- 14.20-14.40 **Kamil Konowalik, Salvatore Tomasello, Christoph Oberprieler, Robert Vogt:**
Using next-generation sequencing techniques for the reconstruction of reticulate evolution in the polyploid complexes of *Leucanthemum* and *Leucanthemopsis* (Compositae, Anthemideae).
- 14.40-15.00 **Eike Mayland-Quellhorst, Dirk Albach:**
The analysis of polyploid species in *Veronica* (Plantaginaceae) with 454 sequencing of ITS1.
- 15.00-15.20 **Susann Wicke, Bastian Schäferhoff, Claude W. dePamphilis, Andreas Fleischmann, Günther Heubl, Kai F. Müller:**
Chloroplast genomes of carnivorous Lentibulariaceae evolve at highly elevated substitutional rates and show significant changes of selection pressures in photosynthesis genes.
- 15.20-15.40 **Coffee break**

15.40-16.10

**S. Schneckenburger: Introduction to the
"Verband Botanischer Gärten"**

Symposium: Mechanisms of Speciation

16.10-16.40

Invited speaker: **H.P. Linder**/Zürich:
Speciation mechanisms, speciation rates, and phylogenies.

Presentations:

16.40-17.00

Samira Ben-Menni Schuler, Jordi López-Pujol, Gabriel Blanca,
Roser Vilatersana, Núria Garcia-Jacas, Víctor N. Suárez Santiago:
Homoploid hybrid speciation in a narrow endemic knapweed:
disentangling reticulate evolution in section *Willkommia*.

17.00-17.20

Roland Greiner, Christoph Oberprieler:
The impact of polyploidy on genetic structure and reproductive
isolation in the genus *Leucanthemum* Mill. (Compositae, Anthemideae).

17.20-17.40

Judith Fehrer, Jindrich Chrtěk, Anna Krahulcova, Frantisek Krahulec:
Patterns and processes of speciation in two closely related agamic complexes
of hawkweeds.

17.40-18.00

Petra Šarhanová, Radim Vašut, Martin Dančák, Timothy Sharbel,
Bohumil Trávníček:
Microevolutionary processes in Central European *Rubus* populations:
apomixis versus sexuality – stability versus innovation.

18.00-18.20

Eliane Furrer, Nigel P. Barker, H. Peter Linder:
Phylogeographical patterns of the widespread *Pentameris pallida* (Poaceae).

18.20-18.40

Jos Käfer, Sylvain Mousset:
A pitfall in sister clade comparisons, and a new analysis of dioecy in
flowering plants.

18.40-20.00

Posters and wine at the Muschel

Tuesday, 18th September

Symposium: Evolution of Tropical Floras

08.30-09.00

Invited speaker: **R. Toby Pennington**/Edinburgh:
Phylogeny, ecology and the historical assembly of tropical forests.

Presentations:

09.00-09.20

Nicola Flanagan, Francisco Hernando Molineros Hurtado, J. Tupac Otero,
Robert Tulio Gonzalez:
Phylogenetic characterization of the diversity of *Vanilla* (Orchidaceae)
in Colombia.

- 09.20-09.40 **Marcus Lehnert**, Harald Schneider, Michael Kessler, Dietmar Quandt, Sarah Noben:
Retracing the evolution of scaly tree ferns (Cyatheaceae-Polypodiopsida).
- 09.40-10.00 **Kurt Weising**, Florian Krapp, Diego Sotero Pinangé, Ana Maria Benko-Iseppon, Georg Zizka:
Phylogeny and evolution of *Dyckia* (Pitcairnioideae; Bromeliaceae): understanding rapid diversification in the Brazilian Cerrado.
- 10.00-10.20 **Daniel Thomas**, Richard Saunders:
Cross-taxon biogeographical patterns at the Malesian floristic interchange: Insights from phylogenetic analyses of species-rich Malesian angiosperm taxa.
- 10.20-10.40 **Alexandra Ley**, Olivier Hardy:
Phylogeographic studies reveal diverse speciation patterns in central African tropical herbs (Marantaceae).
- 10.40-11.00 **Zulqarnain**, Igor Aurelio Silva, Julia Caram Sfair, Fernando Roberto Martins:
Phylogenetic relationships of liana-phorophyte interactions in tropical forest.
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- 11.00-11.15 **Coffee break**
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- 11.15-12.00 **Plenary talk – Erwin Beck/Bayreuth:**
(Why) Do we need legal regulations for biodiversity?
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- 12.00-13.00 **Lunch and meeting of the Section**
“Biodiversity and Evolution” of the German Botanical Society
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- Symposium: Pollination and Dispersal Biology**
- 13.00-13.30 Invited speaker: **Andrea Cocucci/Córdoba:**
The bull in the milkweed: evidence of animal-like male-male competition in plants.
- Presentations:**
- 13.30-13.50 **Stefan Abrahamczyk**, Aelys Humphreys, Michael Kessler:
What drives differences in nectar sugar composition in angiosperms? Pollinator preference or plant identity?
- 13.50-14.10 **Claudia Erbar**, Peter Leins:
Nectar in pollen flowers of the lower organisational level of the angiosperms.

- 14.10-14.30 **Birgit Oelschlägel**, Stefan Wanke, Matthias Nuss, Christoph Neinhuis, Stefan Dötterl:
Pollinator attraction and deception in *Aristolochia rotunda* L. (Aristolochiaceae).
- 14.30-14.50 **Sarah Papiorek**, Robert R. Junker, Marlies Sazima, Thomas Eltz, Klaus Lunau:
The role of colour, gloss and epidermal cell shape for sensory exclusion of bees by flowers adapted to the pollination by birds.
- 14.50-15.10 **André Rech**, Jeff Ollerton, Marlies Sazima:
Reproductive biology in the family Dilleniaceae: natural history and evolution.
- 15.10-15.30 **Petra Wester**, Anton Pauw, Steve Johnson:
Rodent pollinators appealed by potato scent of the South African Pineapple Lily, *Eucomis regia* (Hyacinthaceae).
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- 15.30-16.00 **Coffee break**
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- Two parallel sessions of the Open Symposium
Session I (phylogenetics):**
- 16.00-16.20 **Angélica Cervantes**, Jorge Gutiérrez-Amaro, Thomas Borsch:
Phylogeny and biogeography of Acalyphoideae s. str. (Euphorbiaceae): evidence for at least three Caribbean lineages with radiations in Cuba and Hispaniola.
- 16.20-16.40 **Pedro Gonzalez**, Markus Ackermann, Kurt Zoglauer, Rosa Rankin, Rosalina Berazaín, Egon Köhler, Thomas Borsch:
Phylogeny and historical biogeography of *Buxus* (Buxaceae), focusing on the Cuban and Antillean species.
- 16.40-17.00 **Iraj Mehregan**, Maliheh Memarian, Rahilsadat Mousavian, Valiollah Mozaffarian:
Phylogeny of the tribe Echinophoreae (Apiaceae, subfamily Apioideae) using ITS and ETS data.
- 17.00-17.20 **Julio Schneider**, Pulcherie Bissiengou, Maria do Carmo Amaral, Michael Fay, Marco Thines, Marc Sosef, Lars Chatrou, Georg Zizka:
Intrafamilial relationships and classification of the pantropical Ochnaceae s.l.: a first comprehensive molecular phylogenetic study based on multiple genes.
- 17.20-17.40 **Nikolai Friesen**:
Does the origin of the genus *Allium* lie in the ancient Mediterranean region?

- 17.40-18.00 **Najibeh Ataei**, Jafar Valizadeh, Eva Temsch, Tae-Soo Jang, Elmar Endl, Andreas Dolf, Gerald Schneeweiss, Miguel Angel García, Monika Ballmann, Susann Wicke, Dietmar Quandt, Hanna Weiss-Schneeweiss:
Evolutionary trends in the non-photosynthetic parasitic *Cistanche* (Orobanchaceae) inferred from karyological data.
- 18.00-18.20 **Lars Chatrou**, Michael Pirie, Freek Bakker:
Issues in dating the age of rain forest dwellers – the case of Annonaceae.
- 18.20-18.40 **Michael Pirie**:
Species tree inference given coalescence and reticulation.
- Session II (diverse topics):**
- 16.00-16.20 **Owen Jones**, Roberto Salguero-Gomez:
Variation in plant demographic trajectories: problems and opportunities.
- 16.20-16.40 **Zeki Kaya**, Ayten Dizkırıcı, Yeliz Tümbilen Özer, Çiğdem Kansu, Hayri Duman:
Genetic diversity patterns and relationship among closely related *Quercus infectoria*, *Q. pubescens* and *Q. virgiliana* studied in oak-hybrid rich areas of Turkey.
- 16.40-17.00 **Carsten Löser**:
Speciation and speciation reversal – two sides of a coin.
- 17.00-17.20 **Fernando Fernández Mendoza**, Stephanie Domaschke, Christian Printzen:
Evolving as a system: A photobiont switch drives the evolution of the lichen *Cetraria aculeata*.
- 17.20-17.40 **Barbara Neuffer**:
Flower morphology and pollen germination within and between *Capsella*-species (Brassicaceae).
- 17.40-18.00 **Yannick Marc Städler**, David Masson, Jürg Schönenberger:
X-ray tomography of plant tissue: novel staining methods allow high resolution and high contrast imaging.
- 18.00-18.20 **Michael Wink**:
Evolution of plant secondary metabolism.

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19.30 **Conference Dinner**

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Wednesday, 19th September

Symposium: Evolution of Mediterranean and Arid Floras

- 08.30-09.00 Invited speaker: **Bruce G. Baldwin**/Berkeley:
Evolutionary patterns and processes in the California Floristic Province.
- Presentations:**
- 09.00-09.20 **Ronny Brandt**, Maria Lomonosova, Kurt Weising, Helmut Freitag:
Phylogeny and biogeography of the genus *Suaeda*, subgenus *Brezia* (Chenopodiaceae) in the Americas.

- 09.20-09.40 **Doerte Harpke**, Frank R. Blattner, Helmut Kerndorff:
Phylogeny of *Crocus* (Iridaceae) based on two nuclear loci:
Ancient hybridization and chromosome number evolution.
- 09.40-10.00 **Karol Marhold**, Stanislav Španiel, Judita Zozomová-Lihova:
First insights into the evolutionary history and differentiation
patterns in the *Alyssum montanum*-*A. repens* group.
- 10.00-10.20 **Paulina Kondraskov**, Nicole Schütz, Mike Thiv, Sabrina A. Schmidt,
Barbara Rudolph, Miguel Pinto da Silva Menezes de Sequeira,
Arnoldo Santos Guerra, J. Alfredo Reyes-Betancort:
Laurel forest – a relict vegetation type?
- 10.20-10.40 **Matthias Kropf**, Kristina Plenk, Mária Höhn, Katharina Bardy:
Steppe plants in Central Europe: first insights based on fruit set,
germination experiments, and AFLP variation.
- 10.40-11.00 **Roberto Salguero-Gomez**, Wolfgang Siewert, Brenda Casper,
Katja Tielborger:
A demographic approach to study effects of climate change in
desert plants.
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- 11.00-11.15 **Coffee break**
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- 11.15-12.00 **Plenary talk – Herbert Hurka/Osnabrück:**
Ex situ plant conservation strategies – pros and cons.
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- 12.00-13.00 **Lunch**
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- Symposium: Ontogeny: from Meristems to Phenotypic Diversity**
- 13.00-13.30 Invited speaker: **Louis Ronse de Craene/Edinburgh:**
Evolution of perianth and androecium in Caryophyllales: a complex story.
Presentations:
- 13.30-13.50 **Kester Bull-Herenu**, Regine Claßen-Bockhoff:
The ontogenetic base for the transient model of inflorescence development.
- 13.50-14.10 **Ingrid Lock**, Aleksey Penin, Paula Rudall, Margarita Remizowa,
Dmitry Sokoloff:
Inflorescence development, vasculature and patterns of terminal flower
formation in mutants of *Arabidopsis* (tfl 1-2 and tfl 2-1).
- 14.10-14.30 **Alexander Vrijdaghs**, Hilda Flores Olvera, E. F. Smets:
Homoplasy as a trigger for character research, the ‚bracteoles‘ enveloping
female flowers in Atripliceae (Chenopodiaceae).

14.30-15.30

Poster session and coffee

15.30-16.00

Symposium: Evolution, ecology and population history of model plants

Invited speaker: **Karl Schmid**/Stuttgart-Hohenheim:
Genomic footprints of selection in *Arabidopsis thaliana*.

Presentations:

16.00-16.20

Pilar Catalan, Diana Lopez-Alvarez:
More than one model plant within the complex?
Hybridization history and ecological distribution of the *Brachypodium distachyon*-*B. stacei*-*B. hybridum* taxa.

16.20-16.40

Antonio Manzaneda, Pedro Rey:
Natural variation and tradeoffs in drought tolerance traits in *Brachypodium distachyon*: adaptation and ploidy.

16.40-17.00

Mathijs Nieuwenhuis, Dóra Szinay, Freek Bakker:
Evolutionary trends in genome size in *Pelargonium* (Geraniaceae).

17.00-17.20

Roswitha Schmickl, Marcus Koch:
Arabidopsis thaliana's wild relatives – a model for introgression dynamics.

17.20-17.40

Marc Stift, Brain Hunter, Benjamin Shaw, Aileen Adam, Peter Hoebe, Barbara Mable:
S-linked genetic load contributes to inbreeding depression in *Arabidopsis lyrata*.

17.40-18.00

Frank R. Blattner:
Think big(ger) – From model species to model genera.

Thursday, 20th September

09.15-15.00
(SR 275)

Workshop: How to deal with inflorescences in systematics and floral ecology?

