

## Workshop “Methods in Ostracodology 2”

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Dear participants!

The 1<sup>st</sup> Workshop “Methods in Ostracodology” (MIO 1) was held at the University of Graz in 2008. The conceptual approach of MIO is to instruct people interested in ostracods by providing a theoretical background through lectures and to apply this in practical sessions.

During MIO 1 a proposal was outlined for potential themes of future workshops. Following these recommendations as far as possible MIO 2 comprises the subsequent topics:

- (1) Geometric morphometrics in ostracods
- (2) Stable isotopes in ostracod research
- (3) Transfer functions
- (4) Dissection of Recent ostracods

### **Date and location**

29<sup>th</sup> July – 31<sup>th</sup> July, 2011

Karl-Franzens-University of Graz

Institute of Earth Sciences (Department of Geology & Palaeontology)

Heinrichstrasse 26, A-8010 Graz

<http://erdwissenschaften.uni-graz.at>

### **Organisers**

Prof. Dr. Werner E. Piller (University of Graz)

Dr. Martin Gross (Universalmuseum Joanneum)

Prof. Dr. Dan L. Danielopol (c/o Austrian Academy of Sciences)

Msc. Frank Gitter (Universalmuseum Joanneum)

### **Lecturers**

Prof. Dr. Angel Baltanás (Universidad Autonoma de Madrid)

Dr. Ian Boomer (University of Birmingham)

Prof. Dr. Dan L. Danielopol (c/o Austrian Academy of Sciences)

PD Dr. Peter Frenzel (University of Jena)

Prof. Dr. Tadek Namiotko (University of Gdansk)

### **Demonstrators**

Mag. Marco Caporaletti (University of Graz)  
Msc. Frank Gitter (Universalmuseum Joanneum)  
Dr. Martin Gross (Universalmuseum Joanneum)  
Mag. Klaus Minati (University of Graz)  
Dr. Claudia Wrozyna (University of Graz)

### **Participants**

Brandão, Simone Nunes, Germany  
Curry, Ben Brandon, USA  
Daniel, Thomas, Germany  
Forel, Marie-Béatrice, France  
Frick, Paula, Austria  
Krzymińska, Jarmila, Poland  
Lartey-Antwi, Lailah Gifty, Germany  
Mischke, Steffen, Germany  
Peng, Ping, China  
Pieri, Valentina, Belgium  
Pint, Anna, Germany  
Reina, Montserrat, Spain  
Schornikov, Eugene, Russia  
Szlauder-Lukaszewska, Agnieszka  
Waltshew, Anton, Germany  
Yamaguchi, Tatsuhiko, USA

### **Registration fee**

The fee for on-site payment is **200,- Euro** (only in cash).

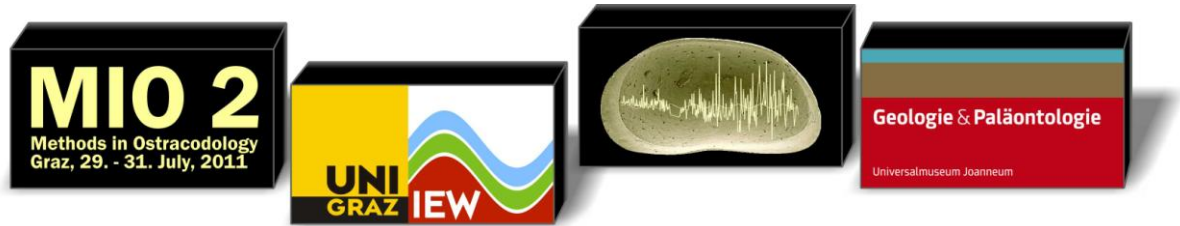
### **Further information**

Please contact: [frank.gitter@museum-joanneum.at](mailto:frank.gitter@museum-joanneum.at) or [the homepage of MIO 2](#).

### **Accommodation and transport**

Please contact the homepage of the city of Graz:  
<http://www.graztourismus.at/cms/ziel/2865539/EN>

# Workshop “Methods in Ostracodology 2”



## Programme

**Friday, 29.07.**

- 08:00–09:00 **REGISTRATION**
- 09:00–09:15 **OPENING**, GROSS, BOOMER & DANIELOPOL  
*Aims and goals of MIO 2*
- “Geometric morphometrics”**
- 09:15–10:10 **LECTURE**, BALTANÁS  
*Basics of Geometric Morphometrics*
- 10:10–10:40 *Coffee break*
- 10:40–11:30 **LECTURE**, BALTANÁS  
*Landmark analysis*
- 11:30–12:00 *Coffee break*
- 12:00–13:00 **PRACTICAL SESSION I**, BALTANÁS, DANIELOPOL, GITTER & MINATI  
*Data acquisition for morphometric analysis, image enhancement and outline recording from photographs and line drawings*
- 13:00–14:40 *Lunch*
- 14:40–15:30 **LECTURE**, BALTANÁS  
*Outline Analysis (I): Elliptic Fourier analysis, Eigenshape analysis and Semilandmarks*
- 15:30–16:00 *Coffee break*
- 16:00–17:00 **LECTURE**, DANIELOPOL  
*Outline Analysis (II): B-splines using MORPHOMATICA*
- 17:00–17:30 *Coffee break*
- 17:30–19:00 **PRACTICAL SESSION II**, BALTANÁS, DANIELOPOL, GITTER & MINATI  
*Practical work: Fitting functions to outlines*
- 19:30– *Social dinner (included in the fee)*

**Saturday, 30.07.**

**“Geometric morphometrics” (continued)**

09:00–10:30 **LECTURE**, BALTANÁS  
*Statistical Methods for Morphometric data*

10:30–11:00 *Coffee break*

11:00–13:00 **PRACTICAL SESSION III**, BALTANÁS, DANIELOPOL, GITTER & MINATI  
*Acquisition of landmark data and statistical tools for analysis*

13:00–14.30 *Lunch*

**“Stable isotope analysis”**

14:30–16:00 **LECTURE**, BOOMER  
*Introduction to stable isotope analysis*

16:00–16:30 *Coffee break*

16:30–18:30 **PRACTICAL SESSION IV**, BOOMER, CAPORALETTI, DANIELOPOL, GROSS & WROZYNA  
*Mass spectrometer; preparation and measurements of ostracod samples  
Visualisation of diagenetic effects by using light and scanning electron microscopy*

19:30– *Get-together at the Universalmuseum Joanneum (included in the fee)*

**Sunday, 31.07.**

09:00–10:00 **TALKS** of participants or discussion

10:00–10:30 *Coffee break*

**“Transfer functions”**

10:30–11:30 **LECTURE**, FRENZEL  
*Ostracod-based transfer functions*

11:30–11:45 *Coffee break*

11:45–12:30 **LECTURE**, FRENZEL  
*Ostracod-based transfer functions (continued)*

12:30–14:00 *Lunch*

**“Soft-parts”**

14:00–15:00 **LECTURE**, NAMIOTKO & DANIELOPOL  
*Basics of soft-part morphology*

15:00–15:15 *Coffee break*

15:15–17:00 **PRACTICAL SESSION V**, NAMIOTKO & DANIELOPOL  
*Dissection of living ostracods and permanent slide-preparation*

17:00–17:15 *Coffee break*

17:15–18:00 **Concluding discussion and closure of the workshop**