

XVII INTERNATIONAL  
SYMPOSIUM ON  
TRICHOPTERA



5-9 SEPTEMBER 2022  
LUNZ AM SEE – AUSTRIA

**Book of Abstracts and  
other Information**

## Detailed schedule

				13:40 - 13:40
14:00 - 14:20		Welcome note		13:40 - 14:40
14:20 - 14:40				14:40 - 14:40
14:40 - 15:00	Konstantina Mavrogianni	Considerations about the "extinction" of codfishes and their impacts		14:40 - 14:40
15:00 - 15:20				14:40 - 14:40
15:20 - 15:40				14:40 - 14:40
15:40 - 16:00	EP1 - Biotope: Defensive pragmatics and ontogenetic shifts in Thalassophryne iboga	Codfishes break		14:40 - 14:40
16:00 - 16:20	EP2 - Didymosphaera Majellae – a model case for the development of Neotropical and subtropical coral reef architecture	Biogeography, Comparative Morphology		14:40 - 14:40
16:20 - 16:40	EP3 - Wing Pattern and Cellular Architecture	Biogeography, General Morphology		14:40 - 14:40
16:40 - 17:00	Tribolium: ground beetles and beetle evolution trends	Biogeography, General Morphology		14:40 - 14:40
17:00 - 17:20	EP4 - Farnham: Using genomics to observe an evolution of codfish size-growth	Biogeography, General Morphology		14:40 - 14:40
17:20 - 17:40	EP5 - Meyer: Taxonomics: the exotic and exognathous outliers of Tribolium	Biogeography, General Morphology		14:40 - 14:40
18:00 - 18:20				14:40 - 14:40
18:00 - 20:00	Welcome reception			14:40 - 14:40
20:00 onwards				14:40 - 14:40

## Abstracts

## List of talks

Keynote talks		
No	Presenter	Title
	Paul B. Frandsen	What has comparative genomics taught us about caddisfly biology?
	Hans Malicky	Considerations about the "extinctions" of caddisflies and other insects
	Ana Previšić	Advancing the understanding of aquatic-terrestrial contaminant transport using aquatic insects

(Video) talks		Title
No	Presenter	
EP1	Megan J. Bishoff	Defensive phragmrosis and cathaptosis in Trichoptera larvae
EP2	Kyle A. DeMar	Nectopsyche Mueller – Leptoceridae: Leptocerinae: Nectopsychini – as a Model Clade for the Study of Wing Patterning and Cellular Architecture
EP3	V. D. Ivanov	Sensory structures on mouthpart palps in Trichoptera: ground plan and basal evolution trends
EP4	Paul B. Frandsen	Using genomics to uncover the evolution of caddisfly silk genes
EP5	W. Mey	Tarachoptera: the extinct and enigmatic cousins of Trichoptera
EP8	Wilfried Wichard	Fossil Trichoptera embedded in mid-Cretaceous Burmese amber
TM2	Lucas M. Camargos	Taxonomic revision of <i>Cernotina</i> Ross and <i>Cymellus</i> Banks (Trichoptera, Polycentropodidae)
TM3	Ed DeWalt	A Proposal to Migrate Trichoptera World Checklist to Taxonworks
TM4	Matthew W. Green	Revision of <i>Pycnopsyche</i> (Trichoptera: Limnephilidae) Species Groups and Their Diagnosable Characters
TM5	Almog Rivka Hershko Pnuel	The Hydropsychidae of Israel – taxonomy and ecology of a little studied fauna
TM6	Ryoichi B. Kuranishi	Functional morphology on the genitalia of <i>Rhyacophila lezeyi</i>
TM7	Alexander B. Orfinger	Progress in the taxonomy of Nearctic Polycentropus Curtis, 1835 (Trichoptera: Polycentropodidae)
TM8	John S. Weaver	Specialized characteristics of the larvae of <i>Rhyacophila</i> Picta
TM9	Carina Zitra	What is in a head? Comparative morphology of larval head muscles in the three Drusinae clades
DG2	Sajad Hussain Parey	Generating DNA barcodes of Indian caddisflies (Hydropsychidae; Trichoptera): future prospects
DG3	Juha Salokannel	DNA-barcode library of Finnish caddisflies
BG2	Xiling Deng	Comparative phylogeography of alpine/subalpine <i>Himalopsyche</i> species revealed distinct genetic structures in the Himalayas and Hengduan Mountains
BG3	Ernesto Rázuri-Gonzales	Phylogenomics of the Western Hemisphere caddisfly genus <i>Smicridea</i> (Trichoptera: Hydropsychidae)
BG4	Dina Smirnova	Investigation of Caddisflies, Insecta, Trichoptera Fauna in Kazakhstan
BG5	Alice Wells	Radiation of the microcaddisfly genus <i>Orthotrichia</i> , Trichoptera Hydroptilidae, in Australia



## Session Evolution & Phylogeny

### Talk EP3

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### Sensory structures on mouthpart palps in Trichoptera: ground plan and basal evolution trends

Comparative study of sensory structures on maxillary and labial palps in Philopotamidae, Rhyacophilidae, Glossosomatidae, Ptilocolepidae, and Hydroptilidae (12 genera, 30 species) obtained by the scanning electron microscopy and the light microscopy revealed significant diversity of the sensory structures. There are 7 principal types of sensilla: pointed trichoid, blunt chaetoid, campaniform, thin basiconic, thick basiconic, petaloid, and pseudoplacoid sensilla. The pointed trichoid and blunt chaetoid sensilla occur on every palp segment. The first and, especially, second segments of maxillary palps have bunches of very large blunt chaetoid sensilla on medial surfaces. Campaniform sensilla were found only on basal segments. Pseudoplacoid sensilla are common on the terminal segments of both labial and maxillary palps except for Ptilocolepidae and Hydroptilidae. The petaloid sensilla are specific for the mouthpart palps of Trichoptera, their structure varies in different genera and families. They are found in groups on the lateral/dorsolateral surfaces of apical segments either of both maxillary and labial palps (Philopotamidae, Rhyacophilidae) or only labial palps in other studied families. The pointed tips of both maxillary and labial palps usually have apical sensory complexes looking like small conical outgrowths without microtrichia, with one large thick basiconic sensilla on their tips and several shorter thick basiconic sensilla on lateral surfaces. We consider these seven types of sensilla along with the apical sensory complex and the assemblage of the petaloid sensilla as a part of Trichoptera ground plan. This primitive diversity might be decreased in evolution so the apical sensory complex, the fields of petaloid sensilla, the groups of very long blunt trichoid sensilla of basal segments, and the pseudoplacoid sensilla disappear in some advanced instances, more often on the maxillary palps. Interspecific variations of sensilla might be important for the species discrimination, while the distribution of certain sensory structures is important for higher taxonomy.

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