

„The Fish of Muddy Waters” – mudminnows, mud loaches & Co.

Including:

“Second International workshop on *Umbra krameri*”

Program

Thursday, October 23 – Day focusing on the European mudminnow (*Umbra krameri*)

12 presentations, each 15 min + 5 min. discussion

09:00 Welcome words

Session 1: Distribution, population changes, habitat relationships

09:20 Wanzenböck, J. (Austria) Introduction to the “Second International Workshop on *Umbra krameri*”- 30 years after: gains in knowledge on the biology of the species

09:40 Jung, M. et al. (Austria) Current status of the mudminnow in Austria – distribution, population development, threats and measures for its protection

10:00 Pekárik, L & Hajdu, J. (Slovakia) Population dynamics of the European Mudminnow (*Umbra krameri*) on Great Rye Island: Challenges and conservation strategies in the 21st century

10:20 Coffee break and poster session

10:40 Sallai, Z. et al. (Hungary) The distribution of the mudminnow *Umbra krameri* WALBAUM, 1792 and the weatherfish *Misgurnus fossilis* (LINNAEUS, 1758) in Hungary over the past fifty years and the threats to the persistence of their populations

11:00 Jelic, D. & Vucic, M. (Croatia) Population, ecology and habitat associations of the endangered mudminnow (*Umbra krameri*) in Croatia

11:20 Nagy, A. et al. (Romania) The situation of *Umbra krameri* Walbaum, 1792, in Romania

11:40 Moshu, A. & Trombitsky, I. (Moldova) *Umbra krameri* populations of the eastern edge of its areal: occurrence, state and eukaryotic symbionts

12:00 Lunch break

Session 2 Breeding, behaviour and genetics

13:30 Müller, T. et al. (Hungary) *Ex situ* and *in situ* breeding and stocking of the European Mudminnow in Hungary: insights from a 15-year cycle of population reinforcement

13:50 Tatár et al. (Hungary) A Case Study of the European Mudminnow Conservation Pilot Program (2008-): Creation of surrogate habitats and self-sustaining populations, risks of climate change

14:10 Takács, P. et al. (Hungary) Morphological characterization of *Umbra krameri* and its current and potential invasive competitors in Hungary

14:30 Preiszner, B. et al. (Hungary) Behavioural responses of the European mudminnow to competition and predation in a habitat invaded by Amur sleeper

14:50 Coffee break and poster session

15:20 Donabaum, R. et al. (Austria) Genetic diversity and population differentiation of European Mudminnow (*Umbra krameri*) in Austria

15:40 Rund, H. et al. (Austria) Catching shadows: Development and validation of three primer pairs for eDNA detection of *Umbra krameri*

16:00 Poster session

Friday, October 24 – Day focusing on the European weatherfish (*Misgurnus fossilis*)

15 presentations, each 15 min. + 5 min. discussion

Session 3: Distribution, habitats and conservation

- 09:00 Van Wichelen, J. et al. (Belgium) Saving European weatherfish, a swampy business
- 09:20 Vos, M. (Netherlands) Monitoring and habitat management for weatherfish (*Misgurnus fossilis*) in the Netherlands: Insights from Research, citizen science, habitat management and habitat design
- 09:40 Krappe, M. & Weidig, A. (Germany) Distribution, Population Dynamics, and Threats of the European weatherfish (*Misgurnus fossilis*) in Mecklenburg - Western Pomerania (NE Germany)
- 10:00 Korte, E. et al. (Germany) The European weatherfish (*Misgurnus fossilis*) in Hesse and Rhineland-Palatinate - occurrence, threats, protection measures
- 10:20 Fischer, A. et al. (Austria) Habitat enhancement for the mud loach (*Misgurnus fossilis*) - project details, construction process and results of fish monitoring
- 10:40 Coffee break and poster session

Session 4: Breeding, Asian species and genetics

- 11:05 Auwerx, J. et al. (Belgium) Genetic Enhancement of weatherfish populations via targeted breeding Programs
- 11:25 Gobbin, T. et al. (Belgium) Balancing risks and opportunities in *ex situ* conservation: host–parasite dynamics of the European weatherfish
- 11:45 Vanhove, M. et al. (Belgium) An (inter)national network to support the FishBase Consortium in parasitology, pathology, ichthyo(parasito)logical mainstreaming and capacity development
- 12:05 Lunch break
- 13:20 Müller et al. (Hungary) *Ex situ* breeding and stocking of the European Weatherfish in Hungary and Romania
- 13:40 Demeny, F. et al. (Hungary) *Ex situ* conservation of weatherfish (*Misgurnus fossilis*) and crucian carp (*Carassius carassius*) in rice fields in Hungary
- 14:00 Megens, H. et al. (Netherlands) Towards a genome variation atlas of the weatherfish (*Misgurnus fossilis*) in the Netherlands
- 14:20 Palandačić, A. et al. (Austria) Genetic diversity of *Misgurnus fossilis* in Austria
- 14:40 Coffee break and poster session
- 15:00 Bohlen, J. et al. (Czech Republic) Towards the establishment of conservation units of the endangered weatherfish (*Misgurnus fossilis*) in Central Europe
- 15:20 Klefoth, T. et al. (Germany) Identification and invasive potential of Asian weatherfish in Europe
- 15:40 Bezányiová, K. et al. (Czech Republic) Beyond the Net: Optimizing eDNA sampling and analysis for challenging muddy habitats and the endangered weatherfish (*Misgurnus fossilis*)
- 16:00 Poster session
- 18:00 Wine tavern

Saturday, October 25 – Day focusing on *Carassius* and other wetland-adapted fish.

13 presentations, each 15 min. + 5 min. discussion

Session 5: Native versus introduced species, citizen science

- 09:00 Šmejkal, M. et al. (Czech Republic) Competitive exclusion of native species by invasive species within *Carassius* genus
- 09:20 Gottwald, M. et al. (Czech Republic) Goldfish, Gibel, or Crucian? Testing public recognition of *Carassius* species
- 09:40 Kalous, L. et al. (Czech Republic) Names and Terminology Matter: The case of the genus *Carassius*
- 10:00 Choleva, L. et al. (Czech Republic) The Phylogenetic Imperative: A Genetics-Informed Framework Delineating Conservation Units for *Carassius carassius* in Czechia
- 10:20 Coffee break and poster session
- 10:45 Stepanyshyna, Y. et al. (Czech Republic) A comparative study of pelagic and benthic resource use by invasive gibel carp (*Carassius gibelio*) and native crucian carp (*Carassius carassius*)
- 11:05 Tripathi, S. et al. (Czech Republic, Hungary) Trait-based mechanisms of invasion: Divergence in morpho-functional traits between the native and invasive *Carassius* species
- 11:25 Thomas, K. et al. (Czech Republic) Citizen science to complement professional data: towards conservation of declining native freshwater fish, the crucian carp
- 11:45 Workshop led by M. Šmejkal (Czech Republic) Engaging people in conservation of crucian carp through a citizen science approach
- 12:15 Lunch break

Session 6: Conservation and other systems/species

- 13:30 Kořen, V. et al. (Czech Republic) Designing critical pond infrastructure for conservation of wetland fishes in the Czech Republic
- 13:50 Müller, T. et al. (Hungary) Propagation and conservation of crucian carp in Hungary: insights from laboratory, semi-intensive, and pond rearing
- 14:10 Buj, I. et al. (Croatia) Conservational rights and wrongs – protection of invasive populations of *Carassius carassius* and artificial habitats for repopulation of depleted native populations?
- 14:30 Ribeiro, D. et al. (Portugal) Assessing the use of small inland wetlands by fish in the Lower Tagus Basin (Portugal)
- 14:50 Coffee break and poster session
- 15:10 Šmejkal, M. et al. (Czech Republic) Negative impact of the invasive topmouth gudgeon (*Pseudorasbora parva*) on population growth of a native fish species, the sunbleak (*Leucaspius delineatus*)
- 15:30 Weiperth, A. et al. (Hungary) Is there any chance in a three-front war? The past, present and possible future of muddy water fish species in Hungarian waters
- 15:50 Final discussion, wrap up of the conference, outlook
- 16:30 End of conference

List of Posters:

Bánó, B. et al. (Hungary) When both prey (*Umbra krameri*) and predator (*Lutra lutra*) are strictly protected species

Grahl, K. (Germany) *Umbra krameri* (WALBAUM 1792) – eine Darstellung des Erkenntnisstandes in den 1960ziger Jahren

Weissenbacher, A. (Austria) Looking beyond the water's edge; ex-situ activities for the European mudminnow, *Umbra krameri*

Stoszková, V. & Choleva, L. (Czech Republic) The Alien Invasive Fish Species of Muddy Waters in the Odra River Basin: Current Situation and Future Trends

Fuxjäger, L. et al. (Austria) Conservation of the weather loach (*Misgurnus fossilis*) in near-natural habitat pools

Fedorčák, J. et al. (Slovakia) Limnophilic Fish Species in Slovakia: The Red List Status and Threats

Šmejkalová, Z. et al. (Czech Republic) Establishment of regional action plan for conservation of critically endangered crucian carp in Czechia

Dianežević, D. et al. (Croatia) Past and Present distribution of *Carassius carassius* in Croatia

Kumkar, P. et al. (Czech Republic) Cryptic Diversity and Taxonomic Ambiguities in *Carassius carassius* from Czech Wetlands: Implications for Conservation

Lehoczky, I. et al. (Hungary) Genetic assessment of crucian carp (*Carassius carassius*) populations in Hungary as part of a conservation initiative aimed at creating a live gene bank

Sallai, Z. et al. (Hungary) The Distribution of the Belica *Leucaspis delineatus* (HECKEL, 1843) and the Crucian Carp *Carassius carassius* (LINNAEUS, 1758) in Hungary Over the Past Fifty Years and the Threats to the Persistence of Their Populations

Sunday, October 26 – Post conference excursion organized and sponsored by nature protection association “Auring”

09:00	Departure by bus from Natural History Museum (NHM) Vienna
9:00 – 10:00	Trip to Eckartsau
10:00 - 11:30	Eckartsau – visit of mudminnow habitats
11:30 – 12:00	Trip to Baumgarten
12:00 - 12:30	Maritz bei Baumgarten - optimal natural habitat of weatherfish (optional)
12:30 – 13:00	Trip to Hohenau an der March
13:00 – 14:30	Lunch at Hohenau an der March (pre-ordered menu/buffet, on own expense)
14:30 - 16:00	Hrudka footpath to “Alte Thaya” – tour to visit measures in the weatherfish project (embankment, connecting ditch, spawning water optimization) + main habitat in the artificial main ditch
16:00 - 16:30	March bridge river tour & connecting ditch: March River to ditch system
16:30 - 17:00	Departure to Vienna (NHM)

Excursion organized and sponsored by Auring, lunch not included.