

#eci2023



XVII EUROPEAN CONGRESS OF ICHTHYOLOGY

4th – 8th September 2023



Abstract book

Terrestrial prey, an important part in *Salmo trutta* diet or a stochastic event?

ČANAK ATLAGIĆ, Jelena ¹; MARIĆ, Ana ²; MARINKOVIĆ, Nikola ¹; ĐUKNIĆ, Jelena ¹; ANDJUS, Stefan ¹; ILIĆ, Marija ¹; TUBIĆ, Bojana ¹; STOJANOVIĆ, Katarina ²; PAUNOVIĆ, Momir ¹; SIMONOVIĆ, Predrag ^{1,2}

¹ Institute of Biological Research “Siniša Stanković”, University of Belgrade, Serbia

² Faculty of Biology, University of Belgrade, Serbia

brown trout diet, terrestrial prey, aquatic prey, prey importance, selective predation

The brown trout is a valuable species for recreational fishing and its diet is of great interest. It feeds on various aquatic invertebrates, but also consumes terrestrial prey, whose contribution is often unjustly underestimated. The importance of terrestrial prey in diets of two trout populations was assessed at two sites (April-October) with different quantity of available aquatic prey (Site 1 high, Site 2 low quantity). Four indices of importance were used: frequency of occurrence (FO), number of prey items (AN), weight (AW), and index of relative importance (IRI). Preference for terrestrial prey was also estimated based on the electivity index (EI), where the availability of aquatic and terrestrial prey was expressed as their percentage in the drift samples.

Significantly less terrestrial prey was available at Site 1 ($0.39\% \pm 0.57\%$) in contrast to Site 2 ($13.21\% \pm 10.38\%$), terrestrial prey was significantly more abundant in the trout diet than in the drift samples at both sites (t test). The EI was positive for terrestrial prey, additionally FO showed that this prey was present in $36\% \pm 16.65\%$ (site 1) and in $87.55\% \pm 8.94\%$ individuals (site 2), indicating a high preference for this type of prey. The importance (IRI) of terrestrial prey was higher than expected at Site 1 ($1.39\% \pm 1.53\%$; maximum 4.7% in September) and high at Site 2 ($58.6\% \pm 23.56\%$; maximum 84.67% in September). Terrestrial prey became more present in the drift and more important in the diet toward the end of the study period, while the importance of aquatic prey decreased based on all four indices at both sites. The correlation between the increasing importance of terrestrial prey (AN, IRI) in the diet and the presence of aquatic prey in the drift (%) towards the end of the season was not significant (Pearson). Thus, the positive trend in the importance of terrestrial prey may be due to their increasing availability and simultaneous decline of large prey in the aquatic community due to the emergence of adults.

Terrestrial prey is generally larger (i.e., yielding more energy) than most aquatic prey and easily captured due to its low mobility in the aquatic environment. In the habitat with low availability of aquatic prey, terrestrial prey played an important role in brown trout diet. In addition, brown trout also preferred it in the habitat rich in aquatic prey. This study shows that terrestrial prey is significant brown trout feeding resource regardless of its general availability in the environment.

DIONIGI Francesco

The Effect of Genome Size on Brain Neuronal Densities in two Sturgeon Species

DIONIGI, Francesco ¹; POLONYIOVÁ, Alexandra ¹; KVERKOVÁ, Kristina ¹; ZHANG, Yicheng ¹; KOCOUREK, Martin ¹; FLAJŠHANS, Martin ²; MUSILOVÁ, Zuzana ¹; KAŠPAR, Vojtěch ²; NĚMEC, Pavel ¹

¹ Department of Zoology, Charles University, Prague, Czech Republic

² South Bohemian Research Center of Aquaculture and Biodiversity of Hydrocenoses, University of South Bohemia in Ceske Budejovice, Vodnany, Czech Republic

density of brain neurons, ploidy, sturgeons, isotropic fractionator

It has been hypothesized based on a few case studies, that ploidy and genome size negatively correlates with brain neuron densities. To test this hypothesis in highly controlled experimental conditions, we compared neuronal and glial cell packing densities in diploid and triploid individuals of the sterlet

#eci2023 - programme overview:

....<O))>< <*)>>< <@))>< <">>< <%>>>< <°>>>><

Monday - 4th of September

18:00 Registration (Congress Hall - Library) + welcome drink

Tuesday - 5th of September

Congress Hall - Library

Room Agro 3 (AIII)

Room Agro 4 (AIV)

08:45 Opening of the congress

09:00 Plenary talk

Martin Reichard

10:00 Coffee break

10:30 symposia (8 talks)

Evolution of life histories

Alien fishes in the Mediterranean – biodiversity, distribution and impact

Otoliths as a tool to study fish life cycles (3rd Edition) // Extraordinary fishes: Phylogeny, ecology and morphology of gobies (I)

12:30 **LUNCH BREAK**

14:00 Plenary talk

Marcelo de Bello Cioffi

15:00 Coffee break

15:30 symposia (6 talks)

Reproductive strategies

Fish sex determination and differentiation from various angles // Fish evolution and genetics (I)

Extraordinary fishes: Phylogeny, ecology and morphology of gobies (II)

17:15 Poster session with snacks and drinks

Wednesday - 6th of September

Congress Hall - Library

Room Agro 3 (AIII)

Room Agro 4 (AIV)

09:00 Plenary talk

Emilia Santos

10:00 Coffee break

10:30 symposia (8 talks)

Fish evolution and genetics (II)

Carassius symposium (I)

Fish ecology, diversity and conservation (I)

12:30 **LUNCH BREAK**

14:00 Plenary talk

Kathryn Elmer

14:50 **GROUP PHOTO**

15:00 Coffee break

15:30 symposia (6 talks)

Fish evolution and genetics (III)

Carassius symposium (II)

16:45 *General assembly of the European Ichthyological Society (Congress Hall - Library)*

18:30 **CONFERENCE DINNER (Únětice Brewery)**

Thursday - 7th of September

Congress Hall - Library

Room Agro 3 (AIII)

Room Agro 4 (AIV)

09:00 Plenary talk

Jörg Freyhof

10:00 Coffee break

10:30 symposia (10 talks)

LIFE Programme: Funding direct action to protect Europe's threatened fish species (I)

Fish evolution and genetics (IV)

Palaeoichthyology: when fossils demonstrate fish diversity and evolution

13:00 **LUNCH BREAK**

FREE AFTERNOON
(optional Zoo visit)

Friday - 8th of September

Congress Hall - Library

Room Agro 3 (AIII)

09:00 Plenary talk

Anthi Oikonomu

10:00 Coffee break

10:30 symposia (8 talks)

LIFE Programme: Funding direct action to protect Europe's threatened fish species (II)

Fish ecology, diversity and conservation (II)

12:30 **LUNCH BREAK**

14:00 Plenary talk

Jens Krause

15:00 Coffee break

15:30 symposia (6 talks)

LIFE Programme: Funding direct action to protect Europe's threatened fish species (III)

Fish ecology, diversity and conservation (III)

17:00 Final remarks, student awards, closing ceremony (Congress Hall - Library)

Detailed scientific programme:

TUESDAY - 5th September 2023

08:45 OPENING OF THE ECI2023

09:00 **Plenary talk (Congress Hall - Library)**

Martin Reichard (Czechia): Evolution of interspecific brood parasitism in fishes

10:00 – 10:30 COFFEE BREAK

10:30 – 12:30 – Scientific symposia:

Congress Hall - Library

Evolution of life histories

chaired by Milan Vrtílek and Jakub Žák

10:30 **Keynote talk**

Rudiger Riesch (UK): Fish life histories in extreme environments

11:00 **Joanna Grabowska** (Poland): Do life-history strategies affect invasion success of freshwater fish species?

11:30 **Jakub Žák** (Czechia): The shortest-lived vertebrates come from water. An overview of the fishes with natural lifespan shorter than one year

11:45 **Milan Vrtílek** (Czechia): Effects of parental senescence in an annual killifish

12:00 **Dmytro Omelchenko** (Czechia): Mutations in hemoglobin genes and their role in the adaptation to hypoxia in Barombi Mbo crater lake cichlids.

12:15 **Abhishek Nair Anil** (Czechia): Role of coevolution in glochidial metamorphosis on multiple species of bitterling fish.

Room Agro 3 (AIII)

Alien fishes in the Mediterranean – biodiversity, distribution and impact

chaired by Nir Stern and Menachem Goren

10:30 **Keynote talk**

Georgios Vagenas (Greece): Decoding the Riddle of Marine Invasions of Non-Indigenous Fishes: Patterns in the Mediterranean through a numerical and spatial resolution approach

11:00 **Nir Stern** (Israel): Status quo in alien fish warfare: multi-annual overview from the Eastern Mediterranean

11:15 **Ertan Taşkavak** (Turkey): A case of being condemned to failure: adversities on conservation efforts of *Carcharhinus plumbeus*

11:30 **Ivana Buj** (Croatia): High diversity of waters, fish communities and stressors reflected in the fish index for ecological state estimation in Croatian water bodies

11:45 **Veronika Labajová** (Czechia): Unexpectedly high diversity of spined loaches (*Cobitis*; Cypriniformes) in the Po River Valley, Italy

12:00 **Margherita Abbà** (Italy): A new alien spined loach (Actinopterygii: Cobitidae) in NW Italy: assessment of its expansion and possible competition with native species in the Malone stream drainage

12:15 **Shevy Rothman** (Israel): Lagging behind – what do we know about the parasitic fauna of alien fishes in the Mediterranean?

Room Agro 4 (AIV)**Otoliths as a tool to study fish life cycles (3rd Edition)***chaired by Alberto Teodorico Correia and Rafael Schroeder*10:30 **Keynote talk**

Alberto Teodorico Correia (Portugal): Structural, shape and chemical proprieties of fish otoliths: current applications, methodological assumptions and future challenges

11:00 **Rafael Schroeder** (Brazil): Population structure, movement pattern and habitat connectivity of *Sardinella brasiliensis* using otoliths as a tool to study sardine life cycle

11:15 **Nor-eddine Chouikh** (Morocco): Spatial variability of linear growth of *Sardina pilchardus* (Walbaum, 1792) from the Moroccan Atlantic coast by using otolithometry

Extraordinary fishes: Phylogeny, ecology and morphology of gobies (I)*chaired by Radek Šanda, Jasna Vukić and Bettina Reichenbacher*11:30 **Keynote talk**

Christopher Goatley (UK): Extraordinary gobies on coral reefs: biodiversity, ecology and ecosystem function

12:00 **Radek Šanda** (Czechia): Diversity of gobies (Gobiidae sensu lato) from European waters and adjacent areas

12:15 **Jasna Vukić** (Czechia): Convergent evolution in body shape in goby lineages

12:30 – 14:00

LUNCH

14:00 Plenary talk (Congress Hall - Library)

Marcelo de Bello Cioffi (Brazil): Too many species, too many types: Sex chromosomes in fishes from a cytogenetic perspective

15:00 – 15:30 COFFEE BREAK

15:30 – 17:00 – Scientific symposia:**Congress Hall - Library****Reproductive strategies**

chaired by Martin Reichard, Holger Zimmermann and Gernot Englmaier

15:30 Keynote talk

Aneesh Bose (Sweden): Is biparental care still 'bi' when one parent doesn't 'care'?

16:00 Terry Donaldson (United States of America): Mating Territory Location Drives Mating Success by Male Wrasses (Labridae) at a Resident Spawning Aggregation Site but Not for All

16:15 Lukas Koch (Czechia): Comparative behavioral study on brood parasitic cuckoo catfish exploitation of host cichlids

16:30 Holger Zimmermann (Czechia): Cannibalism among brood parasitic cuckoo catfish embryos

16:45 Serhii Boryshpolets (Czechia): Crosslink between reproduction strategy and spermatozoa behavior in fishes

Room Agro 3 (AIII)**Fish sex determination and differentiation from various angles**

chaired by Alexandr Sember and Marcelo de Bello Cioffi

15:30 Keynote talk - Alexandr Sember (Czechia): Sex chromosome evolution in African annual killifishes of the genus *Nothobranchius* traced by cytogenomics

16:00 Tomas Pavlica (Czechia): Tracking the existence of unusual $X_1X_2Y_1Y_2$ sex chromosome system in *Bunocephalus banjo* catfish (Siluriformes, Aspredinidae): Unprecedented inter-individual karyotype variability in *B. aloikae*

Fish evolution and genetics (I)

- 16:15 **Francesco Dionigi** (Czechia): Number of neurons in brains of actinopterygian fishes
- 16:30 **Pooria Mohammadzadeh Shaghoei** (Germany): Disentangling species diversity of Iranocichla (Teleostei, Cichlidae) in southern Iran
- 16:45 **Boris Levin** (Russia): A continuum of ecological speciation: a case of repeated evolution of hypertrophied lips in cyprinid fish from East Africa

Room Agro 4 (AIV)

Extraordinary fishes: Phylogeny, ecology and morphology of gobies (II)

chaired by *Radek Šanda, Jasna Vukić and Bettina Reichenbacher*

- 15:30 **Bettina Reichenbacher** (Germany): Diversity of European Gobiidae in the past
- 15:45 **Werner Schwarzhans** (Germany): Gobies, the masters of adaptation, featuring in '15 million years in the evolutionary laboratory'
- 16:00 **Sina Zarini** (Canada): Movement ecology of early juvenile round goby
- 16:15 **Natalia Szydłowska** (Czechia): The non-consumptive effect of higher predator upon food consumption in highly invasive mesopredator *Neogobius melanostomus*: the role of visual and olfactory stimuli in early predatory risk detection
- 16:30 **Sara Kast** (Austria): *Austrolethops wardi* (Teleostei: Gobiidae) – does phylogenetic conservatism obscure trophic ecology?
- 16:45 **Kateřina Holubová** (Czechia): Trophic niches of invasive round gobies *Neogobius melanostomus* and native fish species in the lower part of the Elbe River, Czech Republic

17:15 POSTER SESSION (Circular Pavilion)

WEDNESDAY - 6th September 2023

09:00 Plenary talk (Congress Hall - Library)

Emília Santos (UK): Genetic and developmental basis of morphological variation in cichlid fishes

10:00 – 10:30 COFFEE BREAK

10:30 – 12:30 – Scientific symposia:

Congress Hall - Library

Fish evolution and genetics (II)

chaired by Zuzana Musilová and Sara Stieb

10:30 **Alina Schüller** (Germany): Innovation by inflammation? – The plug, a novel tissue in pelvic brooding ricefishes (Belontiiformes: Adrianichthyidae)

10:45 **Christabel Floi Bucac** (Switzerland): Are genes with variable expression more evolvable? Evidence from the teleost and salmonid whole-genome duplications

11:00 **Zuzana Konvičková** (Czechia): How does the common barbel (*Barbus barbus*) see? The effect of the whole-genome duplication on vision

11:15 **Zuzana Musilová** (Czechia): Vision in the dark: mesopelagic deep-sea fishes and their shallow-water larvae

11:30 **Isabelle Maiditsch** (Switzerland): Shedding X-ray light on the sound-induced motion patterns of the inner ear in two model species, the zebrafish and the glass catfish

11:45 **Veronika Truhlarova** (Czechia): I see you in red: The investigation into opsin gene expression in European cyprinid fishes (family Cyprinidae)

12:00 **Prokop Košťátko** (Czechia): Evolution of vision in sturgeons

12:15 **Sara Mae Stieb** (Switzerland): Seeing on the spectral edges: spectral tuning of UV-vision to UV-colors in damselfishes (Pomacentridae) and red-vision to green-red colors in labrids/wrasses (Labridae)

Room Agro 3 (AIII)

Carassius symposium (I)

chaired by Marek Šmejkal and Lukáš Kalous

- 10:30 **Lukáš Kalous** (Czechia): Questions about fishes of the genus *Carassius*
- 10:45 **Marek Šmejkal** (Czechia): Bringing crucian carp back to life: First results of the Citizen Science Project “Save the Crucian Carp” in the Czech Republic
- 11:00 **Sandip Tapkir** (Czechia): An ecological puzzle: investigating the factors driving gibel carp's competitive supremacy over crucian carp.
- 11:15 **Johan Auwerx** (Belgium): Unknown and still unloved: the story of the crucian carp (*Carassius carassius*) in Flanders
- 11:30 **Million Tesfaye Godana** (Czechia): Gengoro-buna (*Carassius cuvieri* Teminck and Schlegel, 1846) new record from Ethiopia
- 11:45 **Kiran Thomas** (Czechia): Obscured by invasion: Public and conservation bias of the fish status in nature
- 12:00 **Alicja Boroń** (Poland): Coexistence of diploid and triploid females and males of the gibel carp *Carassius gibelio* in the same population - summary of research results
- 12:15 **Martin Knytl** (Czechia): Evolution of microchromosomes in a triploid fish of the genus *Carassius*: A cytogenetic perspective

WEDNESDAY

Room Agro 4 (AIV)

Fish ecology, diversity and conservation (I)

chaired by Miloslav Petrtýl

- 10:30 **Árpád Ferincz** (Hungary): Micropollutants in surface water: new threat to freshwater fish?
- 11:45 **Pradeep Balasaheb Kumkar** (Czechia): Impacts of Plastic and Plasticizers on Small Benthic Loach Fish: Insights from Western Ghats India
- 11:00 **Makubu Priscilla Mokgawa** (South Africa): The uptake and accumulation of polyethylene terephthalate microplastics in the fish tissue of Mozambique tilapia
- 11:15 **Tereza Valchářová** (Czechia): The effect of parasitism on boldness and sheltering behaviour in albino and pigmented European catfish (*Silurus glanis*)
- 11:30 **Iva Prikrylova** (South Africa): Parasites of ornamental fish imported into South Africa: Stowaways that we should be concerned about?
- 11:45 **Andrea Vetešníková Šimková** (Czechia): Hybrid heterosis and hybrid breakdown expressed by pathogen infection in cyprinid fish
- 12:00 **Martina Topić** (Czechia): New insights into genetic diversity of gudgeons of the genus *Gobio* and their monogenean parasites in Austria and Croatia
- 12:15 **Nor-eddine Chouikh** (Morocco): Growth and reproduction of the European hake *Merluccius merluccius* (Linnaeus, 1758) from Safi fishing area on the Moroccan Atlantic coast

12:30 – 14:00

LUNCH

WEDNESDAY

14:00 Plenary talk (Congress Hall - Library)
Kathryn Elmer (UK): Evolutionary divergence and convergence in postglacial salmonids

15:00 – 15:30 COFFEE BREAK

15:30 – 17:00 – Scientific symposia:

Congress Hall - Library
Fish evolution and genetics (III)
chaired by Vendula Šlechtová

- 15:30 **Keynote talk**
Sara Pleše (Croatia): Unlocking the Mysteries of Lamprey Diversity and Evolution in the Danube basin
- 16:00 **Jörg Bohlen (Czechia):** A recent radiation in the loach genus *Schistura* stretched across whole Indochina
- 16:15 **Maximilian Wagner (Austria):** High levels of morphological and genomic parallelism in the interstitial clingfish genus *Gouania*
- 16:30 **Zoran Marčić (Croatia):** The first true cave fish in the Dinaric Karst? Cave colonization made possible by phenotypic plasticity in *Telestes karsticus*
- 16:45 **Anderson Steward González Rivera (Colombia):** Identification of candidate genes associated with differential adaptation of the fish genus *Pimelodus* within thermal and altitudinal gradient in Magdalena-Cauca basin in Colombia.

Room Agro 3 (AIII)

Carassius symposium (II)

chaired by Marek Šmejkal and Lukáš Kalous

- 15:30 **Florian Jacques** (Czechia): Different regulation of gametogenesis and fertilization pathways between gynogenetic and sexual females of gibel carp (*Carassius gibelio*) sheds light on the molecular mechanisms of the stable coexistence of asexual and sexual reproduction
- 15:45 **Fuad Md Mehedi Hasan** (Czechia): *Diplostomum spathaceum* infection inducing differential immune gene expression in sexual and gynogens of gibel carp (*Carassius gibelio*): parasites as potential mechanism facilitating the coexistence of two reproductive forms
- 16:00 **Heiner Kuhl** (Germany): Equilibrated evolution of the mixed auto-/allopolyploid haplotype-resolved genome of the invasive hexaploid Prussian carp
- 16:15 **Lukáš Choleva** (Czechia): Diversity in the genus *Carassius* across Central European watersheds: studying genetic interactions between invasive taxa and threatened native crucian carp (*Carassius carassius*)
- 16:30 open discussion block
- 17:15 Assembly of the European Ichthyological Society (Congress Hall - Library)**
- 18:30 – 22:00 CONFERENCE DINNER (Únětice Brewery)

THURSDAY - 7th September 2023

09:00 Plenary talk (Congress Hall - Library)

Jörg Freyhof (Germany): The conservation status of European freshwater fishes

10:00 – 10:30 COFFEE BREAK

10:30 – 13:00 – Scientific symposia:

Congress Hall - Library

LIFE Programme: Funding direct action to protect Europe's threatened fish species (I)

chaired by Lynne Barratt, Gustavo Becerra Jurado and Jörg Freyhof

10:30 Keynote talk

Lynne Barratt & Maria-Jose Aramburu (Germany): The LIFE Programme and Funding Opportunities for Fish Conservation

11:00 **Vanessa De Santis** (Italy): LIFE PREDATOR: a new EU LIFE Nature & Biodiversity Project to PREvent, Detect, combAT the spread Of *Silurus glanis* in south European lakes to protect biodiversity

11:15 **Martin Čech** (Czechia): LIFE PREDATOR: scientists versus wels catfish (*Silurus glanis*) anglers' lobby

11:30 **Antonella Carosi** (Italy): The 30-year invasion history of *Padogobius bonelli* (Bonaparte, 1846) in the Tiber river basin (Italy): colonization pattern and management implications

11:45 **Georgios Vagenas** (Greece): Historical variations of life-history traits (LFTs) of non-indigenous fishes (NISF) in the Mediterranean during the last 123 years

12:00 **Eleni Kalogianni** (Greece): Population Control of an Invasive Fish: A Critical Action for the Conservation of Threatened Species

12:15 **Antonella Carosi** (Italy): The LIFE STREAMS project for the recovery of the native Mediterranean trout (*Salmo cettii*) in six

pilot areas of Italy: planning and adoption of concrete conservation actions

- 12:30 **Jeroen Van Wichelen** (Belgium): Every cloud has its silver lining, is there a bright future ahead for European weatherfish in Belgium?
- 12:45 **Jānis Bajinskis** (Latvia): Contribution by the LIFE FOR SPECIES project to the protection of threatened fish species in Latvia

Room Agro 3 (AIII)

Fish evolution and genetics (IV)

chaired by Jörg Bohlen

- 10:30 **Lukas Rüber** (Switzerland): Evolution of chameleonfishes (Teleostei: Badidae) in the Western Ghats and Eastern Himalaya biodiversity hotspots
- 10:45 **Susanne Reier** (Austria): Do surface-dwelling fish migrate underground? The case of the minnow *Phoxinus lumaireul* (Schinz, 1840) in the Dinaric Karst
- 11:00 **Sandra Kirchner** (Austria): Enlightened by a blind fish. Comparative analyses of cavernicolous and surface-dwelling populations of *Garra longipinnis*
- 11:15 **Lucija Novoselec** (Croatia): Modern-age refugia – genetic structure and diversity of *Alburnus sarmaticus* in its only remaining habitats in the Danube basin
- 11:30 **Vít Kaufman** (Czechia): Hybridization of cyprinid fishes in the Czech Republic: genetic and morphometric analysis of the family Leuciscidae
- 11:45 **Bárbara Calegari** (Switzerland): Taxonomic overview of the stone loaches genus *Barbatula* (Cypriniformes: Nemacheilidae) from Switzerland
- 12:00 **Gernot Englmaier** (Czechia): Integrative taxonomy of *Synodontis* (Mochokidae) from the Lake Tanganyika basin – a revised perspective on species diversity and intraspecific variability
- 12:15 **Nikola Renić** (Croatia): Weather or Not: The Truth About Weatherfish (*Misgurnus fossilis* L.) in CroatiaR

- 12:30 **Eleni Anna Charmpila** (Czechia): Mitochondrial phylogeny of the genus *Alburnus* (Rafinesque, 1820) with emphasis on the relationships between species from the Adriatic Sea basin
- 12:45 **Dariusz Kaczmarczyk** (Poland): Does the genetic distance between lake minnow (*Eupallasella percunurus*) populations correlate with the geographical distance or not?

Room Agro 4 (AIV)

Palaeoichthyology: when fossils demonstrate fish diversity and evolution

chaired by *Tomáš Přikryl and Bettina Reichenbacher*

- 10:30 **Tomáš Přikryl & Bettina Reichenbacher** (Czechia, Germany): Introduction to the Symposium: Palaeoichthyology: when fossils demonstrate fish diversity and evolution
- 10:45 **Chien-Hsiang Lin** (Taiwan): Exploring the fish paleobiodiversity of the Indo-West Pacific and its possible connection with the ancient European ichthyofaunas
- 11:15 **Manuel Amadori** (Austria): The systematic position of the Jurassic shark †*Palidiplospinax* (Neoselachii; Palaeospinacidae) revisited
- 11:30 **Giorgio Carnevale** (Italia): Moorish idols (Teleostei, Zanclidae) from the Eocene of Bolca, Italy
- 11:45 **Elena Bauer** (Germany): Discovery of the oldest fossil member of the Odontobutidae
- 12:00 **Andrea Herbert Mainero** (Germany): *Valencia* Myers, 1928 and the amazing ancient diversity of Valenciidae Parenti, 1981
- 12:15 **Dominique Mediodia** (Philippines): An overview of fish fossil records in the Philippines
- 12:30 **Siao-Man Wu** (Taiwan): Evolutionary Flexibility and constraint of fish otoliths: a case in Sciaenidae (croakers)

13:00 – 14:30 LUNCH

FREE AFTERNOON (optional ZOO visit)

FRIDAY – 8th September 2023

09:00 **Plenary talk (Congress Hall – Library)**

Anthi Oikonomou (Greece): Conservation biogeography of freshwater fishes: What's hot and what's not

10:00 – 10:30 **COFFEE BREAK**

10:30 – 13:00 – Scientific symposia

Congress Hall – Library

LIFE Programme: Funding direct action to protect Europe's threatened fish species (II)

chaired by Lynne Barratt, Gustavo Becerra Jurado and Jörg Freyhof

10:30 **Mustafa Korkmaz** (Turkey): Using Species Distribution Modelling to Identify Protected Areas for Conserving the Endemic and Threatened Freshwater Fishes of Central Anatolia, Turkey.

~~10:45 **Joel Rees-Jones** (Wales): LIFE Dee River – Restoring one of the most regulated rivers in Europe [CANCELLED]~~

10:45 **Nicolaia Iaffaldano** (Italy): The role of semen cryobank in protecting endangered native Mediterranean brown trout (Molise Region, Italy): LIFE Nat.Sal.Mo Project

11:00 **Tone Tavčar & Kaja Pliberšek** (Slovenia): LIFE SAVING LASCA. Urgent measure to conserve nearly extinct species *Protochondrostoma genei*.

11:15 **Daniel Nyqvist** (Italy): Small fish, small streams, big challenges: conservation of endangered species in tributaries of the upper Po river

11:30 **Einar Kärgerberg** (Estonia): Endangered Fishes and LIFE in Estonia.

11:45 **Karin Olsson** (Sweden): LIFE CONNECTS improves the status of HD Annex listed or Red Listed fish species

FRIDAY

Room Agro 3 (AIII)

Fish ecology, diversity and conservation (II)

chaired by Martin Čech

- 10:30 **Keynote talk (15 min)**
Letha Louisiana Wantania (Germany): Sulawesi's Stream Fishes: Species Coexistence and Habitat Use
- 10:45 **Andrei Togor** (Romania): Updates regarding Asprete/The Sculpin Perch (*Romanichthys valsanicola*), Probably One of The World's Rarest Fish
- 11:00 **Diogo Ribeiro** (Portugal): Movements and space use patterns of invasive juvenile and adult European catfish (*Silurus glanis*) in southern Europe
- 11:15 **Gina Sommer** (Czechia): Stable isotopes provide evidence for trophic niche differentiations in an African river fish community (Mormyridae)
- 11:30 **Kristína Svitačová** (Czechia): The movement activity and exploratory behavior of koi and wild color phenotypes of common carp
- 11:45 **Aymar Orlandi Neto** (Brazil): The increase of invasion rate undermines the alpha diversity in Neotropical reservoirs
- 12:00 **Million Tesfaye Godana** (Czechia): Combined effect of climate and food availability on year class strength of pikeperch (*Stizostedion lucioperca*) in temperate reservoirs
- 12:15 **George Minos** (Greece): Marine gastropod bycatch in cuttlefish trammel net fisheries in Greece and potential for commercial exploitation [SHIFTED FROM AFTERNOON]

12:15 – 14:00

LUNCH

14:00 Plenary talk (Congress Hall - Library)
Jens Krause (Germany): Mexican Waves: The Adaptive Value of Collective Behaviour

15:00 – 15:30 COFFEE BREAK

15:30 – 17:00 – Scientific symposia

Congress Hall - Library

LIFE Programme: Funding direct action to protect Europe's threatened fish species (III)

chaired by Lynne Barratt, Gustavo Becerra Jurado and Jörg Freyhof

- 15:30 **Johanna Hägglund & Linda Vikström** (Sweden): Ecostreams for LIFE - restoring habitats
- 15:45 **Walter Reckendorfer** (Austria): Large scale river restoration projects at the rivers Danube and Inn
- 16:00 **Alessandro Balestrieri** (Italy): Marble trout (*Salmo marmoratus*) and Adriatic grayling (*Thymallus aeliani*) conservation status and management in NW Italy (LIFE20 NAT/IT/001341 - GrayMarble)
- 16:15 **Josu Elso** (Spain): Restoration of the river connectivity to improve diadromous fish populations: LIFE KANTAUERIBAI project

Room Agro 3 (AIII)

Fish ecology, diversity and conservation (III)

chaired by Martin Čech

- 15:30 **Milan Muška** (Czechia): Fish migration between a temperate reservoir and its tributary, effects on native river communities, and ways to prevent it
- 15:45 ~~**George Minos** (Greece): Marine gastropod bycatch in cuttlefish trammel net fisheries in Greece and potential for commercial exploitation [SHIFTED TO THE MORNING SESSION]~~
- 15:45 **João Gago** (Portugal): How non-native catfish *Silurus glanis* is perceived by Portuguese fishermen

FRIDAY

- 16:00 **Boris Levin** (Russia): DNA barcoding of the Volga fishes: unexpected diversity and biogeographical implications
- 16:15 **Heok Hui Tan** (Singapore): Discovery of two uncommon *Encheloclarias* (Teleostei: Clariidae) from Singapore and Brunei
- 16:30 **Rafael Schroeder** (Brazil): The history of the Brazilian sardine (*Sardinella brasiliensis*) between two fishery collapses: an ecosystem modelling approach to study its life cycle
- 17:00 **Final remarks, student awards, closing ceremony (Congress Hall - Library)**

List of Posters

Alien fishes in the Mediterranean – biodiversity, distribution and impact:

P01 - Paraskevi Karachle (Greece): Prey composition of some common mesopelagic fish species from Hellenic Seas

P02 - Menachem Goren (Israel): A time-series study of the dynamics of alien fish species along the Israeli Mediterranean coast.

P03 - Branko Dragičević (Croatia): Insights into the *Anguilla anguilla* population structure in the commercial fyke-net fishery in Croatia

P04 - Sven Horvatić (Croatia): Preliminary insight into sound production of *Dactylopterus volitans* (Dactylopteridae) from the Adriatic Sea

P06 - Aikaterini Dogrammatzi (Greece): Do rabbits differ in Wonderland? The biology of two rabbitfish (*Siganus luridus* and *S. rivulatus*) in the Hellenic Seas.

P07 - Ambra Alderighi (Italy): Movement behaviour, control and removal of invasive European catfish in Po River, Italy.

Carassius symposium:

P08 - Martin Knytl (Czechia): Development of R codes to determine standardized karyotypes in fishes of the genus *Carassius* and any other species

P09 - Jakub Fedorčák (Slovakia): Diversity of *Carassius* species in Slovakia based on mitochondrial DNA and ploidy status

P10 - Jakub Fedorčák (Slovakia): *Carassius carassius* in eastern Slovakia: a step back one minute to midnight?

P11 - Nicola Reinaldo Fornaini (Czechia): Complexity and plasticity of the *Carassius* genome as revealed by cytogenetic mapping of tandem repeats

P12 - Dorota Juchno (Poland): Testes histology and frequency of different stages of spermatogenetic cells in diploid and triploid gibel carp *Carassius gibelio*

P13 - Dorota Juchno (Poland): Sexual and clonal reproduction capabilities of gibel carp *Carassius gibelio*

P14 - Alicja Boroń (Poland): Age and growth rate of the gibel carp *Carassius gibelio* from a bisexual diploid-triploid population in Poland

P15 - Jacek Wolnicki (Poland): Feeding intensity with dry diet affects juvenile crucian carp, *Carassius carassius* (L.), including the growth, occurrence of body deformities and state of gonadal development

P16 - Andrea Vetešníková Šimková (Czechia): Reproduction-associated costs facilitating the coexistence of asexual and sexual forms of gibel carp (*Carassius gibelio*)

Evolution of life histories:

P17 - Milan Vrtílek (Czechia): Fishing for reproductive senescence

Extraordinary fishes: Phylogeny, ecology and morphology of gobies:

P19 - Bettina Reichenbacher (Germany): Description and interpretation of new species-identifying differences in the skeletons of three species of *Corcyrogobius* (Gobiidae)

P20 - Kacper Pyrzanowski (Poland): Reproductive traits of the invasive round goby (*Neogobius melanostomus*) along a latitudinal gradient in Europe

P21 - Maria Yu. Tkachenko (Czechia): Changes of the round goby (*Neogobius melanostomus*) population structure and its dynamic under industrial pressure (Sea of Azov, Ukraine)

Fish ecology, diversity and conservation:

P22 - Bálint Bánó (Hungary): Scale register of Carpathian fish species

P23 - Dóra Somogyi (Hungary): Intraguild predation: a biotic interaction that could lead to the population decline of the threatened native fish, the European mudminnow (*Umbra krameri* Walbaum, 1792), by the invasive Amur sleeper (*Percocottus glenii* Dybowski, 1877)

P24 - Diogo Ribeiro (Portugal): Reproductive traits of the invasive apex predator *Silurus glanis* in the Tagus River, Portugal

P25 - Roberta Barbieri (Greece): Variations in the early development of wild and reared cyprinid *Telestes pleurobipunctatus*

- P26 - Chandani Verma** (Czechia): Impact of microplastic Contamination on estuarine mudskipper fish
- P27 - Grzegorz Zięba** (Poland): Trophic niche of the Amur sleeper at its range limit
- P28 - Laszlo Antal** (Hungary): Experimental evidence for multiple fish species surviving gut passage of waterbirds
- P30 - Jelena Čanak Atlagić** (Serbia): Terrestrial prey, an important part in *Salmo trutta* diet or a stochastic event?
- P31 - Rachid Amara** (France): Abundance and Growth of the European Eels (*Anguilla anguilla* Linnaeus, 1758) in Small Estuarine Habitats from the Eastern English Channel
- P32 - Márton Sallai** (Hungary): Age, growth and condition factor of the riverine bigheaded carp (*Hypophthalmichthys* spp.) in Hungary
- P33 - Zoltán Vitál** (Hungary): Themed social media groups as effective sources of data: A country-wide survey on invasive bigheaded carp distribution
- P34 - Agata Korzelecka-Orkisz** (Polska): The population structure of sea trout (*Salmo trutta* L., 1758) spawning in the Rega River (southwest Baltic basin, Poland).
- P35 - Zeliha Erdoğan** (Turkey): Biology of salema [*Sarpa salpa* (L.)] population off Gökceada (northern Aegean sea, Turkey): a macroherbivore species living in sea grass beds
- P36 - Hatice Torcu Koç** (Turkey): Growth of golden-banded goatfish, *Upeneus moluccensis* (Bleeker, 1855) population from Iskenderun bay: an invasive species in northern Mediterranean sea, Turkey
- P37 - Lidia Marszał** (Poland): Predictors of the distribution of the endangered spirulin (*Alburnoides bipunctatus*)
- P38 - Martin Hubálek** (Czechia): How does induced polyploidy affect the swimming and physiological performance of juvenile sterlet (*Acipenser ruthenus*) and Siberian sturgeon (*Acipenser baerii*) and their reciprocal hybrids?
- P39 - Michal Hnilička** (Czechia): Daily feeding habits of the black bullhead catfish (*Ameiurus melas*) under conditions of high-density population
- P40 - Jan Hůda** (Czechia): Brown trout populations in the streams of lakes Čertovo and Laka (The Bohemian Forest, Czechia)

P41 - Petr Blábolil (Czechia): Living jewels under the water surface of the Bohemian Forest

P42 - Michaela Holubová (Czechia): Underwater Visual Census as a Relevant Method for Fish Monitoring

P43 - George Kehayias (Greece): Increased predation of the endangered fish *Economidichthys trichonis* by *Atherina boyeri* close to fishery lights in Lake Trichonis: new insights

P44 - Beata Więcaszek (Poland): Diet analysis of *Vimba vimba* (L.) and *Coregonus lavaretus* (L.) populations from the Szczecin Lagoon and Lake Dąbie (Odra River Estuary)

P45 - Borys Dzyuba (Czechia): Development of protocols for fractionation of cryopreserved sperm in fishes

P46 - Rafał Kamiński (Poland): Extracorporeal digestion of dry feed with hydrochloric acid improves the biological quality of juvenile cypriniform fish under controlled conditions

P47 - Adam Brysiewicz (Poland): The possibilities of reproduction of anadromous salmonid fish in the tributaries of the Baltic Sea - a case study of the Ina River

P48 - José Gregorio Martínez (Colombia): Evaluation of phenotypic predictors for oxygen radical absorbance capacity in semen of the neotropical fish bocachico *Prochilodus magdalenae*

P49 - Mišo Pavičić (Croatia): The critically endangered Angelshark (*Squatina squatina*) in the eastern Adriatic Sea: conservation efforts and recent findings

P50 - José Gregorio Martínez (Colombia): Testing the cryptic diversity of the Trans-Andean *Pimelodus*

P51 - Abdeslem Arab (Algérie): Study of the ichthyological diversity in the Ghrib dam in Algeria

P52 - Min Chai (Austria): Small fish make it big - Biodiversity of Austria's Minnows (*Phoxinus* sp.)

P53 - Krisztián Nyeste (Hungary): Assessment of trace element accumulation in cyprinid juveniles with various diets and habitat preferences

P54 - Krzysztof Formicki (Poland): Heavy metal distribution in various tissues of Sea trout (*Salmo trutta m. trutta*) from the Rega river in northern Poland

P55 - Beata Więcaszek (Poland): Parasite fauna and the condition of *Coregonus lavaretus* (L.) and *Vimba vimba* (L.) from the Odra River Estuary (north-western Poland)

P56 - Przemysław Czerniejewski (Poland): Long term changes in commercial fish catches and fish composition in Szczecin Lagoon

P57 - Nika Stagicic (Croatia): State of littoral fisheries resources in the Mljet National Park, eastern Adriatic Sea

P58 - Chryssa Anastasiadou (Greece): Hemolymph total antioxidant capacity (TAC): preliminary results for four commercial decapod species in the Northern Aegean Sea

P59 - Devrim Memis (Turkey): The death of the endangered sturgeon species (*Huso huso*) in the Küçükçekmece Lagoon: Let's focus on causes

Fish evolution and genetics:

P60 - Monika Kłodawska (Czechia): The visual ecology of cichlid fishes from crater lake Barombi Mbo in Cameroon

P61 - Adéla Mikešová & Lubomír Piálek (Czechia): De novo genome assembly of the cichlid *Crenicichla semifasciata* by combination of sequences from different sequencing platforms

P62 - Francesco Dionigi (Czechia): The Effect of Genome Size on Brain Neuronal Densities in two Sturgeon Species

P63 - Péter Takács (Hungary): Phylogeny of minnows (*Phoxinus*) in the Carpathian Basin

P64 - Ana Marić (Serbia): European bullhead (*Cottus gobio*) new mtDNA haplotype discovered in the Neretva River

P66 - Thais Ferreira-Araújo (Finland): Resolving the mystery of freshwater breeding flounders?

P67 - Lucija Onorato (Croatia): Hidden Diversity of the Stone Loach in Croatia: Insights from Molecular Phylogenetics

P68 - Vendula Šlechtová (Czechia): An updated phylogeny of the loach genus *Nemacheilus*

P69 - Joerg Bohlen (Czechia): First record of sexual dimorphism in Botiidae – a new synapomorphy for loaches

P70 - Tomáš Dvořák (Czechia): Using Species Groups to Approach the Large and Taxonomically Unresolved Freshwater Fish Family Nemacheilidae (Teleostei: Cypriniformes).

P71 - Jan Krzystolik (Poland): The effect of a constant magnetic field on the directional responses of invasive stone moroko (*Pseudorasbora parva*)

P72 - Radosław Piesiewicz (Poland): The impact of a constant magnetic field on the choice of spawning site in three spot gourami (*Trichogaster trichopterus* (Pallas, 1770))

P73 - Zuzana Konvičková (Czechia): How fish see in the deep sea: The adaptations of opsin gene repertoire in mesopelagic fishes

P74 - Fabio Cortesi (Australia): What the latest advances in molecular approaches and technologies can teach us about the evolution and function of fish vision

LIFE Programme: Funding direct action to protect Europe's threatened fish species:

P75 - Eleni Kalogianni (Greece): Habitat restoration for the conservation of two threatened fishes in an intermittent river

P78 - Ursula Scheiblechner (Austria): Dynamic LIFE Lines Danube (LIFE18 NAT/AT/000733)

P79 - Branko Glamuzina (Croatia): Invasive fish species in the estuarine environment: case of Neretva Estuary (Croatia)

P80 - Lynne Barratt (Germany): Rivers full of LIFE. Addressing the plight of freshwater fish in European waters

Otoliths as a tool to study fish life cycles (3rd Edition):

P81 - Eleni Anna Charmpila (Czechia): Can otolith morphometry differentiate between superficially similar species of *Aphaniops*?

P82 - Rachid Amara (France): Relationship between habitat use and condition of European eel (*Anguilla anguilla*) in small estuaries of the eastern English Channel

P83 - Sanja Matić-Skoko (Croatia): Which factors are more responsible for interannual changes in juvenile fish community composition?

P84 - Alberto Teodorico Correia (Portugal): Is *Chelidonicthys lucerna* a marine estuarine-dependent fish? Insights from otolith microchemistry

P85 - Alberto Teodorico Correia (Portugal): Stock structure and connectivity of *Scomber colias* along the Northwest coast of Africa inferred from otolith microchemistry

Palaeoichthyology: when fossils demonstrate fish diversity and evolution:

P86 - Siao-Man Wu (Taiwan): Tracing the evolutionary history of Sciaenidae (croakers) by means of machine learning technique

P87 - Martin Konwert (Germany): New Information on Leptolepis (Teleostei: Leptolepididae) from the Lower Jurassic of NE-Germany

P88 - Chien-Hsiang Lin (Taiwan): New acropomatid fossils (Acropomatidae) from the early Pliocene of upper Kueichulin Formation, northern Taiwan

P89 - Tomáš Přikryl (Czechia): “*Glossanodon*” *muscelli* – new data on osteology and systematic comments

P90 - Eduardo Villalobos Segura (Austria): Reassessment of late Jurassic elasmobranch fishes

P91 - Manuel Andreas Staggl (Austria): Diversification Patterns of Jurassic-Cretaceous Elasmobranch Fishes (Vertebrata, Chondrichthyes)

Reproductive strategies:

P92 - Olga Jabłońska (Poland): Does temperature affect the reproduction modes of allotriploid *Cobitis* females (Cobitidae, Pisces)?

P93 - Antonela Paladin (Croatia): Reproductive biology of the blackspot seabream *Pagellus bogaraveo* (Brunnich, 1768) from the eastern Adriatic Sea

P – commercial, INNOVASEA company

Committee

Meet our organizing and scientific committee:



Zuzana Musilová: Assistant Professor at the Department of Zoology, Faculty of Science, Charles University in Prague; ([web](#), [RG profile](#), [lab](#)).



Miloslav Petrtýl: Assistant Professor at the Department of Zoology and Fisheries, Faculty of Agrobiolgy, Food and Natural Resources, Czech University of Life Sciences in Prague; ([web](#), [RG profile](#)).



Lukáš Kalous: Professor at the Department of Zoology and Fisheries, Faculty of Agrobiolgy, Food and Natural Resources, Czech University of Life Sciences in Prague; ([web](#), [RG profile](#)).



Vendula Šlechtová: a researcher in the Laboratory of Fish Genetics, Institute of Animal Physiology and Genetics, Czech Academy of Sciences in Liběchov; ([web](#), [RG profile](#)).



Jörg Bohlen: a researcher in the Laboratory of Fish Genetics, Institute of Animal Physiology and Genetics, Czech Academy of Sciences in Liběchov; ([web](#), [RG profile](#)).



© 2024 ECI XVII

THEME BY ANDERS NOREN – UP ↑