

Biodiversity conservation

Oral presentation

Facultative paedomorphic newts in the Balkans: hotspot, habitats, declines, and threats

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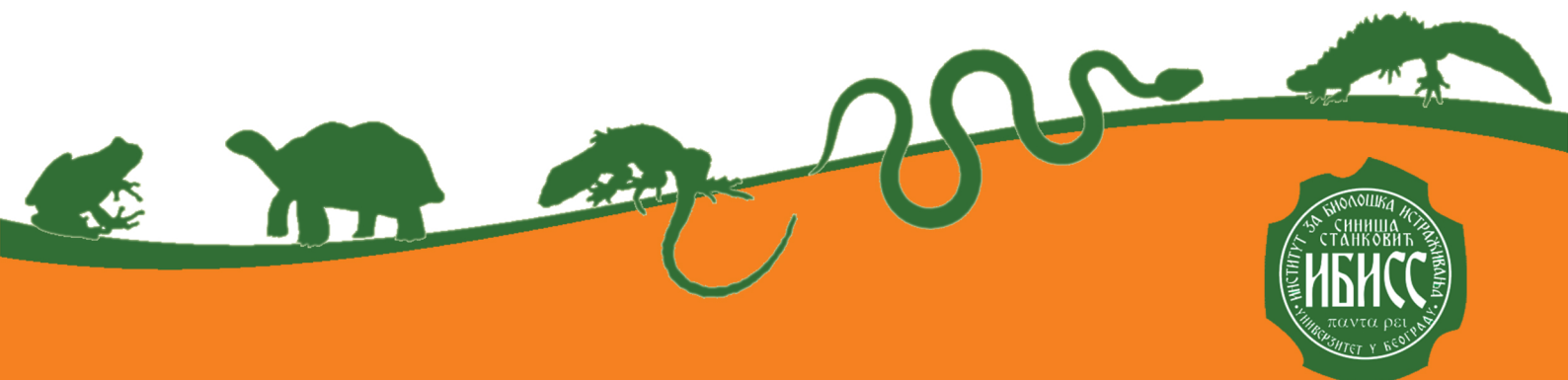
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Facultative paedomorphosis is a polyphenism that implies the development of two alternative adult phenotypes: the metamorphs that lose their gills at metamorphosis and the paedomorphs, which retain them. Our aim was to depict their patterns of distribution, habitats, declines and threats across the Balkans with the support of multiple local collaborations. Metamorphosis is the most common developmental process in newts and one of the main hotspots for newt paedomorphosis occurs in Balkans with the three genus involved: *Ichthyosaura*, *Lissotriton* and *Triturus*. In Alpine newts, the largest populations of paedomorphs were described in an area located between Montenegro and northern Greece, occupying mountain lakes where population sizes can reach thousands of individuals, but also present in lower numbers in mid-elevated ponds and wells. Paedomorphic Greek smooth newts and Macedonian crested newts were typically associated with ponds. Although the former constituted sometimes large populations, the second was usually represented only by a few individuals. Other paedomorphic populations were also described in other Balkan countries. However, recent surveys evidenced high population losses in most habitats, particularly in Montenegro where the situation is catastrophic with almost all populations of paedomorphic newts now extinct, reducing the current hotspot. Paedomorphs from several emblematic subspecies also vanished in several Balkan countries. The main environmental driver of the declines was the introduction of fish, and more recently crayfish. Based on Corine land cover, land use had no significant effect on population losses but care should also be taken to future changes of land use. An increase of urbanisation and pollution was indeed found at the border of some lakes and some habitats became inadequate for newts. There is therefore an urgent need to stop fish introductions and to reverse habitats to more pristine pre-fish conditions to maintain the little dragons of the Balkans.



Program & Book of Abstracts

Belgrade
2022



Wednesday, 7th September 2022

9:00
10:00

PLENARY LECTURE (Room 1)
Cogălniceanu, D.
Skeletochronology - a valuable tool in ectotherm population biology studies
Chairman: Ana Ivanović

COFFEE BREAK(20 min)

10:20
10:35

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12:05

12:05
12:20

	Room 1	Room 2	Room 3
	Biodiversity and Conservation (Continued) Chairmen: Wolfgang Böhme, Martina Lužnik	Reproductive Systems and Life Histories Chairmen: Dan Cogălniceanu, Tijana Vučić	Pathogens Chairman: Silviu Petrovan, Andreas Maletzky
	van Doorn et al. Presenter: van Doorn, L.	Dittrich et al. Presenter: Dittrich, C	Kásler et al. Presenter: Kásler, A.
	At the forefront of conservation: integrating science and amphibian reintroductions in Flanders, Belgium	Parental care and paradox decisions: does relatedness play a role in nursery choice?	Optimization of heat-treatment against chytridiomycosis in <i>Bufo bufo</i> tadpoles
	Denoël Presenter: Denoël, M.	Lunghi Presenter: Lunghi, E.	Ljubicavljević et al. Presenter: Vukov, T.
	Facultative paedomorphic newts in the Balkans: hotspot, habitats, declines, and threats	Preliminary data on the seasonal growth rate of the Italian cave salamander <i>Speleomantes italicus</i>	Occurrence of chytrid fungus (<i>Batrachochytrium dendrobatidis</i>) and body condition in syntopic water frogs <i>Pelophylax shqipericus</i> and <i>P. ridibundus</i>
	Petrovan and Sutherland Presenter: Petrovan, S. O.	Ruthsatz et al. Presenter: Ruthsatz, K.	Kok et al. Presenter: Kok, P. J.R.
	Toads in trees and spots on frog. Using citizen science tools to learn new things about well-known amphibians	Microplastics have sublethal effects on amphibian larvae and lead to post-metamorphic carry-over effects: A study with polyethylene microplastics and <i>Xenopus laevis</i>	Tourist incursions predict chytrid load in amphibians from the pristine "Lost World"
	Herder and Janse Presenter: Herder, J. E.	Hettzey et al. Presenter: Hettzey, A.	Leeming et al. Presenter: Leeming, S.
	Successful translocation of moor frog (<i>Rana arvalis</i>) and pool frog (<i>Pelophylax lessonae</i>) in the Netherlands	Ecotoxicology in a complex world: combined effects of pesticides and pathogens during early life in an anuran amphibian, <i>Rana dalmatina</i>	Ectoparasitism in Polystomatidae (Neodermata, Monogenea): phylogenetic position and mitogenome of <i>Sphyrnura euryceae</i> , a parasite of the Oklahoma salamander
	Janse et al. Presenter: Janse, J.	Muraro et al. Presenter: Muraro, M.	Ecophysiology Chairman: Nataša Tomašević Kolarov
	Conservation practices of yellow-bellied toad and midwife toad in The Netherlands	Drivers of sexual dimorphism variation across populations of the Italian wall lizard at different spatial scales	Stückler et al. Presenter: Stückler, S.
	Brito et al. Presenter: Brito, J. C.	Roitberg et al. Presenter: Roitberg, E. S.	Evidence that catecholaminergic systems are evolutionarily co-opted to mediate dynamic colour change during explosive breeding events in toads
	Diversity, distribution and conservation of the West African Crocodile in Mauritania	Variation in body size and sexual size dimorphism in the lizard <i>Zootoca vivipara</i> : The effects of reproductive mode revisited	Kijanović et al. Presenter: Kijanović, A.
	Billy et al. Presenter: Billy, G.	Bouazza et al. Presenter: Bouazza, A.	Desiccation stress response of <i>Bombina variegata</i> tadpoles
	Strict nature reserve status and snake population maintenance	Elevation influences reproductive traits and maternal conditions in an alpine gecko	Carretero et al. Presenter: Carretero, M. A.
	Zotos et al. Presenter: Zotos, S.	Zeigler et al. Presenter: Ziegler, C.	Has fundamental niche shifted in the Aeolian <i>Podarcis</i> ? An ecophysiological investigation
	Predicting mortality risks of colubrid snakes on Cyprus roads using habitat suitability modelling	Optimal body mass-length ratio during hibernation for <i>Emys orbicularis</i> (Linnaeus, 1758) – European Pond Turtle	