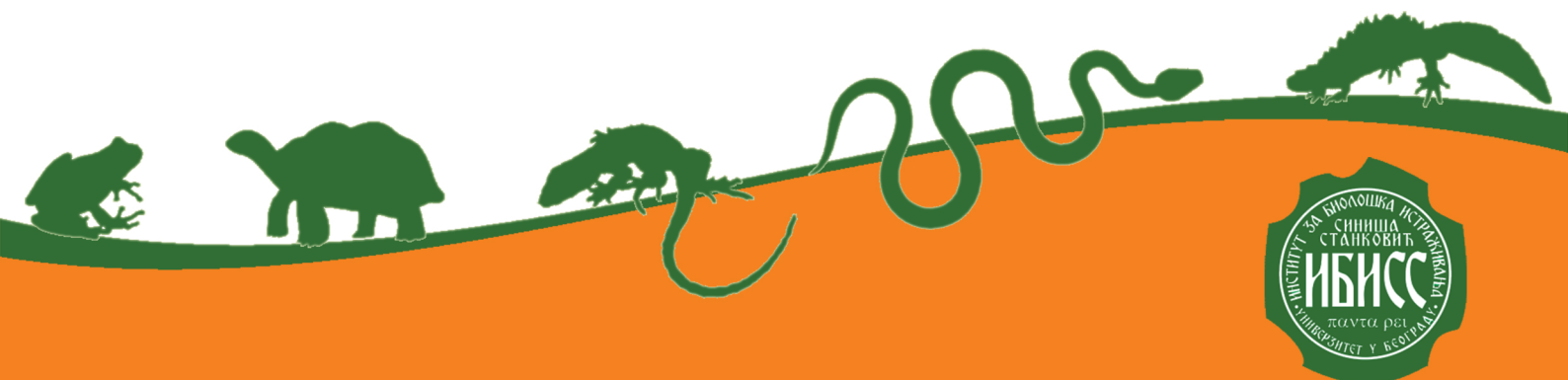




Program & Book of Abstracts

Belgrade
2022



PUBLISHER

Institute for Biological Research “Siniša Stanković” – National Institute of Republic of Serbia, University of Belgrade, Serbia

FOR PUBLISHER

Mirjana Mihailović, director of the Institute for Biological Research “Siniša Stanković” – National Institute of Republic of Serbia, University of Belgrade

EDITORS

Jelka Crnobrnja-Isailović
Tanja Vukov
Tijana Vučić
Ljiljana Tomović

CONGRESS LOGO DESIGN

Dejan Brajović

BOOK COVER

Tanja Vukov, Marko Mirč

EDITION

Available electronically only

PLACE AND YEAR OF PUBLICATION

Belgrade, 2022

ISBN

978-86-80335-19-3

Ecophysiology

Poster presentation

Seasonal variation in ecophysiology of the lizard *Podarcis tauricus*

Ćorović J.^{1,*}, Ćosić N.¹, Crnobrnja-Isailović J.^{1,2}

¹Institute for Biological Research "Siniša Stanković" – National Institute of Republic of Serbia, University of Belgrade, Belgrade, Serbia

²Faculty of Sciences and Mathematics, University of Niš, Serbia

*Corresponding author (e-mail): Jelena Ćorović (jelena.veg@gmail.com)

During thermoregulation reptiles suffer evaporative water loss (EWL) and the intensity of water loss depends on the temperature and the humidity of the habitat. As evaporation increases with temperature, the EWL could constrain the activity of ectotherms when water is not available. The thermal preference of a species and its resistance to water loss can remain similar under different environmental conditions and over time, or they can change depending on a variety of factors. One of the most important factors regarding temperate climate is its seasonality, and ectotherms living in such climate may be adapted to the seasonal fluctuations in the environment and show different physiological responses depending on the season. During spring (May) and autumn (September) we observed two ecophysiological traits of the Balkan wall lizard (*Podarcis tauricus*): preferred body temperature (T_{pref}) with set-point range (T_{set}), and EWL rates (instantaneous evaporative water loss – EWL_i and accumulated evaporative water loss – EWL_a). In these experiments we analyzed only adult males. Our findings showed that the thermal preference of *P. tauricus* was conserved between the seasons, as T_{pref} and T_{set} were quite similar in May and September (T_{pref} May: 21.5°C-36.1°C and T_{pref} September: 21.0°C-35.9°C; T_{set} May: 28.6°C-32.5°C and T_{set} September: 28.7°C-32.6°C). Overall hourly rates of evaporative water loss were lower in September and EWL_i was also with fewer oscillations in the autumn. Mann-Whitney U test showed a significant difference in the total EWL_a ($p < 0.05$). The analyzed lizards lost, on average, 2% and 1.2% of body weight in May and September, respectively. These results indicate that there might be a seasonal change in the sensitivity to water loss that enables the species to lose less water during the drier season.