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BOOK OF ABSTRACTS

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aligned 3'and 5'COI gene sequences were concatenated and combined into a single sequence matrix with the final length of 1260 bp. The COI matrix was used as input for the maximum parsimony and the maximum likelihood tree construction. The COI haplotypes were compared with the sequence database of the National Center for Biotechnology Information (NCBI) using the Basic Local Alignment Search Tool (BLAST).

RESULTS:
Specimens from Georgia are resolved as monophyletic on both maximum parsimony and maximum likelihood trees with high bootstrap support values (99). The BLAST search of the NCBI nucleotide database confirmed the belonging of these specimens to the *M. aureus* species group, while the tree topologies indicate that they were genetically most similar to the *M. aff. bessarabicus* from Turkey. Furthermore, this clade comprises the specimen in the juvenile stage from Georgia, that has not been successfully identified to a species level in the previous studies.

CONCLUSIONS:
In this study, we discovered one new candidate species within the *M. aureus* group and defined the species status of the juvenile specimen from Georgia. The new species morphologically belong to the *M. cinereus* subgroup. However, our study showed a high genetic similarity between this species and morphologically different *M. aff. bessarabicus* from Turkey which belongs to the *M. bessarabicus* subgroup. Such high discordance between molecular and morphological divergence has already been noticed within the *M. aureus* group, and in this particular case, it is probably a result of the geographical proximity, as well as the introgression during the evolutionary past of the two species. In order to fully address causes of observed discordance additional morphological and molecular analyses will be needed.

T1-P-4 Diversity of *branchipus* populations (branchipoda, crustacea) on the territory of Serbia - could the body size be an indicator of geographical and environmental distinctness?

Dragana Miličić[30], Sofija Pavković-Lučić[30], Jelena Trajković[30],Tatjana Savić[31]

KEYWORDS: Branchiopoda; morphology; diversity

INTRODUCTION:
Large branchiopod crustaceans (Class Branchiopoda) usually inhabit small and ephemeral inland water bodies. Some species have been included into national red lists, and some are strictly protected in many European countries. Both the abundance of their specimens in natural populations and their body size can be used as bioindicators of geographical and environmental differences. For the reasons stated above, this group can be used for defining the ephemeral wetland habitats and their possible functions and values.

OBJECTIVES:
The objective of this study was to determine whether the morphological analysis can be used to differentiate *Branchipus* populations from several areas within a certain territory. We used populations from the northern, Pannonian parts (Srem, Banat, and Bačka Districts), and from the southern, mountainous region of Serbia, whose habitats are particularly different in their origin, and physical/chemical features.

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METHOD / DESIGN:

After selecting the most representative locations, body parts that are common to both sexes were measured in all examined populations: a total body length, thorax, abdomen, and cercopod lengths, ratio of total body to thorax length and ratio of total body to the abdomen length. The measurements were performed with the accuracy of 0.1 cm. Data were analyzed using descriptive statistics.

RESULTS:

According to the linear body measurements common for both sexes, results of descriptive statistical analysis showed that two geographical groups of individuals can be distinguished: *Branchipus* populations from the northern habitats (plain landscape of the country), and populations from localities in the southern (hilly part of the country). Morphological parameters that mostly affected differentiation of samples were: abdominal length, the contribution of thorax in total body length, and the contribution of abdomen in total body length.

CONCLUSIONS:

Large branchiopod crustaceans are the flagship animal group for some inland water ecosystems and temporary pools. Results of this study show that two geographical groups of individuals stood out from very different types of habitats, occurring in the northern lands and in the southern hilly and mountainous areas of the country. Present results indicate that linear morphological data obtained by applying the method of discriminate morphological analysis can be an auxiliary method in taxonomic determination of populations and assessment of the regional biodiversity.

T1-P-5 Food choice in *Drosophila melanogaster*: the role of diet type, sex and social environment

Jelena Trajković[32], Sofija Pavković-Lučić[32], Dragana Miličić[32], Tatjana Savić[33]

KEYWORDS: nutrition; food choice; fruit fly

INTRODUCTION:

Insect nutrition is a widely researched topic, since diet affects many biological processes, which can be monitored from cellular to behavioral level. As one of the most important environmental factors, food quality and balance in the amount of key nutrients, strongly affect fruit fly *Drosophila melanogaster* fitness. A number of genes involved in multiple sensory pathways and complex physiological systems are consequently included in the regulation of feeding behavior. The fruit fly food-related behavior is primarily influenced by nutritional needs, and may change throughout life. Also, food choice may be determined by sex and the social environment, i.e. by the presence of other individuals.

OBJECTIVES:

The aim of this study was to determine whether there were differences in food choice between *D. melanogaster* strains reared on two different substrates for more than 20 years. For that purpose, five food items were offered. Further, it was examined whether sex and social environment influenced food choice in these two strains.

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