

The variability of some characters within local populations of amphibians in Dorohoi area, Botoșani county

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Abstract.

To investigate the phenotypic variability, in response to the interaction of environmental factors on gene pool, was used as biological material individuals belonging to *Rana esculenta* complex [(*Rana ridibunda* (Pall.) and *Rana esculenta* (L.) hybrid] collected from two separate water basins, located in Dorohoi municipality, offering different living conditions. Investigations aimed to highlight morphometric, chromatic, cytogenetic and biochemical variability, both in the same population and in different populations. The obtained data were statistically processed and interpreted. It was found a significant variability at interspecific, intraspecific and even individual level.

Keywords: *Rana ridibunda*, *Rana esculenta*, cytogenetics, morphometry, chromatic polymorphism, biochemical indices.

1. Introduction

Starting from the concept of selection action at the population level, we have to keep in mind that the original material on which selection acts is variability, essentially ensured by mutation and genetic recombination. Selection at the individual level, acts on phenotypes, while being advantaged or disadvantaged genotypes that determine the manifestation of these phenotypes.

Understanding the mechanisms by which populations evolve, as a result of permanent confrontation between gene pool and the concrete conditions of the environment, represents an important and topical concern of specialists.

Aspects of amphibians variability are captured in papers which presents their different adaptation to different environmental conditions, which bring new arguments regarding the ability of populations to answer the selective pressure of the environment.

Relatively recent studies have revealed the mechanisms of population coming to counteract the extreme effects of the environment. Thus, frost tolerance is an adaptive response that allows species to survive and employs biochemical and physiological mechanisms genetically regulated. Storey and Storey (1984) have shown that in winter, frogs accumulate large amounts of glycogen in the liver, which will serve as a source of frost protection. Lee et al. (1990) have shown that