

Short-Term Effects of Larval Density on the Body Size and Behaviour in *Triturus dobrogicus* (Kiritzescu 1903)

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Abstract. *The decrease in water availability is a threat to amphibian fitness and demography traits due to habitat reduction and rising individual densities of larvae in smaller water bodies. We assessed the short-term effects of increased densities on the body size, survival and behaviour (aggressivity and cannibalism) of Triturus dobrogicus (Kiritzescu 1903) larvae in experimental low, medium and high densities. Our results showed that high densities negatively affect the body size at metamorphosis and survival rate. Also, the frequency of injuries due to aggressivity and cannibalism increased at high individual densities. By extrapolating the results to natural conditions, we predict that increased densities will affect larval fitness and overall the reproductive success. The present study showed how the aquatic habitat reduction due to desiccation induces negative short-term effects in a newt population.*

Key words: growth, survival rate, aggressivity, cannibalism.

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1. Introduction

Temperate amphibians have a complex life cycle that includes an aquatic stage for egg deposition and larval development, followed after metamorphosis by a terrestrial stage [1]. Thus, changes in water levels during spawning and the larval period can affect the reproductive success of local populations [2]. The aquatic environment is important because it can shape the life-history traits of