
Section 2: Animal Sciences and Wildlife Management**HEMATOLOGICAL INDICATORS OF AQUATIC ENVIRONMENT TOXICITY**

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ABSTRACT - HEMATOLOGICAL INDICATORS OF AQUATIC ENVIRONMENT TOXICITY

In this study toxic effects of an acetylcholinesterase inhibitor (organophosphate pesticide *Terbufos*) on hematological parameters of Crucian carp (*Carassius auratus* Gibelio) are presented. For this purpose 40 fish (3 years old, mean body mass 114,68 g, mean fork length 15,54 cm) were randomly divided into 2 groups (20 individuals each) and situated into two identical aquaria (60 liters each) equipped with appropriate filters, heaters and aerators. In one of the aquaria *terbufos* was added in concentrations of 0,133 mg/l. Fish were treated for 15 days. At the end experiment blood was taken by heart puncture in both controlled and treated fish. The following parameters were determined in native blood: number of erythrocytes (RBC), packed cell volume (PCV), Mean Corpuscular Volume (MCV), while surface area of erythrocytes (μm^2), surface area of nucleus (μm^2) and erythrocyte thickness (μm) were estimated on blood smears. The toxic effects of erythrocyte acetylcholinesterase inhibition of treated fish resulted in significant increase of values RBC, PCV, surface area of both erythrocytes and their nuclei and decrease of MCV and erythrocyte thickness.

These results show that haematological parameters of fish are valuable specific and reliable indicators of water toxicity which are easy to perform on live animals.