

EFFECTS OF SELECTED METALS ON THE FEEDING ACTIVITY OF *ASELLUS AQUATICUS* UNDER LABORATORY AND FIELD CONDITIONS

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Abstract

Pollution of metals and organic micropollutants in aquatic ecosystems has increased globally due to anthropogenic activities. These contaminants induce various sublethal effects that can have a large impact on the ecosystem. Feeding is frequently used as one of the behavioural responses that can be affected. It is an important endpoint because it allows organisms to obtain energy useful for growth, maintenance and reproduction. This study was carried out to investigate the effects of metals on the feeding rates (FR) of *Asellus aquaticus* under laboratory and field conditions and study how FR can be used to monitor water quality. In the laboratory, *A. aquaticus* were exposed to different concentrations of copper, cadmium and lead, and different temperatures to determine their effects on feeding rate. There was a significant difference in the feeding rate between the controls, different metals and temperatures ($p < 0.05$). Also, significant difference was detected between different sites in the field experiment and between in situ and ex situ experiments ($p < 0.05$). This study concludes that metals inhibit feeding rate of *A. aquaticus*. Both field and laboratory studies can be used to measure water quality and determine how the community of organisms may respond to changes in the ecosystem over time due to pollution.

Key words: Feeding rate, *Asellus aquaticus*, metals, in situ, ex situ and pollution