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Effects of Type II Pyrethroids on Daphnia magna: Dose and Temperature Dependences

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Key words. Pyrethroid insecticides, *Daphnia magna*, toxicity

Abstract. *Environmental contamination with various insecticides remains an actual problem. In this connection, investigation of toxicologic hazard of insecticides is essential. In this work, effects of the type II pyrethroids (fenvalerate, cypermethrin and deltamethrin) on Daphnia magna were determined. It was found for the first time that not only low doses (up to 10^{-12} M) of the above-mentioned chemicals but also extremely low doses (up to 10^{-29} M) showed toxicological action on the invertebrates both at optimal ($23 \pm 0.5^\circ\text{C}$) and increased ($28 \pm 0.5^\circ\text{C}$) temperature. At higher temperature, toxic effects were more pronounced.*

1. INTRODUCTION

Superficial waters are contaminated with many anthropogenic toxic chemicals including the pyrethroid insecticides. It has been well described by many research groups that this type of insecti-