

Responses of Gammarus pulex (L.) To Modified Environment



Author: HH Costa ¹

Source: Crustaceana, Volume 11, Issue 3,

pages 245-256

Subjects: Biology

Publication Year: 1966

DOI: 10.1163 / 156854066X00577

ISSN: 0011-216x

E-ISSN: 1568-5403

[Subscription and article submission information](#) 

Buy this article

Price:

\$ 30.00 + tax (if applicable)

[Buy](#)

[. 1 The present work deals with 85 experiments to determine the responses of Gammarus pulex to toxic substances. In these studies, an apparatus was used which is a modification of the apparatus described by Jones (1947). 2. Gammarus pulex reacts negatively to 1/10000 chloroform, 3% alcohol and to some degree beneficial to all formalin concentrations tested. 3. Zinc sulphate, which seems much less toxic than some of the other substances tested seems to already be recognized in concentrations of 0.001N. 4. A negative reaction occurs compared with 0.1 N 0.001N Pb (NO₃)₂ a; 0,0001N in this reaction is delayed at 0,00001N indifferent. 5. As seen in survival experiments, mercury chloride seems to work very toxic. G. pulex is very sensitive even at dilutions up to 0,000001N; at very high concentrations pseudo-positive reaction can be seen. 6. Compared with CuSO₄ were made up to concentrations of 0,0001N avoidance reactions; at 0,00001N the behavior is indifferent. 7. The Hautpchemorezeptoren for ZnSO₄ are the first and second antennas; but also mouth parts, gills and other sensory areas of the body can thereby be additionally involved. 1. The present work deals with 85 experiments to determine the responses of Gammarus pulex to toxic substances. In these studies, an apparatus was used which is a modification of the apparatus described by Jones (1947). 2. Gammarus pulex reacts negatively to 1/10000 chloroform, 3% alcohol and to some degree beneficial to all formalin concentrations tested. 3. Zinc sulphate, which seems much less toxic than some of the other substances tested seems to already be recognized in concentrations of 0.001N. 4. A negative reaction occurs compared with 0.1 N 0.001N Pb (NO₃)₂ a; 0,0001N in this reaction is delayed at 0,00001N indifferent. 5. As seen in survival experiments, mercury chloride seems to work very toxic. G. pulex is very sensitive even at dilutions up to 0,000001N; at very high concentrations pseudo-positive reaction can be seen. 6. Compared with CuSO₄ were made up to concentrations of 0,0001N avoidance reactions; at 0,00001N the behavior is indifferent. 7. The Hautpchemorezeptoren for ZnSO₄ are the first and second antennas; but also mouth parts, gills and other sensory areas of the body can thereby be additionally involved.]

Affiliations: 1: Department of Zoology, University of Ceylon, Peradeniya, Ceylon