
effect of water quality on physiological aspects of fresh water gastropods

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Pollution is one of the major problems of the world water pollution is popular in Egypt. It was aimed to test the effect of water pollution on three of host parasite snails. Analyses of water samples from two localities indicated that El-Mansouria canal at Giza contained a markedly higher levels of physicochemical parameters and some heavy metals than that for El-Kased canal at Tanta.- El-Mansouria canal at Giza showed that water temperature was 23.75 ± 3.52 °C . dissolved oxygen was 6.47 ± 1.21 ppm, pH-value was 7.55 ± 0.41 . total hardness was 284.5 ± 32.7 ppm, chloride concentration was 20.92 ± 1.68 ppm, phosphate concentration was 0.59 ± 0.13 ppm copper concentration was 0.12 ± 0.003 ppm. zinc concentration was 0.07 ± 0.01 ppm, lead concentration was 0.46 ± 0.06 ppm and cadmium concentration was 0.02 ± 0.003 ppm.- El-Kased canal at Tanta showed that water temperature was 21.37 ± 3.78 °C, dissolved oxygen was 7.92 ± 1.87 ppm, pH-value was 7.25 ± 0.39 , total hardness was 263 ± 31.9 ppm, chloride concentration was 17.42 ± 2.17 ppm, phosphate concentration was 0.58 ± 0.05 ppm, and heavy metals concentrations were 0.005 ± 0.001 ppm copper, 0.02 ± 0.004 ppm zinc, 0.02 ± 0.002 ppm lead. and 0.006 ± 0.001 ppm cadmium.83Biomphalaria alexandrina. Bulinus truncatus, and Lymnaea cailliaudi (Gastropods) were recorded to live in two localities in Egypt, exhibiting different degrees of water (quality. El-Mansouria canal at Giza and El-Kased canal at Tanta.The effect of water quality on the prolonged spawning was also studied. The results can be summarized as follow:- The mean level of activity of glutamate oxaloacetate transaminase of Giza water animals were 0.452 ± 0.003 . 0.462 ± 0.003 . 0.536 ± 0.002 p mole/g tissue +or Biomphalaria alexandrina. respectively. 0.003 . 0.492 ± 0.003 . and alexandrina. Bulinus truncatus and Lymnaea cailliaudi,while that of Tanta water animals were 0.481 ± 0.003 . and 0.567 ± 0.002 p mole/g tissue.level of activity of glutamate pyruvate of Giza water animals were 0.214 ± 0.002 . 0.219 ± 0.002 p mole/g tissue for Biomphalaria Bulinus truncatus and Lymnaea cailliaudi,respectively. while that of Tanta water animals were 0.237 ± 0.002 , 0.251 ± 0.002 , and 0.266 ± 0.002 p mole/g tissue.-The mean level of activity of alkaline phosphatase of Giza water animals were 0.255 ± 0.0005 , 0.253 ± 0.001 , and 0.349 ± 0.0005 Kind & King U/g tissue for Biomphalaria alexandrina, Bulinus truncatus and Lymnaea cailliaudi, respectively, while that of Tanta water animals were 0.298 ± 0.001 , 0.294 ± 0.001 . and 0.397 ± 0.0015 Kind & King U/g tissue.840.002 .10- Kind & King U/g tissue for Biomphalaria alexandrina, Bulinus truncatus and Lymnaea

cailliaudi, respectively. • Transferring *Biomphalaria alexandrina*, *Bulinus truncatus*, and *Lymnaea cailliaudi* from Tanta water to live in Giza water + or 90 days showed that:- The mean level of activity of GOT of transferred animals were 0.477 ± 0.01 , 0.468 ± 0.01 , and 0.558 ± 0.01 p mole/g tissue for *Biomphalaria alexandrina*, *Bulinus truncatus*, and *Lymnaea cailliaudi*, respectively. - The mean level of activity of GPT of transferred animals were 0.239 ± 0.02 , 0.230 ± 0.01 , and 0.254 ± 0.001 p mole/g tissue for *Biomphalaria alexandrina*, *Bulinus truncatus*, and *Lymnaea cailliaudi*, respectively. - The mean level of activity of alkaline phosphatase of transferred animals were 0.278 ± 0.001 , 0.287 ± 0.005 , and 0.396 ± 0.002 Kind & King U/g tissue for *Biomphalaria alexandrina*, *Bulinus truncatus*, and *Lymnaea cailliaudi*, respectively. - The mean level of activity of acid phosphatase of transferred animals were 2.785 ± 0.001 , 2.790 ± 0.0015 , and 2.885 ± 0.0025 Kind & King U/g tissue for *Biomphalaria alexandrina*, *Bulinus truncatus*, and *Lymnaea cailliaudi*, respectively. 86 The results of the spawning indicated that, the mean number of laid eggs by snails of Giza water lower than that of Tanta water, also the hatchability decreased for the eggs laid in Giza water. The hatchability of eggs laid in Giza water were 41.66 %, 57.14 %, and 50 % for *Bulinus truncatus*, *Biomphalaria alexandrina* and *Lymnaea cailliaudi*, respectively, while that of eggs laid in Tanta water were 86.66 %, 88.88 %, and 70 % for *Bulinus truncatus*, *Biomphalaria alexandrina* and *Lymnaea cailliaudi*, respectively.