ABSTRACT

EFFECT OF POLLUTION ON FISH (*Carassius gibelio*) (CYPRINIFORMES, CYPRINIDAE) (BLOCH, 1782) COLLECTED FROM DIFFERENT REGION OF BÜYÜK MENDERES RIVER (KOÇARLI AND UMURLU): A HISTOPATHOLOGICAL STUDY

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Water pollution, within the context of environmental pollution, which will determine the quality of life of mankind in the future, is gaining more importance day by day. Since the water is used as an absorber and a repellent for waste products, it is exposed to more pollution in the ecosystem when compared to air and soil. The main factor affecting water pollution is: industrialization, urbanization, population growth, agricultural pesticides and chemical fertilizers. Along with the increase in the number of people and industrialization, it is also considered to be an increase in the values of water quality, in terms of pollution, along the Büyük Menderes River and its tributaries. In this study, it is aimed to investigate the effects of pollution in the Büyük Menderes River on fish in terms of histopathological aspects.

Gill, muscle, intestine and liver tissue samples, obtained from fishes (*Carassius gibelio*) (n=10, for each locality) caught from two different regions of the Büyük Menderes River (Koçarlı ve Umurlu), were subjected to histological preparation processes (fixation, dehydration, blocking, sectioning and staining) and the preparations obtained were evaluated in the light microscope level. Additionally, surface water samples were also collected from the localities mentioned in the study and thereafter water analysis was conducted.

As a result of examinations and evaluations, it was determined that irreversible histopathological changes were formed in *C. gibelio's* gill, muscle, intestine and liver tissues. The results of water analysis, have also supported the findings. When water pollution, which occurs due to many reasons, and it's effects on environment, public health and economy is considered, the results of the study are of great importance for contributing to the identification of measures to be taken.

Keywords: Büyük Menderes River, *Carassius gibelio*, histopathology, water pollution