

## Effects of physicochemical parameters of water on seasonal variation, distribution and density of crustacean zooplankton communities in Sulduz Wetland (Southern parts of Urmia Lake)

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### Abstract

Due to the progressive drying of Urmia Lake, applying appropriate management strategies and providing a suitable solution for the management of hydrological regimes in the satellite wetlands around this lake such as the Sulduz Wetland is necessary. The Sulduz Wetland is located in the West Azerbaijan Province and in the southern part of Urmia Lake. The Sulduz Wetland is ecologically important. The present study was conducted to investigate the role and the effect of physicochemical factors of water on the crustacean zooplankton communities. Sampling was performed seasonally from November 2015 to July 2016. Two groups of crustacean zooplankton including Copepoda and Cladocera were observed. The results of statistical analysis of CCA showed a positive correlation between the existence and density of most of the genera with the temperature, turbidity, soluble solids, dissolved oxygen, phosphate and alkalinity, whereas same genera showed a negative correlation with depth, salinity, electrical conductivity, transparency and pH. Low water temperature in the autumn and in the winter was the main factor in reducing the density of zooplankton in this wetland. Results of CCA analysis showed that the presence and density of identified genera were related to each other and to the physicochemical parameters of water. In conclusion, it can be said that in the Sulduz Wetland like many other habitats of the world, distribution patterns of zooplanktons were strongly influenced by environmental factors.

**Keywords:** Environmental factors, Seasonal variations, Zooplankton communities, Sulduz Wetland

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