

## Plecoptera Fauna of Alara and Karpuz Streams and Determination of their Relationships with Water Quality

**Authors :** Hasan Kalyoncu, Ayşe Güneş

**Abstract :** This study was carried on 12 determined stations, on Alara and Karpuz Streams, between January and November 2014. Seasonal samples were taken from the stations to analyze physicochemical parameters and Plecoptera Fauna in the water. The correlation between identified taxa and physicochemical data were tried to determine. As the result of the study, 2088 individuals from Plecoptera fauna were examined, 3 genera and 13 species were identified. The taxa of *Brachyptera risi*, *Capnia bifrons*, *Dinocras cephalotes*, *Diura bicaudata*, *Isogenus nebecula*, *Isogenus sp.*, *Isoperla grammatica*, *Leuctra hippopus*, *Leuctra inermis*, *Leuctra moselyi*, *Leuctra sp.*, *Nemoura sp.*, *Perla bipunctata*, *Perla marginata*, *Protonemura meyeri* and *Rhabdiopteryx acuminata* were determined. In Alara Stream, the dominant species were; *Isogenus nebecula* at stations I and IV, *Leuctra moselyi* at station II, *Leuctra hippopus* at stations III, V and VI. In Karpuz Stream, *Brachyptera risi* was the dominant species in all stations. While *Leuctra hippopus* was the dominant taxon in Alara Stream, in Karpuz Stream it was *Brachyptera risi*. The highest diversity value was at station III and the lowest was at station VI in Alara Stream and the lowest diversity value was at station VI, while the highest was at station I in Karpuz Stream. In Alara Stream, the most similar stations were I and III, while in Karpuz Stream the highest similarity was determined between stations I and II. As for the evaluation result, the water quality of Alara and Karpuz Streams were determined as at oligosaprobic level.

**Keywords :** Alara stream, Karpuz stream, plecoptera, water quality

**Conference Title :** ICEBESE 2016 : International Conference on Environmental, Biological, Ecological Sciences and Engineering

**Conference Location :** Stockholm, Sweden

**Conference Dates :** July 11-12, 2016