



Introduction and distribution of Chironomidae larvae in Cheshmehkileh estuary of Tonekabon (south Caspian Sea)

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Abstract

Considering the importance of estuaries as sensitive ecological areas and temporary habitat of many aquatic animals and also importance of Chironomidae larvae in the food chain and fish feeding, density and distribution of the chironomid larval and their relationship with environmental factors in Cheshmehkileh estuary of Tonekabon (South Caspian Sea basin) were investigated. Bimonthly from November 2014 to September 2015, in three stations (S_1 in the river environment, S_2 in estuary environment and S_3 in the marine environment) samples were collected using Van Veen grab (0.03 m²) and Surber (0.1 m², 0.2 mm-mesh size) with three replicates. In the present study, three subfamilies were identified, including Chironominae (5 genera), Orthocladinae (4 genera) and Tanypodinae (1 genera). 10 genera were reported from the river and estuary of Cheshmehkileh for the first time. Among identified genera, the highest and lowest average densities were related to *Orthocladius* (235 ind. m⁻²) and *Eukiefferiella* (45.5 ind. m⁻²), respectively. Results of monthly distribution showed that the highest and lowest densities of chironomid larval were in March (320±133 ind. m⁻²) and in September (33.3±11 ind. m⁻²) respectively which were significantly different, by Duncan's test ($p < 0.05$). Among sampling stations, river station (S_1) showed higher density (248.3±93.6 ind. m⁻²) than estuary station (S_2) (90.5±29.6 ind. m⁻²) and marine station (S_3) (0±0 ind. m⁻²) which were significantly different ($p < 0.05$).

Keywords: identification, density, distribution, Chironomidae, Cheshmehkileh estuary, Caspian Sea.