



Genetic diversity of the freshwater species *Alburnus mossulensis* (Heckel, 1843) in the Lorestan province rivers (Iran)

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Abstract

Alburnus mossulensis is an important freshwater fish species native to Iran. In the present study, the genetic variation and structure of the species was investigated in the Dahle Soufian and Hozian Rivers, Iran, using microsatellite markers. According to the results, a proper level of allelic and gene diversity was observed in the studied samples. So that the allelic mean, observed and expected heterozygosity were 9, 0.886 and 0.831, respectively. In most cases, no significant departure from Hardy-Weinberg equilibrium was detected after the sequential Bonferroni correction. Heterozygosity excess was also noticed at most loci. A low level of genetic differentiation was detected between the studied populations. Accordingly, high gene flow and low genetic distance were among the populations. Analysis of molecular variance also showed that the main part of the observed diversity was within the populations. Results from the present study are anticipated to provide useful information for the appropriate conservation management of the *A. mossulensis* populations.

Keywords: *Alburnus mossulensis*, Dahle Soufian, genetic variation, Hozian, population