



Microsatellite Genetic Differentiation Between Populations of European Catfish (*Silurus glanis*)

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Abstract:

In the present study the population genetic structure of European catfish in the Anzali Lagoon and Aras Lake were examined using microsatellite markers. Sixty fin clip samples of *Silurus glanis* from two regions were collected and for genetic analysis 8 microsatellite loci were used to assess the population genetic structure of the *S. glanis*. There were significant differences based on average number of alleles per locus and heterozygosity between two populations ($P < 0.01$). The Analysis of molecular variance (AMOVA) indicated that the proportion of the genetic variation attributed to differences among populations of the *S. glanis* was highly significant for both F_{ST} and R_{ST} ($F_{ST} = 0.165$, $R_{ST} = 0.38$, $P < 0.001$). Excess or lacks of heterozygosity was observed but most of used microsatellite loci in selected areas were at Hardy-Weinberg equilibrium. Our finding showed the two populations are genetically separated, therefore fisheries management programs for conserving and restocking of these species especially in Anzali Lagoon is recommended.