

**Application of microsatellite markers for genetic conservation and management of Persian sturgeon (*Acipenser persicus*, Borodin, 1897) in the Caspian Sea**

**ABSTRACT**

A study was conducted to ascertain the genetic structure and the level of heterozygosity of *Acipenser persicus* in the Caspian Sea. A total of 167 fish were randomly collected from Turkmenistan, Russia and two regions of Iran. The number of alleles of eleven microsatellite markers ranged from 3 to 21 and the mean observed values of heterozygosity were  $0.56 \pm 0.20$ ,  $0.64 \pm 0.14$ ,  $0.67 \pm 0.16$ , and  $0.64 \pm 0.11$ . The observed heterozygosity was lower than the expected levels. The observed low genetic differentiation indicates that all populations are closely related. Hence, inbreeding is a potential problem, which should be taken into consideration in future breeding programs to avoid a further decline in genetic diversity.

**Keyword:** *Acipenser persicus*; Caspian Sea; Microsatellite; Persian sturgeon; Genetic conservation