



Genetical Analysis of the *Epinephelus aeneus* Population from the Turkish Mediterranean Coastline

Elanur Yılmaz¹, Mehmet Baki Yokes^{2*}

¹ Akdeniz Üniversitesi Tıp Fakültesi Tıbbi Biyoloji ve Genetik Anabilim Dalı, Antalya
elanuryilmaz@yahoo.com

² AMBRD-Labs, Hanımefendi Sk. 160/6 Şişli İstanbul
*bakiyokes@gmail.com

Abstract

The White Grouper, *Epinephelus aeneus* (Geoffroy Saint-Hilaire, 1817) is one of the valuable Serranid species and it is highly exploited throughout the Mediterranean. It shows a wide distribution range in the Eastern and Southern Mediterranean, as well as, along the West African coasts from Morocco to Angola. Since it can be fished by various methods from artisanal to industrial, its populations showed a steep decline in the last fifty years in its entire range. It is listed as “Near Threatened” in the IUCN Red List. A decrease in population size may also lead to a decrease in genetic diversity and isolation of populations. In the frame work of this study the genetic diversity of the *Epinephelus aeneus* population from the Turkish Mediterranean coastline is investigated. 95 specimens have been collected either by trawling or bought from fishermen, in Istanbul (n=1), Iskenderun (n=31), Antalya (n=36), Izmir (n=13) and Fethiye (n=14). All the specimens, except the Istanbul specimen, were obtained from the firsthand catcher, thus the location of the fishing site is known. DNA was extracted by common methods from either muscle or fin tissue. 8 microsatellite markers were amplified by FAM marked primers. Most of the microsatellites showed high allelic variations. Fixation index (F_{ST}) values between the populations were found to be low ($<0,15$) for all the markers analyzed, indicating medium genetic differentiation between the local populations. It has been known that *E. aeneus* shows seasonal migration, which may explain the low (F_{ST}) values due to mixing of local populations.

Keywords:

Epinephelus aeneus, microsatellite, population, Turkey
