

ABSTRACT

INVESTIGATION OF GENETIC DIVERSITY OF THE WHITE GROUPER [*Epinephelus aeneus* (GEOFFROY SAINT-HILAIRE, 1817)] BY USING MICROSATELLITE MARKERS

Elanur YILMAZ

M.Sc. Thesis, Department of Biology

Supervisor: Prof. Dr. Murat BİLECENOĞLU

Co-Supervisor: Assistant Prof. Dr. Mehmet Baki YOKEŞ

2012, 75 pages

This study aims to detect the genetic diversity of economically important white grouper, the fish that has been announced as near threatened in the Red List issues of the IUCN. The tissue samples, used in the study, have belonged to the individuals of *Epinephelus aeneus*, captured and sold around Antalya, Iskenderun, Fethiye, Izmir and Istanbul regions of Turkey by fishermen. The DNA samples, isolated from the tissues were multiplied by microsatellite markers, marked by FAM dye. After determining the allele sizes by Peak Scanner, the frequency analyses of these sizes were processed by Poptree, PHYLIP, Treeview and Arlequin programmes. Regarding the results, the genetic diversity of *E. aeneus* has well been detected to be considerably high and exposed no bottleneck effect.

Keywords: Serranidae, *Epinephelus aeneus*, microsatellite, genetic diversity, conservation genetics.