



Barcoding and Genetic Diversity Pattern of Groupers (*Epinephelus spp.*) from Turkish Marine Waters

Cemal Turan*, Deniz Ergüden, Mevlüt Gürlek, Ali Uyan, A. Servet Dođdu

Marine Sciences and Technology Faculty, Iskenderun Technical University, Iskenderun, Hatay,
TURKEY

*turancemal@yahoo.com

Abstract

There is a tendency to exploit marine resources for food, energy and other requirements that puts pressure on the fragile marine environment and necessitates sustainable conservation efforts. In Marine species identification, DNA barcoding can be useful in the assessment of cryptic or morphologically similar species which is widespread in marine environment. Grouper species belonging to *Epinephelus*, *Hyporthodus* and *Mycteroperca* genera and Serranidae family are the most exploited and valuable fish species in Turkish marine waters distributed in the Mediterranean and Aegean Seas and are represented with 6 species (*Epinephelus aeneus*, *Epinephelus marginatus*, *Epinephelus caninus*, *Epinephelus costae*, *Hyporthodus haifensis* and *Mycteroperca rubra*). Some of these species are morphologically very similar and difficult to be distinguished from each other. Here we examine the utility of DNA barcoding of mitochondrial COI, Cytochrome b and D-loop regions, and also documenting pattern of genetic diversity for each species at distributional range, broadening our understanding and monitoring of biogeographic genetic diversity change. This study was supported by TUBITAK (214O575).

Keywords:

DNA Barcoding, mtDNA, *Epinephelus Spp.*, Groupers
