



Preliminary Results of Genetic Barcoding Serranidae Species from Turkish Coastline

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Abstract

In the framework of a barcoding project 275 Serranid specimens have been collected from Turkish coastline between 2007-2016. Until now 66 of the specimens (*Epinephelus aeneus* (n=10), *Epinephelus caninus* (n=2), *Epinephelus costae* (n=5), *Epinephelus marginatus* (n=10), *Hyporthodus haifensis* (n=6), *Mycteroperca rubra* (n=3), *Serranus cabrilla* (n=10), *Serranus hepatus* (n=10), *Serranus scriba* (n=10)) were investigated for mitochondrial cytochrome oxidase subunit I (COI) gene. Total DNA was isolated from either muscle or fin tissue. COI gene was partially amplified with universal primers and sequenced. High genetic differences were observed between the species. Each species had a unique barcode, enabling the species be easily identified from the COI barcode. Intra-species variation was only found in *Serranus hepatus*. The results (642 bp) were compared with the GeneBank entries. It was observed that the sequences were highly matched (99-100 %) the data from other Mediterranean countries. Surprisingly, our data showed less similarity with the sequences previously reported from Turkey. Although allelic variations have been reported for *Epinephelus aeneus* (4 alleles), *Epinephelus marginatus* (5 alleles), *Serranus cabrilla* (3 alleles) and *Serranus scriba* (3 alleles) from Turkey, we did not yet found any COI sequence variations in these species. Moreover, the previous reports of *Serranus scriba* sequences from Turkey by Keskin et al. (2013) did not closely matched our sequence (625/642 and 624/642 bp match), whereas our sequence is 100% in accordance with the entries from Italy, France and Turkey (Iskenderun Bay), suggesting that previous records of Keskin et al. (2013) might belong to a different species.

Keywords:

COI, Barcoding, Serranidae, Turkey