

ABSTRACT

DETERMINATION OF THE GENETIC STOCKS OF ANCHOVY IN THE MARMARA SEA AND SOUTHERN BLACK SEA

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Engraulis encrasicolus is placed in the family of Engraulidae belonging to the Actinopterygii class and the order Clupeiformes. The range of the species is wide, extending from Scandinavia along the Atlantic Coast of Europa to western Africa, as well as from Mediterranean Sea to the Black Sea and Azov Sea. The present study was aimed at determining and recording the genetic stocks and variations of the Sea of Marmara and Black Sea populations. Therefore, the samples of the species were collected from 7 different sampling areas of Bandırma, Zonguldak, Perşembe, Fatsa, Trabzon, Ardeşen and the coastal areas of Georgia. A total of 202 samples were then subjected to DNA extraction. Thereafter, mtDNA *cytochrome b* and *ND6* gene sites of the samples of each location were amplified through polymerase chain reaction using compatible polymers. In the consequence of the analyses performed, 187 haplotypes of *cytochrome-b* and *ND6* gene were found in the area of distribution of the species. In the localities divided into 4 groups based on the values of Γ_{st} , performing analysis of molecular variation (AMOVA), the variation among groups was found to be 5.28%, and among the populations constituting the groups 1.32%, whereas the inter-locality variation was found to be 93.39%. The interpopulation gene migration (flow) was estimated and the gene migration of similar localities was found to be higher.

Key words: *Engraulis encrasicolus* L., mitochondrial DNA, *Cytochrome b*, *ND6*, genetic stock, Marmara, Black Sea