

Determination of relationship degrees according to protein profiles of some fish species living in Beysehir, Suęla Lake and Dam Apa and investigation of the effect on protein profiles of seasonal temperature changes in some fish species

Abstract

Comparisons based on morphological characters is not enough for making the right decision in the determination of the species of taxonomists. Electrophoretic methods are frequently used by animal systematics in taxonomic studies. Proteins are the product of gene effect and are used as genetic markers that play an important role in determining the taxonomic status. In recent years, electrophoretic investigation of proteins has contributed both to the systematic studies and to the studies done on the biochemistry of fish. As well as determining degrees of relationship among fish that are collected from different regions in the same geographical segment species and the differences in proteins as a result of seasonal conditions based on the knowledge that different proteins occur a result of gene expression with the effect of hot and cold water utilizing total protein profiles by SDS-PAGE, one of biochemical methods, in fish such as *Leuciscus lepidus* (Ablet), *Cyprinus carpio* (carp), *Carassius gibelio* (Prussian carp), *Phoxinellus anaticus* (fatty fish), *Tinca tinca* (Tench), *Alburnus orontis* (Orontes spotted bleak), *Scardinius erythrophthalmus* (Rudd), *Capoeta capoeta* (Transcaucasian carp), *Vimba vimba* (Vimba), *Sander lucioperca* (Pikeperch) living in Lakes Beysehir, Suęla and Dam Apa was aimed. In all studied fish species, although there are common major protein bands, the presence of species-specific minor protein bands has provided the separation of the species. Both the same fish species which spread in the different lake and dam showed difference in terms of minor bands and the same fish species demonstrated changes in the protein profiles by synthesizing different proteins in different seasons. It is expected that the study will contribute to the systematic classification and to be source to new studies to be done later. This project has been supported by Selęuk University BAP (14401063).