



## Genetic Variation of Oriental Beech (*Fagus Orientalis*) Populations in Artvin Area

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### Abstract:

*Fagus orientalis* Lipsky (Oriental beech) indigenously grows in the west from Balkans through Anatolia, to the east Caucasus, northern Iran and Crimea. Orientalbeech is an important species for the Turkish economy, thus there is requirement for genetic knowledge and related research to determine and develop in situ conservation strategies. The objective of this study was to determine the magnitude and pattern of genetic variation present in 3 natural Oriental beech populations grows in Artvin Reagion and 2 other populations from Black Sea Region (Samatlar-Dorukyayla and Tokat-Turhal) for comparison of the Artvin populations by means of SSR molecular marker. In this study, Oriental beech samples were collected from 5 different natural populations. Populations from altitudinal ranges between 900 m and 2100 m from sea level were considered. Leaves from 25 single-trees from each population were harvested for DNA isolation. Genetic variability was studied by 7 microsatellite (SSR) markers developed for Fagaceae. Population genetic parameters were calculated using appropriate software and the results were compared with the populations studied previously and discussed in terms of developing conservation strategies for *Fagus orientalis* in Turkey.

**Keywords:** *Fagus orientalis*, Oriental beech, microsatellite, SSR, genetic variation