

Mycorrhizal fungi in *Platanthera chlorantha*

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Platanthera chlorantha is a common species occurring in *Quercus* forests in Turkey. Although this orchid is widespread, the collection of tubers and the destruction of forests are a serious threat to the future of its generation. In order to protect the orchids and improve the destruction, it is first necessary to isolate and identify the mycorrhizal fungi. For this purpose, mycorrhizal fungi in *Platanthera chlorantha* roots were isolated and identified by morphological and molecular methods. Eight isolates were obtained from the roots. Amplification of the rDNA-ITS region was done with the primers ITS4 /ITS5 (White *et al.*, 1990). Amplified products were sequenced by Macrogen Inc.(Korea). The sequences were aligned with CLUSTAL X (Thompson *et al.*, 1997). The identity of isolates was determined by making BLAST search. Phylogenetic trees were constructed using the algorithm of MEGA 4 (Tamura *et al.*, 2007) and Mr Bayes (Ronquist *et al.*, 2011). Two different *Rhizoctonia*-like fungi were identified according to anamorphic criteria. As a result of molecular analyzes, isolates M1 and M2, which were involved in mycorrhizal association, were associated with *Thanatephorus fusisporus* (HQ441575). *T. fusisporus* species were first identified in *Platanthera chlorantha* roots.