

**GENETIC DIFFERENTIATION IN SCOTS PINE (*PINUS SYLVESTRIS* L.): A COMPARISON BETWEEN POPULATIONS FROM ITALY AND PART OF THE REMAINING EURASIAN NATURAL RANGE**

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Scots pine (*Pinus sylvestris* L.) occupies a larger natural range than any other species from the whole *Pinaceae* family, extending from Europe to the Far East (Manchuria) through Siberia. Because of such a wide geographic spreading, with very different environmental conditions, and because of the long evolutionary history of this pine, a large intraspecific variation is expected to occur. The aim of this research is to study the genetic diversity and the differentiation between some populations representative of the Italian natural range of Scots pine and several populations from the rest of Europe and from Asia (Turkey), by using isozymes as genetic markers, analysed through horizontal starch gel electrophoresis. The obtained results confirm - on a much wider geographic scale - the previously observed sharp differentiation of an Italian population, located in the Emilian Apennine, which is a relict and isolated remnant from glacial migrations: it proves to be by far the most differentiated population of all the surveyed ones. These new observations supply further evidence of the status of important genetic resource for this small and autochthonous stand, whose differentiation could depend both on its origin from a different glacial refugium and on a different evolutionary history, and whose values of genetic diversity parameters are similar to those found in the other Italian populations, in spite of its geographic isolation from the main range of this species. On the basis of the obtained values of genetic distance, the seven Italian populations from the Alps tend to group together and appear rather differentiated from the remnant, suggesting both a different postglacial origin and a relative genetic isolation due to the Alpine barrier. Some hypotheses on the postglacial recolonization routes followed by this species are also discussed. This is the first research which compares populations representative of the Italian area with populations from the remaining Eurasian natural range of Scots pine; its results increase the available knowledge on this species, and make it possible the drafting of more accurate programmes of genetic resource conservation.