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Using microsatellite markers to map genetic diversity and population structure of an endangered Moroccan endemic tree (*Argania spinosa* L. Skeels) and development of a core collection

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Abstract

The aim of the present study is to examine the genetic diversity and relationships of natural populations of *Argania spinosa* based on inter-simple sequence repeats (ISSRs) and simple sequence repeats (SSRs). A total of 480 trees from 24 natural provenances of this species were sampled from southwest and northwest Morocco. Ten ISSR primers generated a total of 151 bands of which 150 were polymorphic (99%). Four primer pairs of SSR markers amplified 172 allelic variants among the argan genotypes with 100% polymorphism. Cluster analysis based on unweighted pair-group, principal coordinate, and Bayesian-based analyses, showed that the entire provenances were divided into two main groups for both markers used. The first group contained 22 provenances of southwest regions. The second cluster included the two relic provenances of Oued