

Genetic diversity among *Zygophyllum* (Zygophyllaceae) populations based on RAPD analysis

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ABSTRACT. *Zygophyllum* species are succulent plants that are drought resistant and/or salt tolerant, growing under severe, dry climatic conditions. Despite their importance and abundance in the Mediterranean and Middle East regions, there is little information concerning molecular variations among species of this genus. Genetic diversity was assessed, using RAPD primers, of 12 populations of *Z. coccineum*, *Z. album* and *Z. aegyptium* collected from various locations in Egypt and Saudi Arabia. Young leaves were used for DNA extraction. Genetic distances were calculated using Nei's method. A dendrogram was constructed based on the similarity data matrix by unweighted pair group method using arithmetic averages cluster analysis. Analysis with RAPD markers revealed genetic variation between and within populations of *Zygophyllum*. *Zygophyllum coccineum* showed higher levels of genetic variation and more unique alleles than the other species.

Key words: *Zygophyllum coccineum*; *Z. album*; *Z. aegyptium*; RAPD; Genetic distances; Diversity