



جامعة الملك سعود  
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برنامج ماجستير العلوم في التنوع الأحيائي

## دراسة التنوع الوراثي لعشيرة معزولة من نبات التنضب

### Genetic Diversity of an Isolated Population of *Capparis decidua*

إعداد

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## Summary

*Capparis decidua* is a rangeland plant species growing in isolated regions in Saudi Arabia. The population in Rawdhat Khuraim was noticed to suffer from lack of new generation, in addition to excessive grazing which may reduce the size of the population and reduce the genetic variability. RAPD markers were used to study genetic diversity in this population and a control population. Two criteria were used to study the genetic diversity in population in Rawdhat Khuraim. The first was cluster analysis and genetic distance, and the second is the percentage of polymorphic alleles. Cluster analysis showed that coefficient of similarity within Rawdhat Khuraim population (84-93%) is a lot larger than between Rawdhat Khuraim and the control population (77%). In addition, the percentage of polymorphic alleles in population of Rawdhat Khuraim was 54.8 which is within the range of other endangered plant species. This indicates that the population in Rawdhat Khuraim is isolated, suffering of narrow genetic base and of particular conservation concern.