

## **Potential applications of genetic data for the conservation and management of species**

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Conservation Genetics, an evolving field of research, aims to minimize the loss of genetic diversity and hence the risk of species extinction. We will demonstrate how genetic information on two species in the southern range of Israel can potentially be applied for species conservation. 1. Information on the genetic diversity and the “network” structure of *Acacia tortilis* enabled us to identify specific subpopulations as hot spots of genetic diversity and gene flow in the system, thus leading us to recommend protecting these subpopulations. 2. Information on the effective population size of the reintroduced Asiatic wild ass (*equus hemionus*), a measure of the potential genetic degradation of the population, enabled us to identify the main factors that impact genetic drift in the system, thus leading us to recommend management actions that will slow the loss of genetic diversity in the population