

## **Nubian ibex in Israel: past, present, and future threats**

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Threats to biodiversity change with time, and their mitigation becomes harder. The Nubian ibex (*Capra nubiana*) in Israel are an excellent example. In the past, Nubian ibex were widely distributed throughout the Middle East. However, by the 1950's the species was on the verge of extinction due to uncontrolled hunting. In Israel, less than 150 individuals remained. After enforcing wildlife protection laws, the population quickly recovered and currently stands at 600-1000 individuals. Presently, two kinds of disturbances threaten this population: fragmentation and ecotourism. Nubian ibex typically concentrate around oases and are, therefore, clumped in space. Thus, the species exists in a meta-population type constellation making it sensitive to fragmentation. The population in Israel is concentrated in three populations with tenuous connections. The expansion of highways between these populations threatens genetic flow. Oases are also tourist attractions, and our research revealed that ibex habituate to increased human presence and alter their natural behavior. In the future, the population's existence may be threatened by changes in rainfall patterns. Weather projections for the region describe little change in mean annual rainfall, but an increase in variance. This translates into a higher frequency of droughts. Ibex are sexually dimorphic with difference in the nutritional ecology of males and females. Consequently, we hypothesize that females will be more sensitive to drought conditions and that drought-related die-offs will impact mostly females. High female mortality will impair the population's ability to recover. Models suggest that such a scenario has the potential of driving the species to extinction. Future research will address this issue.