

**Moon bears in the shadow:
Low level of genetic diversity in the edge of Asiatic black bear range in Iran**
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Many bear populations around the world are faced to extinction. Asiatic black bear (*Ursus thibetanus*) has a wide distribution in Asia, but the current range of the species is extremely patchily and the remaining territories are enormously fragmented by human development areas. As a result, most of populations were declined massively, both in distribution range as well in population size.

The western population of the species, Baluchistan black bear (local name Mam), is found in the mountainous steppe woodlands of southeast Iran, where poor people of the area compete against bears over the poor available resources. According to the IUCN Red List, isolated Baluchistan black bears are the most threatened population of the species in Asia. This bear is also one of the least known Asiatic black bears.

In this study I try to shed light on the genetic status of this isolated population. I analyzed feces collected from 6 different areas, which showed that this bear is faced with extremely low genetic diversity. In fact, they show the lowest genetic variation described for the populations of the species so far. This low level of genetic variation might threaten the future survival of the population. Also no significant differences were found among the geographically separated areas and this also can hinder the long-term survival of this bear. In addition, the study results showed significant difference between Iranian populations and the others, suggesting that this population can be a single Evolutionary Significant Unit (ESU). Most probably low level of genetic variation as well as the current genetic distinctiveness of Baluchistan bears is attributed in part to long-time isolation and also living in a marginal habitat.

Shortly, taking to gather, the data from this study (low genetic variation) plus the fact that Iranian black bears has isolated and small populations, all information insist on the threatened situation of the Baluchistan black bear and also highlight the importance of this bear in conservation point of view. These results can be invaluable for conservation programs and importantly also will provide a baseline for future monitoring of this endangered bear.