









CATnews is the newsletter of the Cat Specialist Group, a component of the Species Survival Commission SSC of the International Union for Conservation of Nature (IUCN). It is published twice a year, and is available to members and the Friends of the Cat Group.

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Transboundary leopard conservation in the Lesser Caucasus and the Alborz Range

Recent discovery of leopard reproduction in two sites at the south-western rim of the Lesser Caucasus and the Talysh Mountains give hope for a recovery of this regionally Critically Endangered large cat. Increasing fragmentation of the entire range of the Persian leopard *Panthera pardus tulliana* may however hamper the natural recolonisation of the Caucasus. The revision and update of the *Strategy for the Conservation of the Leopard in the Caucasus Ecoregion*, scheduled for April 2017, should hence emphasise the importance of the transboundary connectivity of suitable habitat and healthy prey populations across the Caucasus and with neighbouring mountain ranges.

In November 2016, Azernews announced the amazing news that five leopards were born in the wild in Azerbaijan (Amina Nazarli 30.11.2016), including a female with two cubs in Hirkan National Park NP in the Talysh Mountains (Fig. 1). This is, according to the Ministry of Ecology and Natural Resources of Azerbaijan, the result of measures taken in the recent past to protect Azerbaijan's wild nature. "The recent picture of the female leopard with two cubs shot this autumn in the Hirkan Park is evidence to this. The pictures of the leopard were taken by camera traps installed in territory of the reserve by the International Dialogue for Environmental Action IDEA, Azerbaijan's Ecology Ministry and the World Wildlife Fund WWF" is the Ministry quoted in the Azernews article.

The discovery of the leopard cubs in the northern Talysh Mountains is very good news indeed. This makes Hirkan NP, together with the protected areas in Azerbaijan, Armenia and Iran in the "Zangezur triangle" (Fig. 2), one of only two sites with confirmed leopard reproduction in the entire Caucasus ecoregion. The protected areas in north-west Iran, e.g. Marakan Protected Area PA and Kiamaky Wildlife Reserve (now part of Kantal NP, a designated transboundary peace park), where known to host resident, reproducing leopards (R. Masoud, pers. comm., Avgan et al. 2012, Moganaki et al. 2013). In the protected areas north of the border, namely Zangezur NP in Nakhchyvan and Arevik NP in Armenia (Fig. 2), the presence of leopard females (Askerov et al. 2015) and subsequent



Fig. 1. A group of leopards (obviously the female with two cubs) pictured in Hirkan NP, Azerbaijan, on 10 November 2016 (Photo WWF Azerbaijan).

reproduction (Amina Nazarli 30.11.2016) was observed recently. Accordingly, the southeastern rim of the Lesser Caucasus and the Talvsh Mountains are the most important areas for the conservation of the leopard in the Caucasus. The recently observed increase in leopard presence is obviously the result of efforts to not only protect the large cat, but also its habitat and its prey base through the creation of new protected areas, hunting bans (especially in Nakhchyvan) and anti-poaching activities (Askerov et al. 2015). Long-range dispersing males can potentially be found anywhere in the Caucasus. Such observations do neither indicate the presence of a population nor are they indicative for the ecological conditions of the respective area. The presence of resident females giving birth however implies the availability of sufficient ecological resources for a potential population. The two leopard population nuclei (Fig. 2) may still be very small, but they are hopefully the beginning of a natural recovery of the leopard population in the Lesser Caucasus.

Increasing fragmentation of Persian leopard range

The positive trend in the "triangle" and in Hirkan NP contrasts with the risk of increasing fragmentation of the range of *Panthera* pardus tulliana (we use P. p. tulliana for the south-western Asiatic leopard subspecies ("Persian leopard"), including saxicolor and ciscaucasica, following Kitchener et al. 2017), resulting in a growing isolation of the Caucasus ecoregion. The corridor to the Zagros Mountain population has been broken some time ago (Avgan et al. 2016, Sanei et al. 2016, Spassov et al. 2016), and the connectivity between the Talysh Mountains and the well-studied leopard population in the eastern Alborz Range (including Golestan NP) in Iran seems to be threatened. A survey by Moganaki et al. (2013) has provided no evidence for leopard presence in Lisar and Agh Dagh protected areas south of the Talysh Mountains in the western Alborz Range. A recent occupancy-based field survey (2015/16; Soofi in prep.) indicated a very low occurrence of wildlife in the western part of the Sefid-Roud River ("Safid" in Fig. 2). For instance, red deer Cervus elephus maral and roe deer Capreolus capreolus are locally extinct in Lisar PA. However, wild boar Sus scrofa and bezoar goat Capra aegagrus were found scattered and in low abundance. This area represents an important corridor between the Iranian leopard source population and the Talysh Mts. in Azerbaijan. The western-most known reproduction of leopard in the Iranian Alborz was found in Deylaman-e-Dorfak No-hunting Area (Fig. 2), located east of Sefid-Roud River, where a subadult female leopard was found dead in January 2017, obviously killed by another leopard (E. Hadipour, pers. comm.). Deylaman-e-Dorfak NHA is located some 200 km south-west of Hirkan NP, a distance that can be travelled by dispersing males, but is a very large gap in the distribution of the resident females.

Strategic transboundary cooperation in leopard conservation

It is a common place that for large carnivore conservation, transboundary cooperation is crucial. On the one hand, viable populations of species such as leopards require huge areas — several thousands to several ten thousands of square kilometres — and on the other hand, "wild habitats" and remote areas often coincide with international borders. This is also the case for the Caucasus ecoregion, shared by six countries, where the international boundaries typically follow the mountain ridges, with adequate leopard habitats on either side.

The international cooperation is defined by the Strategy for the Conservation of the Leopard in the Caucasus Ecoregion, developed in 2007 by representatives of all Caucasian countries and international experts, which was implemented over the past 10 years by means of National Action Plans. The Strategy will now be reviewed and revised in a pan-Caucasian workshop in Tbilisi, Georgia, in April 2017. Compared to ten years ago, we have today a much more realistic view of the situation of leopards in the Caucasus and adjacent regions, and we have experiences with leopard monitoring and with the implementation of (local) conservation projects. In these years, the leopard has received considerable attention in all countries sharing the Caucasus, from governmental agencies as much as from private nature conservation organisations and scientists. The improved knowledge and understanding will allow producing an even more hands-on Strategy for the conservation of the leopard, its prey and habitats. Moreover, the recent positive developments in the south-eastern Lesser Caucasus should facilitate the optimistic atmosphere for the transboundary and

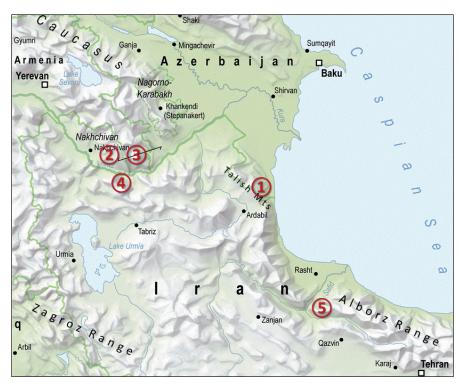


Fig. 2. Map of the Lesser Caucasus and the north-eastern Alborz Range with relevant sites for leopard conservation mentioned in the text. 1 Hirkan NP (AZ), 2 Zangezur NP (AZ), 3 Arevik NP (AR), 4 Kiamaky WR (IR), 5 Deylaman-e-Dorfak NHA (IR).

cross-sectoral cooperation in the ambitious endeavour to recover a viable population of leopards across the Caucasus.

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