

Short Communication

BEAR MANAGEMENT: THE CASE OF A BEAR ATTACK ON HUMANS IN TRENITINO, ITALY

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1. Introduction

The bear vanished from all over the Alps in the XX century, out of a very small and isolated population that survived till the end of the 90's in Trentino, Italy. This was mainly due to human persecution and habitat loss.

The bear reintroduction project carried out in Trentino, from 1997 to 2004 by the Autonomous Province of Trento, the Adamello-Brenta natural Park and the National Wildlife Institute, to ward off the extinction in the Alps, has been very successful so far. The population of bears in the Alps, almost extinct in the late 1990s with no more than 3–4 specimens still present, has now reached around 50 animals (41–51 individuals in 2014), and in the 2002–2014 period there were 41 litters, with 88 cubs, born.

Despite these encouraging results, ensuring a social acceptance of the project, and especially for the return of the bear to the Italian Alps, remains a major challenge to address in a successful way.

The dramatic collapse of the support of the local inhabitants towards both the recovery project and the bears (positive attitude drop from 73% to 30%

between 2003 and 2011) calls for an even more effective policy of damage prevention and compensation, transparency in information transmission, constant monitoring of the population, and for a rapid response framework that allows an efficient and rapid reaction even to cases that pose risks for human safety;

this last topic become a problem since 2014. Social acceptance and cohabitation between bears and human activities is the key for the conservation of many bear populations, but especially for the smaller southern European ones.

In every area of bear presence in the world, there are cases where individual animals show problematic behaviours including some risks to humans. These cases must be primarily addressed by preventing the occurrence of these behaviours, and when possible trying to correct them. But it must be clear that there are cases where the removal of individual bears (captivity or culling) can become a necessary measure that must be taken based on a rigorous, but timely, evaluation of the bear's behaviour, as well as all the other related aspects such as ecological conditions, human attitude and social/political context.

For the first time in the last 150 years in Trentino a bear attack on human occurred in 2014, requiring a rapid reaction. A second one occurred in 2015, still involving a female with cubs that seriously injured a man. The article will focus on the first case.

2. The facts

On the 15th August 2014, close to the village of Pinzolo (Trentino, Italy), a mushroom picker inadvertently approached to within a few meters a bear that was resting with two cubs of the year. This bear, named Daniza, aged 19 years was considered a problematic bear since she had caused damage to livestock, beehives and orchards, and was often near to human activities, and since 2007 had been fitted with a GPS-VHF collar to monitor her movements and to implement aversive conditioning when necessary.

According to the man's testimony as soon as he realized he immediately started to move away but was followed and attacked by the bear. During the scuffle that followed the man was wounded, requiring 40 stitches to the injuries that were taken care of on that day at the hospital. Later on he had to stay for several days in the hospital due to a subsequent infection.

Despite the behaviour of the bear has been considered not abnormal (female defending her cubs), it was decided to capture the bear for reasons of public



Photo: Miha Krofel

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safety, following an order of the President of the provincial government. This decision was supported by the Ministry of the Environment and ISPR (National Wildlife Institute), as it was in accordance with the provisions of the PACOBACE (National Alpine Action Plan on Bear Management). Almost three weeks were required to capture the bear. During this time forestry staff patrolled the area where Daniza occurred, to reduce further unpleasant encounters. On the 10th September Daniza was captured darting her while feeding on a carcass of a preyed sheep, but died during the capture. Subsequent investigations showed that the tranquilizer and the dosage used as well as the shot fired with the tranquilizer gun were adequate, but for unknown reasons the female did not tolerate the anaesthesia.

The Autonomous Province of Trento applied the law and the National Action Plan – both acts state that human safety comes first. The decision to remove the bear was also taken as a way to improve human attitudes (mainly of local residents) toward bears in Trentino by demonstrating that the authorities would react to dangerous situations.

The event had a big media impact, fuelled by a strong divergence between animal rights groups and local residents. The case of Daniza and her cubs received a very high attention of a large part of the Italian society concerned with the welfare of bears. This incident stresses the need for improved communication with the public, and of a rigorous approach to the management of the bear population that should be based on authoritative science based evaluations made by the competent authorities of all the possible alternatives to address the conflicts. This is particularly important when the removal of animals is being considered, which should be used as a last option, only when no other measures are applicable.

The cubs were left in the wild, considering the likelihood for cubs of this age (8–9 months) to survive, and in line with the suggestions of the literature on the subject. Furthermore it was proposed to:

1. Fit one of the cubs with a VHF ear tag radio transmitter;
2. Make food available to the cubs in the initial phase, immediately after the loss of their mother;

3. Monitor the movements of the cubs intensively (initially via radio, then with camera traps and direct observation by raising the awareness of hunters and encouraging them to report sightings);

4. Establish specific guidelines for the management of the cubs, in collaboration with ISPR and the Ministry of the Environment, and by exchanging ideas with international experts;

5. Preparing road signs in the most dangerous areas to reduce the risk of road accidents;

6. Prepare targeted communication material (a special brochure sent to all the families living in the area frequented by the cubs, updating the website, press releases, press conference with the media, meetings with environmental and animal protection associations, among other measures);

7. Organise a round table of experts (30th October 2014), for a direct exchange of ideas on these matters.

All these actions permitted us to monitor the cubs in a continuous manner until the 10th of November, precisely the time when most bears in the alpine region go into hibernation, after which no more data were received. Genetic monitoring carried out at the beginning of 2015 after bears emerged from their winter dens confirmed the presence of both young bears and their survival through the winter season. The data seems to confirm the good survival rates of orphan cubs aged more than 6 months, but it is too early to state the impact on the behaviour of the cubs in a long run.

3. Conclusions

Without effective policies to address the conflicts between bears and humans, including the management of bears that pose risks to humans, the efforts to recover a population of bears in the Alps risk failure, and there is the concrete possibility of an increase in the illegal killing of bears, as it has happened in other regions of Europe.

Short Communication

DEFINING, PREVENTING, AND REACTING TO PROBLEM BEAR BEHAVIOUR IN EUROPE

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1. Introduction

Throughout history people have had conflict with bears. A good understanding of the causes of human-bear conflicts is the first step for reaching an effective solution. In this article we first review existing knowledge of human-bear conflicts and experiences with different mitigation measures. We also provide an overview of official frameworks for dealing with problem bears in 15 European countries, and finally, we propose a set of recommendations for effective management of problematic bear behaviour. This article is a summary of the report “Defining, preventing and reacting to problem bear behaviour in Europe” that was published by the European Commission in the beginning of 2015.

2. Human-bear conflicts

Human-bear conflicts are very diverse and are mainly connected with the bear’s opportunistic foraging and consumption of food. There are two main processes that define the potential of bears to system-

atically exhibit problematic behaviour: habituation to human presence, and conditioning to anthropogenic food. Habituation is an adaptive mechanism through which bears become tolerant of people, thus losing fear of people, while food conditioning is a learning process through which certain behaviours are reinforced by positive stimuli. Bears that are habituated to people and/or conditioned to food of anthropogenic sources are much more prone to causing problems to humans.

Several factors affect the risk of human-bear conflict but probably the most important one is access to anthropogenic food sources (e.g. garbage and slaughter remains, among others).

Other factors that influence the risk of occurrence of human-bear conflict are:

Season: spring and autumn are the two seasons with the highest incidents of human-bear conflicts. Both are related to a seasonal increase in bear feeding activity, when bears emerge from dens in the spring, and excessive feeding in preparation for the denning period in the autumn (i.e. hyperphagia).