Field monitoring

The Association Workshop for All Beings coordinated and conducted large carnivores' monitoring from February to March 2014.

The monitoring in the Żywiec Beskids begun on 08-09.02.2014 with a training that prepared volunteers for field work. They were familiarize with lynx, bear and wolf biology and the tracking methodology: identifying tracks and signs which indicate the presence of the species, and the technique of data gathering during field work.

Methodology

The large carnivores monitoring was conducted in 5-day intervals, each lasted 2-3 days. The trained volunteers took part in winter tracking along previously chosen transects. The area where the monitoring was conducted included the Żywiec Beskids and the Silesian Beskids, and the research covered the areas on the Polish side of the border, and also partly touched the Czech Republic and Slovakia. The project partners conducted parallel research on both sides of the borders.

The volunteers were split into groups. At least one person of each group had knowledge and experiences in large carnivores' tracking. The participants of the project mapped their transects with GPS and recorded tracks and observations. The prepared forms were used for describing identified tracks and signs of bear, lynx and wolf presence. During each walk along a transect current weather conditions, time and trail were noted. In case of finding lynx and wolf tracks the researchers followed them over a distance of at least 200-300 m moving in the opposite direction. A picture of each record was taken with a measure which made it possible for an expert to later perform a thorough analysis and confirm that it was identified correctly. The age of tracks, their number, direction, location and details of the animal's behavior were noted. Fresh scats were also collected in order to perform molecular analysis. Genetic studies of the individuals from Poland, Slovakia and the Czech Republic will be used to determine the degree of genetic relationships between carnivores from this countries as well as to assess the condition of the local population. The data will be also added to the analysis of trails and directions of these animals' migration.

During the monitoring the presence of other protected species was also noted.

Each record was verified by the tracking coordinator and classified by the criteria of the 'SCALP' (Status and Conservation Alpine Lynx Population). Within the frame of this project a basic guidelines and assumptions concerning the methodology of lynx monitoring in the Alps and standardized criteria of the quality of the lynx records were set. Currently this criteria are being successfully used in research on other carnivore species. According to the guidelines, the data gathered during the field work are grouped depending on their rank (importance) and the possibility to verify them into 3 categories:

Category 1 (C1): 'Hard data' such as dead individuals, direct observations verified with a photography, genetic analysis data.

Category 2 (C2): Verified records from people who have adequate experience and knowledge allowing them to identify the observed animals correctly, and records based on tracks found by trained and credible observers, or confirmed by photographic documentation.

Category 3 (C3): Records of dead animals, scats and tracks that are impossible to be verified by experts in terms of correctness of identification. This category also includes records based on vocalization heard and direct observations done by unqualified observers (ex. local community).

Methods of collecting genetic material

Collecting genetic material from carnivore scats is one of noninvasive methods allowing studying of their DNA. While collecting samples, it is crucial to avoid polluting them with different DNA (ex. from other individuals), which is why the scats were collected with the use of disposable gloves. In case of hair the samples were secured in string bags and stored in a freezer. Each scat sample was put into a vial with 96% alcohol. They were labeled and marked with a waterproof marker (species, date, researcher, GPS number consistent with the number from the form) which made it possible to assign the sample to the proper form with a detailed description of the sample (including: the location at which the sample was collected with GPS data, weather conditions, number of observed individuals, freshness of scats).

In order to avoid sample DNA contamination (ex. polluting DNA by mixing samples from different individuals) in one vial material (scat) from only one individual was stored. Additionally, the collected scats were stored in a freezer until the molecular analysis was performed.

The molecular data are being analyzed.