



# REPORT ON THE LYNX MONITORING TRAINING COURSE

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## ***Introduction***

The Balkan Lynx lives in the southwestern part of the Balkan Peninsula, with the main population concentrated in the mountains of eastern Albania and western Macedonia. A small part of the population is thought to live in Montenegro and Kosovo. The total estimation in all range countries is less than 100 mature individuals; therefore it is one of the most endangered populations of Eurasian Lynx in its whole range. The main threats to its survival are habitat degradation, decline of prey base and poaching. Not much is known about the Balkan Lynx ecology and a very few studies were done in this direction. This information is immediately needed as no conservation strategy can start without having enough knowledge about the species in this region. Conservation was before hampered because of the unstable political and economical situation in the region. One of the key factors for the survival of the population is the collaboration between its two main range countries, Albania and Macedonia.

In recent times there has been a general interest from different organizations towards the conservation of this highly endangered population. Several reports have been published as well as different workshops and seminars have been held. The most recent seminar was held on 15 November 2005, in Mavrovo National Park, Macedonia, which was followed by a 2-day workshop for the monitoring of the Balkan Lynx. The participants were from Albania and Macedonia, representing different groups of interest, including governmental agencies and NGOs of both countries. These activities were organized by EURONATUR, the IUCN/SSC Cat Specialist Group, KORA and the NGO consortium "*Macedonian Ecological Society*", "*BIOECO*", under the patronage of the Bern Convention secretariat, and financially supported by the Frankfurt Zoological Society and the German Federal Agency of Nature Conservation.

Following one of the conclusions of the Workshop, that was to conduct a basic field survey in Albania and Macedonia to get more information about the Balkan lynx ecology and distribution, young researchers from two countries were invited to Switzerland for a training course about lynx monitoring. The participants were members of the NGOs "*Macedonian Ecological Society*" (MES) and "*Protection and Preservation of Natural Environment in Albania*" (PPNEA). The training was held from 20 to 31 January 2006 and was organized by KORA and supported by EURONATUR. It included theoretical, conceptual and practical components. The goal of this training was to demonstrate the methods and procedures of the lynx monitoring in Switzerland and to build the basis for a survey and a monitoring system for the Balkan lynx in Albania and Macedonia.

## *Activities*

The Lynx Monitoring Training Course included theoretical and practical components. Lectures and presentations were held at the KORA office, in Bern, meanwhile the field training took place in the Simmental valley in the Swiss Alps.

Urs Breitenmoser made a brief introduction to the training session and gave a presentation about the aims, principles and concepts of monitoring. It was show to us what monitoring can be used for, results and problems created during its ongoing. The need for creating a monitoring-network was underlined as the basis for the future monitoring activities in Albania and Macedonia.

Manuela von Arx presented the status and distribution of the Eurasian Lynx in Europe, in regard of the survey made around Europe by KORA in 2001. The legal framework concerning the lynx in Europe was shown, as well as its distribution, populations and threat status.

Among the survey methods used for the lynx in Europe, special attention was given to camera trapping techniques. Fridolin Zimmermann explained theoretical aspects of camera trapping methods (extensive and intensive). Concepts on how to organize a camera trapping session and how to interpret the data were given and later a practical exercise was held in the forest nearby, on how to adjust a camera trap. This was a pre-activity of the main field training that was going to take place in the Simmental valley, where a camera trapping session was going on from late November 2005.



GPS principles and field orientation methods were presented by Andreas Ryser. The importance of GPS in modern monitoring

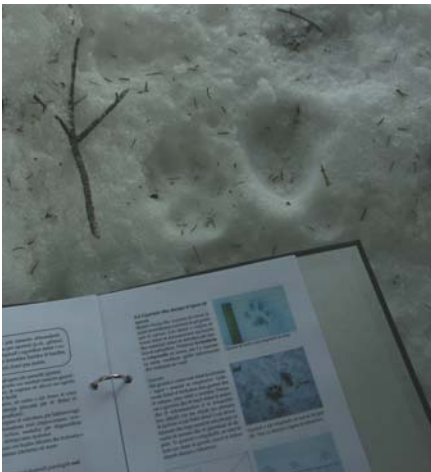
methods was underlined as an advantage in gathering precise position data. After the theoretical part, a field training took place in the pre-Alps to implement on terrain GPS and map orientation techniques.



As mentioned before, our group did three-day field training on camera trapping methods, conducted by Fridolin Zimmermann and Anja Molinari-Jobin. The training took place on the Simmental valley, in the Swiss Alps. This area is well known to be populated

by lynx and in the same place, camera-trapping sessions had taken place years before. We saw on the field how to set the camera traps including film and battery changing, camera programming, and how to manage special cases as for example when a camera is broken. We fulfilled these tasks on our own, in the third day of practicing. Another issue was

track identification, concentrating mainly on lynx tracks. When lynx tracks were found, our group followed them and doing so we could see better the lynx special behavior (as for example in scent marking places) and its way of moving. The field training turned out to be one of the most important components of the training as everybody could see different models of camera trap and practice with them and we could do some lynx tracking.



We also did some lynx identification exercises with photos of lynx taken in previous camera trapping sessions. The coat pattern of the lynx and the special distribution of dots were some of the means used in doing these exercises.

Christine Breitenmoser-Würsten, in her presentation, gave additional information about lynx genetics and its importance in the conservation of the species. She showed the genetic status of the re-introduced populations in Europe, as well as the native ones. Of special interest were the genetic results of the Balkan lynx samples, which showed a clear differentiation of this population from the Carpathian one. This can be used as one more proof in defining this population a different subspecies as previously described by some authors (*Lynx lynx martinoi* Miric 1978). It was also shown how to get genetic material from parts of the animal and methods of its conservation.

Lynx-prey relationships, predation impact and depredation problems were presented by Urs Breitenmoser. The above-mentioned data were studied, interpreted and conclusions were given about the management of these cases.

We took information about how a database functions and its connection with GIS. This presentation was made by Simon Capt from the Swiss Center of Fauna Cartography. Explanations in how to create a database, how to enter the data, its maintenance in order to provide available and sustainable data in long term planning, were given through the presentation.

Kills identification and examination were some other procedures showed to the participants during the training. This was done at the Veterinary Faculty of the University of Bern. There was also a demonstration about trapping systems for the lynx. Two different methods were introduced: foot snares and distantly controlled tranquilizer.

For all the activities during the training of the participants to us it was given the proper literature and material.

## ***Results***

The Lynx Monitoring Training Course lasted for a period of 12 days. This training was not only necessary but also very productive in the cooperation point of view. We built the basis about how to establish and implement a stable monitoring program for the Balkan lynx. From the good presentations and demonstrations on the field we not only learned about monitoring methods but also how to avoid biases and pitfalls, which can sometimes occur.

The field training was the essential part of the entire course. We learned the basics of GPS system, like marking and locating points and routes on the field, downloading data and using them for GIS system. Then, learning the camera trapping method seemed to be the most important part with changing films, batteries, programming the cameras and filling the special camera trapping forms. The films obtained from the period of our camera-trapping field training were developed and pictures of lynx were found in it. We scanned all the lynx pictures and putted them on the KORA picture database. In spite of the bad snow conditions for tracking we were able to find some lynx tracks and follow them to study its behavior. Also we gained knowledge about animal tracks in general, how to recognize and to distinguish them from one another. In the lynx kills identification session, we learned about some main signs for recognizing a lynx kill and distinguishing it from other large carnivore's kills. Also, we got knowledge about some trapping methods, like distantly controlled tranquilizer and foot snare.

During this training we finalized the Albanian and Macedonian versions of the "Guidelines for the Lynx Monitoring" which will be used further on in the monitoring programs in the proper countries. The "Guidelines for the Lynx Monitoring" will be also available online as a PDF documents.

### ***Summary of the results:***

- Build the capacities for the establishment of a Lynx monitoring program in Albania and Macedonia
- Basic GIS and GPS information
- Camera trapping methods (extensive and intensive)
- Implementation of the camera trapping in the field
- Field actions and techniques (tracking, transects, etc.)
- Gathering and analyzing data
- Creation and maintenance of a database
- Genetic information about the species
- Kill identification signs
- Lynx capture methods
- "Guidelines for Lynx Monitoring" published

### ***Conclusions:***

- Spreading through Serbia and Montenegro, Albania and Macedonia, the Balkan lynx population is an isolated one, which with genetic examinations could be recognized as an own subspecies. With no more than 100 individuals, fragmented habitats in the area, decline of prey base and poaching, the survival of this population is under question mark. Urgent measures are needed to be undertaken for the survival of this distinct population.
- Several measures were taken by various conservers for protection of this species. In this direction, EURONATUR, the IUCN/SSC Cat Specialist Group, KORA and the NGO consortium “*Macedonian Ecological Society*”, “BIOECO” organized a seminar, followed by workshop in order to introduce the participants with the knowledge of the monitoring.
- For better understanding the methods, principles and aims of the monitoring, we were invited in Switzerland to see the already established monitoring programme and to learn and practice about the following methods.
- We concluded that it is necessary to build up a monitoring network in Albania and Macedonia as a first step for continuing the monitoring process.
- The Lynx Monitoring Training Course included theoretical and practical components. Practical components took place in the research area in the Western Alps and various lectures were presented in the frame of the theoretical work. Demonstrations were also introduced, containing camera trapping system, lynx capture methods skills and lynx kill identification.
- The results that came from this training are not to be underestimated, especially for countries with no starting point of the monitoring programme. Some of this results are: basics knowledge of GPS system, use of the camera-trapping system, tracking, lynx identification, data base management and entering new data, lynx kill identification and lynx capture methods.
- The translation of the “Guidelines for the Lynx Monitoring” in both languages is also a product of this training. Online version will be available as a PDF format.
- All through, we got very good basic knowledge about monitoring program for the lynx in Switzerland, we can still say that for right and successful monitoring of Balkan lynx, more trainings are needed because of the routine nature of the monitoring methods.

