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The Eurasian lynx in Continental Europe



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Original contributions and short notes about wild cats are welcome

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Cover Photo: Camera trap picture of two Eurasian lynx kittens in north-eastern Switzerland. 11 December 2014 (Photo KORA).

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Conservation challenges in the Bohemian-Bavarian-Austrian lynx population

The development of transboundary cooperation in monitoring and conservation of the Bohemian-Bavarian-Austrian lynx *Lynx lynx* population is presented. From 2013–2020 two international lynx projects, co-financed by the EU, established monitoring standards and collected comprehensive demographic and genetic data on population level. Main threats for the population are illegal killing and inbreeding.

The Bohemian-Bavarian-Austrian BBA lynx population stretches over three countries, the Czech Republic, Germany and Austria. This region forms one of the biggest cohesive woodland areas of Central Europe. Two national parks at the Czech-German border (Šumava and Bayerischer Wald) encompass 680 km² and 240 km², respectively. They are surrounded by large cultural and landscape protection areas with diverse land cover and land use practices. Economical income mainly stems from forestry, agriculture and tourism. From 1982–1989, a total of 17 lynx (6 females, 11 males) of Carpathian origin were officially reintroduced in the area of the subsequent Šumava National Park (Bufka & Červený 1996).

It is not known if any of the 5–7 lynx released in the Bavarian Forest from 1970 to 1974 (Festetics 1981, Stehlik 2004) or their descendants survived until the reintroduction in Bohemian Forest. Therefore, we assume that only this second reintroduction in former Czechoslovakia provided the founder group of today's lynx population. Nevertheless, the clandestine release of lynx on the Bavarian side in the 1970s is still responsible for negative attitudes towards lynx and therefore poses till the present day a challenge for the conservation of the species.

Transboundary cooperation in lynx conservation and monitoring started in the early 1990s. Cooperation was neither institutionalised nor methodically harmonised. It comprised exchange of information and experience with data collection and radio-tracking.

The first transboundary assessment on population level was done in 2000 (Wölfl et al. 2001). The data were of very uneven quality, stemming from diverse compilation methods of different intensity (chance observations, snow tracking and questionnaires) and could

not be evaluated due to lacking documentation and verifiability. However, this information provided a basis for next steps and all data collected since the 1970s have represented a valuable dataset, which enables current long-term population development studies.

As monitoring data inform conservation actions of almost any kind, the focus lay not only on improving the monitoring, but also to harmonise data collection methods. In Bavaria, the monitoring standards developed by the SCALP Expert Group (Molinari-Jobin et al. 2003) have been applied since 2002. This was possible, because a widespread network of volunteers trained to record and document lynx signs was established at an early stage. This enabled the evaluation of lynx reports according to the SCALP catego-

ries (Molinari-Jobin et al. 2021). Since 2007, the quality of the monitoring has further been improved by applying camera-trap surveys (e.g. Wölfl 2008, Wölfl et al. 2009, Weingarh et al. 2012). Nevertheless, it soon became clear that for a sound population assessment, monitoring standards must be applied transboundary and on a larger scale.

Trans-Lynx project

Finally, from 2013–2015 the Trans-Lynx Project, co-financed by the EU, targeted the entire BBA lynx population (some 7,500 km²) and involved several GO and NGO institutions in a transboundary cooperation. The main goal was to implement international monitoring standards, i.e. to harmonise data collection, evaluation, and analysis. The project partners agreed to apply the SCALP criteria, and hence made a big step forward regarding transboundary monitoring standards at population level. Other goals were to integrate stakeholders in project implementation and to develop and strengthen international cooperation.

3Lynx project

In the subsequent 3Lynx project (2017–2020, EU-co-financed) the number of institutions cooperating on transnational level further increased and the area considered was enlarged. In addition to the range countries, institutions from Italy and Slovenia joined to expand the needed expertise. The 3Lynx project continued where the Trans-Lynx project ended and added a next step: an interna-

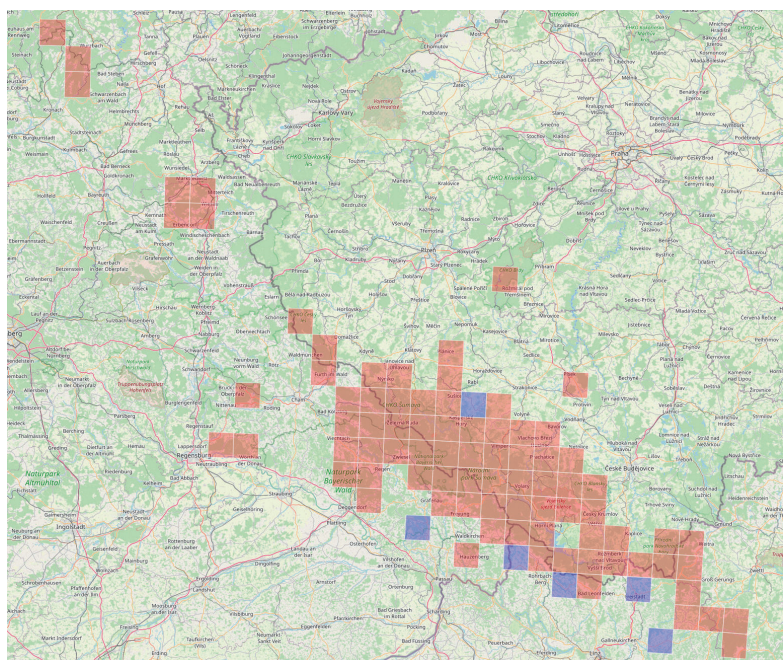


Fig. 1. Distribution of the BBA lynx population in lynx year 2018 (1.5.2018–30.4.2019) based on hard fact data (C1, red) and confirmed data (C2, blue).

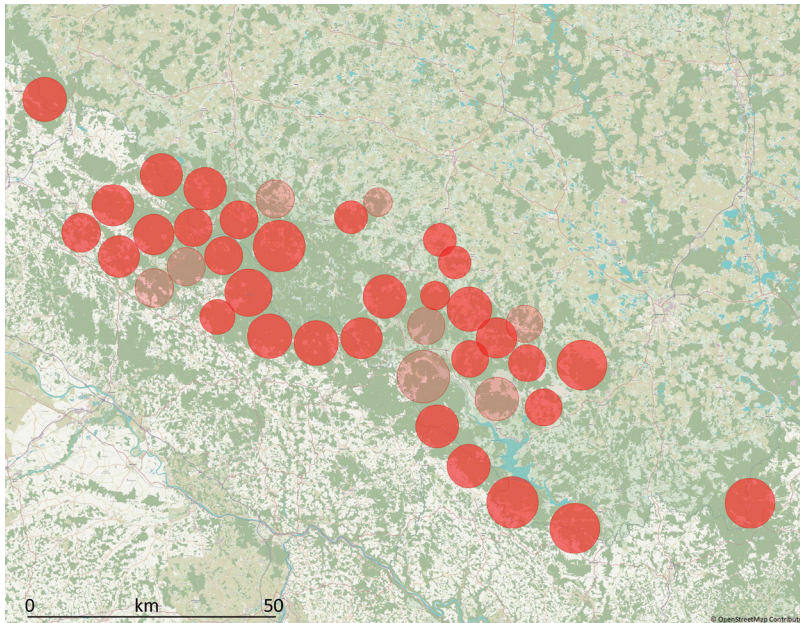


Fig. 2. Map of home ranges of reproducing females with kittens (red) and resident females without confirmed reproduction (light red), recorded in the monitoring year 2018/2019 (1.5.2018–30.4.2019).

tional conservation strategy on population level. The 3Lynx project hence focused on four topics: (1) international cooperation, (2) lynx monitoring, (3) communication and (4) conservation strategy.

As reliable monitoring data are the basis for decisions in lynx conservation and management, a fundamental goal of 3Lynx is (still) the improvement and harmonisation of monitoring from data collection to interpretation. As most important monitoring method, camera-trapping was intensified and extended over an area of 13,000 km², encompassing more than the currently known distribution range of the BBA lynx population (Fig. 1). The camera-traps were installed year-round with 2–10 cameras per 100 km², depending on confirmed or assumed lynx reproduction zones. As females with kittens are the most important indicator for the vitality of the population, the objective was to record all reproductive units (Fig. 2). For the whole BBA lynx population, we realised a total count of family groups, collected data on distribution, minimum population size, mortality, natality, sex and age structure, dispersal and genetics. Furthermore, by comparing two consecutive monitoring periods we could gather population-wide data about survival of subadult and adult lynx. This information helped us assessing the importance of the major threats to the BBA lynx population: illegal killing, inbreeding, and habitat fragmentation (Mináriková et al. 2020, Wölfel et al. 2020).

The participative monitoring approach pursued in 3Lynx aimed at improving relations with

stakeholders, mainly hunters and foresters. Involving all key stakeholders from different countries and languages is a communicative challenge and requires a good coordination of the project activities. We organized mutual stakeholder visits in each of the five participating countries. This gave the stakeholders the opportunity for information exchange and learning about regional approaches to lynx management and conservation. Transnational projects face diverging administrative, legal and socio-political conditions in their countries that often hinder the adaptation of harmonised solutions throughout the entire area, despite the lynx face the same threats in all three countries. This is especially challenging for the development of the lynx strategy on BBA population level (Wölfel et al. 2021).

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