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Abstract: Swiss scientists have begun translocating lynx in an attempt to reduce predation on sheep in the west of the country and to establish a new lynx population in the east. The first year's quota of six has been moved to the canton St Gallen, where the parliament approved the release of lynx.
(1997) conclusions. Our results indicate that present jaguar populations are the result of a somewhat recent (200,000 to 800,000 years old) expansion and colonization process, and have maintained considerably high levels of gene flow throughout broad geographic areas. This population history is quite different from that inferred for other Neotropical cats, particularly the ocelot (Leopardus pardalis), margay (L. wiedii) and oncilla (L. tigrinus), which show marked geographic subdivision and ancient historical groups (Eizirik et al. 1998, Johnson et al. 1999, Culver et al. 2000).

Although no major geographic partitions were observed among jaguar populations, we were able to detect evidence of genetic differentiation among three to four broad geographic areas: Central America (perhaps subdivided into two subunits), northern South America (north of the Amazon river), and southern South America (south of the Amazon). These partitions are likely due to historical reduction in gene flow across certain geographic barriers (e.g. the Amazon river, which has also been found to play such a role for other Neotropical cats). Although these groups show statistically significant evidence of genetic differentiation, their isolation has not been complete, and some gene flow among them has probably been maintained historically. Further studies with increased sampling may detect more refined patterns of geographic substructure at a regional level, including instances where isolation by distance (clinal variation) is playing an important role in the dynamics of genetic variation.

Even though jaguars lack deep geographic partitions (‘subspecies’), our results have indicated the existence of more subtle genetic differentiation across broad geographic areas, which should be taken into account when designing conservation strategies. It is also important to consider that local adaptation to diverse environments may have led to genetic differentiation at particular genes, not assayed in our analyses. We therefore support the implementation of operational conservation units for jaguars defined on a biome or ecosystem scale (Medellin et al., in press), taking into account the historical barriers to dispersal identified in our study, and coordinating management on a regional basis.

References

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Lynx Translocation in Switzerland

Swiss scientists have begun translocating lynx in an attempt to reduce predation on sheep in the west of the country and to establish a new lynx population in the east.

The first year’s quota of six has been moved to the canton of St Gallen, where the parliament approved the release of lynx.

Switzerland’s lynx population is descended from about 20 lynx reintroduced in the 1970s in the western Alps and the Jura Mountains, on the border with France. Fewer than 100 lynx are thought to exist today in the western Alps. The population has failed, for unknown reasons, to spread to eastern Switzerland. In the west there have been increasing complaints from sheep owners of lynx attacks on their flocks, while hunters claim lynx have killed too many roe deer (Capreolus capreolus) and chamois (Rupicapra rupicapra).

In the past year or two there has been a spate of illegal killing of lynx, attributed to hunters, and there have even been suggestions that officials supposed to be protecting the cat have abetted the killing.

In August 2000, the Swiss Lynx Concept, a conservation management plan was implemented. Although the lynx remains a protected species in the Swiss hunting law, the management plan now defines certain rules; outlines the long-term conservation of the lynx in Switzerland; and delegates certain responsibilities back to the cantons. The concept lays down the obligations with regard to the prevention of, and compensation for, damage to livestock; the limit for the removal of lynx causing damage; and defines rules for the intervention in case of local lynx peaks or substantial reduction of the lynx’s natural prey population. If and when the lynx population peaks, it will be reduced.

The management plan was implemented by contracts between the Swiss Agency for Environment, Forest and Landscape (SAEFL), and the cantons of Vaud, Fribourg and Bern in western Switzerland, and Zurich, St. Gallen, Thurgau and the two Appenzells in the east.
for the translocation of 8-12 lynx in the years 2001/02.

As the total lynx population in the Swiss Alps – numbering not more than about 100 – is still relatively small, the reduction of local abundance is being carried out through translocation of lynx to management compartments with low or no lynx occurrence.

When the lynx has recovered in all suitable habitats of Switzerland and further translocations are no longer possible, it is intended to reduce lynx through culling or quota hunting.

Parallel with the increase of lynx abundance in the north-western Alps, the signs of lynx presence declined in the neighbouring compartments, and there are still no lynx in many parts of Switzerland that provide good living space. As a result of its specific land tenure system, the lynx is a poor coloniser. Dispersing lynx tend to settle next to conspecifics, and the socio-spatial structure is an important condition for successful reproduction. Although an individual may cross a high mountain ridge or a fenced highway, such natural and artificial barriers are a huge obstacle to the spread of the population. Instead of expanding into virgin areas, the lynx population was fluctuating on the spot.

The new approach to lynx conservation in Switzerland is much more than moving a few lynx. Throughout the Alps, the expanding forests and abundant prey favour the return of the large cat. Nevertheless, wherever lynx exceeded a certain abundance, it provoked demands from local hunters and sheep breeders for reduction of numbers and even extirpation. Local people seemed to be willing to accept the lynx, but “only if there are not too many”.

To allow the co-existence of lynx and humans in a cultivated landscape, the predator must remain scarce. Consequently, a viable population must be spread over a large area. To trade a reduced local abundance for an extended distribution is considered to be a reasonable compromise to conserve large carnivore populations in a human dominated environment.

The reintroduction of the lynx in eastern Switzerland will not be the end of all problems of and with the lynx. The ultimate goal is to link the Swiss population with the one in the eastern Alps, and thereby help the lynx to spread over the whole of the Alpine arc. The lynx population in the triangle of Slovenia, Italy and Austria, descended from a reintroduction in southern Slovenia, is even less viable than the Swiss population. Small and isolated populations are always vulnerable, especially if they are not allowed to reach high densities.

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First Lynx Radio-collared in Germany

by Manfred Woelfl*

The Naturpark Bayerischer Walde (Bavarian Forest Nature Park) finally succeeded in trapping a lynx in the east of Bavaria at the end of December 2000 when a young female was caught and fitted with a radio-collar.

Lynx were eradicated in the Bavarian and Bohemian Forests about 150 years ago. In the early 1970s and 80s, conservationists reintroduced lynx to Bavaria and former Czechoslovakia respectively. Lynx spread rapidly until 1996 (Wöfl et al., in press). However, hunters and farmers often oppose the return of the large cat, criticising the illegal reintroduction in Bavaria and fearing competition in terms of roe deer hunting and losses of sheep and farmed deer.

Since 1995, the Naturpark Bayerischer Wald has acted as an intermediary between interest groups (e.g. conservationists, farmers, hunters and foresters). Fact-based information is slowly replacing hearsay on all sides, and in the meantime conservation goals are discussed more openly. The education to date of more than 70 local experts to address lynx-related problems; the institution of a privately funded compensation system; and the unbiased position of the Naturpark Bayerischer Wald has slowly revived mutual trust, the key for a long-term survival of large carnivores in Europe.

The project has permission to radio-collar another three animals in 2001, and will continue until 2005, according to its success in increasing acceptance for the lynx. The radio-tracking is meant, apart from mere science, as a tool for public relations work. The method is easy to explain and local people especially are invited to join the tracking sessions. However, as researchers we will not disturb the animals' behaviour. Therefore we definitely guarantee “no direct lynx observation”, and no homing-in on the animal. There exist several nice enclosures for observing lynx in the Bavarian Forest. We aim for the common experience during these tracking sessions. Combined with an open and honest researcher’s mind, we hope that this experience will nourish the fragile strings of mutual trust.

Reference

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(Based on press releases by the Swiss Carnivore Management Project)