
Abstract: In the 1970s, Eurasian lynx *Lynx lynx* from the Slovakian Carpathian Mountains were released at several sites in the Alps. In this article, we will briefly summarize the present status of the lynx in the Alps and discuss re-introduction procedures.
EURASIAN LYNX

The re-introduction of the Eurasian lynx in the European Alps

In the Alps, the largest mountain range in Europe, all large carnivore populations became virtually extinct in the 18th and 19th centuries. This was as a consequence of deforestation, reduction of wild ungulate populations, and direct persecution. In the 20th century, however, the forests and the herbivores in the Alps made a recovery as human populations decreased or concentrated in larger towns. Tourism has increasingly replaced agriculture, especially the livestock husbandry, as the main source of income. As a result, the ecological requirements for the existence of large carnivores in the Alps have improved.

In the 1970s, Eurasian lynx Lynx lynx from the Slovakian Carpathian Mountains were released at several sites in the Alps (Fig. 1). In this article, we will briefly summarize the present status of the lynx in the Alps and discuss the re-introduction procedures. The number of lynx released were few: 14 in Switzerland, 2 in Italy, and 9 in Austria. Additional re-introductions were made in the adjacent Swiss Jura Mountains (19 animals) and in the Dinaric Mountains of Slovenia (6). The exact number of animals released is not known, as in Switzerland, and most likely in Austria and Italy, some more animals were set free clandestinely. None of the re-introductions was preceded by a habitat evaluation or population viability study, nor by a public information campaign. No field research was done to observe the animals (with exception of the Austrian project), where the first animals released were fitted with radio-collars which all failed after a few weeks), nor were any monitoring systems established to survey the development of the populations. The few reports about the development and spread of the populations were mainly based on non-verifiable information. The only reliable data came from Slovenia, where legal hunting of lynx started in 1978 and produced some statistical records, and from Switzerland, where research by means of radio-telemetry began in 1983. Only in the 1990s, younger biologists in the Alpine countries started to re-evaluate the status of the Alpine lynx population.

Today, lynx are permanently present only in two regions of the Alps: in western Switzerland and in the triangle of Slovenia, Italy and Austria (Fig. 1). In western Switzerland, the lynx population has recently re-increased. The effective population size is...
expected to be about 80 individuals. Although the local lynx
density is rather high, there has been no indication of a population
expansion over the past 15 years. The re-introduction into the
Austrian Alps was not successful. The lynx existing in the triangle
most likely origin from immigrants from the Slovenian re-
introduction. The spread of this population, however, has halted
after it was over-harvested in the late 1980s and early 1990s.

It is difficult to judge its survivability of the lynx in the Alps at
present. On one hand, there is a thriving, but still small population
in the western Swiss Alps. Other occurrences in the Alps have
disappeared or are shrinking. The adjacent populations of the Jura
Mountains and the Dinaric Range seem to be stable at the
moment. Although the release programs in the 1970s were
completely uncoordinated and have disregarded almost every rule
for re-introductions - if we assess them according to
contemporary Guidelines for Re-introduction (IUCN 1998) - the
outcome of some of the attempts is still remarkable. Re-
introductions are stochastic events. The most sophisticated
project design gives no guarantee for success, but, on the other
hand, the II-considered release of some animals may by chance
lead to the founding of a population. The lynx returning to the Alps
found good habitat and plentiful prey. What they however did not
find was the broad acceptance by local people. Retrospectively,
we consider the lack of public information and involvement, and of a
long-term conservation and management plan to be the most
significant shortcomings of the re-introductions in the 1970s. In
Switzerland, controversy about the return of the lynx has now
lasted for 30 years. Interest groups such as sheep breeders and
hunters, often supported by the local public, do still not tolerate the
presence of the large cat. In all countries sharing the Alps, illegal
killings were considered a significant threat for the lynx. Local
people often mistrust the authorities, conservation agencies and
scientists promoting the recovery of the lynx, as a result of the
early misinformation and the lack of clear concepts.

Re-introductions of large mammals are long-term projects. Such
species need huge areas to gain viable population size, and they
grow slowly. Large carnivores have the additional burden of being
competitors to man; human dimension aspects cause the most
important problems to be solved. From the ongoing controversy
about the return of the lynx to the Alps, we can learn that three
points are especially important for the re-introduction of large
carnivores:

- to establish a viable population not just take a few years,
  but some decades;
- the site considered from the beginning must comprise the
  whole area of recovery and not just the release sites; and
- to gain broad acceptance, public information and involvement
  is crucial, and unambiguous plans not only for the recovery,
  but also for the subsequent management of the population
  must be communicated early.

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