

Reintroduction of Lynx (*Lynx lynx* L.) in Yugoslavia

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Zusammenfassung: In 7 Ländern Europas wurden Luchse wiedereingebürgert: BRD (1970), Schweiz (1971), Jugoslawien (1973), Italien (1975), Österreich (1977), CSR (1982), Frankreich (1985). Vorgestellt wird die heutige Situation in genannten Ländern und kommentiert wird die Wiedereingebürgerung in Slowenien, wo im März 1973 6 Luchse (1:1) freigelassen wurden. Besprochen wird die Migration, Zuwachs, Nahrung und Einfluß der Luchse auf andere Tiere, vor allem auf Schalenwild, die heutige Verbreitung der neuen Luchspopulation, Bejagung, usw. Aus heutiger Sicht ist die Wiedereingebürgerung in Jugoslawien und in der Schweiz am besten gelungen.

Stock and migration

Two separate populations of lynx live in Yugoslavia. An aboriginal group inhabits the high mountains of Korab, Šara and Prokletija in the region of Macedonia, Kosovo and Montenegro by the Yugoslav-Albanian border. Today this Balkan population of lynx is isolated occupying a territory of about 600.000 ha with an estimated 200 head. Despite the ban on hunting since 1945, they have not extended their territory.

In March 1973 a group of lynx was reintroduced about 700 km north of there, in the region of Kočevje forest 60 km from Ljubljana. Slovenia lies in the northern part of Yugoslavia, bordering on Italy and Austria. The last lynx in Slovenia had been caught in 1912.

Six lynx were transported from Slovakia (Czech and Slovak Republic) in a 1:1 sex ratio, and released in January 1973, quarantened in the vicinity of Trnovec pod Rogom (1099 a.s.l.), in the »Medved« hunting preserve in Kočevje, from whom the suggestion for reintroduction had come. After 46 days quarantine, on March 2, 1973, the lynx were freed. The release of the lynx at mating time appeared successful. Since some months later four young were spotted, which was at least a partial guarantee that the reintroduction could be successful.

The following conditions were important for our resettlement:

1. that the lynx were released at mating time – reproduction
2. that after the release they remained in the vicinity of the quarantine
3. that all three females were pregnant
4. that in August 1973, four young were observed in the direct vicinity of the release. One female having had two cubs, the other two one each. This was the first indication that the attempted resettlement might succeed.

An increase was observed each year. We arranged for hunters and foresters to send us a specially prepared questionnaire

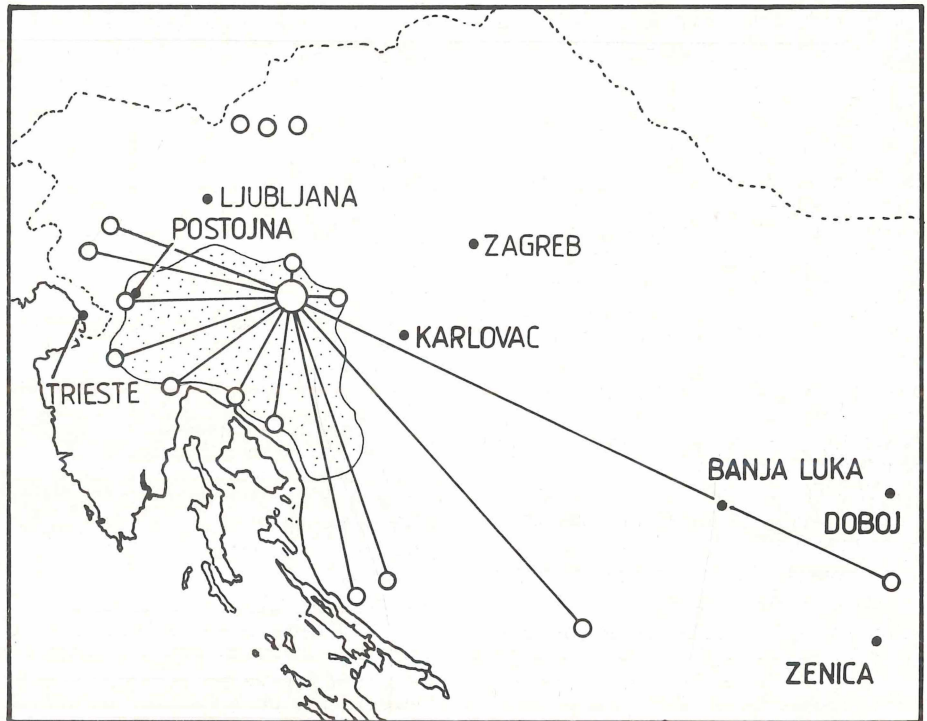


Fig. 1: The range of lynx in 1989. Central area of settlement is shaded; open circles showing furthest migration where lynx have been killed.

when they sighted lynx or found traces in their reserves: traces, direct sightings of lynx. The finding of game mawled by lynx, increases in numbers.

The lynx gradually spread in all directions (Fig. 1):

1. Towards the southeast into hunting reserves of the adjacent Republic of Croatia. Where the first lynx were traced in autumn 1974, actually in the National Park of Risnjak, in Gorska Kotar. The last lynx had been captured here in 1903 at Bukov vrh (1167 m) in Snesnik. Young we sighted in the same place the following year (1975). It should be mentioned that the hunting reserve of Gorska Kotar, which is linked to Kočevje and the Notranjska forests, is settled by native bear, as well as a number of wolves. The same applies along Velebit, the mountain range above the Adriatic Sea. Lynx crossed over Kapela and Lika in 1984 into the hunting grounds of the Republic of Bosnia, where four lynx have been shot to date and two found run over. The furthest known migration of lynx in this direction is almost 300 km from Risnjak, a lynx was shot by Zavidovic in a mouflon reserve.

A possible reason put forward for such a long migration from the core, central area is that there is much less food in these hunting grounds than occurs in Slovenia and even in the region of Gorska Kotar.

The hunting grounds of Bosnia are without red deer, roe deer are scarce, but some man-made colonies of resettled chamois and mouflon exist, all since 1960. Unfortunately we have inadequate data on what happened to the lynx in this extreme southeastern position. Wolf are a great nuisance in Bosnia, and bear also worry the sheep and goats, so there is little sympathy for a new predator – the lynx.

2. Towards the southwest, migration took place over the region of Notranjska – Brkinov, Cicarija to Slavnik (1929 m), where the first lynx was sighted in 1981, in 1984, also a pregnant female with one cub. Six lynx had been shot in this area in 1989.

3. More to the north and west, the new population of lynx expanded in two directions:

– over Velika gora, to Javornik towards Postojna, where the first lynx was sighted in 1978 quite close to the town of Postojna. Lynx with cubs have regularly been sighted above all on the Javorniki, above Cerkno lake. Migration continued beyond there from 1985 over Hrušica, Nanos to Trnovo forest. A powerful male was shot on 18. 12. 1988 close to the town of Grgar, right by the Yugoslav-Italian border (Nova Gorica), which is 120 km as the crow flies from the point of release. We have information (Dr. Perco from Trieste) that for

some years there have been regular lynx traces in the region of northern Italy.

The other direction of migration has been over Mala gora. Menasija and Krim over the Ljubljana-Razdrto motorway, over the region of the forests of Poljanksa and Sevska dolina and Idrija and Jelovic in the Julian Alps, where in 1987 they were found in Triglav National Park. These migration paths to some extent follow the same trails as bear.

At quite the other end of Slovenia, in the Karavanke, lynx have appeared on our side of the border from Austria, where they were resettled in 1977 by Murau in Steiermark. Nine lynx were released, according to our information, 3 female and 6 male. Unfortunately the first was shot 5.12.1979 at Preval, another two in 1989, on 15.1.1989 at Koprivna and 24.10.1989 below Kosuta. All three were powerful males.

We estimate that the central territory of the lynx today extends to some 600.000 ha, of which half is in the Republic of Slovenia and the other half in the Republic of Croatia. The lynx would undoubtedly have expanded more in our surrounding had not shooting been permitted since 1978.

Our findings show that lynx migrated towards the west into areas:

- where there was denser population
- where there was more disturbance
- where the climate was noticeable warmer with exceptionally little snow
- where there is no longer such formal forest complexes as in Kočevje and Notranjska
- that hunters noticed, or found traces, at the furthest extremes where lynx reappeared, invariable of individual lynx and not two or more
- pregnant females were never sighted in these extreme locations.

Nutrition

One of the main elements of our research program was to discover whether the lynx were distinctly carnivorous in our hunting reserves. We followed two routes:

1. the collection of information of finds of game mawled in a lynx manner, i.e., data from the questionnaire which we received from hunters and foresters in the hunting reserve.

This method is not the best, in the broken karst world it is not easy to find torn game and it is also questionable whether it was always taken by lynx. It has to be recognized that it is not easy to ascertain who was the first – lynx, wolf or jackal and if the cadaver is not fresh, it is exceptionally difficult, if not almost impossible to ascertain the real culprit. In snow or mud, tracks can help. In the case of sheep, one must add bear and roaming dogs. This problem has not been resolved in any country in which lynx have been resettled.

We only obtained data from the questionnaire on the kind of game and domestic animals which lynx take, not the quantity,

2. the other method was an analysis of the food in the stomachs of lynx killed.

This method of ascertaining the feeding habits of lynx was more exact, but this only covered the constitution of the diet for five months, i.e., in the hunting season, from 1st October to 1st March, mainly the winter months.

According to the questionnaire, we concluded the following »menu« for lynx in the hunting reserves of Croatia and Slovenia:

Of game:

roe deer
Capreolus capreolus
red deer
Cervus elaphus
mouflon
Ovis ammon musimon
fallow deer
Dama dama
wild boar
Sus scrofa
chamois
Rupicapra rupicapra
badger (3 cases)
Meles meles
brown hare (2 cases)
Lepus europaeus
wild cat (3 cases)
Felis silvestris
capercaillie (3 cases)
Tetrao urogallus
partridge (1 case)
Tetrastes bonasia
fat dormouse
Glis glis

Of domestic animals:

domestic sheep
goats
dogs
domestic cats
chickens

Thus 12 varieties of game and 5 of domestic animals are prey of the lynx.

We were also concerned with the influence of lynx on mouflon. In Kocevje, close to the quarantine where the lynx were released, there are two pens (each of about 1000 ha) mouflon, fallow deer and wild boar were resettled in them after 1971. Even before the release we had been warned from Slovakia that lynx very much favoured mouflon and this was also demonstrated in our environment. Over the years, the lynx destroyed the entire population of mouflon – their numbers were estimated at 250–300 head. The last ram remained until 1982.

It is interesting that in one of the pens there were also fallow deer and wild boar. The lynx did not persecute these as much as mouflon. Mawled remains were found of some young, corpses or skins of fallow deer, but not enough to cause a reduction in numbers as was the case with mouflon. The evidence of this is that 42 fallow deer from Hungary were released in one of the pens in 1985. We also have mouflon free

in nature, but the lynx do not so selectively favour these. Although the latest data from hunters show that there are some such developments in the foothills of Trnovo forest at Goriska. We must study conditions thoroughly in the coming years.

Lynx - Sheep

We are acquainted with the problem of lynx attacking sheep in France. Switzerland and in neighbouring Carinthia in Austria. For the moment we do not have this difficulty since sheep are only in transit in the central area, although herds of sheep (there are a total of 2500 in Kocevje) are tended by shepherds and enclosed in the evening. Only since 1985 have lynx settled in the Alpine areas of Slovenia, where sheep farming is more developed and traditional and herds of sheep graze untended. So far only a few sheep have appeared on the menu in areas of Croatia and fewer still in Slovenia.

Lynx - Hunters

We have found over a number of years that hunters are not enthusiastic about lynx – that is a fact. They claim that the lynx will destroy all the roe deer. Anywhere where they disturb chamois is not a typical forest hunting reserve. The fact is, and this has also been shown by our study, that in all hunting reserves of the central region, the number of roe deer shot has increased in comparison with 1973 – so also in the Kocevje, Notranjska and Krim regions, where lynx have been for longest. Lynx have had a minimal influence on red deer and there has been an exceptionally intensive growth in the number of these game in Kocevje, despite the increase in shooting each year. Wolf is much more selective towards red deer than lynx.

More about hunting policies to lynx

Until 1980, shooting of lynx was only allowed in the narrower central region of the hunting reserve of Kocevje. From 1982–86 the hunting area was greatly extended and in the 1986/87 hunting season. It was decided on the part of the hunting organizations that it should be the same territory as for bear, covering 250.000 ha. Within this, permission was granted each year to shoot only a predetermined number of lynx, 6–8, but outside, the number of lynx shot from the year mentioned was unlimited, although it was forbidden to shoot pregnant females. So in the 1988/89 hunting season in Slovenia 7 lynx from 8 permits were taken in the territory, outside a further 6. In the following hunting season (1989/90) altogether 8 lynx fell – 6 within the territory and 2 outside. The ill-feeling towards lynx shows also in the role of the Hunting Society of Slovenia in the Ministry, in allowing shoot-

ing of lynx outside the territory throughout the year.

Fortunately on the intervention of forester conservationists and above all our institutions this requirement is a dust policy to shooting of lynx within and without the territory was withdrawn from the draft of the new hunting law. We must establish a unified shooting policy as with bear.

Conclusion

We find that: the resettlement was successful, lynx in Slovenia have become, like bear and wolf, hunted game, with open closed seasons. Lynx have extended towards the east and above all towards the west and we hope that they will make contact with the Austrian lynx population. The problem remains of the isolation of

the new population, also in the genetic sense, so we cannot yet talk about a stable population.

Anschrift des Verfassers:

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ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

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