

#### 4. STATUS OF THE LYNX IN EUROPEAN COUNTRIES

In the following pages, we will treat briefly the European countries with an existing or potential lynx population, in alphabetic order of their abbreviations (see tab.1). We use information and recommendations from our respondents. The "comment" represents our interpretation and opinion. Fig.1 shows the recent distribution of the lynx in Europe according to our contacts. There are some contradictions between neighbouring countries, but we did not try to adjust them.

##### AL - Albania

**Status:** Unknown; probable autochthonous population.

**Comment:** No data available. Miric (1974) and Matjuschkin (1979) mention the lynx as present along the Yugoslav-Albanian border, Festetics (1980b) and Cop (1988) include the eastern part of Albania in their map of the distribution of the lynx on the Balkan Peninsula. Bojovic (1978) supposes for Albania the same abundance as for Yugoslavia, but concedes that the lynx in Albania is intensively hunted. Kratochvil (1968h) draws a much more restrictive distribution map for Albania, and he admits that there are no data. On an Albanian map of 1982 on the distribution of game species, submitted by E. Nowak, the lynx is indicated in five places in the NE and in one place in S. Albania. The only concrete information (Miric 1974) is dated 1896 and 1912! The recent distribution of the species in Yugoslavia suggests that it might still exist in Albania too, and Albania could be very important for the conservation of the Balkan lynx population (see Yugoslavia).

##### AT - Austria

**Respondents:** H. Gossow, W. Kulterer, H. Pechlaner

**Status:** Eradicated; re-introduced and re-migrating with increasing tendency.

**Former presence and recent distribution:** Eiberle (1972), Polacsek (1978) and Festetics (1980b) sum up the history of the eradication of the lynx in Austria. The autochthonous population became extinct in all parts of Austria during the 19th century. Polacsek (1978) presents a list of observations in the 20th century. Some of these observations cannot be proved, others may concern animals which had escaped from zoos, and in the NE of the country individuals may have immigrated from Czechoslovakia (Festetics 1980b).

In 1976, the lynx was re-introduced in Austria. This project has been described by Festetics et al. (1980a), Von Berg et al. (1980) and Sommerlatte et al. (1980). Nine lynx (six males, three females) were released in the Styria district (Steiermark, star in fig.2) and followed by radio-telemetry and tracking in the snow. After years of little evidence, there were increasing observations in Carinthia (Kärnten). Today, there is a stable or slightly increasing population in Carinthia, and there have been scattered observations in other districts (H. Gossow, see fig.2b).

**Legal situation, hunting:** Considered as a game species, but protected throughout the year in the whole of Austria.

**Damage to livestock:** In the first years after re-introduction there were no considerable losses of domestic animals. Only in recent years has there been moderate damage in Carinthia. W. Kulterer submitted the following data: 1987: 27 domestic sheep; 1988: four sheep; 1989 (till end of September): 52 sheep, one goat and one calf. Compensation is paid by an insurance ("Bundesländerversicherung") provided by the Carinthian hunters association. The price of a sheep is 1,200 - 2,500 ÖS (W. Kulterer).

**Recommendations:** The respondents emphasise, that both public education and more research on the lynx is needed.

**Comments:** The first lynx of the Slovenian re-introduced population have probably reached Austria and increased the existing population in Carinthia district (H. Gossow, see also Yugoslavia and Italy). This may be one reason for the rapid development of recent years. On the other hand, it is quite characteristic for problems of damage to livestock to turn up a few years after the re-introduction (see Switzerland and France). Whereas in the early years predation on ungulates by the lynx provoked controversy with hunters (Gossow & Honsig-Erlenburg 1986), now a dispute with the sheepbreeders has arisen. Problems may even increase in coming years. Gossow (1989) illustrates exemplarily the psychological and public relation challenges of (or rather after) a re-introduction of a large predator. We will focus on that in the chapter "Re-introduction".

## BG - Bulgaria

**Respondents:** G. Spiridonov, N. Spassov

**Status:** Eradicated.

**Former presence and extinction:** The traditional area still occupied in the 20th century was: 1. the Balkan Mountains E of Sofia and the Rhodope Mountains SE of Sofia; 2. the NW Balkan Mountains S of Vidin; and 3. the northern part of the Istranca Mountains along the border to Turkey south of Burgas. The last known observation was in 1941. Since then, there have been unsubstantiated rumours of individuals immigrating from neighbouring countries. As reasons for the eradication, G. Spiridonov suggests overhunting, conflicts with farmers and sheepbreeders and loss of nutrition due to the reduction or eradication of ungulate populations.

**Legal situation:** Protected by law throughout the year since 1986. The species was given protection at the suggestion of G. Spiridonov, when the possibility of spontaneous remigration became probable.

**Comments:** Evidence for the prehistoric and historic distribution of the lynx in Bulgaria and for its eradication is given by Atanasov (1968). In recent years, several authors erroneously mentioned the species as still present in this country (Festetics 1980b). The only neighbour of Bulgaria with a considerable autochthonous lynx population is Yugoslavia. The range of this population is quite small, and it is doubtful whether it will spread out in the near future. G. Spiridonov and N. Spassov have already suggested the re-introduction of the lynx in Bulgaria.

The worst situation is in the Jura Mountains. As a result of damage to livestock, a violent controversy has broken out that has even led to aggression against people. The matter was not regarded as sufficiently seriously in the beginning, and the chance for constructive dialogue and scientific study has been missed. We must admit that the eruption could not have been expected, and the damage exceeds all experience in Switzerland or Austria. There have been all kinds of rumours about clandestine releases of captive bred lynx and even other big predators (Lynx caracal, Lynx canadensis etc.). S. Capt, who is involved in Swiss lynx research, has been shown a photo of a dead Lynx caracal, said to have been shot in the Ain district. The contact remarked that 18 lynx or lynx-like animals had already been killed in this region. It is impossible to distinguish truth from lies. It is most important to organise an independent investigation, but probably the atmosphere for the moment is too tense. Poaching is frankly admitted by hunters and sheepbreeders in the Jura Mountains. Legal protection is worth nothing if local people do not accept the predator. Local authorities are no longer willing to apply the law, and the ministry in charge has now been forced to take measures. This is not a special French phenomenon. There have been analogous experiences in Switzerland and in Austria.

#### GR - Greece

**Respondents:** G. Giannatos, E. Papaevangelou, F. Studer

**Status:** Eradicated.

**Former presence and extinction:** The species may have been present almost everywhere in Greece. Prehistoric evidence from Attica is given in (Symeonidis et al. 1978). Recent data are not available. Even for regions considered to be the last refuges (Aos Gorge and Varnous and Voras Mountains, NW-Greece), there has been no proof for the last 20 years (G.Giannatos). Surprisingly, hunters and shepherds from the Peloponnese and southern Pindos Mountains are still familiar with the species, and say it was present till World War II. In other parts of Greece, the lynx is completely unknown. Hunters of the Aos region (NE-Greece) claim that they killed a lynx about 20 years ago.

**Legal situation:** Protected since 1939.

**Comments:** Festetics (1980b), Miric (1974), Cop (1988), Matjuschkin (1979), Kratochvil (1968h), and Van den Brink (1975) believe the lynx to be present in the northern part of Greece, but the lack of data is evident. Miric (1978a) mentions the examination of skulls from NW-Greece, but gives no further details. There is one stuffed specimen in the Zoological Museum of the University of Athens, but its origin is uncertain. People such as G. Giannatos or F. Studer, working in N-Greece and collecting data on all big carnivores, have never had a hint of the occurrence of the lynx. The species has not been present in Greece at least since World War II. The reason for its eradication is said to be the loss of habitat (E. Papaevangelou). This may be true for the almost deforested regions of Greece. In the northern part of the country, where the wolf, brown bear and jackal still occur, we expect there are additional reasons (see chapter "Vulnerability").

**YU - Yugoslavia**

**Respondent:** J. Cop

**Status:** Macedonia and Kosovo: Autochthonous population in reduced area, tendency unknown. Slovenia and Croatia: Re-introduced, increasing population.

**Former presence and recent distribution:** In historic times, the lynx was spread over the whole territory of Yugoslavia with the exception of the region around Belgrade (Kratochvil 1968b, Miric 1974, Cop 1977, Miric 1978b and Festetics 1980b). During the 19th and the first half of the 20th century, the area continuously decreased from north to south. In 1940, a few lynx remained along the Yugoslavian-Albanian border. Since World War II, the population has increased again, and the existence of the species seems to have recovered in the region of Macedonia, Kosovo and Montenegro (Miric 1974, Bojovic 1978, Cop 1989). The recent area of the autochthonous population is about 6000 km<sup>2</sup> with an estimate of 200 individuals (J. Cop).

In Slovenia, 700 km north of the autochthonous population, the lynx was re-introduced in 1973. Six individuals (1:1) originating from the Carpathian Mountains of Czechoslovakia were released in the Kocevje region. The re-introduction was very successful. The population<sub>2</sub> increased and spread out. Today, a central area of some 3500 km<sup>2</sup> is continuously reoccupied, but the total area of observations covers about double the space, and individuals have reached as far as Italy and maybe even Austria. The number of lynx is believed to be 300, but the personal estimate of J. Cop is only 150. For more detailed information on the Slovenian lynx re-introduction, we refer to Cop (1977), Cop (1980) and Cop (1989).

**Legal situation, hunting:** The autochthonous lynx population in southern Yugoslavia has been protected by law since 1951. Poaching may occur, but there are no data (J. Cop).

In Slovenia, within an area of 2500 km<sup>2</sup>, the number of lynx that can be shot is fixed every year by the Ministry of Forestry. Outside this region, hunting of lynx is not restricted in number. The hunting season is from September 1st to March 1st. Hunting of the re-introduced population started in 1978. Since then, a total of 172 lynx has been shot (Slovenia 75, Croatia 94, Bosnia 3). J. Cop estimates an additional number of 10 - 20 lynx killed illegally.

**Damage to livestock:** Domestic animals killed by lynx were sheep, goats, dogs and cats. In the centre area of the lynx population, in Slovenia, there is only a little livestock and therefore there is no problem. In Croatia, about 100 sheep have been killed up to now, but the exact number is not known. Any livestock killed is examined by game wardens or a veterinary institute (at least in Slovenia) and in the case of lynx kills, compensation is paid by the state.

There was trouble with semi-domestic moufflons in two hunting enclosures in the central area. These enclosures provoked a concentration of lynx. Several lynx were shot within the enclosures. By 1982, the predator had wiped out the moufflon herd (Cop 1989).

**Recommendation:** The re-introduced population in Slovenia developed very well, but J. Cop doubts whether a further expansion will be possible if hunting pressure remains at the same level. He proposes stronger protection outside the central area, accompanied by public education and field research on the development of the lynx population.

**Comments:** The number given for the autochthonous population would represent a lynx density of one individual per 30 km<sup>2</sup>. Bojovic (1978) hypothesises an even higher density. This indicates a remarkable high density compared with the results of radio-telemetric studies. We maintain that the area of a lynx population is easier to evaluate than the number of lynx. Therefore, the population could be weaker than expected. As this is the only remainder of the Balkan lynx (which is considered to be subspecies of its own - see Miric 1978a), the population should be given priority attention. It is important to know the status of the lynx on the Albanian side of the border.

Development of the re-introduced population in Slovenia was the most dynamic ever known. In comparison with the difficulties in re-introduction programmes in the Federal Republic of Germany, Switzerland, France and Austria, it is hard to believe that a population based on six released lynx can suffer a loss of more than 170 individuals by legal hunting and an unknown number of additional victims in only 16 years. For the sake of further re-introductions, it is important to carry out a field study to understand the dynamics of this population. For re-introduction programmes in the Alps, it is important that the expansion of the Slovenian lynx population towards Italy and Austria should not be stopped by too heavy hunting pressures. For the long-term preservation of the lynx in re-settled areas, a joining up of the Slovenian and the Alpine populations would be of first importance.

## 5. FUR TRADE

The international fur trade is large and has been one of the major threats to many cat species (McMahan 1986). Lynx lynx is not an endangered species, but all cats are listed in appendix II of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). CITES treats Lynx lynx, Lynx canadensis and Lynx pardinus as one species Felis lynx only. The fur trade is recorded by the Wildlife Trade Monitoring Unit (WTMU), located at the World Conservation Monitoring Centre, Cambridge, United Kingdom. WTMU reports for 1986 and 1987 respectively a total of 17,126 and 9,602 Felis lynx skins imported throughout the world. This does not equal the total production of lynx fur, because skins are often re-exported several times. It is almost impossible to evaluate the real size of the original harvest. As for the Union of Soviet Socialist Republics, the only European country with a considerable lynx harvest, for 1986 and 1987 respectively, a total of 2,485 and 2,762 skins was reported.

## 6. POPULATION ESTIMATE

To know the number of lynx in a certain population is an ultimate precondition for a good management. Direct counting of any game species is very difficult, but for the large predators, it is impossible. The only way is to make an indirect census e.g. by means of snow-tracking. A good method would be

- to monitor the occupied surface;
- to determine the individual home ranges by means of radio-telemetry; and
- to understand the structure and social organisation of the population.