
NOTES

MAN AND WOLF IN POLAND - A DELICATE BALANCE

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Summary

The historical and modern relationships between man and wolf in Poland are presented. The distribution, biology and ecology of the wolf, and its influence on prey species that have value to hunters are reviewed. Social perceptions, attitudes towards the wolf, hunting methods, and conservation needs are described.

Résumé

L'homme et le loup en Pologne. Un équilibre délicat.

L'auteur présente les relations homme-loup en Pologne et leur histoire. Sont également abordées la distribution, la biologie et l'écologie du loup, ainsi que l'incidence de ce prédateur sur les proies intéressant les chasseurs. L'article décrit enfin les perceptions sociales et les attitudes vis-à-vis du loup, les méthodes de chasse et les besoins de conservation.

Key Words

Wolf, Canis lupus, Man-wolf relationships, Poland.

Mots clés

Loup, Canis lupus, Relation homme-loup, Pologne.

Introduction

In most of densely populated Europe, wolves (*Canis lupus*) became extinct by the end of the 19th century and only remnant populations survived in a few areas (Bibikov, 1985). Poland is the last country in Central Europe where a relatively large wolf population still exists. Even during past decades of continuous persecution and resulting heavy fluctuations in numbers, this species had never been eradicated (Okarma, 1993).

The goal of this paper is to describe the historical background and the presence of human-wolf relationships in order to better understand the phenomenon of a continuous presence of this predator in Poland. It further aims to underline the present threats faced by the wolf in Poland.

Status and distribution

Palaeontological data show that the wolf has inhabited the area of Poland since the Glacial Period (Wolsan, 1989).

At the beginning of the 19th century, records of conflicts between man and wolf (livestock attacks) were documented in several administrative areas of western Poland. Cases of people killed by wolves have also been described up to the middle of the 19th century (Okarma, 1992). Although such information must be treated with caution, some cases of human fatalities cannot be excluded and indeed are supported by reports from Russia from the present century (Pavlov, 1990).

In areas of abundance, wolves were exterminated using poison; regular wolf hunts with obligatory participation by the inhabitants of local villages were mounted, and high bounties were paid for wolves killed (Okarma, 1987). As a result of persecution the wolf's range gradually decreased and by the early 1900's was restricted to limited areas of north-eastern and south-eastern Poland. During World War I, wolves again expanded westwards, becoming more numerous in eastern Poland and the Carpathian Mountains (Okarma, 1993).

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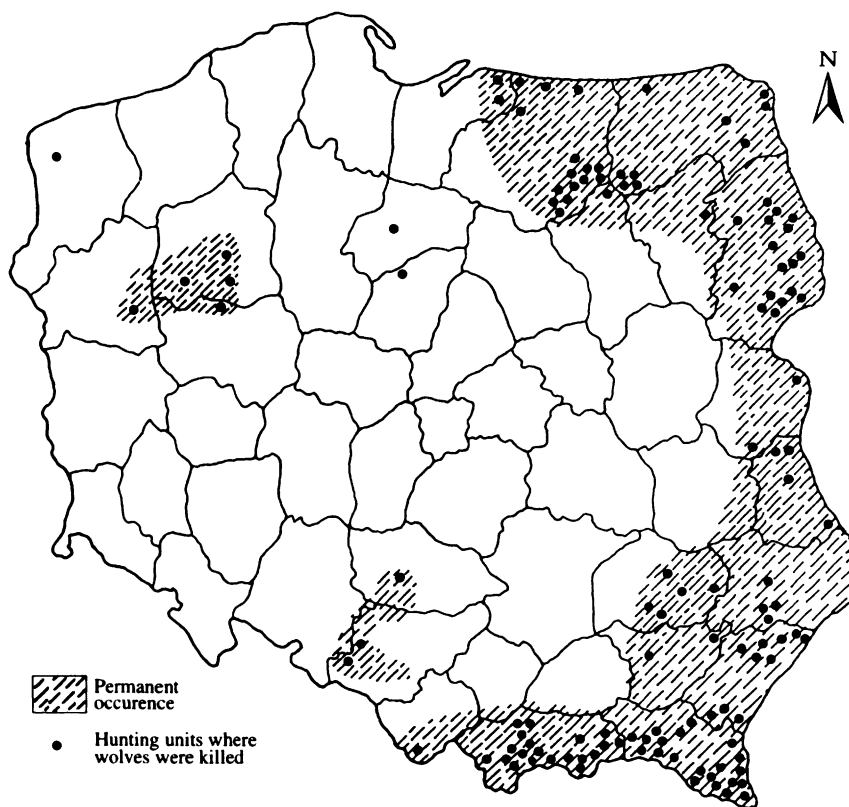


Fig. 1 : Distribution of wolves in Poland (from Pielowski *et al.*, 1993).

In 1927 the wolf was declared a game species, but simultaneously they were classified as vermin which could be eliminated using any techniques available. Continuous extermination (poisoning, trapping, shooting, killing of cubs in dens) resulted in a major decrease in wolf numbers in Poland during the 1930's (Okarma, 1987).

During World War II, the wolf population increased again and individuals were recorded even in western Poland. In the 1950's a wolf control programme was launched by the government : this was prompted not only by losses in livestock which occurred at that time, but also because of a wolf extermination action in the neighbouring USSR. The wolf was removed from the list of game species, a wolf control service was created, and high bounties were again paid for wolves killed. During the most intensive period of the wolf control programme (1955-59), between 250 and 420 wolves were killed annually (Okarma, 1993).

In the early 1970's the wolf's range was restricted to the north-eastern and south-eastern limits of Poland and wolf numbers were estimated to stand at below 100 individuals (Sumiński, 1975). In 1970, the policy of wolf management slowly began to change : in 1973 poisoning was banned and bounties were paid only in a few areas, and finally in 1975 the wolf was once more declared a game species. A close season was instituted from the 1st of April to the 31st of July.

At present, wolves inhabit an area of about 160 000 km² in Poland with two core areas of the highest densities : the south-eastern part of the country (the Carpathian Mountains) and north-eastern part (lower density). There is also a small population in the western Poland (Okarma, 1993 ; Pielowski *et al.*, 1993) (fig. 1).

Wolves have increased in number in Poland since the late 1970's (Okarma, 1989). Their numbers have recently been reported at between 800 and 900 individuals, though

the reliability of this figure is doubtful and the actual number is probably lower (Okarma, 1989). Estimates are compiled on the basis of "year-round observations", sporadically supported by snow tracking censuses. These imperfect methods mean that data on wolf numbers are neither methodically collected nor strictly comparable.

Biology and ecology of wolves in Poland

Wolves occurring in Poland are classified as the nominative subspecies *Canis lupus lupus*. Generally their coat is predominantly grey with black hairs along the back and at the shoulders. There is marked dimorphism between the sexes. The body weight of females is on average 20 % lower (range of body weights for adults killed by hunters : 27-50 kg for females and 35-67 kg for males ; Okarma, 1989). Condylbasal length of skull of adult specimens is 216.2-243.0 mm for females, and 214.0-263.4 for males. Mean condylbasal length of skull of males is higher in the Carpathian Mountains (242.1 mm) than in lowlands (the Białowieża Primeval Forest : 237.8 mm), while for females the reverse is true : 226.1 mm and 229.4 mm, respectively (Okarma and Buchalczyk, 1993).

The main prey of wolves, both in the mountains and in the lowlands, is red deer (*Cervus elaphus*.) Next in importance in the wolf diet are wild boar (*Sus scrofa*) and roe deer (*Capreolus capreolus*.) The rest of the diet consists of hares, rodents, birds, amphibians, and plants (Jędrzejewski *et al.*, 1989 ; Leśniewicz and Perzanowski, 1989). Wolves do not prey on European bison (*Bison bonasus*), and only sporadically take moose (*Alces alces*) (Jędrzejewski *et al.*, 1992).

Wolves show clear selectiveness within particular prey species. Among red deer killed most were calves, and of adults the majority were females. Among wild boar, the prey were almost exclusively piglets (Okarma, 1991 ; Jędrzejewski *et al.*, 1992).

Social attitude and management of the wolf

In Poland, unlike most countries in western Europe and Scandinavia, no widespread fear or hatred is harboured against wolves, although there is also a general ignorance concerning the biology and ecology of the species. Most of Polish society has an indifferent or positive attitude towards wolves, encouraged by the fact that very few losses of livestock have occurred in recent decades. In the 1950's losses of several hundred sheep, some cows, horses, and poultry were reported annually (Okarma, 1993) and public demands for the killing of wolves were common. Nowadays losses of livestock are so small and economically insignificant that they are not even registered.

At the same time, much more wildlife, mainly red deer, is now killed by wolves than in the 1950's (Okarma, 1993). For this reason many hunters and management authorities still perpetuate "the big bad wolf" image and conduct or support policies to limit wolf numbers. In spite of the fact that wolves have been proved to kill mostly calves and females among red deer (Okarma, 1984, 1991), which are the groups least preferred by hunters, losses in wildlife are used to justify a management tendency to limit wolf numbers severely. This tendency is a pure continuation of 19th century views in wildlife management that the wolf is an "unwelcome" species. Hunters were supposed to carry on "ranching" of ungulates for trophies, for meat, thrill of the chase, but because wolves preyed upon these same ungulates, their extermination was demanded. As such opinions have declined, even among hunters, official policy towards wolves has recently stressed only a need to keep them to "a reasonable number".

In 1991 a new law on nature protection was passed, on the basis of which each administrative province may declare any species protected within its provincial area. As a result of public pressure by naturalists, nature conservancy organisations and informal ecological movements, many administrative units where wolves still survive have already given them full protection, with the result that the species is now protected over most of its distribution range in Poland.

This outcome has still proved unacceptable to many wildlife managers who have succeeded in convincing the Ministry of Environment Protection, Natural Resources and Forestry that the wolf population game inhabiting the Carpathian Mountains is too numerous. As a result, in new game laws on game species, the Ministry will not accept full protection of wolves in this region, where the best Polish wolf population survives (Okarma, 1993).

Methods of hunting wolves

In the past, wolves were persecuted with the aim of exterminating them since they were considered dangerous to humans (as was indeed sometimes the case) and competitors for the same animal resources. Historical sources mention several methods of hunting wolves used in Poland and Russia in the 18th and 19th centuries.

1. Hunting with a piglet or dog. On moonlit nights hunters would drive by horse-drawn sledge into the forested countryside. On the sledge they might carry a piglet which was squeezed from time to time to make it squeal ; or a dog might be attached by a rope to the

sledge. Attracted by such bait, wolves would chase the sledge and would be shot by the hunters.

2. Hunting with dogs. This was practised in the steppe zone of Russia, usually in autumn, using a special breed of large hound (*volkodavy*). Small barking dogs would flush out the wolves from their resting places in the forest on to the open steppe, where the hounds would be released. Young wolves were easily killed by the hounds, while the adults were harassed by them and kept in the open ground until the hunters came to kill them (fig. 2).

3. Hunting with birds of prey. On the steppes of Asia some species of eagle were used for hunting wolves. The hunter, carrying an eagle, was mounted on horseback ; once a wolf had been drawn into the open, the hunter released the bird which attacked and killed the wolf (fig. 3).

4. Hunting with nets. Nets 2-3 m high and 10-20 m in length were made from a thick cord. A line of nets up to 500 m in length was set up in a dense part of the forest, supported by trees, bushes, and sticks. The wolves, driven by a line of beaters, became entangled in the nets and were killed by villagers concealed nearby, usually by clubbing them with wooden sticks.

5. Hunting with "wolf fences". An elliptically shaped enclosure was constructed inside a thick stand of young trees close to a clearing. It was about 2 m high, built from wooden pales (like a palisade) or woven from willow or spruce branches, with a wide entrance towards the clearing.



Fig. 2 : Hunting with dogs (from Zhurnal okhoty 5, 1876).

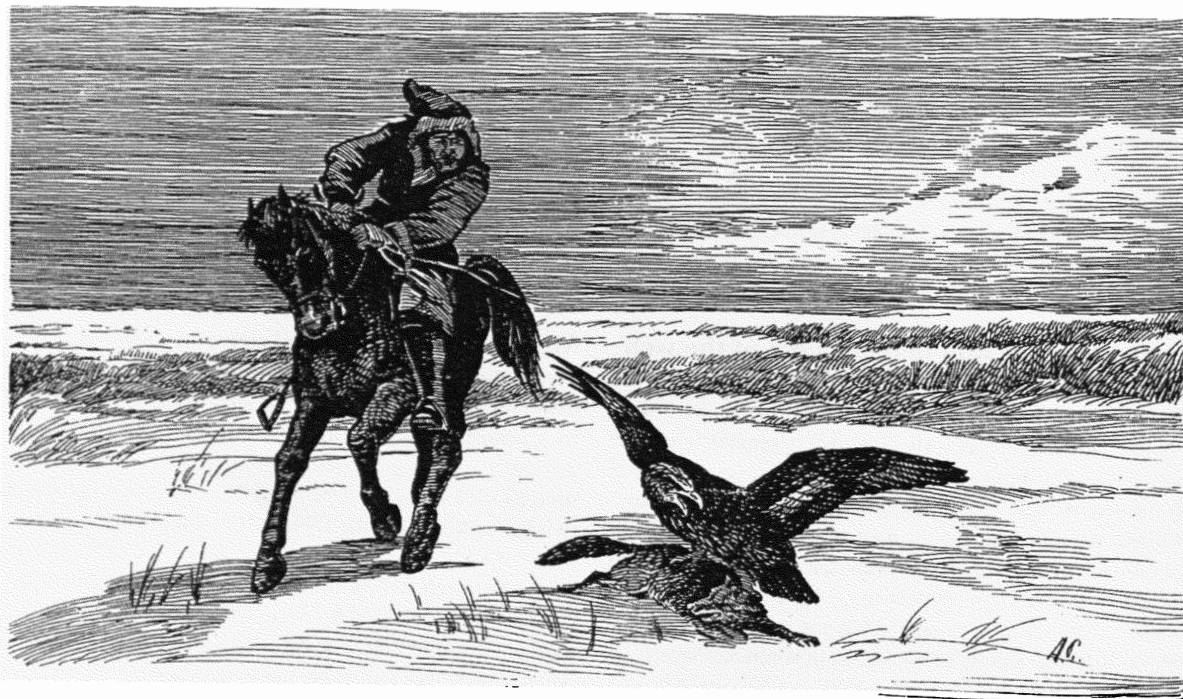


Fig. 3 : Hunting with an eagle (from Priroda i okhota 11, 1882).



Fig. 5 : Wolves inside fladry.

without *fladry* and hunters take positions in this place. Then, two or three persons enter the surrounded area making only a slight noise. Wolves try to move to a safer place, but they cannot cross *fladry*. Wolves walk along *fladry* until they find the gap in *fladry* line, where they try to escape out of surrounded area and they are killed by hunters in this place.

Wolf skulls and pelts have been recently considered as rare and prestigious trophies and their monetary value on the market is very high. This, together with decreased opportunities for hunting wolves (protected in many regions) have stimulated illegal killing of these animals. It is impossible to assess the extent of this practice in Poland,

but some data are available. In the Białowieża Primeval Forest two wolves were found poached (one snared and one shot), and wolf cubs were taken from three dens in 1991-1994 (author's unpublished data).

Re-population by wolves of their original range in Poland (also in the western part of the country) will inevitably lead to increasing conflict with livestock. Thus, it is necessary to work out an alternative national strategy of wolf management which will combine a full protection of this species in some areas (large forest complexes) while allowing its harvesting in areas where extensive losses of livestock might occur.

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