MAMMALIAN SPECIES INTRODUCED IN SOME COUNTIES OF ROMANIA

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Abstract. The paper discusses some aspects connected with the introduction of a few mammalian species (the Rabbit, the Mouflon and the Fallow deer) in the fauna of some counties of Muntenia and Oltenia (southern part of Romania). The Rabbit was colonised in the south of the Getic Plateau (the north of Dolj County) and in other two sites from the Subcarpathian area of Prahova County. The Mouflon was introduced experimentally in the south of Prahova County, northern part of Olt County and in the south-east of Argeş County. The specimens were captured from the south-western region of the Dobrogea Plateau (Bâneasa Forest Range, Constanţa County). These species were short-lived, they disappearing either because of adverse climatic conditions, or poaching. The only species that has survived to this day is the Fallow deer, introduced in two forests from the southern part of Dâmboviţa County. The present herd numbers arrout 70 individuals. The author expounds on the intentions and results obtained by colonising the Alpine ibex in Romania.

1. Introduction

Researches carried out over 2001-2006 had in view the dynamics and current situation of four species (the Rabbit, the Alpine ibex, the Mouflon and the Fallow deer) introduced by man in five counties from the southern part of Romania: Prahova, Dâmboviţa, Argeş, Olt and Dolj (fig. 1).

2. The Rabbit (*Oryctolagus cuniculus* Linnaeus, 1758)

This mammal originates from North Africa and Spain. What distinguishes it from the hare (*Lepus europaeus*) is small size and stronger feet adapted to digging. Most rabbits live in underground galleries which it digs in banks or sunny hillsides. It likes better sandy or sandy-clay soils. Exit places from the galleries are hidden by bushes (usually on the forest edge). The animal avoids agricultural lands. Introduced one hundred years ago in the proximity of the city of Iaşi, it still lives there in optimal conditions, which explains why the largest rabbit population in Romania is found in these places. Several specimens were captured to populate other counties.

Specimens from Corneşti Forest (12 km south-west of Iaşi), Ciurea Forest Range, colonised the counties of Dolj and Prahova.

In *Dolj County*, 25 individuals were brought in the forest adjoinning Fărcăş Commune, Amaradia Forest Range, located in the northern edge of the county. The forest stands 35 km north of Craiova city, in the Olteţ Piedmont.

The decision to introduce the rabbit was taken in 1975, but it materialised one year later.

In 1976, a number of 20 individuals (10 males and 10 females) from Corneşti Forest (Iaşi County) were transported in cages by truck.

In the beginning, they were housed in artificial burrows on fenced-in ground and fed there. After being suveilled for one year, the animals were released into the wild (Balaci Forest Canton). Beside the burrows prepared for them, they would dig themselves

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others close to the former. Later, they left this place and settled some 0.2-0.5 km away, where they lived for eight long years.

Fig. 1. Geographical location of the grounds were new fauna species have been introduced.

In 1984, the species was no longer there. The last specimens seem to have been eaten by foxes and weasels.

In Prahova County, the species was first introduced (1976) in Plopu Forest (Bucovel Hills), 20 km north-east of Ploieşti.

The 5 specimens brought from Corneşti Forest (Iaşi County) were short-lived, because of inadequate biotope conditions.

Two years later six individuals (3 males and 3 females) were introduced on the edge of Cazacu Forest, Vălenii de Munte Forest Range. They were directly set free and they settled on an undergrowth slope rich mainly in *Crataegus monogyna*, on the forest edge. They did not enter the deserted burrows existing there, but dug themselves new ones.

Here they multiplied and lived from 1978 to 1983, then they disappeared, being hunted by foxes.

3. The Alpine ibex (*Capra ibex* Linnaeus, 1758)

The possibility for this ruminant to be introduced in Romania’s fauna was suggested by Negulici (1965). The species is characteristic of the high rocky mountains, such as the Alps, where it lives up to 4,000 m altitude. It is a robust mammal with heavy, en horns.

After contacting specialists from Alpine countries it was decided to introduce the species in the Southern Carpathians. In the 1970s, a delegation of Italian experts, representing the “Gran Paradiso” National Park management, visited Romania and estimated that the southern slope of the Făgăraş Mountain between the Moldoveanu and
the Negoiu peaks was just the adequate environment for this species. ‘Gran Paradiso” National Park (70,000 ha) extends in the north of Italy, in the border area with Switzerland and France. Alpine ibex densities here are of 15-24 individuals / 100 hectares.

In order to supplement the fauna of Romania’s alpine belt, 21 specimen were brought from Italy (1979) and settled in the Ciucea Mountains. At the northern end of Prahova County (close to the border with Brașov County) an enclosure (100 / 100 m), surrounded by a wooden fence, to accommodate the animals was built in the source area of the Teleajen, at a distance of 150 m from the rivers waters. The Alpine ibex were attended to by the forest ranger from the local Forest Canton.

The enclosure housed fed and watered these animals for one year and six months. Subsequently, the bears broke the fence, attacked some of the Alpine ibex, the others leaving the enclosure and dispersing in the surroundings. A few months later they were no longer seen, presumably having been killed by the big predators (wolves, lynx and brown bears).

In mid-1980s a second batch was to populate the Făgărâș Mountains, but nothing materialised until 1988. The events of 1989 put an end to that intention.

4. The Mouflon (Ovis ammon Linnaeus, 1758)

The place of origin of this vigorous and pretty agile species are the Mediterranean islands of Corsica and Sardinia.

In Romania, the most significant population was accommodated in the south-west Dobrogea forest (1965). As the Mouflon enlarged its effectives, it was decided to introduce it experimentally in other counties, too.

Colonisations targeted the counties of Prahova, Olt and Argeș.

**Prahova County.** In 1985, 30 individuals captured in the forests of Băneasa Forest Range, Constanța County, were trucked to two forests, Gherghița and Baracu (Vlăsia Plain), in the southern part of Prahova County and released into the wild.

Gherghița Forest (1,600 ha) extends between the rivers Ialomița (in the south) and Prahova (in the north). It is a mixed foliated hill type wood with species of *Quercus robur*, *Tilia tomentosa*, *Fraxinus excelsior* and *Carpinus betulus*. Baracu Forest (300 ha), in which various *Quercus* species grow stands on the margin of Drăgănești Commune.

All the mouflons brought here were adult. Fifteen individuals were placed in Gherghița Forest (and directly released into the wild), another fifteen were sent to Baracu Forest where, after a 15-day enclosure terem, were set free.

They lived in the two forests for nearly one year, then they left for the neighbouring agricultural area and were never seen again.

In Baracu Forest, two mouflons were shot for selection, and another two were found dead. The last specimen was seen in 1987.

It seem that poaching, the absence of rocky terrain and severe winters (heavy snowfalls and blizzards in 1985) are to blame for its absence.

In **Olt County** mouflons were brought to populate Scornicești Forest (1985). The 33 individuals trucked from Băneasa Forest Range (Dobrogea) were released into the wild at the “Linia lui Lolea” site. They were seen there until around 1992; a few specimens moved northwards, to Seaca-Optășani Forest (20 km away). Subsequently, they disappeared from the area.

At the end of the 1970’s, the species was introduced in Mozacu Forest, in the south-east of **Arges County.** In 1976, the forest was declared “sylvo-cynegetic unit of national interest”, given that it housed such species as Fallow deer, Roe deer and Mouflon, the last one numbering 150 individuals at the utmost.
The 46 mouflons captured from the Băneasa Forest Range (Constanța County), were brought in trucks, released immediately, and observed for a few weeks’ time.

Although Mozacu is a large forest (2,200 ha, Piteşti Plain), yet because it lies in the plain region, there is no rocky terrain there to help mouflons thicken the edge of their hoofs, and unless they can do it, hoofs begin developing too much, preventing them from moving lightly, or if broken make the animals limp, hence an easier pray for predators. From the very first year, the Mozacu mouflons developed a hoof disease (lame) which decimated the effectives, leaving only 16 individuals in 1981, that is, a three-time drop in the population.

Numbers continued to fall over the next years (12 in 1982 and 14 in 1983), the situation improving in 1984 (28 individuals). In the 1985-1988 interval, the mouflon count showed 12-18 individuals; in spring 1989, there were 25; 40 in 1990 and 50 in 1991 only to decrease again at 19 in 1992, 15 in 1993 and 3 in March 1994; the last specimen was seen in 1996. One year later the species was listed as vanished from the area.

In early 1990s, the last 3 specimens (2 males and one female), were brought to Mozacu Forest. It was all that was left (from a total of over 83 specimens in the 1980s) in the Miceşti enclosure north of the city of Piteşti.

Only two mouflons (both males) were shot at Mozacu, one in 1991, another in 1993.

Some males were found dead with the horns entangled in tree branches. The heavy winter of 1985 (hard frosts and heavy snows), caused the death of two mouflons.

Part of the herd left the forest for the neighbouring agricultural grounds, where they were killed by predators.

5. The Fallow deer (*Dama dama* Linnaeus, 1758)

This mammal was introduced (1976) in two lowland forests in the south of Dâmboviţa County (Târgovişte Plain). Iuda Mare (224 ha) and Iuda Mică (179 ha) forests (Comişani Commune) have mixed foliated species.

The animals (20-30 individuals) trucked from Mozacu Forest (Argeş County), were kept for a while in an enclosure (under 1 ha) surrounded by a wooden fence (Table 1).

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On February 4, 2001, I saw 9 individuals (2 males, 5 females and 2 calves) in Iuda Mică Forest and 10 (8 females and 2 calves) in Iuda Mare Forest. The present sex ratio is one to four in favour of females.

In 1977, Bolovani Forest (Comăneş Commune), became a sylvo-cynegetic unit of national interest for the intensive growth of wild boars. For the same purpose an enclosure (403 ha) was commissioned in 1978.

The forest’s undergrowth consists of *Quercus robur* (60-80%), *Tilia sp.*, *Carpinus betulus*, *Fraxinus excelsior* and other species.

In the west of the enclosure, undergrowths are 130-140 years old and have low consistency (0.4-0.6) in the east they are 40-80 years old and have a better consistencies (0.7-0.9).

A 2m-high wire fence, fixed from place to place with concrete pillars, surrounds the enclosure. Inside it there are two smaller enclosures separated by a wooden fence, also provided with concrete pillars built at certain distances. Apart from the main species (the
Wild boar) for which the enclosure had been built, also other species have been brought in, e.g. Fallow deer, Red deer and Roe deer). The Fallow deer is found in both enclosures.

In 1978, the Fallow deer from Iuda Forest (Dâmboviţa County) and Reşca Forest (Olt County) were brought into enclosure. After the 1989 events, part of the fence was broken (1990), but the Fallow deer did not leave the area and in 1991 the fence was remade. In 1992, the herd numbered 21 individuals (7 males and 14 females), and 44-52 over the past few years (Table 2).

Table 2. Numerical evolution of Fallow deer specimens in Bolovani Forest (2000-2006)

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<th>Year</th>
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In 2000, the sex ratio looked as follows: 36% males and 64% females; in 2001 there were 17 males and 31 females (one to eight); in 2004 and 2005, females were 9 times more numerous than males. An unbalanced sex ratio (1 to 6.4) was registered in spring 2006, that is 45 females to 7 males.

Inside the enclosure, the groups of Fallow deer and Roe deer stay apart. The area occupied by one Fallow deer averages 7.75 ha of the enclosed territory.

A valuable trophée (188.88 CIC points) was obtained from a specimen shot on November 1, 2002.

Beside natural sources of nutrition, winter food is supplemented with maize, oats, lucerne, hay and leaves and placed in 40 feeding sites. Salt is distributed in 40 sites, on bare soil. Water is supplied from wells provided with concrete troughs, and a few boggy areas serve the same purpose, too.

6. Conclusions

With the exception of the Alpine ibex, all the other species were introduced at lower altitudes (170-330 m): in the Romanian Plain, the Getic Plateau and the Prahova Subcarpathians.

The idea of populating the Rabbit, the Mouflon, the Fallow deer and the Alpine ibex was an attempt at occupying some free ecological niches.

From the four species introduced over 1975-1985 in the fauna of the five counties discussed herein, only some Fallow deer nuclei have survived in Dâmboviţa County, one such nucleus in enclosure, the other in the wild.

The other species are no longer seen today, either because of adverse physical-geographical conditions, or intense poaching.

While populating the Rabbit, the Mouflon and the Fallow deer was aimed at enriching the local (or regional) fauna, bringing in the Alpine ibex was an experiment in Romania’s fauna.

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