

# MANAGEMENT ATTEMPTS OF WILD BOAR (*Sus scrofa* L.): FIRST RESULTS AND OUTSTANDING RESEARCHES IN NORTHERN APENNINES (ITALY)

Marsan A., Spanò S., Tognoni C.

Istituto di Zoologia, Università di Genova, via Balbi 5, 16125 Genova, Italy.

**Abstract:** Wild boar disappeared from Northern Apennines nearly in the middle of nineteenth century, during the period of greatest human density on hills and mountains. Its disappearance was mainly due to high competition from territory exploitation related to woody and agricultural activities. The species spread from south-eastern France to western Liguria causing damages to cultivations since 1926. In the province of Genoa, thanks to an hunting association logistic support and to the Provincial Administration financial help, beatings have been carried out for three years (1990, 1991 and 1992) on selected area for a total of 7,000 ha with the cooperation of more than 600 volunteers per year. This in order to recognize numerical and structural changes in the present population. The comparison between these data and the number of hunted animals in the same years evidenced that the density of population is unaffected by heavy hunting pressure.

**Keywords:** Wild boar, *Sus scrofa*, Suidae, Regional history, Population, Distribution, Hunting.

IBEX J.M.E. 3:219-221

## 1. Introduction

In the study area (province of Genoa) the Wild boar has been present in historical age; it disappeared in the middle of nineteenth century, as a consequence of maximal expansion of human population and exploitation of natural resources for woody and agricultural activities in Apennines.

The reappearance of Wild boar since 1919, is probably due to a real invasion of the wild european subspecies, or form, spreading from southern France, where Wild boar populations were in a cycle of great numerical expansion (Balletto, 1977).

Toschi (1936) reported that in the provinces of Imperia and Savona, the density of the species reached such high levels that farmers required the suppression of the animals after the damages to cultivations they suffered. However, until 1961, the range occupied by Wild boar populations in Liguria was limited to Imperia province and to the western portion of Savona province.

In 1985 Liguria Region commissioned to the Institute of Zoology of the University of Genoa, a specific research on the presence of the Wild boar, on the wake of the contrasting reactions that the presence of this "new" faunistic population was provoking.

The local administrations, such as the Provincial Administration, identified the pre-

sence of the Wild boar with the troubles they were causing to farmers. As a consequence of the increasing complaints of the farmers, the local administration provided to increase the number of animals to be suppressed, always evaluating the density of the animals on the ground of the tracks and signals of presence left by the animals.

A preliminary phase consisted in the determination of the "form" of the wild boars present in the area, also taking into account that "voices" were run on the existence of non authorized restockings carried out by the hunters. Biometric and craniological analyses revealed that none of the animals (n>300, with >100 craniometric features) showed characteristics of recent cross-breeding with domestic pigs. Phenotypical characters presented a strong homogeneity (Marsan *et al.*, 1990).

The shortage of adult animals and the absence of old animals have also been verified. From the data obtained emerged the need for hunting planes on the ground of scientific censuses.

## 2. Methods

Quantitative data on Wild boar population were obtained in 1985, 1990, 1991 and 1992 by driving censuses with walking operators with dogs. These operators (volunteers) drove the animals towards a line of fixed observers.

We tried to make total count on the sampled territory by using 1 operator per hectare. March and April were the best periods regarding visibility (naked trees), June-July allowed estimation of reproductive trends. Three categories of animals were distinguished: striped (supposed to be  $\leq 5-6$  months old), red (between 5-6 months and 1 year old) and black (over 1 year old).

### 3. Results

Annually, six beatings with positive outcome have been carried out, with the participation of more than 500 people, and among them the provincial guards verified the correct course of the operations. In only two cases the lack of an adequate number of people impeded the correct course of the censuses.

In 1992 relative density resultant is about 1.4 Wild boar/km<sup>2</sup> against 1991 relative density of 1.7 Wild boar/km<sup>2</sup> (Tab. 1).

Apparently the suppression plan taking place during 1991-92 hunting season produced a numerical decrease of the population. This decrease would be counterbalanced by an increase of births: the difference between striped beasts and black beasts is significant (test

$\chi^2$   $p < 0.01$ ) (Fig. 1). One of the regulation mechanisms known in Wild boar could account for this difference (e.g. restriction of reproduction due to density).

### 4. Conclusions

In this century, the only management of Wild boar has been in relation to the entity of damages to cultivations they caused; the more damages the wild boars cause to crops, the more hunting will follow, because the natural ecology of the habitat they occupy in the Apennines is limited by the absence or scarcity of big predators such as the wolf or the lynx.

Our proposals about hunting planning are the following:

- 1) Selected suppressions in at least two age classes based exclusively on the censuses.
- 2) Determination of the ranges of sex and age of the hunted animals. For determining the exact number of killed wild boars we propose the use of an irremovable mark, rather than only the declaration to the authority, often omitted.
- 3) Determination of the environmental situations that could increase Wild boar damages.

Table 1. Results about the censuses in 1991 and 1992.

Census 1991					
Area	Surface (ha)	Wild boar (n)	Striped (n)	Red (n)	Black (n)
Sestri L.	1100	22	15	2	5
Propata	994	11	1	0	10
Masone	1050	23	4	1	18
Gattorna	875	5	0	0	5
Campomor.	881	25	3	7	15
Vobbia	1056	16	0	0	16
Total	5956	102	23	10	69
Census 1992					
Area	Surface (ha)	Wild boar (n)	Striped (n)	Red (n)	Black (n)
Sestri L.	1100	21	15	0	6
Propata	994	21	12	0	9
Masone	1050	10	5	2	3
Gattorna	875	3	1	0	2
Campomor.	881	19	9	2	8
Vobbia	1056	8	0	3	5
Total	5956	82	42	7	33

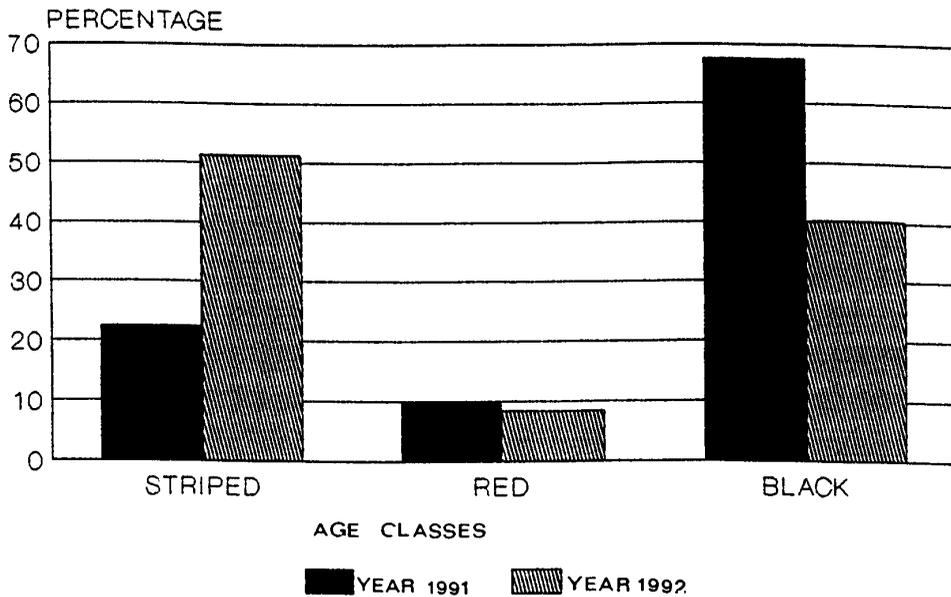


Figure 1: Comparison between two years of censuses (1991/1992) for different age classes.

**REFERENCES**

BALLETTO E., (1977) - *Analisi faunistico-venatoria ed ecologica della regione Liguria*. Tipografia Don Bosco, Genova.

MARSAN A., SCHENONE L. & SPANO S., (1990) - *Il cinghiale in Liguria*. Microart's S.p.a., Regione Liguria.

TOSCHI A., (1936) - Osservazioni sulla presenza del cinghiale (*Sus scrofa*) nell'Italia nord-occidentale. *Ric. Biol. Appl. Caccia*, Bologna: 1-22.