THE AUTUMN DIET OF THE WILD BOAR (Sus scrofa) IN AN ALPINE VALLEY. PRELIMINARY RESULTS

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Abstract: The autumn and winter diet of 20 wild boars killed during the hunting seasons 1989-1992 in the Varaita valley (Cuneo province, NW Italy) was studied. Chestnuts are the main food, they may represent up to 90% of the stomach content.

Keywords: Wild boar, *Sus scrofa,* Suidae, Feeding, Stomach contents, Chestnuts, Acorns.

IBEX J.M.E. 3:180-183

1. Introduction

The diet of Wild boar (*Sus scrofa*) has been studied by various european authors in different regions (plains and hills), but little is known about the wild boar's diet in the alpine environment, also because these animals have only recently settled in those areas.
In this research our attempt is to, partly, provide for such lack of information. Having conducted research work in a limited period of time (during the hunting season: September - December) the results obtained only refer to the wild boar's autumn diet.

2. Study area

The Varaita valley (Cuneo province, Western Alps, Italy NW) covers an area of 42,000 ha with an E-W orientation (Fig.1); altitude ranges from 400 m to 3,841 m (mont Monviso) above sea level. The annual rainfall is 800-1,000 mm in average (150 mm in summer). The valley edges are mainly wooded with dense underbrush; the Chestnut (*Castanea sativa*) is dominant between 400 and 1,000 m, the Oak (*Quercus petreae*) is present. The Larch (*Larix decidua*), pure or mixed with Beech (*Fagus sylvatica*), is common even at low altitudes; the Cembrian pine (*Pinus cembra*) is widespread.

3. Material and methods

During the hunting seasons through 1989-1992, seventy-two (72) stomachs, belonging to wild boars, were collected in Varaita valley (Fig.2).
Twenty (20) specimens have been analysed, up to now, thirteen (13) belonging to males, seven (7) to females.
In order to prepare the samples we used Sjarmidi's method (1992) that suggests the following procedures:
1 - weighing of whole stomach content;
2 - washing of material through four consecutive sieves of decreasing mesh size (2.0 mm, 1.0 mm, 0.5 mm, 0.2 mm);
3 - drying of stomach content in air-bath at 70-80°C for a period of twenty-four hours;
4 - weighing dried material in order to establish water percentage (Tab. 1);
5 - analyses of quality and quantity of samples.

Analyses were conducted on two different classes of fragments (2-4 mm and >4mm).
Fragments of food items were identified using a reference collection of plant and animal materials and counted under dissecting microscope. The fragments were classified in sixteen food categories which were used to calculate the occurence percentage of food category in all twenty stomachs and the percentage of food category in the total dry material.
ANOVA test was used to compare the differences between male and female diet.

4. Results

The occurence percentage and the percentage in total dry weight for each food category are shown in figure 3. Studies were also conducted in order to verify a difference in usage of food resources between males and females (Fig. 4).

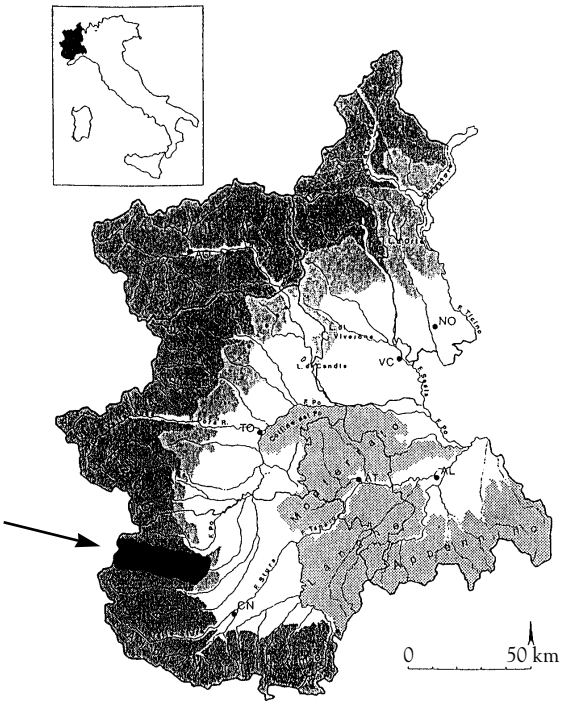

Figure 1 - Study area.

Table 1: Sex and age of the shooted wild boars, fresh and dry weight of their stomach contents and percentage of water.

SEX	AGE (MONTHS)	FRESH WEIGHT (g)	DRY WEIGHT (g)	% WATER
M	9	891	231.541	74
M	7	408	121.244	70
M	40	127	24.290	81
M	30	291	69.697	76
F	15	808	184.562	77
F	20	1442	334.429	77
M	11	473	107.448	77
F	6	228	82.591	64
M	29	183	35.327	81
F	5	405	82.036	80
M	23	1383	304.639	78
F	21	1713	443.121	74
M	17	455	88.420	81
M	12	1007	219.735	78
M	6	500	120.189	76
F	8	577	135.826	76
M	6	692	154.144	78
M	15	1795	368.613	79
M	15	1082	227.121	79
F	10	291	62.241	79

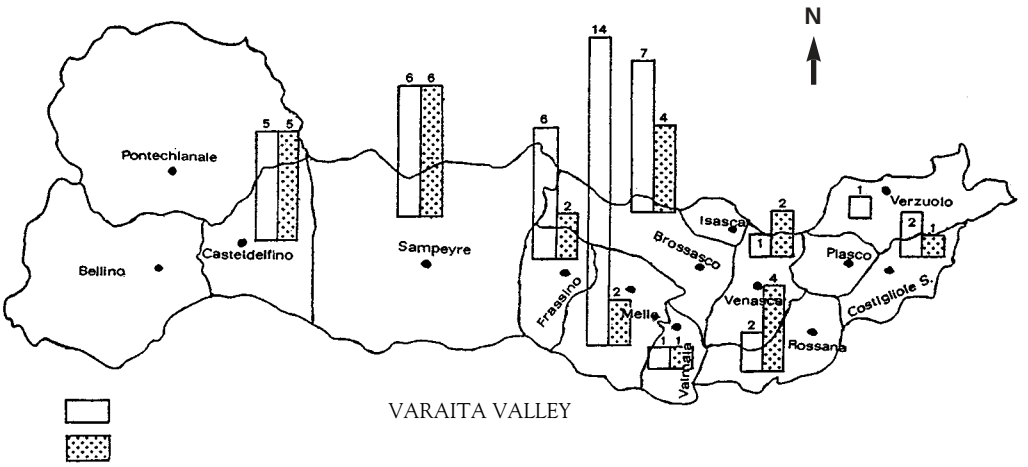

Figure 2 - Stomachs collected during hunting seasons 1989-1992.

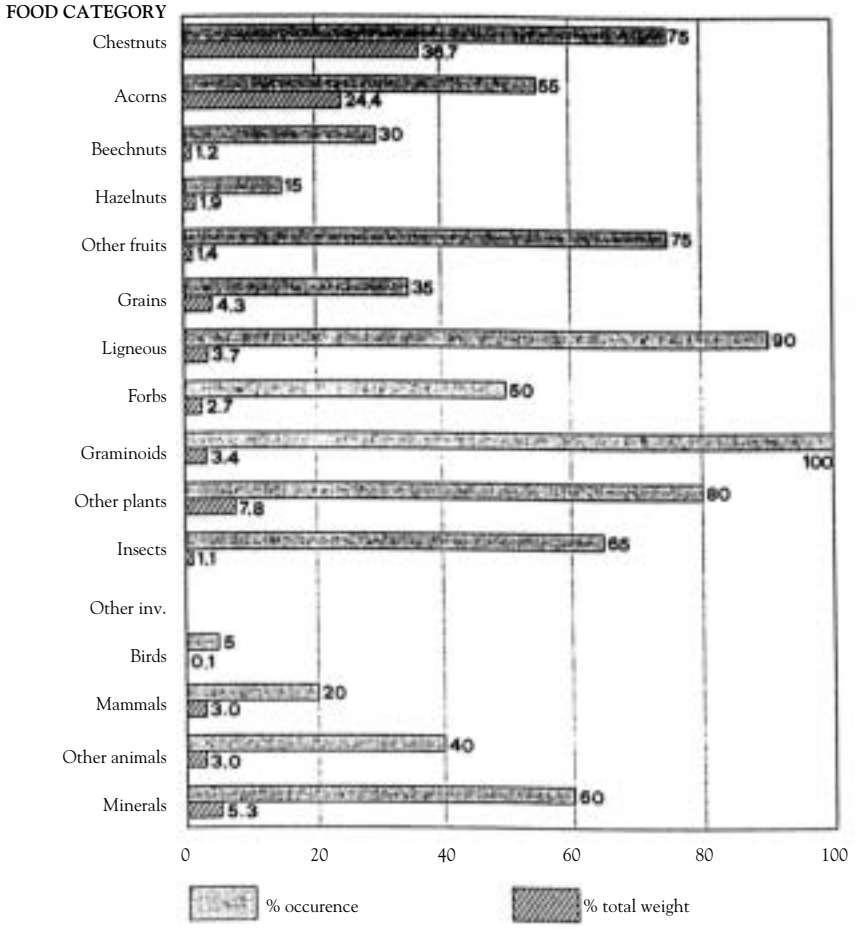

Figure 3 - Diet composition according to stomachs contents.

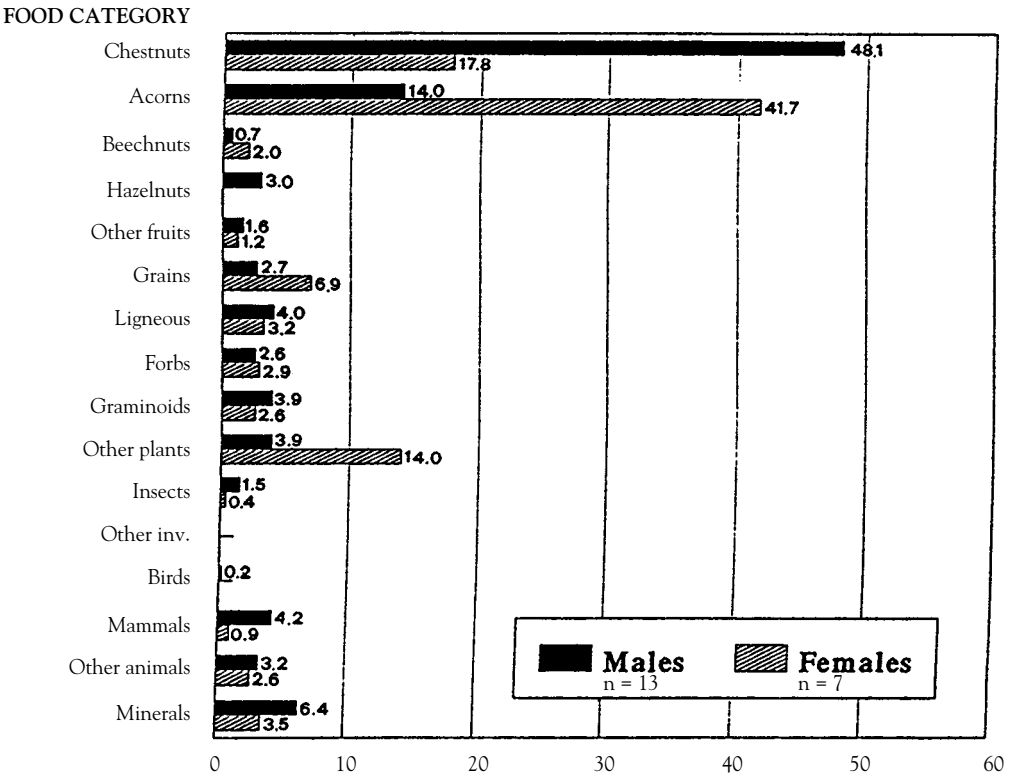

Figure 4 - Diet composition for males and females according to stomach contents.

5. Conclusion

This research has been conducted on stomach contents that were taken during the hunting season and therefore refer to a short time of the year. However we can draw the following points:

- Wild boar is an omnivorous species, it can modify its diet according to the food available in its environment (Genov, 1981);
- plant food covers the main part of the diet (87.5%) while animal matter occurs in lower percentage (7.2%), according to Dardaillon (1987), Sjarmidi *et al.* (1991), Klaa (1991). Acorns and chestnuts were preferred by Wild boar during the study period (61.1% of diet), according to Dardaillon (*op. cit.*) and Sjarmidi (*op. cit.*);
- although graminoids occurred in all analysed stomach contents, they represented only 3.4% of the diet;
- we didn't find any meaningful statistical difference in food choice between males and females, because of a great variability within the quantities of food found in the stomach contents.

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