

PRELIMINARY DATA OF ACTIVITY PATTERNS OF WILD BOAR (*Sus scrofa*) IN THE MAREMMA NATURAL PARK (ITALY)

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Abstract: Seventeen adult wild boars were radiotracked for 24 - hours sessions (n=90) between March and September 1993. Contrary to other studies, time devolved to activities such as moving, feeding, etc. (65%) was significantly higher than time spent resting (35%) in both sexes. The activity was more synchronized to sunrise than to sunset. Part of these results could be explained through food shortage occurring during the study period.

Keywords: Wild boar, *Sus scrofa*, Suidae, Activity rhythm.

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1. Introduction

Studies carried out on the activity rhythm of the European Wild boar (*Sus scrofa*) showed that wild boars are typically nocturnal animals, their activity period always occurring between sunset and sunrise (Douaud, 1983; Cugnasse *et al.*, 1987; Cousse & Janeau, 1991). A close synchronization between the beginning of the activity phase and sunset was also demonstrated by others (e.g. Mauget, 1984) while the relation between the end of activity and sunrise was less obvious.

The aims of the present study were: 1. to determine sex-related differences of activity patterns in adult wild boars in late-spring and summer months in a Mediterranean area; 2. to test the synchronization of activity with sunset and sunrise.

2. Study area and methods

The study was carried out in the Maremma Natural Park, Central Italy (42° 39' N, 11° 05' E). Seventeen adult wild boars (*i.e.* >3 years old) were captured and equipped with transmitters and radiotracked for one to three 24-hours periods each month during one to seven months (from March to September 1993).

3. Results and discussion

Ninety 24-hours tracking periods and 4320 recordings were obtained. Direct observation of the tracked females revealed that none of them farrowed during the study period.

A chi-square test indicated that no significant

differences ($P > 0.1$) occurred between daily activity of males and females in different months. All the tracked wild boars were more active at night though most of them were also active during daylight. Results from the F-test comparing variances of the beginning of activity at sunset and the end of activity at sunrise, showed that the activity phase of the wild boars was significantly more synchronized with sunrise.

Several authors showed that sex-related differences in activity rhythm occur during the farrowing period (late-spring) when females display a polyphasic activity (Janeau & Spitz, 1984; Cousse & Janeau, *op.cit.*); after this period the typical biphasic rhythm is restored. Our study was carried out during a period of food shortage when many wild boars died of starvation (unpubl. data) and most of the females had no piglets. As food availability represents one of the most important factors influencing activity rhythm our results could be explained through food shortage.

Contrary to other studies, time spent in activities such as moving, feeding, etc. (about 65%) was significantly higher than time spent resting (about 35%) in both sexes. The lack of food may also explain why all the animals were active during daylight too; on the other hand, as Briedermann (1971) and Douaud (*op.cit.*) pointed out, diurnal activity occurs when wild boars are living in an area where hunting is not carried out.

As far as the synchronization of activity with

sunset and sunrise was concerned, our results showed the opposite pattern if compared to earlier studies; probably because most of the wild boars in our study started activity in early afternoon and decreased activity in the morning, a close synchronization appeared between the end of activity and sunrise.

REFERENCES

- BRIEDERMANN L., (1971) - Ermittlungen zur Aktivitätsperiodik des Mitteleuropäischen Wildschweines (*Sus scrofa* L.). *Zool. Garten.*, Leipzig, 40 (6): 302-327.
- COUSSE S. & JANEAU G., (1991) - Time budget and polyphasic activity in Wild boar, *Sus scrofa* L. In: "Ongulés/Ungulates 91" F. Spitz, G. Janeau, G. Gonzalez & S. Aulagnier (eds), S.F.E.P.M. - I.R.G.M., Paris-Toulouse: 391-394.
- CUGNASSE J.M., TEILLAUD P. & BON R., (1987) - Résultats préliminaires sur l'activité diurne et la structure des groupes de sangliers (*Sus scrofa* L.) dans les Monts de l'Espinouse. *Gibier Faune Sauvage*, 4: 267-277.
- DOUAUD J.F., (1983) - *Utilisation de l'espace et du temps et ses facteurs de modulation chez le Sanglier Sus scrofa L., en milieu forestier ouvert (Massif des Dhuits, Haute Marne)*. Thèse 3ème cycle, Univ. Strasbourg.
- JANEAU G. & SPITZ F., (1984) - L'espace chez le Sanglier: occupation et mode d'utilisation journalier. *Gibier Faune Sauvage*, 1: 73-89.
- MAUGET R., (1984) - Rythme d'activité et budget-temps chez le Sanglier européen (*Sus scrofa* L.). Symposium International sur le Sanglier. F.Spitz & D.Pépin (eds.), Toulouse, *Les Colloques de l'I.N.R.A.*, n° 22: 79-92.