Z. Säugetierkunde 56 (1991) 119–120 © 1991 Verlag Paul Parey, Hamburg und Berlin ISSN 0044-3468

WISSENSCHAFTLICHE KURZMITTEILUNGEN

Use of an active badger sett by Egyptian mongooses, Herpestes ichneumon, in Southwest Spain

By F. Palomares

Estación Biológica de Doñana, Sevilla, Spain

Receipt of Ms. 23. 4. 1990 Acceptance of Ms. 30. 10. 1990

Badgers (*Meles meles*) use dens dug by themselves for rest and protection (KRUUK 1978; NEAL 1986). Badgers' setts are often used as a refuge by other mammals, including several carnivores (NEAL 1986). Some of the carnivores use deserted setts (see NEAL 1986, for a review). Small carnivores also use active setts, although only casually, whilst foxes (*Vulpes vulpes*) use them more regularly and even for breeding in. Here I report for the first time deserted badger setts being used by Egyptian mongooses (*Herpestes ichneumon*) and describe in detail the regular use of an active sett by several radio-tracked mongooses in Doñana National Park, SW Spain, from September 1987 to March 1989.

Mongooses in this area are typically diurnal and usually use burrows at various locations to rest in at night and for resting periods of several hours during the day (DELIBES and BELTRÁN 1985; PALOMARES 1986). During the two years of study at least nine mongooses have used badger setts as a resting area and overnight refuge. In some situations the density of the vegetation made it difficult to establish the type of burrow used. Four deserted badger setts which displayed two to five entrance holes were used by seven mongooses (3 males and 4 females). One active sett was used by 4 males and 4 females as follows (between the parentheses the tracking day number is shown): males: HM1, at least 3 times (117); HM2, 2 times (205); HM3, 1 time (24); HM7, 26 times (53); females: HH4, 2 times (38); HH6, 1 time (163); HH10, 30 times (154); HH12, 19 times (103). Three individuals, HH10, HH12 and HM7 were also located in the sett during the daytime, both resting and active. Of the mongooses captured whose home range included the sett, only one was never recorded inside it.

The above mentioned badger sett, in the bank of a small stream, is dug out of earth and covers an area of approximately 400 m². Eleven entrances are visible, although there appear to be more between the vegetation below which the sett is found. Of these 11 only 6 showed signs of use in March 1989. From earlier visits, no important changes in the entrances in active use were observed. Throughout the study the sett was in daily use by badgers as confirmed by their tracks, and it can be considered the principal sett of a badger clan (KRUUK 1978). Usually the mongooses used 3 entrances for arrival and departure, whilst the badgers used only 2; one of them being utilised by both species. The resting site of two of the marked mongooses, HH10 and HM7, was located very close to the entrances most frequently used by the badgers. Different behaviour is usually observed with foxes, since they tend to use the parts of the sett the badgers do not (NEAL 1986). WIJNGAARDEN and PEPPEL (1964) have speculated that the use of badger setts by foxes is due to the absence of optimal refuge sites. For mongooses, which frequently use the abundant rabbit warrens of Doñana, this is not the case.

In the study area, badgers and mongooses display different activity patterns. The

F. Palomares

mongoose is diurnal (DELIBES and BELTRÁN 1985; PALOMARES 1986), the badger nocturnal. Despite this difference, both species overlap underground for four to ten hours a day.

The appreciable size difference between the two species in Doñana (approximately 7–9 kg for badgers compared to 3 kg for mongooses) makes such great mutual tolerance unexpected, since confrontations are known to be frequent between other carnivores (e.g. ROGERS and MECH 1981). However, badgers, which are very aggressive among themselves (KRUUK 1978), generally show little interspecific aggression (NEAL 1986). Moreover, there appears to be no disadvantage for the mongoose, in spite of the fact that the two species have a certain similarity of diet and therefore possibly compete for resources in the area (MARTIN-FRANQUELO and DELIBES 1985; PALOMARES 1986).

I am grateful to Dr. M. DELIBES for review and valuable comments on the manuscript, and to N. BUSTAMANTE, for reviewing the English.

The research was supported by DGICYT (project PB87-0405).

References

- DELIBES, M.; BELTRÁN, J. F. (1985): Activity, daily movements and home range of a Ichneumon or Egyptian mongoose (*Herpestes ichneumon*) in southern Spain. J. Zool., London 207, 610–613.
- KRUUK, H. (1978): Spatial organization and territorial behaviour of the European Badger Meles meles. J. Zool., London 184, 1–19.
- MARTIN-FRANQUELO, R.; DELIBES, M. (1985): Ecology of the badger in Doñana, Mediterranean Spain. IV Intern. Ther. Congress. Edmonton. August 1985.

NEAL, E. (1986): The natural history of badger. London, Sidney: Croom Helm. 1-238.

PALOMARES, F. (1986): Ecologia de la gineta y el meloncillo en el Parque Nacional de Doñana. Tesina de Licenciatura. Fac. de Ciencias. Univ. de Granada.

ROGERS, L. L.; MECH, L. D. (1981): Interaction of wolves and black bears in Northeastern Minnesota. J. Mammalogy **62**, 434–436.

WIJNGAARDEN, A. VAN; PEPPELM J. VAN DE (1964): The badger (Meles meles) in the Netherlands. Lutra 6, 1–60.

Author's address: FRANCISCO PALOMARES, Estación Biológica de Doñana (CSIC), Apdo. 1056, E-41080 Sevilla, Spain

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: <u>Mammalian Biology (früher Zeitschrift für</u> <u>Säugetierkunde)</u>

Jahr/Year: 1991

Band/Volume: 56

Autor(en)/Author(s): Palomares Francisco

Artikel/Article: Use of an active badger sett by Egyptian mongooses, Herpestes ichneumon, in Southwest Spain 119-120