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## Diurnal resting of European badger (*Meles meles*) in Denmark

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**Key words:** European badger, *Meles meles*, diurnal resting

**Schlüsselwörter:** Dachs, *Meles meles*, Tagesaufenthalte

### 1. Introduction

Many authors have reported on the architecture and use of setts by badgers (*Meles meles*) (BRØSETH et al. 1997, NEAL & CHEESEMAN 1996, RODRÍGUEZ et al. 1996, ROPER, 1992): Individual badgers may use different setts for diurnal resting and may change frequently, but only a few authors have examined the changes between setts in details. The aim of this research is to study the frequency of badgers' change between diurnal resting sites. This research is part of a project from the National Environmental Research Institute with the title: *Habitat quality factors and the influence of fragmentation on the occurrence and distribution of the higher fauna*.

### 2. Material and Methods

The study-area was 203 km<sup>2</sup> west of Randers in Mid-Jutland, Denmark (MADSEN et al. in prep.). The data-collection on sett use took place in June – August 1999, during three periods of two weeks each. During these periods six adult badgers carried radio-collars, four males (M1, M2, M3, M4) and two females (F1, F2). Home-ranges were estimated from night-trackings in the period spring 1998 – summer 1999. All badgers had different home-ranges, except M1 and F1. M3 and M4 lost their collar during the first part of the study period, so only a few data could be collected on them. The badgers were located once a day in the first period and twice a day during the other periods. Radio-locations took place between 6 a.m. and 9 p.m. The diurnal resting sites are divided in: main setts (the sett where the badger was caught), outliers (alternative setts), and overground resting sites.

### 3. Results and Discussion

F1 and F2 showed a similar pattern: during the first period and the first half of the second period they used their main sett very constantly (Tab. 1). F2 had been lactating recently before she was caught (June 2<sup>nd</sup>, 1999). Reproducing females are prevented from choosing freely between resting sites (BRØSETH et al. 1997, RODRÍGUEZ et al. 1996), so it is likely that F1 also had cubs. Once we saw two cubs in front of the sett where she was radio-located. M1, M3 and M4 changed resting sites regularly (every day or second day) in the first period. M2 rested in his main sett during the first period. One of the causes is that he was trapped at the sett for five of the 12 nights preceding the day location.

Only the males used overground resting sites. NEAL & CHEESEMAN (1996) and RODRÍGUEZ et al (1996) recorded both sexes to use overground resting sites. It could be a result of parental care that overground resting was not recorded for the females in our research. Of the 34 days M1 was located, he switched his resting site at least 18 days after one day. He was only twice recorded at the same sett for two consecutive days. M1, M2 and F1 all changed resting sites during the day once. These results show that badgers can change their diurnal resting site very often, up to every day, in summertime.

### 4. References

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Table 1: Frequencies (number of days) of diurnal resting site-use by individual badgers

<b>Badger no.:</b>	<b>F1</b>	<b>F2</b>	<b>M1</b>	<b>M2</b>	<b>M3</b>	<b>M4</b>
Main sett	20	14	9	16		3
Outlier 1	3	1	9	6	4	2
Outlier 2	2	4	4			
Outlier 3		3	3			
Outlier 4	7	2				
Outlier 5	2	1	3			
Outlier 6		4	1			
Outlier 7	1	2				
Outlier 8		2				
Overground A			4	6	1	1
Overground B			1	1	1	1
Overground C				3	1	
Overground D				1		
Overground E				1		
Switched in daytime	1		1	1		
<b>Total</b>	<b>36</b>	<b>33</b>	<b>35</b>	<b>35</b>	<b>7</b>	<b>7</b>

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