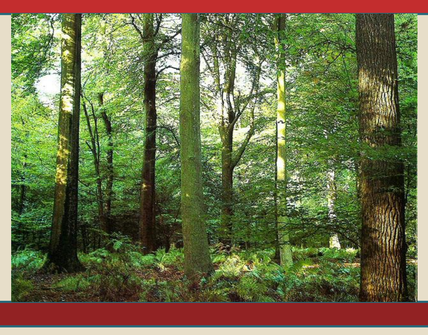

Nest-sharing of the Edible Dormouse (*Glis glis*)

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1. Intruduction

While checking the nest boxes during the day, Edible Dormice (*Glis glis*) are often found sleeping together in pairs or in larger groups.
The study focuses on these sleep communities and analyses if Glis glis chooses his sleeping mates by incidence or if visual patterns can be found.

2. Material and Methods

The data used for this study were obtained from a mark- and recapture project monitoring the population biology of the Edible Dormouse 70km east of Frankfurt/M. (Germany). From 2002 to 2008 all dormice found in nest boxes were captured and marked with passive transonders and monitored from April to late autumn carrying out daily checks using a scanner to minimize disturbance. The study area consists of mixed deciduous woodland of the age of approximately 120 years with oak (*Quercus spec.*), beech (*Fagus sylvatica*), common hornbeam (*Carpinus betulus*) and a well developed herbacious layer.

For the current study we analysed data of 2003 and 2004 obtained from a study area with 94 nest boxes spread over 5.6 ha.

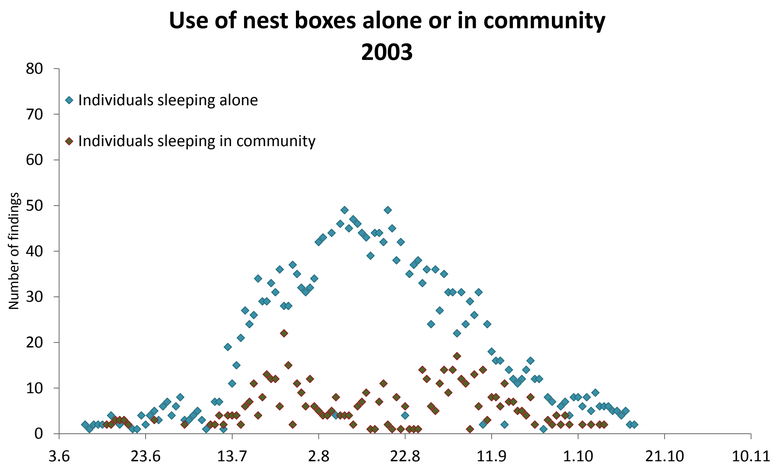

Fig. 1: Individuals per day found sleeping alone or using nest boxes in pairs or groups in 2003.

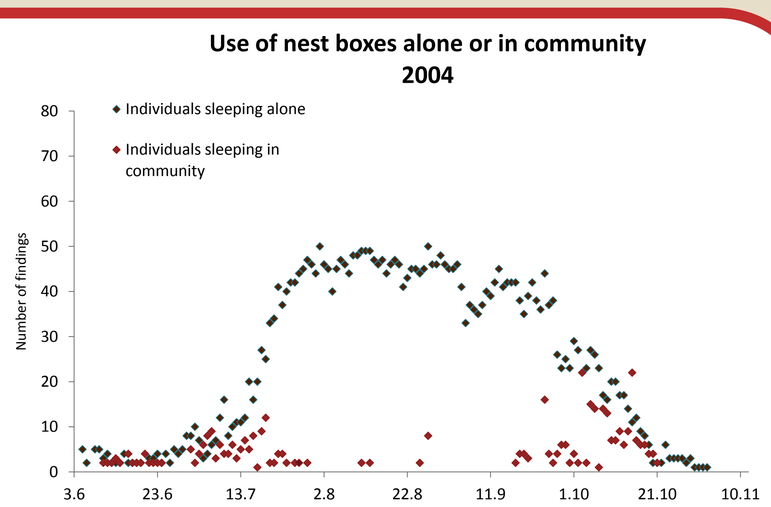

Fig. 2: Individuals per day found sleeping alone or using nest boxes in pairs or groups in 2004.

3. Results

Parts of the population of the Edible Dormouse share nest boxes as sleeping places during their activity period from spring to autumn. Nest-sharing can be found in various combinations of age, sex and number of „sleeping mates“. The variety of these combinations seem to be dependent on whether *Glis glis* goes into reproduction or not as well as on the phase of the acitvity period (mating time, reproduction, rearing the offspring etc.) In 2003 (low reproduction) a high variety of combinations was found throughout the activity period while in 2004 (reproduction) only few different combinations were found. There could be found nearly no shared nest boxes in 2004 during the raise of offspring.

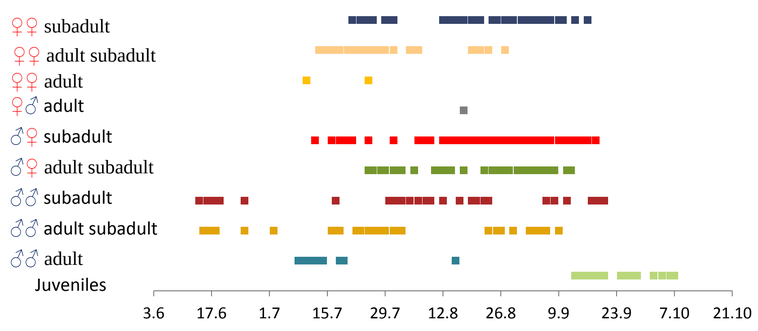

Fig. 3: Time patterns of combinations found during the activity period of Glis glis in 2003

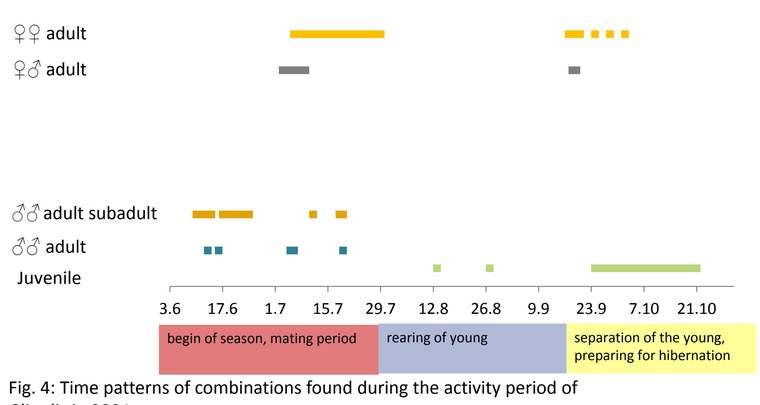

Fig. 4: Time patterns of combinations found during the activity period of Glis glis in 2004

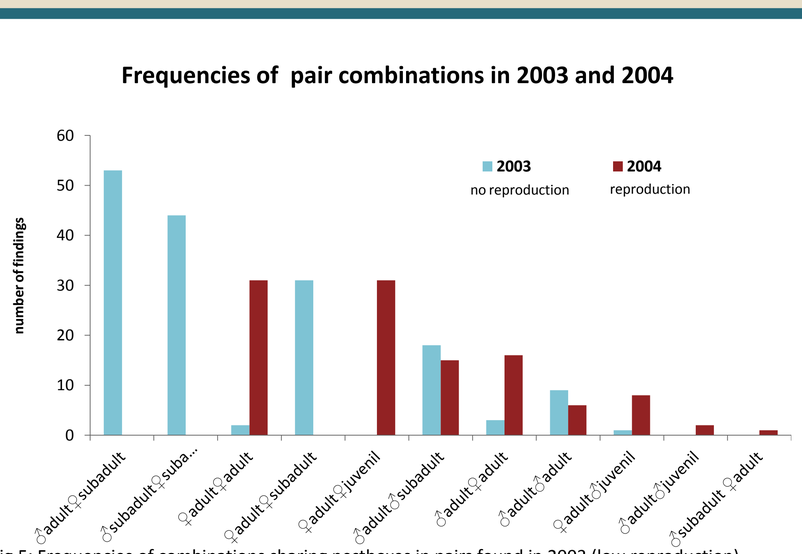

Fig.5: Frequencies of combinations sharing nestboxes in pairs found in 2003 (low reproduction) and 2004 (reproduction). Combinations with only juveniles have been neglected.

Variety of combinations found in 2003 and 2004

	2003	2004
♀adult♀adult	2	31
♂adult♂adult	9	6
♀adult♂adult	3	16
♀adult♀subadult	31	0
♀adult♂subadult	0	1
♀adult♀juvenil	0	31
♀adult♂juvenil	1	8
♀subadult♀subadult	22	0
♂subadult♂subadult	20	0
♀subadult♂subadult	44	8
♀subadult♀juvenil	0	0
♀subadult♂juvenil	1	2
♂subadult♂juvenil	0	2
♂subadult♀juvenil	0	0
♂adult♂subadult	18	15
♂adult♀subadult	53	0
♂adult♂juvenil	0	2
♂adult♀juvenil	0	0
♂♂♂adult	0	0
♀♀♀adult	0	10

	2003	2004
♂♂♂subadult	0	0
♀♀♀subadult	0	0
♂adult♂♂subadult	5	1
♀♀adult♀subadult	1	0
♂♂adult♂subadult	1	1
♀adult♀♀subadult	8	0
♂adult♂♀subadult	10	0
♀♀♂subadult	17	0
♂♂♀subadult	9	0
♂♂adult♀subadult	1	0
♀adult♀subadult♂juvenil	1	0
♂adult♀subadult♂juvenil	0	1
♀adult♂♂subadult	1	0
♀♀♀♂subadult	2	0
♂adult♀♀♂subadult	4	0
♀adult♂♀♀♀subadult	1	0
♀♀♂♂subadult	3	0
♀♀adult♂♂♂♀♀juvenil	0	1
♀♀adult♂♂♂juvenil	0	1
♂adult♂♂♂juvenil	0	2

Tab.1: Possible combinations and number of findings of Glis glis sharing nest boxes in 2003 and 2004. Juveniles are only regarded when found together with adults or subadults, otherwise neglected.

4. Conclusions

Sharing sleeping places seems to be of advantage especially for young dormice (juveniles and subadults). Roosting might offer energetic advantages as well as social interaction (e.g. finding a partner). Due to the preference of designated combinations an incidental choosing of sleeping mates can be excluded in most cases. We assume that hormonal influence could act as trigger for different patterns of sleeping communities. Further triggers could be food availability or climatic factors. Further studies will focus on the latter factors as well as how durable these sleeping communities are.