

## WINTER ACTIVITY IN THE FOREST DORMOUSE *Dryomys nitedula*

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**ABSTRACT.** Similarly as other Palearctic dormice, the Forest Dormouse is a hibernator, being inactive in winter. I present evidence of winter activity and winter caches of the Forest Dormouse in the Białowieża Primeval Forest (north-eastern Poland).

**Key words:** Forest Dormouse, *Dryomys nitedula*, winter activity, Białowieża Forest, Poland

### AĞAÇ FARESI *Dryomys nitedula* ' DA KIŞ AKTİVİTESİ

**ÖZET.** Diğer palearktik ağaç farelerinde olduğu gibi ağaç fareleri de inaktif oldukları bir kış uykusuna yatarlar. Bu çalışmada, Białowieża Primeval Ormanı'nda (Kuzey-doğu Polonya) orman ağaç farelerinin kış sığınaklarında kış aktivitelerine ait kanıtlar sunulmuştur.

**Anahtar sözcükler:** Ağaç faresi, *Dryomys nitedula*, kış aktivitesi, Białowieża Ormanı, Polonya

Dormice from temperate regions of the Palearctic are hibernators, thus are inactive in the winter period (1). This statement holds true also for the Forest Dormouse *Dryomys nitedula* (Pallas, 1778). Lozan et al. (2) did not observe signs of increase in body temperature during hibernation (between the 1<sup>st</sup> half of December and the end of March) in spite of high ambient temperatures (up to 12.4°C), which means that the Forest Dormouse did not break hibernation. Similarly, Gaisler et al. (3) and Kryštufek (4) report no evidence of activity between October and April in that animal in nature. On the other hand, Saint-Girons & Lenkiewicz (5) referred to the possibility of a limited activity in captive dormice during December, January and February, as well as of alternate short periods of activity and inactivity in March and September. In this paper I report the first field evidence of winter activity of the Forest Dormouse, which supports the cited results of studies in captivity.

During four winter seasons (1993/94, 1995/96, 1996/97 and 1997/98) between November and March I checked on a monthly basis c. 190 bird nestboxes. The study area was located in the Białowieża Primeval Forest (north-eastern Poland). In total, I recorded 37 cases of the Forest Dormouse winter activity. In eight cases I found acorn caches with signs of regular use (empty shells, gnawed acorn with tooth-marks and fresh faeces). During each control I removed these signs in order to avoid counting them twice. In total, the stores were visited by Forest Dormice 16 times. The remaining 21 cases of activity were findings of Forest Dormice nests with excrements. All the described signs were undoubtedly left by that species, as in all cases the faeces were found, which are easy to identify in tree-dwelling rodents (6). Of particular interest was the encounter of an acorn cache and a nest of dry alder and hornbeam leaves on 18<sup>th</sup> January 1994; the same nestbox was found empty on 18<sup>th</sup> of December 1993. It should be emphasised that the period in question was unusually warm. According to the meteorological data from the Białowieża village, the mean daily maximum temperature was +3.1°C, and the minimum was -1.4°C.

During the entire 30-day period, the maximum daily temperature did not fall below 0°C, while the minimum daily temperature was above zero for 15 days. Moreover, between 8<sup>th</sup> and 14<sup>th</sup> January the mean maximum temperature was +5.1°C (range 1.3 to 8.6°C) and the mean minimum temperature was +1.7°C (range 0.2 to 3.9°C). On 18<sup>th</sup> December 1993 I also found a non-hibernating Forest Dormouse, which woke up when disturbed. The maximum air temperature was +3.5°C and the minimum was +1.3°C during this 24-hour period. I suggest that winter activity of the Forest Dormouse is probably associated with improved weather conditions, in particular with an increase in the air temperature. Such a conclusion is in agreement with cage studies carried out by Nowakowski (7).

#### REFERENCES

1. Vogel P. Hibernation of recently captured *Muscardinus*, *Eliomys* and *Myoxus*: a comparative study. *Natura Croatica* 6: 217-231, 1997.
2. Lozan M., Bjelik L., Samarskij S. *Soni (Gliridae) jugo-zapada SSSR*. 35-59. Shtiinca, Kishinev, 1990.
3. Gaisler J., Holas V., Homolka M. Ecology and reproduction of *Gliridae* (Mammalia) in Northern Moravia. *Folia zool.* 26: 213-228, 1977.
4. Kryštufek B. Forest dormouse *Dryomys nitedula* (Pallas 1778) - *Rodentia, Mammalia* - in Yugoslavia. *Scopolia* 9: 1-36, 1985.
5. Saint Girons M. Ch., Lenkiewicz Z. Variations annuelles de l'activite chez *Dryomys nitedula* (Pallas 1778) en captivite. *Folia biologica* 13: 23-39, 1965.
6. Nowakowski W. K., Boratyński P. On identification of predation traces in breeding boxes. *Not. Ornit.* 41: 55-69, 2000.
7. Nowakowski W. K. 24-hour activity in the forest dormouse (*Dryomys nitedula*). *Natura Croatica* 7: 19-29, 1998.