

## DISTRIBUTION, ABUNDANCE AND CONSERVATION STATUS OF DORMICE (MYOXIDAE) IN LITHUANIA

RIMVYDAS JUŠKAITIS

*Institute of Ecology, Akademijos 2, 2600 - Vilnius, Lithuania*

**ABSTRACT** – *Muscardinus avellanarius* is the most common and widespread of four dormice (Myoxidae) species, living in Lithuania. It has been recorded from more than 80 localities, mainly in the central and northern parts of Lithuania, with mixed deciduous forests with hazel. Average population densities are from 1 individual/ha in spring to 3 ind/ha in autumn. The remaining three species are rare. *Myoxus glis* is known from eight localities, *Dryomys nitedula* from two and *Eliomys quercinus* from a single one. The last three species are included in the Red Data List of Lithuania. Five localities of *M. glis* are in protected areas.

Key words: Myoxidae, Distribution, Status, Lithuania.

**RIASSUNTO** – *Distribuzione, abbondanza e conservazione dei Mioxidi in Lituania* – Tra le quattro specie di Mioxidi che vivono in Lituania *Muscardinus avellanarius* e quella più comune e diffusa. È stata osservata in oltre ottanta località, prevalentemente nella Lituania centrale e settentrionale in boschi decidui e misti con noccioli. La densità media delle popolazioni è compresa tra 1 ind/ha in primavera e 3 ind/ha in autunno. Le altre tre specie sono rare. *Myoxus glis* è noto per otto località, *Dryomys nitedula* per due ed *Eliomys quercinus* per una singola località. Le ultime tre specie sono incluse nella Red Data List della Lituania. Cinque delle località per cui è noto *M. glis* sono in aree protette.

Parole Chiave: Myoxidae, Distribuzione, Lituania.

### INTRODUCTION

Four species of Dormice occur in Lithuania. Their distribution and abundance have been poorly investigated until now. For this reason, reviews on dormouse distribution, published by different authors (Likhachev, 1972; Airapetjanc, 1983) include very incomplete data on Lithuania. During the last few years, many new localities have been discovered, leading to recent publications in Lithuanian and Russian (Fauna of Lithuania, 1988; Juškaitis, 1992). Otherwise, these data are unavailable to scientists from other countries. This paper aims to present the most recent data on distribution, abundance and conservation status of the four dormouse species in Lithuania.

### METHODS

Information has been collected from the following sources:

- 1) scientific and popular publications
- 2) collections of the Kaunas Zoological Museum
- 3) questioning of Lithuania's zoologists, especially ornithologists investigating hole-nesting birds
- 4) information, received after publication of descriptions and photos of dormice in

7 national magazines and newspapers and 34 local newspapers

5) expeditions through Lithuania, checking specially placed nestboxes.

Dormouse localities were mapped on 10 x 10 km squares of the UTM grid. When two localities are in the same square, they are designated by one sign.

## RESULTS

### EDIBLE DORMOUSE (*Myoxus glis* L.)

Lithuania is situated on the northern edge of distribution for this species. Only two localities were known between the beginning of this century and 1990. Two stuffed specimens are preserved in Kaunas Zoological Museum: one was caught in Kaunas district in 1936, the other in Alytus district also in 1936. Between 1990-1993 6 new sites were discovered - 2 in Kairiadorys district, and one each in Kaunas, Vilnius, Trakai and Alytus districts respectively (Fig. 1). In 3 sites the animals have been found in nestboxes, in another two they were trapped in garden houses, and in one locality they were found in a bee hive. It is interesting, that as many as 6 sites are located in the region between Vilnius and Kaunas. Probably these represent isolated parts of formerly widespread population. Probably the animal occurs in more places. In Lithuania *M. glis* lives in mature forests with old oaks (*Quercus robur*) and many hazels (*Corylus avellana*) and in deciduous forests in river valleys.

### FOREST DORMOUSE (*Dryomys nitedula* Pall.)

For a long time only one site was known. In 1934 the animal was found in the environs of Jonava and the stuffed specimen is kept in Kaunas Zoological Museum. The present state of this locality is unclear. Between 1985-1993 *D. nitedula* has been found in Sakiai district, south-western Lithuania (Fig. 1). The animals (including females with young) were found several times in bird nestboxes, placed in mixed forest with Scotch pine (*Pinus sylvestris*), birch (*Betula pendula*), Norway spruce (*Picea abies*) and buckthorn (*Frangula alnus*). Lithuania and Latvia lie on the northern border of the species distribution area, so the animal should be rare here.

### GARDEN DORMOUSE (*Eliomys quercinus* L.)

This species has been found only in southern Lithuania, in Varena district (Fig. 1). Between 1957-1959 *E. quercinus* with 4-6 young have been found in nestboxes four times. The dormice were observed in dry Scotch pine (*Pinus sylvestris*) forest with juniper (*Juniperus communis*), and a ground cover of moss and lichens. The present state of this locality is not clear, as the exact site is not known.

Since the distribution area of *E. quercinus* stretches far to the north, and the species is ecologically flexible, it could also be expected to live in other places in Lithuania. But even in the central part of its area the animal is distributed sporadically. It was also noted, that during recent decades *E. quercinus* has declined in the Baltic states for unknown reasons (Airapetjanc, 1983).

### COMMON DORMOUSE (*Muscardinus avellanarius* L.)

This is the most widespread and the most numerous dormouse species in Lithuania with more than 80 localities known (Fig. 2). According to our data *M.*

*uvellanarius* has been found in 32 out of 44 administrative districts of Lithuania. It can be expected in some other districts as well. The localities are concentrated mainly in the central part of Lithuania (Panevezysys, Kedainiai, Kaisiadorys, Ukmerge, Kaunas, Jonava districts). In northern Lithuania the animal is also quite common, while in some eastern, southern and western districts it has not yet been found.

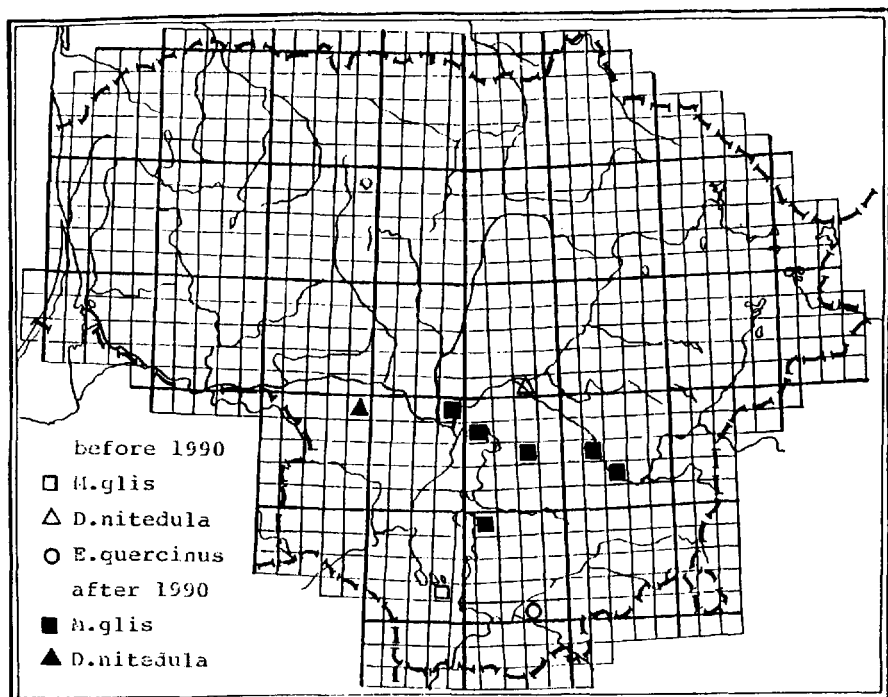


Fig. 1 – Localities of the rare dormice species in Lithuania.

*M. avellanarius* lives in mixed and deciduous forests, especially with a hazel (*Corylus avellana*) understorey. Distribution of this species is therefore linked to distribution of these forests. The small number of *M. avellanarius* localities in western Lithuania is due to spruce forest prevailing there. Huge pine forests limit the species distribution in eastern and southern Lithuania.

Population density of *M. uvellanarius* in Lithuania is comparatively low. Investigations carried out over many years in Sakiai and Moletai districts have revealed that, in spring it is approximately 1 individual/ha (range: 0.4-1.5 ind/ha), while in autumn it is about 3 ind/ha (0.9-3.8 ind/ha).

Three Dormouse species are included in the Red Data List of Lithuania (Red Data Book, 1992). *M. glis* and *D. nitedula* are listed in the 3rd category, as rare species on the northern boundary of their distributional area, and *E. quercinus* - in the 4th category, as an insufficiently known species. Five localities of *M. glis* are in protected areas, including 2 nature conservation reserves established in 1991 in Kaisiadorys district especially for the protection of dormice.

Studies on the distribution of dormouse species in Lithuania are continuing. We

hope that the future list of dormouse localities will become longer. This is most likely for *M. avellanarius*. For the rarer species, the prospect of finding new localities of *M. glis* is the most credible. *E. quercinus* and *D. nitedula* seem to be more rare in Lithuania than *M. glis*, and while new sites for the latter species can be searched for relatively easily, those of *E. quercinus* and *D. nitedula* are more likely to be found by chance. The most promising method is placing and checking of nestboxes in suitable habitats.

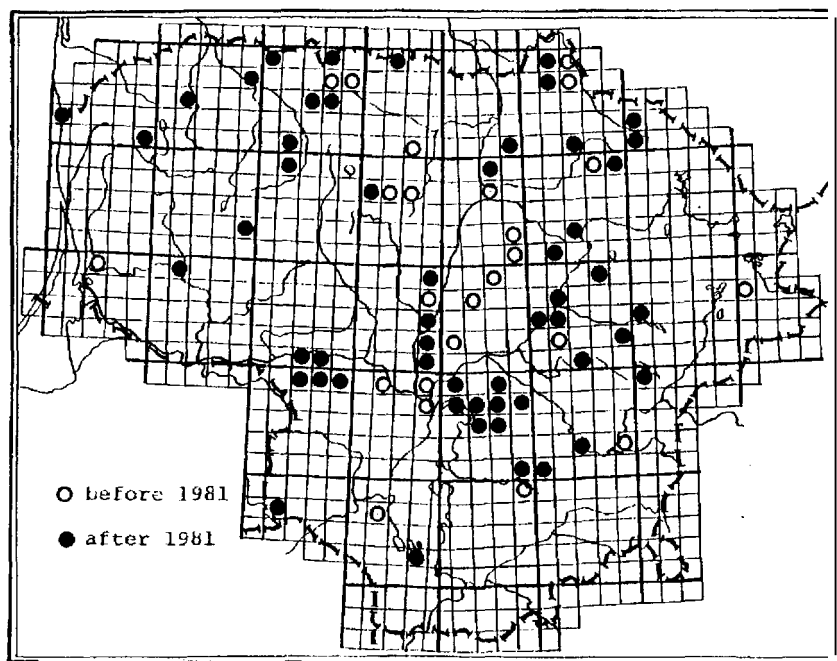


Fig. 2 – Localities of *M. avellanarius* in Lithuania

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