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# THE PRESENT STATUS OF DORMICE IN THE CZECH REPUBLIC

MILOŠ ANDĚRA

*Department of Zoology, National Museum (Natural History), CZ-115 79 Praha 1, Czech Republic*

ABSTRACT – The present status of dormouse distribution patterns in the Czech Republic is reported. In all, four species are presently found within our territory and distribution ranges are plotted on a 10x10km grid. *M. avellanarius* is the most common and wide-spread species, while *M. glis* exhibits considerable regional variability in its distribution pattern. *D. nitedula* has only a limited distribution within our country. *E. quercinus* is the rarest of our species, its present mosaic of distribution seems to be a relict character.

Key words: Myoxidae, Czech Republic, Distribution.

RIASSUNTO – *Lo stato attuale dei Mioxidi nella Repubblica Ceca* – Viene riportato il presente stato dei pattern di distribuzione dei Mioxidi nella Repubblica ceca. In tutto sul nostro territorio sono presenti quattro specie, le cui distribuzioni sono riportate su reticolo cartografico UTM 10x10 km. *M. avellanarius* **e** la specie piu comune e diffusa, mentre *M. glis* presenta una considerevole variabilita regionale nel suo pattern di distribuzione. Per quanto riguarda *D. nitedula,* questa specie ha una distribuzione limitata nel nostro territorio. *E.quercinus* e la specie piu rara e la sua distribuzione attuale a mosaico ha evidentemente un carattere relitto.

Parole chiave: Myoxidae, Repubblica Ceca, Distribuzione.

## INTRODUCTION

Four species of the dormouse family (*Myoxidae*) are represented in the Czech mammal fauna: the edible or fat dormouse (*Myoxus glis),* the garden dormouse (*Eliomys quercinus),* the forest dormouse (*Dryomys nitedula)* and the hazel or common dormouse *(Muscardinus avellanarius).* The present status of dormouse distribution within the territory of former Czechoslovakia was studied in detail by Anděra (1986, 1987) and by Horáček (1986, 1987). The aim of the present paper is to summarize dormouse records for the territory of the Czech Republic and to discuss briefly the distributional patterns of individual species from a zoogeographical and ecological point of view.

## METHODS AND MATERIAL

The present paper summarizes records compiled up to the end of 1992. All available sources of occurrence data have been used, but the collections of museums and other scientific institutions, plus the published literature, provide the basic data. Some records are based on observations by hunters and foresters, but this information was only used where the species identification was undoubtedly correct. Additional records were gathered by ornithologists (from nest boxes) and other field naturalists. Complete lists of distribution data were published by Anděra (1986, 1987). All localities were plotted on UTM (10x10 km) grid maps. Two

symbols were used on the maps: large black circles were used to indicate records after 1945, the smaller ones indicate records before 1945 or of uncertain date.

## RESULTS

The hazel dormouse (*Muscardinus avellanarius*) is the most common and widespread species in the Czech Republic. Its occurrence was registered in a total of 193 grid squares (including 23 records before 1945), i.e. 30% of all squares within our territory (Fig. 1). It inhabits mainly mountain and highland landscapes, however, where suitable conditions are found, this species also occurs in both the lowlands and uplands.

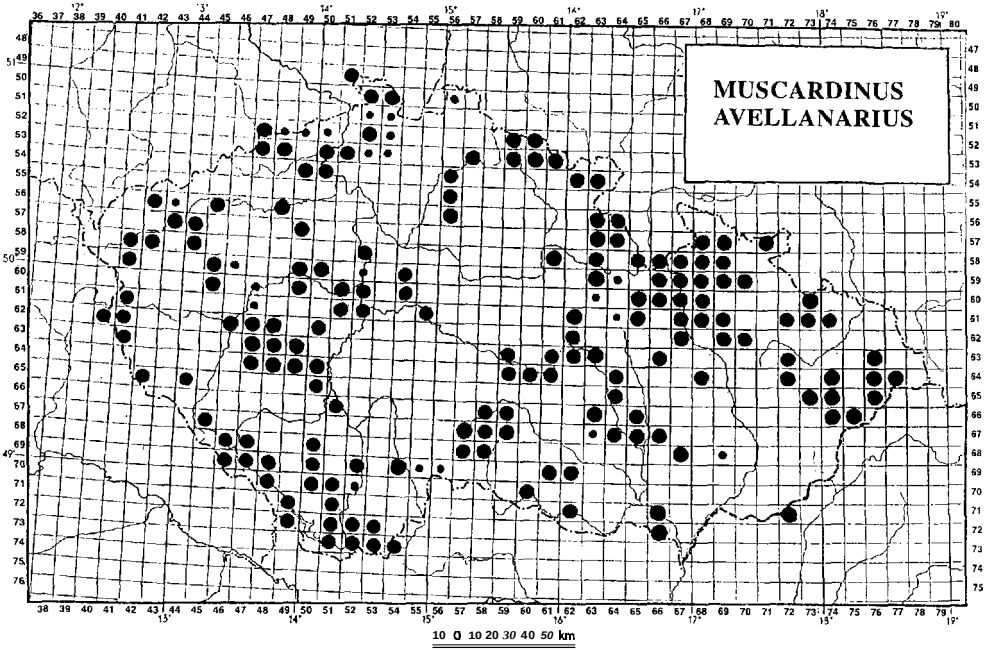


Fig. 1 – The present status of distributional records of *Muscardinus avellanarius* in the Czech Republic

From the zoogeographical point of view, we can suppose, that its original distribution covered the greater part (if not all) of our country. The present mosaic occurrence or even absence of this species in some regions seems to reflect only present habitat conditions. Within our area it is predominantly found in different types of forests except pure pine woods and old spruce monocultures. Further, the species also likes to inhabit shrub stands, clearings and other ecotone habitats. The altitudinal range of the records is from 180 m to 1400 m above sea level, but nearly three quarters of the records fall in the range of 400 m-800 m a.s.l. (for more details see Anděra, 1987).

The edible dormouse (*Myoxus glis*) exhibits a considerable regional variability in its distribution pattern. Whereas in some areas it occurs relatively frequently, there are regions in which it is rare, and even some where the species appears to be

absent. *M. glis* was recorded from 90 squares (14% of the total squares); data gathered before 1945 cover 31 squares (Fig. 2). *M. glis* is missing mainly from lowland deforested areas, and, surprisingly, it has also not been recorded in some highland areas (e.g. southern Bohemia).

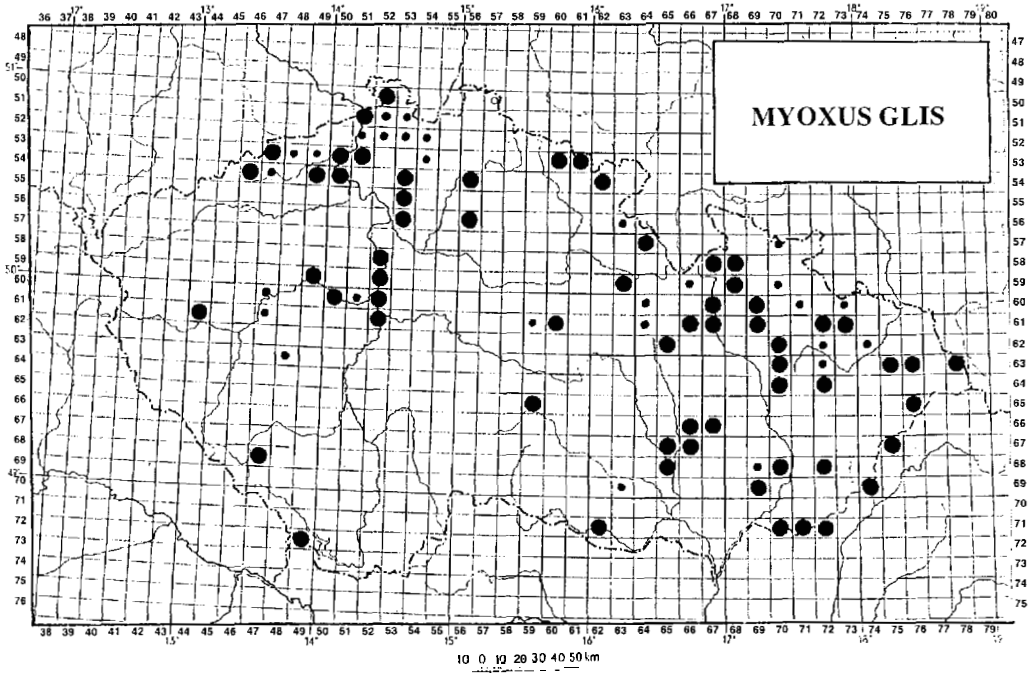


Fig. 2 – The present status of distributional records of *Myoxus glis* in the Czech Republic.

This species can be regarded as a typical inhabitant of deciduous and mixed forests. Moreover, it also favours geomorphologically diverse areas, such as cliffs, caves, sinkholcs, scrccs, etc. The mosaic distribution of *M. **glis*** in the Czech Republic corresponds to the present fragmentary distribution of deciduous woodland enclaves in our country. We can suppose it is a residue of a more widespread distribution, having been determined primarily by limited habitat supply. The altitudinal range of available records extends from 150 m to 1200 m a.s.l., with most records falling within the range of 200 m - 600 m a.s.l. (for more details see Anděra, 1986).

The forest dormouse (*Dryomys nitedula*) has only a very limited area of distribution within Czech territory, covering only the marginal parts of the Western Carpathian Mountains and eastern parts of the Eastern and Central Sudeten Mountains. Twenty-nine occupied squares represent only a small fragment (4.5%) of our country (Fig. 3). The occurrence of this species in the Sumava Mountains/Bayerischer Wald, as indicated for example by H. Kahmann in the 1950s (see Faltin, 1988), is unsubstantiated. **As** to the habitat requirements, our mosaic data suggets that this species inhabits mainly various forest types with numerous clearings and rich herb stratum. Contrary to our other dormice, it

appears to be relatively frequent in pure spruce woods (for more details see Anděra, 1987).

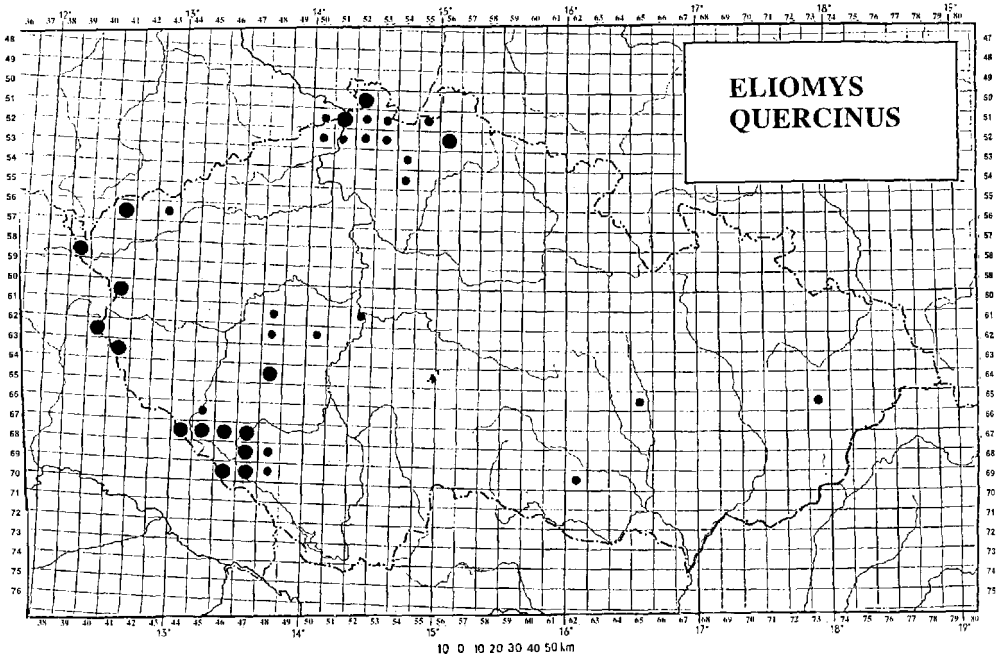


Fig. 3 – The present status of distributional records of *Eliomys quercinus* in the Czech Republic.

The garden dormouse (*Eliomys quercinus*) is one of the rarest species in our mammal fauna. Its present distributional area has a relic character, including only a few mountains and highlands of the Western-Bohemia borderland. Otherwise, only one small isolated population is known from Central Bohemia (the Brdy Mountains). In the UTM grid system, different types of records cover only 37 squares. Moreover, nearly half of them fall in the period before 1945 (Fig. 4). An analysis of all available records indicates an extensive regression of the area of distribution during this century; there are only few recent records of this species. Our knowledge about habitat requirements is also patchy, but a preference for stony and rocky ecotone stands is evident. Present day lack of this type of habitat is due to much lower agrotechnical activity. Loss of pastures in the mountain regions (where shrub vegetation of stony habitats is replaced by extensive woods as a result of reduced acitivities by grazing and browsing domestic animals) within recent decades could be one of the most important reasons for the species regression. *E. quercinus* also inhabits, to a lesser degree, mixed and coniferous forests, clearings and solitary buildings in afforested areas. The ecology of our populations is quite unknown, but it is an interesting fact that most specimens (61.5%) found in scientific collections were captured in late summer and early autumn (Anděra, 1986).

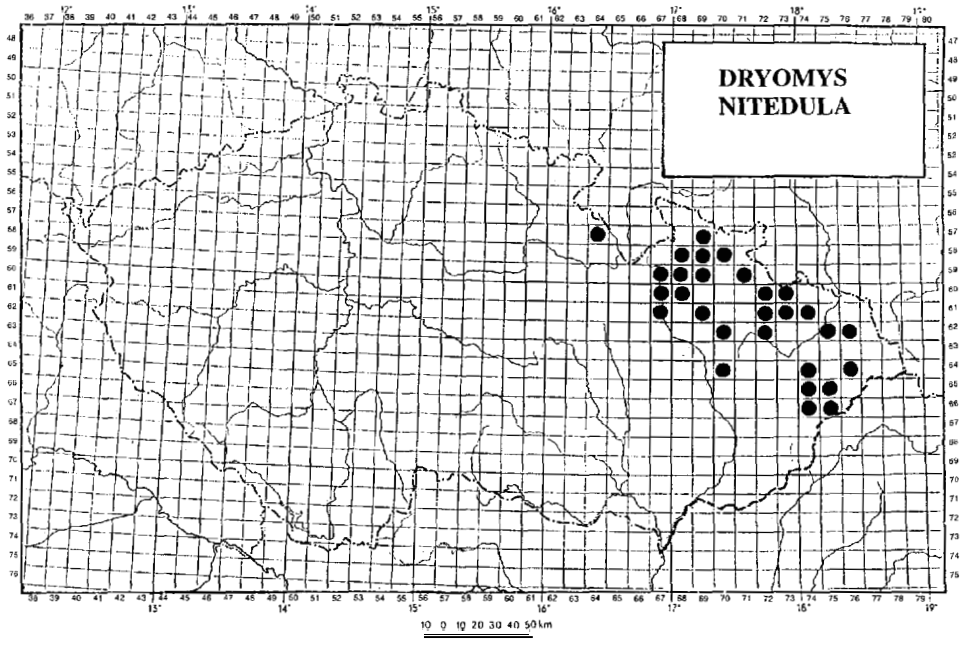


Fig. 4 – The present status of distributional records of *Dryomys nitedula* in the Czech Republic.

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Note: **A** complete list of the Czech literature on dormice is summarized by Anděra (1986, 1987).