

Title: Life tables for the common dormouse *Muscardinus avellanarius* in Lithuania, *Acta Theriologica*, 1999

Author: R. Juškaitis

Country: Lithuania

Background to study

Due to the extensive work involved in collecting information to compile life tables which indicate mortality patterns in species, few exist for mammals and none for dormouse species. Long term monitoring data on two dormouse populations have provided adequate data to present the life tables and mortality patterns of dormice in Lithuania.

Method

- Dormice were monitored in two isolated woodlands in Lithuania between 1983-1990 (Site A) and 1984-1993 (Site B). A total of 262 and 341 nest boxes were erected in each site respectively at 50 m intervals at a height of 1.5-2 m.
- Nest boxes were checked for dormouse presence monthly between April and October and twice a month in May and September. All captured individuals were marked using aluminium rings and their age and sex were determined.
- Juveniles born in the same year and marked in August-October in litters, or living independently were used for calculating life tables. A total of 329 dormice (181 males, 141 females) and 739 dormice (410 males, 329 females) were used from Site A and B respectively.
- Survival was calculated by direct observation and by estimation based on the data obtained and results are for the first four years of life.

Key results

- Dormice suffer high mortality in all years of their life with little changes in mortality rates with age. Mortality rates from year 1-3 ranged from 65% to 55% for males and 66% and 75% in females at Site A. At Site B, mortality rates ranged from 79% to 50% for males and 77% and 82% in females. Mortality rates did vary for individuals born in different years.
- Male and female mortality rates varied in the third year of life in both populations whereby female mortality increased and male mortality decreased to the lowest point in the four years.
- Mortality patterns in dormice differ from other mammal species where data is available.
- Maximum distances travelled from place of birth by May-June juveniles were 800-1200 m with a mean distance of 360 m. As such, mortality rates may be overestimated.
- Maximum distances travelled from place of birth by August-September juveniles were 400-600 m with a mean distance of 130 m.
- All dormice in their second year were sedentary.

Key messages to landowners and managers derived from these results

- To compensate for high mortality during hibernation, habitat enhancement and sympathetic woodland management is recommended to secure larger populations of dormice.
- Re-connecting dormice populations via woodland and hedgerow planting will encourage viable populations by facilitating movement of immigrants and emigrants.
- Suitable habitat within 1 km of dormice populations, connected by arboreal routeways is recommended to allow for juvenile dispersal during the first year of birth.

Key words/phrases

Dormice; *Muscardinus avellanarius*; Lithuania; life table; mortality rate; juvenile; movement