

Genetic diversity and population structure of the common dormouse, *Muscardinus avellanarius*, in Flanders region (Belgium)

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The common dormouse (*Muscardinus avellanarius*) is a very rare and threatened species in Flanders. Surveys revealed that the whole Flemish population seems to be reduced to the eastern part of the municipality of Voeren, where it is connected to the Dutch population.

We can expect that the level of genetic variation within such fragmented and small population is low, and genetic differentiation between patchily dispersed subpopulations is high. In order to assess the genetic diversity and population structure of the common dormouse in this region, we selected 10 microsatellite loci for this study on the basis of polymorphism ascertained in an English dormouse study.

A preliminary genetic analysis was conducted on 65 hair samples of dormouse collected in 2009-2010. The first results revealed at least three different genetic clusters with a low level of gene flow between them. Additional analyses with more samples will complete the genetic results, which will be used by the Mammal Working Group of Natuurpunt to improve advise on dormouse management in Flanders. Long-term and non-invasive population monitoring that combines capture-recapture methods with molecular tools are the only means to provide reliable answers on population trends in a species.