

The effect of habitat connectivity on colonisation of forest fragments with rodents

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Habitat fragmentation through anthropological modification/urbanisation can have an impact on the distribution and population abundance of fauna. Increased fragmentation and the presence of landscape elements that block distribution may minimise recolonization of suitable habitat by small mammals after the population crash phase. This is relevant as the human population expands and requires more and more space, which increases fragmentation.

We determined the degree of connectivity of habitat fragments in North-West

Germany formally by allocating permeability values to the habitat structures present at landscape scale. These data were related to surveys of the colonisation of forest fragments by rodents to assess relationships between fragmentation and repopulation.

Such information is not only important for the assessment of land use effects but can also contribute to a better understanding of processes driving population dynamics. In addition, risk related to rodent-borne diseases can be considered. First results are presented and discussed.