Poster Session 1 – Phylogeography

38 Effects of rivers on gene flow in small rodent populations

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Understanding the role of dispersal barriers is crucial for predicting population responses to landscape and environmental changes. That is why in this study we assessed the role of a medium size lowland river (Biebrza), which is a natural barrier, on gene flow and connectivity in the root vole (*Microtus oeconomus*) population in Biebrza National Park (Poland). This is a hygrophilous rodent species which settles on the banks of the rivers, lakes and other watercourses and swims very well. We analysed molecular data of 176 voles, based on eleven DNA microsatellite loci. Voles were caught at six sites – three on each river side in autumn in years 2009 and 2015. Contrary to our expectations we found a strong effect of the river on genetic distance between the root vole populations in some locations only, whereas in other locations we did find none. Our results show that for small rodents, a well-visible river barrier does not have to impact the gene flow. Interestingly, it follows that some of the barriers, invisible to a human, such as type and amount of vegetation, presence of small roads or pastures may strongly influence root vole genetic structure.

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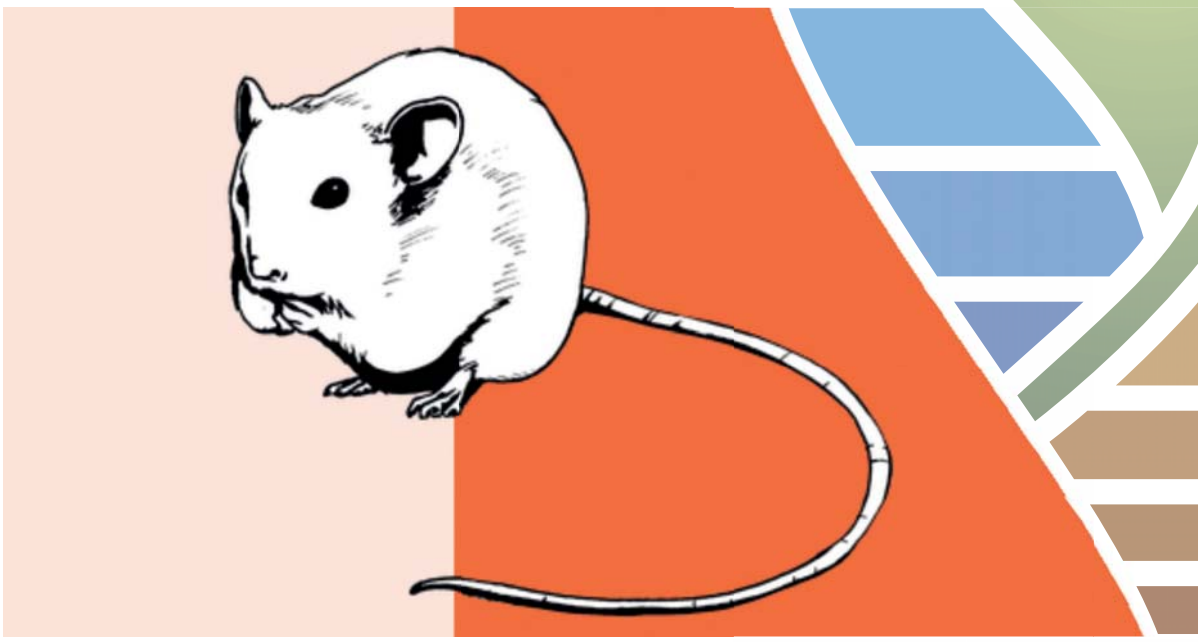

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