Poster Session 2 – Conservation and Ecosystem Services

100 Manipulation of plants based on seed survival rates: complex spatial patterns delay seed retrieval in rodents

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Spatial heterogeneity is generally deemed a central causal factor influencing the physiology and behavior of animals in ecological systems. However, knowledge remains limited about how such patterns influence seed recovery by animals. We hypothesized that variation in spatial patterns benefits seed survival. To prove this hypothesis, we tested seed retrieval parameters by *Apodemus agrarius* and *Lasiopodomys brandtii* in different heterogeneous environments. Our results showed that seed retrieval time increased with increasing spatial heterogeneity. Furthermore, the frequency of invalid excavations was exponentially correlated with spatial heterogeneity. Finally, spatial heterogeneity significantly influenced the frequency heterogeneous objects were explored. Our results indicate that spatial heterogeneity significantly influences the foraging behavior of animals. Consequently, increased spatial heterogeneity will impair the seed retrieval success of rodents. In conclusion, this phenomenon might be an effective strategy of plants to manipulate the seed recovery rates of hoarders, which would ultimately enhance seed survival and the establishment of seedlings.

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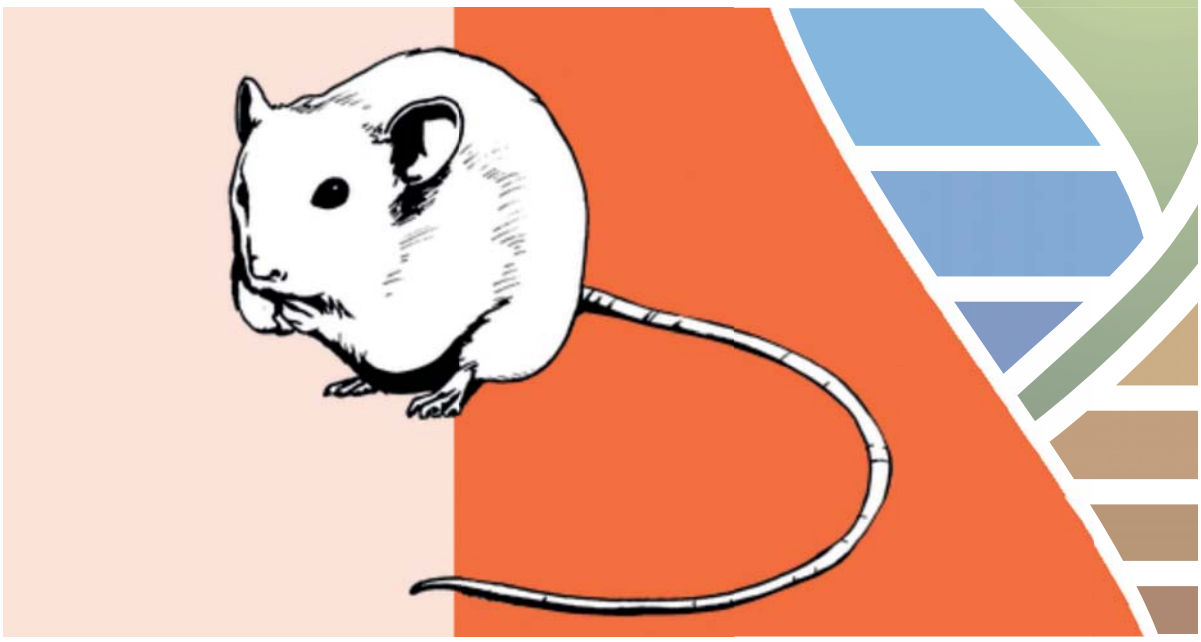
Book of Abstracts



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