Poster Session 1 – Rodent Behaviour

14 Find the needle in the haystack: tracing the dispersal of small palatable tree seeds in European beech forests

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Zoochory is of substantial importance for dispersal of palatable tree seeds. Besides primary dispersal, tree seeds might be detected by seed hoarding animals. Thereby, seeds might be either consumed or hoarded for later consumption. We analysed hoarding behaviour of small mammals in two different study areas in beech (*Fagus sylvatica*) dominated forests in Austria. Ground vegetation, terrain and predator guilds were comparable at both sites. Considering the relatively small dimensions of beechnuts we tested three different seed tagging methods: (1) wire threads with plastic flags fixed with solvent-free glue, (2) wire threads with plastic flags twisted around a beechnut, (3) and radio-transmitters fixed with solvent-free glue. We offered tagged as well as untagged seeds on experimental dishes to analyse seed removal rates. We did not find any difference in seed removal between different tags or untagged beechnuts. Nearly all seeds were removed within 25-35 days after exposure. However, transport distances differed between study areas and radio-tagged seeds generally experienced larger dispersal kernels with a maximum range of 60 m. Furthermore, seeds tagged with radio-transmitters were cached more frequently compared to flag-tagged seeds. In one study area, a higher quota of radio-tagged seeds could be recovered compared to flag-tagged seeds. We suggest to simultaneously use flag-tagged and radio-tagged seeds to obtain a realistic picture of dispersal kernels in situations with dense ground vegetation or irregular terrain.