

# Can rodents enhance germination rates in native rainforest seeds: Seed predators or mutualistic frugivores?

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Fragmentation is a phenomenon which has radically affected ecosystems in every continent except Antarctica. This is particularly evident in the tropical rainforests of far north Queensland, with a significant amount of continuous habitat being lost and the remaining remnants being dispersed throughout a matrix of agricultural and urban developments. Remnants range between 1ha and 600ha and have been shown to be too small to sustain populations of larger frugivores. Therefore, if the long term viability of remnants is to be secured, processes such as seed dispersal and germination must rely on smaller resilient frugivores and omnivores within the system. Rodents have historically been viewed as seed predators and whereas many studies have focused on the effect of gut passage on seed viability, the effect on germination of rodents feeding on large-seeded fruits has received little attention.



*Melomys cervinipes*



*Rattus fuscipes*

This study investigates the impact of two rodent species that are abundant in rainforest remnants in tropical Far North Queensland on germination of fruits that have seeds too large to be ingested whole. Fruits from twenty native rainforest species found on the Atherton tableland were fed to the two rodents *Melomys cervinipes* and *Rattus fuscipes*. We recorded that in 85% of species tested, rodent feeding increased seed germination by a factor of 3.5 suggesting that in rainforest remnants in Far North Queensland, rodents play a significant role in enhancing the germination of large seeded fruits.