

## SEED DISPERSING BIRDS RESPOND TO LOCAL RAINFOREST COVER: CONSEQUENCES FOR SEED FATE

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Most Australian rainforest plants are dispersed by fruit-eating birds. In partly deforested landscapes, seed dispersal within and between forest patches is influenced by these birds' use of forest fragments, and by their patterns of fruit consumption. If the dispersers of a plant species decline or disappear, this will set an ultimate limit to the fate of its seeds – reduced dispersal. Therefore an important question for the conservation of rainforest plant communities is how to sustain or recover seed disperser abundances in fragmented forests.

We assessed the effects of fragment size and surrounding forest cover on communities of seed disperser birds in an extensively-cleared Australian rainforest landscape, where different bird species vary in both their sensitivities to fragmentation and their roles as seed dispersers. In surveys of single one-hectare plots within 25 rainforest fragments, we recorded 20 seed disperser species. We used regression modelling to test how well particular seed disperser variables (species abundances, richness and abundance of functional groups) could be predicted by fragment size and six measures of surrounding forest cover (within 200m, 1000m and 5000m radii, for cover of rainforest and of all forest types). Model comparisons showed that the amount of rainforest cover within 200m was the best predictor of the abundances of fragmentation-sensitive disperser species, and of birds which disperse most plant species (including plants which have few dispersers). We conclude that a high proportion of local rainforest cover will help maintain seed disperser assemblages and seed dispersal in forest fragments and during forest restoration.