



The contribution of the bird community of the regenerating coastal dunes at Richards Bay to regional diversity

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Dedicated to my parents

**The contribution of the bird community of the regenerating
coastal dunes at Richards Bay to regional diversity**

by

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Abstract

Habitat modification in response to disturbances such as slash-and-burn agriculture, afforestation, deforestation and mining affects local communities. Such effects depend on the scale of the disturbances. The present study shows that deforestation, afforestation, the neglect of afforested areas, and dune rehabilitation reduce the total density, richness and diversity of bird communities. Vegetation regeneration in response to a 23 year long rehabilitation programme gave rise to habitats that supported birds assemblages that with age increased in similarity to those typical of undisturbed dune forests. Habitat rehabilitation facilitated local colonisation and local extinction patterns typical of ecological succession, with generalists (small-bodied, seed-eaters) being the first to colonise new habitats (grasslands and scrublands). Habitat specialists such as fruit-eating, hole-nesters were the last to colonise regenerating habitats. Patterns in local and in regional diversity could not be explained through the Intermediate Disturbance Hypothesis. Increased richness, diversity and total density with decreased levels of habitat disturbances appears to be driven by habitat heterogeneity. Assemblages of rehabilitating areas did not differ from those of disturbed landscapes in the region. Habitat rehabilitation thus does not impair the characteristics of bird communities of the northeast coastal region of KwaZulu-Natal, South Africa.

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