

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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Submitted in partial fulfilment of the requirements for the degree of

M.Sc. (Zoology)

in the

Faculty of Natural and Agricultural Sciences, University of Pretoria, South Africa

June 2001

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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.

ACKNOWLEDGEMENTS

I would like to thank Professor Rudi van Aarde as supervisor of this study. His support and advice are greatly appreciated. I would also like to thank Paul Camp and Andrew Denton, of the Ecology Department at Richards Bay Minerals for support and friendship, Richards Bay Minerals for logistical and financial support, the National Research Foundation, Department of Trade and Industry and the University of Pretoria for financial support. I also thank my fellow students for their friendship and helpful discussions, especially Leon Theron and Danie Erasmus for their helping hands during the layout of transects. A word of thanks to Tim Jackson for the painstaking task of proof reading this document. My parents and Hannie encouraged me throughout the step in my career.

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