ECOLOGICAL MANAGEMENT OBJECTIVES AND MONITORING PROCEDURES FOR RUSTENBURG NATURE RESERVE, NORTH WEST PROVINCE

BY

HERCULES PETRUS NEL

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Centre for Wildlife Management
Faculty of Natural and Agricultural Sciences
University of Pretoria
Pretoria

SUPERVISOR: Prof. W. van Hoven
CO-SUPERVISOR: M. S. Deutschländer

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To Monique, Larize and Pierre

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Ecological management objectives and monitoring procedures for Rustenburg Nature Reserve, North West Province

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Hercules Petrus Nel

Supervisor: Prof. W. van Hoven
Co-supervisor: M. S. Deutschländer

Centre for Wildlife Management
Faculty of Natural and Agricultural Sciences
University of Pretoria
Pretoria

Magister Scientiae (Wildlife Management)

ABSTRACT

The physical and biological components of the Rustenburg Nature Reserve were analysed in order to classify and describe the vegetation on the reserve. This data was used to delineate homogenous management units for management and monitoring purposes. Four management units were identified. Multivariate processing techniques were used to create degradation gradients to developed an understanding of the dynamics of the vegetation in the different management units, as well as the response thereof to disturbances. The Integrated System for Plant Dynamics was used to develop degradation gradients and species response curves. Degradation gradients were interpreted in terms of species composition and appearance or disappearance of species along the gradient. Suggestions were also made with regards to a monitoring system to determine the direction and rate of change in each homogenous management unit. Past management strategies were evaluated and the effect it had on game and vegetation composition and structure were analysed. Future management actions, focussed at achieving the primary objective, *viz.* sustained yield of quality water, are suggested. The principle of adaptive management is also suggested as a management strategy.

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