

A phytosociological synthesis of Mopaneveld

by

Frances du Plessis

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Faculty of Natural and Agricultural Sciences

University of Pretoria

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Supervisor: Prof. Dr. G.J. Bredenkamp

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YUNIBESITHI YA PRETORIA



Dedicated to Stefan, my parents and to Him, who guides me along my journey

ABSTRACT

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Mopaneveld, a vegetation type dominated by *Colophospermum mopane*, covers an area of approximately 550 000 km² over eight countries in southern Africa. A phytosociological synthesis of this extensive vegetation type is presented. TWINSpan classification was based on existing, adequate, raw vegetation data of southern African Mopaneveld, which included fifteen data sets. Despite the limitations in sound vegetation data, 2 298 relevés contributed to the identification of seven vegetation types and six major plant communities by the application of TWINSpan. A new method to treat large vegetation data sets is also presented. The wealth of adequate vegetation data from the South African Lowveld Mopaneveld motivated further analysis of this vegetation type. Four major plant communities were identified of which two are discussed in this dissertation. Apart from the phytosociological contribution of this study, TWINSpan results revealed motivation for the southern African Mopaneveld being an event-driven system which follows non-equilibrium models to explain vegetation change.

Keywords: Mopaneveld, Mopani Veld, *Colophospermum mopane*, TWINSpan, DECORANA, large vegetation data sets, savanna, phytosociology, synthesis, vegetation dynamics, non-equilibrium, South African Lowveld, southern Africa

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