



**THE ECOLOGY OF CHIEF'S ISLAND AND THE  
ADJACENT FLOODPLAINS OF THE OKAVANGO DELTA, BOTSWANA**

by

**RUSSELL C. BIGGS**

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**Dedicated to my Parents**

## ABSTRACT

### THE ECOLOGY OF CHIEF'S ISLAND AND THE ADJACENT FLOODPLAINS OF THE OKAVANGO DELTA, BOTSWANA

SUPERVISOR Professor J. du P. Bothma, Eugène Marais

Chair of Wildlife Management, Department of Zoology, University of Pretoria

CO-SUPERVISOR Dr G.K. Theron, Department of Botany,

University of Pretoria.

The study area lies in the central Okavango Delta, Botswana, and was proclaimed a game reserve extension on 2nd July 1976. Peoples of Khoisanoid origin first colonised the area. Bantu speaking baYei followed in about 1750 and baTawana in about 1795. The area is still completely undeveloped and pristine. The solid geology is largely overlain by Kalahari sands, but is seismically very active. Resultant faulting has given rise to the Delta. Further seismic activity, vegetation blockage formation, termitaria establishment and low density of large aquatic moving animals give rise to continual change in water distribution and output at the Delta's base. These natural factors continually cause dynamic change of flooding regimes. The climate is of summer rainfall and local Delta rainfall is considered a major factor in determining extent and duration of flooding. Five vegetation types divided into 20 plant communities occur. Five communities are dependent on a high water table and 10 on surface flooding for maintenance of specific mammalian habitat types. Floodplain vegetation types are considered most sensitive and 'normal' flooding is required to maintain the wetland flora and fauna. Sixty-three mammalian species are recorded from the study area. Twenty-two species are almost wholly dependent on flooding. Lechwe and sitatunga are completely dependent on aquatic and floodplain vegetation types and adequate flooding to conserve their habitat. Water flow in most major channels from ancient to present times has changed radically in distribution. Schemes to extract a more reliable flow out of the Delta for industry and human/stock consumption are laid out and evaluated, and a water demand made for conserved areas. Tourism should be in the form of foot and mekoro or boat safaris. Control of undesirable aquatic vegetation must be monitored. Burning as a management tool is required to enhance flow and control vegetation in some areas. It is premature and unsound to eliminate tsetse fly at this stage. Limited cropping will have to be initiated shortly. Larger tracts of Delta area are required under the direct supervision of the Department of Wildlife and National Parks to maintain the pristine conditions and ensure the conservation of fauna and flora, thereby maintaining the only reason for international tourism to the area.

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