

**Diet and behavioural ecology in sacred chacma baboons: A case study at Lwamondo Hill in the Limpopo Province, South Africa.**

**RENDANI MULAUDZI**

**A Thesis submitted to the School of Environmental Sciences, University of Venda, in fulfilment of the requirements for the degree of Master of Environmental Sciences.**

**August 2014**

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### Abstract

The chacma baboons (*Papio ursinus*) are regarded as the most intelligent and successful cercopithecines in southern Africa. A 10-month study was carried out to provide data on the activity patterns, diet, ranging patterns and raiding behaviour of the 163-member troop of the sacred chacma baboons at Lwamondo Hill on the eastern foothills of the Soutpansberg Mountain range in Limpopo Province, South Africa. The sacred status of these baboons to the Lwamondo Hill human inhabitants distinguishes them from all other populations in southern Africa. The activity types and dietary data were collected in 15-minute intervals of scan sampling on an average of 5 consecutive days per month from February to November 2013, covering both wet and dry seasons. A total of 34 faecal samples were collected and analysed to complement the direct observation data. The GPS sample points were used to quantify the home range size and daily range length. A total of 40 questionnaires from four villages were administered to gather data on key aspects of raiding behaviour. In order to assess the degree of damaged crops, three quadrats (3x5m) were sampled, from a total of twelve fields (i.e. three per village) during the early crop season from October to November. Foraging behaviour (which includes feeding) range between 30.7-65.1%. Their overall diet composition was dominated by plant resources, contributing 67.8%. The baboons consumed a total of 58 plant species, where the top ten accounted for 74.6% of their overall diet. The overall home range size was 4.33 km<sup>2</sup> and average distance travelled was 3.1 km. Results from the actual crop field assessments suggest that, farms located at close proximity to the forest edge were most susceptible to crop damage by baboons. Data from questionnaires show that, while the sacred chacma baboons are regarded as crop-raiders at Lwamondo, they are not killed due to cultural taboos associated with them.