

CHAPTER 1

INTRODUCTION

The caracal *Caracal caracal* is a solitary, predominantly nocturnal felid. Schreber described the first specimen from the southwestern Cape region of South Africa, in 1776. Caracals preferentially inhabit the dry open savanna regions of southern Africa (Skinner & Smithers 1990, Estes 1995, Bothma & Walker 1999). Caracals have, however, been recorded in most major habitat types in southern Africa (Stuart & Wilson 1988). The areas from which they are excluded include the Namib Desert of Namibia (Stuart & Wilson 1988) and the coastal forests of KwaZulu-Natal (Von Richter 1972). Outside the southern African region caracals are found throughout Africa, excluding the tropical forests of West and Central Africa and the Sahara Desert. Beyond Africa, caracals are found throughout the Arabian Peninsula, north into Kazakhstan and southeast into India (Bothma & Walker 1999).

Caracals are medium-sized cats, weighing up to 20 kg (Skinner & Smithers 1990), that feed on a broad spectrum of prey including insects, reptiles, birds and mammals up to the size of a springbok *Antidorcas marsupialis* and mountain reedbuck *Redunca fulvorufula* (Grobler 1981, Stuart 1981, Stuart 1982, Moolman 1986, Palmer & Fairall 1988, Stuart & Wilson 1988, Skinner & Smithers 1990, Stuart & Hickman 1991, Estes 1995, Avenant & Nel 1997, Bothma & Walker 1999).

Caracals are physically robust cats with muscular back legs that are longer than the front legs (Skinner & Smithers 1990). They are reddish in colour, with soft white fur on their bellies. The uniform red pelage has led to the caracal being called rooikat (red cat) in

Afrikaans. Due to caracals having long, tufted black ears and short tails relative to their body length, they have often erroneously been called lynxes. Caracals are, however, not closely related to either the Old or the New World lynxes beyond the two superficial, morphological attributes mentioned above (Bothma & Walker 1999).

In southern Africa, caracals frequently prey on small domestic livestock, and for this reason they are considered problem animals by small livestock farmers. In South Africa and Namibia legislation is in place that classifies caracal as vermin and allows farmers to hunt, trap and destroy them (URL: <http://lynx.uio.no/catfolk/ssacr01.htm>). However, in the more northerly African and Asian distribution zones caracals are considered endangered, and they have been classified as a CITES Appendix II species (URL: <http://lynx.uio.no/catfolk/ssacr01.htm>).

Notwithstanding their wide distribution and problem animal status, little is known of the ecology and behaviour of caracals (Grobler 1981, Moolman 1986, Bothma & Walker 1999). This is probably due to caracals being notoriously difficult to study in the wild because of their nocturnal, solitary behaviour and cryptic colouration (Estes 1995, Van Heezik & Seddon 1998). Many of the studies to date have investigated the prey selection of caracals based on stomach or faecal contents, and behavioural studies based on observations of captive animals.

There is often conflict between conservation institutions and small livestock farmers especially where parks or nature reserves that maintain predator populations are adjacent to small livestock areas. The conflict arises due to the contention by farmers that the conservation agencies protect predators that prey upon domestic stock, and hence indirectly contribute to their own stock losses. Such a situation exists on the

western border of the Kgalagadi Transfrontier Park where it borders on Namibia. The motivation for the present study is to gain insight into the behavioural ecology of free-ranging caracals in the Kgalagadi Transfrontier Park, and to try and determine whether they have an impact on small livestock on the neighbouring agricultural land in Namibia.

To investigate the caracal behaviour and their potential impact on the small livestock farms, a multi-faceted research approach was necessary to answer the following key questions:

- Do the ranges of caracals in the Kgalagadi Transfrontier Parks extend into Namibia?
- Do caracals in the Kalahari show any habitat preferences?
- How do caracals hunt their prey?
- Do caracals utilise small livestock as prey?
- Are there higher densities of caracals near to the Namibian border than elsewhere in the Park?

It is intended that the results of this work be published as a series of articles in various peer-reviewed scientific journals. To this end, each chapter is an entity unto itself and complies with the stylistic regulations of the intended publication. The tables and figures are labelled consecutively within each chapter. Literature cited in each chapter is referenced at the end of that chapter and a full list of citations is included at the end of the thesis. The methodology for each component study is described within the individual articles. However, general methods and a brief summary of the methods employed in each of the chapters appear in Chapter 3. The study area remained the same throughout the study and this results in a certain amount of repetition regarding the

description of the study area in various chapters of this dissertation. An extended description of the study area has also been included (Chapter 2). The final chapter discusses general management recommendations based on the conclusions drawn from the research.

References

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