The Collection Behaviour and Taphonomic Signatures of Hyaenids

By

Brian F Kuhn

A thesis submitted to the University of Pretoria, South Africa, in fulfilment for the requirements for the degree of Doctor of Philosophy
Submitted in Pretoria, 15 December 2006

Dedication

Dedicated to the memory of my father, Jesse Wayne Kuhn (September 4, 1930-February 15, 1997) and to my mother Bettelene Kuhn

And especially to my Uncle, Alwin Goodman Leupold
April 27, 1925-December 10, 2006

Abstract

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The collecting behaviour of specific animals is increasingly becoming of interest to a variety of scientific disciplines. Collectors can be found in the rodent and carnivore mammal populations, as well as certain avian species. Of the carnivores it is hyaenids and leopards (*Panthera pardus)* that appear to be the most prolific collectors of faunal remains. Of the four species in the hyaena family, three are known to collect various quantities of faunal material in their prospective dens; they are spotted hyaenas (*Crocuta crocuta*), brown hyaenas (*Parahyaena brunnea*) and striped hyaenas (*Hyaena hyaena*). The question surrounding the collector of faunal remains in the archaeological record is as important as it is old. This is an in depth examination of the bone collections of all three extant hyaenids and the related taphonomy corresponding to each species. New collections were made from various dens and locations in southern Africa for both *Parahyaena* and *Crocuta*. Additionally previous collections of *Parahyaena* were reanalysed and data from *Hyaena* collections in Jordan reviewed. In all a total of 23,324 bones and bone fragments were examined during this study, specifically looking at species collected, skeletal elements, minimum number of individuals (MNI), number of identified specimens (NISP), fusion data, fragmentation, weathering and an assortment of taphonomic characteristics. Specific taphonomic characteristics recorded were crenulated edges, striations, punctate depressions and punctures, scouring, acid etching and all combinations thereof. The main thrust of this research is to determine if hyaenids in general can be positively identified from other collectors as the collector of a specific assemblage of faunal remains and to determine if the three species of hyaena can be distinguished from one another by studying the faunal collections alone.

Acknowledgements

I would like to thank:

The Palaeoanthropological Scientific Trust (PAST) for supplying the bursary that I received for three of the four years it took to complete this project, as well as Professor Lee Berger of PURE (Palaeoanthropology Unit for Research and Exploration) and Professor Bruce Rubidge and the staff at the Bernard Price Institute (BPI), the University of the Witwatersrand, for administering and depositing the funds for me while I was in the field. Without their support and efforts this project could not have been finished.

Professor John D. Skinner for supervising me on this project, arranging my co-supervisor, Professor Lee Berger at Wits, graciously funding my fieldwork in Namibia when I was all but out of money, and allowing me to carry out independent research. Your faith in me to get this done without being over supervised was most appreciated. And last but not least, for editing drafts of this thesis expeditiously, your efforts were most appreciated.

Professor Lee Berger of the University of Witwatersrand for agreeing to act as a co-supervisor on this project, providing me with a desk and laboratory space at PURE in the early months of study, granting me unhindered access to the reference collections and fossil collections, putting me in touch with PAST and obtaining a PAST bursary, and for your insights and guidance.

Dr. Bob Brain, Dr Graham Mitchell and Dr. Liora Horwitz for their positive and constructive comments on the initial protocol.

The other folks at the University of Witwatersrand:

Dr. Darryl James de Ruiter for his initial aid in the early collections prior to heading off to Texas A & M University and for access to his thesis and his insights on QSP vs. MNI.

Dr. Lucinda Backwell for access to her thesis on bone damage and modifications.

Pedro Boshoff for showing me the art of caving and giving me access to his current work with coprolites, as well as his honours work on the Bolts Farm hyaena, his help in the field, his constant enthusiasm for the project and hyaenas in general and for putting up with me in his office during the early days.

Rodrigo Lacruz, for access to his MSc thesis and for confirming the presence of human remains amongst the Namibia/Skinner collections, also for providing an ear when questions abounded and for sharing all his insights on hyaena dentition and bringing new fossils to my attention when they surfaced. Also for helping positively identifying baboon remains from one of the hyaena dens in the diamond area of Namibia.

Ryan Franklin for his unending help in the field, both in South Africa and Botswana, his work on pathological bones and in the laboratory helping out with the analysis of every bone collected in those two regions, your time and efforts were greatly appreciated.

In addition:

My family, especially my Mom for all her support; financially and otherwise. My Uncle Al (1925-2006), for all his aid and encouragement for me to continue with my education, it is sad to see how fast one can slip away mentally after 70 plus years of being so very sharp, you will be missed. To my brothers Jess and Bill and sister in law Stacey for their moral support and encouragement. And to my Uncle Bud for his

enthusiasm and financial support when he could give it, every penny and rand you sent my way was greatly appreciated. And finally to Chris McMillan, while not family you should be, thanks for giving me a job to fall back on when I came home so I could afford to stay on here in South Africa. If not for working with you when I could I never would have come this far.

Dr. Andrew Taylor for his day in the field and giving me insight into aardvark holes and hyaena modifications of such holes.

Rietvlei Nature Reserve:

Henk Marais, Tshwane Nature Conservation, for putting me in contact with the Rietvlei Nature Reserve.

Rian Marais, Manager of Rietvlei Nature reserve for providing access to the brown hyaena in the reserve.

Karin Coetzee and other staff of Rietvlei Nature Reserve for assistance in locating the various dens located on the reserve and for taking the time to go out in the early hours of the morning and for staying out late in the evening to observe hyaena activity at the various dens.

Ryan Franklin and Dave Lorom for assisting in the collections from the Rietvlei dens; and to Ryan for aiding in the analysis of the collected remains.

Mashatu Game Reserve, Botswana:

Grant Hall for setting up contact with Mashatu Game Reserve.

The staff at Mashatu Game Reserve; especially Jeanetta Selier, Paul Grobler and Pete Le Roux. Plus Dave Lorom and Katja Koeppel for the early days scouting dens and

Ryan Franklin, Jess Kuhn, Joost Segera and Michiel van Silfhout for helping with the collection of faunal remains. And a special thanks to Ryan for helping sort through and identify the 900 plus remains that were collected.

In Namibia:

The Ministry of Environment and Tourism (MET) for granting me permission to conduct fieldwork in Namibia.

Ingrid Wiesel of the Brown Hyaena Project (Luderitz) for her help showing me her dens and giving me unhindered access to them. Tryque Cooper of MET, Luderitz, for his support for this research and NAMDEB diamond company for access to dens on restricted land, especially Diamond Area No 1.

To the staff at the Gobabeb Training and Research Centre: Dr. Joh Henschel, Helen Kolb, Mark Gardiner and especially Hartmut Kolb for his efforts trying to sort out the over heating issues with my hilux. While the time spent may not have provided me with the data I had hoped for I enjoyed the time spent in the Namib-Naukluft Park.

Ellen McMillan for aiding me with sorting out over 23,000 lines of data so I could actually get the information I needed.

Abbreviations

BPI	Bernard Price Institute
CBRL	Council for British Research in the Levant
Dis	Distal
MET	Ministry of Environment and Tourism, Namibia
MNI	Minimum Number of Individuals
NISP	Number of Identified Specimens
PAST	Palaeoanthropological Scientific Trust
Prox	Proximal
PURE	Palaeoanthropology Unit for Research and Exploration
Phalanx 1	Proximal phalange
Phalanx 2	Medial phalange
Phalanx 3	Distal phalange

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