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**The Analysis of the Fauna from Boikarabelo Coal Mine**

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## Introduction

According to Nel (2011) Boikarabelo is located in Limpopo Province of South Africa, approximately 60 km north of the small Town of Lephalale, near the small hamlet of Steenbokpan. The excavators Guy Thomas, Natasha Higgitt and Johan Nel, excavated a series of sites as part of a rescue archaeology project for the proposed Boikarabelo Coal Mine. Accordingly, Nel (2011) indicated that the site yielded a large ceramic concentration, grain bin bases and lower grinding stones. In addition, fauna, fresh-water mussel, charcoal, daga, metal fragments, stone lithics, a fragmented soapstone pipe and a metal bead were documented. The diagnostic ceramics can be attributed to the early Moloko and Letsibogo facies (Nel 2011).

## Methodology

The first step of the analysis as was adapted from Driver's (1999) method consisted of the sorting of specimens into categories of identifiable and non-identifiable remains [(According to the Driver's method, a bone is considered 'identifiable' only if the element (e.g., humerus, femur, etc) can be inferred to modern skeletons of animals)]. Once these divisions were recognised, I then turned to classification of identifiable elements into possible orders of family, genus and species, i.e., taxonomic grouping (for example, Cattle, Sheep). In cases when taxonomic grouping was not possible, elements were grouped into size classes (Bov I, Bov II, Bov III or Bov IV). Bov I being the smallest (for example *Oribi*), Bov II (for example, Sheep), Bov III (for example, Cattle) and Bov IV being the largest [(for example, Buffalo) Brain 1974)]. Alternatively, the specimens were classed as small, medium or large mammals depending on their sizes. This does not however mean that the unidentifiable categories were ignored altogether, since they were investigated for taphonomic condition. Taphonomy means the laws of burial. Accordingly, Brain (1981:07) noted that taphonomy involves what happen to animal remains between death and fossilisation.

Remains that were sorted into the identifiable category were compared with specimen in the reference collection, housed at Ditsong National Museum of Natural History in Pretoria to determine species or family. Consequently, during the identification stages remains were investigated to note modification, i.e., burning, worked, cut and chop marks. In addition specimens were also aged, i.e., mature, immature or unknown. Maturity and immaturity refer to the fusion or lack of fusion of epiphyses (end of a long bone) on the specimen. In cases of shaft fragments (centre parts of the long bones) containing no diagnostic ends, no assumptions as to maturity were made. Body dimension (height of the animal) was not attempted since no complete bones existed.

## **Analysis**

I was able to identify less than 5% of the bones into species. This is an unusual low number given the sample. Nonetheless, it is likely that taphonomic processes might have impacted the site badly. Furthermore, archaeologist may have saved only the fragments that they could easily identify as bone. The collection totalled 1752 element, of which 29 were identifiable. Of the 29, seven could be inferred into specimens. The remainder were grouped into bovids and/or mammal.

Three animal species were identified from the sample: cattle, rodent and tortoise. In addition, Bov II/III and large mammals were noted. It is assumed that most of the Bov II could be Caprines (sheep or goat) and the Bov III could be cattle, whilst mammals could be any wild animal which is not a carnivore (for example, zebra). This finding could be an indication that the Boikarabelo occupants relied more on domesticated animals. On the contrary, it is possible that domestic animals were raised on site, whilst wild animals were butchered where they were hunted and only selected portions brought to site. This may be confirmed by the small number of mammals noted.

Some of the animal species that are known to exist from historical sources were either absent or minimally represented in the collection, for example sheep, goat, etc. This may be due in part to the recovery technique. Contrary to this, it could also suggest that animals were utilised for trade purposes, and only butchered when needed. It is unclear what role the tortoise may have played. There is however, evidence of people who use their meat for food, their skins for decoration, or ritual purposes. The rodent does not appear to be associated with the actual site, as such it could have been scavenging on the debris, consequently trapped and died there.

Sex determination of the collection could not be determined due to fragmentation. Few cut marks were observed from both identifiable and non-identifiable fauna. However, 70% of the fauna exhibited localised burning. The scarcity of cut and chop marks may have to do with taphonomy as explained by O'Connor (2000:19-20) and Reitz and Wing (1999). These will involve among others, abrasion, weathering, trampling, etc. The localised burning is a direct indication of cooking; while the burnt black and grey may suggest deliberate burning of midden deposits (trash). However, caution must be exercised in the interpretation since these modifications could also have resulted from unintentional burning.

## **Discussion and conclusion**

Even though the identified specimens were small, certain cultural information regarding the site could be inferred. The ascendancy of cattle, Bov III and large mammal may indicate that inhabitants favoured large animals; domestication was practiced. In addition, the slaughtering of mature domestic animals may suggest that domestic animals were accorded high status, and were not only kept for consumption. In direct contradiction it can also suggest that this was a commoner site, as Boeyens and

Plug (2011) argued that the slaughtering of young animal may indicate high status. Although other species may have been underrepresented or absent as a result of aforementioned reasons, it is possible to assume that animal husbandry and hunting were practiced by the inhabitants. Cut (and chop) marks and localised burning found on some of the bones may indicate that these animals were defleshed and cooked before consumed. The minimal number of identifiable specimens leaves me with several unanswered questions. As such it is difficult to determine the specific activities carried out in the site. Further study into the site could yield some interesting results that would allow finds to be put into a broader and meaningful perspective.

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