

## Preliminary Investigation of the New Middle Stone Age Site of Plovers Lake, South Africa

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This study is a preliminary assessment of a faunal assemblage derived from Plovers Lake Cave, a newly investigated fossil deposit in the Sterkfontein Valley of South Africa. This cave infill is populated by numerous stone tools of a middle Stone Age (MSA) character. The material discussed in this report is from an ex situ faunal sample recovered between 2001 and 2004. Although the material was disturbed by an episode of limestone mining in the 1920s, taphonomic indicators suggest this disturbance did not significantly affect the composition of the assemblage. The macromammal faunal sample consists of 8,539 specimens, of which 2,215 are identifiable to Family and element (Table 1). The Bovidae numerically dominate the assemblage, though the most common individual animal is the rock hyrax (*Procapra capensis*). Although primates are rare, a particularly rich carnivore assemblage is evident. Microfauna recovered from the site include numerous shrews and rodents, primarily from the Family Muridae. Three extinct taxa have been recognized so far; considered with the MSA tools, they suggest an age for the deposit in excess of 30,000 years. Several fragments of a single human individual have been recovered to date.

The high abundance of carnivores relative to ungulates, combined with the presence of tooth-marked bones and numerous coprolites, suggests carnivore involvement in the accumulation. However, cut-marked bones are present, as are stone tools, suggesting some human activity in the vicinity of the cave. Among the ungulates, there is a high preponderance of open grassland grazers (90%), alongside a small number of more closed habitat animals (10%) (see Table 1). Water-dependent taxa dominate the ungulates (57%), while partially water dependent (6%) and water-independent taxa (37%) are

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**Table 1.** The ex situ faunal assemblage recovered from Plovers Lake, South Africa.

Genus and species	MNI	Habitat <sup>■</sup>	Diet <sup>▲</sup>	Water dependence <sup>◆</sup>
<i>Homo sapiens</i>	1	UB	OM	WD
<i>Papio ursinus</i>	1	OW	OM	PWD
<i>Ceropithecus aethiops</i>	1	OW	B	PWD
<i>Felis lybica</i>	1	UB	C	PWD
cf. <i>Panthera pardus</i>	1	UB	C	WI
<i>Parahyaena brunnea</i>	4	WBG	C	WI
cf. <i>Crocuta crocuta</i>	1	WBG	C	PWD
<i>Lycaon pictus</i>	2	WBG	C	WI
<i>Canis mesomelas</i>	8	UB	C	WI
<i>Vulpes chama</i>	4	WBG	C	WI
<i>Otocyon megalotis</i>	2	WBG	I	WI
<i>Atilax paludinosus</i>	1	UB	C	WD
<i>Suricata suricatta</i>	1	WBG	C	WI
<i>Genetta tigrina</i>	3	OW	C	PWD
cf. <i>Galarella sanguinea</i>	1	UB	C	PWD
cf. <i>Cynictis penicillata</i>	1	WBG	C	WI
cf. <i>Mungos mungo</i>	1	UB	C	PWD
<i>Ictonyx striatus</i>	1	UB	C	PWD
<i>Mellivora capensis</i>	1	UB	C	PWD
<i>Aonyx capensis</i>	1	UB	C	WD
<i>Procapra capensis</i>	23	UB	MF	WI
<i>Equus burchelli</i>	5	WBG	G	WD
<i>Phacochoerus aethiopicus</i>	2	WBG	G	WI
Hippo/Rhino indet.	1	UB	G	WD
<i>Megalotragus</i> sp.†	1	WBG	G	WD
<i>Connochaetes</i> sp.	4	WBG	G	WD
Medium-sized Alcelaphine	6	WBG	G	WD
<i>Damaliscus niro</i> †	1	WBG	G	WD
<i>Damaliscus dorcas</i>	12	WBG	G	WD
<i>Antidorcas marsupialis</i>	14	WBG	MF	WI
<i>Antidorcas bondi</i> †	7	WBG	MF	WI
<i>Raphicerus campestris</i>	2	WBG	B	WI
<i>Hippotragus</i> sp.	2	WBG	G	WD
<i>Redunca arundinum</i>	1	WBG	G	WD
<i>Redunca fulvorufula</i>	4	WBG	G	WD
<i>Taurotragus oryx</i>	2	OW	B	PWD
<i>Tragelaphus strepsiceros</i>	2	OW	B	PWD
<i>Syncerus caffer</i>	3	CWF	G	WD
<i>Pelea capreolus</i>	1	WBG	MF	WI
<i>Hystrix africaeaustralis</i>	9	UB	OM	WI
<i>Lepus</i> sp.	8	WBG	MF	WI
<i>Steatomys pratensis</i>	1	OW	I	—
<i>Aethomys chrysophilus</i>	8	OW	OM	—
<i>Dendromys melanotis</i>	1	WBG	I	—
<i>Tatera</i> sp.	1	WBG	OM	—
<i>Mystromys albicaudatus</i>	3	WBG	OM	—
<i>Otomys irroratus</i>	10	WBG	MF	—
<i>Praomys natalensis</i>	1	WBG	OM	—
<i>Cryptomys hottentotus</i>	1	WBG	MF	—
<i>Crocidura</i> sp.	10	OW	I	—
<b>Total</b>	<b>183</b>			

■CWF=closed woodland or forest, OW=open woodland, WBG=wooded or bushy grassland, UB=ubiquitous

▲B=browser, MF=mixed feeder, G=grazer, C=carnivore, OM=omnivore, I=insectivore

◆WD=water dependent, PWD=partially water dependent, WI=water independent

†extinct taxon

fewer. Other non-ungulate aquatic species are recorded, including water mongoose (*Atilax paludinosus*) and Cape clawless otter (*Aonyx capensis*). The majority of the small mammals recovered represent grassland-adapted taxa, though the Vlei rat (*Otomys irroratus*) is today often associated with marshy areas (Rautenbach, 1982). The combined fauna therefore indicate a predominantly grassland environment with some form of nearby permanent water source such as a lake or perennial river.

Current activity is directed toward retrieving a representative faunal sample from a recently recognized in situ deposit. Comparison of an in situ sample with the present ex situ assemblage will help to improve our understanding of the environmental and ecological conditions prevalent in the later Pleistocene of southern Africa. That the majority of materials known from this time period in southern Africa have been recovered from coastal sites underscores the importance of this new non-coastal locality.

### References Cited

- Rautenbach, I. L. 1982 Mammals of the Transvaal. *Ecoplan Monograph, Pretoria* 1:118–19.