

TABLE 1. Revised Hoogland HGD mammal assemblage.

Taxon	NISP	MNI	Taxon	NISP	MNI
Class Mammalia			Tribe Cephalophini/Neotragini	1	-
Order Primates			Tribe Hippotragini/Reduncini	1	-
Family Cercopithecidae			Tribe Hippotragini/Tragelaphini	1	-
Subfamily Colobinae			Bovidae indet.		
Tribe Colobini			Class I	314	-
<i>Cercopithecoides haasgati</i>	22	12	Class II	199	-
<i>Cercopithecoides williamsi</i>	3	3	Class III	122	-
<i>Cercopithecoides cf. williamsi</i>	1	-	Class IV	9	-
<i>Cercopithecoides sp.</i>	2	1	Indet. Class	18	-
<i>cf. Cercopithecoides</i>	1	1	Family Suidae		
Subfamily Cercopithecinae			Tribe Phacochoerini		
Tribe Papionini			Phacochoerini indet.	2	2
<i>Papio angusticeps</i>	88	37	?Suidae indet.	1	-
<i>Papio sp.</i>	21	-	Order Carnivora		
Cercopithecidae indet.	117	-	Family Felidae		
Primates indet.	1	-	<i>cf. Dinofelis sp.</i>	1	1
Order Artiodactyla			Family Hyaenidae		
Family Bovidae			Hyaenidae indet.	1	1
Tribe Alcelaphini			Carnivora indet.	1	-
<i>Connochaetes gnou</i>	7	5	Order Perissodactyla		
<i>Connochaetes sp.</i>	5	3	Family Equidae		
<i>Damaliscus dorcas</i>	1	1	<i>Equus capensis</i>	19	1
<i>Damaliscus sp.</i>	2	2	<i>Equus cf. quagga</i>	3	1
<i>Megalotragus sp.</i>	1	1	<i>Equus sp.</i>	51	-
Alcelaphini indet.	116	10	Equidae indet.	2	-
Tribe Antilopini			Order Hyracoidea		
<i>Antidorcas bondi</i>	1	1	Family Procaviidae		
<i>Antidorcas australis/marsupialis</i>	4	2	<i>Procavia antiqua</i>	17	8
<i>Antidorcas sp.</i>	5	-	<i>Procavia transvaalensis</i>	44	13
Tribe Hippotragini			<i>Procavia sp.</i>	6	-
<i>Hippotragus sp.</i>	5	3	Order Lagomorpha		
Tribe Neotragini			Family Leporidae		
<i>Oreotragus sp.</i>	158	24	<i>Pronolagus rupestris</i>	2	1
Tribe Reduncini			Leporidae indet.	1	-
Reduncini indet.	9	5	Order Rodentia		
Tribe Tragelaphini			Family Hystricidae		
<i>Taurotragus sp.</i>	5	4	<i>Hystrix africaeaustralis</i>	38	9
<i>Tragelaphus sp.</i>	5	2	Total	1446	154
Tragelaphini indet.	1	-			
Tribe Antilopini/Neotragini	11	-			

TABLE 2. Craniodental measurements of extant and fossil *Oreotragus*.

N	Measurement	Extant <i>Oreotragus oreotragus</i>					Haasgat HGD <i>Oreotragus</i> sp.					Gondolin GD 2 <i>Oreotragus</i> sp.					Makapansgat Member 3 <i>Oreotragus</i> sp.					
		Mean	s	Min.	Max.	n	Mean	s	Min.	Max.	n	Mean	s	Min.	Max.	n	Mean	s	Min.	Max.	n	
	Maxillary																					
	P2 length	7.98	0.53	6.98	8.78	15	10.95	0.57	9.98	11.92	8	8.68	0.66	7.32	9.68	20	9.58	0.75	8.75	10.19	3	
	P2 width	5.94	0.70	4.49	7.64	15	7.30	0.72	6.38	8.13	7	6.04	0.78	4.64	7.05	18	7.30	0.33	6.93	7.54	3	
	P3 length	7.68	0.53	6.91	8.58	16	9.79	0.40	9.11	10.30	7	9.28	0.66	8.18	10.39	11	9.03	0.76	8.16	9.56	3	
	P3 width	6.18	0.45	5.24	6.88	16	7.93	0.78	7.08	9.42	7	6.37	0.78	5.15	7.53	11	7.14	0.27	6.83	7.35	3	
	P4 length	6.92	0.60	6.21	8.05	16	8.68	0.62	7.82	9.75	9	9.02	1.12	7.90	11.25	10	8.17	0.54	7.70	8.94	4	
	P4 width	6.57	0.58	5.33	7.31	16	8.29	0.71	7.15	9.57	11	6.97	0.74	5.77	8.15	10	7.24	0.76	6.40	7.93	4	
	M1 length	8.80	1.11	7.26	11.21	19	11.30	0.42	10.70	11.68	4	10.55	0.84	9.40	13.12	16	9.97	0.41	9.61	10.41	3	
	M1 width	7.45	0.65	6.48	8.73	19	9.41	0.81	8.38	10.41	6	7.52	1.33	5.80	10.23	17	7.59	0.47	7.05	7.91	3	
	M2 length	10.03	0.81	8.43	11.62	19	13.61	1.39	11.72	14.94	4	11.26	0.79	9.79	12.70	15	11.28	0.42	10.66	11.54	4	
	M2 width	7.63	0.68	6.62	8.79	19	9.77	0.60	9.14	10.82	7	7.04	0.79	5.56	8.35	15	8.01	0.56	7.48	8.65	4	
	M3 length	9.49	0.27	9.11	10.04	17	12.27	0.61	11.49	13.13	6	10.02	0.47	9.48	10.86	10	10.41			10.41	1	
	M3 width	6.56	0.55	5.87	7.44	17	9.22	1.05	7.93	11.03	7	6.60	0.76	5.61	7.86	11	6.78			6.78	1	
	Premolar Row Length	23.18	1.45	21.35	27.12	18	28.85	1.58	27.70	30.65	3	26.92		26.92	26.92	1	26.60	0.84	25.69	27.36	3	
	Molar Row Length	27.27	1.26	24.79	29.45	17	34.01	1.37	32.02	35.71	5	32.21	0.83	31.25	33.25	4	30.76	2.33	29.11	32.41	2	
	Mandibular																					
	p2 length	4.75	0.61	4.02	5.80	12	6.18	0.54	5.79	6.56	2	5.53	0.68	4.60	7.22	22	5.71	0.33	5.14	5.92	5	
	p2 width	2.76	0.29	2.42	3.19	12	3.79	0.39	3.36	4.10	3	3.11	0.23	2.66	3.63	22	3.21	0.15	3.09	3.47	5	
	p3 length	8.16	0.86	6.68	9.52	12	10.19	0.92	9.10	11.54	8	9.15	1.08	7.09	10.91	20	9.32	0.54	8.16	9.99	10	
	p3 width	3.84	0.32	3.36	4.30	12	5.11	0.48	4.18	5.97	9	3.99	0.48	3.08	4.84	20	4.47	0.39	3.83	4.99	10	
	p4 length	9.14	0.82	7.82	10.42	12	11.48	1.24	10.58	13.93	6	11.23	1.41	9.44	13.25	14	10.59	0.62	9.45	11.59	12	
	p4 width	4.57	0.47	3.79	5.17	12	5.97	0.36	5.40	6.43	7	4.27	0.84	3.17	5.86	14	5.22	0.33	4.52	5.76	12	
	m1 length	8.62	0.89	7.45	11.03	16	10.99	0.57	10.30	11.92	9	10.02	0.88	8.66	11.41	14	10.18	0.80	8.69	11.93	27	
	m1 width	5.25	0.34	4.61	6.04	16	6.34	0.35	5.72	6.73	9	5.08	0.54	4.41	6.06	14	5.75	0.32	5.11	6.48	28	
	m2 length	9.73	0.91	8.47	12.13	16	12.45	0.70	11.14	13.65	18	10.53	0.79	8.62	11.86	17	11.18	0.91	9.59	12.73	32	
	m2 width	5.31	0.35	4.64	5.74	16	6.43	0.49	5.62	7.48	16	5.50	0.52	4.27	6.31	17	6.02	1.14	5.23	12.57	38	
	m3 length	12.65	0.71	11.34	13.61	14	15.55	0.81	14.50	16.60	13	13.68	0.80	12.35	15.18	20	13.59	1.74	5.46	14.87	26	
	m3 width	4.94	0.39	4.21	5.52	14	6.00	0.31	5.40	6.42	14	5.22	0.40	4.66	5.91	20	5.42	0.32	4.77	5.85	25	
	Premolar Row Length (PRL)	21.87	1.77	19.08	25.06	15	25.57	0.25	25.39	25.75	2	24.21	0.87	23.20	25.20	4	24.32	0.80	23.39	24.83	3	
	Molar Row Length (MRL)	30.28	1.21	28.08	32.18	14	37.94	1.03	36.27	39.15	6	34.79	0.94	33.89	35.86	5	34.70	1.03	32.72	36.71	13	
	Corpus Depth (Diastema) (DD)	16.98	1.35	14.48	18.94	13	23.29	1.13	21.65	24.90	8	20.79	1.18	19.28	22.42	8	21.28	1.62	17.38	23.85	19	
	Corpus Depth (m2/m3) (MD)	8.74	0.83	7.54	10.63	15	12.76		12.76	12.76	1	9.73	0.47	8.96	10.43	8	10.69	1.01	10.00	11.85	3	
	Corpus Width (m2/m3) (CW)	8.00	0.56	6.95	8.73	9	10.69	1.24	9.22	12.93	10	9.59	0.34	9.14	10.04	7	10.99	0.58	10.58	11.40	2	
	PRL/MD	0.71	0.04	0.62	0.76	13	0.67		0.67	0.67	1	0.69	0.02	0.68	0.70	2	0.76		0.76	0.76	1	
	MD/MRL	0.56	0.05	0.47	0.63	13	0.62	0.02	0.60	0.63	3	0.58	0.05	0.54	0.63	3	0.65	0.02	0.64	0.67	2	
	DD/MRL	0.29	0.03	0.24	0.33	13	0.35		0.35	0.35	1	0.28		0.28	0.28	1	0.32	0.03	0.31	0.34	2	
	MD/CW	2.07	0.16	1.81	2.31	9	2.31	0.21	2.12	2.61	7	2.15	0.15	1.96	2.35	7	2.00	0.02	1.99	2.02	2	

TABLE 3. Craniodental measurements (mm) of extant and fossil Reduncini.

Measurement	<i>Redunca arundinum</i>					<i>Redunca fulvorufula</i>				
	Mean	s	Min.	Max.	n	Mean	s	Min.	Max.	n
<i>Maxillary</i>										
M1 length	12.79	1.17	9.91	14.76	41	10.05	1.2	7.84	13.21	65
M1 width	11.16	1.14	8.84	13.90	41	9.92	0.85	8.09	12.45	65
M2 length	14.27	0.69	12.95	15.76	46	12.34	0.8	10.32	13.91	66
M2 width	11.07	1.27	9.2	13.7	47	10.1	1.11	7.5	12.4	66
M3 length	14.98	0.97	13.01	17.46	46	13.54	1.04	11.66	16.49	63
M3 width	9.94	1.47	7.63	13.80	46	9.48	1.15	6.39	11.32	61
<i>Mandibular</i>										
p2 length	5.96	0.54	4.91	6.87	26	4.08	0.53	3.13	5.02	54
p2 width	4.34	0.54	3.59	5.49	26	3.13	0.38	2.20	4.27	54
p4 length	9.96	1.05	8.77	13.96	29	8.09	0.61	6.55	9.56	68
p4 width	6.94	0.7	5.53	8.10	29	5.44	0.52	4.33	6.81	68
m1 length	11.84	1.24	9.32	13.78	34	9.93	1.19	7.47	12.14	78
m1 width	7.9	0.65	6.97	9.38	34	6.97	0.51	6.33	8.19	78
m2 length	14.14	0.84	12.40	15.68	35	12.22	0.74	10.95	13.51	74
m2 width	7.99	0.81	6.27	9.70	35	7.21	0.7	5.94	8.66	74
m3 length	18.62	2.26	7.65	21.97	33	16.52	0.96	14.71	19.09	70
m3 width	7.45	0.95	5.74	9.51	33	6.55	0.75	5.33	8.12	71

TABLE 3. (continued)..

Measurement	Makapansgat Member 3 <i>Redunca darti</i>					Gondolin GD 2 <i>Redunca sp.</i>				
	Mean	s	Min.	Max.	n	Mean	s	Min.	Max.	n
<i>Maxillary</i>										
M1 length	13.99	1	10.92	15.35	30	12.87	1.32	10.19	16.93	44
M1 width	14.12	1.38	11.37	17.08	29	11.77	1.52	8.52	14.64	41
M2 length	16.06	0.97	14.55	18.58	86	14.95	1.05	12.07	16.32	46
M2 width	14.25	1.41	11.0	16.8	85	11.37	1.61	8.7	14.9	45
M3 length	16.94	0.94	15.11	18.98	35	16.08	1.06	13.72	18.20	55
M3 width	14.65	1.34	10.56	16.74	33	10.87	1.64	7.79	16.36	55
<i>Mandibular</i>										
p2 length	6.52	0.34	6.21	7.01	6	5.74	0.6	4.64	7.06	26
p2 width	4.67	0.57	3.90	5.50	6	4.35	0.37	3.53	4.99	26
p4 length	10.43	1.16	6.85	14.15	31	9.85	0.67	8.69	10.99	31
p4 width	7.3	0.6	6.12	8.24	30	6.46	0.64	5.02	7.66	32
m1 length	14.34	1.4	10.36	18.10	111	12.74	1.64	8.19	15.32	38
m1 width	8.93	0.86	6.45	10.76	109	7.84	0.97	5.75	9.41	36
m2 length	16.04	0.85	14.01	18.33	101	15.22	0.82	13.35	17.01	38
m2 width	9.99	0.69	8.41	11.15	92	7.83	0.86	5.85	9.49	37
m3 length	20.99	1.16	18.19	23.38	117	19.63	1.16	16.47	22.21	32
m3 width	8.77	0.9	7.06	10.36	119	7.7	0.9	6.64	11.01	37

TABLE 3. (continued).

Measurement	<i>Elandsfontein Redunca arundinum</i>					<i>Kobus leche</i>				
	Mean	s	Min.	Max.	n	Mean	s	Min.	Max.	n
Maxillary										
M1 length	14.21	0.48	13.64	14.88	5	15.13	1	13.42	17.18	18
M1 width	12.22	0.62	11.34	13.14	6	13.13	1.07	11.76	15.34	18
M2 length	16.94	0.15	16.76	17.03	3	16.30	0.74	14.98	17.72	18
M2 width	11.74	0.7	10.9	12.2	3	12.98	1.08	11.5	15.3	18
M3 length	11.3	1.23	15.87	19.67	7	17.01	0.79	15.73	18.35	18
M3 width	11.84	0.9	10.80	13.22	7	12.30	1.2	10.90	15.10	18
Mandibular										
p2 length	5.96				1	6.09	0.32	5.72	6.81	13
p2 width	4.32				1	4.92	0.22	4.60	5.30	13
p4 length	10.9	0.59	9.86	11.57	9	10.55	0.78	8.89	11.69	17
p4 width	7.21	0.33	6.82	7.73	9	8.12	0.59	7.30	9.24	17
m1 length	14.51	1.65	11.67	17.12	19	13.97	0.82	12.23	14.87	19
m1 width	8.55	0.83	7.21	9.97	19	9.25	0.65	8.36	10.59	19
m2 length	16.82	1	15.34	18.75	18	15.77	0.45	15.04	16.42	19
m2 width	8.93	0.97	6.85	10.26	18	9.15	0.54	8.48	10.66	19
m3 length	22.62	0.86	21.17	24.03	15	21.65	0.98	19.59	23.65	19
m3 width	8.81	0.89	7.02	10.02	17	8.98	0.59	8.09	10.21	19

APPENDIX A

Specimens missing from the Haasgat HGD collections

HGD	Part	Element	Sid	Order	Family	Tribe	Genus	Species	Bovid
32	Cranial	Mandible	L	Artiodactyla	Bovidae	Neotragini	<i>Oreotragus</i>	<i>major</i>	I
46	Cranial	Mandible	R	Artiodactyla	Bovidae	Alcelaphini	<i>Alcelaphus</i>	<i>buselaphus</i>	III
48	Cranial	Mandibular deciduous third premolar	L	Artiodactyla	Bovidae	Tragelaphini	<i>Tragelaphus</i>	<i>strepsiceros</i>	III
64	Cranial	Maxillary first molar	L	Artiodactyla	Bovidae	Alcelaphini	<i>Connochaetes</i>	<i>gnou</i>	III
79	Cranial	Mandible	R	Artiodactyla	Bovidae	Neotragini	<i>Oreotragus</i>	<i>major</i>	I
101	Cranial	Mandible		Carnivora	Canidae		<i>Canis</i>	<i>mesomelas</i>	
120	Cranial	Mandibular fourth premolar	L	Artiodactyla	Bovidae	Antilopini	<i>Antidorcas</i>	<i>marsupialis</i>	II
125	Cranial	Mandibular second molar	L	Artiodactyla	Bovidae	Alcelaphini	<i>Damaliscus</i>	<i>dorcas</i>	II
127	Cranial	Maxilla	L	Artiodactyla	Bovidae	Alcelaphini	<i>Connochaetes</i>	<i>gnou</i>	III
128	Cranial	Maxillary deciduous fourth premolar	L	Artiodactyla	Bovidae	Alcelaphini	<i>Megalotragus</i>	<i>priscus</i>	III
160	Proximal Phalanx	Complete		Artiodactyla	Bovidae	Neotragini	<i>Oreotragus</i>	<i>major</i>	I
194	Femur	Distal epiphysis	L	Artiodactyla	Bovidae	Neotragini	<i>Oreotragus</i>	<i>major</i>	I
205	Metatarsal		R	Artiodactyla	Bovidae	Neotragini	<i>Oreotragus</i>	<i>major</i>	I
215	Astragalus		L	Artiodactyla	Bovidae	Neotragini	<i>Oreotragus</i>	<i>major</i>	I
263	Proximal Phalanx	Complete		Artiodactyla	Bovidae	Alcelaphini	<i>Connochaetes</i>	<i>gnou</i>	III
295	Cranial	Maxillary second molar	L	Artiodactyla	Bovidae	Alcelaphini	<i>Connochaetes</i>	<i>gnou</i>	II
381	Cranial	Mandibular second molar		Artiodactyla	Bovidae	Alcelaphini	<i>Alcelaphus?</i>		III
1038	Intermediate Phalanx	Fragment		Artiodactyla	Bovidae	Reduncini	<i>Kobus</i>	<i>leche?</i>	III
1052	Pelvis			Artiodactyla	Bovidae	Neotragini	<i>Oreotragus</i>	<i>major</i>	I
1120	Cranial	Maxilla	R	Hyracoidea	Procaviidae		<i>Procavia</i>	<i>transvaalensis</i>	
1124	Cranial	Mandible	L	Hyracoidea	Procaviidae		<i>Procavia</i>	<i>transvaalensis</i>	