



Contribution to the knowledge of the fossil mammalian fauna of Java

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**Contribution to the Knowledge of
the Fossil Mammalian
Fauna of Java.**

BY

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TABLES OF MEASUREMENTS.

BIBLIOTHEEK DER
RIJKSUNIVERSITEIT
UTRECHT.

Year	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881
1870	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1871	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1872	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1873	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1874	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1875	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1876	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1877	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1878	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1879	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1880	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1881	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

TABLES OF MEASUREMENTS.

TABLE A.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	100	100	100	100	100	100	100	100	100	100	100	100	100	100
7	42.7	42.6	—	40.9	43.2	40.9	44.0	43.1	41.1	41.3	39.5	40.9	—	—
1-7	57.3	57.4	—	59.1	56.8	59.1	56.0	56.9	58.9	58.7	60.5	59.1	—	—
(1-7)-7	14.6	14.8	—	18.2	13.6	18.2	12.0	13.8	17.8	17.4	21.0 ♀	18.2	—	—
8	21.3	20.4	22.3 ♀	18.9	19.3	19.6	20.3	—	22.6 ♀	19.3	20.0	21.7 ♀	17.1 ♂	20.2
21	18.4	20.6	16.5	16.9	17.9	18.7	20.1	20.7	19.9	18.6	18.0	17.6	14.2 ♀	16.0

TABLE A.

15	16	17	18	19	20	21	22	23	24	25	♂ 26	♂ 27	♂ 28	29
100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
40.6	38.8	40.6	40.2	± 43.7	39.0	40.1	43.4	40.6	± 40.7	41.0	40.0	42.8	41.4	45.6
59.4	61.2	59.4	59.8	56.3	61.0	59.9	56.6	59.4	59.3	59.0	60.0	57.2	58.6	54.4
18.8	22.4 ♀	18.8	19.6	12.6	22.0	19.8	13.2	18.8	18.6	18.0	20.0 ♀	14.4	17.2	8.8 ♂
19.4	19.1	19.7	19.3	20.2	19.5	21.1	18.2 ♂	20.6	19.8	19.0	19.5	22.2 ♀	19.6	21.9 ♀
16.5	16.1 ♀	16.8	20.1	14.5 ♀	16.2	17.1	13.7 ♀	16.1 ♀	16.7	16.5	16.8	—	—	26.2 ♂

TABLE D.

	Our own fossil specimens		B. bubalus var. sondaicus (Kerabau)		"Buffelus palaeo-kerabau"		B. bubalus (Arni)		B. bubalus var. palaeindicus		Buffelus platyceros
	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	
1	—	—	473	565	486		529	544	—		—
2	—	—	396	457	408		428	446	—		—
3	—	—	246	285	242		267	269	—		—
4	ca 200	ca 210	204	222	187		202	215	211		222
5	200	200	200	200	200	200	200	200	200	200	200
6	ca 78	ca 103	94	132	95		103	113	78	118	107
7	200	ca 228	198	237	218		213	236	219		—
8	—	—	95	125	98		106	110	—		—
9	69	75	64	87	66	87	76	88	74	90	—
10	ca 220	ca 255	197	237	164	176	173	229	182	232	—
11	99	ca 110	99	124	109		109	117	108	115	—
12	ca 65	118	82	147	156		106	131	111		—
13	112	158	ca 55	119	93	96	89	116	128	130	119
14	114	133	107	131	—	—	120		—		—
15 ¹⁾	ca 143	162	157	176	—		149	163	137		167
16	42	ca 66	44	60	45		40	57	39	46	57
17		ca 61	55	72	57		59	69	52	54	69
18		ca 61	53	67	52		54	61	47		—
19	—	—	253	318	276		300	310	—		—
20		214	200	222	210		202	213	200		—
21	117	151	72	124	123		82	149	133	139	—
22	74	95	53	76	92		54	ca 78	51	65	79
23	308	408	214	357	392		236	276	338		393
24	ca 970	ca 992	281	539	—		—		—		—
25	—	—	514	1010	—		983		—		—
26	—	—	635	1421	—		907		—		—
27	ca 1362	ca 1379	—	—	—		—		—		—
28	—	—	292	1299	—		532		—		—
29	ca 1236	ca 1285	—	—	—		—		—		—
30	—	—	723	1046	—		974		—		—

1) See note 3 under table B.

TABLE F.

	Nos. of table of measure- ments Stremme (1911) p. 127	Our own fossil specimens		B. bubalus. var. sondaicus (Kerabau)	B. bubalus (Arni)	B. bubalus var. palaeindicus	"Buffelus palaeokera- bau"	Buffelus platy- ceros
		min.	max.	min.	max.	min.	max.	min.
1: 8	XXII: XIX	—	—	4.42—5.84	4.93—4.99	—	4.96	—
1: 5	XXII: XX	—	—	2.36—2.83	2.64—2.72	—	2.43	—
4: 13	III: XVII	1.33—1.53	—	1.82—3.87	1.86—2.28	1.66	2.02	1.86
2: 9	IV: I	—	—	4.63—7.02	4.87—5.80	—	4.67	—
2: 4	IV: III	—	—	1.89—2.15	2.00—2.18	—	2.18	—
2: 10	IV: V	—	—	1.88—2.17	1.87—2.53	—	2.32	—
17: 18	IX: X	1.01	—	0.97—1.18	1.03—1.13	1.15	1.08	—
10: 9	V: I	3.15—3.41	—	2.35—3.72	2.29—2.60	2.37—2.60	2.01—2.48	—
20: 9	XIV: I	2.86	—	2.31—3.35	2.30—2.81	2.61	2.40	—
1: 20	XXII: XIV	—	—	2.21—2.62	2.56—2.62	—	2.32	—
2: 20	IV: XIV	—	—	1.85—2.14	2.06—2.12	—	1.95	—
10: 20	V: XIV	1.15	—	0.93—1.11	0.81—1.13	0.91	0.84	—
10: 13	V: XVII	1.52—1.99	—	1.87—3.14	1.66—1.98	1.43—1.78	1.71—1.90	—
19: 7	XXIV: XII	—	—	1.18—1.46	1.31—1.41	—	1.26	—

TABLE G.

TABLE G.

N ^o .	table of measurements Rüttimeyer (1868) p. 86.	Our own fossil specimens			Bibos sondaicus					Bibos sondaicus var. lowi			Bibos sondaicus	
		<i>a</i>	<i>β</i>	<i>γ</i>	A	B	C	D	E	a	b	c		
		from E. Java "one-horned" specimen	from E. Java "two-horned" specimen	from E. Java detached horn-core	Amsterdam	from Java Amsterdam	Utrecht	from Java Leyden	from Java Leyden	from Borneo Amsterdam	from Borneo Amsterdam	from E. Borneo Leyden	from Java Leyden	
		old ♂	adult ♂	old ♂	old ♂	old ♂	old ♂	typespecimen of old ♂	typespecimen of adult ♂	adult ♂	adult ♂	old ♂	typespecimen of adult ♀	
1		Condyl-basal length (from post. border of occipital condyle to front border of premaxillary of the same side)	438	433	—	474	500	467	524	491	443	—	477	454
2		Length from vertex cranii to tip of nasals	353	—	—	363	450	386	402	410	322	296	342	350
3	9	Width of constriction of forehead between base of horn-core and orbit	182	176	—	186	205	196	212	182	171	164	200	162
4	8	Greatest width of forehead at superior border of orbit	205	ca 215	—	219	232	224	237	210	193	179	233	188
5		Interval between supra-orbital foramina	95-139	98-126	—	91-155	109-157	98	110-168	98-161	80-133	90-116	89-145	89-110
6	14	Interval between tubera malaria	137	140	—	162	166	170	168	135	133	127	171	158
7		Length of horn on outer curve	—	—	—	612	571	L 563. R 615	735	636	466	345	540	331
8		Length of horn-core on outer curve	560	550	610	—	—	—	—	478	321	245	—	—
9		Circumference of horn-core at base	245	248	288	235	260	268	298	254	232	206	255	170
10		Greatest diameter of horn-core at base	89	87	102	85	96	96	108	88	82	71	106	52
11		Transverse diameter of horn-core at base	60	64	76	ca 57	ca 61	ca 63	84	69	61	61	63	46
12		Maximum span of horns	—	—	—	744	895	684	828	812	459	339	631	309
13		Maximum span of horn-cores	ca 924	944	—	—	—	—	—	795	443	330	—	—
14		Tip-to-tip interval of horns	—	—	—	426	724	371	342	633	210	177	376	74
15		Tip-to-tip interval of horn-cores	ca 870	915	—	—	—	—	—	ca 710	384	267	—	—
16		Interval between tip of nasals and tip of horn	—	—	—	588	L 655. R 683	598	555	790	579	532	645	587
17		Interval between tip of nasals and tip of horn-core	550	—	—	—	—	—	—	756	537	487	—	598
18	10	Interval between bases of horns (horn-cores)	ca 260	ca 269	—	304	333	314	339	305	256	230	268	230
19		Interval between vertex cranii and lower border of foramen magnum	152	156	—	198	205	210	227	179	162	—	197	158
20		Interval between ditto and upper border of ditto	—	—	—	170	170	180	200	154	135	—	179	137
21		Interval between occipital crest and vertex cranii	87	ca 82	—	100	87	95	114	71	77	85	ca 101	66
22		Interval between upper border of for. magnum and occipital crest	—	—	—	77	87	85	ca 89	ca 85	66	—	ca 87	78
23		Interval between posterior border of meatus auditivus externus osseus of either side	ca 190	187	—	209	222	206	240	217	174	163	209	176
24	11	Greatest breadth of occiput through petrosals	—	—	—	244	251	248	283	245	205	186	244	205
25	12	Width of occiput between extremities of temporal fossae	116	80	—	118	109	94	94	104	62	86	100	76
26		Greatest interval between temporal fossae in the pre-occipital region	111	109	—	—	123	110	124	129	107	100	117	112
27		Greatest length of temporal fossa	153	159	—	156	172	164	180	173	150	140	161	151
28		Interval between front border of orbit and ditto of premaxillary of same side	243	235	—	259	300	L 272. R 260	280	262	243	226	271	254
29		Height of orbit (measured perpendicular to upper surface of cranium)	61	60	—	61	63	57	66	62	57	58	57	59
30		Interval between upper border of orbit and alveolar margin of molars	130	145	—	146	ca 167	145	162	148	138	125	153	141
31		Interval between outer surfaces of zygomatic arches	207	—	—	220	221	210	221	210	184	175	218	191
32		Width of palate immediately in front of for. palatinum majus	80	76	—	86	—	88	94	81	79	78	88	94
33		Interval between posterior border of palatinum and front border of premaxilla	270	264	—	284	—	286	313	293	266	247	298	279
34	5	Interval between front border of premaxilla and line connecting P ² of either side	126	124	—	140	144	135	162	144	132	120	142	142
35	6	Length of premolar and molar series	126	124	—	132	—	140	137	140	133	136	132	132
36		Length of fissura palatina	54	47	—	60	74	55	60	—	64	65	63	60
37		Width of ditto	16	14	—	18	22	16	16	—	17	17	16	16
38		Median depth of cranium at post. border of palatinum and perpendicular to palate	149	142	—	152	—	158	166	158	136	127	156	151
39		Interval between extremities of paroccipital processes	—	—	—	94	—	ca 118	114	—	82	—	ca 80	—
40		Interval between external angles of occipital condyles	100	90	—	102	117	109	114	107	97	—	103	93
41		Elevation of tip of nasals above palate	77	—	—	76	85	75	86	ca 70	74	—	74	70

TABLE H.

TABLE H.

	Our own fossil specimen		Bibos sondaicus					Bibos sondaicus var. lowi		Bibos sondaicus
	<i>a</i>	<i>β</i>	A	B	C	D	E	<i>a</i>	<i>c</i>	
	old ♂	adult ♂	old ♂	old ♂	old ♂	old ♂	adult ♂	adult ♂	old ♂	adult ♀
1	500	500	500	500	500	500	500	500	500	500
2	403	—	383	450	413	384	418	363	358	385
3	208	203	196	205	210	202	185	193	210	178
4	234	ca 248	231	232	240	226	214	218	244	207
5	108—159	113—146	96—164	109—157	105	105—160	100—164	90—150	93—152	98—121
6	156	162	171	166	182	160	137	150	179	174
7	—	—	646	571	L 603. R 658	701	648	526	566	364
8	640	635	—	—	—	—	487	362	—	—
9	280	286	248	260	287	284	259	262	267	187
10	102	100	90	96	103	103	90	93	111	57
11	69	74	ca 60	ca 61	ca 67	80	70	69	66	51
12	—	—	785	895	733	790	827	518	661	340
13	ca 1055	1090	—	—	—	—	810	500	—	—
14	—	—	449	724	397	326	645	237	394	81
15	994	1057	—	—	—	—	ca 723	433	—	—
16	—	—	620	L 655. R 683	640	530	804	654	676	646
17	628	—	—	—	—	—	770	606	—	658
18	ca 297	ca 311	321	353	336	323	311	289	281	253
19	174	180	209	205	225	217	182	183	206	174
20	—	—	179	170	193	191	157	152	188	151
21	99	ca 95	105	87	102	109	72	87	ca 106	73
22	—	—	81	87	91	ca 85	ca 87	74	91	86
23	ca 217	216	220	222	221	229	221	196	219	194
24	—	—	257	251	266	270	249	231	256	226
25	132	92	124	109	101	90	106	70	105	84
26	127	126	—	123	118	118	131	121	123	123
27	175	184	165	172	176	172	176	169	169	166
28	278	271	273	300	L 291. R 278	267	267	274	284	280
29	70	69	64	63	61	63	63	64	60	65
30	148	167	154	ca 167	155	155	151	156	160	155
31	236	—	232	221	225	211	214	208	228	210
32	91	88	91	—	94	90	82	89	92	103
33	308	305	300	—	306	299	298	300	312	307
34	144	143	148	144	145	155	147	149	149	156
35	144	143	139	—	150	131	143	150	138	145
36	62	54	63	74	59	57	—	72	66	66
37	18	16	19	22	17	15	—	19	17	18
38	170	164	160	—	169	158	161	154	163	166
39	—	—	99	—	ca 126	109	—	93	ca 84	—
40	114	104	108	117	117	109	109	109	108	102
41	88	—	80	85	80	82	ca 71	84	78	77

TABLE I.

	Our own fossil specimens		Bibos sondaicus				
	α	β	A	B	C	D	E
3:23 . .	0.96	0.94	0.89	0.92	0.95	0.88	0.84
3:25 . .	1.57	2.20	1.58	1.88	2.09	2.26	1.75
19:25 . .	1.31	1.95	1.68	1.88	2.23	2.41	1.72
4: 3 . .	1.13	1.22	1.18	1.13	1.14	1.12	1.15
4: 6 . .	1.50	1.54	1.35	1.40	1.32	1.42	1.56
19:21 . .	1.75	1.90	1.98	1.36	2.21	1.99	2.52
25:40 . .	1.16	0.89	1.16	0.62	0.86	0.82	0.97
2:28 . .	1.45	—	1.40	1.50	1.42-1.48	1.44	1.56
19:23 . .	0.80	0.83	0.95	0.92	1.02	0.95	0.82
19:25 . .	1.31	1.95	1.68	1.88	2.23	2.41	1.72

TABLE K.

	Corresponding Nos. of Stremme (1911), p. 94.	Corresponding Nos. of Toula (1902) table.		Rhinoceros sivalensis (Baker & Durand) 1836, p. 502.	"Rhinoceros sivasondaicus" Stremme (1911) p. 90 & 94	Our own fossil specimens	
				Λ	a	a	b
1	—	1	Greatest length of cranium (from tip of nasals to posterior surface of occipital condyles)	—	598	645	ca 610
2	—	—	Greatest width of ditto (interval between outer surfaces of zygomatic arches)	—	—	360	391
3	4	3	Breadth between proc. postorbitales of frontals	254	194	199	198
4	13	2	Transverse width of nasals below vertex of nasal arch	174	95	111	119
5	—	6	Least distance between the cristae fronto-parietales	—	35	54	—
6	—	—	Perpendicular from a line tangential to the summit of occipital crest and vertex of nasal arch to the depression of frontals	99	—	67	—
7	2	14	Greatest breadth of occiput.	341	270	304	—
8	7	10	Interval between outer angles of occipital condyles	195	134	136	—
9	8	15	Horizontal diameter of for. magnum	—	48	46	—
10	1	—	Height of occiput (from lower edge of for. magnum to summit of occipital crest)	259	194	197	—
11	—	22	Interval between naso-maxillary notch and tip of nasals	—	152	145	ca 140
12	—	21	Interval between ditto and anterior border of orbit	—	108	119	ca 115
13	12	20	Distance from posterior surface of occipital condyle to anterior border of orbit of the corresponding side	449	383	398	ca 420
14 ¹⁾	5	—	Distance from anterior border of orbit to posterior border of meatus auditorius externus	—	—	323	—
15	14	—	Height of vertex of nasal arch above palate	238	152	154	ca 149
16	6	—	Total length of the seven molars	324	248	272	—
17	—	—	Length of premolar series (measured at the buccal side).	—	—	135	—
18	10	—	Distance between internal extremities of fossae glenoidales	—	86	94	ca 75
19	—	—	Distance between tips of proc. glenoidales (from middle of top to ditto of other side)	—	—	143	—
20	—	24	Distance from post. surface of occipital condyle to ditto of M ³ of corresponding side	—	245	255	267
21	11	42	Interval between lower edge of for. magnum and median posterior extremity of palate	368	283	—	—

¹⁾ As it is not improbable that Cuvier and Stremme measured from anterior border of orbit to anterior

TABLE K.

RHINOCEROS SONDAICUS													Toula (1902) table	Cuvier (1822) p. 37	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
646	611	641	595	640	639	622	601	616	627	642	634	616	590	—	—
354	328	347	339	365	346	337	326	339	325	354	361	354	—	—	—
218	167	183	182	183	192	194	173	171	182	204	218	190	184	172	197
99	87	88	85	81	93	95	91	94	95	107	107	100	87	87	95
ca 42	55	67	50	56	69	63	47	46	37	60	62	52	70	—	—
59	53	47	60	48	60	59	61	61	57	65	60	58	—	—	—
306	281	275	296	289	299	289	291	289	276	302	310	320	271	294	303
153	142	130	142	139	144	134	123	145	132	149	145	144	130	145	132
50	42	46	45	50	50	48	43	45	45	44	49	45	46	43	42
226	204	212	205	226	212	231	205	210	213	229	222	219	—	196	218
160	152	159	150	159	157	149	144	153	161	163	151	151	160	—	—
117	100	110	97	106	108	103	109	102	102	102	112	102	117	—	—
398	374	393	373	400	401	406	369	376	385	400	404	383	390	390	385
306	309	330	291	326	323	322	302	304	316	304	328	320	—	—	—
ca 154	144	135	152	136	147	143	164	162	ca 137	160	148	163	—	—	—
250	254	247	—	245	243	257	239	241	266	247	256	250	—	248	—
125	133	122	—	125	119	130	126	125	132	128	126	128	—	—	—
99	105	96	87	84	92	100	91	88	101	91	90	92	—	95	90
141	151	135	130	152	150	161	131	148	147	149	162	142	—	—	—
258	241	256	261	274	282	259	239	240	240	264	261	235	230	—	—
295	294	313	290	289	ca 308	303	279	282	290	310	297	ca 290	ca 329	ca 329	305

border or middle of meatus auditorius externus, I thought it better not to use the values given by them.

TABLE L.

	Rhinoceros sivalensis.	"Rhinoceros siva- sondaicus."	Our own fossil specimens.	
	A	a	a	b
1	—	625	648	ca 581
2	—	—	362	372
3	226	203	200	189
4	155	99	112	133
5	—	37	54	—
6	88	—	67	—
7	304	282	306	—
8	174	140	137	—
9	—	50	46	—
10	231	203	198	—
11	—	159	146	ca 133
12	—	113	120	ca 110
13	400	400	400	400
14 ¹⁾	—	—	325	—
15	212	159	155	ca 142
16	289	259	273	—
17	—	—	136	—
18	—	90	94	ca 71
19	—	—	144	—
20	—	256	256	254
21	328	296	—	—

¹⁾ See the note on table K.

TABLE L.

RHINOCEROS SONDAICUS.															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
649	653	652	638	640	637	613	651	655	651	642	628	643	605	—	—
356	351	353	364	365	345	332	353	361	338	354	357	370	—	—	—
219	179	186	195	183	192	191	188	182	189	204	216	198	189	176	205
99	93	90	91	81	93	94	99	100	99	107	106	104	89	89	99
ca 42	59	68	54	56	69	62	51	49	38	60	61	54	72	—	—
59	57	48	64	48	60	58	66	65	59	65	59	61	—	—	—
308	301	280	317	289	298	285	315	307	287	302	307	334	278	302	315
154	152	132	152	139	144	132	133	154	137	149	144	150	133	149	137
50	45	47	48	50	50	47	47	48	47	44	49	47	47	44	44
227	218	216	220	226	211	228	222	223	221	229	220	229	—	201	226
161	163	162	161	159	157	147	156	163	167	163	150	158	164	—	—
118	107	112	104	106	108	101	118	109	106	102	111	107	120	—	—
400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
308	330	336	312	326	322	317	327	323	328	304	325	334	—	—	—
ca 155	154	137	163	136	147	141	178	172	ca 142	160	147	170	—	—	—
251	272	251	—	245	242	253	259	256	276	247	253	261	—	254	—
126	142	124	—	125	119	128	137	133	137	128	125	134	—	—	—
99	112	98	93	84	92	99	99	94	105	91	89	96	—	97	94
142	161	137	139	152	150	159	142	157	153	149	160	148	—	—	—
259	258	261	280	274	281	255	259	255	249	264	258	245	236	—	—
296	314	319	311	289	ca 307	299	302	300	301	310	294	ca 303	337	337	317

TABLE M.

		Rhinoceros sondaicus																		
Cor- responding nos. of Stremme (1911), P. 94	Rhinoceros sivalensis A	"Rhino- ceros siva- sondaicus"	Our own fossil specimens		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
			a	b	1.35	1.38	1.30	1.44	1.28	1.41	1.25	1.42	1.38	1.30	1.32	1.40	1.46	—	1.50	1.39
7 : 10	1.32	1.39	1.54	—	1.35	1.38	1.30	1.44	1.28	1.41	1.25	1.42	1.38	1.30	1.32	1.40	1.46	—	1.50	1.39
7 : 18	—	3.14	3.23	—	3.09	2.68	2.86	3.40	3.44	3.25	2.89	3.20	3.28	2.73	3.32	3.44	3.48	—	3.09	3.37
16 : 18	—	2.88	2.89	—	2.53	2.42	2.57	—	2.92	2.64	2.57	2.63	2.74	2.63	2.71	2.84	2.72	—	2.61	—
16 : 3	1.28	1.28	1.37	—	1.15	1.52	1.35	—	1.34	1.27	1.32	1.38	1.41	1.46	1.21	1.17	1.32	—	1.44	—
15 : 4	1.37	1.60	1.39	1.25	1.56	1.66	1.53	1.79	1.68	1.58	1.51	1.80	1.72	1.44	1.50	1.38	1.63	—	—	—
13 : 21	1.22	1.35	—	—	1.35	1.27	1.26	1.29	1.38	1.30	1.34	1.32	1.33	1.33	1.29	1.36	1.32	1.19	1.19	1.26

TABLE N.

No. of Cranium.	P ¹			P ²			P ³			P ⁴			M ¹			M ²			M ³			
	l	b	l/b	l	b	l/b	l	b	l/b	l	b	l/b	l	b	l/b	l	b	l/b	l	b	l/b	
																						l
1	—	—	—	30	41	0.73	36	53	0.68	41	57	0.72	43	57	0.75	ca 47	57	0.82	55	51	1.08	left
	—	—	—	29	41	0.71	37	53	0.70	38	56	0.68	43	56	0.77	ca 46	56	0.82	ca 52	51	1.02	right
2	21	23	0.91	31	43	0.72	37	54	0.69	41	56	0.73	41	57	0.72	44	57	0.77	ca 48	57	0.84	l.
	ca 21	ca 23	0.91	31	44	0.70	37	54	0.69	42	58	0.72	42	57	0.74	45	58	0.78	49	50	0.98	r.
3	ca 21	19	1.11	ca 28	41	0.68	ca 36	49	0.73	—	—	—	ca 45	58	0.78	45	58	0.78	46	53	0.87	l.
	ca 20	20	1.00	ca 27	41	0.66	ca 35	50	0.70	ca 40	54	0.74	41	58	0.71	ca 45	59	0.76	ca 44	50	0.88	r.
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	ca 38	56	0.68	ca 43	44	0.98	l.
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	r.
13	21	21	1.00	31	42	0.74	36	52	0.69	40	53	0.75	43	54	0.80	45	55	0.82	44	47	0.94	l.
	22	21	1.05	29	42	0.69	35	50	0.70	38	53	0.72	43	54	0.80	43	55	0.78	43	46	0.93	r.
8	21	20	1.05	29	39	0.74	35	49	0.71	36	50	0.72	ca 38	50	0.76	39	51	0.76	—	42	—	l.
	—	—	—	30	38	0.79	33	49	0.67	37	50	0.74	ca 40	51	0.78	42	51	0.82	44	44	1.00	r.
7	21	19	1.11	28	40	0.70	34	53	0.64	38	56	0.68	41	56	0.73	ca 46	59	0.78	46	51	0.90	l.
	ca 20	18	1.11	27	40	0.68	36	52	0.69	39	56	0.70	41	56	0.73	45	58	0.78	48	51	0.94	r.
9	22	20	1.10	27	39	0.69	34	50	0.68	36	52	0.69	ca 41	54	0.76	43	54	0.80	ca 42	46	0.91	l.
	22	20	1.10	28	39	0.72	34	50	0.68	37	52	0.71	40	54	0.74	41	54	0.76	ca 44	45	0.98	r.
5	ca 25	21	1.19	ca 28	40	0.70	ca 36	50	0.72	ca 40	56	0.71	ca 42	58	0.72	ca 42	58	0.72	ca 46	56	0.82	l.
	ca 24	21	1.14	ca 29	39	0.74	ca 35	50	0.70	ca 38	56	0.68	ca 40	58	0.69	ca 42	58	0.72	ca 45	54	0.83	r.
6	20	19	1.05	28	41	0.68	33	56	0.59	40	58	0.69	41	57	0.72	46	59	0.78	65	52	1.25	l.
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	45	52	0.87	r.
11	—	—	—	30	42	0.71	35	52	0.67	40	56	0.71	43	57	0.75	44	57	0.77	ca 43	49	0.88	l.
	—	—	—	30	41	0.73	37	52	0.71	40	56	0.71	43	58	0.74	44	58	0.76	ca 46	49	0.94	r.
12	—	—	—	29	42	0.69	36	55	0.65	43	60	0.72	45	59	0.76	46	60	0.77	ca 48	52	0.92	l.
	—	—	—	30	42	0.71	37	55	0.67	43	60	0.72	45	60	0.75	46	60	0.77	ca 49	53	0.92	r.
14	18	17	1.06	27	34	0.79	37	47	0.79	36	51	0.71	40	54	0.74	44	56	0.79	51	48	1.06	—
α	20	24	0.83	28	40	0.70	36	52	0.69	38	51	0.75	39	56	0.70	45	56	0.80	52	49	1.06	—
	21	28	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
a	—	—	—	30	42	0.71	—	—	—	40	ca 56	0.71	41	58	0.71	45	61	0.74	51	52	0.98	l.
	22	22	1.00	30	ca 41	0.73	37	52	0.71	40	58	0.69	40	—	—	44	62	0.71	50	53	0.94	r.

Rhinoceros
sondaicus"Rhinoceros"
sivasondaicus"Our own fossil
specimen

TABLE O.

N ^o . of cranium.	P ¹		P ²		P ³		P ⁴		M ¹		M ²		M ³	
	l	b	l	b	l	b	l	b	l	b	l	b	l	b
1	—	—	0.73	0.72	0.88	0.93	1.00	1.00	1.05	1.00	ca 1.15	1.00	1.34	0.89
	—	—	0.76	0.73	0.97	0.95	1.00	1.00	1.13	1.00	ca 1.21	1.00	ca 1.37	0.91
2	0.51	0.41	0.76	0.77	0.90	0.96	1.00	1.00	1.00	1.02	1.07	1.02	ca 1.17	1.02
	ca 0.50	0.40	0.74	0.76	0.88	0.93	1.00	1.00	1.00	0.98	1.07	1.00	1.17	0.86
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	ca 0.50	0.37	ca 0.68	0.76	ca 0.88	0.93	1.00	1.00	1.03	1.07	ca 1.13	1.09	ca 1.10	0.93
13	0.53	0.40	0.78	0.79	0.90	0.98	1.00	1.00	1.08	1.02	1.13	1.04	1.10	0.89
	0.58	0.40	0.76	0.79	0.92	0.94	1.00	1.00	1.13	1.02	1.13	1.04	1.13	0.87
8	0.58	0.40	0.81	0.78	0.97	0.98	1.00	1.00	ca 1.06	1.00	1.08	1.02	—	0.84
	—	—	0.81	0.76	0.89	0.98	1.00	1.00	ca 1.08	1.02	1.14	1.02	1.19	0.88
7	0.55	0.34	0.74	0.71	0.89	0.95	1.00	1.00	1.08	1.00	ca 1.21	1.05	1.21	0.91
	ca 0.51	0.32	0.69	0.71	0.92	0.93	1.00	1.00	1.05	1.00	1.15	1.04	1.23	0.91
9	0.61	0.38	0.75	0.75	0.94	0.96	1.00	1.00	ca 1.14	1.04	1.19	1.04	ca 1.17	0.88
	0.59	0.38	0.76	0.75	0.92	0.96	1.00	1.00	1.08	1.04	1.11	1.04	ca 1.19	0.87
5	ca 0.63	0.38	ca 0.70	0.71	ca 0.90	0.89	1.00	1.00	ca 1.05	1.04	ca 1.05	1.04	ca 1.15	1.00
	ca 0.63	0.38	ca 0.76	0.70	ca 0.92	0.89	1.00	1.00	ca 1.05	1.04	ca 1.11	1.04	ca 1.18	0.96
6	0.50	0.33	0.70	0.71	0.83	0.97	1.00	1.00	1.03	0.98	1.15	1.02	1.63	0.90
	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11	—	—	0.75	0.75	0.88	0.93	1.00	1.00	1.08	1.02	1.10	1.02	ca 1.08	0.88
	—	—	0.75	0.73	0.93	0.93	1.00	1.00	1.08	1.04	1.10	1.04	ca 1.15	0.88
12	—	—	0.67	0.70	0.84	0.92	1.00	1.00	1.05	0.98	1.07	1.00	ca 1.12	0.87
	—	—	0.70	0.70	0.86	0.92	1.00	1.00	1.05	1.00	1.07	1.00	ca 1.14	0.88
14	0.50	0.33	0.75	0.67	1.03	0.92	1.00	1.00	1.11	1.06	1.22	1.10	1.42	0.94
a	0.53	0.47	0.74	0.79	0.95	1.02	1.00	1.00	1.03	1.10	1.18	1.10	1.37	0.96
	—	—	0.75	0.75	—	—	1.00	1.00	1.03	1.04	1.13	1.09	1.28	0.93
a	0.55	0.38	0.75	ca 0.71	0.93	0.90	1.00	1.00	1.00	—	1.10	1.07	1.25	0.91
	—	—	0.75	ca 0.71	0.93	0.90	1.00	1.00	1.00	—	1.10	1.07	1.25	0.91

Rhinoceros
sondaicus.

"Rhinoceros
sivasondaicus".

Our own fossil specimen.

TABLE P.

TABLE P.

	1	2	3	4	5	6	7	8	9	10	11	12 ²⁾	13	14	15	16	17	18	19	20	21	22	23	24	25
	H. constrictus. Angola. Miller, 1920, n.º 7, p. 2, pls. 1-4, below.	H. amphibius. Zambezi. Miller, 1910, n.º 7, p. 2 pls. 1-4, above.	H. amphibius. Zanzibar.	H. amphibius. Africa.	H. amphibius. Mozambique.	H. amphibius. Africa.	H. amphibius. Africa.	H. amphibius. Congo.				H. amphibius.				H. amphibius.		H. amphibius. Mozambique.		H. amphibius. Zanzibar.	H. amphibius. Congo.	H. amphibius. Congo.	H. amphibius. Zambezi.	H. amphibius. Cape.	H. amphibius. Nile.
	U.S. Nat. Mus. n.º. 34787	U. S. Nat. Mus. n.º. 123387	Leyden	Leyden	Leyden	Leyden	Leyden	Leyden	Amsterdam	Amsterdam	Amsterdam	Utrecht	Amsterdam	Amsterdam	Amsterdam	Utrecht	Leyden	Leyden	Amsterdam	Leyden	Leyden	Leyden	Leyden	Leyden	Leyden
	M ₁	M ₁	M ₃	M ₃	M ₂	M ₃	M ₃	M ₃	M ₃	M ₃	M ₃	M ₃	M ₃ ?	M ₂	M ₂	M ₂	M ₂	M ₂	M ₁	M ₁	M ₁	M ₁	M ₁	M ₁	M ₁
1 Condyllo-basal length.	690	730	652	627	637	—	645	646	764	ca 685	765	ca 655	695	635	668	665	712	626	541	603	497	514	ca 585	—	ca 660
2 Zygomatic breadth	ca 435	435	404	405	400	386	396	ca 418	468	410	480	410	431	410	410	385	405	390	329	373	356	337	362	367	402
3 Rostral constriction	110	144	118	120	115	101	107	110	163	117	177	127	109	100	117	98	115	119	88	106	102	100	94	114	122
4 Rostral expansion	332	370	340	308	319	290	299	ca 342	381	344	386	337	322	304	308	296	325	285	244	287	230	218	272	257	290
5 Occipital breadth	278	332	277	277	272	254	287	ca 278	315	278	339	297	292	296	281	284	296	278	225	271	256	222	254	—	291
6 Occipital depth (to basion).	196	214	197	192	188	—	178	ca 198	222	—	221	197	ca 195	197	188	171	185	192	167	194	172	163	169	—	196
7 Median depth between orbits.	181	208	167	171	165	147	162	165	175	162	208	185	179	156	166	165	180	152	145	155	131	130	147	146	157
8 Nasal [greatest length].	390	400	ca 372	345	372	347	377	353	374	380	430	350	410	360	365	357	401	304	284	342	234	260	332	312	345
9 Height of orbit	75	90	81	76	72	64	70	69	82	79	78	79	79	78	82	73	80	70	66	75	69	66	72	65	73
10 Width of orbit	70	65	66	65	63	70	70	ca 68	76	66	67	61	66	60	66	59	72	60	60	65	57	60	57	64	62
11 Elevation of orbit above level of forehead	24	40	50	35	30	40	35	ca 34	43	38	22	30	44	41	50	40	36	34	18	37	25	15	27	36	32
12 Mandible (condyle to front of alveolus of canine)	587	620	547	524	552	514	542	531	607	556	601	571	581	541	513	525	585	509	450	476	406	405	476	480	524
13 Coronoid height	355	410	372	335	358	311	340	319	363	363	402	348	350	340	352	320	359	326	249	314	264	272	360	315	325
14 Canine width [between outer alveolar margin of canines]	385	403	361	345	361	307	346	ca 354	427	395	407	366	374	341	351	346	388	307	265	315	259	258	340	282	322
15 Length of symphysis [without median spine]	168	224	179	177	162	160	160	171	197	169	197	177	167	164	171	181	169	152	134	151	120	115	144	149	157
16 Maxillary tooththrow (alveoli)	265	258	254	246	254	239	234	231	265	261	272	—	282	—	—	—	—	—	—	—	—	—	—	—	—
17 Mandibular tooththrow (alveoli)	293	286	277	264	277	258	260	261	294	285	310	—	286	—	—	—	—	—	—	—	—	—	—	—	—
18 Width of palate at anterior lobe of M ¹	68	76	59	68	70	61	57	60	93	63	95	—	69	63	63	66	68	65	55	67	60	71	46	64	70
first upper molar [length ¹⁾ × breadth at base of crown]	45 × 41	46 × 46	41 × 41	39 × 45	40 × 39	39 × 40	37 × 41	33 × 37	43 × 48	42 × 45	46 × 43	—	41 × 44	37 × 42	35 × 40	36 × 40	45 × 46	40 × 46	38 × 41	42 × 42	41 × 42	40 × 37	40 × 45	41 × 44	49 × —
second upper molar [length × breadth].	53 × 45	51 × 51	48 × 51	49 × 55	47 × 48	44 × 51	47 × 52	37 × 42	48 × 54	52 × 57	50 × 50	42 × 49	47 × 44	42 × 47	45 × 44	48 × 49	54 × 58	— × —	— × —	— × —	— × —	— × —	— × —	— × —	— × —
third upper molar [" "]	— × —	— × —	53 × 49	51 × 55	52 × —	50 × 50	48 × 50	44 × 45	54 × 56	61 × 55	54 × 50	51 × 50	50 × —	— × —	— × —	— × —	— × —	— × —	— × —	— × —	— × —	— × —	— × —	— × —	— × —
first lower molar [" "]	46 × 31	51 × 34	41 × 35	36 × 33	37 × 31	— × —	36 × 35	38 × 32	40 × 42	39 × 38	45 × 36	36 × 35	42 × 32	37 × 30	36 × 33	37 × 32	41 × 40	41 × 39	37 × 34	41 × 36	37 × 34	39 × 30	38 × 35	40 × 37	40 × —
second lower molar [" "]	59 × 35	57 × 39	56 × 42	47 × 40	46 × 33	44 × 42	48 × 42	48 × 38	50 × 48	51 × 46	50 × 41	46 × 41	46 × 38	49 × 33	44 × 36	42 × 41	50 × 45	56 × 39	— × —	— × —	— × —	— × —	— × —	59 × 41	— × —
third lower molar [" "]	— × —	— × —	74 × 44	72 × 40	70 × —	72 × 41	64 × 41	64 × 35	77 × 45	70 × 44	72 × 42	66 × 40	68 × —	— × —	— × —	— × —	— × —	— × —	— × —	— × —	— × —	— × —	— × —	— × —	— × —

1) Measured at outer side of tooth.
 2) It is almost certain, that cranium and lower jaw of specimen 12 do not belong to one another.

TABLE Q.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 : 7	3.81	3.51	3.90 con	3.67	3.86 con	—	3.98 con	3.92 con	4.63 con	4.23 con	3.68	3.54	3.88 con	4.07 con	4.02 con	4.03 con	3.96 con	4.12 con
1 : 3	6.27	5.07	5.53	5.23	5.54	—	6.03	5.87	4.69 am	5.85	4.32 am	5.16	6.38 con	6.35 con	5.71	6.79 con	6.19	5.26
4 : 2	0.76	0.85	0.84	0.76 con	0.80	0.75 con	0.76 con	0.82	0.81	0.84	0.80	0.82	0.75 con	0.74 con	0.75 con	0.77	0.80	0.73 con
1 : 11	28.75	18.25	13.04 am	17.91 am	21.23	—	18.43	19.00	17.77 am	18.03 am	34.77 con	21.83	15.80 am	15.49 am	13.36 am	16.63 am	19.78	18.41
1 : 6	3.52	3.41	3.31 am	3.27 am	3.39 am	—	3.62 con	3.26 am	3.44	—	3.46	3.32 am	3.56 con	3.22 am	3.55 con	3.89 con	3.85 con	3.26 am
9 : 10	1.07	1.38	1.23	1.17	1.14	0.91 con	1.00 con	1.01 con	1.08	1.20	1.16	1.30	1.20	1.30	1.24	1.24	1.11	1.17
13 : 12	0.60	0.66	0.68 am	0.64	0.65	0.61	0.63	0.60 con	0.60 con	0.65	0.67 am	0.61	0.60 con	0.63	0.69 am	0.61	0.61	0.64
15 : 12	0.29	0.56	0.33	0.34	0.29 con	0.31	0.30	0.30	0.32	0.30	0.33	0.31	0.29 con	0.30	0.33	0.34	0.29 con	0.30
5 : 6	1.42	1.55	1.41	1.44	1.44	—	1.61	1.40	1.42	—	1.53	1.51	1.50	1.50	1.49	1.66	1.60	1.45
15 : 14	0.44	0.56	0.50	0.51	0.45	0.52	0.46	0.48	0.46	0.43	0.48	0.48	0.45	0.48	0.49	0.52	0.44	0.50

TABLE R.

	1	2	3	4	5	6	7
I:2	1.59 am	1.68	1.61	1.55 am	1.59 am	—	1.63
Difference in mm. between height and breadth of orbit	+ 5 am	+ 25 am	+ 15 am	+ 11 am	+ 9 am	— 6 aus	0 am
I:16.	2.60	2.83 aus	2.57 am	2.55 am	2.51 am	—	2.76
Situation of top \bar{C} with regard to alveolar margin of \underline{C}	—	—	above aus	above aus	above aus	above aus	above aus
Situation of posterior border of for. infraorbitalis with regard to upper premolars	middle p ³ am	front p ⁴ aus	front p ⁴ aus	middle p ⁴	front p ⁴ aus	front p ⁴ aus	middle p ³ am

1) See note 2 belonging to table P.
2) Only M² and M³ are present.

TABLE R.

8	9	10	11	12	13	14	15	16	17	18
1.60	1.57 am	1.67	1.59 am	1.60	1.61	1.55 am	1.63	1.73 aus	1.76 aus	1.61
+ 1 am	+ 6 am	+ 13 am	+ 11 am	+ 18 am	+ 13 am	+ 18 am	+ 16 am	+ 14 am	+ 8 am	+ 10 am
2.80 aus	2.88 aus	2.62	2.92 aus	2.47 am	—	—	—	—	—	—
above aus	above aus	above aus	above aus	— ¹⁾	above aus	above aus	above aus	above aus	above aus	above aus
front p ⁴ aus	front p ³	front p ⁴ aus	middle p ³ am	— ²⁾	front p ⁴ aus	front p ⁴ aus	front p ³ am	front p ⁴ aus	middle p ³ am	front p ⁴ aus

TABLE S.

	H. sivalensis			H. iravaticus	H. nama	
	F.A.S. pl. LXI, fig. 5 Lydekker 1884, p. 40	small variety? var angustidens Lydekker 1884, p. 41 pl. VI, fig. 1	typical form Lydekker 1884, p. 41	F.A.S. pl. LVII, fig. 10 Lydekker 1884, p. 42	F.A.S. pl. LVIII, fig. 2 Lydekker 1884, p. 44	F.A.S. pl. LVIII, fig. 3 Lydekker 1884, p. 44
2 Length of symphysis	180	—	—	130	104	132
2 Interval between canines 1:2	203	—	—	113	183	236
1:2	0.89	—	—	1.13	0.57	0.56
3 Depth at P ₁	117	—	—	74	110	118
4 Longer diameter of C	61	—	—	38	42	47
5 Depth of ramus at M ₂	—	107	112	—	—	—
6 Length of five last cheek teeth	—	196	216	—	—	—
7 Length of M ₁	—	31	38	—	—	—
8 Width of ditto	—	24	33	—	—	—
9 Length of M ₂	—	43	48	—	—	—
10 Width of ditto	—	31	39	—	—	—
11 Length of M ₃	—	56	72	—	—	—
12 Width of ditto	—	33	41	—	—	—
13 Longer diameter of I ₁	34	—	—	—	31	32
14 Longer diameter of I ₂	25	—	—	—	25	23
15 Longer diameter of I ₃	33	—	—	—	31	36

TABLE S.

dicus		H. palaeindicus				Our own fossil specimens		
F.A.S. pl. LVIII, fig. 1 Lydekker 1884, p. 44	Lydekker 1884, p. 44	Lydekker 1884, p. 46	Lydekker 1884, p. 46	Lydekker 1884, p. 46 pl. VI, fig. 2	type-F.A.S. pl. LVII, fig. 5 Lydekker 1884, p. 46	I Lower jaw	II Right horizontal ramus	III Fragmentary lower jaw
149	—	127	137	—	—	ca 145	ca 132	—
251	—	208	236	—	—	ca 215	ca 220	—
0.59	—	0.61	0.58	—	—	0.67	0.60	—
132	—	124	132	—	—	—	74	—
54	—	57	60	—	—	46	ca 41	—
—	—	—	—	—	—	108	103	ca 100
—	—	—	—	—	—	194	ca 198	—
—	—	—	—	—	—	35	34	—
—	—	—	—	—	—	29	28	—
—	—	—	—	—	—	32	39	33
—	—	—	—	—	—	35	32	30
—	—	—	—	—	—	55	—	48
—	—	—	—	—	—	36	34	30
33	30	46	46	50	38	—	ca 27	—
23	23	16	18	15	—	—	ca 25	—
38	34	47	46	51	47	—	19	—

TABLE T.

		MEASUREMENTS OF M ³ OF													
		Fore talon		1		2		3		4		5		6	
		molar		molar		molar		molar		molar		molar		molar	
		r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.
Greatest length at base of crown	A	—	—	87c	90c	96c	97c	94	—	—	95	—	—	—	—
	B	—	ca 68	—	77	—	82	—	85	—	86	—	86	—	85
	C	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	D	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	E	—	—	—	—	—	—	—	—	86	—	86	—	87c	—
	F	—	—	—	—	—	—	—	—	—	—	—	84	—	85
	G	—	—	—	—	—	—	—	—	—	86	—	85	—	—
	H	—	—	—	—	—	—	83	—	87c	—	ca 65c	—	89c	—
Breadth at base of crown ¹⁾	A	—	—	—	—	24	—	24-26	—	26	—	26	—	—	—
	B	—	7-14	—	—	—	19	—	20	—	19-20	—	21	—	20
	C	—	—	—	—	—	—	—	—	—	—	19	—	19	—
	D	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	E	—	—	—	—	—	—	—	—	19	—	19	—	19	—
	F	—	—	—	—	—	—	—	—	—	—	ca 20	—	ca 19	—
	G	—	—	—	—	—	—	—	ca 13 ³⁾	—	ca 20	—	ca 19	—	—
	H	—	—	—	22 ³⁾	—	20	—	ca 20	—	—	—	—	—	—
Height of worn or very slightly worn ridge-crest	A	—	—	56	55	59	59	—	—	—	—	—	—	—	—
	B	—	—	—	—	—	—	—	54	—	54	—	—	—	56
	F	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	G	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	H	—	—	—	—	—	—	—	—	—	—	—	—	—	—

A = l. and r. M³. N^o. a of JANENSCH's table n^o. 5.
 B = „ M³. „ b „ „ „ „ 5.
 C = „ and r. M³. „ c „ „ „ „ 5.
 D = „ „ „ „ „ d „ „ „ „ 5.
 E = „ „ „ „ „ e „ „ „ „ 5.
 F = „ M³, our own specimen. Total length, measured along median line of crown 16,5 cm.
 G = r. „ „ „ „ „ „ „ „ „ „ 17,3 „ „
 H = l. „ „ „ „ „ „ „ „ „ „ of our own fragment of the cranium. Total length, measured along median line of crown 25 cm.

TABLE T.

		STEGODON AIRÁWANA.													
		7		8		9		10		11		12		Hind talon	
		molar		molar		molar		molar		molar		molar		molar	
		r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.
	A	93	—	—	—	86	—	—	—	—	—	—	—	—	—
	B	—	85	—	83	—	77	—	69	—	60	—	44	—	32
	C	—	87	85	85	82	81	79	75	70	71	62	62	ca 45	49
	D	—	85c	85	85c	81c	84c	77c	80c	69c	73c	—	—	—	—
	E	84c	—	81c	82c	76c	79c	68c	76c	64c	71c	61c	64c	—	—
	F	—	83	—	76	—	72	—	68	—	65	—	56	—	—
	G	83	—	77	—	71	—	68	—	63	—	55	—	—	—
	H	—	82	—	80	—	74	—	66c	—	59c	—	n	—	—
	A	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	B	—	20-22	—	22-23	—	20-22	—	17-19	—	16-18	—	14	—	—
	C	19	19	19	19	19	19	19	19	19	19	ca 18	19	ca 13	13
	D	—	21	22	22	—	—	—	—	—	—	—	—	—	—
	E	19	—	21	21	22	21	20	20-22	ca 20	ca 21	—	—	—	—
	F	—	ca 21	—	ca 20	—	ca 19	—	ca 18	—	ca 16	—	ca 16	—	—
	G	ca 21	—	ca 20	—	ca 20	—	ca 18	—	ca 15	—	—	—	—	—
	H	—	—	—	—	—	—	—	—	—	—	—	n	—	at buccal side
	H	—	22	—	22	—	21	—	17	—	ca 14	—	n	—	at palatal side
	A	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	B	—	55	—	50	—	47	—	45	—	44	—	39	—	31
	F	—	—	—	—	—	—	—	—	—	46	—	37	—	ca 20
	G	—	—	—	—	46	—	46	—	44	—	36	—	ca 21	—
	H	—	53	—	55	—	—	—	—	—	—	—	n	—	—

c = cement included.
 n = not developed.
¹⁾ I cannot see why JANENSCH gives sometimes two values, as he emphasized: "Gemessen auszen an der Basis" (p. 176).
²⁾ See text p. 135.
³⁾ Breadth of fore talon included.

TABLE U.

Concerning M^3 and M^1 Concerning M_2	Fore talon		1		2		3		4		5		6		7		Hind talon		
	(x)		(x+1)		(x+2)		(x+3)		(x+4)		(x+5)		(x+6)		(x+7)		r.	l.	
	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.			
Greatest length at base of crown	A	—	—	—	79	—	82	80	82	82	87c	87c	88c	89c	—	—	—	—	—
	B	—	ca 56	—	60	—	62	—	65	—	65	—	74	75	ca 68	71	—	—	—
	C	—	51	54	54	54	55	56	58	58	57	57	64	—	62	—	—	—	—
	D	—	—	—	—	—	—	—	—	—	—	—	58	—	59	—	—	—	—
	E	—	—	—	—	—	—	—	—	—	—	—	66	—	66	—	—	—	—
	F	—	—	—	—	46c	45c	48c	48c	50c	51c	51c	52	53	58c	57c	—	—	—
	G	—	43	43	—	45	—	47	—	48	48	—	47	—	43	—	—	—	—
Breadth at base of crown	A	—	—	—	16-23	—	16-23	—	20-23	—	24	22-23	ca 24	ca 24	ca 16-19	ca 18	ca 9	—	ca 9
	B	—	—	—	—	—	—	—	—	—	—	—	20	20	ca 15-19	ca 19	ca 13	—	ca 13
	C	—	—	—	18-20	—	18-20	—	18-23	—	18-23	—	15-18	—	13	—	—	—	—
	D	8	13	13	15	16	15	16	16	16	—	16-18	17	18	—	—	—	—	—
	E	—	—	—	—	—	—	—	—	—	—	16-18	14	14	12-15	13	—	—	—
	F	3-8	11-14	11-14	14	14	14	ca 14	ca 14	14	14	15	14	14	—	—	—	—	—
	G	ca 7	11-16	—	12	12	12	12	12	12	12	—	11	—	9	—	4	—	—
Height of worn or very slightly worn ridge-crest	C	—	—	—	—	—	—	—	—	—	—	—	41	—	42	—	38	—	—
	D	—	—	28	—	31	—	—	—	—	—	—	—	—	—	—	—	—	—
	F	—	—	—	—	—	—	—	—	—	—	28	29	28	28	28	28	28	—
	G	17	—	—	24	—	25	—	27	—	27	—	28	—	27	—	21	—	—

A = l. and r. M_2 , n°. a of Janensch's table n°. 6.
 B = l. and r. M_2 , n°. b " " " " " " 6.
 C = r. M_1 , our own specimen.
 D = l. and r. M^1 , n°. a of Janensch's table n°. 3.
 E = l. and r. M^1 , n°. b of Janensch's table n°. 3.
 F = l. and r. m^3 , n°. a " " " " " " 2.
 G = r. m^3 , n°. b " " " " " " 2.
 c = cement included.

TABLE V.

		MEASUREMENTS OF M_3 OF											
		Fore talon	1		2		3		4		5		
		molar r.	molar l.	molar r.	molar l.	molar r.	molar l.	molar r.	molar l.	molar r.	molar l.		
Greatest length at the base of the crown	A	—	ca 38	76c	76c	83c	82c	89c	86c	91	—	90	—
	B	ca 39	—	64	65	76	77	77	80	82	82	82	80
	C	—	—	—	—	—	—	—	—	83	—	81	—
	D	—	—	—	—	—	—	—	—	—	—	—	—
	E	—	—	ca 71	71	79	76	87	87	89	89	87	86
Breadth at the base of the crown.	A	ca 9	ca 12	19	16	18-22	18-22	19-23	17-26	19-24	17-26	19-23	18-23
	B	ca 10	ca 10	17	16	18	18	19	ca 18	—	—	—	—
	D	—	—	—	—	—	—	—	—	—	—	—	—
	E	12	9	20-21 ¹⁾	16-19 ¹⁾	21-25	24-24	23-27	24-30	18-30	22-30	18-30	20-27
Height of unworn or very slightly worn ridge-crest.	A	—	—	—	—	—	—	—	—	—	—	60	—
	C	—	—	—	—	—	—	—	—	—	—	—	—
	E	—	—	—	—	—	—	—	—	—	—	+50 ²⁾	+50 ²⁾

A = l. and r. M_3 n°. a of Janensch's table n°. 7.B = l. and r. M_3 n°. b " " " " 7.C = r. M_3 n°. c " " " " 7.D = l. M_3 n°. d " " " " 7.E = l. and r. M_3 of lower jaw of our own collection. Total length of r. M_3 (measured along the median line of the surface of the crown) 27 cm.

TABLE V.

		STEGODON AIRÂWANA															Hind talon		
		6		7		8		9		10		11		12		13			
		molar r.	molar l.	molar r.	molar l.	molar r.	molar l.	molar r.	molar l.	molar r.	molar l.	molar r.	molar l.	molar r.	molar l.	molar r.	molar l.	molar r.	molar l.
	A	91	—	91	91	91	92	89	90	87	86	76	81	67	75	ca 53	ca 58	—	—
	B	—	—	—	—	—	—	—	81	—	—	—	—	—	—	—	—	—	—
	C	78	—	77	—	77	—	76	—	74	—	72	—	67c	—	ca 53	—	—	—
	D	—	—	—	—	—	—	55	—	—	—	—	76	—	70	—	ca 60	—	ca 40
	E	86	86	—	—	—	—	—	—	—	—	—	—	n	n	n	n	—	—
	A	19-24	19-22	21-27	20-25	22-27	22-26	23-26	22-25	23-26	22-24	19-23	21	19	21	16	16-19	—	—
	B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	D	—	—	—	—	—	—	—	—	—	—	22	—	22	—	19	—	16	—
	E	20-27	20-28	—	—	—	—	—	—	—	—	—	—	n	n	n	n	—	—
	A	61	—	61	61	58	59	56	59	56	61	53	60	52	51	47	48	31	45
	C	—	—	58	—	58	—	56	—	54	—	54	—	—	—	ca 42	—	20	—
	E	+45 ²⁾	+45 ²⁾	—	—	—	—	—	—	—	—	—	—	n	n	n	n	—	—

n = not developed.

c = cement included.

¹⁾ Fore talon included.²⁾ + means more than. The base of these ridge-crests is still concealed by the bone.

TABLE W.

DIMENSIONS OF FEMORA in cm.													Interval between caput femoris and ditto of trochanter major.	∠ α
Total height	Corpus femoris		Caput femoris		Distal extremity					Internal length				
	Smallest breadth	Smallest girth	Diameter	Girth	Breadth between epicondylis	Girth at same level	Breadth of facies articularis patellaris	Breadth between condylis femoris	External length					
110	14	38	15	51	25	76	10	21	21	25	—	15°		
100	10,5	30	—	—	—	—	—	—	—	—	—	up to 40°		
90	—	32,5	—	—	—	—	—	—	—	—	—	ca 0°		
—	17	43	17	55	—	—	—	—	—	—	42	—		
82	10	29	12,5	39,5	ca 22	—	—	17,5	—	—	28	15°		
—	ca 9,5	ca 27	11	35,5	18	51	7,5	15	14,5	16,5	25,5	—		
75	10,5	28	11,5	36	18	49	8	15	14	16,5	23	22°		
87	12	32,5	13	42	20	56	10,5	16,5	17,5	20	28	27°		
—	10	28	—	—	—	—	—	—	—	—	—	—		
—	13	33,5	—	—	—	—	—	—	—	—	—	—		

Stegodon airavana.
 Elephas maximus. Berlin
 Mastodon giganteus. Cambridge
 N°. 1 }
 " 2 }
 " 3 }
 " 4 } Our
 " 5 } own
 " 6 } specimens
 " 7 }

In tables W—Z "breadth" means the intero-external dimension, and "length" the antero-posterior dimension.

TABLE X.

		DIMENSIONS OF HUMERI in cm.										
		Total height.	Corpus humeri		Proximal extremity		Distal extremity			Distal plane of articulation		
			Smallest breadth.	Smallest girth.	Interval between outer surface of caput humeri and ditto of tuberculum majus.	Greatest antero-posterior diameter of caput humeri.	Breadth at level of epicondylus lateralis.	Greatest interval between ep. lat. and capitulum.	Greatest interval between ep. med. and trochlea.	Breadth.	Greatest length of trochlea.	Greatest length of capitulum.
Stegodon airâwana . . .	—	8	28	—	—	17	22	12	15,5	13	8,5	
N ^o . 1	} Our own specimens	88	12,5	43	24,5	22	24,5	33	18	20,5	19	14,5
„ 2		ca 68	8,5	36	—	—	—	—	12	18	14	10
„ 3		—	11	45	—	ca 20	—	—	—	—	—	—

TABLE IJ.

		DIMENSIONS OF RADII in cm.						
		Total height	Corpus radii		Proximal plane of articulation		Distal extremity	
			Smallest breadth	Smallest girth	Breadth	Girth	Greatest breadth	Greatest girth
Stegodon airâwana . . .	—	5	14	12	27	13	36	
N ^o . 1	} Our own specimens	54,5	5,5	17	11	28,5	ca 12	ca 38,5
N ^o . 2		53,5	5	13,5	10	26	12,5	35,5

TABLE Z.

	DIMENSIONS OF ULNAE in cm.											
	Total height.	Corpus ulnae		Distal extremity		Proximal plane of articulation				Olecranon		
		Smallest breadth.	Smallest girth.	Greatest breadth.	Greatest girth.	Greatest breadth.	Greatest width of internal, horizontal lobe.	Greatest width of external, horizontal lobe.	Interval between tip of proc. anconeus and notch between ext. and int. horizontal lobes.	Greatest breadth.	Greatest interval between tip of proc. anconeus and post surface of olecranon.	
Stegodon airâwana . . .	64	7	22	10,5	33	16	—	—	—	—	—	
Elephas antiquus München . . .	111	15	48,5	—	—	—	—	—	—	—	—	
Mastodon giganteus. Berlin	64	8	26	—	—	—	—	—	—	—	—	
N ^o . 1	} Our own specimens	62,5	9	27	13,5	43	18	8	5	ca 9	17,5	ca 15,5
„ 2		60	8	26	ca 13	ca 39	16,5	6,5	4,5	—	17	ca 15,5
„ 3		—	7,5	25	—	—	18	7,5	5	ca 9	—	—

