Analysis of postcranial elements of cave bear material (*Ursus spelaeus*) from Goyet (Condroz/Belgium)

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Abstract

In the 19th century, excavations took place in the third cave of Goyet (Condroz/Belgium), distinguishing five bone horizons. The cave material covers a geological period of time between 12,500 and 39,000 years BP according to AMS dates. Of all species found at Goyet, only *Ursus spelaeus* material has been analysed in this publication. On 570 long bones and metapodial bones of all horizons 249 variables were measured and statistically analysed. First the two assemblages with the most specimens, B4 and B5, were compared with each other. This showed that some measurements of the younger bone material (B5) were significantly smaller. Furthermore, all horizons were tested for a trend in size depending on the geological age. In contrast to the former result the trend test showed an increase in size of the bone measurements from the old layers to the younger ones, except in the youngest assemblage B5.

Key words: Ursus spelaeus, bone breadth, univariate statistics

Résumé

Cinq niveaux ossifères ont été reconnus lors des fouilles réalisées au 19ème siècle dans la troisième grotte de Goyet (Condroz/Belgium). Le matériel trouvé dans la grotte couvre un laps de temps entre 12,500 et 39,000 ans BP, basé sur des datations AMS. De toutes les espèces trouvées à Goyet, le matériel d'*Ursus spelaeus* est le seul qui a été analysé dans ce projet. Sur 570 os longs et métapodes, 249 variables ont été mesurées et analysées statistiquement. Les deux assemblages comprenant le plus de specimens, B4 et B5, ont été comparés l'un à l'autre. Les résultats montrent de façon significative que, dans l'assemblage le plus jeune, certaines mesures sont plus petites. De plus, un changement de taille en rapport avec l'âge géologique a été testé pour tous les niveaux. Contrairement aux résultats précédents, le test de tendance montre une augmentation de la taille des os, des couches les plus âgées vers les couches les plus jeunes, sauf pour l'assemblage le plus jeune (B5).

Mots-clés: *Ursus spelaeus*, mesures, statistiques univariées

Introduction

The cave of Goyet is situated in the Condroz, a region south of the Sambre and Meuse valleys in Belgium. The Condroz landscape is characterised by steep-sided valleys cutting through plateaux of relatively constant altitudes, locally reaching 350 m (DENIS, 1992). The entrance of the cave is located in a limestone cliff 15m above the river Samson (DUPONT, 1873), a small tributary of the Meuse river (for a detailed description of the location of the site see GERMONPRÉ & SABLIN, 2001).

Edouard Dupont, director of the excavation in the 1860's, subdivided the cave of Goyet into three parts: Chamber A, B and C; Figure 1 depicts a plan of the interior of the cave. Chamber A is about 26 m long and 4-5 m wide. Chamber B is located behind Chamber A and has a length of c. 13 m. The palaeontological collection from this cave (bones from horse, reindeer, bison and various carnivores such as bear, lion, and hyena) has been stored since its excavation at the Royal Belgian Institute of Natural Sciences (DUPONT, 1873). The taphonomy of the cave bear assemblages is described in GERMONPRÉ (1996), GERMONPRÉ & SABLIN (2001), GERMONPRÉ (2004a, b), and GERMONPRÉ (in press). The dental morphology of the bears in assemblage B4 is given in BARYSHNIKOV *et al.* (2003). Several AMS dates are available on carnivore bones from the rear of Chamber A and from Chamber B, and on herbivore bones found at the entrance of Chamber A (Table 1).

Cave bear assemblage A1 is the smallest of the Goyet assemblages with a total of 193 identified specimens

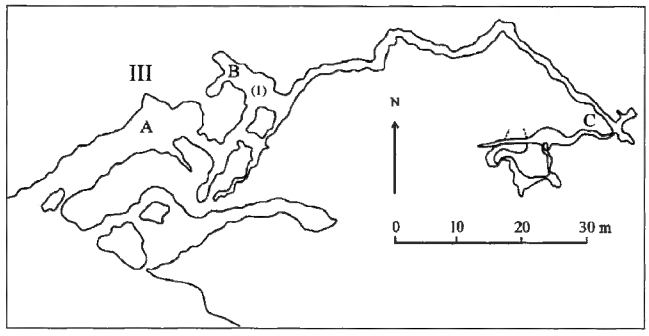

Fig. 1 — Map of the Goyet cave (GERMONPRÉ & SABLIN, 2001).

Table 1 — Absolute dating of specimens from the assemblages A1, A2, A3, B4 and B5 in the cave of Goyet (GERMONPRÉ, 1997; GERMONPRÉ & SABLIN, 2001; VAN STRYDONCK *et al.*, 2001; GERMONPRÉ, 2004).

AMS (y BP) assemblage	Chamber A entrance *Equus ferus*	Chamber A entrance *Rangifer tarandus*	Chamber A rear *Ursus spelaeus*	Chamber A rear *Crocuta crocuta*	Chamber B *Ursus spelaeus*
A3		27,590 +/-70	27,440 +/-165		
A2			34,920 +330-320		
B4					36,500 +1040 -920
					35,470 +780-710
A1	12,560 +/-50		38,770 +1180-1030	27,230 +/- 260	
	12,770 +/-92			35,000 +/- 400	
B5					20,780 +/- 140
					28,160 +/- 370

(NISP) and a minimum number of 14 individuals (MNI). Currently it is the oldest dated assemblage from Goyet with an AMS age of c.39,000y BP. Cave bear assemblage A2 comprises just under 500 skeletal remains, with a NISP of 432 and a MNI of 30 (GERMONPRÉ, 2004a). Cave bear assemblage A3 from Chamber A has a NISP of 965 and a MNI of 62. Cave bear assemblage B4 contains more material with a NISP of 2184 and a MNI of 89 (GERONPRÉ, 2004b; GERMONPRÉ & SABLIN, 2001). So far AMS dates show that cave bear assemblage B5 could be the youngest horizon, and with a NISP of c. 2300 and a MNI of c. 100, this is the largest assemblage at Goyet. Because remains of *Ursus spelaeus* are the dominant fossil finds in the Goyet cave, this article concentrates on the analysis of this species. 570 specimens were measured and statistically analysed, for absolute datings see Table 1. In particular the special aim of this project is to compare the five assemblages of Goyet to each other in order to see relevant differences i.e. size changes in geological time and, if so, to give possible explanations.

Table 2 — Amount of specimens per skeletal element and per assemblage of *Ursus spelaeus*.

Elements	Assemblages A1	A2	A3	B4	B5	Total
Humerus	–	4	–	8	5	17
Ulna	–	1	–	13	12	26
Radius	–	1	–	10	12	23
Mc I	–	3	7	15	21	46
Mc II	–	2	8	16	18	44
Mc III	3	4	11	14	17	49
Mc IV	–	2	4	15	18	39
Mc V	–	3	5	14	15	37
Femur	–	–	–	7	8	15
Tibia	–	–	–	15	6	21
Fibula	1	1	–	12	9	23
Mt I	1	5	9	14	12	41
Mt II	3	5	6	17	17	48
Mt III	4	7	9	21	15	56
Mt IV	2	5	7	17	16	47
Mt V	–	4	7	12	15	38

A lot of information had already been drawn from the dental material (GERMONPRÉ, 2004a, b; BARYSHNIKOV *et al.*, 2003; GERMONPRÉ & SABLIN, 2001) and the purpose is to look for the comparative indicators in the measured sixteen different postcranial elements (long bones and metapodial bones).

Material and methods

Only well-preserved, intact specimens (long bones and metapodial bones) of adult individuals of *Ursus spelaeus* were measured. Table 2 shows the amount of specimens per skeletal element and per assemblage. This table reveals that the assemblages A1, A2 and A3 contain a small amount of fossil finds of *Ursus spelaeus*. Note that the data sets are incomplete, due to incomplete fossil records. Thus, the analysis of the finds from these assemblages is rather difficult, and further calculations concentrate initially on the data from B4 and B5. Figure 2 depicts the measurements taken on the third metatarsal. Similar measurements were taken on all metapodial bones, as well as

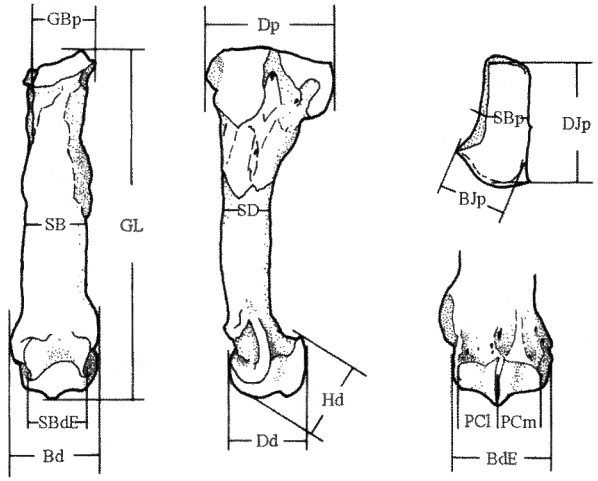

Fig. 2 — Measurements on metatarsalia III. For the explanation of the abbreviations see p. 273.

those specific to long bones. These measurements in mm were taken following mainly DUERST (1926) and VON DEN DRIESCH (1976), a total of 249 variables. The statistical analysis was carried out with SAS Version 8 (SAS INSTITUTE INC., 2001) and SPSS Version 11 (SPSS INC., 2001). In the appendix all individual measurements are given: on long bones (Table A1), on metacarpal bones (Table A2) and on metatarsal bones (Table A3). The main aims of this article were to test for temporal changes in size and for significant differences in size between the assemblages. A further, minor interest was to look for significant size differences between males and females.

As already explained in the introduction, this analysis focused primarily on changes of measured skeletal elements of bears with time. The "temporal trend line" of the Goyet material, according to geological age, would be A1 (oldest), B4, A2, A3, B5 (youngest). Since there are not many data from the assemblages A1, A2 and A3 available, except for the metapodial elements mc III, mt II, mt III and mt IV, we looked primarily for differences between the assemblages B4 and B5. Out of the 249 variables, 50 possible candidates for discrimination were selected for the statistical analysis. First it was checked whether the data were skewed or showed an approximately Gaussian distribution. Most of the variables were either skewed or the variances were quite heterogeneous. Therefore for all comparisons the *t*-test, the Welch-*t*-test or the *U* test after Mann-Whitney were applied to test for significant differences between the two groups (B4 and B5). To control a type I error (α) of 5% of the overall analysis, the resulting raw *p*-values were corrected for multiplicity with the α-adjustment procedure of Bonferroni-Holm (HOLM, 1979). The next step is to analyse whether there is a temporal trend in the data from the five assemblages as shown in the variables described above. We deduced a reduction in size from old (A1) to young (B5). Therefore we tested the stratigraphical groups with the Jonckheere-Terpstra test, which is a non-parametrical test on trend with a one-sided hypothesis, see HOLLANDER & WOLFE (1999) for more details. We excluded B5, because the null hypothesis of this test is rejected, when the measurements of at least one younger assemblage is significantly smaller compared to the measurements of an older layer. The results of assemblage B5 in the position of the "temporal trend line" seem at first glance surprising.

Results

As described above, first we tried to find significant differences between B4 (old) and B5 (young), before looking at the "temporal trend line" of all assemblages. These differences were found in ten variables of the 50 possible candidates for discrimination. Table 3 contains the measured data and Table 4 lists these variables with the two-sample test used and the adjusted two-sided *p*-value. These ten significant variables are the smallest breadth of the diaphysis (SB) of mt I, II and III, the smallest proximal breadth (SBp) of mt III, the smallest breadth of the proximal joint (BJp) of mc IV, the distal breadth (Bd) of mt II and III, the smallest breadth of the distal epiphysis (SBdE) of mt III, and the breadth of the distal epiphysis (BdE) of mt III and V.

The box plots in Figures 3 and 4 show the differences in size between B4 and B5 graphically for two of these variables. The assemblages and number of specimens included in the analysis are given on the abscissa and

Table 3 — List of ten significant variables from B4 and B5, test statistics, adjusted *p*-values, number of cases (N), mean values, standard deviations (sd), and results.

Bone/variable	test	adjusted *p*-value	assemblage	N	mean value	sd
Mt III/SB	Welch-*t*	0.00003	B4	21	16.548	1.730
			B5	15	13.809	0.894
Mt III/SBdE	*t*	0.00011	B4	21	16.131	1.065
			B5	14	14.288	0.692
Mt III/SBp	*t*	0.0002	B4	21	11.694	1.013
			B5	15	9.893	0.908
Mt III/Bd	Welch-*t*	0.00144	B4	20	23.380	1.755
			B5	15	20.973	1.173
Mt II/SB	*t*	0.0016	B4	17	14.360	1.345
			B5	17	12.411	0.977
Mc IV/BJp	Welch-*t*	0.00647	B4	13	15.932	1.312
			B5	17	13.679	1.445
Mt II/Bd	*t*	0.02465	B4	16	21.701	1.414
			B5	15	19.897	1.117
Mt I/SB	Welch-*t*	0.05000	B4	14	12.346	0.682
			B5	11	10.676	1.433
Mt III/BdE	*t*	0.05000	B4	13	20.152	1.610
			B5	12	18.111	1.102
Mt V/BdE	*t*	0.05000	B4	8	24.370	1.757
			B5	12	21.564	1.504

Table 4 — Unadjusted *p*-values and multiplicity corrected *p*-values of the trend test after Jonckheere-Terpstra (JT), testing a one-sided hypothesis for a negative trend.

Bone/variable	JT *p*-value	adjusted JT *p*-value
Mt III/SB	0.3943	1
Mt III/SBdE	0.8881	1
Mt III/SBp	0.9473	1
Mt III/Bd	0.9160	1
Mt II/SB	0.9907	1
Mc IV/BJp	0.1944	1
Mt II/Bd	0.7337	1
Mt I/SB	0.4191	1
Mt III/BdE	0.9450	1
Mt V/BdE	–	–

the range of the measurement in mm is presented on the ordinate. In Figure 3 the medians for the measurement 'breadth of the proximal joint' (BJp) of metacarpal bone IV are 15.93 mm in B4 and 13.68 mm in B5. In Figure 4 the medians of the variable 'smallest breadth of the diaphysis' (SB) of the metatarsal bone II are 14.36 mm in B4 and 12.41 mm in B5. Highly significant differences between B4 and B5 are apparent in these two examples. Also in all of the 50 variables the data from B5 is consistently smaller than that of B4 (see Figures 3-6).

In addition, these results dictate the direction of the test: only a negative trend, meaning a size decrease in the measurements from A1 to A3, was of interest. Therefore

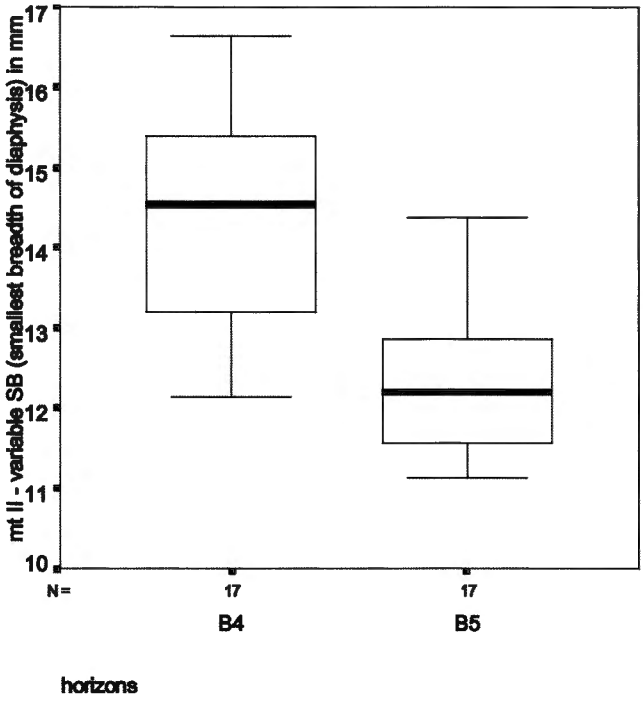

Fig. 4 — Significant difference in metatarsalia (mt) II SB (smallest breadth of the diaphysis).

we tested a one-sided hypothesis for a negative trend on nine of the ten variables analysed above. MtV BdE had to be excluded because of too small sample sizes. However, the test and an extended descriptive analysis showed contrasting results. Either the measurements of each group had such a high variability that no trend could be

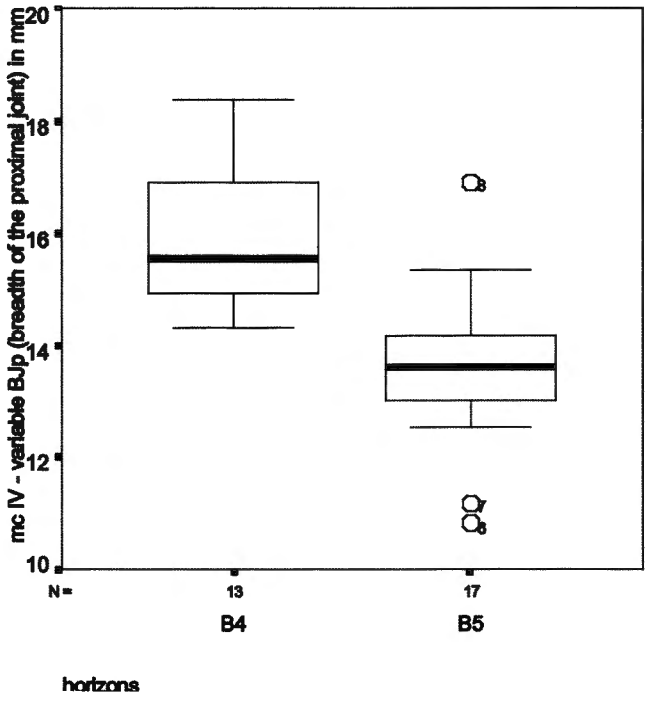

Fig. 3 — Significant difference in metacarpalia (mc) IV BJp (smallest breadth of the proximal joint).

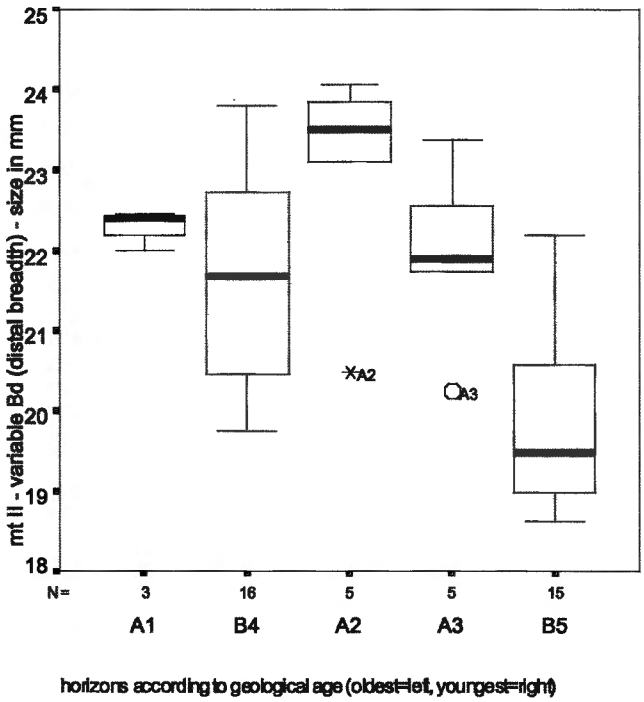

Fig. 5 — No temporal trend in metatarsalia (mt) II Bd (distal breadth).

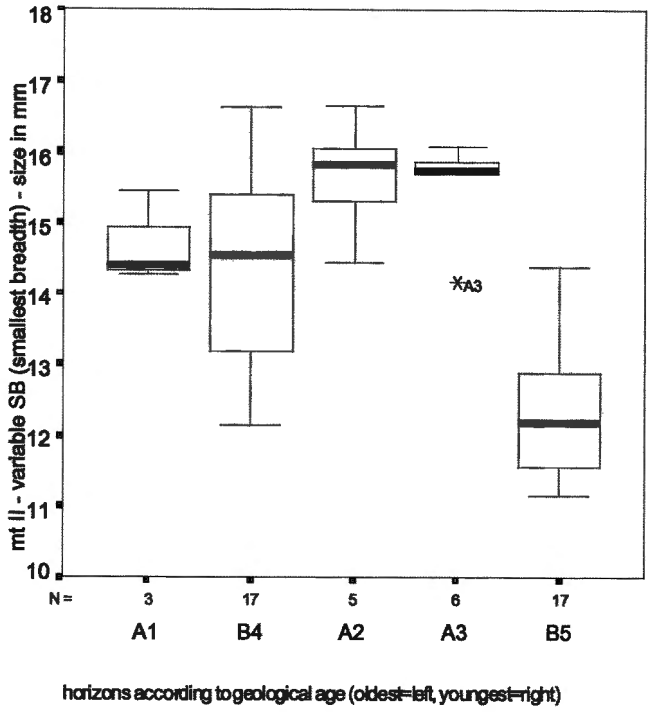

Fig. 6 — Temporal trend in metatarsalia (mt) II SB (smallest breadth of the diaphysis).

found or the trend was positive, meaning a size increase in the measurements from A1 to A3. Figures 5 and 6 show these results, for example, on the metatarsal bone II. For illustrative purposes the graphs include the assemblage B5, but the *p*-values are computed without this horizon. Figure 5 shows no trend at all between the groups for variable Bd of mt II – additional the raw *p*-value of the Jonckheere-Terpstra test of 0.7337 (Bonferroni-adjusted *p*-value of 1). Also variable SB (mt II) had a non-significant decreasing trend (raw *p*-value of 0.9907, multiplicity corrected $p = 1$). On top of that Figure 6 shows a clearly visible trend in the opposite direction. In particular one can see that the sizes of bone measurements increased during time. Also, the multiplicity corrected *p*-value for the Jonckheere-Terpstra test (Table 4) for an increase would be $p = (1\text{-}0.9907)*9=0{,}0837$ – which is significant to an α of 10%.

Summarising the results this means that the measurements on the fossil finds from A1 to A3 either do not differ or did not significantly increase during geological time, while the bones of the younger horizon B5 atypically decreased.

Discussion

It is believed that *Ursus spelaeus* became larger and more robust with time (THENIUS 1958; THENIUS 1959; KURTÉN 1968; RABEDER *et al.* 2000). This theory is supported by some variables of the data presented herein. Yet, some of the data show the contrary effect since the measurements of B5 are smaller than those of horizons B4, A1, A2 and A3. This discrepancy is based either on the overlap of the time span of each assemblage or otherwise the dating of the finds or the selection of the bones needs to be checked. Another possible explanation could be a strong sexual dimorphism between males and females. Indeed, the data sets contain bones from male and female individuals. However, the measurements used herein do not permit a reliable and objective gender distinction amongst bones. Mixture analysis, the method used by QUILES & MONCHOT (2004) to separate male and female bones, was not applied here since this statistical programme is not yet available. The different proportions of male and female bones in the postcranial material in the assemblages could have influenced the mean size of the variables, which were used herein to compare the different assemblages. Indeed, the size of female dentition from assemblage B5 is significantly different from that of assemblage B4 (GERMONPRÉ 2004b) pointing to a true difference in these two assemblages. Based on frequencies of sexed canines, assemblage B4 is a male dominated assemblage and assemblage B5 is a female dominated one (GERMONPRÉ & SABLIN 2001; GERMONPRÉ 2004b). GERMONPRÉ (2004a) found that in cave bear assemblage A3 more than 60% of the dental material derives from female bears. In cave bear assemblages A2 and A1 the sex ratio is more or less even. The canine size of these Goyet cave bears is strongly dimorphic (BARYSHNIKOV *et al.*, 2003). According to GITTLEMAN & VAN VALKENBURG (1997) dimorphism in canine size is related to severe male-male competition and frequent infanticide in polygenous species.

Additional research on assemblage B5 will follow, as further information is needed. Mitochondrial DNA analyses of the cave and brown bears from Goyet are also being carried out at the moment (Hofreiter in prep.; Hänni in prep). Stable isotope analyses of the cave bear bones from all assemblages are currently being undertaken (Bocherens in prep.). According to the AMS dates (Table 1), the bears from Goyet-horizon B5 are the youngest cave bears in north western Europe. Even younger *Ursus spelaeus*-finds come e.g. from Nixloch near Losenstein-Ternberg in Austria (FRANK & RABEDER, 1997), where the cave bear horizon has an age of 18,130 +/- 580 years BP (^{14}C dating). Other examples are from Austria, Croatia and the Pyrenees, sites that are more southerly than Goyet (FOSSE *et al.*, 2001). Since the cave bear finds from the Belgian site are some of the youngest known, and because there is a time span of about 20,000 years between the assemblages, it is interesting to search for changes within this group of bears.

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Appendix

Abbreviations

Coll-nb	number of the specimen in the inventory list of the museum's collection
Skel	skeletal element
Strat	stratigraphy, assemblages recognized by Dupont (1873)

Skeletal elements

H	Humerus
U	Ulna
R	Radius
Fe	Femur
T	Tibia
Fi	Fibula
mt I - V	Metatarsalia 1 - 5
mc I - V	Metacarpalia 1 - 5

Measurements

GL	greatest length (VON DEN DRIESCH, 1976)
SB	smallest breadth of diaphysis (DUERST, 1926; VON DEN DRIESCH, 1976)
Bp	breadth proximal (DUERST, 1926; VON DEN DRIESCH, 1976)
SBp	smallest prox. breadth (DUERST, 1926)
Dp	depth proximal (VON DEN DRIESCH, 1976)
Bd	greatest breadth distal (DUERST, 1926; VON DEN DRIESCH, 1976)
Dd	depth distal (DUERST, 1926, VON DEN DRIESCH, 1976)
SBdE	smallest breadth of epicondyle (DUERST, 1926)
BdE	distal epicondylar breadth (GRANDAL D'ANGLADE, 1993)
BJp	breadth of prox. joint (DUERST, 1926)

Table A1 — Data list of the analysed variables of the long bones. According to AMS dates assemblage A1 contains the oldest and assemblage B5 the youngest fossil bear finds. For the explanation of the abbreviations see p. 273.

Coll-nb	Skel	Strat	GL	B	D	Bp	Dp	Bd	Dd
2688-1	H	**B5**	.	40.00	38.94	.	.	102.79	.
2688-2	H	**B5**	.	37.01	40.96	.	.	110.88	62.88
2688-3	H	**B5**	349.50	37.88	38.65	76.26	92.08	106.65	66.07
2688-4	H	**B5**	.	39.77	38.68	.	.	109.37	61.05
2688-5	H	**B5**	343.80	43.13	38.51	80.04	91.99	108.78	62.49
2826-1	H	**A2**	439.90	46.92	47.26	97.89	119.69	143.42	81.52
2757-1	H	**A2**	443.50	49.85	51.58	96.74	.	141.37	79.27
2757-2	H	**A2**	.	42.82	50.35	.	.	.	.
2757-3	H	**A2**	.	41.09	46.29	.	.	.	.
2839-30	H	**B4**	.	32.27	39.53	.	.	102.94	65.80
2839-31	H	**B4**	.	30.35	39.56	.	.	.	.
2839-32	H	**B4**	337.85	37.30	35.94	73.14	.	104.63	63.11
2839-33	H	**B4**	.	45.11	44.93	.	.	133.16	77.40
G3.4.452	H	**B4**	.	35.21	41.59	.	.	.	63.97
G3.4.453	H	**B4**	.	35.99	41.60	.	.	.	63.93
G3.4.454	H	**B4**	.	37.86	40.20	.	.	109.80	.
G3.4.455	H	**B4**	.	37.86	38.52	.	.	107.14	61.03
2690-1	U	**B5**	363.85	36.78	26.60	.	14.85	47.15	27.92
2690-2	U	**B5**	329.50	41.20	28.87	78.35	11.93	48.99	27.63
2690-3	U	**B5**	321.50	36.16	24.05	68.39	10.79	45.34	28.07
2690-4	U	**B5**	311.05	36.70	24.93	74.63	11.58	45.05	24.81
2690-5	U	**B5**	.	38.02	27.90	70.19	11.80	44.77	26.48
2690-6	U	**B5**	333.40	40.53	29.89	.	9.92	50.06	27.01
2690-7	U	**B5**	.	36.35	24.13	.	14.53	.	.
2738-1	U	**B5**	.	33.67	23.37	.	11.30	37.72	25.47
2738-2	U	**B5**	316.90	34.92	25.45	68.63	10.30	48.33	24.13
2738-3	U	**B5**	.	36.69	22.09	68.89	14.77	.	22.33
2738-4	U	**B5**	321.75	36.75	30.61	70.12	11.26	.	26.37
2738-5	U	**B5**	339.90	37.32	26.81	.	10.25	.	24.59
2825-1	U	**A2**	.	50.24	36.01	.	19.11	.	40.98
2836-14	U	**B4**	.	.	.	87.64	15.36	.	.
2743-30	U	**B4**	323.05	36.37	25.91	72.60	11.82	44.64	24.52
2743-31	U	**B4**	323.55	35.91	26.52	76.34	11.76	.	24.73
2743-32	U	**B4**	353.95	45.94	31.20	.	13.95	52.93	31.55
2743-33	U	**B4**	355.75	47.44	31.68	87.03	13.80	56.39	32.19
2743-34	U	**B4**	312.80	35.10	25.47	71.11	10.84	44.14	28.78
G3.4.103	U	**B4**	.	45.85	33.20	.	15.10	.	.
G3.4.104	U	**B4**	.	44.95	32.69	84.38	12.96	.	.
G3.4.107	U	**B4**	.	35.59	24.40	.	8.76	44.18	30.19
G3.4.108	U	**B4**	325.85	35.20	26.24	72.99	10.66	44.24	24.68
G3.4.109	U	**B4**	.	46.74	30.58	84.07	11.60	.	.
G3.4.113	U	**B4**	.	.	.	.	19.72	.	.
2689-1	R	**B5**	286.30	26.20	19.29	44.35	33.45	65.02	43.90
2689-2	R	**B5**	286.35	26.51	16.80	45.42	.	63.22	42.26
2689-3	R	**B5**	.	32.30	22.95	47.39	.	.	.
2689-4	R	**B5**	289.81	30.52	22.88	50.16	38.57	72.85	43.55
2689-5	R	**B5**	.	27.18	20.49	.	.	.	43.30
2689-6	R	**B5**	281.28	25.18	18.99	44.82	.	.	.
2689-7	R	**B5**	279.69	26.19	18.78	44.32	36.11	64.03	.
2689-8	R	**B5**	291.81	30.57	22.36	49.04	38.57	.	46.53
2689-9	R	**B5**	.	28.57	21.02	45.20	35.71	64.19	43.49
2689-10	R	**B5**	.	26.13	19.25	48.29	.	70.10	46.87
2689-11	R	**B5**	293.52	29.50	19.83	45.66	35.91	67.57	45.99
2689-12	R	**B5**	281.22	31.12	21.63	46.56	35.80	68.84	43.69
2825-2	R	**A2**	333.30	37.75	20.82	54.13	38.52	81.46	54.43
2836-27	R	**B4**	.	24.68	17.79	.	.	.	43.74
2836-28	R	**B4**	.	29.74	19.72	.	.	.	45.19
2836-29	R	**B4**	.	38.00	28.56	62.53	43.89	.	.
2836-30	R	**B4**	328.70	33.75	25.76	.	.	78.93	58.06
2743-37	R	**B4**	313.00	32.90	24.10	57.08	41.74	80.94	51.75

Coll-nb	Skel	Strat	GL	B	D	Bp	Dp	Bd	Dd
2743-39	R	**B4**	278.36	30.03	15.21	44.71	.	66.40	43.52
2743-40	R	**B4**	278.72	26.74	15.36	44.41	.	66.54	44.93
G3.4.74	R	**B4**	.	41.30	23.03	.	.	.	.
G3.4.76	R	**B4**	.	37.65	28.95	.	.	81.10	55.71
G3.4.77	R	**B4**	.	.	27.24	.	.	82.81	56.65
2721-1	Fe	**B5**	399.60	42.42	32.13	106.14	39.70	89.16	77.44
2721-2	Fe	**B5**	400.85	42.28	30.09	111.29	35.88	94.79	76.67
2721-3	Fe	**B5**	426.30	42.84	32.01	112.61	38.40	91.99	.
2721-4	Fe	**B5**	455.60	49.60	35.76	137.36	41.31	111.00	88.54
2721-5	Fe	**B5**	463.50	48.02	35.17	133.51	41.49	110.76	87.20
2731-1	Fe	**B5**	408.20	41.79	28.28	106.69	36.63	92.32	74.83
2731-2	Fe	**B5**	399.40	41.52	27.69	101.57	35.78	89.77	73.38
2731-3	Fe	**B5**	385.20	40.22	29.58	109.77	35.18	90.01	72.94
2745-1	Fe	**B4**	476.90	48.03	.	126.10	44.83	107.29	86.67
2745-2	Fe	**B4**	457.95	43.34	33.22	111.58	35.41	96.54	83.45
2745-3	Fe	**B4**	439.60	48.12	33.13	120.49	39.41	111.07	.
2745-4	Fe	**B4**	374.00	42.79	27.59	.	36.93	88.92	75.57
2837-1	Fe	**B4**	466.05	49.24	37.01	147.17	43.61	.	.
2837-2	Fe	**B4**	484.45	51.54	36.90	127.34	45.80	109.14	.
G3.4.140	Fe	**B4**	381.10	42.01	29.02	.	37.74	88.90	76.21
2723-1	T	**B5**	268.50	30.74	28.53	89.57	65.84	67.66	40.94
2723-2	T	**B5**	264.10	29.49	27.95	91.77	65.79	66.80	43.50
2723-3	T	**B5**	317.00	35.59	33.57	110.31	78.96	81.94	50.05
2723-4	T	**B5**	272.61	28.02	29.31	90.64	69.19	.	43.15
2723-5	T	**B5**	271.30	27.19	25.02	87.76	63.23	68.32	38.50
2723-6	T	**B5**	271.87	33.37	32.96	98.03	70.65	73.81	43.63
2745-30	T	**B4**	248.25	29.07	28.96	90.41	64.76	66.15	40.64
2745-31	T	**B4**	253.45	28.81	29.04	86.89	64.89	67.04	38.63
2745-32	T	**B4**	301.89	35.52	33.57	.	.	83.65	50.23
2837-4	T	**B4**	300.28	30.45	30.21	103.21	70.57	81.30	45.04
2837-5	T	**B4**	308.05	35.45	36.17	.	.	87.02	52.96
2837-6	T	**B4**	289.80	31.65	31.54	92.38	67.01	74.38	43.64
2742-62	T	**B4**	.	36.09	34.37	.	.	.	.
2742-63	T	**B4**	307.34	35.74	34.03	.	.	86.57	49.30
G3.4.172	T	**B4**	.	.	.	94.08	68.94	.	.
G3.4.173	T	**B4**	261.60	27.21	27.35	87.65	61.60	68.03	41.20
G3.4.174	T	**B4**	.	35.00	31.87	.	.	84.73	49.29
G3.4.175	T	**B4**	245.00	26.22	25.96	80.37	.	.	36.82
G3.4.176	T	**B4**	.	33.40	34.13	.	.	82.68	49.28
G3.4.177	T	**B4**	301.80	33.68	34.85	110.63	.	74.62	.
G3.4.178	T	**B4**	288.35	36.28	35.18	101.47	.	.	.
2731-4	Fi	**B5**	238.35	8.66	8.43	24.32	24.36	30.60	19.73
2731-5	Fi	**B5**	235.16	10.49	9.73	28.09	.	27.94	21.41
2731-6	Fi	**B5**	236.74	7.80	8.30	26.39	26.19	31.60	19.90
2731-7	Fi	**B5**	252.42	9.37	8.54	26.06	.	31.39	.
2731-8	Fi	**B5**	.	.	.	31.25	27.68	.	.
2731-9	Fi	**B5**	.	7.75	.	.	.	30.61	20.79
2731-10	Fi	**B5**	.	.	9.87	29.57	27.67	.	.
2731-11	Fi	**B5**	.	8.67	.	.	.	36.01	25.37
2731-12	Fi	**B5**	.	.	7.98	23.03	.	.	.
2756-2	Fi	**A2**	.	.	.	.	.	34.88	.
2857-68	Fi	**B4**	266.69	10.23	10.05	28.72	37.54	36.76	24.25
2857-69	Fi	**B4**	273.68	11.57	9.37	25.07	25.19	29.59	24.46
2857-72	Fi	**B4**	.	9.68	.	.	.	28.57	21.80
2857-71	Fi	**B4**	.	8.86	.	.	.	29.22	.
2857-73	Fi	**B4**	.	9.76	.	.	.	30.14	20.85
2857-74	Fi	**B4**	208.09	7.26	8.05	19.69	23.84	24.75	22.82
2857-75	Fi	**B4**	.	11.68	10.05	.	.	28.54	27.55
2857-76	Fi	**B4**	.	.	7.21	23.88	22.89	.	.
2857-77	Fi	**B4**	230.89	8.68	7.12	20.91	23.52	28.55	24.03
2857-78	Fi	**B4**	222.92	8.44	8.11	21.28	24.27	29.44	18.14
2857-79	Fi	**B4**	209.38	7.72	8.24	17.88	22.92	25.03	23.02
G3.4.270	Fi	**B4**	.	10.19	.	.	.	32.61	25.37
2811-38	Fi	**A1**	.	8.70	.	.	.	35.54	25.41

Table A2 — List of the analysed data of metacarpal bones. For the explanation of the abbreviations see p. 273.

Coll-nb	Skel	Strat	GL	SB	SD	Bp	Dp	Bd	Dd	SBp	BJp	SBdE	BdE
2741-1	Mc I	**B5**	57.58	12.20	9.07	23.12	17.84	19.26	17.80	.	.	12.75	18.20
2741-2	Mc I	**B5**	58.34	12.37	8.65	23.36	19.12	19.21	15.81	19.54	13.10	11.41	16.87
2741-3	Mc I	**B5**	60.56	10.73	9.10	22.51	.	17.09	15.90	19.32	12.50	.	.
2741-4	Mc I	**B5**	60.98	13.96	10.49	25.55	.	19.70	17.29	19.76	.	13.31	17.91
2741-5	Mc I	**B5**	63.34	11.56	8.78	22.51	.	18.65	.	.	.	12.01	.
2741-6	Mc I	**B5**	54.93	12.10	9.22	.	22.01	15.90	15.69	.	.	10.46	.
2741-7	Mc I	**B5**	61.24	11.28	9.38	22.03	.	18.49	15.78	.	.	11.95	16.84
2741-8	Mc I	**B5**	72.48	12.30	10.31	27.24	.	21.02	18.18	.	.	.	20.62
2741-9	Mc I	**B5**	78.38	14.95	11.26	30.88	25.71	23.07	20.63	24.66	16.10	14.58	21.73
2741-10	Mc I	**B5**	.	15.78	10.75	29.32	.	24.03	19.13	.	.	16.02	21.24
2741-11	Mc I	**B5**	61.99	12.64	10.11	25.01	.	18.59	16.26	21.89	13.53	11.49	.
2741-12	Mc I	**B5**	63.23	12.37	9.53	24.83	18.79	19.30	17.51	.	12.75	12.93	17.83
2741-13	Mc I	**B5**	60.70	11.80	10.04	23.26	19.11	18.37	16.15	19.39	.	12.48	17.86
2741-14	Mc I	**B5**	59.57	11.22	8.75	24.38	19.67	17.33	15.94	18.69	13.06	11.70	17.24
2741-15	Mc I	**B5**	61.99	11.29	8.86	21.80	.	18.30	15.19	18.94	12.09	11.78	17.41
2741-16	Mc I	**B5**	57.68	12.58	8.99	23.37	.	19.04	15.58	19.56	12.44	11.27	17.07
2741-17	Mc I	**B5**	58.90	12.02	9.39	21.81	17.72	18.09	16.33	.	.	11.91	17.52
2707-6	Mc I	**B5**	.	11.58	10.11	21.75	20.48	17.78	.	.	12.99	11.24	.
2707-11	Mc I	**B5**	63.92	12.01	10.05	23.89	20.49	17.70	16.82	19.99	12.07	11.83	.
2707-16	Mc I	**B5**	60.81	11.30	9.64	.	.	18.10	16.28	19.38	13.11	11.88	16.99
2707-24	Mc I	**B5**	62.93	11.82	.	23.47	21.06	.	16.50	20.33	13.07	.	.
2820-2	Mc I	**A3**	68.54	14.87	11.64	26.37	25.15	20.36	19.37	.	.	13.08	.
2820-3	Mc I	**A3**	70.28	13.89	10.50	27.16	24.35	19.31	18.52	22.97	15.55	13.09	18.47
2820-4	Mc I	**A3**	71.48	15.83	11.18	28.26	.	22.37	.	24.75	.	15.11	.
2820-5	Mc I	**A3**	73.26	14.04	10.90	.	25.27	21.45	.	.	.	14.72	.
2820-6	Mc I	**A3**	69.18	13.74	10.64	.	24.23	.	.	.	.	14.48	.
2820-7	Mc I	**A3**	69.06	14.71	10.01	28.40	24.26	20.67	.	.	.	13.94	.
2202-5	Mc I	**A3**	59.98	12.31	9.38	25.60	.	20.67	.	21.72	.	13.58	.
2758-2	Mc I	**A2**	57.56	10.41	8.27	21.23	.	16.97	.	.	.	11.39	15.17
2758-4	Mc I	**A2**	67.95	15.05	10.08	27.95	25.04	20.78	18.47	23.66	15.07	14.10	19.87
2758-5	Mc I	**A2**	74.11	14.85	11.33	.	.	21.78	.	.	.	16.00	.
2742-25	Mc I	**B4**	65.64	12.90	9.64	26.81	23.41	20.21	.	23.04	14.88	14.28	20.92
2742-28	Mc I	**B4**	67.28	12.68	10.49	27.37	23.04	18.76	17.46	22.47	12.77	13.35	.
2742-15	Mc I	**B4**	72.28	14.85	10.92	27.55	26.25	22.30	19.64	24.66	.	14.18	21.21
2838-80	Mc I	**B4**	60.78	12.01	8.96	22.46	19.71	18.81	16.26	19.41	12.54	12.60	.
2838-81	Mc I	**B4**	59.56	12.30	9.13	.	20.44	16.58	.	18.57	12.67	11.49	16.63
2838-82	Mc I	**B4**	68.73	13.20	10.80	25.75	21.14	20.90	.	22.78	13.90	14.46	.
2838-83	Mc I	**B4**	60.15	11.83	9.54	22.11	19.55	16.55	17.62	19.13	10.85	11.73	17.53
2838-84	Mc I	**B4**	61.34	11.97	8.97	22.67	.	18.94	16.23	.	.	12.65	17.95
2857-40	Mc I	**B4**	68.26	13.25	10.45	25.34	21.91	21.08	18.18	22.65	13.30	13.91	20.06
2857-41	Mc I	**B4**	66.33	14.28	10.75	26.84	23.05	.	.	22.41	14.49	.	20.60
G3.4.300	Mc I	**B4**	56.75	11.20	8.18	21.42	17.90	17.65	16.46	18.31	12.68	12.37	16.05
G3.4.304	Mc I	**B4**	.	13.53	10.16	.	.	20.16	18.74	.	.	13.31	.
G3.4.301	Mc I	**B4**	56.41	11.21	8.20	21.77	.	17.37	.	17.74	.	11.90	.
G3.4.302	Mc I	**B4**	.	14.03	10.18	.	.	.	.	.	.	.	.
G3.4.312	Mc I	**B4**	58.83	11.56	8.14	23.57	.	17.01	.	19.41	.	12.09	.
2736-11	Mc II	**B5**	69.02	15.03	11.63	17.77	.	20.73	18.47	15.49	12.66	14.35	18.57
2741-33	Mc II	**B5**	85.49	18.81	13.43	22.37	.	28.84	22.08	21.07	17.14	18.91	24.33
2741-34	Mc II	**B5**	82.62	17.99	12.31	22.28	31.32	26.00	.	22.29	15.82	17.60	.
2741-35	Mc II	**B5**	78.07	16.70	12.17	20.34	28.90	24.73	19.06	17.99	.	16.07	19.95
2741-36	Mc II	**B5**	78.08	15.84	11.86	20.99	.	24.11	19.20	19.96	15.72	17.11	20.35
2741-37	Mc II	**B5**	75.10	14.85	10.66	18.29	.	22.45	18.95	18.35	14.52	14.63	19.35
2741-38	Mc II	**B5**	70.45	15.82	10.77	18.93	.	23.86	19.31	17.77	13.96	16.24	19.67
2741-39	Mc II	**B5**	69.28	14.83	10.74	19.35	.	22.56	17.81	18.60	13.58	15.15	18.99
2741-40	Mc II	**B5**	.	14.47	10.20	18.48	.	22.54	17.76	17.52	14.43	15.64	19.81
2741-41	Mc II	**B5**	70.81	15.04	10.92	19.42	24.78	23.32	18.73	16.85	13.50	15.71	18.98
2741-42	Mc II	**B5**	73.55	15.14	10.93	19.78	.	23.04	18.79	18.28	13.49	15.63	19.89
2741-43	Mc II	**B5**	73.93	14.38	9.70	19.79	.	22.49	18.08	19.03	14.52	14.41	.
2741-44	Mc II	**B5**	72.32	15.03	10.58	19.38	.	23.23	.	18.53	14.16	.	19.14
2741-45	Mc II	**B5**	79.96	15.67	11.57	20.39	.	24.12	.	18.96	14.47	17.44	.
2741-46	Mc II	**B5**	80.54	16.24	11.24	21.25	.	25.91	20.78	20.32	15.17	17.92	21.27

Coll-nb	Skel	Strat	GL	SB	SD	Bp	Dp	Bd	Dd	SBp	BJp	SBdE	BdE
2707-7	Mc II	**B5**	73.72	16.70	11.31	21.12	26.75	24.24	19.73	17.78	14.92	15.66	21.38
2707-12	Mc II	**B5**	.	16.49	11.34	20.21	27.20	23.48	19.28	.	.	15.56	20.43
2707-25	Mc II	**B5**	.	15.23	12.97	19.03	.	22.29	.	15.73	14.21	14.57	18.57
2820-18	Mc II	**A3**	84.88	18.63	14.62	23.23	30.61	27.40	.	21.64	20.07	17.11	.
2820-19	Mc II	**A3**	79.59	20.12	12.95	.	.	27.11	.	21.85	.	18.44	20.84
2820-20	Mc II	**A3**	76.70	19.44	13.35	23.89	29.22	26.67	.	21.35	.	18.53	23.17
2820-21	Mc II	**A3**	.	18.88	.	23.43	32.01	.	.	22.31	18.95	.	.
2820-22	Mc II	**A3**	.	19.15	.	.	.	.	.	22.03	.	.	.
2820-24	Mc II	**A3**	79.53	18.99	12.98	23.85	31.45	27.11	22.03	21.27	19.85	18.43	23.30
2820-25	Mc II	**A3**	.	16.75	11.13	21.07	.	24.05	18.65	17.64	.	16.74	.
2820-27	Mc II	**A3**	84.62	17.93	15.09	22.49	30.67	27.40	22.10	20.84	19.78	16.83	22.03
2758-12	Mc II	**A2**	.	20.22	14.58	.	.	.	.	.	.	.	.
2758-13	Mc II	**A2**	83.19	20.39	14.20	24.31	30.91	28.18	21.80	19.91	17.52	18.77	23.20
2742-11	Mc II	**B4**	68.31	17.09	11.05	20.18	25.89	22.96	19.92	16.70	13.45	15.18	19.43
2742-12	Mc II	**B4**	77.40	15.55	11.43	21.70	27.52	24.49	18.71	18.28	13.50	17.13	20.12
2742-13	Mc II	**B4**	84.20	19.01	14.64	23.31	32.72	28.18	.	21.42	14.81	19.27	24.20
2857-24	Mc II	**B4**	70.04	16.01	10.85	18.15	25.51	22.37	.	16.62	14.20	15.82	.
2857-29	Mc II	**B4**	68.75	15.65	10.49	19.24	25.23	22.56	18.00	19.22	.	15.80	19.85
2857-30	Mc II	**B4**	77.61	16.22	12.38	21.50	28.43	25.04	21.31	20.96	16.72	17.23	21.52
2857-32	Mc II	**B4**	84.00	20.17	13.69	24.51	30.64	27.70	21.31	22.28	18.67	18.23	24.03
2857-34	Mc II	**B4**	69.68	15.24	11.28	19.33	24.78	21.81	18.51	18.46	15.10	15.30	19.61
2857-35	Mc II	**B4**	70.12	15.58	10.79	19.31	24.63	22.50	19.10	18.36	14.11	15.33	19.89
2857-36	Mc II	**B4**	83.30	19.80	13.64	23.49	30.58	27.56	.	21.89	.	18.28	23.20
2857-37	Mc II	**B4**	77.56	16.35	12.50	21.47	.	25.07	.	19.81	17.20	17.24	22.23
2857-38	Mc II	**B4**	77.90	18.94	13.42	22.74	31.78	26.88	21.86	20.66	17.71	18.47	22.97
G3.4.303	Mc II	**B4**	69.50	15.55	11.60	18.96	24.68	22.20	.	16.56	14.52	15.78	.
G3.4.305	Mc II	**B4**	.	19.93	13.70	21.98	.	.	.	20.29	16.81	.	.
G3.4.306	Mc II	**B4**	69.80	16.13	10.98	20.16	24.65	22.73	19.10	17.51	15.00	15.46	19.65
G3.4.313	Mc II	**B4**	72.53	16.95	11.74	18.80	26.80	23.64	18.55	18.26	14.88	16.17	20.68
2741-19	Mc III	**B5**	85.90	.	14.68	22.42	.	.	22.91	.	17.05	.	.
2741-20	Mc III	**B5**	76.00	15.24	12.71	18.76	.	23.32	20.09	.	15.08	.	.
2741-21	Mc III	**B5**	73.95	14.86	.	18.99	26.66	22.28	19.02	13.23	14.98	14.07	.
2741-22	Mc III	**B5**	73.72	14.24	11.80	19.77	.	23.06	19.78	14.25	15.90	15.60	20.13
2741-23	Mc III	**B5**	76.21	17.86	10.86	18.56	26.32	22.20	18.34	13.63	14.47	14.34	.
2741-24	Mc III	**B5**	71.79	15.94	11.80	.	.	22.70	.	13.93	14.28	14.68	.
2741-25	Mc III	**B5**	70.90	14.46	10.37	20.20	.	23.34	18.37	14.11	15.52	15.56	20.12
2741-26	Mc III	**B5**	70.80	14.56	10.53	20.89	.	23.08	18.18	14.14	15.37	15.60	.
2741-27	Mc III	**B5**	72.75	15.48	12.34	20.04	.	24.51	.	13.10	14.67	15.39	.
2741-28	Mc III	**B5**	74.24	16.02	11.61	20.86	.	24.60	20.67	14.25	15.78	16.08	21.58
2741-29	Mc III	**B5**	80.87	15.51	11.91	20.68	.	24.73	20.70	14.42	16.66	16.80	.
2741-31	Mc III	**B5**	79.62	16.21	11.05	20.99	.	24.87	20.15	13.56	16.29	16.51	21.31
2741-32	Mc III	**B5**	84.50	15.80	12.44	21.74	.	26.43	22.15	14.88	15.98	17.40	21.80
2742-10	Mc III	**B5**	87.35	19.35	14.49	21.96	32.91	29.58	20.97	16.15	.	20.30	24.39
2742-14	Mc III	**B5**	86.22	17.65	14.37	25.03	32.24	27.26	23.63	18.29	18.66	17.21	23.55
2707-8	Mc III	**B5**	75.81	16.32	11.17	19.23	28.07	24.56	20.61	14.31	14.49	15.41	21.63
2707-13	Mc III	**B5**	75.58	16.16	11.37	19.44	.	24.12	20.08	14.34	14.92	15.53	21.65
2707-17	Mc III	**B5**	71.16	14.84	12.32	.	.	22.90	.	.	.	14.12	.
2707-26	Mc III	**B5**	.	14.75	12.91	18.92	.	23.79	.	.	.	14.17	.
2820-8	Mc III	**A3**	.	.	.	23.04	.	.	.	17.78	16.89	.	.
2820-9	Mc III	**A3**	89.68	18.57	13.43	22.94	.	27.53	22.34	17.65	17.46	17.02	23.41
2820-10	Mc III	**A3**	78.82	15.07	10.63	18.80	.	22.81	.	14.32	.	16.56	.
2820-11	Mc III	**A3**	75.63	15.82	11.13	20.16	.	22.77	.	.	15.37	16.23	.
2820-12	Mc III	**A3**	77.37	15.46	11.15	18.23	.	.	.	13.22	.	16.58	.
2820-13	Mc III	**A3**	90.69	18.37	13.43	23.21	.	.	22.90	16.82	18.42	16.83	23.26
2820-14	Mc III	**A3**	85.32	18.03	13.66	22.67	32.63	27.36	22.62	16.81	16.87	18.03	23.25
2820-15	Mc III	**A3**	80.31	18.43	13.75	21.24	.	26.20	.	16.26	16.20	16.23	.
2820-16	Mc III	**A3**	72.46	16.13	11.52	20.08	27.59	23.94	20.48	13.56	15.63	15.01	20.02
2820-29	Mc III	**A3**	.	19.35	14.56	22.91	.	27.61	.	.	.	18.78	.
2820-30	Mc III	**A3**	.	.	.	24.49	.	.	.	17.84	17.94	.	.
2758-6	Mc III	**A2**	87.91	18.14	14.96	23.48	.	28.50	.	16.90	17.31	18.67	25.75
2758-7	Mc III	**A2**	87.35	19.45	14.47	22.20	.	27.48	.	18.18	18.21	18.68	.
2758-8	Mc III	**A2**	89.70	20.48	13.90	23.20	35.23	29.62	23.50	18.77	18.51	20.13	26.29
2758-10	Mc III	**A2**	74.96	14.51	11.93	18.50	.	23.43	.	13.20	14.91	16.56	.
2857-13	Mc III	**B4**	72.18	15.06	10.65	17.83	.	21.79	.	12.75	13.52	14.62	.
2857-19	Mc III	**B4**	.	15.76	12.05	.	.	.	19.42	.	.	.	.

Coll-nb	Skel	Strat	GL	SB	SD	Bp	Dp	Bd	Dd	SBp	BJp	SBdE	BdE
2857-20	Mc III	**B4**	86.77	19.10	14.32	21.72	31.57	27.33	22.42	16.08	17.16	17.94	25.13
2857-21	Mc III	**B4**	.	14.81	12.77	21.02	29.92	25.14	21.74	15.16	15.00	17.52	22.25
2857-22	Mc III	**B4**	72.70	15.48	10.36	18.89	.	22.23	.	12.26	14.19	15.11	.
2857-25	Mc III	**B4**	73.36	14.88	10.82	19.12	25.77	22.84	19.28	13.50	14.40	15.72	20.16
2857-26	Mc III	**B4**	82.09	18.43	13.91	23.55	31.52	27.66	23.71	15.83	17.24	18.76	24.46
2857-27	Mc III	**B4**	82.46	14.91	11.84	20.76	.	25.27	.	15.70	14.99	17.72	.
2857-28	Mc III	**B4**	87.29	18.82	14.36	22.30	.	27.82	22.70	16.71	17.43	18.00	25.08
G3.4.307	Mc III	**B4**	.	15.65	11.81	19.39	.	23.45	18.89	.	14.75	15.09	21.02
G3.4.314	Mc III	**B4**	81.51	16.69	13.53	20.68	30.79	27.16	21.09	14.86	15.48	19.04	23.28
G3.4.223	Mc III	**B4**	89.62	18.79	14.08	24.62	.	29.60	23.28	17.39	16.55	18.79	24.47
2811-29	Mc III	**A1**	90.14	18.86	14.62	24.55	.	28.59	.	16.81	18.46	17.89	.
2811-30	Mc III	**A1**	84.59	18.61	14.33	22.79	34.12	26.97	22.80	16.61	18.28	18.13	.
2811-34	Mc III	**A1**	.	16.98	.	20.36	.	.	.	.	.	.	.
2744-11	Mc IV	**B5**	91.66	17.32	14.36	23.41	.	28.90	.	14.86	15.09	17.50	.
2744-12	Mc IV	**B5**	83.20	17.42	12.25	22.57	32.06	26.80	20.91	.	13.00	.	22.89
2744-13	Mc IV	**B5**	.	15.49	11.95	21.96	.	24.90	.	14.34	13.17	16.05	.
2744-14	Mc IV	**B5**	75.17	15.78	12.12	20.08	27.50	25.15	18.68	13.43	13.60	15.16	21.45
2744-15	Mc IV	**B5**	78.18	15.73	11.97	18.57	28.71	24.86	18.23	11.17	13.01	15.35	20.66
2741-30	Mc IV	**B5**	79.22	16.61	11.73	21.76	.	26.16	20.85	.	10.82	17.19	.
2741-47	Mc IV	**B5**	.	15.74	12.71	22.54	.	25.23	20.51	.	11.18	17.80	.
2741-48	Mc IV	**B5**	94.62	21.30	15.15	26.99	.	31.84	25.49	18.28	16.91	21.95	26.62
2741-49	Mc IV	**B5**	78.29	17.01	11.08	22.78	.	26.29	20.68	13.95	13.55	17.21	22.94
2741-50	Mc IV	**B5**	75.81	15.97	12.20	20.37	.	25.49	18.77	.	14.20	15.40	21.32
2741-51	Mc IV	**B5**	.	14.82	11.84	21.33	.	24.95	.	.	13.94	.	20.51
2741-52	Mc IV	**B5**	.	16.68	12.12	20.83	.	24.57	19.87	.	13.92	15.46	21.84
2741-53	Mc IV	**B5**	.	15.83	10.92	20.31	.	24.54	.	13.25	13.64	14.86	.
2741-54	Mc IV	**B5**	74.50	16.68	13.13	21.78	.	26.29	19.50	12.26	12.53	17.06	22.03
2707-9	Mc IV	**B5**	77.29	16.87	11.85	21.54	28.76	24.88	20.70	13.26	15.35	15.80	22.55
2707-14	Mc IV	**B5**	77.51	16.71	12.34	20.85	29.04	24.20	20.37	13.29	14.48	16.01	.
2707-23	Mc IV	**B5**	.	15.85	.	19.75	.	.	.	.	.	16.13	.
2707-27	Mc IV	**B5**	.	15.59	.	20.16	28.79	.	.	.	14.15	.	.
2820-31	Mc IV	**A3**	88.52	19.87	14.58	25.76	.	30.35	23.63	17.25	15.31	19.08	25.56
2820-32	Mc IV	**A3**	93.34	20.22	13.31	22.71	31.88	28.84	22.44	15.87	17.02	17.68	.
2820-33	Mc IV	**A3**	93.38	22.45	18.50	27.14	37.42	32.9	.	18.82	17.96	20.48	.
2820-34	Mc IV	**A3**	78.74	16.32	11.85		.	25.48	20.13	14.49	13.89	16.27	.
2758-9	Mc IV	**A2**	80.30	18.28	12.69	21.48	.	25.84	.	13.82	14.45	15.65	.
2758-15	Mc IV	**A2**	79.68	17.56	12.04	20.93	29.71	25.11	20.81	13.80	14.80	16.35	23.12
2742-9	Mc IV	**B4**	97.95	18.55	13.80	25.17	35.47	32.15	24.19	17.33	.	19.95	25.67
2742-3	Mc IV	**B4**	89.34	21.80	15.86	25.82	35.29	31.78	23.92	17.68	18.40	19.79	26.98
2742-4	Mc IV	**B4**	85.73	21.10	16.95	25.90	34.96	31.19	25.28	16.98	14.59	18.40	26.42
2857-9	Mc IV	**B4**	84.66	18.72	13.89	26.01	.	28.02	22.04	17.24	17.22	17.14	.
2857-10	Mc IV	**B4**	76.68	17.37	11.33	20.87	28.14	24.41	19.92	14.75	14.33	15.69	22.33
2857-11	Mc IV	**B4**	76.02	16.51	11.43	20.48	29.11	24.88	19.56	13.81	14.96	15.50	22.40
2857-12	Mc IV	**B4**	73.81	15.99	12.11	21.34	.	23.25	19.50	13.84	.	15.24	22.66
2857-14	Mc IV	**B4**	85.06	18.15	13.98	25.79	.	28.41	.	17.64	17.97	18.19	24.08
2857-15	Mc IV	**B4**	79.15	17.42	12.41	20.63	28.63	24.90	20.55	14.13	14.90	16.28	21.50
2857-16	Mc IV	**B4**	77.60	17.15	10.90		28.57	24.43	20.99	14.86	14.97	15.81	22.48
2857-17	Mc IV	**B4**	73.48	15.82	.	21.69	28.78	.	.	13.61	15.46	14.51	.
G3.4.308	Mc IV	**B4**	78.19	15.47	11.38	21.29	27.75	24.25	19.58	12.90	15.54	15.06	21.53
G3.4.309	Mc IV	**B4**	79.76	17.47	12.07	21.72	28.11	.	20.01	15.55	15.68	.	.
G3.4.310	Mc IV	**B4**	81.68	20.54	14.42	23.16	.	29.51	.	15.36	16.19	17.20	.
G3.4.315	Mc IV	**B4**	88.34	19.35	14.39	23.81	32.24	28.06	24.31	15.98	16.90	17.55	.
2744-1	Mc V	**B5**	80.85	15.84	12.35		29.35	25.84	20.55	.	9.91	19.45	24.46
2744-2	Mc V	**B5**	76.57	.	11.86	28.83	29.53	28.54	19.28	26.32	12.21	20.97	26.54
2744-3	Mc V	**B5**	76.44	16.16	12.92	.	31.32	26.06	20.31	26.93	11.73	19.34	25.04
2744-4	Mc V	**B5**	82.45	18.84	13.02	30.26	.	29.33	20.71	30.29	13.15	18.87	27.73
2744-5	Mc V	**B5**	81.30	16.69	13.09	30.04	31.64	26.96	19.74	29.01	12.07	19.25	.
2744-6	Mc V	**B5**	90.25	18.99	.	33.90	36.66	32.03	22.26	32.27	11.78	.	29.62
2744-7	Mc V	**B5**	.	18.15	11.64	.	.	28.76	.	.	12.00	19.38	.
2744-8	Mc V	**B5**	87.72	16.97	11.36	30.48	.	29.08	21.90	29.28	12.69	20.70	.
2744-9	Mc V	**B5**	79.31	17.48	.	31.34	34.99	28.44	20.59	30.08	14.47	20.04	26.26
2744-10	Mc V	**B5**	76.54	17.60	12.54	29.75	31.10	29.66	19.61	27.45	12.42	20.58	26.34
G3.5.1	Mc V	**B5**	.	21.30	14.98	38.77	.	30.77	23.33	35.59	13.48	23.53	29.44
2707-10	Mc V	**B5**	78.22	17.05	12.08	29.08	32.31	25.90	20.17	27.91	11.97	18.43	24.71
2707-15	Mc V	**B5**	78.09	17.39	12.12	28.87	31.21	26.24	20.34	27.64	12.63	19.58	25.63

Coll-nb	Skel	Strat	GL	SB	SD	Bp	Dp	Bd	Dd	SBp	BJp	SBdE	BdE
2707-18	Mc V	**B5**	.	17.29	14.16	.	.	.	.	.	.	18.27	.
2707-28	Mc V	**B5**	.	16.76	14.65	.	.	.	.	.	.	.	.
2820-36	Mc V	**A3**	.	15.27	.	27.97	.	.	.	27.81	10.31	.	.
2820-37	Mc V	**A3**	92.85	19.59	14.97	31.26	33.54	29.55	.	30.68	.	20.79	.
2820-38	Mc V	**A3**	94.29	20.80	15.06	36.04	37.26	32.01	25.17	34.85	12.63	22.48	29.60
2820-39	Mc V	**A3**	88.02	19.18	15.27	33.88	38.03	32.41	.	33.15	15.46	23.14	31.07
G3.3.1	Mc V	**A3**	99.17	20.33	18.31	34.62	40.27	34.22	.	33.99	15.34	24.40	.
2758-14	Mc V	**A2**	.	19.77	14.65	.	.	.	.	.	.	.	.
2758-16	Mc V	**A2**	87.82	24.15	18.22	35.90	36.05	34.49	.	36.04	16.40	26.74	.
2758-17	Mc V	**A2**	85.54	21.42	16.48	33.39	34.59	32.19	.	33.45	14.89	23.52	.
2742-5	Mc V	**B4**	.	19.98	13.71	35.08	36.08	30.55	.	33.27	14.05	23.43	.
2742-6	Mc V	**B4**	96.28	22.11	15.49	40.52	41.27	34.93	24.80	37.17	13.79	24.85	.
2742-7	Mc V	**B4**	95.39	21.22	15.49	38.52	38.99	32.69	25.42	36.56	13.77	24.35	.
2742-8	Mc V	**B4**	79.87	19.74	14.37	30.41	32.58	29.90	.	31.62	12.41	21.32	.
2857-1	Mc V	**B4**	72.68	16.74	10.43	27.80	.	24.25	.	27.46	11.62	17.51	24.41
2857-2	Mc V	**B4**	76.35	16.67	11.36	27.73	30.07	25.84	19.84	26.13	11.20	19.89	24.85
2857-3	Mc V	**B4**	74.96	16.64	10.21	25.79	28.34	24.53	.	25.81	11.40	17.78	24.48
2857-4	Mc V	**B4**	79.37	17.38	10.56	.	.	26.96	.	27.50	.	19.70	.
2857-5	Mc V	**B4**	79.88	18.41	12.01	29.02	29.71	25.26	.	28.52	.	18.65	25.19
2857-6	Mc V	**B4**	78.49	17.71	11.73	29.94	30.63	26.78	20.17	27.57	9.70	19.51	25.99
2857-7	Mc V	**B4**	80.39	17.08	11.84	28.20	28.47	25.03	20.16	27.82	11.02	18.54	25.75
2857-8	Mc V	**B4**	85.27	18.16	13.87	31.60	35.63	29.79	.	31.48	13.39	20.87	28.36
G3.4.311	Mc V	**B4**	72.36	16.13	10.49	26.12	29.29	24.21	.	26.33	10.87	17.35	.
G3.4.316	Mc V	**B4**	86.92	20.53	16.19	31.00	35.13	31.58	23.74	32.10	12.31	23.70	

Table A3 — List of the analysed data of metatarsal bones. For the explanation of the abbreviations see p. 273.

Coll-nb	Skel	Strat	GL	SB	SD	Bp	Dp	Bd	Dd	SBp	BJp	SBdE	BdE
2736-1	Mt I	**B5**	.	10.37	8.81	.	.	17.84	.	.	.	13.18	.
2736-2	Mt I	**B5**	53.35	9.74	7.76	20.80	20.44	15.88	13.97	19.00	11.80	11.29	14.78
2736-3	Mt I	**B5**	51.35	11.65	8.93	20.82	20.35	16.13	14.86	20.82	13.88	11.23	.
2736-4	Mt I	**B5**	53.61	9.53	8.32	22.74	24.64	17.06	14.67	21.22	11.17	11.86	16.42
2736-5	Mt I	**B5**	57.70	11.13	8.42	23.03	23.05	17.07	15.35	21.28	14.76	12.24	16.37
2736-6	Mt I	**B5**	52.24	10.48	8.57	22.12	.	16.42	14.95	19.80	.	11.55	16.80
2736-7	Mt I	**B5**	50.23	10.24	8.90	20.59	.	.	14.28	.	12.17	11.28	.
2736-8	Mt I	**B5**	53.64	11.14	8.85	20.73	.	16.23	.	.	.	11.58	16.02
2736-9	Mt I	**B5**	55.71	10.44	9.38	21.34	23.75	18.37	15.22	.	12.61	13.38	16.91
2741-18	Mt I	**B5**	56.46	12.15	9.29	24.33	23.90	17.49	15.22	23.49	13.35	12.20	15.75
2707-1	Mt I	**B5**	53.46	10.57	8.90	20.54	23.36	16.13	14.65	19.93	.	11.53	16.57
2707-19	Mt I	**B5**	.	.	8.51	20.08	.	.	.	.	.	.	.
2820-1	Mt I	**A3**	55.38	12.35	10.09	.	.	18.18	.	.	.	13.33	.
2202-1	Mt I	**A3**	57.84	12.18	10.41	24.20	25.66	.	17.29	.	14.50	12.57	.
2202-2	Mt I	**A3**	58.99	12.87	10.65	26.21	25.05	19.83	.	25.67	.	13.08	.
2202-3	Mt I	**A3**	58.07	11.76	10.02	23.64	25.38	17.34	.	21.29	.	12.72	16.79
2202-4	Mt I	**A3**	60.09	13.87	10.81	.	.	19.56	.	.	.	13.75	.
2202-6	Mt I	**A3**	55.36	12.28	10.07	20.80	.	17.20	.	.	.	12.72	.
2202-7	Mt I	**A3**	52.40	11.94	10.30	23.34	22.07	16.88	16.13	21.04	13.05	12.76	16.39
2202-8	Mt I	**A3**	55.00	13.23	10.45	24.76	.	18.41	.	23.61	.	12.66	.
2202-9	Mt I	**A3**	55.82	12.12	10.12	23.62	23.23	17.86	16.34	22.38	12.61	12.27	16.38
2797-1	Mt I	**A2**	61.21	11.76	10.54	24.86	21.88	16.71	.	22.50	.	12.88	.
2797-2	Mt I	**A2**	61.27	13.52	11.17	26.21	22.40	.	.	23.64	13.22	13.37	.
2797-11	Mt I	**A2**	60.94	13.37	10.85	27.07	25.80	19.22	17.55	23.26	15.19	13.79	.
2797-12	Mt I	**A2**	59.14	12.95	11.01	24.41	24.66	18.00	16.93	21.48	16.40	13.43	.
2758-1	Mt I	**A2**	57.22	12.05	8.71	22.43	.	17.93	.	.	.	13.20	.
2742-26	Mt I	**B4**	57.56	13.82	10.30	26.90	29.45	18.24	.	22.45	.	.	.
2742-27	Mt I	**B4**	60.39	14.40	10.31	25.26	.	20.83	.	.	.	13.80	.
2857-33	Mt I	**B4**	47.40	10.42	8.26	19.88	19.21	14.90	14.68	18.33	.	11.41	.
2857-39	Mt I	**B4**	62.49	13.57	10.38	26.82	21.68	20.13	18.55	22.02	16.34	14.57	19.96
2857-42	Mt I	**B4**	54.46	13.41	9.74	26.04	.	20.05	16.95	24.33	.	14.28	.
G3.4.317	Mt I	**B4**	.	10.53	8.82	.	.	15.90	.	.	.	11.89	.
G3.4.318	Mt I	**B4**	56.92	12.72	9.81	24.02	23.65	17.43	17.69	21.82	14.81	13.10	18.01
G3.4.319	Mt I	**B4**	48.31	10.57	8.18	19.29	.	14.49	14.57	.	.	11.02	.
G3.4.320	Mt I	**B4**	47.45	10.95	7.97	19.71	.	15.67	14.29	.	.	11.17	.
G3.4.321	Mt I	**B4**	.	13.79	10.36	.	.	.	.	.	.	13.54	.
G3.4.322	Mt I	**B4**	.	12.01	10.45	.	.	17.29	.	.	.	12.64	.
G3.4.323	Mt I	**B4**	50.69	11.26	9.99	20.22	20.45	17.45	15.16	19.28	12.33	12.05	15.62
G3.4.334	Mt I	**B4**	57.73	11.75	9.80	22.75	22.54	16.96	15.59	21.15	.	10.89	16.48
G3.4.339	Mt I	**B4**	.	13.65	11.21	.	.	.	.	.	.	13.47	.
2811-25	Mt I	**A1**	.	13.81	10.24	.	.	19.40	.	.	.	14.65	.
2736-10	Mt II	**B5**	74.52	14.38	11.07	17.87	.	22.19	.	15.71	11.60	15.85	19.36
2736-12	Mt II	**B5**	69.23	11.96	9.39	15.74	.	19.31	16.02	14.50	10.25	14.16	.
2736-13	Mt II	**B5**	67.02	13.65	11.09	17.30	.	21.38	16.91	14.89	11.15	14.24	18.77
2736-14	Mt II	**B5**	64.61	12.77	9.71	16.38	.	20.63	15.21	14.92	10.15	13.87	17.88
2736-15	Mt II	**B5**	63.24	11.39	9.51	14.47	22.90	18.92	14.29	13.09	.	13.14	15.56
2736-16	Mt II	**B5**	.	11.48	9.73	15.19	.	.	.	14.51	.	13.73	.
2736-17	Mt II	**B5**	61.25	11.14	8.09	15.85	.	18.79	13.57	13.87	9.93	13.48	16.47
2736-18	Mt II	**B5**	62.78	12.09	9.51	16.79	.	19.48	15.03	13.91	10.29	13.88	.
2736-19	Mt II	**B5**	61.26	11.56	8.11	15.42	.	19.35	13.69	14.26	11.00	13.72	17.41
2736-20	Mt II	**B5**	61.55	11.63	8.82	15.69	.	19.03	14.80	14.62	10.29	12.84	.
2736-21	Mt II	**B5**	63.55	12.19	8.34	15.50	.	18.85	14.74	13.01	9.00	12.56	.
2736-22	Mt II	**B5**	64.86	12.28	10.48	15.22	.	19.54	16.07	14.36	11.56	13.59	17.48
2736-23	Mt II	**B5**	64.98	12.82	9.55	16.40	.	20.43	15.00	14.50	11.38	13.82	17.27
2736-24	Mt II	**B5**	66.59	13.89	10.58	17.18	24.81	21.37	16.95	15.21	11.65	13.99	18.35
2736-25	Mt II	**B5**	67.36	13.42	9.70	.	.	.	16.01	14.83	11.52	.	.
2707-2	Mt II	**B5**	66.49	12.87	9.33	15.40	.	20.56	15.95	14.71	12.42	.	18.91
2707-20	Mt II	**B5**	.	11.46	9.06	14.24	22.35	18.63	.	13.14	.	13.03	.
2202-11	Mt II	**A3**	69.15	15.85	11.74	18.48	.	22.55	.	16.72	.	16.37	.
2202-12	Mt II	**A3**	68.77	15.69	10.93	16.27	.	21.73	.	.	.	15.28	.
2202-13	Mt II	**A3**	73.33	16.08	11.58	18.55	29.30	21.90	18.39	17.68	13.96	15.29	19.91
2202-14	Mt II	**A3**	69.43	15.74	11.17	17.87	.	23.38	.	.	12.07	16.50	.

Coll-nb	Skel	Strat	GL	SB	SD	Bp	Dp	Bd	Dd	SBp	BJp	SBdE	BdE
2202-15	Mt II	**A3**	71.49	15.72	10.23	17.40	.	.	.	16.64	11.98	15.13	.
2202-16	Mt II	**A3**	63.79	14.17	9.45	16.83	.	20.26	.	15.37	11.50	13.77	.
2797-4	Mt II	**A2**	74.35	16.65	11.28	19.87	.	23.11	17.61	17.74	13.22	15.47	19.73
2797-5	Mt II	**A2**	74.50	16.06	11.55	18.33	28.88	24.06	.	16.96	12.96	16.17	.
2797-8	Mt II	**A2**	70.62	14.44	10.20	15.55	.	20.50	.	14.11	11.46	14.64	.
2797-9	Mt II	**A2**	71.48	15.31	10.76	16.79	26.54	23.51	17.88	16.93	13.75	15.43	19.94
2797-10	Mt II	**A2**	75.43	15.83	12.24	18.59	30.29	23.86	.	.	12.79	17.45	.
2742-29	Mt II	**B4**	81.16	16.31	11.57	18.85	29.40	23.77	19.10	18.90	14.81	17.10	20.30
2742-30	Mt II	**B4**	73.70	13.12	11.25	19.25	29.67	22.01	.	16.64	11.30	15.70	19.53
2742-32	Mt II	**B4**	81.35	16.63	11.39	19.64	28.77	.	.	19.25	14.00	.	.
2838-67	Mt II	**B4**	68.89	13.19	10.31	15.57	.	20.81	.	14.89	11.60	14.96	18.20
2838-66	Mt II	**B4**	62.52	13.12	9.65	14.89	22.24	20.97	14.90	13.77	11.80	14.75	18.32
2838-68	Mt II	**B4**	62.56	12.71	9.25	15.47	22.03	19.77	15.11	14.42	11.74	13.55	17.39
2838-69	Mt II	**B4**	69.27	15.39	10.38	17.87	25.07	23.80	.	17.08	14.21	16.95	21.68
2838-86	Mt II	**B4**	63.45	13.62	9.69	14.63	23.26	20.11	15.83	14.06	10.45	13.40	.
2838-85	Mt II	**B4**	62.94	12.14	9.61	14.47	22.34	19.92	15.02	13.93	10.19	13.29	17.37
2857-31	Mt II	**B4**	67.39	14.93	10.68	17.69	26.43	23.08	.	16.74	12.13	15.62	.
G3.4.324	Mt II	**B4**	67.99	13.26	10.24	15.10	23.83	19.76	15.85	14.05	10.99	13.10	.
G3.4.325	Mt II	**B4**	70.17	15.21	9.86	17.91	26.05	22.35	16.68	16.55	13.45	15.87	.
G3.4.326	Mt II	**B4**	71.08	14.53	10.11	16.17	25.19	22.19	.	15.44	12.36	14.41	.
G3.4.327	Mt II	**B4**	.	15.58	10.53	18.62	.	23.72	.	16.37	12.28	16.14	.
G3.4.335	Mt II	**B4**	75.02	15.57	11.08	17.86	26.76	21.57	.	17.09	13.85	14.44	.
G3.4.340	Mt II	**B4**	69.11	13.68	11.14	16.82	24.40	21.73	17.14	14.78	11.17	14.97	19.00
2742-34	Mt II	**B4**	68.79	15.13	11.69	17.46	26.30	21.65	.	16.08	12.46	15.02	.
2811-24	Mt II	**A1**	.	15.44	12.18	18.83	.	22.45	.	16.22	.	15.45	19.45
2811-31	Mt II	**A1**	65.29	14.40	10.55	17.41	.	22.40	.	14.96	12.12	14.93	.
2811-32	Mt II	**A1**	67.23	14.27	10.55	17.06	26.27	22.00	.	16.47	13.52	15.46	.
2736-26	Mt III	**B5**	85.94	14.19	12.41	21.59	34.93	22.97	18.87	11.12	16.28	15.57	20.08
2736-27	Mt III	**B5**	72.62	14.13	9.71	17.37	.	20.85	16.74	10.22	14.32	13.33	17.71
2736-28	Mt III	**B5**	71.25	12.13	8.78	18.68	.	19.89	15.19	8.57	13.47	13.96	17.36
2736-29	Mt III	**B5**	72.24	13.65	10.48	16.90	.	21.18	16.06	9.87	14.65	14.65	17.86
2736-30	Mt III	**B5**	74.95	14.52	10.39	18.02	.	22.63	17.28	9.34	15.96	14.68	18.89
2736-31	Mt III	**B5**	70.39	13.77	10.81	17.70	27.43	20.50	16.36	9.75	13.81	13.80	17.17
2736-32	Mt III	**B5**	75.18	14.69	11.22	19.56	30.39	21.48	17.23	10.45	14.90	15.20	19.26
2736-33	Mt III	**B5**	75.96	14.45	12.31	19.51	.	21.44	17.37	11.31	14.11	14.56	19.13
2736-34	Mt III	**B5**	73.80	13.46	10.09	14.73	28.43	18.94	15.52	10.11	.	13.58	17.15
2736-38	Mt III	**B5**	74.60	14.86	10.81	17.16	28.37	22.36	17.80	9.90	14.52	14.48	18.60
2736-39	Mt III	**B5**	74.44	12.47	10.45	16.29	28.54	19.84	16.19	8.76	12.76	13.60	.
2736-40	Mt III	**B5**	79.07	15.09	10.54	19.63	30.58	21.34	17.41	10.49	13.95	14.85	17.92
2736-41	Mt III	**B5**	75.91	13.09	10.43	18.06	29.73	20.25	17.28	10.25	14.26	14.37	.
2707-3	Mt III	**B5**	74.36	13.92	11.21	18.60	.	21.48	17.24	10.25	14.90	.	.
2707-21	Mt III	**B5**	.	12.71	11.17	16.59	.	19.44	.	8.00	.	13.40	16.20
2202-17	Mt III	**A3**	82.65	16.38	12.30	19.05	33.16	25.40	19.91	13.08	18.69	16.56	21.59
2202-18	Mt III	**A3**	85.25	17.58	12.13	22.16	34.79	25.99	.	13.54	18.35	17.79	.
2202-19	Mt III	**A3**	86.26	16.05	11.86	19.60	32.3	22.81	.	12.55	.	15.37	.
2202-20	Mt III	**A3**	80.10	16.27	12.49	21.08	31.25	24.86	.	12.22	17.63	18.19	.
2202-21	Mt III	**A3**	78.33	15.66	11.55	20.00	32.05	25.11	17.72	11.34	.	17.35	21.21
2202-22	Mt III	**A3**	.	16.58	.	19.59	.	.	.	.	.	.	.
2202-24	Mt III	**A3**	77.90	16.89	12.30	20.60	32.03	24.36	.	13.49	15.60	17.08	.
2202-25	Mt III	**A3**	.	15.78	12.05	19.12	32.99	.	.	11.06	17.27	.	.
2202-26	Mt III	**A3**	81.44	16.16	12.09	19.80	33.26	24.48	.	11.30	.	16.33	.
2797-3	Mt III	**A2**	83.07	.	13.69	.	.	24.83	.	13.35	.	16.25	.
2797-15	Mt III	**A2**	79.21	15.07	10.38	17.54	.	23.15	.	11.83	.	17.06	.
2797-16	Mt III	**A2**	81.72	15.51	.	20.00	30.07	.	19.20	11.74	14.61	15.32	.
2797-17	Mt III	**A2**	72.64	13.17	9.66	15.78	.	18.69	.	9.97	.	14.22	.
2797-18	Mt III	**A2**	.	13.83	11.65	19.88	32.80	.	.	9.62	14.81	.	.
2797-19	Mt III	**A2**	83.96	17.54	.	22.38	34.21	24.24	.	13.04	17.30	17.38	.
2797-20	Mt III	**A2**	88.33	17.80	14.21	20.80	34.77	26.06	.	13.91	17.80	16.69	22.70
2742-33	Mt III	**B4**	86.92	19.23	12.86	23.25	35.75	24.78	.	12.56	18.83	17.24	.
2742-34	Mt III	**B4**	85.70	18.56	12.18	22.02	33.76	25.21	20.43	12.68	18.71	17.15	21.62
2742-23	Mt III	**B4**	83.43	20.40	12.36	22.94	35.01	25.88	.	12.15	18.18	18.23	22.39
2742-24	Mt III	**B4**	84.94	19.16	12.94	21.38	.	25.34	.	11.89	.	16.69	.
2838-64	Mt III	**B4**	71.67	15.57	10.80	17.48	27.34	22.14	15.98	11.97	14.04	15.04	18.77
2838-75	Mt III	**B4**	70.93	14.41	9.51	18.24	26.80	21.58	16.10	10.70	14.55	14.52	18.15
2838-71	Mt III	**B4**	70.83	14.94	10.18	18.13	27.10	20.89	16.75	10.94	13.94	14.88	.

Coll-nb	Skel	Strat	GL	SB	SD	Bp	Dp	Bd	Dd	SBp	BJp	SBdE	BdE
2838-70	Mt III	**B4**	79.23	15.25	11.55	17.82	26.45	22.19	17.11	11.72	.	15.78	.
2838-73	Mt III	**B4**	79.99	17.86	12.87	20.14	.	25.79	.	12.07	15.04	17.54	22.11
2838-74	Mt III	**B4**	72.40	15.15	10.34	17.86	27.49	20.89	16.50	11.08	13.97	14.75	18.42
2838-72	Mt III	**B4**	71.07	14.65	9.80	18.47	27.97	20.96	16.14	9.38	15.37	14.92	19.26
2838-54	Mt III	**B4**	80.16	17.24	12.63	20.46	31.72	.	19.10	11.96	16.10	16.87	21.40
2838-56	Mt III	**B4**	72.15	15.78	10.77	17.24	27.01	21.96	16.97	11.19	.	14.51	18.10
2838-53	Mt III	**B4**	79.74	16.19	11.73	17.91	26.94	22.92	.	12.58	.	16.58	.
G3.4.328	Mt III	**B4**	81.42	15.97	11.19	20.01	30.93	23.31	.	11.88	16.37	16.90	20.10
G3.4.329	Mt III	**B4**	77.57	16.65	12.34	19.42	.	22.32	.	12.01	.	15.78	.
G3.4.330	Mt III	**B4**	76.92	16.07	12.90	18.60	.	23.75	.	11.45	15.52	16.47	.
G3.4.331	Mt III	**B4**	81.54	14.13	10.84	19.38	.	22.54	18.12	9.21	16.16	15.81	18.90
G3.4.332	Mt III	**B4**	78.86	16.47	12.43	19.85	31.09	24.85	.	12.67	17.04	16.56	21.20
G3.4.336	Mt III	**B4**	83.13	15.91	12.55	21.09	32.53	24.83	.	12.29	16.99	16.67	.
G3.4.341	Mt III	**B4**	85.96	17.91	12.54	21.57	34.57	25.47	19.36	13.20	15.50	15.85	21.55
2811-27	Mt III	**A1**	77.50	16.65	11.91	20.89	32.32	23.88	.	11.54	.	16.92	18.48
2811-28	Mt III	**A1**	85.97	16.63	12.80	22.27	32.94	24.39	19.02	12.39	.	16.12	20.14
2811-35	Mt III	**A1**	.	17.12	13.12	20.60	.	.	.	10.49	.	.	.
2811-36	Mt III	**A1**	.	13.88	10.50	.	.	.	.	10.71	.	.	.
2736-35	Mt IV	**B5**	86.43	13.81	10.86	.	27.09	21.19	.	12.01	.	16.62	.
2736-36	Mt IV	**B5**	96.11	15.89	13.80	25.73	.	24.88	20.08	15.31	14.58	18.38	22.08
2736-37	Mt IV	**B5**	92.66	19.65	14.81	28.04	.	27.90	.	.	18.35	20.05	.
2736-42	Mt IV	**B5**	81.21	15.12	11.83	21.29	28.29	22.55	18.10	11.99	11.39	15.38	20.05
2736-43	Mt IV	**B5**	78.28	15.40	12.64	22.23	26.92	22.75	16.36	12.75	13.88	16.32	19.20
2736-44	Mt IV	**B5**	85.69	14.09	11.03	23.80	.	23.47	18.19	12.19	13.00	17.05	20.78
2736-45	Mt IV	**B5**	75.90	14.11	11.48	.	.	22.10	16.84	13.09	12.43	16.03	18.67
2736-46	Mt IV	**B5**	75.71	14.21	11.48	21.25	.	22.05	17.00	13.86	12.34	15.66	19.13
2736-47	Mt IV	**B5**	84.45	15.03	11.36	21.97	.	22.79	18.34	13.55	14.06	15.69	19.36
2736-48	Mt IV	**B5**	83.84	16.43	13.25	22.15	30.26	23.70	18.43	14.28	14.58	16.72	21.27
2736-49	Mt IV	**B5**	81.36	14.80	10.33	22.87	.	21.17	17.50	13.45	13.44	15.23	.
2736-50	Mt IV	**B5**	82.08	15.19	11.09	21.27	.	22.16	16.83	13.49	13.89	15.28	19.28
2736-51	Mt IV	**B5**	.	14.29	12.04	21.42	.	.	17.14	.	.	16.43	19.19
2736-52	Mt IV	**B5**	85.87	15.46	12.01	24.44	.	22.90	18.60	12.48	.	16.60	19.89
2736-53	Mt IV	**B5**	94.85	19.94	14.77	28.68	.	29.28	21.92	16.67	14.48	22.15	25.25
2707-4	Mt IV	**B5**	80.55	15.01	11.13	22.30	28.07	21.94	17.93	13.44	12.66	.	.
2202-27	Mt IV	**A3**	.	14.95	12.28	19.43	.	.	.	.	12.67	.	.
2202-28	Mt IV	**A3**	.	14.36	11.99	.	.	21.97	.	.	.	15.89	.
2202-29	Mt IV	**A3**	90.58	18.74	14.12	26.25	32.37	26.46	19.91	14.27	14.60	19.20	22.74
2202-30	Mt IV	**A3**	94.60	18.05	15.76	26.18	34.01	28.02	21.02	15.52	18.25	19.88	24.78
2202-31	Mt IV	**A3**	95.00	17.28	14.10	23.97	32.88	25.56	.	.	14.76	18.94	.
2202-33	Mt IV	**A3**	.	17.67	.	26.35	33.06	.	.	16.01	15.53	.	.
2202-35	Mt IV	**A3**	.	14.10	10.97	19.96	.	22.81	.	.	.	16.14	.
2797-13	Mt IV	**A2**	84.74	17.11	13.69	22.96	.	24.96	.	.	.	18.38	.
2797-14	Mt IV	**A2**	.	18.05	15.30	.	.	27.27	.	.	.	19.11	.
2797-26	Mt IV	**A2**	90.97	17.21	13.03	25.29	.	25.87	.	.	15.25	18.53	23.01
2797-27	Mt IV	**A2**	84.27	17.36	14.27	23.10	29.86	26.04	.	13.16	.	17.98	.
2797-28	Mt IV	**A2**	.	17.97	.	25.30	33.77	.	.	.	14.07	.	.
2742-19	Mt IV	**B4**	90.92	17.96	14.77	26.41	32.38	28.83	21.13	12.95	15.89	21.20	.
2742-21	Mt IV	**B4**	89.35	16.96	12.75	23.55	30.91	25.89	19.39	14.65	15.20	17.68	22.32
2742-20	Mt IV	**B4**	89.88	16.35	13.58	24.73	31.05	25.54	.	14.82	16.53	18.90	.
2742-22	Mt IV	**B4**	100.45	18.28	15.89	28.28	36.39	25.61	20.76	.	16.19	18.54	.
2838-45	Mt IV	**B4**	88.07	15.85	13.57	23.20	27.95	24.27	.	14.61	12.51	18.12	.
2838-47	Mt IV	**B4**	82.28	15.57	11.09	21.42	26.95	23.05	.	12.38	12.90	16.05	.
2838-55	Mt IV	**B4**	88.06	18.33	14.67	26.11	.	26.81	.	15.53	13.33	19.67	24.40
2838-57	Mt IV	**B4**	77.72	14.74	10.87	19.99	26.51	22.38	17.29	12.12	11.42	16.03	.
2838-58	Mt IV	**B4**	79.39	15.81	12.65	20.43	.	22.65	.	.	12.18	16.92	.
2838-61	Mt IV	**B4**	84.96	18.97	14.30	24.10	30.56	26.46	20.46	15.13	14.68	18.56	22.81
2838-63	Mt IV	**B4**	87.16	15.85	13.38	24.01	28.42	24.51	18.59	.	.	18.23	21.40
2838-60	Mt IV	**B4**	79.19	15.06	11.07	21.56	27.50	22.27	16.72	11.78	13.37	15.80	20.49
2838-62	Mt IV	**B4**	77.53	14.16	11.17	20.83	25.08	22.11	16.85	12.21	11.80	16.18	.
2838-59	Mt IV	**B4**	92.54	18.38	14.47	24.85	32.04	27.28	19.24	15.50	15.12	18.29	.
G3.4.333	Mt IV	**B4**	.	15.52	13.05	22.64	.	24.31	.	.	14.05	17.87	.
G3.4.337	Mt IV	**B4**	86.21	16.00	12.37	22.19	27.91	23.01	18.16	13.12	14.83	15.24	19.79
G3.4.342	Mt IV	**B4**	90.03	17.95	12.67	.	31.05	25.04	.	.	.	18.13	.
2811-26	Mt IV	**A1**	.	18.02	.	23.71	34.13	.	.	.	.	.	.
2811-33	Mt IV	**A1**	.	15.72	12.25	.	.	22.08	.	.	.	15.16	.

Coll-nb	Skel	Strat	GL	SB	SD	Bp	Dp	Bd	Dd	SBp	BJp	SBdE	BdE
2736-54	Mt V	**B5**	.	12.02	10.51	22.93	.	20.94	16.42	15.80	9.68	15.65	19.72
2736-55	Mt V	**B5**	84.45	12.93	12.78	26.20	30.36	24.69	17.85	18.47	12.69	16.77	22.15
2736-56	Mt V	**B5**	83.12	13.80	11.67	26.83	31.06	22.16	17.67	16.39	9.96	15.62	20.76
2736-57	Mt V	**B5**	88.04	12.39	10.63	28.14	34.60	23.54	17.28	18.15	12.41	17.86	21.91
2736-58	Mt V	**B5**	.	12.23	10.50	26.09	.	22.24	17.98	16.48	10.99	18.20	21.74
2736-59	Mt V	**B5**	.	14.25	11.66	27.41	.	.	.	18.96	.	.	.
2736-60	Mt V	**B5**	92.86	12.16	11.83	26.42	31.33	22.05	17.95	16.18	.	17.81	21.23
2736-61	Mt V	**B5**	.	12.03	11.58	.	.	19.79	16.05	.	.	15.96	.
2736-62	Mt V	**B5**	98.92	15.70	13.90	32.8	34.97	28.39	20.92	20.52	12.62	20.46	25.23
2736-63	Mt V	**B5**	.	14.35	11.53	.	.	24.36	17.93	19.40	11.34	18.28	22.38
2736-64	Mt V	**B5**	85.00	12.37	12.52	26.53	29.23	22.02	.	17.39	10.44	17.81	20.72
2736-65	Mt V	**B5**	79.60	12.64	11.45	26.25	27.76	21.63	18.05	17.39	11.06	14.81	20.43
2736-66	Mt V	**B5**	.	11.60	10.50	22.99	.	21.07	17.10	16.61	9.75	15.91	19.85
2707-5	Mt V	**B5**	84.52	14.15	11.43	27.95	31.49	.	19.10	18.16	11.20	17.38	22.65
2707-22	Mt V	**B5**	.	12.76	.	.	.	23.32	.	17.48	9.29	15.03	.
2202-38	Mt V	**A3**	.	15.77	14.34	.	.	26.31	.	.	.	18.95	.
2202-39	Mt V	**A3**	.	14.65	13.89	.	.	23.52	.	19.72	12.21	19.77	.
2202-40	Mt V	**A3**	.	15.97	.	.	.	.	.	18.19	10.64	.	.
2202-41	Mt V	**A3**	.	14.72	14.49	.	.	27.30	.	18.56	11.53	19.68	.
2202-42	Mt V	**A3**	.	16.85	14.58	29.80	.	26.71	.	20.28	.	18.70	.
2202-43	Mt V	**A3**	.	12.36	11.37	.	.	.	.	15.78	10.50	16.28	.
2202-44	Mt V	**A3**	.	15.94	13.80	.	.	26.09	.	18.51	.	19.19	.
2797-21	Mt V	**A2**	.	13.19	13.20	.	.	.	.	16.24	10.20	.	.
2797-22	Mt V	**A2**	.	14.51	13.79	.	.	.	.	.	.	19.91	.
2797-24	Mt V	**A2**	.	15.01	.	29.55	35.82	.	.	18.21	11.12	.	.
2797-25	Mt V	**A2**	92.90	14.41	14.72	29.31	34.76	27.17	.	19.32	13.66	17.67	.
2742-16	Mt V	**B4**	95.92	15.49	15.82	28.05	38.15	28.88	22.54	20.02	10.97	20.42	27.52
2742-17	Mt V	**B4**	101.50	15.82	12.47	30.60	38.33	26.22	19.43	19.66	11.37	21.40	23.75
2742-18	Mt V	**B4**	.	15.23	15.14	.	.	25.42	.	.	.	18.59	.
2838-43	Mt V	**B4**	.	13.73	13.33	.	.	22.57	17.32	17.73	12.25	16.62	22.94
2838-48	Mt V	**B4**	78.66	12.85	10.89	26.03	27.04	22.76	16.91	17.54	10.57	16.73	22.79
2838-46	Mt V	**B4**	90.17	13.54	14.44	28.94	31.94	24.58	19.17	18.59	.	17.34	25.11
2838-52	Mt V	**B4**	87.78	15.93	14.25	28.70	32.57	25.52	20.36	19.24	12.83	19.05	26.14
2838-51	Mt V	**B4**	.	14.16	13.33	27.90	.	22.88	.	17.27	12.00	17.73	.
2838-50	Mt V	**B4**	78.85	13.22	10.47	24.88	26.12	22.69	16.63	17.18	10.03	17.23	22.64
2838-49	Mt V	**B4**	84.96	13.95	11.59	25.48	30.95	22.57	17.56	16.51	10.69	16.91	.
G3.4.338	Mt V	**B4**	90.47	14.08	13.13	28.38	.	24.99	.	19.32	9.39	19.22	.
G3.4.343	Mt V	**B4**	.	16.33	13.21	29.34	.	25.89	18.83	19.52	14.17	19.80	24.07