

Corrections to: Femoral and Tibial Diaphyseal Cross-Sectional Geometry in Pleistocene *Homo*

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CORRECTIONS

These are corrections to the original version of this article (Trinkaus and Ruff 2012; [10.4207/PA.2012.ART69](https://doi.org/10.4207/PA.2012.ART69)).

Several of the values included in Tables A4 and A12 of this paper were incorrect, as summarized below. A corrected version of these tables (the latter for the femoral midshaft only) is available here as a combined file.

SUNGHIR 1

The right side midshaft (50%) femoral values for I_x and I_y (Table A4) and Z_x and Z_y (Table A12) were reversed. The correct values are included in the new table. However, we suggest using the left side values (unchanged from the original publication) in comparative analyses. The cross-sectional shape of the right femoral midshaft of this specimen is highly unusual (Trinkaus et al. 2014: Fig. 15-4). Its I_x/I_y ratio of 0.695 is more than 3 SD from the mean and well outside the range for other European/West Asian EUP/MUP femora in the sample. It is also very different from the much more normal left side value of Sunghir 1 (1.193). Bilateral asymmetry in overall rigidity (J, polar second moment of area) is also quite high in the Sunghir femoral midshafts – much higher than in any other known Late Pleistocene human (Trinkaus et al. 2014). Bilateral asymmetry in general is small in cross-sectional diaphyseal parameters of the human lower limb (Auerbach and Ruff 2006), except in pathological cases (e.g., Ruff et al. 2018). Although no specific pathology was identified in the Sunghir 1 right femur, it is not possible to evaluate other sections distal to midshaft due to its state of preservation. In light of its very unusual morphology, we recommend using the more normal-appearing left side values of Sunghir 1 in comparative analyses. Note that correct values were used in graphs in Trinkaus and Ruff (2012), and they were also listed correctly in Trinkaus et al. (2014).

In addition, for the femoral 35% section (Table A3), the side for Sunghir 1 was incorrectly listed as right – it should be left.

ZHOUKOUDIAN UPPER CAVE 67 AND 68

As noted in the original publication (Trinkaus and Ruff 2012), the midshaft femoral section outlines for Zhoukoudian UC 67 and 68 published in Weidenreich (1941), on which our femoral 50% section properties were based, are suspect. We recalculated section properties based on new CT scans of casts of the specimens (Xing et al. 2021; S. Xing, personal communication), which were used to establish periosteal contours, combining these with cortical breadths derived from Weidenreich's drawings (1941: Fig. 45) to reconstruct endosteal contours. The corrected properties are given in the new combined table here. The new properties have a negligible effect on the graphs presented in the original paper.

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CORRECTED TABLES A4 AND A12 IN TRINKAUS AND RUFF, PALEOANTHROPOLOGY 2012: 13–62 (bold = corrected values).

	Side	TA	CA	I _x	I _y	I _{max}	I _{min}	J	Z _x ¹	Z _y ²	Z _p ³	
Early Pleistocene												
KNM-ER 736	L	871	659	56553	60075	65146	51482	116628	2829	3130	5496	
KNM-ER 737	L	586	441	21538	32802	33140	20200	54340	1468	1917	3165	
KNM-ER 803a	L	626	504	27573	34793	38942	23424	62366	1816	2061	3598	
KNM-ER 1472*	R	464	400	16191	17987	20429	13748	34178	1168	1308	2303	
KNM-ER 1481a*	L	391	332	10167	14416	14848	9734	24583	863	1106	1847	
KNM-ER1808mn	R	551	478	20813	27251	27330	20735	48064	1441	1793	3006	
KNM-ER 5881/2												
Middle Pleistocene												
Ain Maarouf 1	L	506	428	19718	20306	22010	18015	40024	1271	1255	2663	
Berg Aukas 1	R	800	708	51599	51050	61019	41631	102649	2648	3058	5244	
Broken Hill E690	L	468	420	19363	15999	21229	14134	35362	1271	1255	2354	
Broken Hill E793	--	587	428	26198	25272	28746	22724	51470	1642	1853	3227	
Castel del Guido 1	R	666	582	42003	29626	43024	28605	71629	2219	1767	3716	
La Chaise-BD 5 ¹	R	502	410	17883	21149	21561	17471	39032	1290	1502	2595	
Ehringsdorf 5	R	814	666	52616	49833	57005	45444	102449	3201	2853	5575	
Gesher-B.-Y. 1	R	373	316	8991	13418	13513	8896	22408	802	1086	1774	
Kresna 11	L	591	454	23587	30202	30637	23149	53789				
Mammolo 1	R	761	609	51832	37927	51847	37911	89759	2979	2494	5087	
OH 28	L	576	410	18731	31758	32379	18110	50489	1418	1851	3077	
Tabun E1 ²	R	577	544	24709	28951	31218	22442	53660	1766	1902	3401	
Zhoukoudian 1	L	572	497	22521	29366	29673	22215	51887	1550	1884	3192	
Zhoukoudian 2	L	453	413	13726	19686	19702	13710	33412	1135	1432	2402	
Zhoukoudian 4	R	515	428	17804	24029	24769	17064	41833	1334	1571	2710	
Zhoukoudian 5	L	470	420	14573	20717	20762	14528	35290	1158	1352	2349	
Zhoukoudian 6	L	502	440	19282	21367	24295	16354	40649	1383	1407	2591	

	Side	TA	CA	I _x	I _y	I _{max}	I _{min}	J	Z _x ¹	Z _y ²	Z _p ³	
Neandertals												
Amud 1	L	749	660	44164	46307	55455	35016	90471	2522	2702	4825	
Chapelle-aux-Saints 1	L	725	606	38088	43120	43178	38030	81208	2263	2800	4658	
Feldhofer 1*	R	652	504	33955	30596	37384	27166	64551	2035	1981	3720	
Ferrassie 1	R	721	565	38744	42513	50953	30304	81257	2400	2515	4543	
Ferrassie 2*	L	728	581	35191	46398	46829	34761	81590	2235	2828	4687	
	R	601	461	24392	30914	32334	22971	55305	1718	1987	3441	
	L	627	482	27378	32515	35561	24332	59893	1809	2159	3673	
Fond-de-Forêt 1*	L	727	571	40732	41154	48582	33305	81886	2281	2571	4472	
Palomas 96	R	429	284	14158	15017	16739	12437	29175	1095	1200	2137	
Quina 5	R	618	537	29356	30141	30386	29111	59497	2090	1914	3693	
Rochers-de-V. 1	L	646	545	34007	30948	34057	30898	64955	2105	2108	3900	
Saint-Césaire 1	R	740	624	47905	38670	52020	34555	86575	2817	2258	4685	
Shanidar 4	R	768	610	46120	43883	47274	42729	90003	2398	2669	4667	
Shanidar 5	R	813	620	50193	49511	52327	47376	99704	2536	2818	4933	
Shanidar 6	R	548	414	21399	23735	23800	21333	45133	1405	1622	2805	
Spy 2*	R	616	493	27664	30579	31873	26371	58243	1779	1989	3488	
Tabun 1	R	497	427	16166	23002	23105	16063	39168	1265	1607	2681	
Tabun 3	R	390	328	11012	12960	14070	9902	23972	931	1046	1848	
MPMH												
Qafzeh 3 ³	L	576	438	30596	21246	30621	21221	51842	1734	1565	3084	
Qafzeh 8 ³	R	775	636	66853	35575	67446	34981	102428	2977	2236	4940	
Qafzeh 9 ³	R	770	624	53769	40845	54488	40126	94614	2660	2495	4784	
Skhul 3	L	708	523	42627	34322	42986	33963	76949	2208	2124	4018	
Skhul 4*	R	598	468	33312	23360	35271	21401	56672	1846	1660	3275	
	L	563	476	32067	20664	32860	19871	52731	1773	1571	3135	
Skhul 5	R	760	525	58890	32473	60811	30552	91363	2739	2233	4694	
	L	691	528	55730	25144	55776	25098	80874	2708	1784	4318	
Skhul 6	R	606	481	36153	22770	36963	21960	58923	1948	1614	3347	
Skhul 7	R	520	403	18906	22599	23880	17625	41505	1322	1568	2685	

CORRECTED TABLES A4 AND A12 IN TRINKAUS AND RUFF, PALEOANTHROPOLOGY 2012: 13-62 (bold = corrected values) (continued).

	Side	TA	CA	Ix	Iy	Imax	Imin	J	Zx1	Zy2	Zp3
EUP/MUP											
Arene Candide 1 ^{4*}	R	569	309	26000	15500	26000	15500	41500	1540	1199	2589
Barma Grande 2 ^{4*}	L	737	603	53900	33800	54500	33200	87700	2648	2158	4507
Cro-Magnon 1	R	790	642	71055	38435	71985	37505	109490	3255	2329	5280
	L	732	581	52695	37038	53069	36664	89733	2597	2341	4599
Cro-Magnon 4322	L	555	476	33207	18635	33607	18235	51842	1924	1334	3079
Cro-Magnon 4324	L	541	432	28345	18966	28477	18834	47311	1639	1424	2872
Dolní Věstonice 3	R	411	307	14539	11552	15495	10596	26091	1050	968	1890
	L	406	306	14290	11054	14348	10996	25343	1059	960	1893
Dolní Věstonice 13 [*]	R	574	429	27986	22501	28842	21646	50487	1707	1631	3103
	L	557	401	23190	22898	23519	22568	46087	1468	1617	2857
Dolní Věstonice 14 [*]	R	551	389	26759	19015	26790	18984	45774	1603	1395	2806
	L	552	404	29908	17673	29933	17648	47581	1722	1376	2926
Dolní Věstonice 16	R	614	422	36190	22041	36444	21787	58231	1928	1569	3294
	L	624	422	36490	22762	36704	22547	59251	1881	1637	3303
Dolní Věstonice 35	R	588	384	33208	20320	35131	18397	53528	1768	1344	2932
Grotte-des-Enfants 4 ^{4*}	R	717	545	52300	31400	52300	31400	83700	2605	1992	4322
Minatogawa 1 [*]	R	508	385	19190	19900	20590	18500	39090	1356	1469	2623
	L	499	401	19620	18950	20150	18420	38570	1386	1376	2566
Minatogawa 2	L	350	257	8460	9800	9800	8450	18260	750	853	1503
Minatogawa 3 [*]	R	390	354	13110	11500	13120	11490	24610	1034	956	1860
	L	391	365	12320	12460	12910	11870	24780	974	1032	1872
Minatogawa 4 [*]	R	327	236	8040	7880	8530	7390	15920	715	667	1299
Mladeč 27	R	498	391	23588	15493	24169	14912	39081	1554	1246	2632
Nahal 'En-Gev 1	L	455	390	18328	14981	18453	14856	33308	1297	1247	2372
Ohalo 2 [*]	R	660	506	47715	25000	49490	23225	72715	2337	1806	3936
	L	641	518	43365	24777	44031	24111	68142	2264	1752	3793

CORRECTED TABLES A4 AND A12 IN TRINKAUS AND RUFF, PALEOANTHROPOLOGY 2012: 13–62 (bold = corrected values) (continued).

	Side	TA	CA	Ix	Iy	I _{max}	I _{min}	J	Z _{x1}	Z _{y2}	Z _{p3}
EUP/MUP											
Paglicci 25 ^{4*}	R	615	482	34900	24300	34900	24300	59200	1918	1719	3397
Paviland 1 [*]	L	608	466	34298	22793	34466	22625	57091	1968	1593	3336
Pavlov 1 [*]	R	611	411	30665	25570	32324	23912	56235	1748	1720	3220
	L	633	423	28040	30871	34266	24645	58911	1672	1972	3368
Rochette 2 ^{3*}	R	524	443	23200	20700	24400	19500	43900	1494	1526	2803
Sungghir 1 ⁵	R	788	591	40076	57640	60680	37036	97716	2250	3063	4927
	L	678	518	40882	34264	48086	27060	75146	2161	2114	3961
Sungghir 4 ⁴	L										
Veneri 1 ^{4*}	L	767	617	61300	36000	61400	35900	97300	2967	2205	4864
Veneri 2 ^{4*}	L	671	543	44100	28700	44300	28400	72800	2327	1886	3946
Willendorf 1	R	477	375	20811	15249	21036	15025	36060	1376	1228	2437
Zhoukoudian-UC 67 ⁶	R	618	498	41466	21613	41468	21611	63079	2138	1662	3262
Zhoukoudian-UC 68 ⁶	R	535	404	29580	15995	29586	15988	45574	1713	1353	2624