

Annex**Table 1.:** Fossil, Pleistocene period *Equus* sp. metatarsus III external sizes and values calculated from those**1. táblázat:** Fosszilis, pleisztocén korú *Equus* sp. metatarsus III. külső méretei és a belőlük számolt értékek

<i>Inventory number</i>	<i>Length</i> <i>GL mm</i> $\pm 0.1mm$	<i>Circumference</i> <i>mm</i> $\pm 0.1mm$	<i>Bp</i> <i>mm</i> $\pm 0.1mm$	<i>Dp</i> <i>mm</i> $\pm 0.1mm$	<i>Diw</i> <i>mm</i> $\pm 0.1mm$	<i>Did.</i> <i>mm.</i> $\pm 0.1mm$	<i>Bd</i> <i>mm</i> $\pm 0.1mm$	<i>Dd</i> <i>mm</i> $\pm 0.1mm$	<i>Slenderness</i> <i>index</i> $\frac{Diw}{GL}$	$\frac{Diw}{Did}$	<i>Withers</i> <i>height cm,</i> <i>according to</i> <i>Vitt</i>	<i>Bone description</i>
ö/6.Pfadt	287.00	125.00	61.00	51.00	39.00	37.00	60.00	45.00	13.60	1.054	150.10	Intact bone
ö/8.Pfadt	277.00	122.00	54.00	-	35.50	36.50	53.00	36.00	12.80	0.972	144.87	Young adult, growing
ö/12.Lavina	288.0	131.0	63.6	48.6	41.0	39.2	62.1	47.0	14.20	1.046	150.62	Intact bone
ö/13.Lavina	276.0	124.0	55.0	45.5	38.9	37.2	54.1	41.3	14.10	1.046	144.35	
ö/14.Lavina	283.8	137.0	59.0	50.0	40.0	38.0	59.0	45.0	14.10	1.053	148.43	
ö/15.Köka	282.0	128.0	51.0	45.0	39.2	38.0	53.0	41.0	13.90	1.032	147.49	Slightly worn
ö/16.Majosháza	287.00	135.00	60.5	50.00	42.00	39.50	60.70	46.60	14.60	1.063	150.10	Intact bone
ö/17.Pfadt	287.00	125.00	60.50	49.00	38.30	37.00	59.50	45.00	13.40	1.035	150.10	Intact bone
ö/18.Laseberg	294.0	134.0	63.0	52.0	43.0	39.0	60.5	45.0	14.60	1.103	153.76	Intact, cracked lengthwise

ö/19.Majosháza	281.5	123.0	55.0	46.0	38.0	37.8	56.0	43.0	13.50	1.005	147.20	The proximal end worn, cracked lengthwise
ö/20.Majosháza	293.0	126.0	52.2	46.0	39.2	37.1	51.0	38.2	13.40	1.057	153.24	The proximal joint end is slightly worn
ö/21.Pfadt	290.0	123.0	57.0	51.0	37.5	36.8	58.0	45.0	12.90	1.019	151.67	Not worn, cracked
22/Pfadt	-	102.00	53.00	46.00	29.00	32.00	-	-	-	0.906		Juvenile
ö/22.Majosháza	286.0	137.0	55.0	-	42.0	37.2	53.2	38.0	14.70	1.129	149.57	The proximal joint end is broken, the remain is post mortem fragmented
ö/23.Majosháza	282.0	126.0	52.0	46.0	38.0	38.2	51.0	38.0	13.50	0.995	147.48	Slightly worn. damaged
ö/24.Majosháza	277.0	118.0	54.5	44.0	37.6	35.0	53.0	37.0	13.60	1.074	144.87	Slightly worn. Fractured
ö/25.Majosháza	-	124.0	55.5	47.6	38.5	37.9	-	-		1.016	-	The distal joint end got broken
ö/26.Lavina	286.0	125.0	47.0	43.0	37.0	39.5	43.0	31.0	12.90	0.937	149.58	Slightly worn, arrosion on the surface
ö/27.Kiskunlacháza	284.0	127.0	57.2	-	40.2	37.8	55.2	43.0	14.20	1.063	148.53	At the proximal joint end has a recent damage

ö/28.Kiskunlacháza	272.0	119.0	54.0	43.0	37.0	36.8	-	41.0	13.60	1.005	142.26	Slightly worn, the medial side of the distal joint end is damaged
ö/29..Pfadt	297.0	130.0	62.0	48.2	41.6	38.8	61.5	44.9	14.00	1.072	155.33	Intact bone. in the dorsal area of the diaphysis under the <i>foramen nutriticum</i> . several flat exostoses can be found (former injury)
ö/30.Laseberg	278.5	120.0	51.5	44.9	38.10	37.0	52.0	40.5	13.70	1.030	145.65	Cracked, good preservation
ö/31.Laseberg	287.0	111.0	50.5	42.8	33.0	35.0	50.0	34.0	11.50	0.943	150.10	Slightly worn, the external layer is cracked on the medial side
ö/32.Lavina	288.0	120.0	50.0	41.0	38.0	35.0	51.0	35.5	13.20	1.086	150.62	Intact, fractured
ö/33.Laseberg	299.4	126.0	58.0	48.8	40.0	38.5	56.8	39.5	13.40	1.039	156.59	Slightly deliquescent
ö/34.Laseberg	292.0	121.0	55.0	42.0	35.4	38.9	56.0	41.0	12.10	0.910	152.72	Intact
ö/35.Laseberg	290.6	124.0	55.6	49.0	37.0	38.0	55.0	42.0	12.70	0.974	151.98	Fractured
ö/39.Pfadt	278.0	117.0	53.3	45.0	35.2	36.2	54.8	39.8	12.70	0.972	145.40	Intact bone
ö/40.Laseberg	286.4	118.0	53.1	44.0	36.0	35.2	51.7	38.1	12.60		149.79	Intact bone

ö/41.Laseberg	282.8	131.0	60.9	51.0	43.0	39.0	60.0	45.1	15.20	1.103	147.90	Intact bone
ö/42.Pfadt	274.0	122.0	56.3	46.0	37.0	36.8	52.6	40.0	13.50	1.005	143.30	Intact bone
ö/43.Ócsa	-	125.0	57.4	-	39.6	37.9	-	-		1.045	-	The proximal end is damaged, the distal end has broken off
ö/44.Ócsa	280.0	131.0	57.2	43.2	41.8	37.2	52.0	37.6	14.90		146.44	Intact bone, the joint ends are slightly worn
45/Pfadt	-	131.00	56.20	48.00	40.20	39.00	-	-	-	1.031	-	Prox. end
46/Pfadt	-	128.00	57.20	44.00	41.00	37.40	-	-	-	1.096	-	Prox. end
30/D.Danube.Dunaföldvár	296.0	132.0	57.7	52.20	41.10	38.0	54.80	40.00	18.50	1.083	154.81	
40/D Danube.Dunaföldvár	292.00	119.0	52.15	42.82	36.04	34.71	54.33	34.93	12.30	1.038	152.72	
43/D.Danube.Dunaföldvár	284.0	122.0	56.88	46.35	39.20	36.04	54.19	42.45	13.80	1.088	148.53	
44/D Dunaföldvár	287.00	130.00	55.96	48.38	39.35	40.23	54.40	39.2	13.70	0.978	150.10	slightly worn
45/D.Danube.Dunaföldvár	286.0	124.0	57.26	50.00	38.37	36.35	56.00	40.66	13.40	1.056	149.58	
46/D Danube.Dunaföldvár	288.0	125.0	58.04	54.22	39.06	36.75	55.55	44.52	13.60	1.063	150.62	
56/DDanube.Dunaföldvár	296.0	130.0	60.68	55.40	39.42	39.36	58.39	44.64	13.30	1.002	154.81	
65/D Danube Dunaföldvár	-	112.0	-	-	36.43	32.16	-	-	-	1.133	-	fragment
ö/66 Majosháza	283.30	124.00	54.00	45.00	39.00	38.0	53.00	42.00	13.80	1.026	148.17	slightly worn
ö/69 Majosháza	282.30	127.00	57.00	46.60	40.00	38.50	56.40	40.50	14.20	1.039	147.64	intact bone

Table 2.: Fossil, Pleistocene *Equus sp.* metatarsus III bone cortex measurements and values calculated from those**2. táblázat:** Fossilis, pleisztocén korú *Equus sp.* metatarsus III. csont kéregállomány méretei és a belőlük számolt értékek

<i>Inventory number</i>	\bar{P}_n mm ±0.01 mm	<i>Cmax</i> mm ±0.01 mm	<i>Cmaxloc</i> angle degree ±1° X	<i>Cmax_{97-100%}loc</i> angular range 2° Y	$\frac{Cmax}{\bar{P}_n}$ Load int.	$\left(\frac{Cmax}{\bar{P}_n} \times \sin Y\right) \times 10$ Durability of load	$\left(\frac{Cmax}{\bar{P}_n} \times \frac{1}{\sin Y}\right) \times \cos X^2$ Life history	<i>The age group of the specimen, the condition of the bone, the circumstance of imbedding</i>
ö/6.Pfadt	8.61	14.44	97°28'	25°	1.677	7.087	0.0682	Adultus
22./Pfadt	5.00	9.11	84°25'	20°	1.822	6.231	0.1465	Juvenilis, in the distal epiphysis zone the joint end came away, distal epiphysis unfused
ö/31.Lberg	5.82	11.00	95°	10°	1.890	3.282	0.083	Subadult
ö/34.Lberg	7.12	12.00	102°28'	20°	1.685	5.763	0.2320	Young adultus
8./Pfadt	6.02	10.53	105°	20°	1.749	5.982	0.3426	Adultus
ö/30.Lberg	9.45	16.50	100°	15°	1.746	4.519	0.2033	Adultus
ö/32.Lavina	7.68	14.00	90°	30°	1.82	9.10	0.00	Adultus
ö/24.Mháza	9.37	14.50	117°32'	10°	1.548	2.688	1.905	Adultus low withers height
ö/18.Lberg	9.03	15.50	90°	25°	1.716	7.252	0.00	Adultus
ö/18.Lberg		13.25	155°	5°	1.467	1.279		Pregnancy?
ö/27.Klháza	8.32	14.00	87°48'	20°	1.684	5.760	0.0091	Adultus
ö/15.Köháza	7.63	14.65	112°28'	20°	1.919	6.563	0.836	Adultus, cow hocks?
21./Pfadt	7.57	15.00	105°	25°	1.980	8.368	0.314	Adultus
ö/23Pfadt	7.97	17.45	100°	15°	2.190	5.668	0.255	Adultus

ö/14.Lavina	8.08	15.16	102°21'	30°	1.876	9.380	0.180	Adultus
ö/28.Klháza	8.67	18.05	105°	25°	2.083	8.803	0.330	Adultus, small withers height
ö/26.Lavina	7.73	16.80	100°	20°	2.173	7.432	0.299	Adultus
ö/16.Mháza	8.76	15.70	115°	20°	1.792	6.129	0.351	Adultus, slightly open leg position?
ö/35.Lberg	7.64	14.20	102°28'	25°	1.859	7.856	0.2071	Adultus
ö/23.Mháza	6.78	13.95	107°28'	15°	2.057	5.324	0.722	Adultus
ö/29.Pfadt	8.11	16.92	105°	15°	2.086	5.398	0.5398	Adultus
ö/39.Pfadt	6.69	13.33	95°	20°	1.992	6.813	0.044	Adultus
ö/42.Pfadt	8.23	16.55	98°29'	15°	2.010	5.203	0.170	Adultus
ö/45.Pfadt	7.01	15.16	105°	20°	2.163	7.397	0.4236	Adultus
ö/46.Pfadt	7.87	15.64	97°28'	25°	1.987	8.397	0.081	Adultus
ö/20.Mháza	6.97	15.40	92°28'	20°	2.21	7.558	0.0126	Adultus
ö/17.Pfadt	7.25	14.76	107°28'	25°	2.035	8.599	0.437	Adultus
ö/22.Mháza	8.61	13.56	104°53'	45°	1.574	11.129	0.151	Adultus
ö/12.Lavina	9.22	15.05	90°	40°	1.633	10.497	0	Adultus
ö/13.Lavina	8.60	16.10	107°28'	10°	1.872	3.250	0.979	Young adultus, <i>post mortem</i> deformation
ö/33.Lberg	9.79	16.40	90°	15°	1.676	4.337	0	Adultus
ö/33.Lberg		13.90	152°29'	5°	1.420	1.238		Pregnancy?
ö/41.Lberg	8.69	16.00	114°53'	15°	1.841	4.765	1.282	Adultus, open leg position?
ö/19.Mháza	8.45	17.55	90°	10°	2.077	3.606	0	Adultus
ö/19		12.10	152°29'	5°	1.432	1.248		Pregnancy?
ö/25.Mháza	7.07	13.60	86°	30°	1.925	9.625	0.0188	Adultus
ö/43.Ócsa	7.713	16.45	97°28'	20°	2.134	7.298	0.107	Adultus

ö/44.Ócsa	7.85	14.90	114°56'	30°	1.898	9.49	0.681	Adultus, slightly open leg position?
ö/40.Lberg	7.57	13.55	97°28'	25°	1.790	7.565	0.055	Adultus
30/D Dunaföldvár	7.15	14.65	105°	20°	2.049	7.008	0.401	Adultus
40/D Dunaföldvár	7.77	13.30	100°	5°	1.712	1.493	0.592	Young adultus
43/D Dunaföldvár	8.87	14.35	90°	25°	1.618	6.838	0.000	Adultus
45/D Dunaföldvár	7.22	13.65	109°55'	15°	1.891	4.894	0.794	Adultus
46/D Dunaföldvár	7.20	12.85	95°	20°	1.785	6.105	0.0397	Adultus
ö/56 Duna Dunaföldvár	8.02	15.55	102°28'	15°	1.939	5.020	0.015	Adultus
65/D Dunaföldvár	6.21	12.53	100°	15°	2.020	5.228	0.2353	Adultus
65/D Dunaföldvár		10.89	145°	5°	1.750	1.525		Pregnancy?
ö/66.Mháza	6.74	12.10	99°	10°	1.795	3.117	0.2530	Adultus
ö/69.Mháza	8.25	16.71	100°	15°	2.025	5.242	0.2359	Adultus

Table 3.: Domesticated horse, not working, metatarsus III external sizes and calculated values**3. táblázat:** Házasított ló, munkára nem fogott, metatarsus III. külső méretek és számított értékek

<i>Inventory number</i>	<i>Length GL mm ±0.1mm</i>	<i>Circumference mm ±0.1mm</i>	<i>Bp mm ±0.1mm</i>	<i>Dp mm ±0.1mm</i>	<i>Diw mm ±0.1mm</i>	<i>Did mm ±0.1mm</i>	<i>Bd mm ±0.1mm</i>	<i>Dd mm ±0.1mm</i>	<i>Slenderness index $\frac{Diw}{GL} * 100$</i>	<i>$\frac{Diw}{8Did}$</i>	<i>Withers height cm, according to Vitt</i>	<i>Bone description</i>
ö/8.recent	266.00	77.00	49.00	39.50	24.00	23.00	44.50	34.00	9.00	1.043	cannot be interpreted	0 days old, Hungarian half-bred mare foal
ö/72.recent	277.50	85.00	49.30	40.00	25.30	25.50	44.40	36.20	9.12	0.992	cannot be interpreted	1 week old, Hungarian half-bred stallion foal
ö/38.recent	267.30	78.00	49.90	48.20	23.20	23.20	47.80	35.00	8.70	1.000	cannot be interpreted	4 weeks old, Hungarian half-bred mare foal
ö/2 recent	272.00	101.00	47.00	42.00	32.00	30.04	51.00	38.00	11.80	1.065	142.30	1-2 years old, Hungarian half-bred stallion colt

ő/6.recent	299.3	121.00	62.20	53.60	39.00	37.00	61.90	47.90	13.00	1.054	156.53	2 years old, Nonius stallion colt
ő/7.recent	279.00	115.00	57.80	48.00	35.80	35.70	54.20	42.00	12.80	1.003	146.00	3 years old, quoter horse mare
ő/3.rec	280.0	103.00	53.00	41.00	32.00	30.50	51.2	40.00	11.43	1.049	146.44	Between the age of 3-4 years, subadult stallion
ő/73.recent	308.00	133.00	66.00	62.50	41.90	39.80	68.00	53.00	13.60	1.053	161.08	6 years old, held in corral Hungarian half-bred stallion
ő/68.recent	315.00	126.00	62.50	52.50	39.0	38.00	60.00	47.00	12.40	1.037	164.75	7 years old, Hungarian half-bred castrated

Table 4.: Domesticated horse, not working, metatarsus III bone cortex measured values and values calculated from those**4. táblázat:** Házasított ló, munkára nem fogott metatarsus III. csont kéregállomány méretei és a belőlük számolt értékek

<i>Inventory number</i>	\bar{P}_n mm ±0.01 mm	C_{max} mm ±0.01 mm	C_{maxloc} angle degree ±1°	$C_{max_{97-100\%loc}}$ angular range ±2°	$\frac{C_{max}}{\bar{P}_n}$ Load int.	$\left(\frac{C_{max}}{\bar{P}_n} \times \sin Y\right) \times 10$ Durability of load	$\left(\frac{C_{max}}{\bar{P}_n} \times \frac{1}{\sin Y}\right) \times \cos X^2$ Life history	<i>The age, life history and circumstance of keeping the specimen</i>
ö/8.rec	3.94	4.00	97°33'	75°	1.015	9.803	0.019	0 day, not exposed to load. therefore the durability of load cannot be interpreted
ö/72.rec	4.19	4.48	97°21'	20°	1.069	3.656	0.051	1 week old, Hu. half-bred male foal
ö/38.rec	4.18	5.55	95°00'	35°	1.327	7.612	0.155	4 week olds, Hungarian half-bred mare, lived in a box near her mother
ö/2.rec	8.24	11.11	114°56'	50°	1.348	10.326	0.313	Between the age of 1-2 years, Hu. half-bred stallion colt, the right rear leg is injured, left leg is under increased load (met. III right)
ö/6.rec	7.68	14.40	100°00'	30°	1.875	9.375	0.113	2 years old, Nonius stallion colt, the right rear leg is severely injured, left leg is under increased load, kept tied to a stall, static load
ö/7.rec.	9.05	13.88	95°00'	25°	1.533	6.478	0.0276	3 years old, quarter horse mare, lived in flat sandy grassland, his leg was injured
ö/3.rec.	7.74	11.42	107°28'	40°	1.475	9.484	0.2069	Between the age of 3-4 years, subadult stallion colt, grazed on rope leash. kept in stable tied down
ö/73.rec.	9.14	13.30	113°54'	60°	1.455	12.602	0.276	6 years old, stallion with Friesian physique, lived in corral
ö/68.rec	7.90	15.5	107°	20°	1.962	6.710	0.4904	7 years old, castrated, did not work, grazed

Table 5.: Mounts, metatarsus III external sizes and calculated values**5. táblázat:** Hátas ló metatarsus III. külső méretek és számított értékek

<i>Inventory number</i>	<i>Length GL mm ±0.1mm</i>	<i>Circumference mm. ±0.1mm</i>	<i>Bp mm ±0.1mm</i>	<i>Dp mm ±0.1mm</i>	<i>Diw mm. ±0.1mm</i>	<i>Did mm. ±0.1mm</i>	<i>Bd mm. ±0.1mm</i>	<i>Dd mm ±0.1mm</i>	<i>Slenderness index$\frac{Diw}{GL}$</i>	<i>$\frac{Diw}{Did}$</i>	<i>Withers height cm according to Vitt</i>	<i>Life history</i>
ö/10.rec.	224.00	83.00	45.00	34.00	26.20	25.20	42.00	32.00	11.70	1.04	117.15	Old castrated pony, occasionally ridden
ö/35.rec.	304.00	129.00	64.20	49.00	38.50	40.00	61.40	50.00	12.66	0.96	159.00	Show jumping horse, mare, lived for 28 years
ö/37 rec	317.00	143.00	63.00	59.50	39.90	45.2	64.00	50.00	12.58	0.88	165.79	Used for cross-country riding, Hungarian half- bred castrated, lived for 17 years
ö/39.rec	-	122.00	58.90	56.50	37.30	39.40	-	-	-	0.95		Used for cross-country riding, Shagya Arabian stallion, lived for 10-12 years
ö/1.rec	284.00		57.60	54.00	40.50	41.20	58.00	43.80	14.26	0.98	148.53	Regularly ridden, 14 years old castrated

Table 6.: Mounts, metatarsus III bone cortex measured values and values calculated from those**6. táblázat:** Hátsó ló metatarsus III. csont kéregállomány méretei és a belőlük számolt értékek

<i>Inventory number</i>	\bar{P}_n mm ±0.01mm	C_{max} mm ±0.01mm	C_{maxloc} angle degree ±1°	$C_{max_{97-100\%loc}}$ angular range ±2°	$\frac{C_{max}}{\bar{P}_n}$ Load int.	$\left(\frac{C_{max}}{\bar{P}_n} \times \sin Y\right) \times 10$ Durability of load	$\left(\frac{C_{max}}{\bar{P}_n} \times \frac{1}{\sin Y}\right) \times \cos X^2$ Life history	<i>The age, life history and circumstance of keeping the specimen</i>
ö/10.rec.	6.40	9.50	115°00'	10°	1.484	2.576	1.526	Old castrated pony, occasionally ridden by children. Ponies should be examined in a separate group, the mt. III is allometrical
ö/39.rec.	6.40	16.45	100°00'	5°	2.570	2.2410	0.888	Shagya Arabian stallion, 10-12 years old, regularly used for cross-country riding, kept in box
ö/37.rec.	6.39	20.05	105°00'	10°	3.138	5.448	1.210	Hungarian half-bred, castrated, 17 years old, used for cross-country riding, kept in box
ö/35.rec.	6.69	15.26	110°00'	15°	2.282	5.905	0.411	Mecklenburg mare, 28 years old, show jumping horse, foaled 3 times, kept in box
ö/35.rec.	6,69	11,33	152°29'	5°	1,694	1,477		foaled 3 colts
ö/1.rec.	6.36	16.50	107°21'	25°	2.594	10.964	0.546	Hungarian half-bred, 14 years old, castrated, regularly ridden

Table 7.: Draught horse metatarsus III external sizes calculated values**7. táblázat:** Fogat ló metatarsus III. külső méretek és számított értékek

<i>Inventory number</i>	<i>Length</i> <i>GL mm</i> $\pm 0.1mm$	<i>Circumference</i> <i>mm</i> $\pm 0.1mm$	<i>Bp</i> <i>mm</i> $\pm 0.1mm$	<i>Dp</i> <i>mm</i> $\pm 0.1mm$	<i>Diw</i> <i>mm</i> $\pm 0.1mm$	<i>Did</i> <i>mm</i> $\pm 0.1mm$	<i>Bd</i> <i>mm</i> $\pm 0.1mm$	<i>Dd</i> <i>mm</i> $\pm 0.1mm$	<i>Slenderness</i> <i>index</i> $\frac{Diw}{GL} * 100$	$\frac{Diw}{Dd}$	<i>Withers height cm, according to Vitt</i>	<i>Life history</i>
ö/71.rec.	305.50	135.00	-	-	43.00	39.50	63.70	49.40	14.08	1.088	159.78	4 years old, Cross-bred Horse , driving horse in a farm, Uszód
ö/9.rec.	321.00	128.00	64.00	53.20	41.00	39.90	61.20	51.20	12.77	1.027	167.88	6 years old, driven in a carriage, in pair
ö/5.rec.	307.50	128.00	58.50	49.00	41.00	37.00	59.20	45.00	13.33	1.108	160.82	10 years old, Kisbér mare, light draught horse
ö/4.rec.	292.00	103.00	50.00	45.00	32.00	31.00	49.00	37.00	10.95	1.032	152.70	18 years old, small size, castrated, worked in a farm occasionally
ö/11.rec.	310.30	123.00	58.30	46.20	39.20	36.90	59.90	44.40	12.63	1.062	162.29	8 years old, Hungarian half-bred castrated, used in a carriage

Table 8.: Draught horse metatarsus III bone cortex measured values and values calculated from those**8. táblázat:** Fogat ló metatarsus.III. csont kéregállomány méretei és a belőlük számolt értékek

<i>Inventory number</i>	\bar{P}_n <i>mm</i> $\pm 0.01mm$	C_{max_n} <i>mm</i> $\pm 0.01mm$	$C_{max_{loc_n}}$ <i>angle degree</i> $\pm 1^\circ$	$C_{max_{97-100\%loc}}$ <i>angular range</i> $\pm 2^\circ$	$\frac{C_{max}}{\bar{P}_n}$ <i>Load int.</i>	$\left(\frac{C_{max}}{\bar{P}_n} \times \sin Y\right) \times 10$ <i>Durability of load</i>	$\left(\frac{C_{max}}{\bar{P}_n} \times \frac{1}{\sin Y}\right) \times \cos X^2$ <i>Life history</i>	<i>The age, life history and circumstance of keeping the specimen</i>
ö/71.rec.	7.40	15.64 C_{max_1}	107°28'	20°	2.154	7.228	0.568	Quarter horse, 4 years old, mare, body mass hypertrophy
ö/71.rec.	7.40	15.56 C_{max_2}	125°	10°	2.103	3.652	3.984	Work hypertrophy, draft horse in farm, kept in Uszód
ö/11.rec.	6.52	13.91	117°28'	30°	2.133	10.665	0.911	Body mass and work hypertrophy
ö/11.rec.	6,52	13,91	117°28'	15°	2,133	5,520	1,760	Hungarian half-bred castrated, kb. 8 years old, used in chariot, work hypertrophy
ö/9.rec.	9.62	15.20 C_{max_1}	105°00'	20°	1.580	5.404 Y_1	0.3094 X_1	6 years old mare, used in chariot in double drive, rarely used, body mass hypertrophy
ö/9.rec.	9.62	15.0 C_{max_2}	125°00'	25°	1.559	6.588 Y_2	1.214 X_2	Work hypertrophy
ö/4.rec.	6.28	10.80 C_{max_1}	100°00'	15°	1.723	4.459 Y_1	0.201 X_1	18 years old, low withers height, castrated, draught horse in today's farm, in the plain. Stabled all his life, body mass hypertrophy
ö/4.rec	6.28	9.3 C_{max_2}	127°00'	3°	1.484	0.776 Y_2	0.809 X_2	Work hypertrophy
ö/5.rec.	8.11	14.86 C_{max_1}	110°00'	10°	1.832	3.182 Y_1	1.234 X_1	Body mass- and work hypertrophy
ö/5.rec.	8.11	15.03 C_{max_2}	125°00'	20°	1.852	6.334 Y_2	1.328 X_2	10 years old, Kisbér half-bred, mare, did not foal. Light draught horse, work hypertrophy

Table 9.: Dombóvár-Tesco DTQ83. tomb metatarsus III test sheet**9. táblázat:** Metatarsus III. vizsgálati lap (Dombóvár-Tesco Q83.)

Excavation identification data: Dombóvár-Tesco preventive archaeological excavation 2007, 4th century horse burial

Based description of the information collected based on the bone remains and important for life history: Gracile, mc. III slenderness index: 14.23, mt. III slenderness index 12.02. The mc/mt is 0.855, typical mount. It is tall, its withers heights is 146.18 cm calculated from the mt. III The skull is narrow, high, short, the profile is pronounced, the muzzle runs straight. Based on its teeth, it is a male specimen of around 6-7 years of age. The incisors show an irregular abrasion suggesting cribbing. On the left *condylus occipitalis* an osteophyte of the size of a small bean is apparent, and on the joint surface of the atlas a corresponding dimple, with the traces of an inflammatory reaction around it.

a) External sizes of metatarsus III and calculated values**a) Metatarsus III. külső méretek és számított értékek**

<i>Inventory number</i>	<i>Length</i> <i>GL mm</i> $\pm 0.1mm$	<i>Circumference</i> <i>mm</i> $\pm 0.1mm$	<i>Bp</i> <i>mm</i> $\pm 0.1mm$	<i>Dp</i> <i>mm</i> $\pm 0.1mm$	<i>Diw</i> <i>mm</i> $\pm 0.1mm$	<i>Did</i> <i>mm</i> $\pm 0.1mm$	<i>Bd</i> <i>mm</i> $\pm 0.1mm$	<i>Dd</i> <i>mm</i> $\pm 0.1mm$	<i>Slenderness</i> <i>index</i> $\frac{Diw}{GL}$	$g\frac{Diw}{Dia}$	<i>Withers</i> <i>height cm,</i> <i>according to</i> <i>Vitt</i>	<i>Bone</i> <i>description</i>
Q83JH,2007.07.09.	279.50	108.00	51.80	41.00	33.60	34.20	50.50	38.00	12.02	0.982	146.18	Calcified intact bone

b) Measured and calculated values of the cortex**b) Metatarsus.III. csont kéregállomány méretei és a belőlük számolt értékek**

<i>Inventory number</i>	\bar{P}_n <i>mm</i> $\pm 0.01mm$	<i>Cmax</i> <i>mm</i> $\pm 0.01mm$	<i>Cmaxloc</i> <i>angle degree</i> $\pm 1^\circ$ <i>X</i>	<i>Cmax</i> _{97-100%loc} <i>angular</i> <i>range</i> <i>Y</i> $\pm 2^\circ Y$	<i>Load intensity</i> $\frac{Cmax}{\bar{P}_n}$	<i>Durability of load</i> $\left(\frac{Cmax}{\bar{P}_n} \times \sin Y\right) \times 10$	<i>Life history</i> $\left(\frac{Cmax}{\bar{P}_n} \times \frac{1}{\sin Y}\right) \times \cos X^2$
Q83JH2007.07.09	7.60	11.28	90°	15°	1.484	3.841	0

Based on the available database, the conclusions drawn from the results: The maximum width of metatarsus III cortex is located at 90°, which indicates regular leg position. Additional width growth is not apparent. The load intensity value is low, and the 3% deviation from the maximum width covers a medium -15° - angular range. The observed phenomenon characterise horses that are not subjected to work. The low load value and the abrasion of teeth suggesting cribbing indicate a specimen condemned to boredom. It was probably kept in a corral, or tied down in a stable. The alteration developed on the knob of the nape and the atlas vertebra could significantly restrict the normal use of the animal.

c-d) X-ray images of metatarsus III

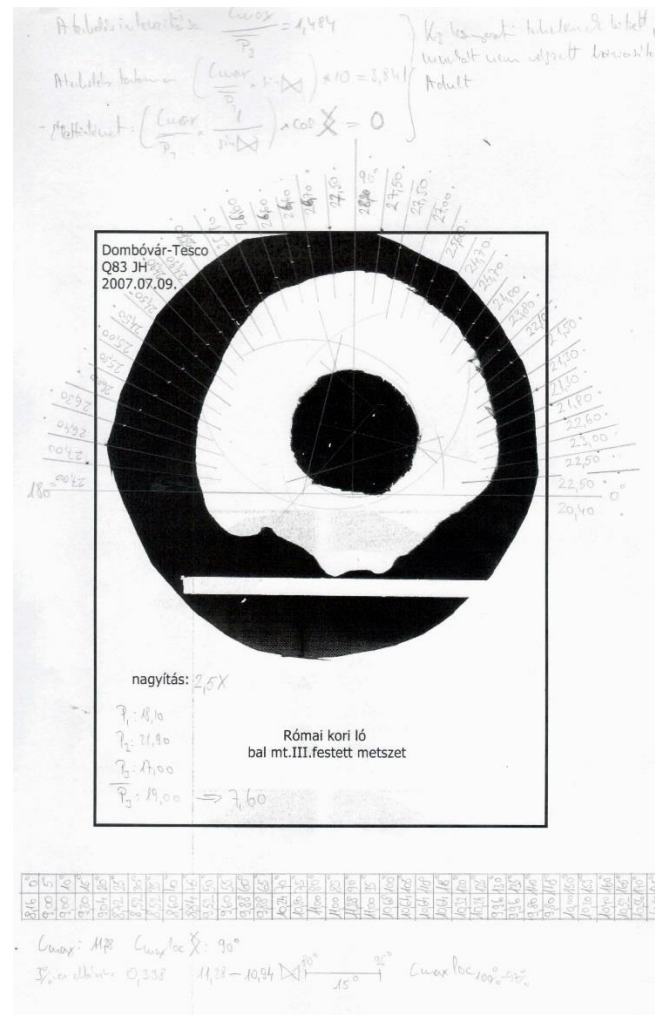
c-d) Metatarsus III. röntgenfelvételei



c) Dorso-plantar view
c) Dorso-plantáris nézet



d) Latero-medial view
d) Latero mediális nézet



e) Measurement sheet ((Dombóvár-Tesco Q83.)
e) Vizsgálati lap (Dombóvár-Tesco Q81.)

Table 10.: Szekszárd, Csontos-Szurdik metatarsus III test sheet**10. táblázat:** Metatarsus III. vizsgálati lap (Szekszárd, Csontos-szurdik)

Excavation identification data: Szekszárd, Csontos-szurdik, loess wall slide. The dating to the Avar period suspected based on the size of the bones was narrowed down to 640-690 A.D. as the most likely date, through radiocarbon dating by the Debrecen-based Isotoptech Zrt..

a) External sizes of metatarsus III and calculated values a) Metatarsus III. külső méretek és számított értékek

<i>Inventory number</i>	<i>Length</i> <i>GL mm</i> $\pm 0.1mm$	<i>Circumference</i> <i>mm</i> $\pm 0.1mm$	<i>Bp</i> <i>mm</i> $\pm 0.1mm$	<i>Dp</i> <i>mm</i> $\pm 0.1mm$	<i>Diw</i> <i>mm.</i> $\pm 0.1mm$	<i>Did</i> <i>mm.</i> $\pm 0.1mm$	<i>Bd</i> <i>mm.</i> $\pm 0.1mm$	<i>Dd</i> <i>mm</i> $\pm 0.1mm$	<i>Slenderness</i> <i>index</i> $\frac{Diw}{GL}$	$g\frac{Diw}{Did}$	<i>Withers</i> <i>height cm,</i> <i>according to</i> <i>Vitt</i>	<i>Bone</i> <i>description</i>
Sz.Cssz1/2016	259.00	106.00	50.60	43.80	33.00	33.50	50.20	39.40	12.74	1.015	135.45	good preservation

Gracile, slenderness index metatarsus III 12.74. Low, small to medium wither height, calculated from metatarsus III 135.45 cm (Vitt, 1952). Adult specimen.

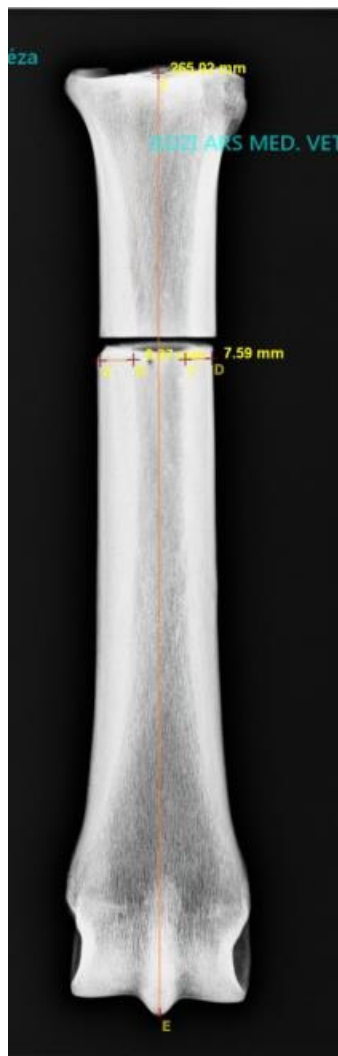
b) Measured and calculated values of the cortex b) Metatarsus.III. csont kéregállomány méretei és a belőlük számolt értékek

<i>Inventory number</i>	\bar{P}_n <i>mm</i> $\pm 0.01mm$	<i>Cmax</i> <i>mm</i> $\pm 0.01mm$	<i>Cmaxloc</i> <i>angle degree</i> $\pm 1^\circ$ X	<i>Cmax_{97-100%loc}</i> <i>angular range</i> $\pm 2^\circ$ Y	<i>Load intensity</i> $\frac{Cmax}{\bar{P}_n}$	<i>Durability of load</i> $\left(\frac{Cmax}{\bar{P}_n} \times \sin Y\right) \times 10$	<i>Life history</i> $\left(\frac{Cmax}{\bar{P}_n} \times \frac{1}{\sin Y}\right) \times \cos X^2$
Sz.Cs sz.1/2016.	7.89	12.90	95°	5°	1.635	1.425	0.1425

Based on the available database, the conclusions drawn from the results: The maximum width of the cortex is located at 95°, and it indicates regular leg position. The 3% deviation from the maximum cortex width covers 5° angular range, the environmental load is of medium extent 1.635 and the value indicating the durability of the load is low 1.425. The phenomena observed indicate horses not used for work. The intensity of the load indicates a grazing life style. The durability of the load assumes death at a young adult age.

c-d) X-ray images of metatarsus III

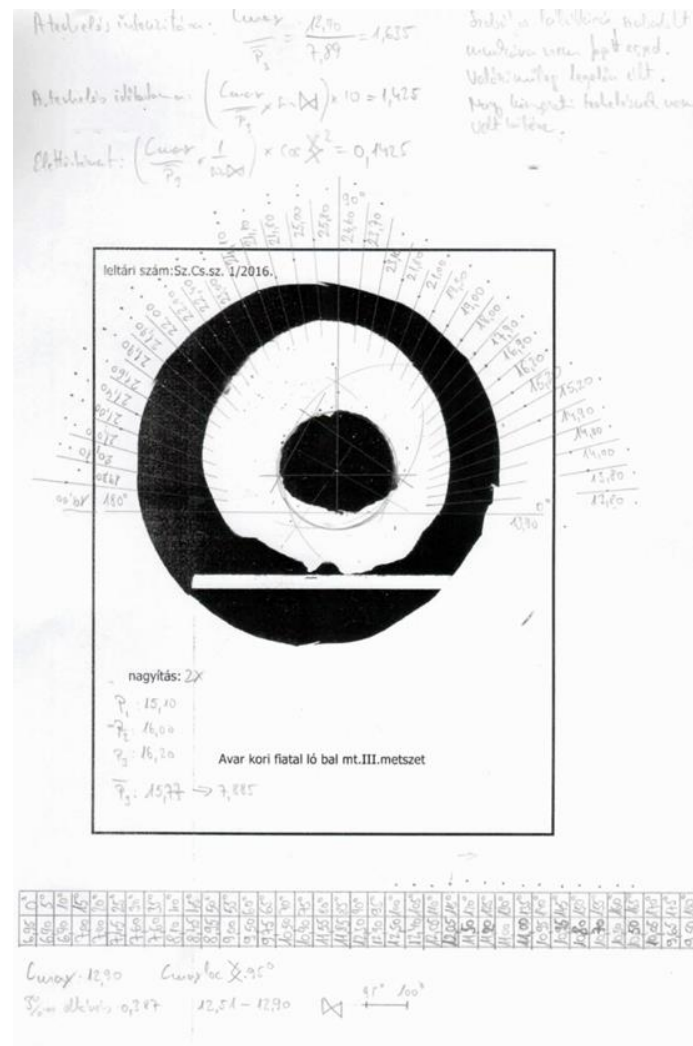
c-d) Metatarsus III. röntgenfelvételei



c) Dorso-plantar view
c) Dorso-plantáris nézet



d) Latero-medial view
d) Latero mediális nézet



e) Measurement sheet ((Szekszárd, Csontos-szurdik)
e) Vizsgálati lap (Szekszárd, Csontos-szurdik)