

[Supplementary material]

Early commensal interaction between humans and hares in Neolithic northern China

Pengfei Sheng^{1,2}, Yaowu Hu^{1,2}, Zhouyong Sun³, Liping Yang³, Songmei Hu³, Benjamin T. Fuller⁴ & Xue Shang^{5,6,*}

¹ *Institute of Archaeological Science, Fudan University, P.R. China*

² *Department of Cultural Heritage and Museology, Fudan University, P.R. China*

³ *Shaanxi Provincial Institute of Archaeology, Xi'an, P.R. China*

⁴ *Department of Archaeology and Heritage Studies, Aarhus University, Denmark*

⁵ *Department of Archaeology and Anthropology, University of Chinese Academy of Sciences, Beijing, P.R. China*

⁶ *Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences, Beijing, P.R. China*

* *Author for correspondence: ✉ shangxue@ucas.ac.cn*

Information concerning collagen measurement

Our purified collagen specimens were measured at the University of the Chinese Academy of Sciences, using an IsoPrime 100 IRMS coupled with an Elementar Vario (Elementar, UK), with sulfanilamide, IAEA-600 ($\delta^{13}\text{C} = -27.8\text{‰}$, VPDB; $\delta^{15}\text{N} = 1.0\text{‰}$, AIR), IAEA-N-1 ($\delta^{15}\text{N} = 0.4\text{‰}$, AIR), IAEA-N-2 ($\delta^{15}\text{N} = 20.3\text{‰}$, AIR), IAEA-CH-6 ($\delta^{13}\text{C} = -10.5\text{‰}$, VPDB), USGS-24 ($\delta^{13}\text{C} = -16.0\text{‰}$, VPDB), USGS 40 ($\delta^{13}\text{C} = -26.4 \pm 0.04\text{‰}$, VPDB; $\delta^{15}\text{N} = -4.5 \pm 0.1\text{‰}$, AIR) and USGS 41 ($\delta^{13}\text{C} = 37.6 \pm 0.05\text{‰}$, VPDB; $\delta^{15}\text{N} = 47.6 \pm 0.2\text{‰}$, AIR) as reference materials. For every ten samples, a standard collagen sample ($\delta^{13}\text{C} = -14.7 \pm 0.2\text{‰}$; $\delta^{15}\text{N} = 7.0 \pm 0.2\text{‰}$) was inserted for calibration and to monitor stability. The isotope results were analyzed as the ratio of the heavier isotope to the lighter isotope ($^{13}\text{C}/^{12}\text{C}$ or $^{15}\text{N}/^{14}\text{N}$) and expressed as 'δ' in parts per 1000 or per mil (‰) relative to internationally defined

standards (Lee-Thorp 2008) for carbon (Vienna Pee Dee Belemnite, VPDB) and nitrogen (Ambient Inhalable Reservoir, AIR).

Table S1. Sample information and isotope data of the human and animal bones from Yangjiesha and Wangyangpan.

Lab ID: Y: Yangjiesha site; W: Wangyangpan site.

Lab ID	Context	Species	Bone sampled	$\delta^{13}\text{C}$ (‰)	$\delta^{15}\text{N}$ (‰)	C (%)	N (%)	C:N
15Y7	AH17	<i>Homo sapiens</i>	Left tibia	-6.0	9.1	45.3	16.1	3.2
16Y1	AH21	<i>Homo sapiens</i>	Left femur	-10.7	10.5	39.3	14.3	3.2
15Y3	CF6:44	<i>Canis. familiaris</i>	Femur	-6.3	6.7	45.0	16.2	3.2
15Y4	CH24:20	<i>Canis. familiaris</i>	Left tibia	-6.2	7.5	45.2	16.1	3.2
15Y5	AH19:13	<i>Canis. familiaris</i>	Right ulna	-7.0	7.4	43.2	15.6	3.2
16Y4	AH25	<i>Canis. familiaris</i>	Left mandible	-7.6	8.1	40.6	15.0	3.1
16Y37	BT1H1:7	<i>Canis. familiaris</i>	Left tibia	-7.9	6.6	40.6	15.0	3.1
15Y6	AH19:18	<i>Sus. scrofa</i>	Right mandible	-9.5	7.6	42.7	15.7	3.1
16Y2	AH12:68	<i>Sus. scrofa</i>	Right radius	-6.9	9.1	43.9	16.2	3.1
16Y3	AH19:20	<i>Sus. scrofa</i>	Left humerus	-7.4	7.9	43.4	15.7	3.2
16Y5	AH25:2	<i>Sus. scrofa</i>	Right humerus	-7.4	9.1	46.3	17.2	3.1
16Y6	AH25:4	<i>Sus. scrofa</i>	Right humerus	-8.1	9.0	32.7	12.1	3.1
16Y7	AH25:5	<i>Sus. scrofa</i>	Right humerus	-9.1	8.9	44.6	16.2	3.2

16Y8	AH25:1	<i>Sus. scrofa</i>	Right humerus	-10.4	7.9	42.0	15.1	3.2
16Y9	CH32:15	<i>Sus. scrofa</i>	Right mandible	-7.2	8.7	46.0	17.2	3.1
16Y10	AH25:3	<i>Sus. scrofa</i>	Skull	-10.6	7.9	49.3	19.0	3.0
16Y11	CH4:11	<i>Sus. scrofa</i>	Right ulna	-8.3	6.5	49.7	19.2	3.0
16Y22	AH17(2):1 1	<i>Sus. scrofa</i>	Right radius	-6.9	8.0	44.3	16.4	3.1
16Y23	CF3J1:9	<i>Sus. scrofa</i>	Lower right canine	-10.5	7.9	46.3	17.0	3.1
16Y24	CH45:8	<i>Sus. scrofa</i>	Right I phalanx	-8.8	7.7	42.8	15.5	3.2
16Y25	AF5:2	<i>Sus. scrofa</i>	Right femur	-12.9	7.3	35.8	13.1	3.2
16Y26	BH1:9	<i>Sus. scrofa</i>	Left mandible	-12.9	7.3	38.6	14.2	3.1
16Y27	AH19:17	<i>Sus. scrofa</i>	Left maxilla	-10.1	7.6	39.0	14.0	3.2
16Y28	CH24:21	<i>Sus. scrofa</i>	Mandibular symphysis	-16.7	5.7	41.8	15.1	3.2
16Y29	BH1:1	<i>Sus. scrofa</i>	Left mandible	-13.1	7.3	40.1	14.3	3.2
16Y30	CF6:45	<i>Sus. scrofa</i>	Left tibia	-7.6	6.8	44.3	16.1	3.2
16Y31	CH20:3	<i>Sus. scrofa</i>	Right radius	-8.5	7.6	39.3	14.1	3.2
16Y34	CF7:6	<i>Sus. scrofa</i>	Left I phalanx	-19.0	5.7	41.8	15.5	3.1

16Y35	AF13: J:7	<i>Sus. scrofa</i>	Right III metatarsus	-7.5	7.1	41.8	15.4	3.1
16Y38	CF3J1:11	<i>Sus. scrofa</i>	Left I phalanx	-11.3	7.6	38.5	14.2	3.1
16Y39	CH20:2	<i>Sus. scrofa</i>	Left mandible	-7.3	8.1	40.8	15.1	3.1
16Y40	AH12:67	<i>Sus. scrofa</i>	Mandible	-6.9	7.6	41.3	15.3	3.1
16Y41	AH25:6	<i>Sus. scrofa</i>	Mandible	-16.0	5.5	39.3	14.3	3.2
15Y8	CH5:33	<i>Lepus capensis</i>	Right pelvis	-19.1	2.9	44.3	15.9	3.2
15Y9	AH12:30	<i>Lepus capensis</i>	Right ulna	-16.0	4.6	42.6	15.4	3.2
15Y10	CF6:31	<i>Lepus capensis</i>	Left tibia	-20.0	3.0	43.2	15.7	3.2
15Y11	CF6:18	<i>Lepus capensis</i>	Left ulna	-18.7	4.0	44.5	15.8	3.2
15Y12	CF9:12	<i>Lepus capensis</i>	Left tibia	-17.2	2.8	40.9	15.0	3.1
16Y12	CH5:22	<i>Lepus capensis</i>	Left femur	-15.9	5.5	39.8	14.5	3.2
16Y13	CH24:12	<i>Lepus capensis</i>	Left femur	-17.7	4.2	43.1	15.8	3.1
16Y14	CH5:21	<i>Lepus capensis</i>	Left femur	-19.9	4.5	40.7	14.9	3.2
16Y15	CF6:29	<i>Lepus capensis</i>	Left femur	-18.8	4.7	43.3	16.1	3.1
16Y16	AH17②:4	<i>Lepus capensis</i>	Left femur	-20.2	2.4	45.7	17.1	3.1
16Y17	CH46:4	<i>Lepus capensis</i>	Left femur	-20.1	4.5	41.7	14.9	3.2
16Y18	CH5:20	<i>Lepus capensis</i>	Left femur	-20.0	2.7	38.9	14.1	3.2

16Y19	CF7:2	<i>Lepus capensis</i>	Left femur	-20.3	2.6	40.8	14.7	3.2
16Y20	BH9:3	<i>Lepus capensis</i>	Left femur	-18.9	5.1	40.3	14.6	3.2
16Y21	CT3F3J1:3	<i>Lepus capensis</i>	Left femur	-18.2	4.8	40.9	14.8	3.2
16Y33	AH12	<i>Lepus capensis</i>	Lower limb long bone	-13.9	7.2	40.8	15.0	3.1
17Y1	CT3F3:2	<i>Lepus capensis</i>	Left mandible	-19.9	3.7	43.3	15.1	3.3
17Y2	CH5:3	<i>Lepus capensis</i>	Left mandible	-20.2	5.4	34.7	12.7	3.2
17Y3	CH24:3	<i>Lepus capensis</i>	Left mandible	-17.7	3.2	42.0	15.3	3.2
17Y4	CH15:6	<i>Lepus capensis</i>	Left mandible	-19.6	4.0	38.0	13.7	3.2
17Y5	AH23:4	<i>Lepus capensis</i>	Left mandible	-18.8	5.1	36.4	13.3	3.2
17Y6	CH24:4	<i>Lepus capensis</i>	Right mandible	-21.4	4.6	41.9	15.2	3.2
17Y8	AH12:6	<i>Lepus capensis</i>	Vertebra	-19.4	3.7	38.8	14.0	3.2
17Y9	AH12:2	<i>Lepus capensis</i>	Vertebra	-20.5	3.8	40.1	14.5	3.2
17Y10	AH12:3	<i>Lepus capensis</i>	Limb bone	-18.0	5.2	36.2	13.1	3.2
17Y11	AH12:4	<i>Lepus capensis</i>	Limb bone	-16.2	4.2	37.8	13.9	3.1
17Y12	AH12:5	<i>Lepus capensis</i>	Limb bone	-18.7	2.6	38.4	14.2	3.1
17Y14	AH12:7	<i>Lepus capensis</i>	Limb bone	-20.1	4.3	36.1	13.0	3.2

17Y15	AH12:8	<i>Lepus capensis</i>	Limb bone	-18.0	3.3	36.6	13.3	3.2
17Y16	CF9:15	<i>Lepus capensis</i>	Right tibia	-19.6	3.9	42.3	15.3	3.2
17Y17	CF9:3	<i>Lepus capensis</i>	Right mandible	-18.8	4.2	38.9	13.9	3.2
17Y18	CF9:4	<i>Lepus capensis</i>	Tooth on left mandible	-21.0	5.4	32.8	11.9	3.2
17Y19	AH12:9	<i>Lepus capensis</i>	Left mandible	-18.9	4.0	41.5	15.1	3.2
17Y20	CF6:6	<i>Lepus capensis</i>	Left mandible	-21.2	4.5	39.2	14.3	3.2
17Y21	CF6:7	<i>Lepus capensis</i>	Left mandible	-19.6	3.2	38.9	14.3	3.1
17Y22	AH12:10	<i>Lepus capensis</i>	Left mandible	-19.3	2.2	40.1	14.1	3.3
17Y23	AH23:5	<i>Lepus capensis</i>	Right mandible	-21.4	3.4	41.5	14.8	3.2
17Y24	AH12:11	<i>Lepus capensis</i>	Right mandible	-21.3	2.7	40.1	14.8	3.1
17Y25	CF8:1	<i>Lepus capensis</i>	Right mandible	-20.0	3.0	42.5	15.3	3.2
17Y26	CF9:5	<i>Lepus capensis</i>	Right mandible	-21.5	3.5	43.0	14.7	3.4
17Y27	AH23:6	<i>Lepus capensis</i>	Right mandible	-15.5	3.8	32.4	11.8	3.2
17Y28	CH5:4	<i>Lepus capensis</i>	Mandibula symphysis	-16.5	5.8	38.4	13.7	3.2
17Y29	AH12:12	<i>Lepus capensis</i>	Right mandible	-18.1	4.0	35.7	13.1	3.1

17Y30	CH46:1	<i>Lepus capensis</i>	Left mandible	-20.0	5.4	37.7	13.9	3.1
17Y31	CF2:2	<i>Lepus capensis</i>	Right mandible	-18.2	3.5	38.8	14.3	3.1
17Y32	AH12:13	<i>Lepus capensis</i>	Right mandible	-16.3	5.6	37.1	13.6	3.1
17Y33A	AH12:1	<i>Lepus capensis</i>	Limb bone	-19.5	4.3	40.5	14.9	3.1
17Y44	CH4:7	<i>Lepus capensis</i>	Right femur	-20.8	5.9	41.3	15.2	3.1
17Y45	AH19:6	<i>Lepus capensis</i>	Left tibia	-20.9	5.1	40.1	15.1	3.1
17Y46	AH12:45	<i>Lepus capensis</i>	Left tibia	-19.2	3.7	40.9	14.9	3.2
17Y47	AH23:33	<i>Lepus capensis</i>	Right tibia	-18.8	6.4	40.7	14.7	3.2
17Y49	CH15:10	<i>Lepus capensis</i>	Right tibia	-19.9	4.3	40.1	14.7	3.1
17Y51	AH12:34	<i>Lepus capensis</i>	Left radius	-17.2	5.5	42.5	15.6	3.1
17Y53	AH12:33	<i>Lepus capensis</i>	Left radius	-21.1	4.0	41.7	15.6	3.1
16W1	M1	<i>Homo sapiens</i>	Right femur	-7.1	9.4	40.9	15.1	3.1
16W2	M3	<i>Homo sapiens</i>	Right fibula	-7.0	7.7	42.0	15.1	3.2
16W4	T1③:1	<i>Sus. scrofa</i>	Occipital bone	-6.1	6.6	43.0	15.1	3.3
17W5	T3H29	<i>Canis. familiaris</i>	Spine	-7.9	8.9	41.5	15.1	3.2

References

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