

SI Appendix

Table S1: $\delta^{13}\text{C}$ tooth enamel values (average and standard deviation) from archaeological tooth enamel, Trench III, Gogo Falls.

Family	Tribe	Species	$\delta^{13}\text{C}$	Std. dev.	no. samples
Bovidae	Bovini	<i>Bos taurus</i>	1.6	1.5	11
Bovidae	Alcelaphini		1.5	1.2	15
Bovidae	Hippotragini		1.2	1.4	5
Equidae		<i>Equus sp.</i>	0.8	0.6	13
Bovidae	Reduncini		0.7	1.7	5
Hippopotamidae		<i>Hippopotamus amphibius</i>	0.6	0.6	2
Bovidae	unk.		0.5	1.3	2
Bovidae	Neotragini	<i>Ourebia ourebi</i>	0.3	0.8	8
Bovidae	Caprini		0.2	1.4	14
Suidae		<i>Phacochoerus sp.</i>	-0.1	0.9	4
Suidae		<i>Potamochoerus sp.</i>	-3.9		1
Bovidae	Tragelaphini	<i>Taurotragus oryx</i>	-6.6	2.8	5
Bovidae	Cephalophini	<i>Sylvicapra sp.</i>	-8.8		1

Table S2: $\delta^{13}\text{C}_{1750}$ tooth enamel values (average and standard deviation) from modern comparative fauna from Kenya and Tanzania. *Neotragini and *Sylvicapra* values were calculated to tooth enamel values from keratin using $\epsilon_{\text{keratin-enamel}}$ values of 11.1‰ because of a lack of enamel values in the literature.

Family	Tribe	Species	$\delta^{13}\text{C}$	std. dev. (\pm)	no. samples	Ref.
Bovidae	Bovini	<i>Bos taurus</i>	2.7	1.2	5	(1, 2)
Bovidae	Alcelaphini		3.2	1.5	93	(3-6)
Bovidae	Hippotragini		1.8	2.1	29	(3-5)
Equidae		<i>Equus sp.</i>	2.2	0.4	9	(5, 7, 8)
Bovidae	Reduncini		2.5	1.4	51	(3, 4)
Hippopotamidae		<i>Hippopotamus amphibius</i>	-2.3	1.7	14	(7, 9)
Bovidae	Neotragini*	<i>Ourebia ourebi</i>	1.3	4.4	4	(3)
Bovidae	Caprini		-4.0	3.4	22	(10)
Suidae		<i>Phacochoerus sp.</i>	1.0	1.1	56	(5, 6, 9)
Suidae		<i>Potamochoerus sp.</i>	-6.9	4.9	15	(9)
Bovidae	Tragelaphini	<i>T. oryx</i>	-10.4	2.2	18	(3, 4)
Bovidae	Cephalophini	<i>Sylvicapra sp.</i> *	-10.6	1.4	9	(3)

Table S3: $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ tooth enamel values from Gogo Falls fauna. Calculated %C₄ has been rounded to the nearest 5% to account for uncertainty in the dietary model.

Specimen ID	Common/ Species name	Family/Sub- Family	Tribe	$\delta^{13}\text{C}$	$\delta^{18}\text{O}$	%C ₄
KKC13-E-296	<i>Bos taurus</i>	Bovidae	Bovini	-1.0	1.0	80
KKC13-E-297	<i>Bos taurus</i>	Bovidae	Bovini	-0.8	-2.7	80
KKC13-E-298	<i>Bos taurus</i>	Bovidae	Bovini	1.9	1.8	100
KKC13-E-299	<i>Bos taurus</i>	Bovidae	Bovini	1.5	1.2	100
KKC13-E-300	<i>Bos taurus</i>	Bovidae	Bovini	1.8	0.3	100
KKC13-E-301	<i>Bos taurus</i>	Bovidae	Bovini	2.9	1.7	100
KKC13-E-302	<i>Bos taurus</i>	Bovidae	Bovini	2.7	2.8	100
KKC13-E-303	<i>Bos taurus</i>	Bovidae	Bovini	0.6	0.5	90
KKC13-E-304	<i>Bos taurus</i>	Bovidae	Bovini	3.4	2.3	100
KKC13-E-305	<i>Bos taurus</i>	Bovidae	Bovini	3.2	2.1	100
KKC13-E-306	<i>Bos taurus</i>	Bovidae	Bovini	1.3	2.5	95
KKC13-E-307	<i>Bos taurus</i>	Bovidae	Bovini	1.8	0.7	100
KKC13-E-342		Bovidae	Alcelaphini	0.2	1.4	90
KKC13-E-343		Bovidae	Alcelaphini	0.1	1.5	90
KKC13-E-345		Bovidae	Alcelaphini	3.2	2.4	100
KKC13-E-350		Bovidae	Alcelaphini	-0.4	-0.4	85
KKC13-E-351		Bovidae	Alcelaphini	1.3	0.3	95
KKC13-E-352		Bovidae	Alcelaphini	3.0	1.9	100
KKC13-E-353		Bovidae	Alcelaphini	0.6	0.1	90
KKC13-E-354	<i>Damaliscus spp.</i>	Bovidae	Alcelaphini	2.7	1.5	100
KKC13-E-355	<i>Damaliscus spp.</i>	Bovidae	Alcelaphini	3.0	1.9	100
KKC13-E-356	topi/hartebeest	Bovidae	Alcelaphini	2.1	-2.1	100
KKC13-E-357	<i>Damaliscus spp.</i>	Bovidae	Alcelaphini	0.6	-0.3	90
KKC13-E-358	<i>Damaliscus spp.</i>	Bovidae	Alcelaphini	2.2	1.3	100
KKC13-E-346*	<i>Alcelaphus/ Damaliscus</i>	Bovidae	Alcelaphini	0.0	-0.3	85
KKC13-E-348*		Bovidae	Alcelaphini	2.2	1.3	100
KKC13-E-377	topi/hartebeest	Bovidae	Alcelaphini	0.3	1.1	90
KKC13-E-349	roan/sable	Bovidae	Hippotragini	-0.6	-2.7	85
KKC13-E-373	roan/sable	Bovidae	Hippotragini	1.4	-2.1	100
KKC13-E-376	roan/sable	Bovidae	Hippotragini	2.3	0.4	100
KKC13-E-372*	roan	Bovidae	Hippotragini	2.7	0.2	100
KKC13-E-374*	roan/sable	Bovidae	Hippotragini	0.9	2.4	95
KKC13-E-317	<i>Equus burchelli</i>	Equidae		1.5	1.9	100
KKC13-E-318	<i>Equus burchelli</i>	Equidae		2.0	1.4	100
KKC13-E-319	<i>Equus burchelli</i>	Equidae		1.3	0.0	100
KKC13-E-320	<i>Equus burchelli</i>	Equidae		0.8	1.3	95

Specimen ID	Common/ Species name	Family/Sub- Family	Tribe	$\delta^{13}\text{C}$	$\delta^{18}\text{O}$	%C4
KKC13-E-315	<i>Equus spp.</i>	Equidae		0.1	1.0	90
KKC13-E-316	<i>Equus spp.</i>	Equidae		1.6	2.4	100
KKC13-E-321	<i>Equus spp.</i>	Equidae		0.6	1.2	90
KKC13-E-323	<i>Equus spp.</i>	Equidae		0.5	-0.4	90
KKC13-E-324	<i>Equus spp.</i>	Equidae		0.0	-0.3	90
KKC13-E-312*	<i>Equus spp.</i>	Equidae		0.1	1.4	90
KKC13-E-314*	<i>Equus spp.</i>	Equidae		0.0	0.6	90
KKC13-E-367	kob/waterbuck	Bovidae	Reduncini	2.8	0.9	100
KKC13-E-378	kob/waterbuck	Bovidae	Reduncini	2.3	1.3	100
KKC13-E-368*		Bovidae	Reduncini	-0.4	-0.3	85
KKC13-E-370*		Bovidae	Reduncini	-1.0	-0.2	80
KKC13-E-371*		Bovidae	Reduncini	1.0	-2.6	95
KKC13-E-330	<i>H. amphibius</i>	Hippopotamidae		0.2	-2.6	90
KKC13-E-331	<i>H. amphibius</i>	Hippopotamidae		-0.5	0.7	85
KKC13-E-309*	unk	Bovidae		1.4	0.8	100
KKC13-E-347	unk	Bovidae		1.0	0.7	95
KKC13-E-333	<i>Ourebia ourebi</i>	Bovidae	Neotragini	0.0	-1.1	95
KKC13-E-334	<i>Ourebia ourebi</i>	Bovidae	Neotragini	0.9	-3.0	94
KKC13-E-335	<i>Ourebia ourebi</i>	Bovidae	Neotragini	-0.6	0.9	85
KKC13-E-336	<i>Ourebia ourebi</i>	Bovidae	Neotragini	-0.9	2.1	80
KKC13-E-337	<i>Ourebia ourebi</i>	Bovidae	Neotragini	-0.3	1.9	85
KKC13-E-338	<i>Ourebia ourebi</i>	Bovidae	Neotragini	1.2	0.5	95
KKC13-E-339	<i>Ourebia ourebi</i>	Bovidae	Neotragini	0.9	0.8	95
KKC13-E-340	<i>Ourebia ourebi</i>	Bovidae	Neotragini	0.9	0.7	95
KKC13-E-283*	goat/sheep	Caprinae		-0.4	1.9	85
KKC13-E-280	goat/sheep	Caprinae		2.2	3.0	100
KKC13-E-281	goat/sheep	Caprinae		0.2	1.9	90
KKC13-E-282	goat/sheep	Caprinae		-2.0	1.6	75
KKC13-E-284	goat/sheep	Caprinae		-0.8	3.2	80
KKC13-E-285	goat/sheep	Caprinae		0.5	4.3	90
KKC13-E-288	goat/sheep	Caprinae		1.7	1.3	100
KKC13-E-289	goat/sheep	Caprinae		-0.7	-2.8	80
KKC13-E-290	goat/sheep	Caprinae		0.5	3.8	90
KKC13-E-291	goat/sheep	Caprinae		-2.1	-0.6	70
KKC13-E-292	goat/sheep	Caprinae		2.6	2.9	100
KKC13-E-293	goat/sheep	Caprinae		0.7	1.6	90
KKC13-E-286*	goat/sheep	Caprinae		0.3	3.3	90
KKC13-E-287*	goat/sheep	Caprinae		-1.2	-1.9	80
KKC13-E-326	<i>Phacochoerus sp.</i>	Suidae		0.7	1.4	90
KKC13-E-327	<i>Phacochoerus sp.</i>	Suidae		0.4	1.7	90
KKC13-E-328	<i>Phacochoerus sp.</i>	Suidae		-0.3	-0.2	85

Specimen ID	Common/ Species name	Family/Sub- Family	Tribe	$\delta^{13}\text{C}$	$\delta^{18}\text{O}$	%C4
KKC13-E-332	<i>Potamochoerus</i> <i>sp.</i>	Suidae		-5.8	2.3	45
KKC13-E-360	<i>Taurotragus oryx</i>	Bovidae	Tragelaphini	-9.6	-0.8	20
KKC13-E-363	<i>Taurotragus oryx</i>	Bovidae	Tragelaphini	-3.9	0.0	60
KKC13-E-364	<i>Taurotragus oryx</i>	Bovidae	Tragelaphini	-4.1	1.2	60
KKC13-E-361*	<i>Taurotragus oryx</i>	Bovidae	Tragelaphini	-9.6	2.0	20
KKC13-E-362*	<i>Sylvicapra sp.</i>	Bovidae	Cephalophini	-8.8	-1.1	25

*sample was run untreated due to low sample volume

Table S4: Modern caprine $\delta^{13}\text{C}_{1750}$ tooth enamel data.

Common/Species name	Locality	$\delta^{13}\text{C}_{1750}$	Citation
sheep	Naivasha Basin	0.1	(10)
sheep	Naivasha Basin	0.3	(10)
sheep	Naivasha Basin	-0.9	(10)
sheep	Naivasha Basin	0.2	(10)
sheep	Naivasha Basin	-0.6	(10)
sheep	Naivasha Basin	-1.5	(10)
sheep	Central Rift valley	-0.7	(2)
sheep	Central Rift valley	-0.4	(2)
goat	Baragoi	-7.9	this study
goat	Baringo	-10.2	this study
goat	Borana Maua	-10.7	this study
goat	Ciakariga	-10.9	this study
goat	Emuhaya	-10	this study
goat	Kainauk	-8.5	this study
goat	Kibwezi	-6.3	this study
goat	Kilungu	-9.7	this study
goat	Kilungu	-10.1	this study
goat	Kimende	-4.7	this study
goat	Lamu	-12.3	this study
goat	Lodwar	-3.5	this study
goat	Loyangalani	-9.5	this study
goat	Maimanti	-9.7	this study
goat	Malaral	-4.1	this study
goat	Mandera	-5.6	this study
goat	Marimanti	-11.7	this study
goat	Matiiri	-6	this study
goat	Maua	-9.5	this study
goat	Mericho	-3.6	this study
goat	Nanyuki	-6.3	this study
goat	Nariokotome	-5.4	this study
goat	Ndaragwa	-3.5	this study
goat	South Horr	-10.3	this study
goat	Suguta Malmar	-4.4	this study
goat	Tharaka	-11.2	this study
goat	Tunyai	-11.6	this study
goat	Naivasha Basin	-6.3	(10)
goat	Naivasha Basin	-7.4	(10)
goat	Naivasha Basin	-7.2	(10)
goat	Naivasha Basin	-6.1	(10)
goat	Naivasha Basin	-6.5	(10)

Common/Species name	Locality	$\delta^{13}\text{C}_{1750}$	Citation
goat	Naivasha Basin	-5.9	(10)
goat	Naivasha Basin	-3.4	(10)
goat	Naivasha Basin	-2.6	(10)
goat	Naivasha Basin	-8.5	(10)

Table S5: Comparison of wild vs. domestic fauna at Neolithic sites in Kenya

Site	Tradition	wild %	domestic	N (NISP)	Ref.
Narosura	SPN*	7	93	1215	(11)
Crescent Island Main	SPN	18	82	526	(11)
Prolonged Drift	SPN	79.9	20.1	1491	(12)
Ngamuriak	Elmenteitan	0.5	99.56	4653	(13, 14)
Sugenya	Elmenteitan	1.9	98.1	1774	(15)
Olderotua	Elmenteitan	1.6	98.4	2127	(15)
Maasai Gorge	Elmenteitan	4.3	96.7	115	(11)
Gogo Falls	Elmenteitan	46.5	53.5	612	(16)
Wadh Lango 140-160	Elmenteitan	10.9	89.1	156	(17)
Wadh Lango 160-190	Elmenteitan	10	90	88	(17)

*SPN = *Savanna Pastoral Neolithic*

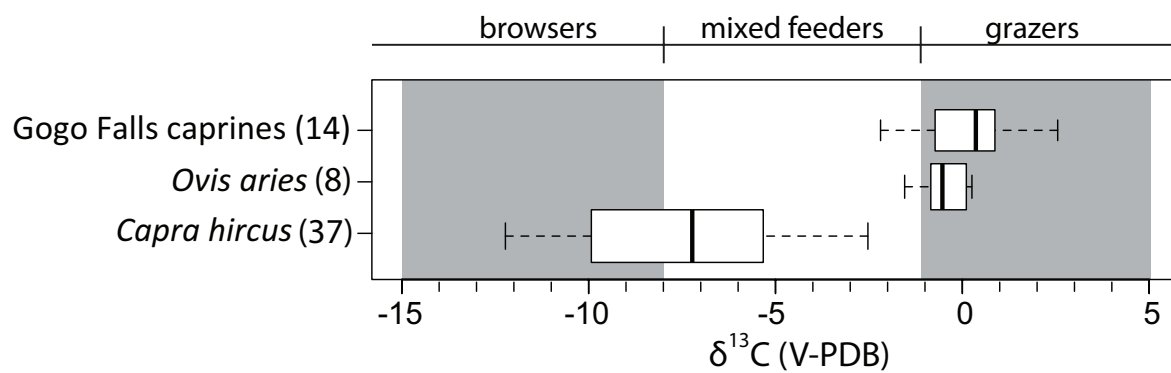


Figure S1: Boxplots of $\delta^{13}\text{C}_{1750}$ tooth enamel values of modern goat, *Capra hircus* (Table S4), modern sheep, *Ovis aries* (Table S4), and Gogo Falls caprines (Table S3).

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