

Supplementary Information

Pathways to plant domestication in Southeast Anatolia based on new data from aceramic Neolithic Gusir Höyük

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Supplementary Figure S1
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Additional supplementary materials for this manuscript include the following:

Supplementary Data Files S1 to S8



Supplementary Fig. S1. Photo showing the location of the excavated area (red circle) at Gusir Höyük next to the Gusir sinkhole lake (photo from the Gusir Höyük project archive).

Supplementary Table S1. Per phase counts of the charred plant macro-remains studied from Gusir Höyük: ~11.4-10.9 kyr cal BP group corresponds to the PPNA; ~10.5-10.3 kyr cal BP group corresponds to the EPPNB.

Excavation grid square	~11.4-10.9 kyr cal BP	~10.5-10.3 kyr cal BP		Total
	20-M, N; 21-G, L, N; 22-J; 23-K, L	23-M	20-I	
Context type	Building fills	Ashy fills	Fire pits	
No of sampled contexts (= no of samples)	27	4	5	36
Nutshell & <i>Celtis</i>				
<i>Prunus</i> subg. <i>Amygdalus</i> nutshell (fragment count)	875	8	258	1141
<i>Prunus</i> subg. <i>Amygdalus</i> nutshell weight (g)	2.512	0.017	0.273	2.802
<i>Pistacia</i> nutshell (fragment count)	383	25	289	697
<i>Pistacia</i> nutshell weight (g)	0.56	0.041	0.154	0.755
Nutshell indet. (fragment count)	386		117	503
<i>Celtis</i>	2	3	4	9
Fabaceae				
<i>Lens</i> spp. (whole, cotyledon count)	113	8	20	141
<i>Vicia</i> cf. <i>ervilia</i> (whole, cotyledon count)	51	13	8	72
Vicieae indet. (whole, cotyledon count)	31	2	2	35
Vicieae indet. (fragment count)	18		8	26
<i>Onobrychis</i> cf. <i>viciifolia</i> (whole, cotyledon count)	4			4
<i>Vicia/Lathyrus</i> (whole, cotyledon count)	184	24	20	228
<i>Vicia/Lathyrus</i> (fragment count)	45		7	52
<i>Medicago radiata</i>		14	1	15
<i>Astragalus/Trigonella</i>		10	1	11
Fabaceae (small)		3	4	7
Fabaceae indet. (fragment count)	262	31	91	384
Poaceae				
<i>Triticum boeoticum</i> (wide) (whole + apical/embryo)		34		34
<i>T. boeoticum</i> (wide) (fragment count)		2		2
<i>T. boeoticum</i> (narrow) (whole + apical/embryo)		13		13
<i>T. turgidum</i> spp. <i>dicoccoides</i> (whole + apical/embryo)		14		14
<i>T. turgidum</i> spp. <i>dicoccoides</i> (fragment count)		3		3
<i>Triticum</i> spp. (fragment count)		207		207
<i>T. boeoticum</i> chaff (spikelet fork count)		3		3
<i>T. boeoticum</i> chaff (glume base count)		9		9
<i>T. turgidum</i> spp. <i>dicoccoides</i> chaff (glume base count)		1		1
<i>Triticum</i> spp. chaff (spikelet fork count)		21		21
<i>Triticum</i> spp. chaff (glume base count)		24		24
<i>Aegilops</i> spp. grain (whole + apical/embryo)		2		2
<i>Aegilops</i> spp. chaff		3		3
Poaceae wild (small) grain (whole + apical/embryo)	16		6	22
Poaceae wild (small) (fragment count)	75	16	11	102
Poaceae wild (medium) grain (whole + apical/embryo)	1		5	6
Poaceae indet. (fragment count)	12	4	28	44
Poaceae culm	2	12	3	17

Wild/weedy other				
<i>Gypsophila</i>	12	1	2	15
<i>Silene</i>	1			1
Brassicaceae	14			14
<i>Brassica/Sinapis</i>	29			29
<i>Neslia</i>	1			1
Apiaceae (cf. <i>Lisea</i>)	1			1
Lamiaceae	2	4		6
<i>Galium</i>	1			1
Cyperaceae (<i>Bolboschoenus/Carex</i>)	7	3	4	14
<i>Adonis</i>		1		1
Boraginaceae			1	1
<i>Vitis sylvestris</i>			1	1
Tuber/rhizome indet.	5			5
Non-wood NISP	2533	518	891	3942
Cupule/Involucre fragment	4			4
Amorphous charred plant/aggregate	67		15	82
Wood charcoal >2mm				
<i>Prunus</i> subg. <i>Amygdalus</i>	378		15	393
<i>Pistacia</i>	96	14	190	300
<i>Prunus</i>	3			3
<i>Quercus</i>	4	12	10	26
<i>Betula</i>	10	84	3	97
<i>Acer</i>	10		7	17
Maloideae			2	2
<i>Rhamnus</i>	4			4
Ulmaceae/cf. <i>Celtis</i>	1		1	2
<i>Fraxinus</i>	2	160	1	163
<i>Alnus</i>			1	1
Chenopodiaceae	1			1
Wood charcoal >2mm NISP	509	270	230	1009

Supplementary Table S2. Preliminary zooarchaeological results from PPNA contexts at Gusir Höyük, showing taxa with clear habitat preferences (NISP=Number of Identified Specimens; Habitat codes: M=mountain; G=Grassland; W=woodland; Wet/Aq=wetland/aquatic).

Habitat	Taxon	NISP
M	Wild goat, <i>Capra aegagrus</i>	334
G	Wild sheep, <i>Ovis orientalis</i>	768
G	Brown hare, <i>Lepus europaeus</i>	3
G	Chukar & Grey partridge, <i>Alectoris chukar</i> & <i>Perdix perdix</i>	438
W	Aurochs, <i>Bos primigenius</i>	327
W	Red deer, <i>Cervus elaphus</i>	1392
W	Roe deer, <i>Capreolus capreolus</i>	19
W	Wild boar, <i>Sus scrofa</i>	501
W	Brown bear, <i>Ursus arctos</i>	5
Wet/Aq	Beaver, <i>Castor fiber</i>	3
Wet/Aq	Common crane, <i>Grus grus</i>	1
Wet/Aq	White-tailed eagle, <i>Haliaeetus albicilla</i>	1
Wet/Aq	Fish	126
Wet/Aq	<i>Unio</i> shell	7

Supplementary Data File S1 (.xlsx file). Radiocarbon dates from the Gusir Höyük excavation grid squares sampled for charred plant remains.

Supplementary Data File S2 (.xlsx file). Counts of charred plant remains retrieved from each sampled excavation grid square at Gusir Höyük, grouped by chronological phase and context type.

Supplementary Data File S3 (.xlsx file). Measurements of *Triticum* accessions - All specimens sourced from the John Innes Centre Germplasm Resource Unit (GRU) (Norwich, UK).

Supplementary Data File S4 (.xlsx file). Archaeological charred *Triticum* measurements from Gusir Höyük (GSR) and Çayönü (CAY).

Supplementary Data File S5 (.xlsx file). Archaeological charred *Triticum* grain measurements used in PCA, including missMDA imputed length measurements of incomplete Gusir Höyük grains.

Supplementary Data File S6 (.xlsx file). PCA results of the *Triticum* accessions measurements.

Supplementary Data File S7 (.xlsx file). PCA results of the archaeological charred *Triticum* measurements.

Supplementary Data File S8 (.xlsx file). Mean, minimum and maximum values and standard deviations of length, breadth and height measurements for each modern *Triticum* accession and the archaeological specimen groups.