Supplementary material for

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Material and methods

Carpological data

We identified sites with published archaeobotanical data through a systematic review of the literature. Once identified, we chose sites for inclusion in our analytical dataset that: reported seed (carpological) data, presented quantitatively; dated between the Roman and Ottoman periods; are publicly available (theses and dissertations not available in online repositories were excluded); and did not duplicate results previously published. These criteria are similar to those used by Marston and Castellano (2023). In total, we include 31 sites, some of which include assemblages dated to multiple periods (Table S1).

We standardize botanical names for crops following Zohary *et al*. (2012), save for cereals in which we follow the earlier taxonomy used in the *Flora of Turkey* (Davis 1985). When identifications were presented at a taxonomic level more specific than the ones we adopted, we reduced that level of identification—e.g. two-row barley (*Hordeum vulgare* subsp. *distichum*) was reduced to hulled barley (*Hordeum vulgare*). When identifications were presented at uncertain levels of identification, we reduced those to the genus or (sub-)family level—e.g. *Triticum* cf. *dicoccum* was reduced to *Triticum* sp., and *Vicia/Lathyrus* was reduced to “Pulse indeterminate.” Identifications uncertain to domestication status (e.g. *Vicia* sp.) were excluded as possibly wild. We excluded all definitively identified wild taxa, tuber and parenchyma fragments, and other non-carpological remains save crop chaff and nutshell.

Raw counts were recorded for each period from each site. In the few instances in which only weights were reported for cereals and pulses (e.g. Gordion and Gritille [Miller 1998, 2010]), these were converted to counts using site-specific data, where available, or else approximated at a ratio of 0.01g = 1 seed, following empirical data provided by Miller (Stein *et al*. 1996, p. 255). We converted nutshell fragment counts to approximate whole nut equivalents following Filipović (2014), at a ratio of 15 fragments = 1 *Pistacia* and 20 fragments = 1 *Amygdalus*, *Prunus*, or *Quercus*. *Olea* fragment counts were converted to whole endocarps at a ratio of 4:1, following Bouchaud *et al*. (2017), while we converted *Olea* weights to counts at 0.3 g = 1 endocarp (following figures provided by Galili *et al.* 2021). We converted grape berries to grape seeds at a ratio of 1:4.

In addition to simple numerical analyses following standard practices (Marston 2014; Pearsall 2015), we conducted multivariate analysis of the carpological assemblage (Smith 2014). Based on a better performance (i.e., proportion of variance explained), we opted for principal component analysis (PCA) of a cleaned dataset. Assemblages with fewer than 100 specimens meeting the minimum taxonomic criteria were omitted, as were shipwreck sites, given their distinct formation processes. Prior to computation, count values were subjected to Hellinger transformation, a recommended step for the ordination of species abundance data through linear models (Legendre & Gallagher 2001; Legendre & Birks 2012; Borcard *et al*. 2018). PCA was performed on the covariance matrix. Results are presented as correlation biplot (using "scaling 2" in Oksanen *et al*. 2019), thus maintaining the angle between descriptor vectors (species) reflecting their correlation. The PCA plot includes confidence ellipses (68%) calculated on the standard deviation. Multivariate analysis was carried out in R 3.5.1 package Vegan version 2.5.5 (Oksanen *et al*. 2019).

Faunal data

Zooarchaeological records are based on a systematic review of published literatures, with data drawn from original publications, though prior syntheses were also consulted (e.g. Kroll 2012; Vroom 2018; Slim & Çakırlar 2023). In the dataset we also include assemblages for which only data on main domesticates (caprine, pig, cattle) are published. The latter are, however, excluded from multivariate analysis (see below). In total, we include 29 sites, some of which include assemblages dated to multiple periods (Table S1).

We include only definitively identified remains of domesticated animals, excluding broader categories (e.g. "large mammal"), even when those are highly likely to represent domesticated animal remains nearly exclusively. Identifications are reduced to common taxonomic categories. We generally lump sheep and goat remains with indeterminate sheep/goat, except when differentiating the two. Note that several sites do not report sheep and goat separately. Wild taxa are excluded while non-food domesticates are included. We calculated relative percentages among domesticated animals based on bone counts (NISP) as reported in the original publications.

In addition to simple numerical analyses, faunal data were subjected to multivariate analysis (PCA). Prior to computation, "sheep" and "goat" were reduced to "sheep/goat", while undifferentiated "equids" were removed from the dataset. Following the same protocol used for carpological data, the PCA was performed on the covariance matrix of Hellinger transformed count values (Legendre & Gallagher 2001; Legendre & Birks 2012; Borcard *et al*. 2018) and results are presented as correlation biplot (Oksanen *et al*. 2019). The PCA plot includes confidence ellipses (68%) calculated on the standard deviation. Multivariate analysis was carried out in R 3.5.1 package Vegan version 2.5.5 (Oksanen *et al*. 2019).

Pollen data

Pollen records were retrieved from the European Pollen Database (EPD; Fyfe *et al.* 2009; Williams *et al.* 2018). Palynological data available in the EPD includes 36 cores in modern Turkey; of these, only 10 have sufficient resolution sampling and absolute dates (radiometric, varve-count, biostratigraphic correlation with varved sequence) associated with the years AD 1-2000. These latter sequences were selected for quantitative analysis (Table S1).

Data are presented as relative percentages calculated on the total of terrestrial pollen, excluding ferns and aquatic plants. Our analysis differentiates arboreal crops (*Castanea*, *Juglans*, *Olive*, *Vitis*; CJOV), following the methodology discussed by Mercuri *et al*. (2013) and Woodbridge *et al*. (2019); total sum of arboreal taxa, excluding CJOV; undifferentiated *Cerealia*-type, and *Secale* pollen, when provided. Chronology is based on the most updated age-depth model available in the EPD.

			Botanical Data			Faunal Data		
Site	**Region**	**Coordinates; Elevation (masl)**	**Dating**	**Selected?**	**Reference**	**Dating**	**Selected?**	**Reference**
ROMAN (1st to mid-4th c.)								
Datça	Aegean	36.7283N; 27.6869E; 15	—	—	—	1-350	y	Silibolatlaz 2017
Ephesus	Aegean	37.941111N; 27.341944E; 15	1-300	y	Heiss and Thanheiser 2016; Heiss and Thanheiser 2020	1-350	y	Forstenpointer et al 2002
Klazomenai	Aegean	38.358167N, 26.767583E; 18	—	—	—	1-350	y[1]	Slim and Çakırlar 2023
Troy	Aegean	39.957461N; 26.238561E; 35	—	—	—	1-350	y[1]	Slim and Çakırlar 2023
Didyma	Aegean	37.385N; 27.256389E; 70	—	—	—	1-350	y	Boessneck and von den Driesch 1983
Pergamon	Aegean	39.1325N; 27.184167E; 315	—	—	—	1-350	y	Boessneck and von den Driesch 1985
Amorium	C-An.	39.020556N; 31.289167E; 940	1-350	n[1]	Harrison 1993; Lightfoot et al. 1995; Giorgi 2011	—	—	—
Gordion	C-An.	39.650472N; 31.978199E; 693	1-350	y	Marston 2017; Marston and Miller 2014	1-350	y	Çakırlar and Marston 2019
Pessinonte	C-An.	39.333889N; 31.584444E; 940	1-350	y	van Peteghem 2005 and 2008; van Peteghem and Braeckman 2001	1-350	y	De Cupere 1995
Aşvan-kale	E-An.	38.899589N; 38.950008E; 821	1-100	y	Nesbitt et al. 2017	—	—	—
Cemi-i Çeto	SE-An.	37.922381N; 41.69203E; 710	—	—	—	post-300	n[3]	Acar and Siddiq 2023
Ilısu Höyüğü	SE-An.	37.527068N; 41.845406E; 525	250-300	y	Oybak Dönmez 2018	—	—	—
Zeugma	SE-An.	37.058611N; 37.865833E; 524	1-350	y	Challinor and de Moulins 2013	1-350	Y	Charles 2013
Sagalassos	Tr-Med.	37.678056N; 30.519444E; 1550	1-450	n[1]	Poblome et al. 2015; Vandam et al. 2019	1-350	y	De Cupere 2001
EARLY BYZANTINE (mid-4th to mid-9th c.)								
Ephesus	Aegean	37.941111N; 27.341944E; 15	—	—	—	400-700	y	Forstenpointner et al 2008
Yassi Ada	Aegean	36.75306N; 27.76367E; 0	600-700	y	Bryant and Murray 1982	—	—	—
Amorium	C-An.	39.020556N; 31.289167E; 940	475-850	y	Giorgi 2012	500-850	y	Slibolatlaz-Baykara 2012; Ionnidou 2012
Çadır Höyük	C-An.	39.676797N; 35.143431E; 1020	—	—	—	300-850	y	Cassis et al 2019
Gordion	C-An.	39.650472N; 31.978199E; 693	350-425	y	Marston and Miller 2014	—	—	—
Pessinonte	C-An.	39.333889N; 31.584444E; 940	—	—	—	475-800	y	Ervynck et al 2003
Beşiktaş	Marmara	41.068616N; 29.028535E; 128	600-800	y	Ulaş 2020	—	—	—
Kinet Höyük	Medit.	36.853637N; 36.157192E; 10	775-600	y	Ramsay and Eger 2015	—	—	—
Limyra	Medit.	36.342831N; 30.170519E; 10	—	—	—	500-700	y	Forstenpointner and Gaggl 1997
Olympos	Medit.	36.396667N; 30.473056E; 10	—	—	—	350-850	y	Onar et al 2022
Sinop	N-An.	42.026667N; 35.151111E; 25	—	—	—	575-625	n[3]	Onar et al 2021
Ziyaret Tepe	SE-An.	37.79347N; 40.793047E; 560	400-800	y	Matney et al. 2015	—	—	—
Sagalassos	Tr-Med.	37.678056N; 30.519444E; 1550	250-600	y	Baeten et al. 2012	350-550	y	De Cupere 2001
MIDDLE BYZANTINE (mid-9th to early 13th c.)								
Bozburun	Aegean	36.728033N; 28.071252E; 0	800-900	y	Gorham 2000	—	—	—
Serçe Limanı	Aegean	36.584596N; 28.048723E; 0	1000-1100	y	Ward 2004	—	—	—
Amorium	C-An.	39.020556N; 31.289167E; 940	800-1100	y	Giorgi 2012	800-1100	y	Slibolatlaz-Baykara 2012; Ionnidou 2012
Çadır Höyük	C-An.	39.676797N; 35.143431E; 1020	—	—	—	1000-1100	n[2]	Cassis et al 2019
Aşvan-kale	E-An.	38.899589N; 38.950008E; 821	900-1100	y	Nesbitt et al. 2017	900-1100	y	Pişkin 2016

			Botanical Data			**Faunal Data**		
Site	**Region**	**Coordinates; Elevation (masl)**	**Dating**	**Selected?**	**Reference**	**Dating**	**Selected?**	**Reference**
Istanbul-Yenikapi	Marmara	41N; 28.95E; 5	900-1100	y	Oybak-Dönmez 2010	—	—	—
Kinet Höyük	Medit.	36.853637N; 36.157192E; 10	900-1300	y	Ramsay and Eger 2015	—	—	—
Mersin-Yumuktepe	Medit.	36.801164N; 34.604313E; 38	1000-1200	y	Fiorentino et al. 2014	—	—	—
Komana-Pontika	N-An.	40.3575N; 36.638611E; 640	900-1200	y	Piskin and Tatbul 2015	900-1300	y	Pişkin 2015
Gritille	SE-An.	37.556430787N; 38.572040247E; 525	1000-1250	y	Miller 1998	1150-1225	y	Stein 1988
Horum Höyük	SE-An.	37.109201N; 37.861011E; 390	—	—	—	1100-1300	y	Bartosiewicz 2005
Karkemish	SE-An.	36.829722N; 38.015E; 350	700-1000	y	Carra 2018	—	—	—
Tilbeşar Höyük	SE-An.	36.874N; 37.559E; 625	—	—	—	1000-1300	y	Berthon and Mashkour 2008
Beycesultan	Tr-Med.	38.256668N; 29.701197E; 833	900-1000	y	Helbaek 1961	—	—	—
LATE BYZANTINE/TURKIC (early 13th to mid-15th c.)								
Amorium	C-An.	39.020556N; 31.289167E; 940	post 1100	y	Giorgi 2012	post-1100	y	Slibolatlaz-Baykara 2012
Gordion	C-An.	39.650472N; 31.978199E; 693	1200-1400	y	Marston 2017; Miller 2010	—	—	—
Kınık Höyük	C-An.	37.937441N; 34.380126E; 1110	—	—	—	1250-1400	y	Crabtree and Campana 2014
Aşvan-kale	E-An.	38.899589N; 38.950008E; 821	1100-1335	y	Nesbitt et al. 2017	—	—	—
Aşvan-Taşkun Kale	E-An.	38.899589N; 38.950008E; 821	1275-1335	y	Nesbitt et al. 2017	—	—	—
Korucutepe	E-An.	38.635528007N; 39.531663018E; 820	1200-1400	y	van Zeist and Bakker-Heeres 1975	1200-1400	y	Boessneck and von den Driesch 1973
Aydos Castle	Marmara	40.931111N; 29.256944E; 450	1200-1400	y	Ulaş 2020	—	—	—
Daskeleion	Marmara	40.128889N; 28.071667E; 40	1100-1300	y	Oybak Dönmez et al. 2016	—	—	—
Küçükyalı	Marmara	40.943576N; 29.115447E; 10	800-1325	y	Ulaş 2020	—	—	—
Kinet Höyük	Medit.	36.853637N; 36.157192E; 10	—	—	—	1275-1325	y[1]	Redford et al 2001
Gre Virike	SE-An.	36.917388864N; 38.017240349E; 350	1000-1300	y	Oybak Dönmez 2006	—	—	—
Mezraa Höyük	SE-An.	36.972338N; 37.975654E; 340	1000-1300	y	Oybak Dönmez 2006	—	—	—
Ziyaret Tepe	SE-An.	37.79347N; 40.793047E; 560	—	—	—	1275-1425	y	Matney et al. 2009
OTTOMAN (post-mid 15th c.)								
Can Hasan III	C-An.	37.279114N; 33.322985E; 1011	1400-1600	n[1]	Hillman 1972 and 1978; Fairbairn 2019	—	—	—
Kaman-Kalehöyük	C-An.	39.362778N; 33.786667E; 1070	1400-1600	y	Fenwick and Omura 2015; Kennedy 2000; Nesbitt 1993	1400-1600	y	Hongo 1997
Dikilitaş	Marmara	40.487523N; 29.702014E; 130	post 1400	y	Willcox 2003	—	—	—
Komana-Pontika	N-An.	40.3575N; 36.638611E; 640	post 1450	y	Piskin and Tatbul 2015	post 1450	y	Pişkin 2015
Mardin	SE-An.	37.313056N; 40.735E; 1070	—	—	—	post 1450	y	Siddiq 2023
BYZANTINE (other/generic)								
Beşik Tepe	Aegean	39.915167N; 26.150817E; 10	—	—	—	post-350	y	von den Driesch and Boessneck 1984
Hierapolis	Aegean	37.925N; 29.125833E; 370	post-350	y	Fiorentino et al. 2012	—	—	—
Sardis	Aegean	38.488333N; 28.040278E; 110	—	—	—	not given	n[4]	Deniz et al 1964
Pergamon	Aegean	39.1325N; 27.184167E; 315	—	—	—	1100-1500	y	Boessneck and von den Driesch 1985
Çadır Höyük	C-An.	39.676797N; 35.143431E; 1020	post-350	n[1]	Cassis et al. 2019; Smith 2007	post-350	y	Arbuckle 2009
Pessinonte	C-An.	39.333889N; 31.584444E; 940	post-350	y	van Peteghem 2005 and 2008; van Peteghem and Braeckman 2003	—	—	—

			Botanical Data			Faunal Data		
Site	**Region**	**Coordinates; Elevation (masl)**	**Dating**	**Selected?**	**Reference**	**Dating**	**Selected?**	**Reference**
Istanbul-Yenikapi	Marmara	41N; 28.95E; 5	—	—	—	350-1450	y	Onar et al 2013
Kilise Tepe	Medit.	36.480505N; 33.547757E; 120	post-350	y	Bending and Colledge 2007	post-300	y	Baker 2008
Tarsus-Gözlükule	Medit.	36.91243N; 34.895952E; 30	post-350	n[1]	Özyar et al. 2020	—	—	—
Oymaağaç	N-An.	41.207728N; 35.429287E; 280	post-350	y	Czichon et al 2016	—	—	—
Lidar Höyük	SE-An.	37.4733N; 38.4806E; 530	—	—	—	300-1300	y	Kussinger 1988
Zeugma	SE-An.	37.058611N; 37.865833E; 524	—	—	—	650-1000	Y	Charles 2013

n[1] = quantitative data not availlable
n[2] = faunal assembalge from destruction level
n[3] = faunal remains from burial context
n[4] = faunal data provided without chronology
y[1] = quantitative data availlable only for main domesticates (sheep/goat, pig, cattle)

Table S1. Archaeobotanical and zooarchaeological sequences from Anatolia. Coordinates indicative and reflect the information provided in the literature cited.

		Pollen Data				
Site (Core)	**Coordinates; Elevation**	**EPD**	**Selected?**	**Chronology**	**C14 (2k)**	**Reference**
Abant Gölü	40.606475N; 31.279956E; 1330	site15736	y	>12000-400	1	Bottema et al 1993-1994
Adatepe Gölü	41.049212N; 30.564427E; 5	site2963	n[3]	1000-0	1	Bottema et al 1993-1994
Adliye (ADL4)	40.414353N; 29.818564E; 210	—	n[5]	3000-0	2	Argant 2003
Ağlasun (12)	37.664341N; 30.520058lE; 1235	—	n[5]	7500-0	5	Vermoere 2004
Ağlasun (13)	37.664341N; 30.520058EE; 1235	—	n[5]	8000-0	2	Vermoere 2004
Ağlasun (6)	37.664341N; 30.520058EE; 1235	—	n[5]	9000-0	4	Vermoere 2004
Akgöl Adabag	37.5N; 33.733333E; 1000	site15740	n[2]	>12000 to 100	—	Bottema and Woldring 1984
Aktas (AC1)	41.193999N; 43.178584E; 1800	—	n[5]	1000-0	3	Kılıç et al 2018
Aktas (AC2)	41.193999N; 43.178584E; 1800	—	n[5]	700-0	3	Kılıç and Ersin 2019
Avlan Gölü	36.583333N; 29.95E; 1025	site2991	n[1]	n/a	—	Bottema and Woldring 1984
Bafa Gölü (Baf S1)	37.500878N; 27.444024E; 0	—	n[5]	6000-0	—	Knipping et al 2008
Bafa Gölü (Baf S6)	37.500878N; 27.444024E; 0	—	n[5]	2500-0	2	Knipping et al 2008
Bereket (BKT1-2)	37.548722N; 30.282261E; 1455	site28070	y	3500-0	7	Kaniewski et al 2007a; Kaniewski et al 2007b
Bereket (SA09JBDrill02)	37.548722N; 30.282261E; 1455	—	n[5]	2400-0	16	Bakker et al 2013
Beyşehir (I)	37.770601N; 31.513018E; 1125	site3013	n[2]	6000-0	—	van Zeist et al 1975
Beyşehir (II)	37.770601N; 31.513018E; 1125	site3013	n[2]	>12000-0	—	Bottema and Woldring 1984
Bozova	37.403611N; 38.535054E; 570	site3033	n[2]	2500-0	—	van Zeist et al 1970
Bulemaç (T1-4)	39.979132N; 41.560771E; 1730	—	n[5]	>12000-0	—	Collins et al 2005
Büyük Gölü	37.383333N; 37.383333E; 765	site 3041	n[1]	n/a	—	Bottema et al 1993-1994
Çakırca	40.457637N; 29.686158E; 90	—	n[5]	400-0	1	Bottema et al 2001
Çöl Gölü	40.59072N; 33.680092E; 875	—	n[5]	2000-0	2	Roberts et al 2009
Çubuk Gölü (CK-1)	40.482059N; 30.834743E; 1025	—	n[5]	2800-0	3	Ocakoğlu et al 2016
Demiryurt Gölü	39.888053N; 37.579011E; 1300	site3079	n[1]	2000-0	1	Bottema et al 1993-1994
Elaia (ELA70)	38.943148N; 27.038632E; 0	—	n[5]	7500-0	4	Shumilovskikh et al 2016
Elaiussa Sebaste (ELA6)	36.483624N; 34.173725E; 20	—	n[5]	1900-0	3	Melis et al 2015
Elmali	36.716111N; 29.854444E; 1025	site 3092	n[1]	n/a	—	Bottema and Woldring 1984
Engir (EG 15-03)	38.80252N; 35.591001E; 1080	—	n[5]	2300-0	2	Şenkul et al 2018b
Eski Acıgöl (ESK92)	38.550409N; 34.544295E; 1270	—	n[5]	11000-0	2	Roberts et al 2001; Woldring and Bottema 2002
Gavur	36.819749N; 37.301453E; 645	—	n[5]	4000-0	—	Topuz et al 2023
Göksu-Iznik	40.461166N; 29.668258E; 85	—	n[5]	3000-0	2	Argant 2003
Gölbaşı-Bozova	37.799819N; 37.646805E; 880	site3131	n[2]	3000-0	—	van Zeist et al 1970
Gölcük Gölü	38.315665N; 28.027689E; 1050	—	n[5]	1600-0	7	Danladi et al 2023
Gölhisar (GHA)	37.119211N; 29.592657E; 945	site3132	n[2]	10000-0	—	Eastwood et al 1998; Eastwood et al 1999; Eastwood et al 2007
Gölhisar (GHB)	37.119211N; 29.592657E; 945	site3132	n	18670 to	(biostr.)	Bottema and Woldring 1984
Gölhisar (GHC)	37.119211N; 29.592657E; 945	site3132	y	2700-200	3	Eastwood et al 1998; Eastwood et al 1999; Eastwood et al 2007
Gravgaz (06 SA06EPB1)	37.577961N; 30.401167E; 1220	—	n[5]	2500-0	7	Bakker et al 2011; Bakker et al 2012
Gravgaz (1996)	37.577961N; 30.401167E; 1220	—	n[5]	3000-0	3	Vermoere et al 2000; Vermoere et al 2002; Bakker et al 2012

		Pollen Data				
Site (Core)	**Coordinates; Elevation**	**EPD**	**Selected?**	**Chronology**	**C14 (2k)**	**Reference**
Gravgaz (1999)	37.577961N; 30.401167E; 1220	—	n^5	2500-0	1	Vermoere et al 2002; Bakker et al 2012
Hazar Gölü (Hz11-P02)	38.516667N; 39.416666E; 1240	—	n^5	3000-500	1	Biltekin et al 2021
Hazar Gölü (Hz11-P03)	38.516667N; 39.416666E; 1240	—	n^5	13000-0	—	Biltekin et al 2018
Hoyran Gölü	38.200146N; 30.813001E; 917	site15739	n^2	6000-0	—	van Zeist et al 1975
Iznik (IZN05/SC4E&LC1 + IZN09/LC2&LC3)	40.449836N; 29.534072E; 85	site26045	y	>12000-0	2	Ülgen et al 2012; Miebach et al 2016
Kararmik Batakligi	38.425N; 30.8E; 1005	site 3181	n^2	>12000 to 100	—	van Zeist et al 1975
Kaz	40.28333N; 36.15E; 540	site3187	n^2	—	—	Bottema et al 1993-1994
Köyceğiz Gölü	36.873034N; 28.631389E; 0	site3203	y	5000-0	1	van Zeist et al 1975
Küçük Akgöl	40.877892N; 30.43215E; 10	site3209	n^2	4000-0	—	Bottema et al 1993-1994
Ladik Gölü	40.91603N; 36.011205E; 870	site15734	n^2	>12000-0	—	Bottema et al 1993-1994
Manyas (Core 11)	40.185643N; 27.943352E; 15	site26044	n^3	4300-0	(210Pb; 137Cs)	Leroy et al. 2002
Melen Gölü	40.760865N; 31.039583E; 115	site3282	n^2	4000-0	—	Bottema et al 1993-1994
Mogan (MD)	39.763339N; 32.794344E; 975	—	n^5	600-0	2	Oybak Dönmez et al 2021
Mogan (MS)	39.763339N; 32.794344E; 975	—	n^5	3000-0	2	Oybak Dönmez et al 2021
Mucur Obruk (MOG 14-01)	39.061932N; 34.518898E; 1175	—	n^5	800-100	2	Şenkul and Doğan 2018
Nar Gölü (NAR01/02)	38.339966N; 34.456505E; 1371	site28154	y	1700-0	(varve)	England et al 2008
Nar Gölü (NAR10)	38.339966N; 34.456505E; 1370	—	n^5	>12000-0	(U–Th)	Roberts et al 2016
Ova Gölü	36.323594N; 29.362788E; 5	site3333	n^2	6500-0	—	Bottema and Woldring 1984
Pinarbaşı	37.451929N; 30.056533E; 990	site15737	y	>12000-0	1	Bottema and Woldring 1984
Sepanca Gölü	40.71667N; 30.25E; 30	site26046	y	3000 to 5	10	Leroy et al 2010
Söğüt Gölü	37.077542N; 29.881559E; 1405	site3429	n^2	>12000-0	—	van Zeist et al 1975
Söğütlü	38.67088N; 41.962703E; 1280	—	n^5	8000-0	1	Bottema 1995
Sultansazlığı (core A+B)	38.260776N; 35.210374E; 1070	—	n^5	>12000-0	—	Şenkul et al 2022
Suppitassu Gölü	39.285278N; 36.915E; 1880	site28159	n^1	n/a	—	Dörfler 2015
Tatlı Göl	41.570866N; 36.062089E; 0	site3461	n^2	8000-0	—	Bottema et al 1993-1994
Tecer Gölü	39.43139N; 37.08361E; 1405	site28158	y	5100 to 200	3	Kuzucuoglu et al 2011
Troy/Kumtepe (TR-201)	39.963032N; 26.188936E; 10	—	n^5	4500-1000	1	Riehl et al 2014
Tuzla	39.022848N; 35.813193E; 1130	site3480	n^1	n/a	—	Bottema et al 1993-1994
Tuzla (TZL)	39.022848N; 35.813193E; 1130	—	n^5	5000-0	—	Şenkul et al 2018a
Van (04-2)	38.621917N; 42.594841E; 1650	site3488	y	>12000-0	(biostr.)	Litt et al 2009
Van (2-13)	38.621917N; 42.594841E; 1650	site3488	y	10000-0	(varve)	van Zeist and Woldring 1978
Van (90-4)	38.621917N; 42.594841E; 1645	—	n^5	>12000-0	(varve)	Wick et al 2003
Yeniçağa Gölü	40.78002N; 32.02629E; 990	site15735	n^4	16250 to 2900	—	Bottema et al 1993-1994

n^1 = sequence without absolute dates
n^2 = sequence without absolute dates for the last 2k
n^3 = sequence with low sampling resolution for the last 2k
n^4 = EPD sequence not covering last 2k BP
n^5 = sequence not included in EPD

Table S2. Pollen sequences from Late Holocene Anatolia. Coordinates and chronology reflect the information provided in the literature cited.

Anatolian paleoclimate during the first and second millennia AD

An overview of the climatic history of Late Holocene Anatolia is available in several published reviews (e.g. Finné *et al*. 2019; Jacobson *et al*. 2022; Labuhn *et al*. 2018; Luterbacher *et al*. 2024; McCormick *et al*. 2012) and is briefly summarized here. Three high-resolution and well-dated stable isotope records from Anatolia provide insights into effective moisture-variability during the 1st and 2nd millennia AD: Sofular Cave in northwestern Anatolia (Göktürk *et al*. 2011); Nar Gölü in southcentral Anatolia (Jones *et al*. 2006; Dean *et al*. 2013); and Kocain Cave in southwestern Anatolia (Jacobson *et al*. 2021) (Figure S1).

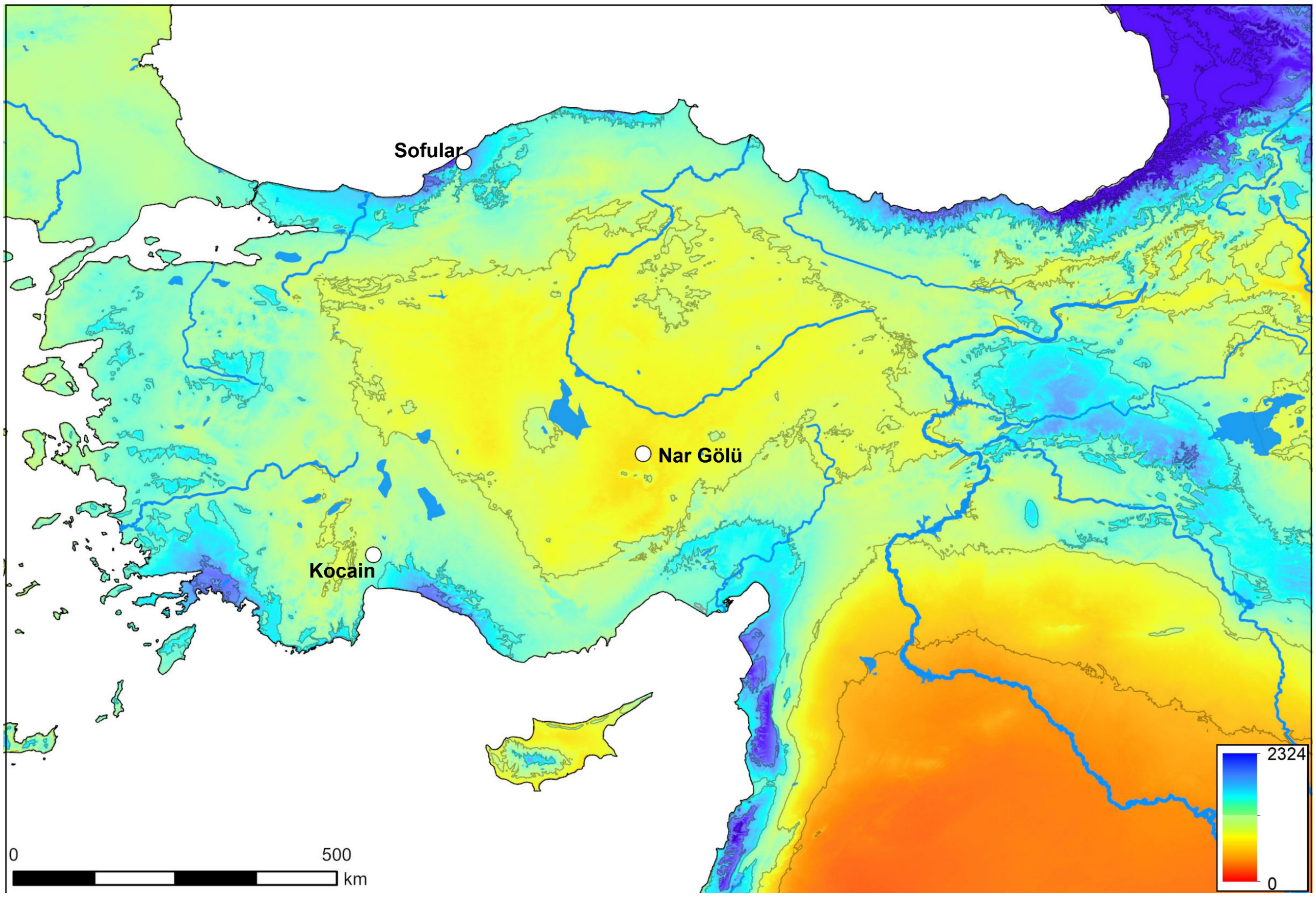

Figure S1. Location of the paleoclimatic archives discussed in the text. The basemap represents the annual average (1970-2000) precipitation (mm). Data extracted from WorldClim2 (Fick et al. 2017).

Throughout the 1st millennium AD, fluctuations in $\delta^{13}C$ at Sofular Cave are closely aligned to changes in $\delta^{18}O$ at Nar Gölü (Figure S2). At the beginning of the 1st millennium AD, during the Roman Warm Period (RWP), dry conditions are recorded at Sofular and Nar, with increased precipitation indicated during the 4th and early 5th centuries. A significant increase in humidity is reconstructed for the mid-6th, 7th, and early 8th centuries, corresponding to the Late Antique Little Ice Age (LALIA). At Nar Gölü, Jones *et al*. (2006) interpret this shift as due to an increase in winter rainfall coupled by a decrease in summer evaporation. Following a short-term dry phase, dated at ca. AD 800 at Nar Gölü, wet conditions are attested at both sites until the onset of the Little Ice Age (LIA), ca. AD 1400.

Originally interpreted as proxy for temperature (Göktürk 2011), δ^{13}C values from Kocain Cave were later reconsidered (e.g. Jacobson *et al*. 2021) as indicative of changes in effective moisture. The trend from this speleothem (Ko-1) significantly diverges from the pattern observed at Sofular Cave and Nar Gölü: a phase of high effective moisture during the 4th and 5th centuries AD is followed by shift to dry conditions starting at c. AD 460 and lasting until c. AD 830. The Medieval Climatic Anomaly (MCA) and the LIA are characterized by a significant degree in interdecadal variability, with the former period overall wetter than the latter. In addition to interpretative issues, these contrasting patterns could be explained by the location of these paleoclimatic proxies in different climatic regions within the Anatolian Peninsula (Jacobson *et al*. 2021).

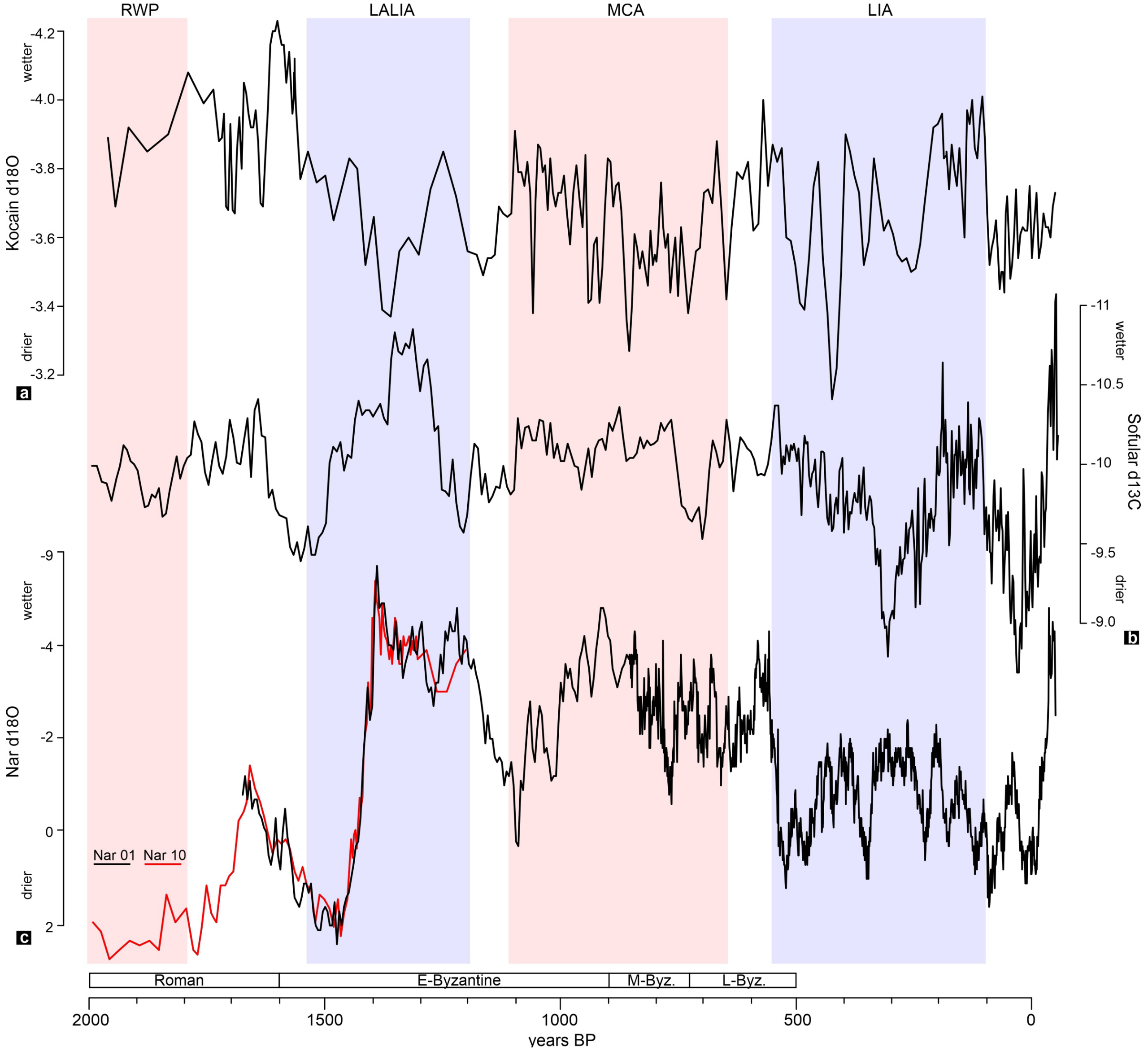

Figure S2. Stable Isotope data from Nar Gölü, cores Nar-01 and Nar-02 (Dean et al. 2013), Sofular Cave (Göktürk et al. 2011), and Kocain Cave (Jacobson et al. 2021).

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