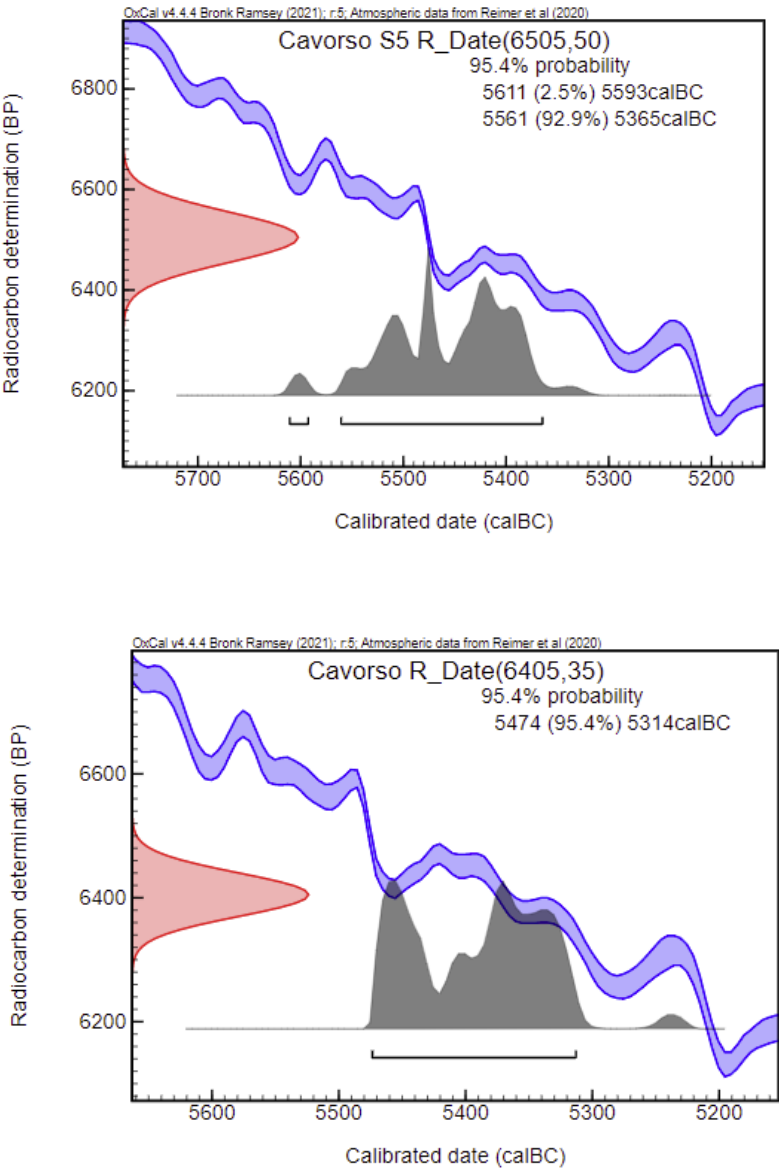
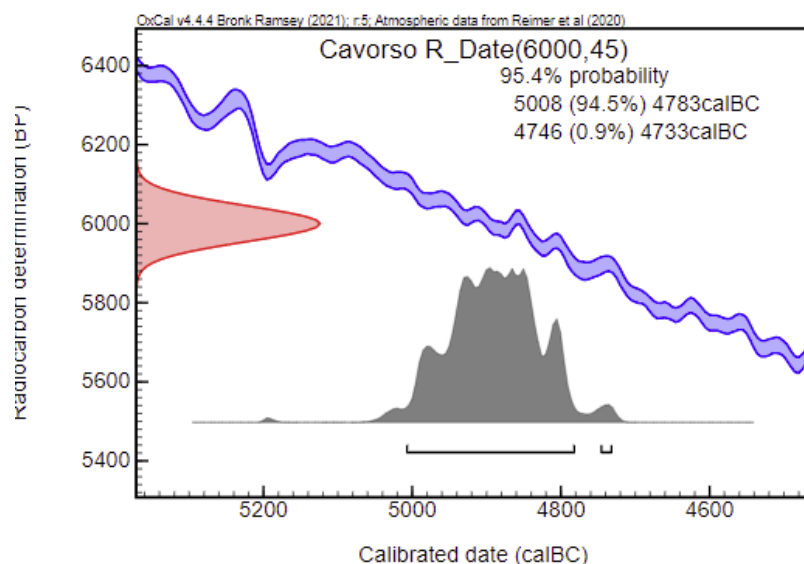
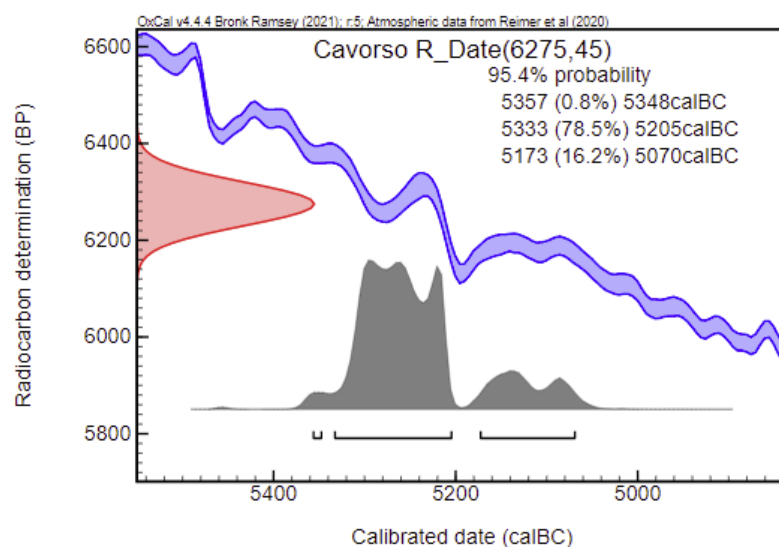


SUPPLEMENTARY FIGURE 1. Radiocarbon dating. Table of measurements obtained by OxCal¹(version 4.4.4), using the IntCal20 curve², and relative details and graphs.

Laboratory	Material dated (sample type)	Radiocarbon date BP	Calibrated date BCE
Lecce LTL6124A	B1/d8/US300 (charcoal)	6505±50	5561-5365
Lyon-3504	SI US1 (human bone)	6405±35	5474 - 5314
Lyon-5202	SS US (charcoal)	6275±45	5333-5205
Lecce LTL6123A	C/A2 US22 (charcoal)	6000±45	5008 - 4783

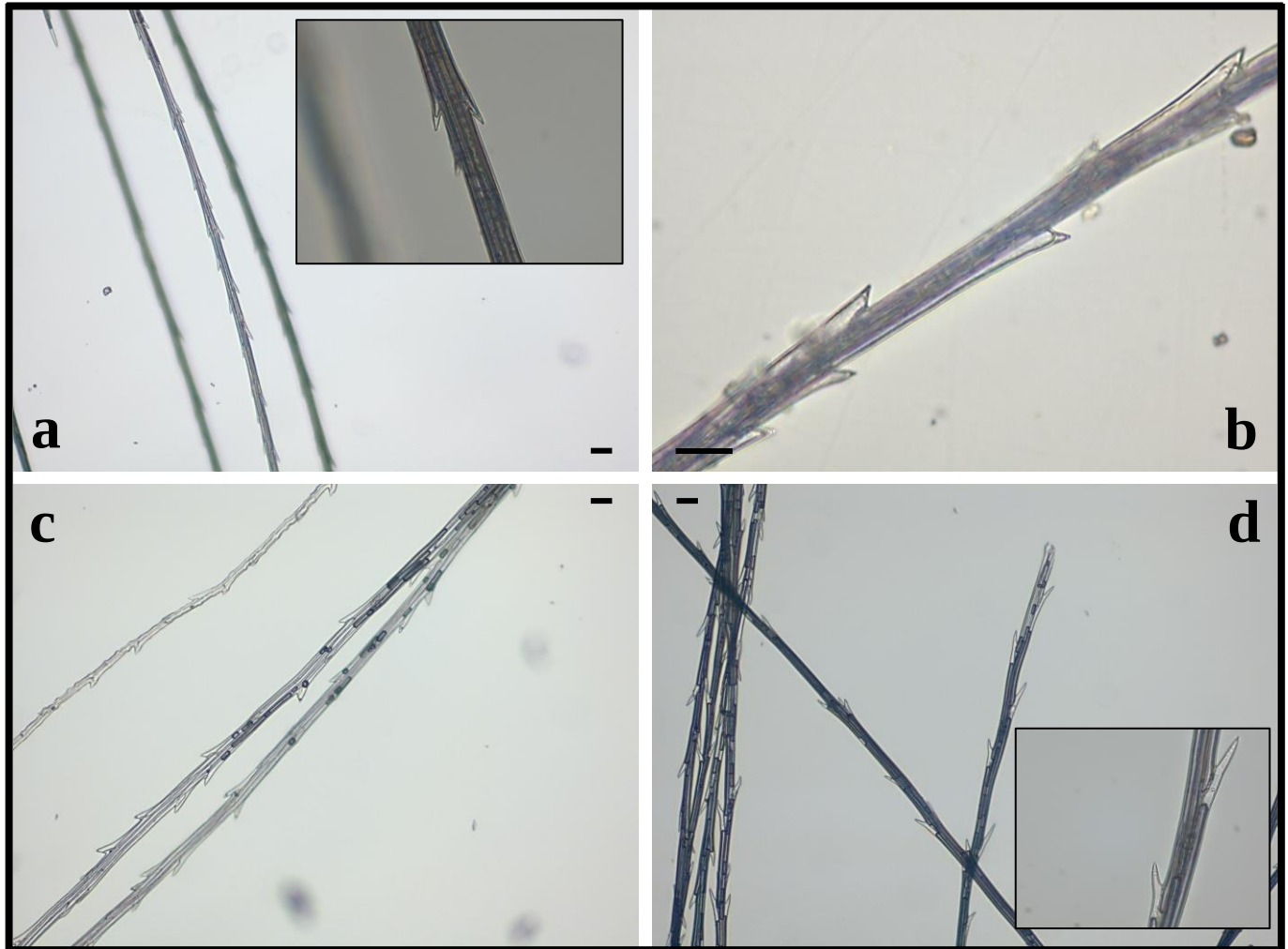




Supplementary References

1. Bronk Ramsey, C., OxCal 4.4.4. Available from: <http://c14.arch.ox.ac.uk/oxcal>. (2021).
2. Reimer, P. J. et al. The IntCal20 Northern Hemisphere radiocarbon age calibration curve (0–55 cal kBP). Radiocarbon 62, 725–757 (2020).

Supplementary Figure 2. Experimental reference collection.



Representative images from modern plant materials observed at light microscope were shown. Fruit fragments of: **a** *Erigeron* sp., **b** *Hieracium* sp., **c** *Sonchus* sp., and **d** *Taraxacum* sp. The scale bar indicates 20 μm.

SUPPLEMENTARY TABLE 1. Dental calculus samples and applied methods. Codes for human and animal samples subjected to Optic Microscopy (OM), Gas Chromatography-Mass Spectrometry (GC-MS), and Next Generation Sequencing (NGS). ND: not determined sex.

	Code	Sex/Age at death	OM	GC-MS	NGS
Human dental calculus samples (individuals)	12E	ND/Adult	x	x	
	94A+127A	ND/Adult	x	x	x
	SS11	ND/Adult	x	x	
	102	ND/Adult	x	x	x
	33IX	ND/Adult	x	x	x
	SS44A+44B	ND/Adult	x	x	x
	39VB	ND/Adult	x	x	x
	13+12C	ND/Adult	x	x	x
	105B+105C	ND/Adult	x	x	x
	76B	ND/Adult	x	x	x
	65B+5B	ND/Adult	x	x	x
Human dental calculus samples (isolated teeth)	4star		x	x	
	76E		x	x	
	76H		x	x	
	138E		x	x	
	248		x	x	
	18star		x	x	
	138B		x	x	
	138F		x	x	
	12star		x	x	
	138A		x	x	
	74		x	x	
	240		x	x	
	13star		x	x	
	61star		x	x	
	11star		x	x	
	125A		x	x	
	126B		x	x	
	126C		x	x	
	146L		x	x	
	239		x	x	
	76I		x	x	
	234		x	x	
	236		x	x	
	13+12-23		x	x	
	11-12		x	x	
	76F		x	x	
	243		x	x	
	146H		x	x	
	76A		x	x	
	144A		x	x	
	238		x	x	
	12		x	x	
	251		x	x	
Animal dental calculus samples	A1		x	x	
	A2		x	x	
	A3		x	x	
	A4		x	x	
	A5		x	x	
	A6		x	x	
	A7		x	x	
	A8		x	x	
	A9		x	x	
	A10		x	x	
	A10(2)		x	x	

SUPPLEMENTARY TABLE 2. Microdebris recovered from human dental calculus samples of Grotta Mora Cavorso. Amount and proposed identification of microparticles detected by light microscopy in calculi from human individuals. Starch Morphotype II: Panicoideae. Legend for pollen type: Fb, Fabaceae undifferentiated; GC, Gymnosperm Cupressaceae; Q, *Quercus* deciduous undifferentiated; S, *Salix*; ND, not determined pollen. Legend for the other microparticles: FF, Cichorieae/Astereae fruit fragment; Uo, Unknown origin microparticles.

Code	Starch Morphotype II	Not determined starch	Total starches per sample	Single pollen grain	Fragment of plant tissue	Plant fibres	Other micro-remains
12E						8	
94A+127A		2	2		1	10	
SS11						6	
102						14	
33IX		1	1	1 Fb, 1 GC, 2 ND		11	1 FF
SS44A+44B	15		15	1 Q		11	1 Uo
39VB						5	
13+12C				1 S		14	1 Uo
105B+105C						10	
76B						9	
65B+5B		1	1			13	
Total	15	4	19	6	1	111	3

SUPPLEMENTARY TABLE 3. Microdebris recovered from human isolated calculus samples of Grotta Mora Cavorso. Amount and proposed identification of microparticles detected by light microscopy in calculi from human isolated teeth. Starch Morphotypes: I, Triticeae; II, Panicoideae. Legend for pollen type: C/A, Cheno-Amaranthaceae; Cy, Cyperaceae; F, Fagaceae, *Fagus*; GP, Gymosperm Pinaceae; P, Poaceae; Q, *Quercus* deciduous undifferentiated; V, *Vitis*; ND, not determined. Legend for the other microparticles: T, stellate trichome; Uo, microparticles with unknown origin.

Code	Starch Morphotype		Not determined starch	Total starches per sample	Single pollen grain	Trichome	Plant fibres	Other micro-remains
	–	=						
4star	1			1			4	
76E								
76H							10	
138E					1 Q			
248		1		1			10	
18star					1 GP			
138B	5	1	1	7				
138F							5	
12star			1	1				
138A					1 C/A	1T	20	1 Uo
74		1		1				
240								
13star							11	
61star					1 Q, 1 Cy, 1 P		19	3 Uo
11star					1 ND	1 T	25	
125A		1		1	1 V			1 Uo
126B	1			1	2 Cy		15	1 Uo
126C							6	
146L							10	
239								
76I	1			1			9	
234	1			1			12	
236	2			2			14	
13+12-23					1 GP, 1 F		19	1 Uo
11-12							12	
76F							10	4 Uo
243							13	1 Uo
146H								
76A	1			1			12	
144A							2	
238							15	
12		1		1	1 P			
251					1 GP			
Total	12	5	2	19	14	2	253	12

SUPPLEMENTARY TABLE 4. Microdebris recovered from animal dental calculus samples of Grotta Mora Cavorso. Amount and proposed identification of microparticles detected by light microscopy in calculi from animal specimens. Starch Morphotype I: Triticeae. Legend for pollen: A, Asteroideae undifferentiated; Fagaceae, *Fagus*; Fb, Fabaceae undifferentiated; GP, Gymnosperm Pinaceae. Legend for the other microparticles: T, stellate trichome; TF, tracheid fragment from conifer wood with torus-margo pit; SV, spiral vessels; MS monolet spore.

Lab code	Paleontological code	Species	Starch Morphotype I	Not determined starch	Total starches per sample	Single pollen grain	Plant fibres	Other micro-remains
A1	B1755	<i>Bos taurus</i>						
A2	B429	<i>Ovis vel Capra</i>					9	1 MS
A3	B2298	<i>Cervus elaphus</i>				1 GP		
A4	2927	<i>Vulpes sp.</i>						
A5	1206	<i>Martes sp.</i>		1	1	1 Fb	10	1 T, 1 TF
A6	C186	<i>Sus sp.</i>					10	
A7	B1574	<i>Ovis vel Capra</i>						
A8	B2230	<i>Ovis vel Capra</i>				1 F	16	
A9	B544	<i>Lepus sp.</i>						
A10	B1612	<i>Cervus sp.</i>	5		5	2 GP, 1 A		
A10(2)	B1612(2)	<i>Cervus sp.</i>	1		1		11	3 SV
Total			6	1	7	5	56	6

SUPPLEMENTARY TABLE 5. Results of lab contamination tests by horizontal slide trap (others: fibres, hairs, dust residues).

Context	Location of traps (number)	Starches	Pollen grains	Others	Total
Workday	workbench (15)	2	3	2	7
	floor (12)	6	8	3	17
	shelf (8)	2	1	0	3
	hood (6)	0	0	0	0
After decontamination	workbench (15)	0	0	0	0
	floor (12)	1	1	0	2
	shelf (8)	0	0	0	0
	hood (6)	0	0	0	0

SUPPLEMENTARY TABLE 6. Plant ancient sequences detected in dental calculi. aDNA sequences were shown for each sample. The single-nucleotide polymorphism detected in sample 13+12C between the two clusters of amplicons was evidenced in grey.

Samples	Cluster	Ancient sequence (5'-3')
65B+5B		TTCTAGCACAAAGAAAGTCGAAGTATATATTTTACTCGATACAAACTATTTTTTTTGAGGATCCACTGTAATAATGAAAA AGATTTCTGCATATATACGCAAATCGGTCGATAATATCAAAATCCGATGAATCAGCCCAGGTCGACTTACTAACGGGATG TCCTAATACGTTACAAAATCGCATTTTAGCCAACGATCCAATCAGAGGAATAATT
33IX		TTCTAGCACAAAGAAAGTCGAAGTATATATTTTACTCGATACAAACTATTTTTTTTGAGGATCCACTGTAATAATGAAAA AGATTTCTGCATATATACGCAAATCGGTCGATAATATCAAAATCCGATGAATCAGCCCAGGTCGACTTACTAACGGGATG TCCTAATACGTTACAAAATCGCATTTTAGCCAACGATCCAATCAGAGGAATAATT
102		TTCTAGCACAAAGAAAGTCGAAGTATATATTTTACTCGATACAAACTCTTTTTCTTGAGGATCCACTGTAATAATGAGAAA GATTTCTGCATATATGCACAAATCGGTCGATAATATCAAAATCCGACGAATCTGCCCAGGTGGACTTACTAATAGGATGC CCCAATGCGTTACAAAATTTCACTTTAGCCAATGATCCAATCAGAGGAATAATT
13+12C	1	TTCTAGCACAAAGAAAGTCGAAGTATATATTTTACTCGATACAAACTATTTTTTTTGAGGATCCACTGTAATAATGAAAA AGATTTCTGCATATATACGCAAATCGGTCGATAATATCAAAATCCGATGAATCAGCCCAGGTCGACTTACTAACGGGAT GTCCTAATACGTTACAAAATCGCATTTTAGCCAACGATCCAATCAGAGGAATAATT
	2	TTCTAGCACAAAGAAAGTCGAAGTATATATTTTACTCGATACAAACTATTTTTTTTGAGGATCCACTGTAATAATGAAAG AGATTTCTGCATATATACGCAAATCGGTCGATAATATCAAAATCCGATGAATCAGCCCAGGTCGACTTACTAACGGGAT GTCCTAATACGTTACAAAATCGCATTTTAGCCAACGATCCAATCAGAGGAATAATT
39VB		TTCTAGCACAAAGAAAGTCGAAGTATATCTTTATTCAATACAAACTCCTTTTTCTGCAAGATCCGCTATGATGATGAGAAA TATTTCTGCATATACGCAAAAATCGGTCAATAATATTAGAATCTGATAACTCAGCCGAATGGGCTTACTAATAGGATGC CCAATGCGTTACAAAATATCACTTTAGCCAATTCTCCAATCAGAGGAATAATT