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SUPPLEMENTARY INFORMATION

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An early Aurignacian arrival in southwestern Europe

Miguel Cortés-Sánchez[1,2], Francisco J. Jiménez-Espejo[3,4*], María D. Simón-Vallejo[1,2], Chris Stringer[5], María Carmen Lozano Francisco[2], Antonio García-Alix[4,6], José L. Vera Peláez[2], Carlos P. Odriozola[1,2], José A. Riquelme-Cantal[7], Rubén Parrilla Giráldez[2], Adolfo Maestro González[8], Naohiko Ohkouchi[3] and Arturo Morales-Muñiz[9]

[1]Departamento de Prehistoria y Arqueología, Facultad de Geografía e Historia, Universidad de Sevilla, Seville, Spain. [2]HUM-949 Research Group, Departamento de Prehistoria y Arqueología, Facultad de Geografía e Historia, Universidad de Sevilla, Seville, Spain. [3]Japan Agency for Marine-Earth Science and Technology, Yokosuka, Japan. [4]Instituto Andaluz de Ciencias de la Tierra, CSIC-UGR, Armilla, Spain. [5]Department of Earth Sciences, Natural History Museum, London, UK. [6]Departamento de Estratigrafía y Paleontología, Facultad de Ciencias, Universidad de Granada, Granada, Spain. [7]Departamento de Geografía y Ciencias del Territorio, Universidad de Córdoba, Córdoba, Spain. [8]Instituto Geológico y Minero de España, Madrid, Spain. [9]Laboratorio de Arqueozooarqueología, Departamento de Biología, Universidad Autónoma de Madrid, Madrid, Spain. *e-mail: fjjspejo@ugr.es

Supplementary Information is linked to the online version of the paper at xx.

Supplementary Information

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References used for manuscript Figure 1: Western Europe and North Africa map reconstruction modified from Ehlers et al. 2011 with coastline at -85m sea level with elevations. References used for manuscript Figure 1: Western Europe and North Africa map reconstruction modified from Ehlers et al. 2011 with coastline at -85m sea level with elevations 3. Bajondillo (this paper), 9. Romaní, 10. Arbreda, 11. Isturitz, 12. Labeko, 13. La Viña, 15. Castanet, 16. Pataud, 17. Les Cottés, 18. Riparo Mochi, 19. Geißenklösterle, 20. Fumane, and 21. Serino (Wood et al., 2014 with references), 14. Kent's (Higham et al., 2011), , 23. Peshtera/Kozarnika (Fu et al., 2016); Early Upper Palaeolithic sites with ages <42 ka cal BP in the Iberian Peninsula and North Africa (yellow): 1. Pego do Diabo (Zilhão et al., 2010), 2. Gorham´s (Higham et al., 2012), 4. Ventanas and Carigüela (this paper), 5. La Boja (Zilhão et al., 2017), 6. Cendres (Villaverde et al., 2017), 7. Foradada and 8. Mallaetes (Villaverde et al. 2017 with references). African sites: 23. Haua Fteah (Douka et al., 2014), 24. Grotte des Pigeons (Taforalt) (Barton et al., 2007), 25. Benzú (Ramos et al., 2008), and 26. Jebel Irhoud (Hublin et al., 2017).

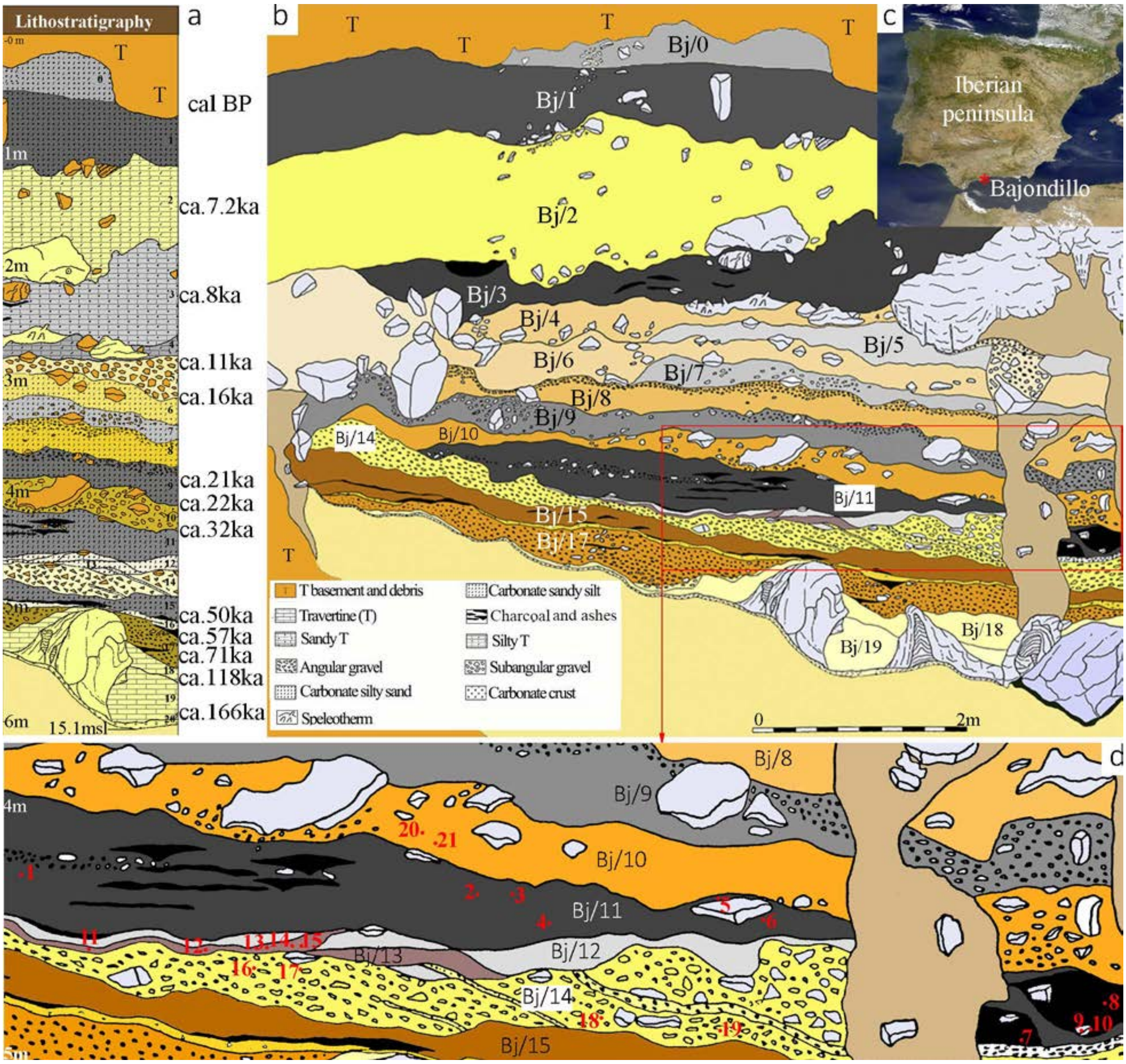
Archaeol. Layer (age cal BP) Techno-complex	**Sample**	**Laboratory code**	**Method/ Treatment**	**Calibration curve**	**Radiocarbon Age (2σ)**	**$d^{13}C^{0}/_{00}$**	**Lower Cal yr BP ^{14}C=2σ TL=1σ**	**Upper Cal yr BP ^{14}C=2σ TL=1σ**	**Median**	**Lower Bayesian Modelled Cal yr BP**	**Upper Bayesian Modelled Cal yr BP**	**Median**	**Sample location Supp. Inf. Fig. 1d**
Bj/10 (c. 32.1-<22 ka) Gravettian	Burnt flint	MAD-2470	TL				26997	21691					20
	Patella sp.	CNA-3819.1.1	^{14}C-AMS/ABA	Marine13.14c	28660±120	-1.81±1.50	32634	31605	32098	32380	31540	31920	21
Boundary Start Bj/10										32583	31643	32093	
Boundary end Bj/11										32832	31863	32366	
Bj/11 (ca. 37.6-32.4 ka) Evolved Aurignacian	Burnt flint	*MAD-2482*	TL				28790	23236					2
	Burnt flint	*MAD-2559*	TL				33687	25685					10
	Mytilus edulis	**CNA-3821.1.1**	^{14}C-AMS/ABA	Marine13.14c	**28880±240**	0.7±1.5	33197	31636	32433	33345	32156	32726	5
	Mytilus edulis	**CNA-3820.1.1**	^{14}C-AMS/ABA	Marine13.14c	**28970±240**	-3.96±1.50	33340	31744	32577	33413	32205	32787	3
	Mytilidae sp.	**CNA-3878.1.1**	^{14}C-AMS/ABA	Marine13.14c	**29040±220**	2.10±1.50	33400	31870	32699	33441	32266	32835	1
	Mytilidae sp.	**CNA-3817.1.1**	^{14}C-AMS/ABA	Marine13.14c	**29180±240**	-0.10±1.50	33591	32062	32917	33582	32385	32983	6
	cf. *Otala* sp.	**CNA-3883.1.1**	^{14}C-AMS/ABA	IntCal13.14c	**31280±280**	-1.70±1.50	35805	34638	35181	35805	34635	35181	4
	Mytilidae sp.	**CNA-3876.1.1**	^{14}C-AMS/ABA	Marine13.14c	**32780±340**	-2.51±1.50	37424	35520	36313	37191	35474	36258	9
	Carbonac/ ash sedim.	*Ua-18050*	^{14}C/AMS	IntCal13.14c	*32770±1065*	-23.2	39725	34809	37112	38323	34719	36369	7
	Carbonac/ ash sedim.	*Ua-17150*	^{14}C/AMS	IntCal13.14c	*33690±1195*	-23.6	41068	35579	38117	38683	35034	36695	8
Boundary Start Bj/11										39953	36028	37607	
Boundary End Bj/13										41586	39161	40826	

Supplementary Information Table 1. Radiocarbon accelerator and thermoluminescence (TL) dates from Bajondillo.

Archaeol. Layer (age cal BP)	Sample	Laboratory code	Method/ Treatment	Calibration curve	Radiocarbon Age	$d^{13}C^{0}/_{00}$	Lower Cal yr BP	Upper Cal yr BP	Median	Lower Bayesian	Upper Bayesian	Median	Sample location
Bj/13 (ca. 43.0-40.8 ka) Early Aurignacian	*Mytilidae* sp.	**CNA-3218.1.2**	^{14}C-AMS/ABA	Marine13.14c	**36890±200**	5.04±1.5	41589	40633	41145	41660	40767	41243	-
	cf. *Otala* sp.	**CNA-3216.3.1**	^{14}C-AMS/ABA	IntCal13.14c	**36890±210**	-6.27±1.5	41895	41080	41496	41893	41120	41511	15
	Charcoal	*Ua-18270*	^{14}C-AMS	IntCal13.14c	*37005±1790*	-23.8	45768	38346					11
	Mytilidae sp.	**CNA-3873.1.1**	^{14}C-AMS/ABA	Marine13.14c	**37430±570**	5.84±1.50	42430	40517	41550	42399	40803	41615	14
	Mytilidae sp.	**CNA-3213.3.2**	^{14}C-AMS/ABA	Marine13.14c	**38160±230**	0.86±0.02	42447	41720	42083	42427	41702	42066	13
	Charcoal	**CNA-3882.1.2**	^{14}C-AMS-ABA	IntCal13.14c	**39270±870**	-24.64±1.50	44778	42008	43216	43710	41602	42523	14
Boundary Start Bj/13										44918	41878	42959	
Boundary end Bj/14										47515	43903	46039	
Bj/14 (ca. >50-46.0 ka) Mousterian	Burnt flint	*MAD-2463*	TL				34369	22733					19
	Mytilidae sp.	**CNA-3211.1.1**	^{14}C-AMS/ABA	Marine13.14c	**43840±490**	0.43±0.03	47868	45656	46649	47748	45787	46685	-
	cf. *Otala* sp.	**CNA-3881.1.1**	^{14}C-AMS/ABA	IntCal13.14c	**42710±1120**	-10.34±1.50	48901	44259	46216	48163	45168	46633	16
	Carbonac/ ash sedim.	*Ua-16859*	^{14}C-AMS	IntCal13.14c	*>40.000*	-23.9							18
	Mytilidae sp.	**CNA-3875.1.1**	^{14}C-AMS/ABA	Marine13.14c	**44020±1290**	-0.85±1.50	49750	45083	47117	48470	45418	46768	17
	Bivalvia sp.	**CNA-3880.1.1**	^{14}C-AMS/ABA	Marine13.14c	**46610±1740**	5.53±1.50		>46695	48732	49048	45753	47013	19
	Mytilidae sp.	**CNA-4168.1.1**	^{14}C-AMS/ABA	Marine13.14c	**46890±1810**	3.38±1.50		>49497					
	Mytilidae sp.	**CNA-3822.1.1**	^{14}C-AMS/ABA	Marine13.14c	**48410±2420**	-1.77±1.50		>49871					

Supplementary Information Table 1. (Continuation). Radiocarbon accelerator and thermoluminescence (TL) dates from Bajondillo.

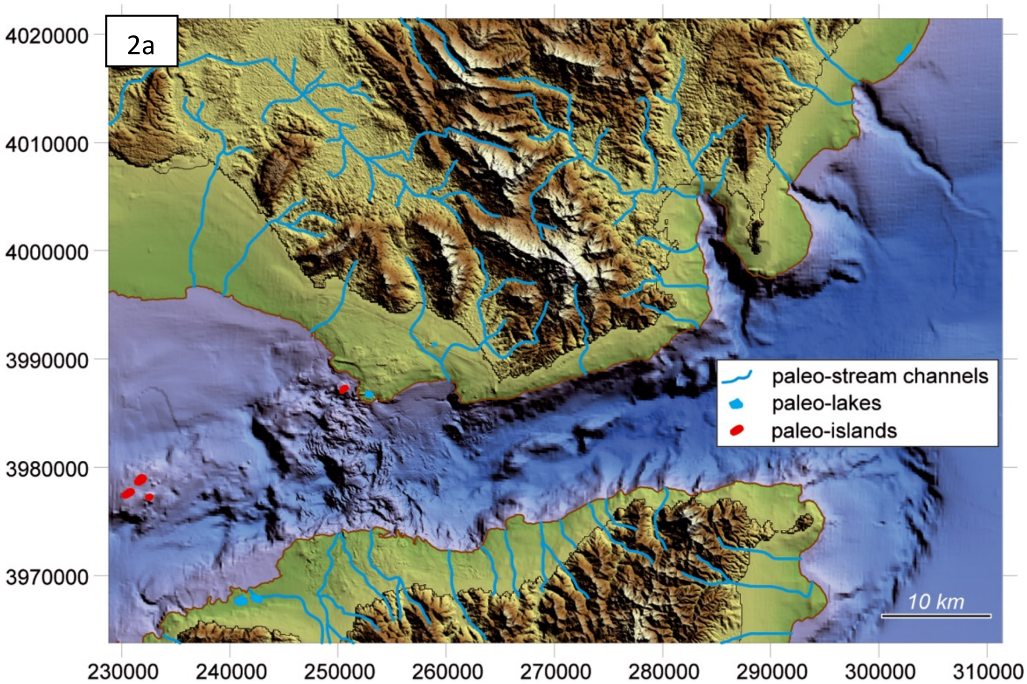
Supplementary Information Table 1. . Radiocarbon accelerator and thermoluminescence (TL) dates from Bajondillo. Radiocarbon accelerator and thermoluminescence (TL) dates from Bajondillo for this study (bold) and from pilot study (cursive) (Cortés et al., 2007). Laboratory codes: Ua: Ånström laboratory, University of Uppsala (Sweden); CNA: National Center for Accelerators (Spain); MAD: Dating and Radiochemistry Laboratory, Universidad Autónoma de Madrid. Acronym codes: ^{14}C-AMS: radiocarbon dating; TL: thermoluminiscence dating; ABA: acid and base leaching. Radiocarbon has been calibrated using Oxcal 4.3 software (https://c14.arch.ox.ac.uk/oxcal.html) along with Intcal13 and marine13 curves (Reimer et al., 2013; Ramsey, 2009). The local variation of the reservoir age, estimated from recent samples, in the westernmost Mediterranean is 280+36 yr (Siani et al., 2000). However, it is not applied to the calibration of marine samples from Bajondillo site because this value is unknown for the Mediterranean Sea during from 50 to 20 ky (glacial period), and apply the present reservoir effect have a nil effect on the obtained calibrated values. Dates provided as calibrated years before present (cal yr BP), plotted with age uncertainties of 2σ and the median value. Dates obtained from Bayesian analysis (Oxcal 4.3 software, https://c14.arch.ox.ac.uk/oxcal.html) are provided as calibrated years before present (cal yr BP), plotted with age uncertainties of 2σ and the median value. Note that the boundaries between phases have been obtained by means of Bayesian analysis as well, except for the beginning of Bj/14, since older dates of 50 cal ka BP were obtained at the bottom of the sequence, and the end of Bj/10 , where only two dates were obtained. Radiocarbon dates with high analytical error (Ua-18270: 37005±1790 yr BP; CNA-4168.1.1: 46890±1810 yr BP; CNA-3822.1.1: 48410±2420 yr BP) and with unquantified analytical error (Ua-16859: >40.000 yr BP) as well as TL ages (high uncertainty in age) have not been included in the Bayesian model.

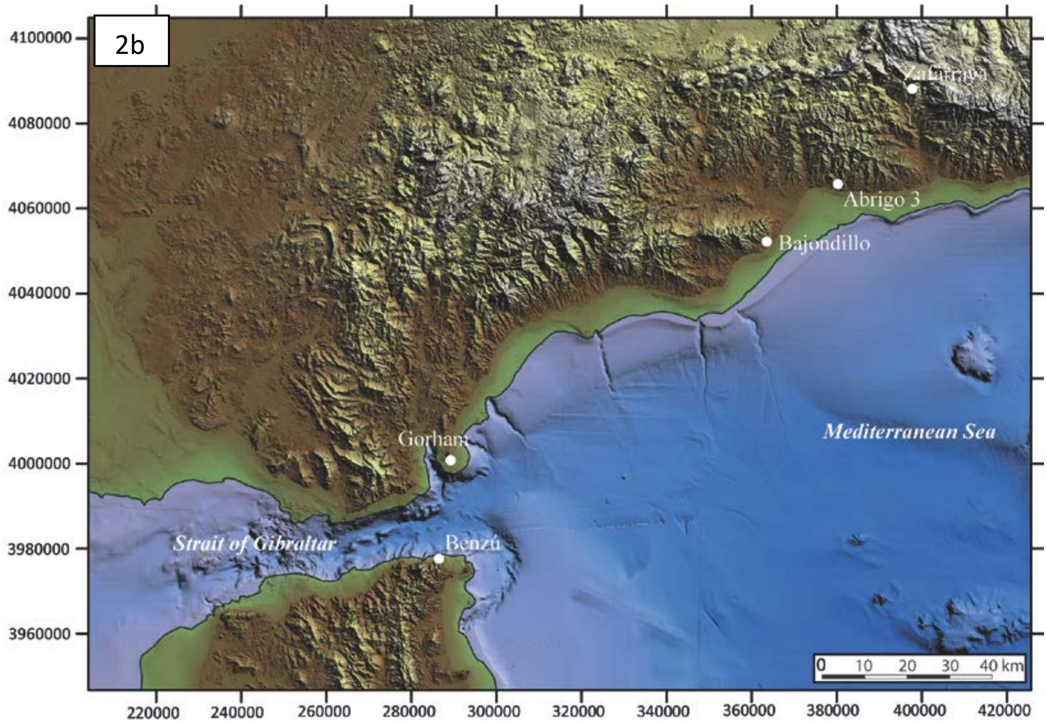


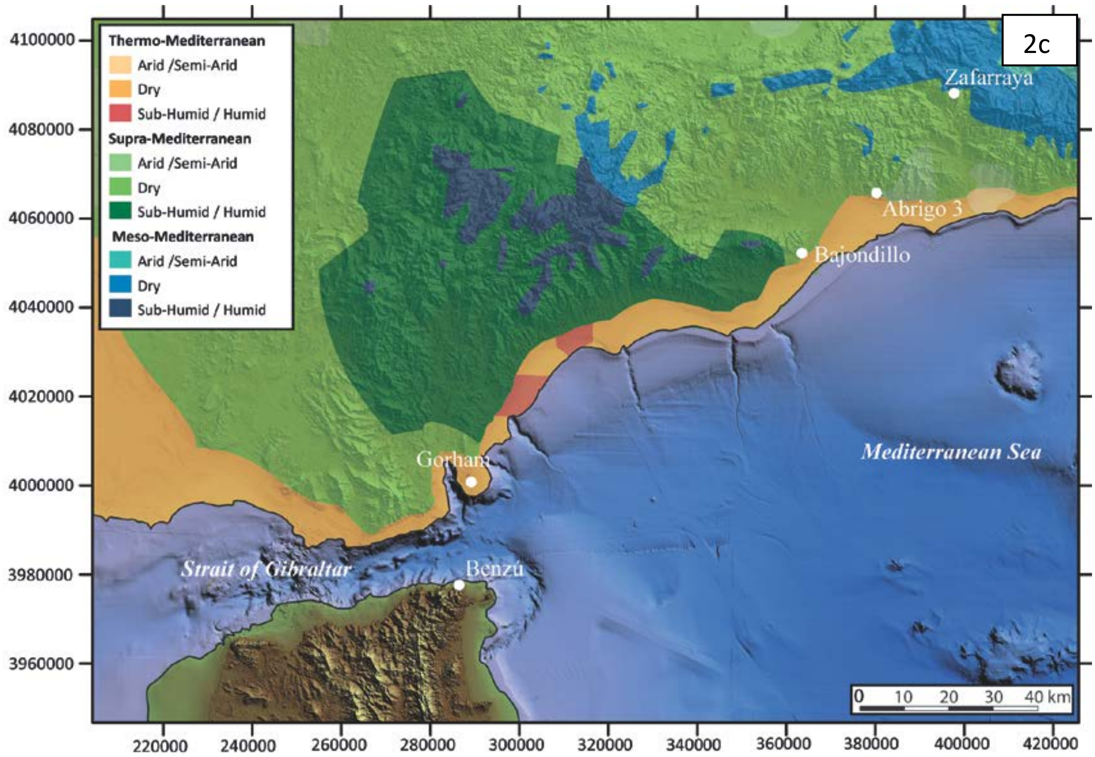
Supplementary Figure 1. a) Detail of Bajondillo site Central section from the West profile. b) Stratigraphic sequence of Bajondillo (the chronology of the lithostratigraphic column incorporates data from another 24 ^{14}C/AMS and U/Th dates from other levels not included in this paper) (see Cortés, 2007, Cortés et al., 2011, and unpublished data). c) Location of Bajondillo site. d) Detail of Middle-Palaeolithic to Early Upper Palaeolithic levels with location of the samples that have been dated (Supplementary Table 1).

All dated samples were taken from locations where no traces of alteration processes were visible. The sedimentary features of Bj/14 and Bj/13 allow one to readily distinguish levels on account of the following criteria (Bergadà and Cortés, 2007):

- Bj/14: a ca. 20 cm–deep deposit of 1-5 cm rock fragments from travertine of subangulose morphology that are fragmented and cracked (fissured) and almost devoid of matrix (3% of sand 10YR 6/4).
- Bj/13: a ca. 16 cm – deep deposit. Built on a brown matrix of limose sands (10 YR 6/3) where the coarse fraction of the sediment represents ca. 10% of the bulk.
- Bj/12: a ca. 18 cm – deep deposit. Granulometrically indistinguishable from Bj/13, its greyish colour (10 YR 5/1) derives from the ashes that are found in and around this feature (a hearth) on the roof of level Bj/13.



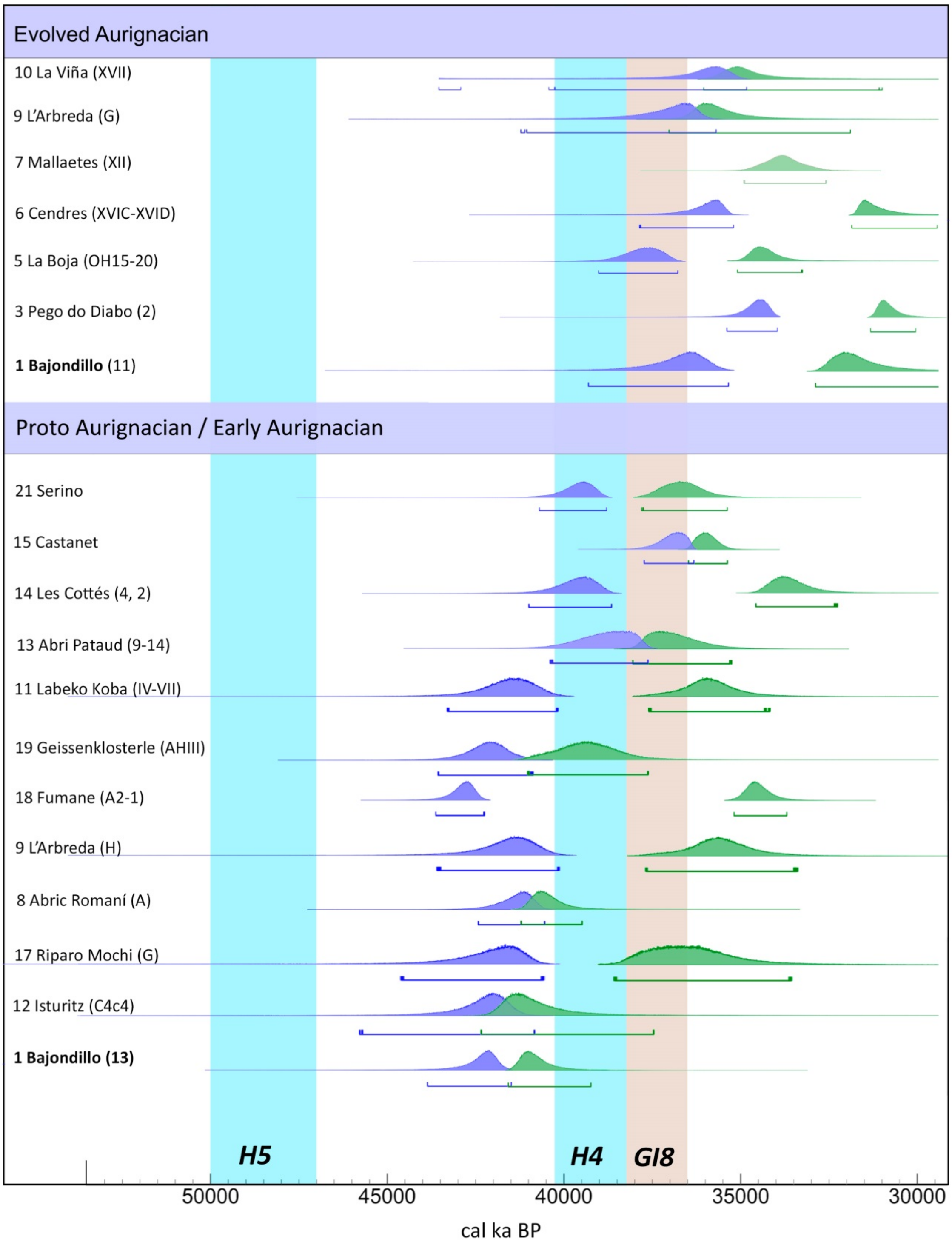




Supplementary Figure 2. a. Palaeogeographical reconstruction of the Strait of Gibraltar area at -85 msl. Areas in red represent emerged islands, areas in blue coastal lacustrine areas, and blue lines river drainage systems. The present coast is represented by a continuous black line. The presently submerged coastal corridor essentially corresponds to the area marked in green.

b. Strait of Gibraltar with coastline contours estimated from mean sea level values at -85 m, the most common situation during Marine Isotope Stage 3.

c. Bioclimatic zones of the southernmost Iberian Peninsula during a glacial cool-dry stage (modified from Jennings et al., 2011) with location of archeological sites mentioned in the text. High relief and other factors configure a potential bioclimatic "refugium" (Jennings et al., 2011). Figures created using Global Mapper v.16 software see acknowledgements chapter for used database.



Supplementary Figure 3. Boundaries of techno-complexes from selected sites (Location numbers as in Fig. 1) with analyzed layer in parentheses, start (blue) and end (green). Light blue bar: Heinrich Stadials 4 and 5; Light brown bar: Glacial Interstadial 8. Figure taken from Oxcal 4.3.2 (Bronk Ramsey 2017). All dates calibrated with Intcal13 or Marine13 at range of 95.4% of probability (Reimer et al. 2013). References: Wood et al., 2014, Reimer et al., 2013, Bronk Ramsey, 2017, Camps and Higham, 2012, Higham et al., 2010 and 2012, Douka et al., 2012, Talamo et al. 2012, White et al. 2012, Soressi et al., 2012, White et al., 2012, Szmidt et al., 2010, Villaverde et al., 2017.

LITHIC INDUSTRIES

The lithic industries from Bajondillo cave levels Bj/14, Bj/13 and Bj/11 analyzed thus far amount to 4,197 items (see SI, Table 2).

The 353 items from Bj/13 include 1 hammer, 55 of cortical removal, 107 products of *débitage* (63 whole and 44 fragmented), 6 supports with Siret accidental break, 6 cores, 14 chunks, 16 splinters, 132 debris (artifacts smaller than 1.5 cm^2), 6 thermal fracture flakes and 10 tools (see Cortés, 2007).

Raw materials were flint (94.3%) and quartzite (5.7%). Both were collected from existing Neogene conglomerate outcrops <5km radius around the cave. Since a substantial part of this industry was associated to a hearth (i.e. Bj/12), almost half of the Bj/13 material was thermo-altered (46.7% *vs.* the 30.2% recorded for Bj/14). Thermoalteration explains why a significant (34.9%) proportion of the supports were fragmented, in particular the thinnest items [i.e. blades/bladelets: 18.9% (Bj/14); 36.4% (Bj/13); 36.8% (Bj/11)].

As for butts, 43.4% of Bj/13 items exhibited a nil or scarce preparation of the striking platform (i.e. cortical and flat) as opposed to 23.1% of dihedral and facetted preparations, together with other less diagnostic types of butts (snaps and punctiforms: 30%; linear: 3.5%). The morphometric features of the proximal portions of the items indicate the use of both hard and soft hammers. By categories, the 63 whole *débitage* supports include 37 flakes, 15 blades/bladelets and 11 maintenance and rejuvenation flakes of cores for blades. The industry of Bj/13 is of reduced dimensions, 73.1% of the lengths and widths falling below 30mm.

a) Unretouched material

Stage 1 (Raw material collecting). Only an elongated boulder used as a hammer is recorded.

Stage 2 (Preparation and initial shaping out of cores). 41 cortex removal items (39.4% of the unretouched material that is complete).

Level / Category	Bj/14				Bj/13				Bj/11			
	W	f	∑	%	W	f	∑	%	W	f	∑	%
Hammer/tested nodules	3	2	5	0.3	1	0	1	0.3	-	-	0	0.0
Cortical flakes	207	110	317	16	41	14	55	16	116	81	197	11
Flakes*	309	133	442	22	37	25	62	18	106	121	227	12
Blades-Bladelets*	34	31	65	3.3	15	16	31	8.8	36	89	125	6.8
Flakes of rejuvenation B/b*	0	0	0	0	11	3	14	4.0	53	32	85	4.6
Siret accidental break	-	14	14	0.7	-	6	6	1.7	-	9	9	0.5
Core for flakes	36	9	45	2.3	2	1	3	0.8	10	14	24	1.2
Core for blades/bladelets	0.0	0.0	0.0	0.0	3	1	4	1.1	12	10	22	1.3
Chunks	67		67	3.4	13		13	3.7	50		50	2.7
Splinters	67		67	3.4	16		16	4.5	83		83	4.5
Debris	852		852	43	132		132	37	918		918	50
Thermic flakes	19		19	1.0	6		6	1.7	46		46	2.5
Tools	190	16	106	5.3	9	1	10	2.8	37	22	59	3.2
∑	**1,684**	**315**	**1,999**	**100**	**286**	**67**	**353**	**100**	**1,467**	**378**	**1,845**	**100**
*∑ *Débitage* full product.	343	164	507	25	63	44	107	30	195	242	437	30

Supplementary Information Table 2. Lithic industries from Bj/14 to Bj/11 levels. W (whole), f (fragment), B (blade), b (bladelet).

Stage 3 (*Débitage*). Two technological concepts, one aimed at obtaining flakes (whole = 52.6) and another for obtaining blades and bladelets (w = 47.4%) are recorded. The latter system includes maintenance and rejuvenation of blades/bladelets cores (w = 17.5%, w + f = 13.1%) and specific cores. This is one of the key elements arguing for an Upper Palaeolithic technology at Bj/13.

The Elongation index (Ie) of flaked products evidences a collection dominated by flakes, but also one where the leptolithic elements reach values above 20%, whereas the thickness index defines a set dominated by flat and very flat supports.

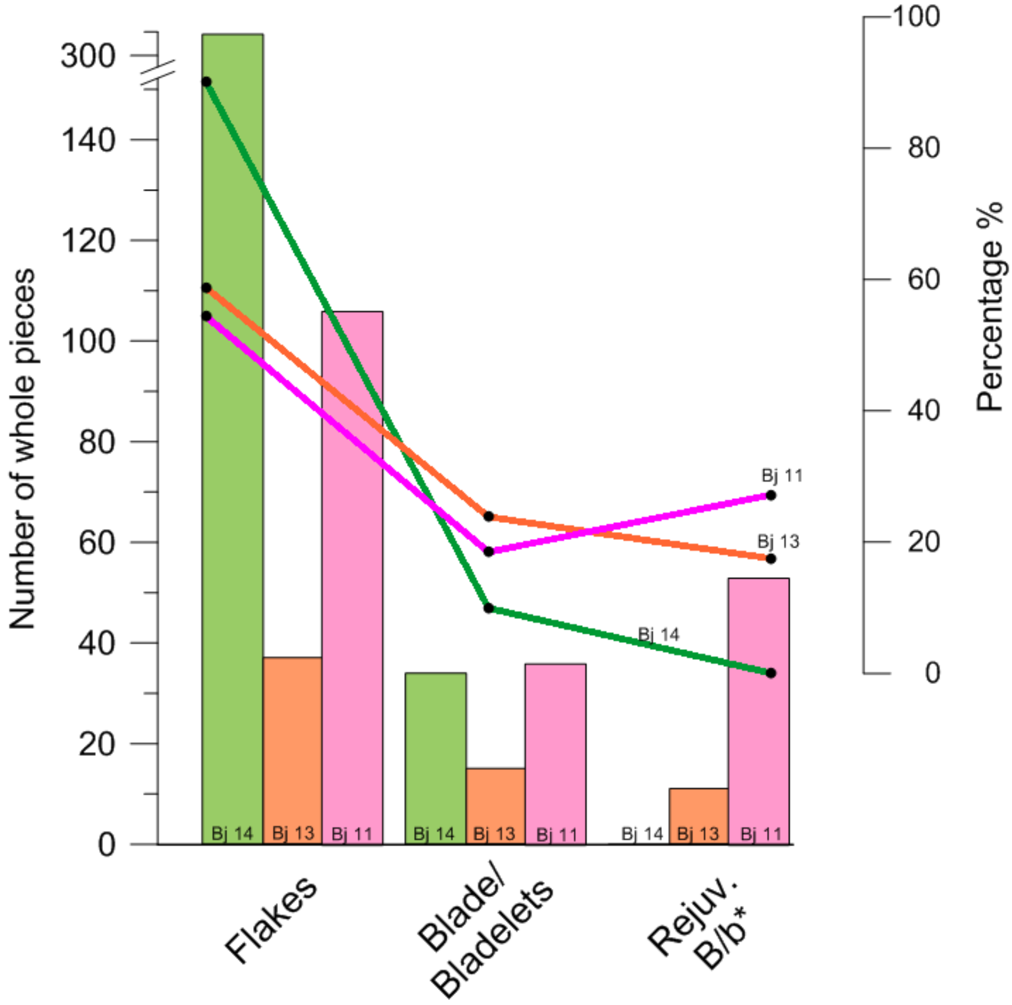
Flaked surfaces with a significant amount of cortex (>25%) amount to 42.3% as opposed to items with marginal cortex (<25%: 57.7%). Equally significant is the fact that fully half of the pieces feature cortex. This fact agrees with the small size of the industries and the raw materials used, as well as with the *débitage* of the lithic raw materials and the abandonment of a large part of the supports obtained at the site.

The morphologies of the striking platforms coincide with the changes experienced in the schemas of débitage. Cortical+flat butts (Σ46.2%) are dominant whereas linear, punctiform and snap butts, largely linked to blades/bladelets production, reach significant frequencies (Σ33.7%). This contrasts with the reduction of the facetted/dihedrals forms (Σ23.1%). Butts feature clear indications of the simultaneous use of hard and soft hammers.

b) Technological analysis

Stage 1 (Collection of raw material). The collection of boulder and rock fragments maintains the preference for flint (>90%) with quartzite always in medium-small volumes (<90-80mm^3).

Stage 2. (Supports from cortex removal and shaping out of the cores). The 55 pieces (41 whole and 14 fragments) assigned to this category (15.6% of the industry, Supplementary Table 2) systematically pursue the elimination of as much cortex as possible. From the initial stages of core reduction we find items clearly linked with the preparation of blades/bladelets cores from unipolar convergent removals.



Supplementary Figure 4. *Débitage* full production of Flakes, Blade/bladelets(B/b*), Rejuvenation of Blade/bladeletes (Rejuv. B/b*) for Bajondillo Bj/14 (green bars), Bj/13 (orange bars) and Bj/11 (pink bars) archeological levels, and percentages % (continuous lines). Notice break at Y-axis = 150.

Stage 3 (*Débitage*)

a) Flakes. 62 items (17.6 %, Supplementary Table 2). Within this group one finds flakes with more balanced proportions / contours and centered morphological axes, and flakes with localized plunging, irregular profiles and transversal deviated symmetry axes. The latter often originated in the partial re-arrangements of cores or as flakes of transit between series of preferential removals. The direction of the negatives on the dorsal faces indicate similar frequencies for the bilateral débitage and scarce use of the distal striking platform. Most of the pieces featured less than four removals. Likewise, 2 Janus flakes (1 fractured), of very irregular design, correspond to fortuitous elements rather than to a specific *débitage*, as in Bj/14 (4% of *débitage* from Janus/Kombewa well-formalized cores and employees to make 5 retouched tools).

b) Blades and bladelets (8.8%, Supplementary Table 2). The Elongation index at Bj/13 yields a *ca*. 3:1 flake to blade/bladelet ratio (i.e. 76%:24%). Nevertheless, from a strict technological standpoint, blades/bladelets represent 14.4% of whole supports (sum of Cortical flakes+ flakes + B/b + Flakes of Rev. B/b*) Supplementary figure 4). Indeed, eliminating Stage 2 items, flakes of rejuvenation of cores and accidental break Siret, about one third of the 52 remaining Stage 3 *débitage* elements (sum of flakes + B/b + Flakes of Rev. B/b*) were blades/bladelets (28.8%). Longitudinal sections are predominantly convex and sinuous. From this technological standpoint, this is the first time in the stratigraphic sequence that intentional elongated supports are documented. The presence of cores for blades/bladelets and their corresponding flakes of maintenance/rejuvenation in Bj/13 complete the range of technological items that characterize an Upper Palaeolithic industry. Still, it is the combined presence of certain elements, rather than just their presence, what constitutes the crucial novelty revealing the Upper Palaeolithic nature of Bj/13. Of the generally recognized width categories, blades/bladelets at Bj/13 fall into the three, namely 6-8mm (12%), 8-10mm (22%) and 10-12mm (66%).

c) Cores. All seven identified cores (1.9% of the industry, Supplementary Table 2) are executed in flint. One is amorphous and a second one possibly represents an initial stage of a core for blades. Three cores are for obtaining flakes of crossed or centripetal management. Another is one of sub-pyramidal concept (Fig. 2, Bj/13.16). This core, executed on a nodule, has a flat and concave striking platform and documents the technology for bladelet production at Bj/13. The last of the cores is fragment (Fig. 2, Bj/13.18), and could correspond to this same sub-pyramidal concept.

One final category of items signaling blades/bladelets technology is that of maintenance and rejuvenation flakes of cores (i.e. debordant flakes, crested flakes, etc.).

A technological comparison of Bj/13 with MP reveals a clear break. In this way, the combined frequency of blades and bladelets ($Ie \geq 2$) for the whole MP sequence reaches to 15.1% of full production *débitage* (Bj/17: 2.8%, Bj/16: 2.6%, Bj/15: 3.5%, Bj/14: 6.2%). In Bj/13 this frequency raises to 14.4% (Supplementary Table 2). These frequencies are not strictly comparable because:

- In the case of blades/bladelets, these are all chance products of flake production without any technological aim in MP levels. Nevertheless, restricting comparisons to typometrical criteria, Bj/13 exhibits an Δ232% increase in blades/bladelets when compared to Bj/14. The actual difference is, in fact, larger when one considers that in Bj/14, 10 of the 18 products with an Ie ≥ 2 are cortex removal flakes with accidental extensions. For such reason, typometric blades would only total 8 items in Bj/14 (i.e. 3.4% of full production *débitage*) raising the technological differences between both levels (>240%).

- The presence of 14 maintenance and rejuvenation flakes of cores for blades/bladelets (core tablet, overhands, flanks and crests). These account for 10.6% of the industry and 17.5% (whole items of *débitage*). This category is absent in all the MP levels from Bajondillo.

Stage 4. (Retouched tools). A total of 10 items (2.8% of the industry, Supplementary Table 2), including a flat nose end-scraper, a borer, a continuous retouched blade, a scraper, a notch, a denticulate, a complete and a fragmented *ecaillée,* a diverse and a natural back knife are recorded at Bj/13. Except for the notch and denticulate made on quartzite, the remaining tools were made of flint. In tipometrical terms, except for a flake on which the scraper was made and a >30mm blade fragment, the remaining tools were 20-50mm wide, with lengths ranging between 10-30mm and thicknesses between 4-12mm. Butts feature three dihedral, two facetted, one crushed and two removed.

As for the selection of supports, 6 flakes (3 from Stage 2), a blade, two rejuvenation flakes of blade cores and a c*hunk* are recorded.

The most relevant tool in the Bj/13 collection is a nose end-scraper with its retouched front placed on one side of the flake (Fig. 2, Bj/13.1). This peculiarity is also documented in the Aurignacian industries of Bajondillo. Specifically, in 12 out of the 20 burins and end-scrapers from Bj/11 the retouch application does not coincide with the distal tip of the piece. At Bj/11, 6 out of the 12 end-scrapers in which the location of the retouching could be identified with respect to a deviated axis, feature a distal retouching and in 2 of them the fronts are deviated. In 3 end-scrapers the retouch is proximal and in the remaining ones lateral. The latter, as in Bj/13, happen to be nose end-scrapers. Therefore, the lateral disposition of the end-scraper front from Bj/13 conforms with the general pattern documented at Bj/11.

The tool collection also features a borer with marginal abrupt retouch on a little flake (Fig. 2, Bj/13.2), a distal fragment of a blade with marginal scaled retouch extracted from a prismatic core with converging removal (Fig. 2, Bj/13.4), and a double scraper on a flake with convergent negatives of removal. The latter has a facetted butt and was possibly broken using a soft hammer. Its origin can be either a core for flakes managed with a recurrent convergent scheme or a core for blades with a slightly convex transversal arc.

Two quartzite tools are documented in Bj/13. One is a deep clactonian notch (Fig. 2, Bj/13.5), the other a clactonian denticulate over flake with lateral plunging. At Bj/11 notches and denticulates constitute the second typological group in importance, behind end-scrapers.

Two splintered pieces were possibly used as wedges. These tools also constitute a novelty of Bj/13 as they do not appear in any of the MP levels.

Lastly, we have a cortical flake with a deep simple retouching (Fig. 2, Bj/13.5). The fracture of its right upper angle forces us to leave open at this moment its typological assignment although we note similarities on the side edge of the piece with a nose end-scraper.

To summarize, although the Bajondillo cave lithic industry collection is small, at Bj/13 the tools of diagnostic value, the technological system recognized on account of blades and bladelets, cores and their rejuvenation flakes, are discordant beyond question with the pattern documented in the MP and conform instead fully with an UP (Aurignacian) technology featuring clear connections with Bj/11.

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Authors Contribution

Conceived and designed the experiments: MC-S. Analyzed the data: MC-S, FJJ-E, MDS-V, CS, COL, MCLF, JLVP, JAR-C, AG-A, RPG, AMG, NO, AM-M. Wrote the paper: MC-S, FJJ-E ,CS, AM-M. Archaeology and lithic technology: MC-S, MDS-V, COL, RPG. Archaeozoology and taphonomy: AM-M, MC-S, MCL-F, JLV-P. Geology and Paleoclimatology: FJJ-E, AG-A, AMG, NO

Author Information

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