

Historia de *Corylus avellana* L. en la Península Ibérica desde el Último Máximo Glacial

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Procesos Geoambientales y Cambio Global



Aspectos metodológicos: identificar

-Polen: fácil de reconocer entre triporados. Majico a la vista. Calculo de frecuencias

-Antracológicamente fácil de distinguir. Dataciones radiocarbono. Se conserva bien

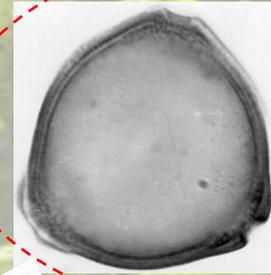
-*Corylus* a escala postglacial → *Corylus avellana*

- *C. colurna*, *C. maxima* en SE Mediterráneo. No evidencias Holocenas peninsulares

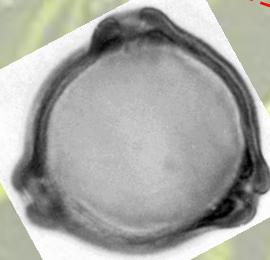
- Aparece bien representado en los diagramas



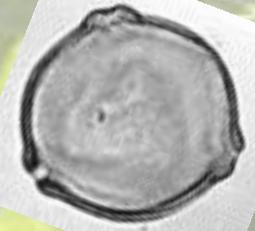
Corylus avellana buen fichaje para conocer su historia postglacial



Corylus



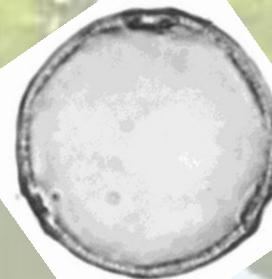
Betula



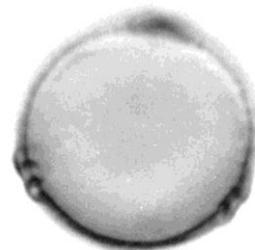
Carpinus orientalis/Ostrya carpinifolia type



Myrica



Celtis



Cannabis/Humulus type

Aspectos metodológicos: extracción de datos

-Reviews MIS2 y Holoceno a escala peninsular (2010)

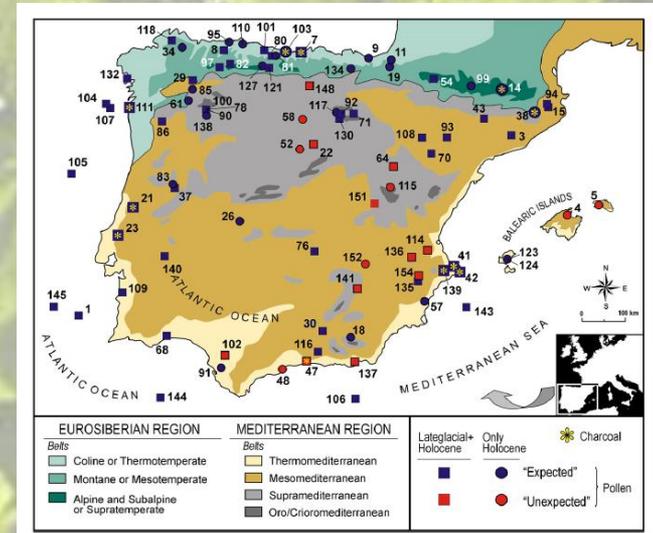
-Monografía Paleoflora (2012)



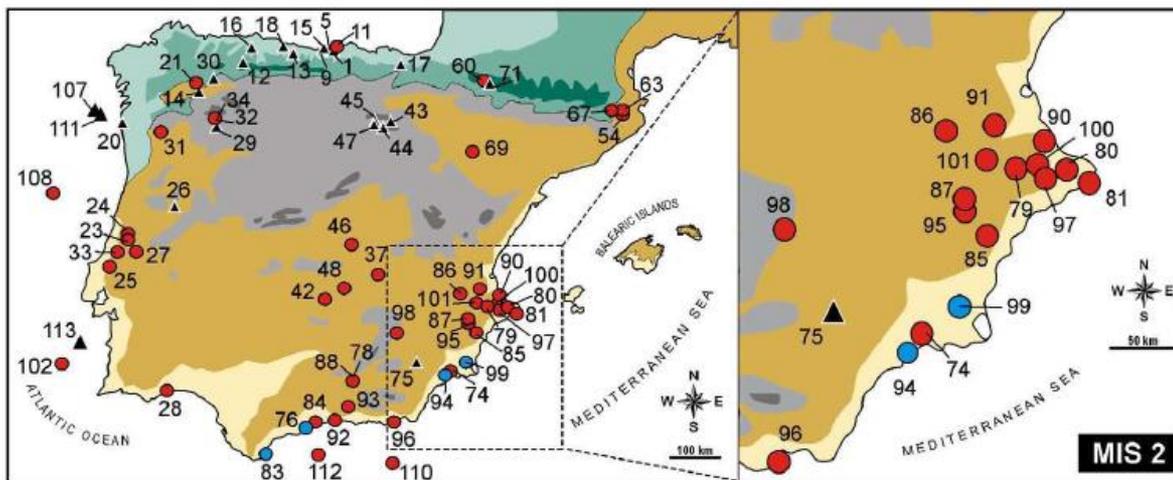
GRAN AVANCE para la Paleoecología Ibérica

-Limpieza y obtención datos en bruto

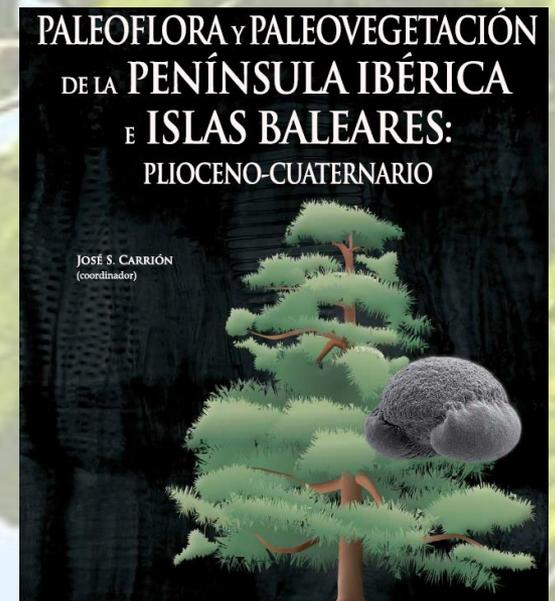
-No todo lo publicado válido



Carrión et al., 2010

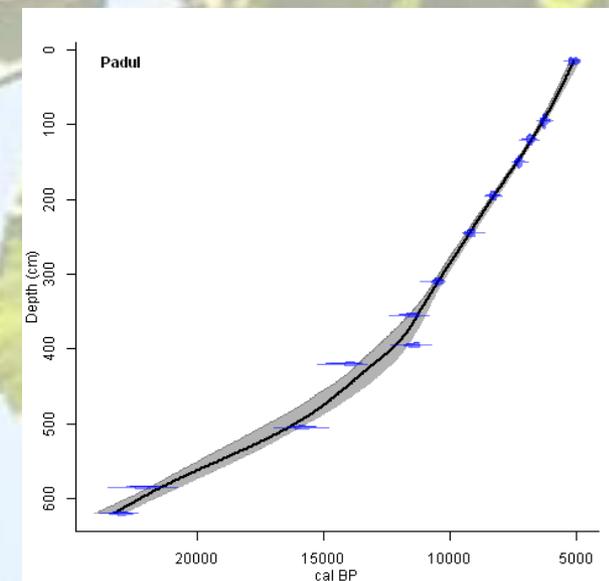
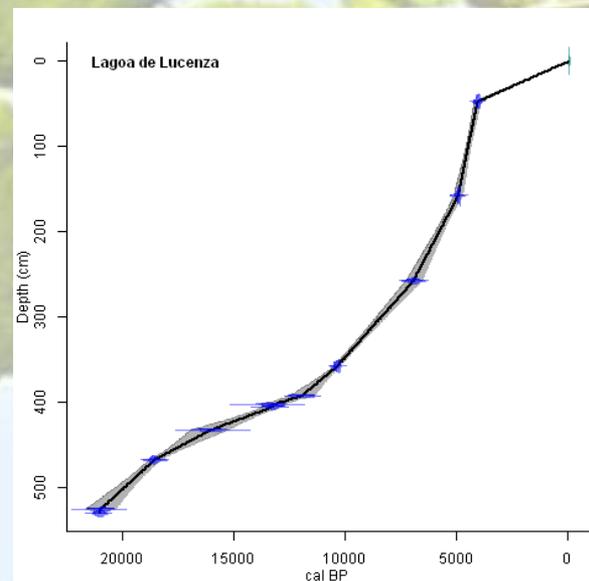
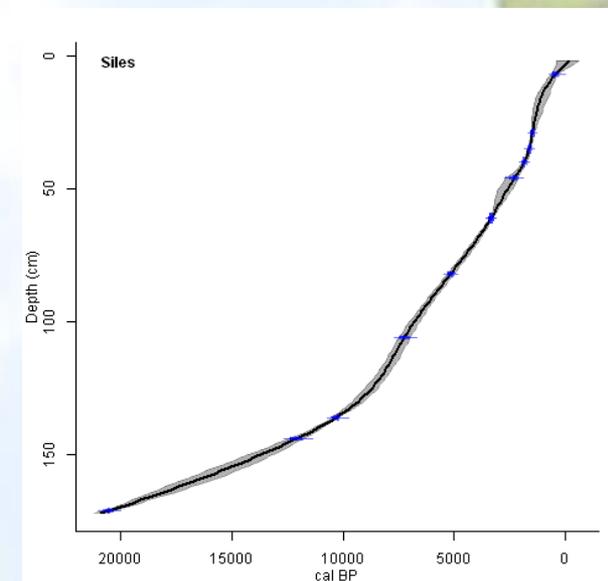
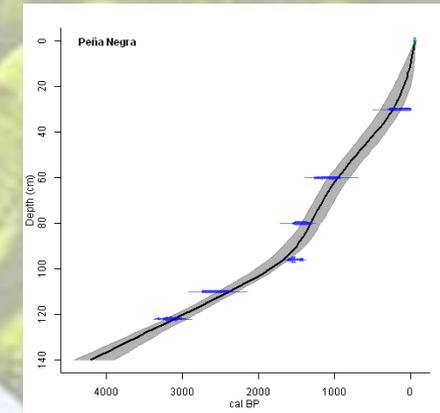
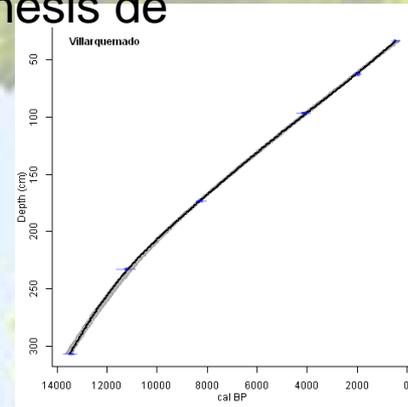
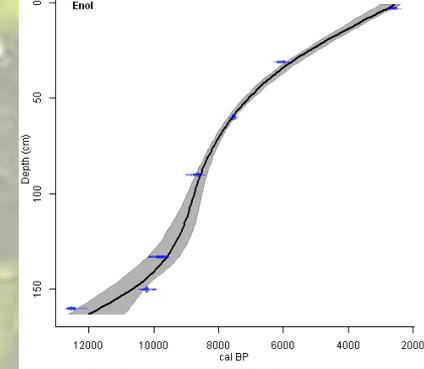


González-Sampériz et al., 2010

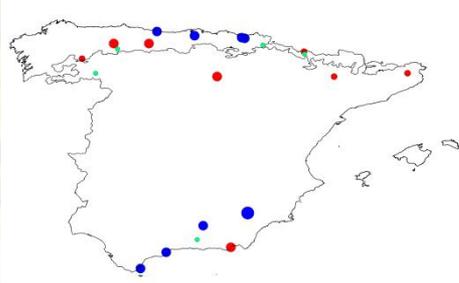


Aspectos metodológicos: modelos de edad

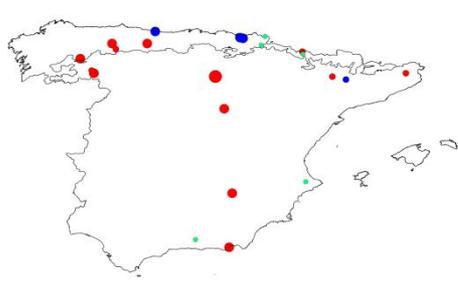
- Cuando aparece *Corylus*? Básico para conocer la cronología de expansión
- Recalibración de datos publicados y génesis de modelos de edad actualizados
- Análisis breakpoint: cálculo time-slides



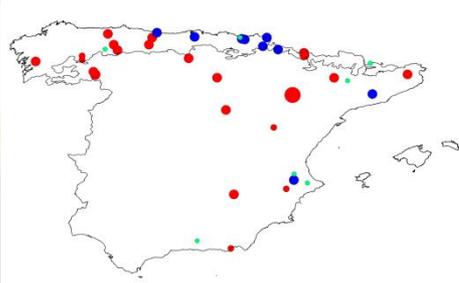
21-18 cal kyr BP



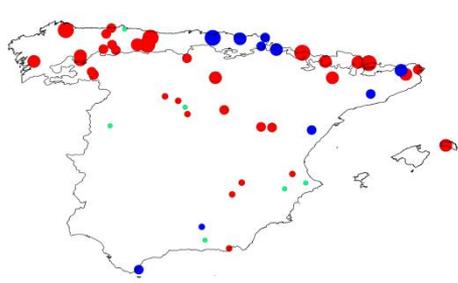
18-15 cal kyr BP



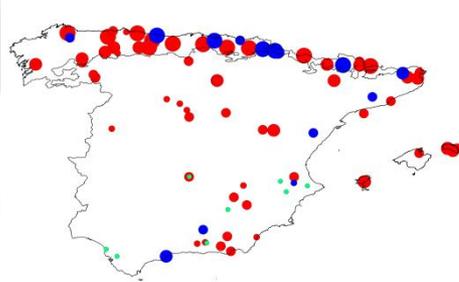
15-12 cal kyr BP



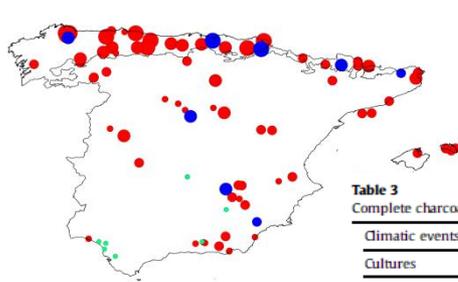
12-9 cal kyr BP



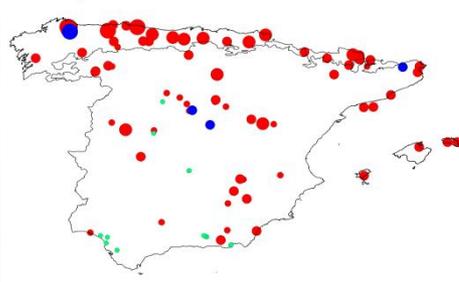
9-6 cal kyr BP



6-3 cal kyr BP



3-0 cal kyr BP



Legend

- Archaeological sequence
- Natural deposit
- *Corylus* absence
- Presence < 2%
- 2 - 10 %
- 11 - 25 %
- > 26 %

Distribución preliminar a partir de evidencias paleobotánicas

TABLE 2—Total taxa determined in the La Pila site.

General table levels Taxa	IV-4		IV-3		IV-2		IV-1		III-4		III-3		III-2		III-1		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Cupresaceae					2	0.61											
<i>Juniperus</i> sp.	95	40.42	92	43	104	30.14	18	7.56	27	8.31	8	3.21	14	14.74			
<i>Pinus</i> type <i>sylvestris</i>			3	1.41	11	3.21	5	2.11	4	1.22	3	1.21	1	1.05			
<i>Pinus</i> sp. cf. <i>Pinus</i>	1	0.42	1	0.51							1	0.41			1	0.24	
<i>Picea excelsa</i>	29	12.34	4	1.91	11	3.21	2	0.84	2	0.61							
Indeterminable gymnosperm			2	0.93					1	0.31							0.24
<i>Betula</i> cf. <i>alba</i>	27	11.51	34	15.91	29	8.41	14	5.88	81	25	94	37.61	22	23.15	141	35.21	
<i>Populus-Salix</i>	5	2.13	1	0.51	3	0.91	6	2.52	17	5.21	33	13.21	17	17.91	53	13.21	
<i>Quercus</i> (deciduous)	4	1.71	12	5.61	7	2	31	13	8	2.45	29	11.61	3	3.15	63	15.71	
<i>Quercus</i> sp. <i>Corylus avellana</i>	1	0.42	2	0.93	6	1.73	3	1.26	1	0.31	4	1.61			15	3.74	
<i>Castanea sativa</i>			1	0.51			1	0.42			1	0.41			2	0.51	
<i>Fraxinus excelsior</i>					3	0.91							1	1.05		0.24	
<i>Fagus sylvatica</i>															1	0.24	
<i>Sorbus</i> cf. <i>aria</i> cf. <i>Buxus</i>	2	0.91	4	1.91	3	0.91	2	0.84	32	10	17	6.81	7	7.41	47	11.72	
<i>Arbutus unedo</i> cf. <i>Sambucus</i>	2	0.91	1	0.51			4	1.68							1	0.24	
Leguminosae	31	13.21	10	4.71	94	27.24	109	45.81	97	29.75	18	7.21	15	15.81	19	4.74	
Indeterminable	38	16.21	47	22	72	20.91	43	18.11	56	17.21	42	16.81	15	15.81	54	13.51	
Total (2104)	235		214		345		238		326		250		95		401		

Uzquiano, 1992

Table 3

Complete charcoal floristic data between 19.6 and 14 Kyr BP.

Climatic events	LGM			H1						H1/Bölling							
	Upper Solutrean			Lower Magdalenian						Middle Magdalenian							
	Cultures		Sites	Altamira		Cualventi		Las Aguas		El Linar		Tito-Bustillo					
Layers	El Linar	Altamira	Cobranche	Altamira	Cualventi	Las Aguas	B1/B2	C-3	Tito-Bustillo								
Taxa	N	N	%	N	%	N	%	N	%	N	%	N	%				
<i>Juniperus</i> sp.	2	5	5.91	138	41.07	26	32.90	24	12.90	26	21.67	10	10	44	34.37	54	28.8
<i>Abies</i> sp.		1	1.16														
<i>Pinus sylvestris</i>		2	2.32			2	2.53					1	1	9	7.03	2	1.0
<i>Betula</i> sp.								1	0.53			21	21	5	3.91	1	0.5
<i>Salix</i> sp.		47	54.65	164	48.80	31	39.24	44	23.65	6	5.00	10	10	22	17.18	6	3.2
<i>Quercus</i> (deciduous)		2	2.32	2	0.59							5	5	1	0.78	2	1.0
<i>Corylus avellana</i>								3	1.61								
<i>Castanea sativa</i>						1	1.26										
<i>Sorbus aria</i>				2	0.59											1	0.5
<i>Hippophae rhamnoides</i>				1	0.29	4	5.06	32	17.21								
<i>Arbutus unedo</i>				1	0.29			1	0.53							1	0.5
<i>Erica</i> sp.						1	0.29		0.53								
<i>Cytisus</i> sp.		5	16	18.19			4	5.06	4	2.15				12	9.37	8	4.2
<i>Ulex</i> sp.		12						33	17.74					3	2.34	14	7.4
Fabaceae				1	0.29			20	10.75	76	63.33	37	37	16	12.51	83	44.3
Indeterminables	1	13	15.11	26	7.73	11	13.92	23	12.36	12	10.00	16	16	16	12.51	15	8.0
Total	20	86		336		79		186		120		100		128		187	

Uzquiano, 2013