

UNIVERSITY OF GRANADA RADIOCARBON DATES III

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The following list includes some measurements made from December 1982 to May 1985 in the Radiocarbon Dating Laboratory, Faculty of Science, University of Granada, of samples from Spain, Portugal, and the Sudan. Sample preparation techniques and benzene synthesis remain as described previously (R, 1982, v 24, p 217–221) and equipment and measurement of samples was also reported previously (R, 1985, v 27, p 610–615). Radiocarbon ages are calculated using the ^{14}C half-life of 5570 years and 0.95 activity of NBS oxalic acid is used as modern standard. Sample descriptions are based on information provided by submitters. Age determinations were made with the help of Research Project 0925/81, CAICYT, Spain.

GEOLOGIC SAMPLES

Cueto de la Avellanosa series

Peat from Cueto de la Avellanosa (43° 07' N, 4° 22' W), Santotis, Santander prov, Spain. Samples coll 1982 by B Mariscal and subm 1982 by A Cendrero-Uceda, Dept Geol, Fac Sci, Univ Santander.

UGRA-134. C de A 2 **2860 ± 220**
1.7m depth.

UGRA-135. C de A 3 **1100 ± 500**
20cm depth.

UGRA-137. C de A 1 **6020 ± 140**
3.4m depth.

General Comment: UGRA-134 and -137 are younger than expected.

ARCHAEOLOGIC SAMPLES

Spain

UGRA-138. Se Metro 1 **700 ± 110**

Wood from Metro de Sevilla (37° 27' 44" N, 5° 58' 17" W), Seville. Sample coll and subm 1981 by F Fernández-Gómez, Mus Arqueol, Seville; from 11m depth. *Comment:* date agrees with expected age.

UGRA-142. Coquino **3370 ± 120**

Charcoal from Cueva del Coquino (37° 11' 03" N, 4° 09' 12" W), Loja, Granada prov. Sample coll 1981 by J Carrasco-Rus and subm 1983 by S

Navarrete-Enciso, Dept Prehist, Univ Granada, to date end of Neolithic. Sample from 50cm depth. *Comment:* expected age was ca 3950 BP.

UGRA-143. Espada 3030 ± 110

Charcoal from Cerro de la Mora (37° 13' 31" N, 3° 59' 07" W), Moraleda, Granada prov. Sample coll and subm 1983 by J Carrasco-Rus, from 2m depth. *Comment:* date agrees with expected age.

UGRA-146. ALM. II 3680 ± 100

Charcoal from El Rincón de Almendricos (37° 29' N, 1° 54' W), Lorca, Murcia prov. Sample coll 1981 and subm 1982 by M-M Ayala-Juan, Dept Arqueol, Univ Murcia; from 15cm depth. *Comment:* date agrees with expected age.

UGRA-139. PM 1.6B'.170.6 15,840 ± 1060

Bone from Peña Miel I (42° 12' 59" N, 2° 37' 51" W), Pradillo de Cameros, Rioja prov. Sample coll 1980 and subm 1981 by P Utrilla, Dept Hist Antigua, Univ Zaragoza, to date Upper Paleolithic in Rioja. *Comment:* expected age was ca 30,000 BP.

Motilla del Azuer series

Charcoal from Motilla del Azuer (39° 03' 14" N, 3° 29' 48" W), Daimiel, Ciudad Real prov. Samples coll and subm 1979 by F Molina, Dept Prehist, Univ Granada, to date Bronze Age in S tableland.

UGRA-140. D 16156 4000 ± 140

5.2m depth. *Comment:* expected age was ca 3600 BP.

UGRA-144. D 16209 3840 ± 120

5.7m depth. *Comment:* expected age was ca 3650 BP.

UGRA-145. D 16276 3930 ± 130

2.4m depth. *Comment:* expected age was ca 3500 BP.

UGRA-147. N C5 46 12,060 ± 150

Charcoal from Cueva de Nerja (36° 45' 45" N, 3° 50' 55" W), Maro, Málaga prov. Sample coll 1980 by E Aura-Tortosa and J González-Tablas and subm 1982 by F Jordá-Cerdá, Dept Prehist y Arqueol, Univ Salamanca, to date establishment of Upper Paleolithic in E Andalucía. Sample from 2.9m depth. *Comment:* expected age was ca 15,000 BP.

Cueva de las Palomas series

Charcoal and seed from Cueva de las Palomas (36° 59' N, 4° 52' W), Teba, Málaga prov. Samples coll 1979–1982 and subm 1983 by I Marqués-Merelo, Dept Prehist, Univ Málaga, to date Copper Age in Málaga prov.

UGRA-161. CP G-15 NV No. 169 5370 ± 100

Charcoal at 50cm depth.

UGRA-162. CP G-15 NV No. 175 **5240 ± 110**

Seed at 50cm depth.

UGRA-177. CP G-15 No. 136a **5470 ± 130**

Charcoal.

UGRA-198. CP G-16 NVIII No. 139-198 **5500 ± 130**

Charcoal at 75cm depth.

UGRA-204. CP G-16 NV No. 83-75-104 **5840 ± 210**

Charcoal at 50cm depth.

General Comment: expected ages were ca 4800 BP.

UGRA-136. Albox-1 **3280 ± 140**

Charcoal from Cerro del Tesoro (37° 23' 44" N, 2° 17' 43" W), Albox, Almería prov. Sample coll and subm 1983 by J D García-Guirao, Town Hall Albox, to date Neolithic-Bronze Age transition in Almanzora R Basin. *Comment:* date agrees with expected age.

Almizaraque series

Charcoal from Almizaraque (37° 18' N, 1° 47' W), Cuevas de Almanzora, Almería prov. Samples coll 1982 by M D Fernández-Posse and subm 1982 by M Fernández-Miranda, Subdir Gen Arqueol, to date first metallurgy in SE Iberian peninsula.

UGRA-163. A 1182 C20 **4120 ± 100**

1.2m depth.

UGRA-164. A 1282 C18 **3950 ± 100**

84cm depth.

UGRA-170. A 882 C21 **4300 ± 90**

60cm depth.

UGRA-174. A 882 C22 **4550 ± 140**

3.5m depth.

General Comment: dates agree with expected ages.

UGRA-157. PPU19 **190 ± 90**

Charcoal from Papauvas (37° 15' 30" N, 7° 02' 40" W), Aljaraque, Huelva prov. Sample coll 1981 and subm 1983 by J C Martín de la Cruz, Dept Prehist y Arqueol, Univ Autónoma, Madrid. Sample from 17cm depth. *Comment:* no expected age for this sample.

Llanete de los Moros series

Charcoal and seeds from Llanete de los Moros (38° 01' 54" N, 4° 22' 11" W), Montoro, Córdoba prov. Samples coll 1981 and subm 1983 by J C Martín de la Cruz to date end of Bronze Age.

UGRA-159. LLM 4	2980 ± 130
Charcoal at 3.1m depth.	
UGRA-160. LLM 10	3000 ± 100
Seed at 3.9m depth.	
UGRA-175. LLM 9	2890 ± 140
Charcoal at 3.9m depth.	
UGRA-183. LLM 11	3080 ± 90
Charcoal at 4.1m depth.	
UGRA-186. LLM 13	2710 ± 250
Seed at 3.4m depth.	
UGRA-187. LLM 14	2910 ± 120
Charcoal at 3.9m depth.	
UGRA-190. LLM 5	2930 ± 110
Charcoal at 4.4m depth.	

General Comment: no expected ages for these samples.

Morra del Quintanar series

Charcoal from Morra del Quintanar (39° 01' 05" N, 2° 27' 05" W), Munera, Albacete prov. Samples coll 1979–1980 and subm 1982 by C Martín-Morales, Subdir Gen Arqueol, to date Middle Bronze Age in Albacete prov.

UGRA-165. Q 1445-80	3720 ± 110
60cm depth.	
UGRA-166. Q 1813-80	3780 ± 110
50cm depth.	
UGRA-167. Q 221-79	3350 ± 150
1.1m depth.	

General Comment: expected ages were ca 3550 BP.

UGRA-156. C. de G. 1	4040 ± 110
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Bone from Cau de la Guineu (41° 46' 14" N, 1° 36' 46" E), Sant Mateu de Bages, Barcelona prov. Sample coll 1981 and subm 1982 by L A Guerrero-Sala, Inst Prehist y Arqueol, Univ Barcelona, to date Bronze Age burials in Catalonia. Sample from 2.5m depth. *Comment:* date agrees with expected age.

UGRA-148. A-1	5400 ± 100
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Charcoal from Dolmen de Arreganyats (42° 25' 35" N, 2° 59' 26" E), Espolla, Gerona prov. Sample coll 1979 and subm 1982 by J Tarrús-Galter,

Mus Arqueol Bañolas, prov Gerona, to date Catalonian dolmens on Catalonian Coast. *Comment:* expected age was 4000–4700 BP.

UGRA-154. RM-1 **3900 ± 150**

Charcoal from Riera Masarach (42° 19' 35" N, 2° 54' 32" E), Pont de Molins, Gerona prov. Sample coll 1981 by M Mataró and subm 1982 by J Tarrús-Galter to date end of Neolithic in Catalonia; from 1.7m depth. *Comment:* date agrees with expected age.

UGRA-155. CP-1 **3450 ± 110**

Charcoal from Cova de Pau (42° 09' 40" N, 2° 44' 54" E), Serinya, Gerona prov. Sample coll 1981 by A González and subm 1982 by J Tarrús-Galter to date Bronze Age in NE Catalonia; from 1.6m depth. *Comment:* date agrees with expected age.

UGRA-158. CM-1 **440 ± 100**

Charcoal from Dolmen de Coll de Madas (42° 26' 10" N, 2° 56' 09" E), Cantallops, Gerona prov. Sample coll 1981 by R Vilardell and subm 1982 by J Tarrús-Galter to date old dolmens in Catalonian coast. *Comment:* date is younger than expected.

El Raso de Candeleda series

Charcoal from El Raso de Candeleda (40° 07' 00" N, 5° 18' 08" W), Candeleda, Avila prov. Samples coll and subm 1982 by F Fernández-Gómez, Mus Arqueol Seville, to date pre-Roman town.

UGRA-168. El Raso 1/82 **3030 ± 150**

30cm depth.

UGRA-169. El Raso 2/82 **2190 ± 90**

2m depth.

UGRA-171. R-1-C-5 **2140 ± 90**

UGRA-173. R-2-E-W **2570 ± 140**

General Comment: expected ages were 2000–2300 BP.

Portugal

Vinha da Soutilha series

Charcoal from Vinha da Soutilha (41° 49' 11" N, 7° 21' 33" W), Mairos, Tras-os-Montes prov. Samples coll and subm 1982 by S M Soares-Oliveira, Inst Arqueol, Fac Letras, Univ Porto, to date Bronze Age in NE Portugal.

UGRA-133. M1.SIII.Lar.1 **4650 ± 150**

58cm depth.

UGRA-176. 82-L.4-3 **6730 ± 200**

UGRA-178. 82-L.8-4**4370 ± 140**

1m depth.

General Comment: expected ages were 3500–4000 BP.**UGRA-172. M.T./Cv.2****4540 ± 90**

Charcoal from Monte da Tumba (38° 16' 54" N, 8° 13' 12" W), Torrão, Alcácer do Sal prov. Sample coll 1982 and subm 1983 by M J Coelho-Soares, Mus Arqueol Setúbal, to date Chalcolithic period in SW Iberian peninsula. *Comment:* expected age was ca 4200 BP.

*Sudan***Necrópolis Meroítica de Emir Abdallah series**

Wood from Necrópolis Meroítica de Emir Abdallah (20° 48' N, 30° 20' E), Abri, Wadi Halfa, Norte prov, Nubia. Samples coll 1980 and subm 1982 by V M Fernández-Martínez, Dept Prehist, Univ Complutense, Madrid, to date Spanish archaeol research in the Sudan.

UGRA-149. T-624**3400 ± 100****UGRA-150. T-199****2220 ± 120****UGRA-151. T-234****2130 ± 100****UGRA-152. T-426****2130 ± 90****UGRA-153. T-506****2320 ± 90***General Comment:* dates agree with expected ages.

REFERENCES

- González-Gómez, C, López-González, J D and Domingo-García, M, 1982, University of Granada radiocarbon dates I: Radiocarbon, v 24, no. 2, p 217–221.
 González-Gómez, C, Sánchez-Sánchez, P and Domingo-García, M, 1985, University of Granada radiocarbon dates II: Radiocarbon, v 27, no. 3, p 610–615.