backward push of the hand. Such anomalies have been associated with a specific craft, for example basket weaving.[352]

On both fibula of the skeleton in grave 9 further abnormalities could be observed, which are due to the sustained over-use during extended walking or jumping.

The bases of former joint connections are also good markers to find one-sided strain. The burial of grave 2 suggested an often kneeling body posture by the fronts of the shin bones. The skeleton from grave 1 also showed conspicuous features on the toe bones, which indicate a similar one-sided strain, but here with positioned toes, as would be found in frequent and short-term kneeling in an upright position. The same skeleton shows signs of frequent and exaggerated inward rotation of the lower arm during a uniform daily task on both ulnas.

Half of the individuals identified as adult suffered from trauma along the spine (skeletons 1, 2, 4, 9) as would appear as a result of a shift or rip in the invertebral disc. These injuries were caused without a doubt by over-use or overload of the spinal column in the lumbar vertebrae by frequent and sustained carrying of too heavy loads.

5.3.6 Carbon and nitrogen stable isotope analysis of human and faunal remains from the Cuatrovitas medieval period

Domingo C. Salazar-García

5.3.6.1 Introduction: Stable isotopes and dietary reconstructions

Dietary reconstructions during historical periods along the Mediterranean have traditionally been based on the interpretation of written texts, in contrast with alternative means of diet reconstruction based on material remains and analytical techniques used mostly for prehistoric times in the region.[353] However, during the last decade biogeochemical analysis has been increasingly carried out on skeletal remains from individuals who lived in historical periods, especially during Antiquity[354] and the Middle Ages.[355] This type of analysis allows diet to be approached in a direct manner by studying directly the diet each of the individuals consumed, avoiding generalizations obtained from written sources when addressing individual life histories.

Carbon and nitrogen stable isotope analysis of collagen from skeletal tissues such as bone and dentine has long been established as a reliable tool for inferring information about the diets of historic and prehistoric humans and animals.[356] This technique is based on the underlying rationale that the isotopic composition of food is recorded in the body tissues of a consumer[357] after a predictable isotope fractionation.[358] Well-preserved archaeological remains can retain the stable isotope ratios present during life, and although many types of human tissues are suitable for stable isotope analysis, archaeological studies typically focus on bones, dentine, and enamel. Bone and dentine are composed of both inorganic (ca. 75–80 % of dry weight, mostly hydroxyapatite) and organic (ca. 20–25 % of dry weight, mostly collagen) matter,[359] while enamel is typically composed of more than 98 % inorganic hydroxyapatite. All of these components have specific stable isotope ratios that reflect their chemical origin and formation: the inorganic mineral derives from the end products of metabolism and reflects the carbon isotopic ratios of the whole diet, while the organic matter derives mainly from dietary amino acids (with possible modification, such as transamination) and reflects carbon and nitrogen isotope ratios linked primarily to protein consumption.[360]

Bulk collagen from bone or dentine is usually the preferred substrate for carbon and nitrogen stable isotope-based dietary reconstructions for three reasons: 1) its biochemistry is well known, 2) it is the major nitrogen source in skeletal remains, and 3) the atomic ratio of C to N obtained from a sample provides a robust quality indicator that can even reliably assess the isotopic integrity of material more than 100.000 years old.[361] However, there are a few considerations to bear in mind when interpreting collagen isotope ratios. Due to a slow but constant collagen turnover, results obtained from adult human bone collagen represent an averaged protein diet over many years prior to death, depending on the collagen turnover rate of the bone sampled.[362] By contrast, dentine collagen exhibits almost no turnover, and thus the isotopic values measured from dentine primarily reflect the protein sources consumed during the short interval in which the dentine of each tooth was formed, mainly during childhood,[363] with the added uncertainty that the values could have been influenced by breastfeeding and weaning.[364]

Carbon stable isotope values of collagen are used to distinguish between the consumption of marine (^{13}C enriched) or terrestrial (^{13}C depleted) foods in the diet,[365] although the interpretation of $\delta^{13}C$ values becomes more complicated if fish obtained from brackish water are included in the diet.[366] $\delta^{13}C$ can also be used to estimate the relative dietary proportions of plants performing C_4 versus C_3 photosynthesis.[367]

352 Pecero Espín 2015, 114, with references to Kennedy 1989.
353 Salazar-García et al. 2018.
354 Salazar-García 2011.
355 Inskip et al. 2018.
356 Lee-Thorp 2008; Makarewicz – Sealy 2015.
357 De Niro 1985; DeNiro – Epstein 1978; De Niro – Epstein 1981.
358 Schoeller 1999.
359 Hare 1980.
360 Ambrose – Norr 1993.
361 De Niro 1985; van Klinken 1999; Britton et al. 2011.
362 Schwarcz – Schoeninger 1991; Hedges et al. 2007.
363 Beaumont et al. 2012.
364 Fuller et al. 2006; Eerkens et al. 2011.
365 Chisholm et al. 1982; Peterson – 1987; Schoeninger – De Niro 1984.
366 Eerkens et al. 2013; Salazar-García et al. 2014a.
367 van der Merwe – Vogel 1978; O'Leary 1981.

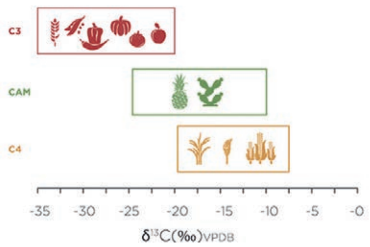


Fig. 204: $\delta^{13}C$ values of different photosynthetic route plant types.

This is useful because all trees, shrubs and herbs, as well as temperate or shade-adapted grasses, are C_3 plants (^{13}C depleted), while C_4 plants (^{13}C enriched) include many important domesticated tropical grasses (e.g., maize, sorghum, millet, and sugar cane) (fig. 204). However, this technique is not useful to get information on specific plants consumed, for which the study of plant microremains trapped in dental calculus is best suited.[368]

Collagen nitrogen stable isotope ratios are typically used to estimate trophic level because they increase by approximately 3–5 ‰ with each step up an idealized food-chain,[369] with some acknowledgement of inherent variation among these values.[370] Although this can be further complicated by special cases in which plants have higher $\delta^{15}N$ values than expected[371] or in cases of animal tissue enrichment due to urea-recycling under water stress,[372] $\delta^{15}N$ values can still allow diets rich in plant proteins to be distinguished from those rich in animal proteins.[373] Additionally, because aquatic food chains tend to contain more trophic levels than terrestrial ones, individuals consuming diets rich in marine or freshwater resources typically have higher $\delta^{15}N$ stable isotope values than individuals consuming predominantly terrestrial food products.[374] Furthermore, when combined, nitrogen and carbon values can discriminate between the consumption of aquatic foods and C_4 terrestrial foods (fig. 205).

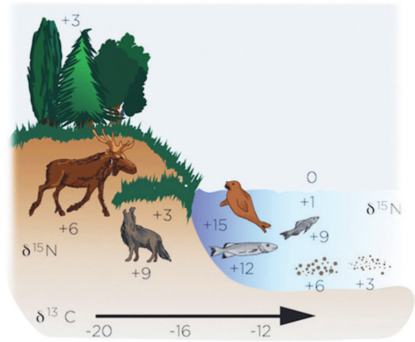


Fig. 205: $\delta^{13}C$ and $\delta^{15}N$ values of terrestrial and marine foodwebs.

5.3.6.2 Materials and methods

Human (n=6) and faunal (n=7) remains were selected for carbon and nitrogen stable isotope analysis (table 1). Dyaphisis from long bones were selected when available for analysis both for humans and fauna. Human remains were taken from adult or subadult individuals, in order to avoid breastfeeding signatures that might have been present in infantile individuals. Both females and males are present in the human sample selection. Most of the faunal remains were also taken from non-infantile specimens when possible. Faunal species samples include bovids, suids, ovis and equids.

Methods outlined in Salazar-García et al.[375] were followed to extract collagen for C and N isotope ratio analysis at the Light Stable Isotope Facility of the University of Cape Town (UCT) in Cape Town, South Africa. Whole bone fragments weighing ca. 300 mg obtained from each of the specimens were demineralized in a 0.5M HCl solution at 5 ºC. They were then rinsed three times with deionized water until the pH became neutral, and gelatinized over 48 hours at 70 ºC before being filtered and ultrafiltered using 50–90 µm EZEE© filters and >30 kDa Amicon© ultrafilters respectively. Finally, the purified solutions were frozen and lyophilized before being weighed into tin capsules and loaded onto the mass spectrometers.

The carbon and nitrogen isotope ratios in collagen were measured in duplicate using a Delta XP continuous-flow isotope ratio mass spectrometer interfaced with an elemental analyser, Flash EA 2112.[376] All samples were analysed in the UCT light stable isotope labs. Stable carbon isotope ratios were expressed relative to the VPDB scale (Vienna PeeDee Belemnite), and stable nitrogen isotope ratios were measured relative to the AIR scale (atmospheric N2). All of them are expressed using the delta notation (δ) in parts per thousand (‰). Repeated analysis of internal and international standards determined an analytical error better than 0.1 ‰ (1σ) for $\delta^{13}C$ and $\delta^{15}N$.

5.3.6.3 Results and discussion

Samples from all the humans and faunal remains analysed yielded sufficient collagen in the >30 kDa fraction for $\delta^{13}C$ and $\delta^{15}N$ analysis in duplicate. All of them met published collagen quality controls (i.e. % C > 35, % N > 10, C:N ratio between 2.9–3.6).[377] All isotope ratio results from Cuatrovitas medieval period are present in table 2 and fig. 206.

368 Power et al. 2014; Salazar-García et al. 2013a.
369 De Niro – Epstein 1981; Minagawa – Wada 1984; Schoeninger et al. 1983.
370 Hedges – Reynard 2007; O'Connell et al. 2012.
371 Warinner et al. 2013.
372 Pearson 2007.
373 Bol – Pflieger 2002; Petzke et al. 2005; Fahy et al. 2013.
374 Schoeninger et al. 1983; Schoeninger – De Niro 1984.
375 Salazar-García et al. 2013b.
376 Thermo–Finnigan©, Bremen, Germany.
377 De Niro 1985; van Klinken 1999.

S-UCT	Archaeological context	Cultural Period	Species	Bone	Sex	Age
20244	PD1 Tumba 1	Christian (Late MA)	Human	Left humerus	Female	27–35 y
20245	PD2 Tumba 7	Christian (Late MA)	Human	Left femur	Female?	Young adult
20246	PD3 Tumba 2	Islamic (Early MA)	Human	Left humerus	Female	30–35 y
20247	PD4 Tumba 9	Christian (Late MA)	Human	Right peroneus	Male	17–20 y
20248	PD5 Tumba 4	Christian (Late MA)	Human	Right radius	Male	25–30 y
20249	PD6 Tumba 8	Christian (Late MA)	Human	Left humerus	Indet	11–15 y
20250	E-CV-2 Corte 5 (8)	Islamic (Mid MA)	Bos taurus	Right radius	*	Juvenile–adult
20251	E-CV-3 Corte 15 (50)	Christian (Late MA)	Bos taurus	Left tibia	*	Juvenile–adult
20252	E-CV-3 Corte 15 (50)	Christian (Late MA)	Sus sp.	Right third metatarsal	*	Infantile–subadult
20253	E-CV-3 Corte 15 (50)	Christian (Late MA)	Equus cavallus	Right second meta-carpal	*	Juvenile–adult
20254	E-CV-4 Cata 21 (4)	Christian (Late MA)	Ovis aries	Left tibia	*	Adult
20255	E-CV-4 Cata 21 (9)	Christian (Late MA)	Bos taurus	Right radius	*	Juvenile–adult
20256	E-CV-4 Cata 21 (9)	Christian (Late MA)	Ovis aries	Right humerus	*	Infantile-juvenile

Table 1: Info from the samples taken for CN isotope analysis (S-UCT code, archaeological context, cultural period, species, bone, sex and age)

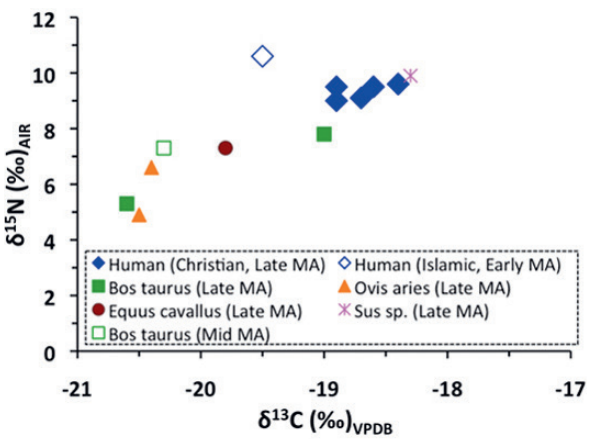


Fig. 206: $\delta^{13}C$ and $\delta^{15}N$ values of human and faunal remains from Cuatrovitas.

Analysing the carbon values, it can be seen that the herbivore $\delta^{13}C$ mean value of the Christian period is -20.1 ± 0.7 (1σ) ‰ and its minimum and maximum values are -20.6 and -19.0 ‰ respectively. These values are all compatible with what would be expected from typical C_3 terrestrial ecosystems. The $\delta^{15}N$ mean value of these herbivores is 6.4 ± 1.3 (1σ) ‰ and its minimum and maximum values are 4.9 and 7.8 ‰, defining the background for the herbivore trophic level at the site for the Christian period. There is also one omnivore (Sus sp.) for this period, with $\delta^{13}C$ and $\delta^{15}N$ values of -18.3 ‰ and 9.9 ‰ respectively. Its values show a clear higher trophic level than that of the herbivores from the same period (3.5 ‰ increase on the herbivore mean $\delta^{15}N$), and suggest perhaps an introduction of a different type of resource to that of the herbivores in the diet (almost 2.0 ‰ higher $\delta^{13}C$ value than the herbivores). Regarding the fauna from the Islamic period, only one herbivore (Bos taurus) was available for analysis, showing $\delta^{13}C$ and $\delta^{15}N$ values of -20.3 ‰ and 7.3 ‰ respectively, which is also consistent with a C_3 terrestrial ecosystem and will be the background reference for when comparing the Islamic human to it. Unfortunately no more fauna from the Islamic period nor aquatic resources from any of the medieval stages could be analysed for this site.

Considering all humans (n=5) from the Christian period as a whole, we see that they have $\delta^{13}C$ and $\delta^{15}N$ mean values of –18.7 ± 0.2 (1σ) ‰ (min: –18.9 ‰, max: –18.4 ‰) and 9.3 ± 0.3 (1σ) ‰ (min: 9.0 ‰, max: 9.6 ‰) respectively. These mean values suggest that at the population level, diet during the Late Middle Ages was mainly based on terrestrial C_3 resources at Cuatrovitas. The humans are clearly placed at

S-UCT	Species	Cultural Period	$\delta_{13}C$	$\delta_{15}N$	%C	%N	C:N
20244	Human	Christian (Late MA)	-18.9	9.5	41.9	15.1	3.2
20245	Human	Christian (Late MA)	-18.4	9.6	41.9	15.3	3.2
20246	Human	Islamic (Early MA)	-19.5	10.6	43.7	14.6	3.3
20247	Human	Christian (Late MA)	-18.6	9.5	41.9	15.1	3.2
20248	Human	Christian (Late MA)	-18.9	9.0	41.8	15.1	3.2
20249	Human	Christian (Late MA)	-18.7	9.1	42.0	15.2	3.2
20250	Bos taurus	Islamic (Mid MA)	-20.3	7.3	40.1	14.2	3.3
20251	Bos taurus	Christian (Late MA)	-20.6	5.3	39.4	13.8	3.3
20252	Sus sp.	Christian (Late MA)	-18.3	9.9	41.0	14.9	3.2
20253	Equus cavallus	Christian (Late MA)	-19.8	7.3	41.1	15.0	3.2
20254	Ovis aries	Christian (Late MA)	-20.4	6.6	40.9	14.9	3.2
20255	Bos taurus	Christian (Late MA)	-19.0	7.8	39.8	14.4	3.2
20256	Ovis aries	Christian (Late MA)	-20.5	4.9	42.0	15.0	3.3

Table 2. Carbon and nitrogen stale isotope ratio results from the samples analysed ($\delta^{13}C$, $\delta^{15}N$, %C, %N, C:N)

a trophic level higher than the herbivores (ca. 3‰ higher in $\delta^{15}N$), and with $\delta^{15}N$ values similar to that of the omnivore. This suggests that an important part of their protein input in the diet came from animal resources and, together with having $\delta^{13}C$ values compatible with C_3 resources, that the plant foods they consumed were probably C_3 crops. There is no clear isotopic evidence of marine or C_4 resource consumption in any of the individuals, regardless of age or sex. Of course, this doesn't mean that they didn't consume these types of foods at all, but that they didn't consume them on a regular enough basis to be clearly detectable in their bone collagen.

Something similar is observed during the earlier stages of the Middle Ages, under Islamic rule, although only one individual was analysed. This individual has $\delta^{13}C$ and $\delta^{15}N$ values of -19.5 and 10.6 ‰ respectively. The carbon isotope ratio values are compatible with a C_3 terrestrial resource exclusive diet, and the nitrogen isotope ratio values show the human to be situated on a higher trophic level from the bovid analysed (3.3 ‰ higher), although the bovid is from the Islamic period of the Mid Middle Ages and thus not strictly contemporary to the human. Comparing humans from the Christian period and the Islamic period, the $\delta^{13}C$ value for the Islamic period is 0.8 ‰ lower than the mean value from the Christian period. The $\delta^{15}N$ values from the Islamic individual, even if 1.3 ‰ higher than that of the human average from the Christian period, show a similar difference with regard to the corresponding faunal background values from the Islamic period (Mid Middle Ages). These small variations between Christian and Islamic periods might be at some degree due to environmental, husbandry or land-use differences, but could as well mean that specific main C_3 dietary resources were different between cultural periods. We must anyway keep in mind that having only one human and one herbivore analysed for the Islamic period of the Middle Ages means that we don't really get a clear picture of the population's diet or environmental background values, so interpretation should be taken with caution.

When comparing Cuatrovitas to other Middle Age isotopic studies from the south and southeast of the Iberian Peninsula, we can see some contrasts arising. While in the other southern Islamic population analysed in Écija there is also a diet consistent with C_3 plant consumption (with only a very minor contribution of C_4 plants),[378] in several sites from eastern and southeastern Iberia there is clear isotopic evidence of consumption of resources other than terrestrial C3 amongst Islamic populations. At the city of Balànsiya (Valencia), although terrestrial C_3 resources dominated the diet, an increase in consumption of C_4 plants (e.g. millet, sorghum) and/or marine resources is detected among individuals dating to the Islamic period.[379] At the site of El Tossal de les Basses (Alicante), the Islamic individuals also present isotopic evidence for marine food consumption.[380] Amongst the mudéjar (Islamic people living in Christian territory) population of El Raval (Crevillent) the diet was quite homogeneous and consisted of both C_4 and C_3 terrestrial resources.[381] During Christian times and amongst Christian populations, however, most isotopic evidence in both the broader study region[382] and elsewhere in Western Europe[383] points to a main C_3 terrestrial resource consumption

378 Inskip et al. 2018.
379 Alexandre et al. 2019.
380 Salazar-García et al. 2016.
381 Salazar-García et al. 2014b.
382 Alexandre et al. 2019.
383 Mion et al. 2019; Olsen et al. 2016.

9. BIBLIOGRAPHY

Abū l-Ḫayr 1990:
Abū l-Ḫayr al-Išbīlī, *ʿUmdat al-ṭabīb* fī ma*ʿrifat al-nabāt*, ed. Muḥammad al-ʿArabī al-Ḫaṭṭābī (Rabat 1990) 2 vol.

al-Bakrī 1968:
Abū ʿUbayd al-Bakrī, Ǧuġrāfiyyat al-Andalus wa-Urūbbā min *›Kitāb al-masālik wa-l-mamālik‹*, ed. ʿAbd al-Raḥmān ʿAlī al-Ḥāǧǧī (Beirut 1968).

al-Ḥimyarī 1938:
Abū ʿAbd Allāh Muḥammad b. ʿAbd Allāh Ibn ʿAbd al-Munʿim al-Ḥimyarī, *La Péninsule Ibérique au Moyen Âge d'après le ›Kitāb ar-Rawḍ al-Miʿṭār fī ḫabar al-aqṭār‹*, ed. E. Lévi-Provençal (Cairo 1938).

al-Idrīsī 1968:
Abū ʿAbd Allāh Muḥammad b. Muḥammad b. ʿAbd Allāh b. Idrīs al-Idrīsī, *Description de l'Afrique et de l'Espagne par Edrîsî*, ed. and transl. R. Dozy and M. J. De Goeje (Leiden 1866, reprint Leiden 1968).

al-Maqqarī 1967:
Šihāb al-Dīn Abū 'l-ʿAbbās Aḥmad b. Muḥammad b. Aḥmad b. Yaḥyā al-Tilimsānī al-Maqqarī, *Analectes sur l'histoire et la littérature des arabes d'Espagne*, ed. R. Dozy, G. Dugat, L. Krehl and W. Wright (Leiden – London 1855–1861, reprint Amsterdam 1967).

al-Šaqundī 1934:
Abū 'l-Walīd Ismāʿīl b. Muḥammad al-Šaqundī, *Elogio del Islam español (Risāla fī faḍl al-Andalus)*, transl. E. García Gómez (Madrid 1934).

al-ʿUḏrī 1965:
Abū 'l-ʿAbbās Aḥmad b. ʿUmar b. Anas Ibn al-Dalāʾī, *Nuṣūṣ ʿan al-Andalus min ›Kitāb tarṣīʿ al-aḫbār wa-tanwīʿ al-āṯār wa-l-bustān fī 'l-ġarāʾib al-buldān wa-l-masālik ilā ǧāmiʿ al-mamālik‹*, ed. ʿAbd al-ʿAzīz al-Ahwānī (Madrid 1965).

al-Zuhrī 1968:
Abū ʿAbd Allāh Muḥammad b. Yaḥyā b. Šihāb al-Zuhrī, ›Kitāb al-Djaʿrāfiyya‹. Mappemonde du caliphe al-Maʾmūn reproduite par Fazārī (III[e]–XI[e] s.), rééditée et commentée par Zuhrī (VI[e]–XII[e] s.), ed. and transl. Muḥammad Hadj-Sadok, *Bulletin d'Etudes Orientales* 21, 1968, 7–312.

ʿAbd al-Karīm 1974:
Gamal ʿAbd al-Karīm, La España musulmana en la obra de Yāqūt (s. XII–XIII). Repertorio enciclopédico de ciudades, castillos y lugares en al-Andalus, extraido del Muʿǧam al-buldān (Diccionario de los países), *Cuadernos de Historia del Islam* 6, 1974, 50–57.

AG Boden 2005:
AG Boden, *Bodenkundliche Kartieranleitung* (Stuttgart 2005).

Aitoutouhen Temsamani 2007:
F.-Z. Aitoutouhen Temsamani (coord.), *Actas I encuentro internacional ‚Alquerías y Pueblos del Aljarafe'. Historia, arqueología, arquitectura y medio ambiente*, Benacazón 25.–27.9.2003 (Tetuan 2007).

Aldazábal et al. 2010:
V. Aldazábal – R. Plá – R. Ivernizzi, Determinación de elementos traza en cerámicas arqueológicas del Lago Traful. Áreas de aprovisionamiento y circulación, in: S. Bertolino – R. Cattáneo – A. D. Izeta (eds.), *La arqueometría en Argentina y Latinoamérica* (Cordoba 2010) 29–34.

Alexandre et al. 2019:
M. M. Alexandre – A. Gutiérrez – A. R. Millard – M. P. Richards – C. M. Gerrard, Economic and Socio-Cultural Consequences of Changing Political Rule on Human and Faunal Diets in Medieval Valencia (c. 15th century AD) as Evidenced by Stable Isotopes, *Archaeological and Anthropological Sciences* 11, 2019, 3875–3893. [doi.org/10.1007/s12520-019-00810-x] (04.06.2021)

Allen 2003:
H. D. Allen, A Transient Coastal Wetland. From estuarine to supratidal conditions in less than 2000 Years (Boca do Rio, Algarve, Portugal), *Land Degradation and Development* 14, 2003, 265–283.

Allen et al. 1996:
R. M. Allen – B. Huntley – W. A. Watts, The Vegetation and Climate of Northwest Iberia over the Last 14 000 yr, *Journal of Quaternary Science* 11, 1996, 125–147.

Almagro 2014:
A. Almagro, La planimetría de mezquitas andalusíes, in: S. Calvo Capilla, *Las mezquitas de al-Andalus* (Almería 2014) 13–14.

Ambrose – Norr 1993:
S. H. Ambrose – L. Norr, Experimental Evidence for the Relationship of the Carbon Isotope Ratios of Whole Diet and Dietary Protein to Those of Bone Collagen and Carbonate, in: J. B. Lambert – G. Grupe (eds.), *Prehistoric Human Bone. Archaeology at the molecular level* (Berlin 1993) 1–38.

Amores Martínez 2007:
F. Amores Martínez, La obra del escultor Juan de Astorga para la Ermita de Cuatrovitas en Bollullos de la Mitación, *Laboratorio de Arte* 20, 2007, 281–293.

Angelé – Cressier 1992:
S. Angelé – P. Cressier, Velefique (Almería). Un ejemplo de mezquita rural en Al-Andalus, in: P. Cressier (ed.), *Estudios de arqueología medieval en Almería* (Granada 1992) 241–264.

Arbeiter 1998:
A. Arbeiter, Von der Auflösung des Römischen Reiches bis zur Konsolidierung der portugiesischen Nation, in: T. G. Schattner (ed.), *Archäologischer Wegweiser durch Portugal* (Mainz 1998) 43–55.

Arera-Rütenik 2017:
T. Arera-Rütenik, *Transformation von Moscheen zu Kirchen auf der Iberischen Halbinsel* (= Berliner Beiträge zur Bauforschung und Denkmalpflege 14) (Petersberg 2017).

Asín Palacios 1943:
M. Asín Palacios, *Glosario de voces romances registradas por un botánico anónimo hispano-musulmán (siglos XI–XII)* (Madrid 1943).

Azuar Ruiz 1983:
R. Azuar, Panorama de la arqueología medieval de los valles alto y medio del Vinalopó (Alicante), *Lucentum* 2, 1983, 349–383.

Azuar Ruiz 1985:
R. Azuar Ruiz, Las mezquitas en el ambito rural, in: Instituto Hispano-Arabe de Cultura (ed.), *Actas de las II Jornadas de la cultura árabe e islámica*, Madrid 1980 (Madrid 1985) 65–72.

Baccour et al. 2005:
H. Baccour – M. Medhioub – F. Jamoussi – T. Mhiri – A. Daoud, Mineralogical Evaluation and Industrial Applications of the Triassic Clay Deposits (Southern Tunisia), *Materials Characterization* 59(11), 2005, 1613–1622.

Baena-Escudero et al. 2019:
R. Baena-Escudero – M. Rinaldi – B. García-Martínez – I. C. Guerrero-Amador – L. Nardi, Channel Adjustments in the Lower Guadalquivir River (Southern Spain) over the Last 250 Years, *Geomorphology* 337, 2019, 15–30 [https://doi.org/10.1016/j.geomorph.2019.03.027] (07.10.2021).

Ballesteros Beretta 1913:
A. Ballesteros Beretta, *Sevilla en el siglo XIII* (Madrid 1913).

Baquero 2017:
J. M. Baquero, La leyenda de los túneles de Cuatrovitas, *El Diario* 18.5.2017. [http://www.eldiario.es/andalucia/pasaporte/leyenda-tuneles-Cuatrovitas_0_642536166.html] (04.06.2021).

Barceló 1995:
C. Barceló, La toponímia àrab, in: V. M. Rosselló – E. Casanova (eds.), *Estudis de toponímia valenciana. Materials de toponímia (Mestratge de Toponímia 1990–1991)* (Valencia 1995) vol. 2, 1131–1147.

Barceló 2000:
C. Barceló, Adaptación arábiga de los topónimos antiguos, in: *Congrés Internacional de Toponímia i Onomàstica Catalanes,* Valencia 2001 (Valencia 2000) 489–510.

Barone 1976:
R. Barone, *Anatomie comparée des mammifères domestiques. I. Osteologie* (París 1976).

Barrucand – Bednorz 1991:
M. Barrucand – A. Bednorz, *Maurische Architektur in Andalusien* (Cologne 1991).

Basset – Terrasse 1927:
H. Basset – H. Terrasse, Sanctuaires et forteresses almohades. Le ribat de Tit. Le Tasghimout, *Hespéris* 7, 1927, 117–171.

Bazzana 1992:
A. Bazzana, *Maisons d'al-Andalus. Habitat médiéval et structures du peuplement dans l'Espagne orientale* (= Collection Casa de Velázquez Ser. Archéologie 17) (Madrid 1992).

Bazzana 2002:
A. Bazzana, Materiaux, techniques et modes de construction. Quelques réflexions à propos de l'habitat villageois dans al-Andalus, in: É. Hubert – A. Bazzana (eds.), *Castrum 6. Maisons et espaces domestiques dans le monde méditerranéen au Moyen âge*, Collection Casa de Velázquez 72 (= Collection de l'École Française de Rome 105/6) (Rome – Madrid 2002) 53–74.

Bazzana – Bedia Garcia 2005:
A. Bazzana – J. Bedia García (eds.), *Excavaciones en la isla de Saltés (Huelva) 1988–2001* (Seville 2005).

Bazzana – Bedia García 2009:
A. Bazzana – J. Bedia García (eds.), *Saltés. Un asentamiento islámico en las marismas del Odiel (siglos XI–XIII)* (= Hulva Arqueológica 21) (Huelva 2009).

Beaumont et al. 2012:
J. Beaumont – A. Gledhill – J. Lee-Thorp – J. Montgomery, Childhood Diet. A closer examination of the evidence from dental tissues using stable isotope analysis of incremental human dentine, *Archaeometry* 55(2), 277–295.

Behre 1981:
K. E. Behre, The Interpretation of Anthropogenic Indicators in Pollen Diagrams, *Pollen et Spores* 23(2), 1981, 225–245.

Benabat Hierro – Pérez Macías 1999:
Y. Benabat Hierro – J. A. Pérez Macías, La Ollita, una noria islámica en Niebla, *Huelva en su Historia* 7, 1999, 233–242.

Benito et al. 2008:
G. Benito – V. R. Thorndycraft – M. Rico – Y. Sánchez-Moya – A. Sopeña, Palaeoflood and Floodplain Records from Spain. Evidence for long-term climate variability and environmental changes, *Geomorphology* 101, 2008, 68–77.

Benito et al. 2015:
G. Benito – M. G. Macklin – C. Zielhofer – A. F. Jones – M. J. Machado, Holocene Flooding and Climate Change in the Mediterranean, *Catena* 130, 2015, 13–33.

Benito Iborra 1986:
M. Benito Iborra, Aproximación a la creación de una metodología para el estudio de la fauna medieval. El Castillo de la Mola (Novelda, Alicante), in: *Actas del I Congreso de Arqueología Medieval,* Huesca 1985 (Zaragoza 1986) vol. 1, 409–423.

Bertolino et al. 2010:
S. Bertolino – U. Zimmermann – V. Galván – A. Laguens, Composición mineralógica y química y posible proveniencia de cerámica pre y post-hispánica del valle del Rio Copacabana, NO de Córdoba, in: S. Bertolino – R. Cattáneo –A. D. Izeta (eds.), *La arqueometría en Argentina y Latinoamérica* (Cordoba 2010) 35–42.

Bertrand 2000:
M. Bertrand, Cuevas d'al-Andalus et cuevas chrétiennes, in: E. Hubert – A. Bazzana (eds.), *Castrum 6. Maisons et espaces domestiques dans le monde méditerranéen au Moyen âge*, Collection Casa de Velázquez 72 (= Collection de l'École Française de Rome 105, 6) (Rome – Madrid 2002) 27–52.

Beug 2004:
H. J. Beug, *Leitfaden der Pollenbestimmung für Mitteleuropa und angrenzende Gebiete* (Stuttgart 2004).

Bintliff 1975:
J. L. Bintliff, Mediterranean Alluviation. New evidences from archaeology, *Proceedings Prehistoric Society* 41, 1975, 78–84.

Boessneck 1980:
J. Boessneck, Diferencias osteológicas entre las ovejas (Ovis Aries Linne) y cabras (Capra Hircus Linne), in: D. Brothwell – E. Higgs (eds.), *Ciencia en Arqueología* (Madrid 1980) 338–366.

Bol – Pflieger 2002:
R. Bol – C. Pflieger, Stable Isotope (13C, 15N and 34S) Analysis of the Hair of Modern Humans and Their Domestic Animals, *Rapid Commun Mass Spectrom* 16, 2195–2200.

Bond et al. 1997:
G. Bond – W. Showers – M. Cheseby – R. Lotti – P. Almasi – P. Demenocal – P. Priore – H. Cullen – I. Hajdas – G. Bonani, A Pervasive Millennial-Scale Cycle in North Atlantic Holocene and Glacial Climates, *Science* 278 (5341), 1997, 1257–1266.

Bond et al. 1999:
G. Bond – W. Showers – M. Elliot – M. Evans – R. Lotti – I. Hadjas – G. Bonani – S. Johnson, The North Atlantic's 1–2 kyr Climate Rhythm. Relation to Heinrich Events, Dansgaard/Oeschger cycle and the Little Ice Age, in: P. Clark – R. Webb – L. Keigwin (eds.), *Mechanisms of Global Climate Change at Millennial Time Scales* (= Geophysical Monograph Ser. 112) (Washington 1999) 35–58.

Borja 1992:
F. Borja, *Pleistoceno reciente, Holoceno y períodos históricos del SW de Andalucía. Paleogeografía de medios litorales y fluvio-litorales de los últimos 30.000 años* (PhD University of Seville 1992).

Borja 1993:
F. Borja, Formaciones superficiales antrópicas. Aportación al estudio del proceso holoceno de antropización de los sistemas naturales, *Arqueología Espacial* 16/17, 1993, 29–39.

Borja 2013:
F. Borja, La desembocadura del Guadalquivir durante la segunda mitad del Holoceno. Síntesis paleogeográfica, in: L. García – V. Hurtado – J. M. Vargas – T. Ruiz – R. Cruz-Auñón (eds.), *El asentamiento prehistórico de Valencina la Concepción* (Seville 2013) 3–110.

Borja 2014:
F. Borja, Sevilla (1500 a.C.–1500 d.C.). Estudio de geoarqueología urbana. In: J. Beltrán – O. Rodríguez (eds.), *Sevilla Arqueológica. La ciudad en época protohistórica, antigua y andalusí* (Seville 2014) 274–303.

Borja 2017:
F. Borja, La reconstrucción paleogeográfica y la evolución de los paisajes durante los tiempos históricos. La desembocadura del Guadalquivir en época romana, in: J. Váquez – P. Garrido (eds.), *El Tesoro del Zaudín. Contextualización arqueológica del conjunto numismático tardoantiguo de Tomares (Sevilla)* (Seville 2017) 47–84.

Borja – Borja 2016:
F. Borja – C. Borja, Archivo aluvial del bajo Guadalquivir durante el Holoceno medio-reciente. Paleoclima, impacto humano y nivel del mar, in: A. Fernández – L. García-Sanjuán – M. Díaz-Zorita (eds.), *Montelirio. Un gran monumento megalítico de la Edad del Cobre* (Seville 2016) 41–66.

Borja et. al. 2008:
F. Borja – M. A. Hunt – J. L. Ubera – C. Zazo – C. J. Dabrio – J. L. Goy – M. A. Barral –Y. Llergo – C. Borja, Estudio geoarqueológico de la Vega de Sevilla. Reconstrucción paleogeográfica del sector interno del estuario del Guadalquivir durante el Holoceno, in: S. Rovira – M. García-Heras – M. Gener – I. Montero (eds.), *Actas VII Congreso Ibérico de Arqueometría* (Madrid 2008) 87–96.

Borja et al. 2018a:
F. Borja – C. Borja – A. Jiménez, Paisaje y paleogeografía en el bajo Guadalquivir (Itálica, Hispalis, Caura), in: J. L. Escacena – Á. Gómez – L.G. Pérez (eds.), *Caura. Arqueología en el bajo Guadalquivir* (= Spal Monografías Arqueología 26) (Sevilla 2018) 17–46.

Borja et al. 2018b:
F. Borja – C. Borja – A. Jiménez – E. García, Evolución de la llanura aluvial del bajo Guadalquivir durante el Holoceno medio-superior. Geoarqueología y reconstrucción paleogeográfica de la vega de Itálica, *Boletín Geológico y Minero* 129(1), 2018, 371–420.

Borrero Fernández 1983:
M. Borrero Fernández, *El mundo rural sevillano en el siglo XV. Aljarafe y Ribera* (Seville 1983).

Bosch Gimpera et al. 1935:
P. Bosch Gimpera – P. Aguado Bleye – R. Menéndez Pidal, *Historia de España 2. España romana: 218 a. de J.C. – 414 d. J.C.* (Madrid 1935).

Bosch Martínez 2017:
L. Bosch Martínez, Les grutes de Cabrils. Una nova aportació a l'arqueologia subterrània. I part, *Sessió d'Estudis Mataronins* 34, 2017, 109–132.
[https://www.raco.cat/index.php/SessioEstudisMataronins/article/view/347431] (04.06.2021).

Bosch Vilà 1984:
J. Bosch Vilà, *La Sevilla islámica 712–1248* (Seville 1984).

Bossong 2016:
G. Bossong, *Das maurische Spanien* (Munich 2016).

Bottema – Woldring 1990:
S. Bottema – H. Woldring, Anthropogenic Indicators in the Pollen Record of the Eastern Mediterranean, in: S. Bottema – G. Entjes-Nieborg – W. van Zeis (eds.), *Man's Role in the Shaping of the Eastern Mediterranean Landscape* (Rotterdam 1990) 231–264.

Boyd et al. 1992:
R. Boyd – R. Darlymple – B. A. Zailin, Classification of Clastic Coastal Depositional Environments, *Sedimentary Geology* 80, 1992, 139–150.

Boyer et al. 2006:
P. Boyer – N. Y. Roberts – D. Baird, Holocene Environment and Settlement on the Carsamba Alluvial Fan, South-Central Turkey. Integrating geoarchaeology and archaeological field survey, *Geoarchaeology* 21, 2005, 675–698.

Bridgman 2012:
R. Bridgeman, Contextualising Pottery Production and Distribution in South-Western Al-Andalus during the Almohad Period. Implications for understanding economy, in: S. Gelichi (ed.), *Atti del IX Congreso Internazionale Sulla Ceramica Medievale nel Mediterraneo,* Venice 2009 (Florence 2012) 95–100.

Briggs 1977:
D. Briggs, *Sediments* (London 1977).

Britton et al. 2011:
K. Britton – S. Gauzinski-Windheuser – W. Roebroeks – L. Kindler – M. P. Richards, Stable Isotope Analysis of Well-Preserved 120,000-year-old Herbivore Bone Collagen from the Middle Palaeolithic Site of Neumark-Nord 2. Germany reveals niche separation between bovids and equids, *Palaeogeography, Palaeoclimatology, Palaeoecology* 333/334, 2011, 168–177.

Bronk Ramsey 1995:
C. Bronk Ramsey, Radiocarbon Calibration and Analysis of Stratigraphy, The OxCal program, *Radiocarbon* 37, 1995, 425–430.

Bronk Ramsey 2001:
C. Bronk Ramsey, Development of the Radiocarbon Program OxCal, *Radiocarbon* 43, 2001, 355–363.

Brückner 1986:
H. Brückner, Man's Impact on the Evolution of Physical Environment in the Mediterranean Region in Historical Times, *GeoJournal* 13(1), 1986, 7–17.

Brückner – Hoffman 1992:
H. Brückner – G. Hoffmann, Human-Induced Processes in Mediterranean Countries, *Geoökoplus* 3, 1992, 97–110.

Bryndley – Brown 1980:
C. W. Bryndley – C. Brown, *Crystal Structures of Clay Minerals and Their X-Ray Identification* (London 1980).

Bustamante et al. 2007:
J. Bustamante – F. Corriente – M. Tilmatine, *Abulḫayr Al'išbīlī (s. V/XI). Kitābu ʿumdati ṭṭabīb fī maʿrifati nnabāt likulli labīb* (Madrid 2007) 4 vol.

Butzer 1982:
K. W. Butzer, *Archaeology as Human Ecology. Method and theory for a contextual approach* (Cambridge 1982).

Butzer 1973:
K. W. Butzer, Sediments from the Acheulian site of Amanzi (Uitenhage District, South Africa), *Quaternaria* 17, 1973, 299–319.

Cacho et al. 2001:
I. Cacho – J. O. Grimalt – M. Canals – L. Staffi – N. J. Shackleton – J. Schönfeld – R. Zhan, Variability of the Western Mediterranean Sea Surface Temperatures during the Last 25.000 Years and its Connection with the Northern Hemispheric Climatic Changes, *Paleoceanography* 16, 2001, 40–52.

Calero et al. 2006:
N. Calero – V. Barrón – J. Torrent, Water Dispersible Clay in Calcareous Soils of Southwestern Spain, *Catena* 74, 2006, 22–30.

Calvo Capilla 2004:
S. Calvo Capilla, Las mezquitas de pequeñas ciudades y núcleos rurales de al-Andalus, *'Ilu. Revista de Ciencias de las Religiones. Anejos* 10, 2004, 39–63.

Calvo Capilla 2014:
S. Calvo Capilla, *Las mezquitas de al-Andalus* (Almería 2014).

Canivell et al. 2013:
J. Canivell – R. Rodríguez García – A. M. González Serrano – A. Romero Girón, Vernacular Rammed Earth Building Typologies in the Ancient Reign of Seville, Spain, in: M. Correia – G. Carlos – S. Rocha (eds.), *Vernacular Heritage and Earthen Architecture, International Conference on Vernacular Heritage and Earthen Architecture,* Vilanova de Cerveira 2013 (London 2013) 117–122.

Canti – Huisman 2015:
M. Canti – J. Huisman, Scientific Advances in Geoarchaeology during the Last Twenty Years, *Journal of Archaeological Science* 56, 2015, 96–108.

Carabaza Bravo 1999
J. M. Carabaza Bravo, El paisaje agrícola del Aljarafe sevillano, *Revista del Instituto Egipcio de Estudios Islámicos* 31, 1999, 225–242.

Carande – Carriazo 1968:
R. Carande – J. M. Carriazo, *El tumbo de los Reyes Católicos* (Seville 1968).

Cardoso 1996:
A. Cardoso, A geoarqueologia. Fundamentos e métodos, *Almada* 5, 1996, 70–77.

Carmona 1990:
P. Carmona, *La formació de la plana al-luvial de València. Geomorfologia, hidrologia i geoarqueologia de l'espai litoral del Túria* (Valencia 1990).

Caro 1634:
R. Caro, *Antigüedades y principado de la Ilustrísima ciudad de Sevilla y corografía de su convento jurídico o antigua Chancillería* (Seville 1634).
[http://www.bibliotecavirtualdeandalucia.es/catalogo/es/consulta/registro.cmd?id=1040377] (09.06.2021)

Carrión 2002:
J. S. Carrión, Patterns and Processes of Late Quaternary Environmental Change in a Montane Region of Southwestern Europe, *Quaternary Science Reviews* 21, 2002, 2047–2066.

Casana 2008:
J. Casana, Mediterranean Valleys Revisited. Linking soil erosion land use and climate variability in the Northern Levant, *Geomorphology* 101, 2008, 429–444.

Castellanos et al. 2012:
Ó. Castellanos – C. Ríos – M. A. Ramos – E. Plaza, A Comparative Study of Mineralogical Transformations in Fired Clays from the Laboyos Valley, upper Magdalena Basin (Colombia), *Boletín de Geología* 34(1), 2012, 43–55.

Castrillo Márquez 1969:
R. Castrillo Márquez, Description de al-Andalus según un ms. de la Biblioteca de Palacio, *Al-Andalus* 34, 1969, 83–104.

Castroviejo 1986:
S. Castroviejo, *Flora Iberica. Plantas vasculares de la Península Ibérica e Islas Baleares* (Madrid 1986).

Catarino 2002:
H. Catarino, Châteaux et peuplement rural islamique et de la Reconquête en Algarve oriental. Les données archéologiques, in: M. Bourin – S. Boisellier (eds.), *L'espace rural au Moyen Age. Portugal, Espagne, France (XIIe–XIVe siècle)* (Rennes 2002) 57–88.

Cavilla Sánchez-Molero 2005:
F. Cavilla Sánchez-Molero, *La cerámica almohade de la isla de Cádiz (Ŷazīrat Qādis)* (Cádiz 2005).

Celan 1983:
F. Celan, Cuatrovitas, primitivo arraigo romero de Sevilla. Transcript of an interview with the historian Hilario Arenas, *ABC de Sevilla* (24.05.1983).

Centro de Edafología y Biología 1962:
Centro de Edafología y Biología aplicada del Cuarto (ed.), *Estudio agrobiológico de la provincia de Sevilla* (Seville 1962).

Chaix – Méniel 2001:
L. Chaix – P. Méniel, *Archéozoologie. Les animaux et l´archéologie* (Paris 2001).

Chishil et al. 1982:
B. S. Chishil – D. E. Nelson – H. P. Schwartz, Stable-Carbon Isotope Ratios as a Measure of Marine Versus Terrestrial Protein in Ancient Diets, *Science* 216, 1982, 1131–1132.

Civis et al. 1987:
J. Civis – F. J. Sierro – J. A. González Delgado – J. A. Flores – I. Andrés – J. Porta – M. Valle, El Neógeno marino de la provincia de Huelva. Antecedentes y definición de las unidades litoestratigráficas, in: J. Civis (ed.), *Paleontología del Neógeno de Huelva* (Salamanca 1987) 9–21.

Clason 1972:
A. T. Clason, Some Remarks on the Use and Presentation of Archaeological Data, *Hellinium* 12, 1972, 139–153.

Cohen – Srjeantson 1986:
A. Cohen – D. Serjeantson, *A Manual for the Identification of Bird Bones from Archaeological Sites* (London 1986).

Colón 1907:
H. Colón, *Itinerario, Boletín de la Real Sociedad Geográfica* (Madrid 1907).

Comelles 1984:
J.-M. Comelles, Los caminos del Rocío, in: S. Rodríguez Becerra (ed.), *Antropología cultural de Andalucía* (Seville 1984) 425–445.

Conlin Hayes 2006:
E. Conlin Hayes, La necrópolis islámica de Aljamar (Tomares, Sevilla), *Anuario Arqueológico de Andalcía* 2003(2), 422–433.

Conyers 2004:
L. B. Conyers, *Ground-Penetrating Radar for Archaeology* (Walnut Creek, Calif. 2004).

Córdoba Alonso 2004:
I. Córdoba Alonso, Sondeos arqueológicos den la calle Liebre e/a Calle Ánimas de San Lucas, Jerez de la Frontera (Cádiz) 2004, *Anuario Arqueológico de Andalucía* 2004(1), 379–381.

Corzo Pérez et al. 2006:
S. Corzo Pérez – P. Moreno de Soto – Z. Kalas Porras, Intervención arqueológica preventiva en el entorno de la ermita de Cuatrovitas, Bollullos de la Mitación, *Anuario Arqueológico de Andalucía* 2006, 4412–4420.

Corzo Pérez 2014:
S. Corzo Pérez, El despoblado andalusí de Cuatrovitas (Bollullos de la Mitación, Sevilla), in: I. Camarero Castellano – Mª M. Delgado Pérez, *Al-Andalus hoy. Siete estudios y un contexto* (Sevilla 2014) 39–60.

Courty et al. 1989:
M. A. Courty – P. Goldberg – R. MacPhail, *Soils and Micromorphology in Archaeology* (Cambridge 1989).

Cremaschi 2000:
M. Cremaschi (ed.), *Manuale di geoarcheologia* (Rome – Bari 2000).

Cressier 1983:
P. Cressier, L'alpujarra médiévale. Une approche archéologique, *Mélanges de la Casa de Velazquez* 19, 1983, 89–124.

Creswell 1979:
K. A. C. Creswell, *Early Muslim Architecture* (New York 1979) 2 Vol.

Creswell – Allan 1989:
K. A. C. Creswell – James W. Allan, *A Short Account of Early Muslim Architecture* (Aldershot 1989).

Cultrone et al. 2001:
G. Cultrone – C. Rodríguez-Navarro – E. Sebastián – O. Cazalla – M. J. de la Torre, Carbonate and Silicate Phase Reactions during Ceramic Firing, *European Journal of Mineralogy* 13(3), 2001, 621–634.

Cytryn-Silverman 2011:
K. Cytryn-Silverman, The Umayyad Mosque of Tiberias, *Muqarnas* 26, 2011, 37–61.

Currás et al. 2012:
A. Currás – L. Zamora – J. M. Reed – E. García-Soto – S. Ferrero – X. Armengol – F. Mezquita-Joanes – M. A. Marqués – S. Riera – R. Julià, Climate Change and Human Impact in Central Spain during Roman Times. High-resolution multi-proxy analysis of a tufa lake record (Somolinos, 1280 m asl), *Catena* 89(1), 2012, 31–53.

Dabrio et al. 1999:
C. Dabrio – C. Zazo – J. Lario – J. L. Goy – F. J. Sierro – F. Borja – J. A. González – J. A. Flores, Sequence Stratigraphy of Holocene Incised-Valley Fills and Coastal Evolution in the Gulf of Cadiz (Southern Spain), *Geologie en Mijnbouw* 77(3/4), 1999, 263–281.

Dabrio et al. 2000:
C. Dabrio – C. Zazo – J. L. Goy – F. J. Sierro – F. Borja – J. Lario – J. A. González – J. A. Flores, Depositional History of Estuarine Infill during the Last Postglacial Transgression (Gulf of Cadiz, Southern Spain), *Marine Geology* 162(2–4), 2000, 381–404.

Dahlin – Zhou 2006:
T. Dahlin – B. Zhou, Multiple-Gradient Array Measurements for Multichannel 2D Resistivity Imaging, *Near Surface Geophysics* 4(2), 2006, 113–123.

Daniels 2004:
D. J. Daniels (ed.), *Ground-Penetrating Radar* ²(London 2004).

Daoudi et al. 2018:
F. Daoudi et al., Characterization of Rammed-Earth Materials from the XVIth century Badii Palace in Marrakech (Morocco) to Ensure Authentic and Reliable Restoration, *Geoarchaeology* 33, 2018, 529–541.

Davis 1989:
S. J. M. Davis, *La arqueología de los animales* (Barcelona 1989).

Dawson 1971:
E. Dawson, Los restos de aves en arqueología, in: D. Brothwell – E. Higgs (eds.), *Ciencia en Arqueología* (Madrid 1980) 367–383.

De Andrés Gómez de Barreda et al. 1987:
A. De Andrés Gómez de Barreda – P. Menéndez Aparicio – J. L. Balcázar del Piñal – J. M. Palacios Latasa, Estudio de cerámicas arqueológicas. Análisis de fragmentos cerámicos del asentamiento de La Isabela (Santo Domingo, República Dominicana), *Henares* 1, 1987, 53–58.

De Niro 1985:
M. J. De Niro, Postmortem Preservation and Alteration of in vivo Bone Collagen Isotope Ratios in Relation to Palaeodietary Reconstruction, *Nature* 317, 1985, 806–809.

De Niro – Epstein 1978:
M. J. De Niro – S. Epstein, Influence of Diet on the Distribution of Carbon Isotopes in Animals, *Geochimica et Cosmochimica Acta* 42, 1978, 495–506.

De Niro – Epstein 1981:
M. J. De Niro – S. Epstein, Hydrogen Isotope Ratios of Mouse Tissues are Influenced by a Variety of Factors Other than Diet, *Science* 214, 1981, 1374–1375.

De Soto García et al. 2012:
Mª R. De Soto García – R. García Giménez – I. De Soto García, Estudio mineralógico de cerámica común de yacimientos romanos en el Valle del Río Almar (Ávila), *Revista de la Sociedad Española de Mineralogía Macla* 16, 2012, 32–33.

Dearing 1999:
J. A. Dearing, *Environmental Magnetic Susceptibility. Using the Bartington MS2 system* (Keniloworth 1999).

Deil 1997:
U. Deil, *Zur geobotanischen Kennzeichnung von Kulturlandschaften. Vergleichende Untersuchungen in Südspanien und Marokko* (Stuttgart 1997).

Delile et al. 2016
H. Delile – L. Schmitt – N. Jacob-Rousseau –L. Grosprêtre – G. Privolt – F. Preusser, Headwater Valley Response to Climate and Land Use Changes during the Little Ice Age in the Massif Central (Yzeron basin, France), *Geomorphology* 257, 2016, 179–197.

Desprat et al. 2003:
S. Desprat – M. F. Sanchez Goni – M. F. Loutres, Revealing Climatic Variability of the Last Three Millennia in Northwestern Iberia Using Pollen Influx Data, *Earth and Planetary Science Letters* 213, 2003, 63–78.

Dewolf – Bourrié 2008:
Y. Dewolf – G. Bourrié (eds.), *Les formations superficielles, genèse, typologie, classification, paysages et environnements, ressources et risqué* (Paris 2008).

Díaz et al. 2011
H. F. Díaz – R. Trigo – M. K. Hughes – M. E. Mann – E. Xoplaki – D. Barriopedro, Spatial and Temporal Characteristics of Climate in Medieval Times Revisited, *Bulletin of the American Meteorological Society* 92(Nov.), 2011, 1487–1500.

Didierjean 178:
François Didierjean, Le paysage rural antique au Nord-Ouest de Séville : Campo de Aljarafe, *Mélanges de la Casa de Velázquez* 14, 1978, 5–33.

Domínguez Ortiz 1977:
A. Domínguez Ortiz, La población del reino de Sevilla en 1534, *Cuadernos de Historia (anexos de la revista Hispania)* 7, 1977, 337–348 with appendix 2.

Driesch 1976:
A. Driesch, A Guide to the Measurement of Animal Bones from Archaeological Sites, *Peabody Museum Bulletin* 1 (Harvard 1976).

Eerkens et al. 2011:
J. M. Eerkens – A. G. Berget – E. J. Bartelink, Estimating Weaning and Early Childhood Diet from Serial Micro-Samples of Dentin Collagen, *Journal of Archaeological Science* 38, 2011, 3101–3111.

Eerkens et al. 2013:
J. M. Eerkens – M. Mackie – E. J. Bartelink, Brackish Water Foraging. Isotopic landscapes and dietary reconstruction in Suisun Marsh (Central California), *Journal of Archaeological Science* 40, 2013, 3270–3281.

Eguaras Ibáñez 1988:
J. Eguaras Ibáñez, *Ibn Luyūn. Tratado de agricultura* (Granada 1988).

El Faiz 1991:
M. El Faiz, The Aljarafe of Seville. An experimental garden für the agronomists of muslim Spain, in: L. Tjon Sie Fat – E. de Jong (eds.), *The authentic garden. A Symposium on gardens,* Leiden 1990 (Leiden 1991) 139–152.

Ellenberg 1996:
H. Ellenberg, *Vegetation Mitteleuropas mit den Alpen in ökologischer, dynamischer und historischer Sicht* (Stuttgart 1996).

Epalza 1991:
M. de Epalza, Espacios y sus funciones en la ciudad árabe, in: *Simposio internacional sobre la ciudad islámica,* Zaragoza 1988 (Zaragoza 1991) 9–30 (translation A. Heidenreich).

Escribano Ucelay 1964/1965:
V. Escribano Ucelay, La mezquita de la calle Rey Heredia, *Al-Mulk* 4, 1964/65, 83–101.

Ewert 1973:
C. Ewert, La mezquita de Mértola (Portugal), *Cuadernos de la Alhambra* 9, 1973, 3–35.

Ewert – Wisshak 1981:
Ch. Ewert – J.-P. Wisshak, *Forschungen zur almohadischen Moschee. 1. Vorstufen* (= Madrider Beiträge 9) (Mainz 1981).

Ewert – Wisshak 1984:
C. Ewert – J.-P. Wisshak, *Forschungen zur almohadischen Moschee. 2, Die Moschee von Tinmal* (= Madrider Beiträge 10) (Mainz 1984)

Faegri – Iversen 1989:
K. J. Faegri – J. Iversen, *Textbook of Pollen Analysis* (Chichester 1989).

Fahy et al. 2013:
G. Fahy – M. Richards – J. Riedel – J. J. Hublin – C. Boesch, Stable Isotope Evidence of Meat Eating and Hunting Specialization in Adult Male Chimpanzees, *Proceedings of the National Academy of Sciences of the United States of America* 110(15), 2013, 5829–5833.

Fassbinder et al. 1990:
J. W. E. Fassbinder – H. Stanjek – H. Vali, Occurrence of Magnetic Bacteria in Soil, *Nature* 343(6254), 1990, 161–163.

Fassbinder – Becker 2013:
J. W. E. Fassbinder – H. Becker, Magnetometerprospektion des großen Kurgans 1 von Bajkara, Kasachstan, *Archäologie in Eurasien* 16, 2013, 131–136.

Fechter – Falkner 1983:
R. Fechter – G. Falkner, *Moluscos. Moluscos europeos marinos y de interior* (Barcelona 1983).

Feijoó 2018:
M. Feijoó, Christian and Muslim Patterns of Secular and Religious Cave Use in the Iberian Peninsula in Late Antiquity and Early Middle Ages (5th/6th–11th/12th c. AD), in: K. A. Bergsvik – M. Dowd (eds.), *Caves and ritual in medieval Europe AD 500–1500* (Oxford 2018) 152–164.

Fierro et al. 2011:
E. Fierro – M. Munuera – S. Fernández-Jiménez – A. Arribas Herrera – J. S. Carrión, Cambios en el paisaje vegetal de la región andaluza durante el Pleistoceno superior y el Holoceno, *Menga. Revista de Prehistoria de Andalucía* 2, 2011, 15–33.

Figueredo López 2003:
F. M. Figueredo López, *Historia de Bollullos de la Mitación* (Seville 2003).

Fili et al. 2014:
A. Fili – R. Messier – C. Capel – V. Héritier-Salama, Les palais mérinides dévoilés. Le cas de Aghmat, in: Y. Lintz et al. (cord.), *Maroc Médiéval. Un empire de l'Afrique à l'Espagne,* exhibition Paris 2014 (Paris 2014) 446–450.

Fletcher et al. 2007:
W. J. Fletcher – T. Boski – D. Moura, Palynological Evidence for Environmental and Climatic Change in the Lower Guadiana Valley (Portugal) during the Last 13.000 Years, *The Holocene* 17(4), 2007, 481–494.

Fletcher – Zielhofer 2013:
W. J. Fletcher – C. Zielhofer, Fragility of Western Mediterranean Landscapes during Holocene Rapid Climate Changes, *Catena* 103, 2013, 16–29.

Florido Trujillo 2013:
G. Florido Trujillo, El patrimonio territorial en el Plan de Ordenación del Territorio de Andalucía. Indefiniciones y dificultades para un conocimiento preciso, *Boletín de la Asociación de Geógrafos Españoles* 63, 2013, 173–201.

Foundation Aghmat 2013:
Foundation Aghmat (ed.), *Archaeology, Conservation, Development. Progress and prospects of the Moroccan-American project* (37 pages manuscript) (2013).

Franco Múgica et al. 2001:
F. Franco Múciga – M. García Antón – J. Maldonaldo Ruiz – C. M. Juaristi – H. S. Ollero, The Holocene History of Pinus Forests in the Spanish Northern Meseta, *The Holocene* 11(3), 2001, 343–358.

Freitas et al. 2003:
M. C. Freitas – C. Andrade – F. Rocha – C. Tassinari – J. M. Munhá – A. Cruces – J. Vidinha – C. M. da Silva, Lateglacial and Holocene Environmental Changes in Portuguese Coastal Lagoons 1. The sedimentological and geochemical records of the Santo André coastal area, *The Holocene* 13(3), 2003, 433–446.

French 2003:
C. A. French, *Geoarchaeology in Action. Studies in soil micromorphology and landscape evolution* (London – New York 2003).

French 2017:
C. A. French, Colluvial Settings, in: A. S. Gilbert (ed.), *Encyclopedia of geoarchaeology* (Dordrecht 2017) [doi.org/10.1007/978-1-4020-4409-0] (23.03.2020).

Frey 2016:
A. V. Frey, ¿Fue la crisis política del occidente musulmán del siglo XIII debida a un cambio climático? Una aproximación histórica al fin del Periodo Cálido Medieval?, *En la España Medieval* 39, 2016, 127–158.

Frey 2017:
A. V. Frey, ¿Qué puede aportar el clima a la Historia? El ejemplo del Periodo Cálido Medieval en el Magreb Almorávide y Almohade, *El Futuro del Pasado* 13, 2017, 221–266.

Füssel 2008:
St. Füssel, *Städte der Welt*. Braun/Hogenberg (Cologne 2008).

Fuller et al. 2006:
B. T. Fuller – J. L. Fuller – D. A. Harris – R. E. M. Hedges, Detection of Breastfeeding and Weaning in Modern Human Infants with Carbon and Nitrogen Stable Isotope Ratios, *American Journal of Physical Anthropology* 129, 2006, 279–293

Galán et al. 1898:
E. Galán – I. González – E. Mayoral – A. Miras – M. A. Vázquez, Caracterización y condiciones de sedimentación de la facies diatomítica de Sanlúcar de Barrameda (Cuenca del Guadalquivir, SW de España), *Boletín de la Real Sociedad Española de Historia Natural (Sección Geología)* 84(3/4), 1989, 101–113.

Galán – Martin Vivaldi 1973:
E. Galán – J. L. Martin Vivaldi, Caolines españoles. Geología, mineralogía y genesis vol 1, *Boletín de la Sociedad Española de Cerámica y Vidrio* 12, 1973, 79–98.

Gálvez Vázquez 1983:
Mª E. Gálvez Vázquez, Chorographia hispalense, *Historia. Instituciones. Documentos* 9, 1983, 113–134.

García de Diego 1959:
V. García de Diego, Estudio histórico-crítico de la toponimia mayor y menor del antiguo Reino de Sevilla, *Archivo Hispalense* 30/31, 1959, 109–135. 227–252 (30) and 51–76. 161–191 (31).

Gayangos 1840–1843
P. Gayangos, *The History of the Mohammedan Dynasties in Spain* (London 1840–43) 2 vol.

Geheime Gänge in die Unterwelt 2013:
Geheime Gänge in die Unterwelt, *Bayerische Archäologie* 2013(1), 16–41.

Gilotte 2001:
S. Gilotte, La Villeta de Azuquén. Une fortification du Xᵉ–XIᵉ siècle dans la région de Trujillo (province Cáceres), in: I. C. Ferreiras Fernandes (coord.), *Mil anos de fortificações na Península Ibérica e no Magreb (500–1500), Actas do simpósio internacional sobre castelos,* Lisbon 2000 (Lisbon 2001) 825–832.

Gilotte 2010:
S. Gilotte, *Aux marges d'al-Andalus. Peuplement et habitat en Estrémadure centre-orientale (VIII^e–XIII^e siècle)* (Helsinki 2010).

Gilotte 2014a:
S. Gilotte, Albalat (Romangordo, Prov. Cáceres, Estremadure). La vie quotidienne d'un établissement frontalier d'al-Andalus (X^e–XII^e siècle), *Fondation Max van Berchem Bulletin* Décembre 28, 2014, 1–3.

Gilotte 2014b:
S. Gilotte, La notion de frontière à l'époque almoravide, le cas d'Albalat, in: Y. Lintz – C. Déléry – B. Tuil-Leonetti (eds.), *Le Maroc médiéval. Un empire de l'Afrique à l'Espagne,* exhibition Paris 2014 (Paris 2014) 182–184.

Gilotte et al. 2013:
S. Gilotte – F. Landou – F. Callède, Albalat, une ville de gué fluvial (Romangordo, Cáceres). Étude préliminaire de son enceinte, in: I. F. Fernandes (ed.), *Fortificações e território na Península Ibérica e no Magreb (séculos VI a XVI)* (Mértola 2013) 355–367.

Giovannetti et al. 2010:
M. Giovannetti – M^a. C. Páez – G. Cochero – P. Espósito – G. Corrado – J. Spina – F. Franchetti, Sectorización del espacio, cerámica y cronología relativa. Análisis comparativos en un asentamiento agrícola multicomponente (Los Colorados, Catamarca), in: S. Bertolino – R. Cattáneo – A. D. Izeta (eds.), *La arqueometría en Argentina y Latinoamérica* (Cordoba 2010) 55–60.

Gladfelter 1981:
B. G. Gladfelter, Developments and Directions in Geoarchaeology, in: M. B. Schiffer (ed.), *Advances in archeological method and theory* (New York 1981) 343–364.

Goldberg – Macphail 2006:
P. Goldberg – R. J. Macphail, *Practical and Theoretical Geoarchaeology* (Oxford 2006).

Gómez Martínez 2006:
S. Gómez Martínez, *Cerámica islámica de Mértola. Producción y comercio* (Madrid 2006).

Gómez Martínez 2014:
S. Gómez Martínez, *Cerámica islámica de Mértola*. Museu de Mértola (Mértola 2014).

Gómez Martínez et al. 2009:
S. Gómez Martínez – V. Lopes – C. Torres – M. de Fátima Palma – S. Macias, Mértola Islâmica. A madina e o arrabalde, *Xelb* 9, 2009, 405–427.

Gómez-Moreno 1927:
M. Gómez-Moreno, La torre de San Nicolás en Madrid, *Archivo Español del Arte* 3 (Madrid 1927) 129–132.

Gómez de Avellaneda Sabio 2002:
C. Gómez de Avellaneda Sabio, Patio de los naranjos. El sahn como imagen del paraíso, in: Fundación El Legado Andalusí (ed.), *Actas del II Congreso Internacional 'La Ciudad en Al-Andalus y el Magreb',* Algeciras 1999 (Granada 2002) 673–710.

Gómez Martínez 2011:
S. Gómez Martínez, Intervenção arqueológica na mesquite-igreja matriz de Mértola, in: S. Macias et al., *Mesquita igreja de Mértola* (Mértola 2011) 89–104.

Gonçalves 2009:
M. J. Gonçalves, Silves islâmica. Deambulando pelo Arrabalde Oriental, in: J. L. Matos (ed.), *O Gharb no Al-Andalus. Sínteses e perspectivas de estudo. Homenagem a José Luís de Matos, Actas do 6. Encontro de Arqueologia do Algarve,* Silves 23.–25. october 2008 (Silves 2009) 489–524.

Gonçalves n. d.:
M. J. Gonçalves, *Islamic Silves. Five centuries of occupation in eastern suburb,* exhibition guide (Silves n. d.).

González García et al. 1990:
F. González García – V. Romero Acosta – G. García Ramos – M. González Rodríguez, Firing Transformations of Mixtures of Clays Containing Illite, Kaolinite and Calcium Carbonate Used by Ornamental Tile Industries, *Applied Clay Science* 5, 1990, 361–365.

González Díez 1986:
I. González Díez, *Estudio geológico del área urbana de Sevilla y alrededores* (PhD thesis university of Cordoba 1986).

González Díez et al. 1985:
I. González Díez – E. Renedo – E. Galán Huertos, Clay Materials for Structural Clay Products from the Bailen Area, in: N. A. Shaikh – N. G. Wik (eds.), *Proceedings of the Nordic symposium 'Clay minerals in the modern society',* Uppsala 1985 (Uppsala 1986) 77–90.

González González 1951:
J. González González , *Repartimiento de Sevilla. Estudio y edición* (Madrid 1951) 2 vol.

González Jiménez 1975:
M. González Jiménez, *La repoblación de la zona de Sevilla durante el siglo XIV* (Seville 1975).

González Jiménez 1980:
M. González Jiménez, *En torno a los orígenes de Andalucía. La repoblación del siglo XIII* (Seville 1980).

González Jiménez 1991:
M. González Jiménez, *Diplomatario andaluz de Alfonso X el Sabio* (Seville 1991).

González et al. 2017:
I. González – P. Campos – A. Mirás – A. Romero, Archaeometric Characterization of Ceramic Materials from Cuatrovitas (Seville, Spain), *16th International Clay Conference,* Granada 2017 (Poster).

Goosse et al. 2006:
H. Goosse – O. Arzel – J. Luterbacher – M. E. Mann – H. Renssen – N. Riedwyln – A. Timmermann – E. Xoplaki – H. Wanner, The Origin of the European 'Medieval Warm Period', *Climate of the Past* 2, 2006, 99–113.

Goosse et al. 2012:
H. Goosse – J. Guiot – M. E. Mann – S. Dubinkina – Y. Sallaz Damaz, The Medieval Climate Anomaly in Europe. Comparison of the summer and annual mean signals in two reconstructions and in simulation with data assimilation, *Global and Planetary Change* 84/85, 2012, 25–47.

Goulven 1927:
J. Goulven, *Le cercle des Doukkala au point de vue économique* (Paris 1917).

Goy et al. 1996:
J. L Goy – C. Zazo – C. J. Dabrio – J. Lario – F. Borja – F. J. Sierro – J. A. Flores, Global and Regional Factors Controlling Changes of Coastlines in Southern Iberia (Spain) during the Holocene, *Quaternary Science Reviews* 15, 1996, 773–780.

Graciani – Tabales 2008:
A. Graciani – M. Á. Tabales, El tapial en el área sevillana. Avance cronotipológico structural, *Arqueología de la Arquitectura* 5, 2008, 135–158.
[DOI:10.13140/RG.2.2.33066.31680] (04.06.2021)

Graf 2008:
K. Graf, *Die islamische Keramik der Wüstung von Cuncos (Extremadura, Spanien)* (Master's Thesis university of Bamberg 2008).

Graf 2010:
K. Graf, Die islamische Keramik der Wüstung von Cuncos (Extremadura, Spanien), *Beiträge zur islamischen Kunst und Archäologie* 2, 2010, 59–80.

Grove – Rackham 2003:
A. T. Groove – O. Rackham, *The Nature of Mediterranean Europe. An ecological history* (London 2003).

Gründl et al. 2008:
N. Gründl – A. Hanusch – A. Probst – B. Schäfer, Bauforschung an der Kirche San Miguel el Alto in Toledo (Spanien). in: Ernst Herzfeld Gesellschaft (ed.), *Beiträge zur islamischen Kunst und Archäologie* 1 (Wiesbaden 2008) 135–144.

Guerrero Lobillo 1974:
J. Guerrero Lobillo, Al-Qasr-al-Mubarak. El Alcázar de la bendición, *Boletín de la Real Academia de Bellas Artes Santa Isabel de Hungría* 2, 1974, 83–109.

Guichard 2005:
P. Guichard, *Al-Andalus. Acht Jahrhunderte muslimischer Zivilisation in Spanien* (Tübingen 2005).

Guichard – van Staevel 1995:
P. Guichard – J. P. van Staevel, La casa andalusí. Ensayo de lectura antropológica, in: J. Navarro Palazón (ed.), *Casas y palacios de al-Andalus* (Granada 1995) 45–51.

Guitiérrez Lloret 2015:
S. Guitiérrez Lloret, Casa y casas. Reflexiones arqueológicas sobre la lectura social del espacio doméstico medieval, in: Mª. E. Díez Jorge – J. Navarro Palazón (eds.), *La casa medieval en la Península Ibérica* (Madrid 2015) 17–48.

Gurriarán Daza 2000:
P. Gurriarán Daza, Acerca del alminar almohade de Cuatrovitas en Bollullos de la Mitación (Sevilla), *Caetaria, Revista bianual de Arqueología* 3, 2000, 163–186.

Gutiérrez – Peña 1990:
M. Gutiérrez – J. L. Peña, Evolución climática y geomorfológica del Holoceno superior (Cordillera Ibérica, Depresión del Ebro y Prepirineo), in: A. Cearreta – F. M. Ugarte (eds.), *International Conference on the environment and human society in the western Pyrenees and Basque Mountains during the upper Pleistocene and the Holocene,* Vitoria 1990 (Bilbao 1992) 57–66.

Halstead – Frederich 2000:
P. Halstead – C. Frederich, *Landscape and Land Use in Postglacial Greece* (Sheffield 2000).

Hanebuth et al. 2021:
T. J. J. Hanebuth – M. Lee King – F. J. Lobo – I. Mendes, Formation History and Material Budget of Holocene Shelf Mud Depocenters in the Gulf of Cadiz, *Sedimentary Geology* 421, 2021, 105956. [https://doi.org/10.1016/j.sedgeo.2021.105956] (07.10.2021).

Hare 1980:
P. E. Hare, Organic Geochemistry of Bone and its Relation to the Survival of Bone in the Natural Environment, in: A. K. Behrensmeye – A. P. Hill (eds.), *Fossils in the Making. Vertebrate taphonomy and paleoecology* (Chicago 1980) 208–219.

Harris 1991:
E. C. Harris, *Principios de estratigrafía arqueológica* (Barcelona 1991).

Harris 2013:
W. V. Harris, *The Ancient Mediterranean Environment between Science and History* (Leiden 2013).

Haschner 2002:
A. Haschner, Ist das Erdstallrätsel gelöst? *Der Erdstall* 28, 2002, 114–120.

Hedges – Reynard 2007:
R. E. M. Hedges – L. M. Reynard, Nitrogen Isotopes and the Trophic Level of Humans in Archaeology, *Journal of Archaeological Science* 34, 2007, 1240–1251.

Hedges et al. 2007:
R. E. M. Hedges – J. G. Clement – C. D. L. Thomas – T. C. O'Connell, Collagen Turnover in the Adult Femoral Mid-Shaft. Modeled from anthropogenic radiocarbon tracer measurements, *American Journal of Physical Anthropology* 133, 2007, 808–816.

Heidenreich 2013:
A. Heidenreich, Spielfiguren, in: V. Daiber (Hrsg.), *Lebenswelten islamischer Kunst. Eine Blütenlese aus dem Universitätsmuseum für islamische Kunst Bamberg* (Bamberg 2013) 13–28.

Heidenreich – Jiménez 2020:
A. Heidenreich – A. Jiménez, Neue hochmittelalterliche Erdstollen westlich von Sevilla. Südliche Beispiele für das mitteleuropäische Phänomen des Erdstalls, *Madrider Mitteilungen* 61, 2020, 78–110.

Herbers 2006:
K. Herbers, *Geschichte Spaniens im Mittelalter* (Stuttgart 2006).

Hereford 2002:
R. Hereford, Valley-fill Alluviation during the Little Ice Age (ca. A.D. 1400–1880), *Geological Society of America Bulletin* 114(12), 2002, 1150–1563.

Héritier-Salama et al. 2016:
V. Héritier-Salama – Ch. Capel – A. Fili – Ron Messier, De la ville aux champs. La transformation d'Aghmat (Maroc) entre les XIVe et XVIe siècles, in: Ch. Müller – M. Heintz (dirs.), *Transitions historiques* (= Colloques de la Maison de l'Archéologie et de l'Ethnologie, René-Ginouvès 12) (Paris 2016) 196–207.

Hernández Bermejo – García Sánchez 2000:
J. E. Hernández Bermejo – E. García Sánchez, Botánica económica y etnobotánica en al-Andalus (Península Ibérica: s. X–XV). Un patrimonio desconocido de la humanidad, *Arbor* 166, 2000 (June), 311–331.

Hernández Díaz et al. 1939:
Hernández Díaz – A. Sancho Corbacho – F. Collantes de Terán, *Catálogo arqueológico y artístico de la Provincia de Sevilla vol. 1* (Seville 1939).

Hernández Díaz et al. 1955:
J. Hernández Díaz – A. Sancho Corbacho – F. Collantes de Terán, *Catálogo arqueológico y artístico de la Provincia de Sevilla vol. 4* (Seville 1955).

Hernández Jiménez 1961:
F. Hernández Jiménez, El codo en la historiografía árabe de la Mezquita Mayor de Córdoba. Contribución al estudio del monumento, *Al-Mulk* 2, 1961, 5–52.

Hernández Jiménez 1975:
F. Hernández Jiménez, *El alminar de Abd al-Rahman III en la Mezquita Mayor de Córdoba. Génesis y repercusiones* (Granada 1975).

Hernando – Sánchez 1954:
B. Hernando – P. Sánchez, Estudio del pH en suelos de diferentes características, *Anales de Edafologia y Agrobiología* 13, 1954, 7–14.

Herre 1971:
W. Herre, La ciencia e historia de los animales domésticos, in: D. Brothwell – E. Higgs (eds.), *Ciencia en Arqueología* (Madrid 1980) 262–277.

Herrera García 1995:
A. Herrera García, De caminos y de comunicaciones viarias aljafareños (Noticias de los siglos XVI–XVIII), *Hespérides* 3, 1995, 159–184.

Hillson 1992
S. Hillson, *Mammal Bones and Teeth. An introductory guide to methods of identification* (London 1992).

Hinz 1955:
W. Hinz, *Islamische Maße und Gewichte umgerechnet ins metrische System* (Leiden 1955).

Höfer 2014:
D. Höfer, *Die holozäne Vegetationsgeschichte Südportugals (Algarve). Palynologische Untersuchungen an ausgewählten Ästuaren* (PhD Thesis university of Jena 2014).

Hottinger 1996:
A. Hottinger, *Die Mauren. Arabische Kultur in Spanien* (München 1996).

Hughes 2014:
J. D. Hughes, *Environmental Problems of the Greeks and Romans. Ecology in the ancient Mediterranean* [2](Baltimore 2014).

Ikeoka et al. 2010:
R. Ikeoka – C. Appoloni – P. Parreira – F. Lopes – A. Bandeira, Análise de fragmentos cerâmicos do Sambaqui do Bacanga (MA) através da técnica de Fluorescência de Raios X por Dispersão em Energia (ED-XRF), in: S. Bertolino – R. Cattáneo – A. D. Izeta (eds.), *La arqueometría en Argentina y Latinoamérica* (Cordoba 2010) 61–66.

Inskip et al. 2018:
S. Inskip – G. Carroll – A. Waters-Rist – O. López-Costas, Diet and Food Strategies in a Southern al-Andalusian Urban Environment during Caliphal Period (Écija, Sevilla), *Archaeological and Anthropological Sciences* 11, 2019, 3857–3874.
[doi.org/10.1007/s12520-018-0694-7] [06.06.2021]

Iucci et al. 2010:
Mª E. Iucci – C. Volzone – M. Morosi – N. Zagorodny, Aporte del análisis textural por porosimetría de mercurio a la caracterización de la cerámica ordinaria del sitio El Molino (Dpto. de Belén, Catamarca), in: S. Bertolino – R. Cattáneo – A. D. Izeta (eds.), *La arqueometría en Argentina y Latinoamérica* (Cordoba 2010) 67–70.

Jalut et al. 2000:
G. Jalut – A. E. Amat – L. Bonnet – T. Gauguelin – M. Fontugne, Holocene Climatic Changes in the Western Mediterranean, from Southeast France to South-east Spain, *Palaeogeography, Palaeoclimatology, Palaecology* 160, 2000, 255–290.

Jiménez Barrientos 1987:
J. C. Jiménez Barrientos, Materiales medievales procedentes de la Dehesa de Lerena (Huévar, Sevilla), *Estudios de historia y arqueología medievales* 7/8, 1987, 223–238.

Jiménez Hernández 2015:
A. Jiménez Hernández, La metrología histórica como herramienta para la Arqueología de la Arquitectura. La experiencia en los Reales Alcázares de Sevilla, *Arqueología de la Arquitectura* 12, 2015, 2–29.

Jiménez Martín 1988:
A. Jiménez Martín, El castillo de San Marcos, in: M. González – A. Jiménez – J. Montoya – J. L. Tejada (eds.), *Nuestro orígenes históricos como El Puerto de Santa María* (El Puerto de Santa María 1988) 33–62.

Jiménez Martín 1999:
A. Jiménez Martín, Las mezquitas, in: M. Valor Piechotta – A. Ṭāhiri (eds.), *Sevilla Almohade* (Sevilla – Rabat 1999) 88–106.

Jiménez-Moreno et al. 2013:
G. Jiménez Moreno – A. García-Alix – M. D. Hernández-Corbalán – R. S. Anderson – A. Delgado-Huertas, Vegetation, Fire, Climate and Human Disturbance History in the Southwestern Mediterranean Area during the Late Holocene, *Quaternary Research* 79, 2013, 110–122.

Jol 2009:
H. M. Jol, *Ground Penetrating Radar. Theory and Applications* (Elsevier – Amsterdam – Oxford 2009).

Jordá – Borja 2018:
J. Jordá – F. Borja (eds.), Geoarqueología. Entre las ciencias de la tierra y la historia, *Boletín Geológico y Minero* 129 (1/2), 2018.

Junta de Andalucía:
II Plan General de Bienes Culturales de Andalucía. Secretaría General de Políticas Culturales (2000).
Junta de Andalucía: Plan de Ordenación del Territorio de Andalucía (2006).
Plan de Ordenación del Territorio de la Aglomeración Urbana de Sevilla (2009).
III Plan General de Bienes Culturales. Secretaría General de Políticas Culturales (2012).

Karner 1903:
L. Karner, *Künstliche Höhlen aus alter Zeit* (Wien 1903).

Khamnueva – Wendt et al. 2019:
S. Khamnueva-Wendt – S. V. Mitusov – J. Wendt – H. S. Bork, Classification of Buried Soils, Cultural, and Colluvial Deposits in the Viking Town Hedeby, *Geoarchaeology* 35, 2019, 1–25. [https://doi.org/10.1002/gea.21777] (23.03.2020).

King 2018:
D. King, The Enigmatic Orientation of the Great Mosque of Córdoba, *Suhayl 16/17*, 2018/19, 33–111. [https://www.raco.cat/index.php/Suhayl/article/view/355091] (04.06.2021).

Köster 1966:
E. Köster, *Análisis mecánico de rocas y suelos. Manual de granulometría y morfometría* (Madrid 1966).

Kühtreiber – Weichenberger 2013:
Th. Kühtreiber – J. Weichenberger, Unterirdische Gänge auf Burgen. Eine Spurensuche, in: C. Theune (ed.), *Stadt – Land – Burg. Festschrift für Sabine Felgenhauer-Schmiedt zum 70. Geburtstag* (Rahden 2013) 237–248.

Lafuente Ibáñez 1994:
P. Lafuente Ibáñez, Cerámica islámica en el área suroccidental de Al-Andalus. Estado de la cuestión, in: J. M. Campos Carrasco et al. (coord.), *Arqueología en el entorno del Bajo Guadiana, Actas del encuentro internacional de arqueología del suroeste,* Huelva 1993 (Huelva 1994) 565–583.

Lang 1994:
G. Lang, *Quartäre Vegetationsgeschichte Europas. Methoden und Ergebnisse* (Jena 1994).

Lario et al. 2002:
J. Lario – C. Zazo – J. L Goy – C. J. Dabrio – F. Borja – P. G Silva – F. Sierro – A. González – V. Soler – E. Yll, Changes in Sedimentation Trends in SW Iberia Holocene Estuaries (Spain), *Quaternary International* 93/94, 2002, 171–176.

Lauwerier 1988:
R. Lauwerier, *Animals in Roman Times in the Dutch Eastern River Area* (= Nederlandse Oudheden 12) (Groningen 1988).

Lavee et al. 1998:
H. Lavee – A. C. Imenson – P. Sarah, The Impact of Climate Change on Geomorphology and Desertification along a Mediterranean-arid Transect, *Land Degradation and Development* 9, 1998, 407–422.

Le Borgne 1955:
E. Le Borgne, Susceptibilité magnetique anormale du sol superficial, *Annales de Géophysique* 11, 1955, 399–419.

Lecome et al. 2000:
I. Lecome – H. Gjøystdal – A. Dahle – O. Ch. Pedersen, Improving Modeling and Inversion in Refraction Seismics with a First Order Eifonal Solver, *Geophysical Prospecting* 48, 2000, 437–454.

Lee-Thorp 2008:
J. A. Lee-Thorp, On Isotopes and Old Bones, *Archaeometry* 50, 2008, 925–950.

Leveau 1995:
Ph. Leveau, Géoarchéologie, géohistoire et géographie historique. A propos des approches naturaliste et historique du site de Marseille Antique, *Méditerranée* 3/4, 25–32.

Lévi-Provençal – García Gómez 1998:
E. Lévi-Provençal – E. García Gómez, *Sevilla a comienzos del siglo XII. El tratado de Ibn-ʿAbdūn* (Seville 1998).

Lévi-Provençal 1953:
E. Lévi-Provençal, La ›Description de l'Espagne‹ d'Aḥmad al-Rāzī. Essai de reconsitution de l'original arabe et traduction française, *Al-Andalus* 18, 1953, 51–108.

Liedl – Feldbauer 2017:
G. Liedl – P. Feldbauer, *Al Filaha. Islamische Landwirtschaft* (Vienna 2017).

Linares González et al. 1983:
J. Linares González – J. Huertas – J. Capel Martínez, La arcilla como material cerámico. Características y comportamiento, *Cuadernos de prehistoria y arqueología de la Universidad de Granada* 8, 1983, 479–490.

Linford 2004:
N. T. Linford, Magnetic Ghosts. Mineral Magnetic Measurements on Roman and Anglo-Saxon Graves, *Archaeological Prospection* 11, 2004, 167–180.

Llergo et al. 2013:
Y. Llergo – M. A. Royo – C. Granados – A. Fernández – F. Borja – J. L Ubera, Cambios en el entorno vegetal de Valencina de la Concepción (Sevilla) en la Prehistoria, in: L. García – V. Hurtado – J. M. Vargas – T. Ruiz – R. Cruz-Auñón (eds.), *El asentamiento prehistórico de Valencina de la Concepción* (Seville 2013) 409–420.

Loke 2015:
M. H. Loke, *2-D and 3-D ERT Surveys and Data Interpretation, Piedmont regional order of geologists* (Turin 2015) [http://ftp.geologipiemonte.it/atti%20download/006PIE15%20Loke%20TO-Sept_2015.pdf] (04.06.2021).

López Elum 1994:
P. López Elum, *La alquería islámica en Valencia. Estudio arqueológico de Bofilla, siglos XI a XIV* (Valencia 1994).

López Guzmán 2002:
R. López Guzmán (coord.), *Arquitectura de Al-Andalus. Almería, Granada, Jaén y Málaga* (Granada 2002).

López Quiles 2002/2003:
V. López Quiles, Excavación de un subterráneo de época almohade en el Campus Universitario Miguel Hernández de Elche (Alicante). Estudio del material cerámico, *Recerques del Museu d'Alcoi* 11/12, 2002/03, 151–164.

López Rosendo 2004:
E. López Rosendo, Intervención arqueológica urgente en el yacimiento de los Villares de Jerez de la Frontera (Cádiz). Campaña de 2004, *Anuario Arqueológico de Andalucía* 2004(1), 369–378.

López-Sáez et al. 2018:
J.A. López Sáez – S. Pérez-Díaz – A. Rodríguez-Ramírez – A. Blanco-González – J. J. R. Villarías-Robles – R. Luelmo-Lautenschlaeger – G. Jiménez-Moreno – S. Celestino-Pérez – E. Cerrillo-Cuenca – J. N. Pérez-Asensio – A. León, Mid-late Holocene Environmental and Cultural Dynamics at the South-West Tip of Europe (Doñana National Park, SW Iberia, Spain), *Journal of Archaeological Science (Reports)* 22, 2018, 58–78.

Loureiro – Coutinho 1995:
N. S. Loureiro – M. A. Coutinho, Rainfall Changes and Rainfall Erosivity Increase in the Algarve (Portugal), *Catena* 24, 1995, 55-67.

Macias et al. 2011:
S. Macias – C. Torres – J. M. Ferreira Boiça – M. de Fátima Rombouts de Barros – S. Gómez Martínez (eds.), *Mesquita igreja de Mértola* (Mértola 2011).

Macklin et al. 1995:
M. G. Macklin – J. Lewing – J. C. Woodward, Quaternary Fluvial Systems in the Mediterranean Basin, in: M. G. Macklin – J. Lewing – J. C. Woodward (eds.), *Mediterranean quaternary river environments* (Rotterdam 1995) 1–25.

Madoz 1816:
P. Madoz, *Diccionario geográfico-estadístico-histórico de España y sus posesiones de ultramar* (Madrid 1816) vol. 4.

Maher – Taylor 1988:
B. A. Maher – R. M. Taylor, Formation of Ultrafine-grained Magnetite in Soils, *Nature* 336(6197), 1988, 368–370.

Mayewski et al. 2004:
P. A. Mayewski – E. Rohling – J. C. Stager – W, Karlen – K. A. Maasch – L. D. Meeker – E. A. Meyerson – F. Gasse – S. van Kreveld – K. Holmgren – J. Lee-Thorp – G. Rosqvist, G. – F. Rack – M. Staubwasser – R. R. Schneider – E. J. Steig, Holocene Climate Variability, *Quaternary Research* 62, 2004, 243–255.

Makarewicz – Sealy 2015:
C. A. Makarewicz – J. Sealy, Dietary Reconstruction, Mobility and the Analysis of Ancient Skeletal Tissues. Expanding the prospects of stable isotope research in archaeology, *Journal of Archaeological Science* 56, 2015, 146–158.

Martin-Consuegra et al. 1998:
E. Martin-Consuegra – N. Chisvert – L. Caceres – J. L. Ubera, Archaeological, Palynological and Geological Contributions to Landscape Reconstruction in the Alluvial Plain of the Guadalquivir River at San Bernardo, Sevilla (Spain), *Journal of Archaeological Science* 25, 1998, 521–532.

Martin-Consuegra et al. 1996:
E. Martin-Consuegra – J. L. Ubera – E. Hernandez-Bermejo, Palynology of the Historical Period at the Madinat al-Zahra Archaeological Site (Spain), *Journal of Archaeological Science* 23, 1996, 249–261.

Martin-Consuegra et al. 2000:
E. Martin-Consuegra – E. Hernandez-Bermejo – J. L. Ubera, *Palinología y botánica histórica del complejo arqueológico de Madinat al-Zahra* (= Monografías del jardín botánico de Córdoba 8) (Cordoba 2000).

Martín del Rio et al. 2019:
J. J. Martín del Rio – V. Flores Alés – F. J. Alejandre Sánchez, New Method for Historic Rammed-earth Wall Characterization. The Almohade ramparts of Malaga and Seville, *Studies in Conservation* 64, 2019, 363–372.

Martín Pozas 1978:
J. M. Martín Pozas, Análisis cuantitativo de fases cristalinas por DRX, in: J. A. Saja (ed.), *Difracción por muestras policristalinas. Método de Debye–Scherrer* (Valladolid 1978) 77–98.

Martín Puertas et al. 2008:
C. Martín Puertas – B. L. Valero-Garcés – M. P. Mata – P. González Sampériz – R. Bao – A. Moreno – V. Stefanova, Arid and Humid Phases in the Southern Spain during the Last 4000 Years. The Zoñar Lake record (Córdoba), *The Holocene* 18, 2008, 907–921.

Martín Puertas et al. 2011:
C. Martín Puertas – B. L. Valero-Garcés – M. P. Mata – A. Moreno – S. Giralt – F. Martínez-Ruiz – F. Jiménez-Espejo, Geochemical Processes in a Mediterranean Lake. A high-resolution study of the last 4.000 years in Zoñar Lake (southern Spain), *Journal of Paleolimnogoly* 46, 2011, 405–421.

Martinelli 2012:
C. Martinelli (ed.), *The Anonymous Andalusian Cookbook* (n. p. 2012).

Martínez Rodríguez 2013:
A. Martínez Rodríguez, *Lorca almohade. Ciudad y territorio* (Murcia 2013).

Martini – Chesworth 2010:
I. P. Martini – W. Chesworth, *Landscape and Societies* (New York 2010).

Mateu 1986
J. F. Mateu, *Paisaje natural y paisaje cultural. La morfogénesis mediterránea en tiempos históricos* (PhD Thesis university of Valencia 1986).

Mayoral – González 1987:
E. Mayoral – I. González, Contribución al estudio de las facies de tránsito (Mioceno-Plioceno) en el sector noroccidental de la Cuenca del Guadalquivir (Valencina de la Concepción, Sevilla), *Acta Geológica Hispánica* 21/22, 177–184.

Mazzoli-Guintard 2002:
Ch. Mazzoli-Guintard, Urbanisme islamique et ville en al-Andalus. Autour de nouvelles propositions méthodologiques, in: A. Torremocha Silva – V. Martínez Enamorado (eds.), *II. Congreso internacional de la ciudad en al-Andalus y el Magreb,* Algeciras 1999 (Granada 2002) 49–73.

Meighan 1971:
C. Meighan, Los moluscos como restos de alimentos en los sitios arqueológicos, in: D. Brothwell – E. Higgs (eds.), *Ciencia en Arqueología* (Madrid 1980) 427–434.

Mendes – Teixidó 2008:
M. S. Mendes – T. Teixidó, Evaluation of an Hybrid Refraction Tomography Code, in: European association of geoscientists and engineers (eds.), *Near Surface 2008. 14th European meeting of environmental and engineering geophysics,* Krakow 2008 (Red Hook 2014) 251–255.

Miguel – Morales 1984:
J. Miguel – A. Morales, Catálogo para la unificación de medidas en el esqueleto postcraneal de mamíferos, in: *Primeras Jornadas de Metodología en Investigación Prehistórica,* Soria 1981 (Madrid 1984) 299–308.

Mileto et al. 2011:
C. Mileto – F. Vegas – J. M. López, Criterios y técnicas de intervención en tapia. La restauración de la torre Bofilla de Bétera (Valencia), *Informes de la Construcción* 63(523), 2011, 81–96.

Mileto et al. 2012a:
C. Mileto – F. Vegas – V. Cristini, Refuerzos y mejoras. Variantes constructivas de la tapia en España, in: *SIACOT 2012, Congreso Iberoamericano de arquitectura y construcción en tierra* (Lima 2012).
[http://hdl.handle.net/10251/55268] (07.06.2021)

Mileto et al. 2012b:
C. Mileto – F. Vegas – V. Cristini – L. García Soriano, Restoration of Rammed Earth Architecture in the Iberian Peninsula. Ongoing research, in: C. Mileto – F. Vegas – V. Cristini (eds.), *Rammed Earth Conservation, Proceedings of the first international conference of rammed earth conservation 'Restapia 2012',* Valencia 2012 (London 2012) 381–386.

Minagawa – Wada 1984:
M. Minagawa – E. Wada, Stepwise Enrichment of 15N along Food Chains. Further evidence and the relation between 15N and animal age, *Geochimica et Cosmochimica Acta* 48, 1984, 1135–1140.

Mion et al. 2019:
L. Mion – E. Herrscher – G. André – J. Hernández – R. Donat – M. Fabre – V. Forest – D. C. Salazar-García, The Influence of Religious Identity and Socio-Economic Status on Diet over Time, and Example from Medieval France, *Archaeological and Anthropological Sciences* 11, 2019, 3309–3327.
[https://link.springer.com/article/10.1007%2Fs12520-018-0754-z] (04.06.2021)

Miras et al. 2017:
A. Miras – A. Romero – I. González – P. Campos, Study by Different Techniques of the Mineralogical Evolution in Fired Clays. Interest in the formulation of ceramic bodies, *16th International Clay Conference,* Granada 2017 (Poster).

Montes Romero-Camacho –Valor Piechotta 2020:
I. Montes Romero-Camacho – M. Valor Piechotta, El espacio conquistado en el bajo valle del Guadalquivir. La restauración eclesiástica en las sedes de Córdoba y Sevilla y el ritual de transformación de mezquitas en iglesias, in: F. Giese-Vögeli – A. León-Muñoz (eds.), *Diálogo Artístico durante la Edad Media. Arte Islámico – Arte Mudéjar*, Córdoba 2016 (Cordoba 2020) 121–144.

Moore et al. 1991:
P. D. Moore – J. A. Webb – M. E. Collinson, *Pollen Analysis* (Oxford 1991).

Morales 2006:
A. J. Morales, Die Aljarafe-Region um Sevilla. Grabkapellen und Chorapsiden muslimischer Tradition, in: E. Schubert (ed.), *Museum ohne Grenzen. Die Mudejar-Kunst* (Freiburg 2006) 259–273.

Morales Muñiz 1993:
A. Morales Muñiz, Estudio faunístico del yacimiento islámico de Mertola. Los mamíferos, *Arqueología Medieval* 2, 1993, 263–272.

Moreno-García et al. 2003:
M. Moreno-García – C. Pimenta – S. Davis – S. Gabriel, A osteoteca. Uma ferramenta de trabalho, in: J. E. Mateus – M. Moreno-García (eds.), *Paleoecologia humana e arqueociências. Um programa multidisciplinar para a arqueologia sob a tutela da cultura* (= Trabalhos de Arqueologia 29) (Lissbon 2003) 235–261.

Morgenroth 2004:
U. Morgenroth, *Southern Iberia in the Early Iron Ages* (Oxford 2004).

Muñoz Torrado 1914:
A. Muñoz Torrado, *La iglesia de Sevilla en el siglo XIII* (Seville 1914).

Navarro Palazón – Jiménez Castillo 2007:
J. Navarro Palazón – P. Jiménez Castillo, *Siyāsa. Estudio arqueológico del despoblado andalusí (ss. XI–XIII)* (Murcia 2007).

Neboit 1991:
R. Neboit-Gilhot, *L'homme et l'érosion. L'érosión des sols dans le monde* [2](Clermont-Ferrand 1991).

Neboit 1992:
R. Neboit, Accumulation et creusement dans les vallées depuis 10 000 ans autour de la Mediterranée, *Bulletin de l'Association des Géographes Français* 3, 1992, 189–206.

O'Connell et al. 2012:
T. O'Connell – C. Kneale – N. Tasevska – G. Kuhnle, The Diet-oody Offset in Human Nitrogen Isotopic Values. A controlled dietary study, *American Journal of Physical Anthropology* 149, 2012, 426–434.

O'Leary 1981:
M. H. O'Leary, Carbon Isotope Fractionation in Plants, *Phytochemistry* 20(4), 1981, 553–567.

Olmedo Granados 2009:
F. Olmedo Granados (ed.), *Cortijos, Haciendas y Lagares, provincia de Sevilla* (Seville 2009) 2 vol.

Olsen et al. 2016:
K. C. Olsen – C. D. White – F. J. Longstaffe – F. J. Rühli – C. Warinner – D. C. Salazar-García, Isotopic Anthropology of Rural German Medieval Diet. Intra- and inter-population variability, *Archaeological and Anthropological Sciences* 10, 2018, 1053–1065.
[DOI 10.1007/s12520-016-0432-y] (04.06.2021)

Orellana 1982:
E. Orellana, *Prospección geoeléctrica en corriente continua* (Madrid 1982).

Ortiz et al. 2007:
J. E Ortiz – T. Torres – J. E. López-Pamo – V. Soler – J. F. Llamas – D. Barettino – M. J. García, Organic Matter Accumulation during the Holocene in the Guadalquivir Marshlands (SW Spain), *Geological Journal* 42(5), 2007, 547–566.

Pacheco Mejías 2012:
G. Pacheco Mejías, *Estudio arqueológico de las torres islámicas y mudéjares sevillanas* (Master's Thesis university of Seville 2012).

Pales – Lambert 1971:
L. Pales – C. Lambert, *Osteologique des Mammifères du Quaternaire. I. Les membres. Herbivores e Carnivores* (Paris 1971).

Payne 1973:
S. Payne, Kill-off Patterns in Sheep and Goats. The mandibles from Asvan Kale, *Anatolian Studies* 23, 281–303.

Pearson 2007:
J. A. Pearson, Hunters, Fishers, and Scavengers. A review of the isotope evidence for Neanderthal diet, *Before Farming* 2, 2007, 1–16.
[DOI: 10.3828/bfarm.2007.2.2] (04.06.2021).

Pecero Espín et al. 1999:
J. C. Pecero Espín – J. M. Magariños Sánchez – I. López Flores, La población islámica del castillo de Triana, in: M. Valor Piechotta –

A. Tahiri (eds.), *Sevilla almohade,* Exhibition Seville – Rabat 1999 (Seville 1999) 194–203.

Pérez 2010:
M. I. Pérez, Análisis petrográficos de la cerámica de Doncellas: Un nuevo aporte para el estudio del proceso de producción in: S. Bertolino – R. Cattáneo – A. D. Izeta (eds.), *La arqueometría en Argentina y Latinoamérica* (Cordoba 2010) 79–84.

Pérez-Saenz et al. 2013:
A. Pérez-Saenz – P. González-Sampériz – A. Moreno – B. Valero-Garcés – G. Gil-Romera – M. Rieradevall – P. Tarrats – L. Lasheras-Álvarez – M. Morellón – A. Belmonte – C. Sancho – M. Sevilla-Callejo – A. Navas, Holocene Climate Variability. Vegetation dynamics and fire regime in the Central Pyrenees. The Basa de la Mora sequence (NE Spain), *Quaternary Science Reviews* 73, 2013, 149–169.

Peterson – Fry 1987:
B. J. Peterson – B. Fry, Stable Isotopes in Ecosystem Studies, *Annual Review of Ecology and Systematics* 18, 1987, 293–320.

Petzke et al. 2005:
K. J. Petzke – H. Boeing – C. C. Metges, Choice of Dietary Protein of Vegetarians and Omnivores is Reflected in Their Hair Protein C-13 and N-15 Abundance, *Rapid Commun Mass Spectrom* 19, 2005, 1392–1400.

Pietsch et al. 2013:
D. Pietsch – K. Schenk – S. Japp – M. Schnelle, Standardised Recording of Sediments in the Excavation of the Sabaean Town of Sirwah, Yemen, *Journal of Archaeological Science* 40(5), 2013, 2430–2445.

Pleguezuelo Hernández 1989:
A. Pleguezuelo Hernández, *Azulejo Sevillano* (Seville 1989).

Pope – van Andel 1984:
K. O. Pope – T. H. van Andel, Late Quaternary Alluviation and Soil Formation in Southern Argolid. Its history, causes and archaeological implications, *Journal of Archaeological Science* 11, 1984, 281–306.

Porras Crevellin 2003:
A. I. Porras Crevellin, El medio natural antropizado en el yacimiento de Cote (Montellano, Sevilla). Análisis geoarqueológico, in: M. Valor – M. J. Sánchez (coords.), *Un enclave en la Banda Morisca. Cote (Montellano, Sevilla) y su entorno* (Seville 2003) 47–60.

Power et al. 2014:
R. C. Power – D. C. Salazar-García – R. M. Wittig – A. G. Henry, Assesing Use and Suitability of Scanning Electron Microscopy in the Analysis of Micro Remains in Dental Calculus, *Journal of Archaeological Science* 49, 2014, 160–169.

Powers 1987:
J. F. Powers, *A Society Organized for War. The Iberian municipal militias in the Central Middle Ages 1000–1284* (Berkeley 1987).

Pozo Martínez 1989:
I. Pozo Martínez, El despoblado islámico de Villa Vieja, Calasparra (Murcia). Memoria prelimiar, *Miscelánea Medieval Murciana* 15, 1989, 185-212.

Prummel – Frisch 1986:
W. Prummel – H. J. Frisch, A Guide for the Distinction of Species, Sex and Bodyside in Bones of Sheep and Goat, *Journal of Archaeological Science* 13, 1986, 567–577.

Queiroz – Mateus 2004:
P. F. Queiroz – J. E. Mateus, Paleoecologia Litoral entre Lisboa e Sines. Do Tardiglaciário aos tempos de hoje, in: A. A. Tavares – M. J. F. Tavares – J. L. Cardoso (eds.), *Evolução geohistórica do litoral portuguêŝ e fenómenos correlativos* (Lissbon 2004) 257–304.

Ramos Roca 2001:
E. Ramos Roca, Patrones de consumo de fauna como indicadores de cambio sociocultural: el caso de la Quinta de Bolívar, *Revista de Antropología y Arqueología* 13(1), 2001, 147–168.

Rapp – Gifford 1985:
G. Rapp – J. A. Gifford (eds.), *Archaeological Geology* (New Haven – London 1985).

Rapp – Hill 1998:
G. Rapp – C. L. Hill, *Geoarchaeology. The earth-science approach to archaeological interpretation (*London 1998).

Reed et al. 2001:
J. M. Reed – A. C. Stevenson – S. Juggins, A Multi-Proxy Record of Holocene Climatic Change in Southwestern Spain. The Laguna de Medina (Cadiz), *Holocene* 11, 2001, 707–719.

Reille 1992:
M. Reille, *Pollen et spores d'Europe et d'Afrique du nord* (Marseille 1992).

Reimer et al. 2004:
P. J. Reimer – M. G. L. Baillie – E. Bard – A. Bayliss – J. W. Beck – C. J. H. Bertrand – P. G. Blackwell – C. E. Buck – G. S. Burr – K. B. Cutler – P. E. Damon – R. L. Edwards – R. G. Fairbanks – M. Friedrich – T. P. Guilderson – A. G. Hogg – K. A. Hughen – B. Kromer – G. McCormac – S. Manning – C. B. Ramsey – R. W. Reimer – S. Remmele – J. R. Southon – M. Stuiver – S. Talamo – F. W. Taylor – J. van der Plicht – C. E. Weyhenmeyer, IntCal04 Terrestrial Radiocarbon Age Calibration. 0–26 cal kyr BP, *Radiocarbon* 46, 2004, 1029–1058.

Renfrew 1976:
C. Renfrew, Archaeology and the Earth Sciences, in: D. A. Davidson – M. L. Shackley (eds.), *Geoarchaeology. Earth science and the past* (London 1976) 1–5.

Ribas i Beltran – Balaguer 1963:
Mª Ribas i Beltran – Ll. Balaguer, Los hipogeos históricos en Cataluña (1), *Chtitonia* 1, 1963, 56–91.

Ribera 2010:
A. Ribera, Las cuevas de Benaxuay. Un grupo de cuevas-ventanas andalusíes en el río Chelva (Valencia), *Cuadernos de Madinat al-Zahra* 7, 2010, 343–368.

Riccardi et al. 1999:
M. P. Ricardi – B. Messiga – P. Duminuco, An Approach to the Dynamics of Clay Firing, *Applied Clay Science* 15(3), 1999, 393–409.

Riquelme Cantal 1991:
J. A. Riquelme Cantal, Estudio faunístico del yacimiento medieval de 'El Maraute' (Torrenueva, municipio de Motril, Granada), *Boletín de Arqueología Medieval* 5, 1991, 93–111.

Riquelme Cantal 1993:
J. A. Riquelme Cantal, Estudio faunístico del yacimiento medieval de Plaza España, Motril (Granada), *Arqueología Medieval* 2, 1993, 243–260.

Rivas Rivas – Álvarez-Ossorio Rivas 2006:
A. Rivas Rivas – A. Álvarez-Ossorio Rivas, *Una ventana al pasado. Historia de Bollullos de la Mitación* (Seville 2006).

Rodrigo 2018:
F. S. Rodrigo, A Review of the Little Ice Age in Andalusia (Southern Spain). Results and research challengers*, Cuadernos de Investigación Geográfica* 44, 2018, 245–265.
<https://publicaciones.unirioja.es/ojs/index.php/cig/article/view/3316/3007> (09.06.2021).

Rodríguez 2002:
J. Rodríguez, Como se desarrollan las viviendas humanas en el valle de Elda, *Alborada* 30, 1984, 44.

Rodríguez Moreno 2018a:
R. I. Rodríguez Moreno, 1.12. Vías de comunicación-fluvial y terrestres y distribución de la población para época romana en la cornisa noroccidental del Aljarafe, Campo oriental de Tejada- Gerena, valle y vega del Maenuba-Guadiamar. Acercándonos a conocer los tipos de asentamiento, la propiedad y la vegetación (manuscript 45 p. Seville 2018)
<https://www.academia.edu/40345803/1_12_La_distribuci%C3%B3n_de_la_poblaci%C3%B3n_y_el_paisaje>(29.09.2021)

Rodríguez Moreno 2018b:
R. I. Rodríguez Moreno, 1.8.1. Algunas consideraciones finales sobre la evolución y pervivencia medieval, moderna y contemporánea de esta vía de comunicación. La nueva vía almohade. Entre madīna Libla y qaryat Šantabūs (manuscript 66 p. Seville 2018)
<https://www.academia.edu/40328532/1_08_1_La_nueva_v%C3%ADa_almohade_Entre_mad%C4%ABna_Libla_y_al_qaryat_%C5%A0antab%C5%ABs> (29.09.2021)

Rodríguez Ramírez 1997:
A. Rodríguez Ramírez, *Geomorfología del Parque Nacional de Doñana y su entorno. Organismo autónomo de Parques Nacionales* (Madrid 1997).

Rodríguez-Ramírez – Yañez-Camacho 2008:
A. Rodríguez-Ramírez – C. M. Yañez-Camacho, Formation of Chenier Plain of Doñana Marshland (SW Spain). Observation and geomorphic model, *Marine Geology* 254, 2008, 187–196.

Rodríguez-Ramírez et al. 2014:
A. Rodríguez-Ramírez – E. Flores-Hurtado – C. Contreras – J. J. R. Villarías-Robles – G. Jiménez-Moreno – J. N. Pérez-Asensio – J. A. López-Sáez – S. Celestino-Pérez – E. Cerrillo-Cuenca – A. León, The Role of Neo-Tectonics in the Sedimentary Infilling and Geomorphological Evolution of the Guadalquivir Estuary (Gulf of Cadiz, SW Spain) during the Holocene, *Geomorphology* 219, 2014, 126–140.

Rodríguez-Ramírez et al. 2019:
A. Rodríguez-Ramírez – J. J. R. Villarías-Robles – J. N. Pérez-Asensio – S. Celestino-Pérez, The Guadalquivir Estuary. Spits and marshes, in J. A. Morales (ed.), *The Spanish coastal systems* (Cham 2019) 517–541.

Romero Baena et al. 2018:
A. Romero Baena – I. González Díez – E. Galan – A. Miras Ruiz – P. Campos Díaz de Mayorga, Ceramic Materials from Cuatrovitas Archaelogical Site (Spain). A mineralogical and chemical study for determining the provenance and study for determining the provenance and the firing temperature, *Applied Clay Science* 166, 2018, 38–48.

Rother 1984:
K. Rother, *Die mediterranen Subtropen. Mittelmeerraum, Kalifornien, Mittelchile, Kapland, Südwest- und Südaustralien* (Braunschweig 1984).

Ruiz et al. 2004:
F. Ruiz – A. Rodríguez-Ramírez – L. Cáceres Puro – J. Vidal – M. Carretero – L. Clemente – J. Muñoz-Pichardo – C. Yañez – M. Abad, Late Holocene Evolution of the Southwestern Doñana National Park (Guadalquivir Estuary, SW Spain). A multivariate approach, *Palaeogeography, Palaeoclimatology, Palaeoecology* 204, 2004, 47–64.

Rütenik 2012:
T. Rütenik, *Die Transformation von Moscheen zu Kirchen auf der Iberischen Halbinsel* (PhD Thesis Technical University of Berlin 2012).

Ruiz et al. 2005:
F. Ruiz – A. Rodríguez-Ramírez – L. M. Cáceres – J. Rodríguez-Vidal – M. I. Carretero Abad – M. Olías – M. Pozo, Evidence of High-Energy Events in the Geological Record. Mid-holocene evolution of the southwestern Doñana National Park (SW Spain), *Palaeogeography, Palaeoclimatology, Palaeoecology* 229, 2005, 212–229.

Ruiz Rodriguez 1997:
A. Ruiz Rodriguez, The Iron Age Iberian People of the Upper Guadalquivir Valley, in: M. Diaz-Andreu – S. Keay, (eds.), *The archeology of Iberia. The dynamics of change* (London – New York 1997) 175–191.

Salazar-García 2011:
D. C. Salazar-García, Patrón de dieta en la población púnica de Can Marines (Ibiza) a través del análisis de isótopos estables (C y N) en colágeno óseo, *Saguntum* 43, 2011, 95–102.

Salazar-García – Silva Pinto 2011:
D. C. Salazar-García – V. Silva Pinto, Isótopos en la Prehistoria y Arqueología Valencianas, *Saguntum Extra* 19, 2011, 75–91.

Salazar-García et al. 2018:
D. C. Salazar-García – M. Fontanals-Coll – G. Goude – E. Subirà, To 'Seafood' or not to 'Seafood'? An isotopic perspective on dietary preferences at the Mesolithic-Neolithic transition in the Western Mediterranean, *Quaternary International* 470, 2018, 497–510.

Salazar-García et al. 2016:
D. C. Salazar-Garcí – A. Romero – P. García-Borja – E. Subirà – M. P. Richards, A Combined Dietary Approach Using Isotope and Dental Buccal-Microwear Analysis of Humans from the Neolithic, Roman and Medieval Periods from Archaeological Site of Tossal de les Basses (Alicante, Spain), *Journal of Archaeological Science Reports* 6, 2016, 610–619.

Salazar-García et al. 2014:
D. C. Salazar-García – M. P. Richards – O. Nehlich – A. G. Henry, Dental Calculus is not Equivalent to Bone Collagen for Isotope Analysis. A comparison between carbon and nitrogen stable isotope analysis of bulk dental calculus, bone and dentine collagen from same individuals from the Medieval site of El Raval (Alicante, Spain), *Journal of Archaeological Science* 47, 2014, 70–77.

Salazar-García et al. 2014:
D. C. Salazar-García – E. Aura – C. Olària – S. Talamo – J. V. Morales – M. P. Richards, Isotope Evidence for the Use of Marine Resources in the Eastern Iberian Mesolithic, *Journal of Archaeological Science* 42, 2014, 231–240.

Salazar-García et al. 2013b:
D. C. Salazar-García – L. B. de Lugo Enrich – H. J. Álvarez García – M. Benito Sánchez, Estudio diacrónico de la dieta de los pobladores antiguos de Terrinches (Ciudad Real) a partir del análisis de isótopos estables sobre restos óseos humanos, *Revista Española de Antropología Física* 34, 2013, 6–14.

Salazar-García et al. 2013a:
D. C. Salazar-García – R. C. Power – A. Sanchis-Serra – V. Villaverde – M. J. Walker – A. G. Henry, Neanderthal Diets in Central and Southeastern Mediterranean Iberia, *Quaternary International* 318, 2013, 3–18.

Saleh Ettahiri et. al. 2013:
A. Saleh Ettahiri – A. Fili – J.-P. van Staëvel, Nouvelles recherches archéologiques sur l'origines de l'Empire almohade au Maroc. Les fouilles d'Igîlîz, *Comptes-rendus de séances de l'Academie des Inscriptions et Belles-Lettres* 2013(2), 1053–1086.

Salem 1983–86:
E. Salem, Los palacios abbādíes de Sevilla, *Andalucía Islámica, Textos y estudios* 4/5,1983–86, 145–159.

Salinas Pleguezuelo 2007:
E. Salinas Pleguezuelo, Un vertedero urbano de época tardoalmohade en Córdoba, in: A. García – F. Villada (eds.), *La cerámica en entornos urbanos y rurales en el Mediterráneo medieval* (Granada 2007) 313–356.

Salinas Pleguezuelo 2012:
E. Salinas Pleguezuelo, *La cerámica islámica de Madinat Qurtuba de 1031 a 1236. Cronotipología y centros de producción* (PhD Thesis university of Cordoba).
[http://hdl.handle.net/10396/7830] [02.04.2020].

Sánchez Blanco y Pardo 1916:
F. Sánchez Blanco y Pardo, Haciendas de Andalucía, *Bética Revista Ilustrada Sevilla* 4, 1916, 59–60.

Sándor-Pröschold – Sanke 2002:
Zs. Sándor-Pröschold – M. Sanke, "Sepulturam ipsius loci liberam esse decernimus". Die mittelalterlichen und frühneuzeitlichen Bestattungen im Prämonstratenserkloster Speinshart, *Beiträge zur Archäologie der Oberpfalz und in Regensburg* 5, 2002, 273–369.

Santos – Sanchez Goñi 2003:
L. Santos – M. F. Sanchez Goñi, Lateglacial and Holocene Environmental Changes in Portuguese Coastal Lagoons 3. Vegetation history of the Santo André coastal area, *The Holocene* 13(3), 2003, 459–464.

Schiffer 1987:
M. B. Schiffer, *Formation Processes of the Archaeological Record* (Albuquerque 1987).

Schmid 1972:
E. Schmid, *Atlas of Animal Bones. For prehistorians, archaeologists and quaternary geologists* (Amsterdam 1971).

Schmidt 2009:
A. Schmidt, Electrical and Magnetic Methods in Archaeological Prospection, in: S. Campana – S. Piro (eds.), *Seeing the Unseen. Geophysics and landscape archaeology* (London 2009).

Schneider et al. 2016:
H. Schneider – D. Höfer – C. Trog – R. Mäusbacher, Holocene Landscape Development along the Portuguese Algarve Coast. A high resolution palynological approach, *Quaternary International* 407, 2016, 47–63.

Schoeller 1999:
A. Schoeller, Isotope Fractionation. Why aren't we what we eat?, *Journal of Archaeological Science* 26, 1999, 667–673.

Schoeninger – de Niro 1984:
M. J. Schoeninger – M. de Niro, Nitrogen and Carbon Isotopic Composition of Bone Collagen from Marine and Terrestrial Animals, *Geochimica et Cosmochimica Acta* 48, 1984, 625–639.

Schoeninger et al. 1983:
M. J. Schoeninger – M. de Niro – H. Tauber, Stable Nitrogen Isotope Ratios of Bone Collagen Reflect Marine and Terrestrial Components of Prehistoric Human Diet, *Science* 220, 1983, 1381–1383.

Schröder et al. 2018:
T. Schröder – J. van 't Hoff – J. A. Lopez-Saez – F. Viehberg – M. Melles –K. Reicherter, Holocene climatic and environmental evolution on the southwestern Iberian Peninsula: A high-resolution multi-proxy study from Lake Medina (Cádiz, SW Spain), *Quaternary Science Reviews* 198, 2018, 208-225

Schultz 1964:
L. G. Schultz, *Quantitative Interpretation of Mineralogical Composition from X-Ray and Chemical Data for the Pierre Shale* (= Geological Survey Professional Papers 391) (Washington 1964).

Schuster – Quintus-Bosz 1993:
T. Schuster – A. Quintus-Bosz, Wave Eikonal Traveltime Inversion Theory, *Geophysics* 58, 1993, 1314–1323.

Schwartz – Schoeninger 1991:
H. P. Schwartz – M. J. Schoeninger, Stable Isotope Analyses in Human Nutritional Ecology, *Yearbook of Physical Anthropology* 34, 1991, 283–321.

Schwarzfischer 1968:
K. Schwarzfischer, *Zur Frage der Schrazellöcher oder Erdställe* (Weiden 1968).

Shackleton 1971:
N. Shackleton, Los moluscos marinos en la arqueología, in: D. Brothwell – E. Higgs (eds.), *Ciencia en Arqueología* (Madrid 1980) 418–426.

Sierro et al. 1996:
F. J. Sierro – A. González Delgado – C. J. Dabrio – A. Flores – J. Civis, Late Neogene Depositional Sequences in the Foreland Basin of Guadalquivir (SW Spain), in: P. F. Friend – C. J. Dabrio (eds.), *Tertiary Basins of Spain* (Cambridge 1996) 339–345.

Silver 1971:
I. A. Silver, La determinación de la edad en los animales domésticos, in: D. Brothwell – E. Higgs (eds.), *Ciencia en Arqueología* (Madrid 1980) 289–309.

Singer 1987:
H.-R. Singer, Der Maghreb und die Pyrenäenhalbinsel bis zum Ausgang des Mittelalters, in: U. Haarmann (ed.), *Geschichte der arabischen Welt* (Munich 1987) 264–322.

Soler Estrela 2012:
A. Soler Estrela, La técnica del tapial en las fortificaciones y despoblados de Sharq al-Andalus. Un estudio arquitectónico constructivo, in: C. Mileto – F. Vegas – V. Cristini (eds.), *Rammed Earth Conservation, Proceedings of the first international conference of rammed earth conservation 'Restapia 2012',* Valencia 2012 (London 2012).

Sparks 1971:
B. Sparks, Los moluscos no marinos en la arqueología, in: D. Brothwell – E. Higgs (eds.), *Ciencia en Arqueología* (Madrid 1980) 406–417.

Stevenson 1985:
A. C. Stevenson, Studies in the Vegetational History of SW Spain II. Palynological investigations at Laguna de Las Madres (Huelva), *Journal of Biogeography* 12, 1985, 293–314.

Swapan et al. 2005:
K. Swapan – D. Kausik – S. Nar – R. Sarkar, Shrinkage and Strength Behaviour of Quartzitic and Kaolinitic Clays in Wall Tile Compositions, *Applied Clay Science* 29(2), 2005, 137–143.

Tabales Rodríguez 2004:
M. Á. Tabales Rodríguez, Algunas notas sobre las fábricas murarias almohades en Sevilla, in: M. Valor Piechotta – J. L. Villar Iglesias – J. Ramírez del Río (coords*.), Los almohades. Su patrimonio arquitectónico y arqueológico en el sur de al-Andalus* (Seville 2004) 75–90.

Tabernero et al.1993:
E. Tabenero – V. R. Vallejo – E. Pons, Indicadores analíticos de suelos como método de prospección. El yacimiento protohistórico de Mas Castelar, Pontos (Alt Empordà), in: P. Fumanal – J. Bernabeu (eds.), *Estudios sobre Cuaternario AEQUA* (Valencia 1993) 207–215.

Tamura et al. 2007:
T. Tamura – Y. Saito – S. Sieng – B. Ben– M. Kong – S. Choup – S. Tsukawaki, Depositional Facies and Radiocarbon Ages of a Drill Cores from the Mekong River Lowland near Phnom Penh (Cambodia). Evidence for tidal sedimentation at the time of Holocene maximum flooding, *Journal of Asian Earth Sciences* 29, 2007, 585–592.

TCA geomática 2013:
TCA geomática, *Red Topográfica de la Hermita Cuatrovitas Bollullos de la Mitación (Sevilla). Technical report* (Seville 2013).

Tendero Porras et al. 2007:
E. Tendero Porras – A. Guilabert Mas – M. Olcina Doménech, *La maqbara del Tossal de Manises (Alicante)* (Alicante 2007) 2 vols.

Terés 1986:
E. Terés, *Materiales para el estudio de la toponimia hispanoárabe. Nómina fluvial* (Madrid 1986).

Torres Balbás 1941:
L. Torres Balbás, Dos obras de arquitectura almohade. La mezquita de Cuatrohabitan y el castillo de Alcalá de Guadaira, *Al-Andalus* 6, 1941, 204–216.

Torres Balbás 1960:
L. Torres Balbás, Aznalfarache = Ḥiṣn al-Faraŷ, *Al-Andalus* 25(1), 1960, 222–228.

Trog et al. 2013:
C. Trog – D. Höfer – P. Frenzel – S. Camacho – H. Schneider – R. Mäusbacher, A Multi-proxy Reconstruction and Comparison of Holocene Palaeoenvironmental Changes of the Alvor and Alcantarilha Estuaries (southern Portugal), *Revue de Micropaléontologie* 56(4), 2013, 131–158.

Valdeolmillos Rodriguez et al. 1996:
A. Valdeolmillos Rodriguez – T. Martin-Arroyo – M. Dorado Valiño – B. Ruiz Zapata, Estudio polínico de los sedimentos del embalse Romano de Proserpina, Mérida (Badajoz), in: *Estudios Palinológicos. XI Simposio de Palinología,* Alcala de Henares 1996 (Alcala de Henares 1996) 125–130.

Valdés Fernández 2002:
F. Valdés Fernández – S. Díaz, El Castillo de Cuncos. Una ciudad islámica desconocida en la raya hispano-portuguesa, *Arqueologia do Alqueva* 11(2), 2002, 213–218.

Valdés Fernández 2004:
F. Valdés Fernández, Eine unbekannte islamische Stadt. Das sogennante Castillo de Cuncos (Villanueva del Fresno, Badajoz) an der portugiesisch-spanischen Grenze, in: M. Müller-Wiener – Ch. Kothe – K.-H. Golzio – J. Gierlichs (eds.), *Al-Andalus und Europa. Zwischen Orient und Okzident* (Düsseldorf 2004) 107–116.

Valdés Fernández et al. 2008:
F. Valdés Fernández – M. Gussone – T. Rütenik, Die Transformation von Sakralbauten in Spanien. Voraussetzungen, Beispiel San Augustin in Badajoz, in: Ernst Herzfeld Gesellschaft (ed.), *Beiträge zur islamischen Kunst und Archäologie* 1 (Wiesbaden 2008) 123–134.

Valencia 1988:
R. Valencia, *Sevilla musulmana hasta la caída del Califato. Contribución a su estudio* (Madrid 1988).

Vallvé 1986:
J. Vallvé, *La división territorial de la España musulmana* (Madrid 1986).

Vallvé Bermejo 1976:
J. Vallvé Bermejo, Notas de metrología hispano-árabe. El codo en la España musulmana, *Al-Andalus* 41(2), 1976, 339–354.

Valor Piechotta 1982:
M. Valor Piechotta, Aún más sobre Cuatrovita. Analisis de sus fuentes documentales y prospección arqueológica, *Estudios de Historia y de arqueologia medievales* 2, 1982, 127–135.

Valor Piechotta 1989:
M. Valor Piechotta, Molinos hidráulicos de rodezno en el Aljarafe sevillano, in: *El agua en zonas áridas. Arqueología e historia. Hidráulica tradicional de la provincia de Almería* (Almería 1989) 737–752.

Valor Piechotta 1995:
M. Valor Piechotta, Aznalfarache, in: M. Valor Piechotta (coord.), *El último siglo de la Sevilla islámica (1147–1248)* (Seville 1995) 145–148.

Valor Piechotta 1999:
M. Valor Piechotta, Ḥiṣn al-Faraŷ, in: M. Valor Piechotta – A. Tahiri (eds.), *Sevilla Almohade,* exhibition Sevilla – Rabat 1999 (Madrid 1999) 190–193.

Valor Piechotta 2003:
M. Valor Piechotta, La aportación de la arqueología medieval al estudio del paisaje andaluz. El Aljarafe sevillano, in: J. Fernández Lacomba et al. (ed.), *Territorio y patrimonio. Los paisajes andaluces* (Comares 2003) 142–153.

Valor Piechotta 2008:
M. Valor Piechotta (ed.), *Sevilla almohade* (Madrid 2008).

Valor Piechotta 2016:
M. Valor Piechotta, Historia del lugar y su entorno, in: *Heidenreich* 2016, 8–12.

Valor – Montes 1997:
M. Valor – I. Montes, De mezquitas a iglesias. El caso de Sevilla, in: G. de Boe – F. Verhaege (eds.), *Religion and Belief in Medieval Europe, Papers of the Medieval Europe Brugge 1997 Conference* (= IAP rapporten 4) (Zellik 1997) 139–148.

Valor – Montes 2018:
M. Valor Piechotta – I. Montes Romero-Camacho, La transformación de mezquitas a iglesias. El modelo andaluz, *Anuario de Historia de la Iglesia Andaluza* 11, 2018, 99–115.

Valor Piechotta – Jiménez Hernández 2018:
M. Valor Piechotta – A. Jiménez Hernández, Las almunias de Sevilla almohade: Buhayra y Aznalfarache, in: J. Navarro Palazón – C. Trujillo San José (eds.), *Almunias. Las fincas de las élites en el occidente islámico. Poder, solaz y producción* (Seville 2018) 323–342.

Valor Piechotta – Ramírez del Río 2004a:
M. Valor Piechotta – J. Ramírez del Río, La división geográfico-administrativa de al-Andalus, in: *El esplendor de los Omeyas cordobeses,* exhibition Madinat az-Zahra 2001 (Granada 2001) 264–273.

Valor Piechotta – Ramírez del Río 2004b:
The Encyclopaedia of Islam (New Edition) 12,6 (Leiden 2004) 746–747 s. v. al-Sharaf (M. Valor Piechotta – J. Ramírez del Río).

Valor Piechotta et al. 2002:
M. Valor Piechotta – J. Mª Carabaza Bravo – A. I. Porras Crevillent, Espacio rural y territorio en el Aljarafe de Sevilla. Ḥiṣn al-Faraŷ, in: C. Trillo (ed.), *Asentamientos rurales y territorio en el Mediterráneo medieval* (Granada 2002) 337–372.

van Andel et al. 1987:
Th. van Andel – C. Runnels – K. O. Pope, Cinco mil años de uso y abuso de la tierra en la Argólida del Sur (Grecia), *Debats* 21, 1987, 30–43.

van der Knaap – Van Leeuwen 1995:
W. O. van der Knaap – J. F. N. Van Leeuwen, Holocene Vegetation Succession and Degradation as Responses to Climatic Change and Human Activity in the Serra de Estrela, Portugal, *Review of Palaeobotany and Palynology* 95, 1995, 153–211.

van der Merwe – Vogel 1978:
N. J. van der Merwe – J. C. Vogel, 13C Content of Human Collagen as a Measure of Prehistoric Diet in Woodland North America, *Nature* 276, 1978, 815 f.

van Klinken 1999:
G. J. van Klinken, Bone Collagen Quality Indicators for Palaeodietary and Radiocarbon Measurements, *Journal of Archaeological Science* 26, 1999, 687–695.

van Staëvel 2010:
J.-P. van Staëvel, La caverne, refuge de 'l'ami de dieu'. Une forme particulière de l'érémitisme au temps des almoravides et de almohades (Maghreb extrême, X–XIII siècles), *Cuadernos de Madinat al-Zahra* 7, 2010, 311–326.

van Staëvel 2017:
J.-P. van Staëvel, L'art almohade fut-il révolutionnaire?, *Perspective 2. Le Maghreb*, 2017, 81–102.

van Staëvel et al. 2014:
J.-P. van Staëvel – A. Fili – A. Saleh Ettahiri, Igiliz Hargha, lieu de naissance du Mahdi Ibn Tumart, et la genèse de l'Empire almohade, in: Y. Lintz et al. (cords.), *Maroc Médiéval. Un empire de l'Afrique à l'Espagne,* exhibition Paris 2014 (Paris 2014) 268–277.

van Staëvel et al. 2017:
J.-P. van Staëvel – A. Fili – S. Gaime – C. Masure, Nouvelles recherches archéologiques sur le ribāṭ de Tīṭ (Moulay Abdallah Amghar, Province d'El Jadida, Maroc), *Hespéris-Tamuda* 52/3, 2017, 109–134.

Vera et al. 2014:
E. Vera – E. Conlin – I. Carrasco, La necrópolis islámica del sector norte, in: J. Beltrán Fortes – O. Rodríguez Gutiérrez (ed.), *Sevilla arqueológica* (Seville 2014) 231–233.

Vera Reina – López Torres 2005:
M. Vera Reina – P. López Torres, *La cerámica medieval sevillana (s. XII al XIV). La producción trianera* (= BAR International Series 1403) (Oxford 2005).

Vis et al. 2010:
G. J. Vis – S. J. P. Bohncke – H. Schneider – C. Kasse – S. Coenraads-Nederveen – K. Zuurbier – J. Rozema, Holocene Flooding History of the Lower Tagus Valley (Portugal), *Journal of Quaternary Science* 25(8), 1222–1238.

Vita-Finzi 1969
C. Vita-Finzi, *The Mediterranean Valleys. Geological changes in historical times* (London 1969).

Walker et al. 2009:
M. Walker– S. Johnsen – S. O. Rasmussen – T. Popp – J. P. Steffensen – Ph. Gibbard – W. Hoek – J. Lowe – J. Andrews – S. Björck – L. Cwynar – K. Hughen – P. Kershaw – B. Kromer – T. Litt – D. J. Lowe – T. Nakagawa – R. Newnham – J. Schwander, Formal Definition and Dating of the GSSP (Global Stratotype Section and Point) for the Base of the Holocene Using the Greenland NGRIP Icecore, and Selected Auxiliary Records, *Journal Quaternary Science* 24(1), 2009, 3–17.

Wanner et al. 2008:
H. Wanner – J. Beer – J. Bütikofer – T. J. Crowley – U. Cubasch – J. Flückiger – H. Goosse – M. Grosjean – F. Joos – J. O. Kaplan – M. Küttel – S. A. Müller – I. C. Prentice – O. Solomina – T. F. Stocker – P. Tarasov – M. Wagner – M. Widmann, Mid- to Late Holocene Climate Change. An overview, *Quaternary Science Reviews* 27, 2008, 1791–1828.

Warinner et al. 2013:
C. Warinner – N. Robles García – N. Tuross, Maize, Beans and the Floral Isotopic Diversity of Highland Oaxaca, Mexico, *Journal of Archaeological Science* 40, 2013, 868–873.

Watanabe et al. 1999:
T. Watanabe – T. Matsuoka – Y. Ashida, Seismic Travel Time Tomography Using Fresnel Volume Approach, *SEG Houston 1999 Meeting, Technical Program Expanded Abstracts* 18(1), 4 p.

Waters 1992:
M. R. Waters, *Principles of Geoarchaeology. A North American perspective* (Tucson 1992).

Watson 1974:
A. M. Watson, The Arab Agricultural Revolution and Its Diffusion, *The Journal of Economic History* 34(1), 1974, 8–35.

Weichenberger 1985:
J. Weichenberger, Wurden Erdställe als Zufluchtsanlagen gebaut?, *Der Erdstall* 11, 1985, 24–33.

Weichenberger 2009:
J. Weichenberger, Erdställe. Hochmittelalterliche Zufluchtsanlagen und Verstecke?, *Beiträge zur Mittelalterarchäologie in Österreich* 25, 2009, 289–300.

Wilkinson 2003:
T. J. Wilkinson, *Archaeological Landscapes of the Near East* (Tucson 2003)

Wirth 1993:
E. Wirth, Stadtplanung und Stadtgestaltung im islamischen Maghreb, *Madrider Mitteilungen* 34, 1993, 348–368.

Wisshak 1983:
J.-P. Wisshak, Maße und Proportionen in der Moschee von Tinmal (Marokko), in: *Bauplanung und Bautheorie in der Antike,* Kongress Berlin 1983 (= Diskussionen zur archäologischen Bauforschung 4) 344–358.

Wisshak 1984:
J.-P. Wisshak, Maße und Proportionen, in: Ch. Ewert – J.-P. Wisshak, *Forschungen zur almohadischen Moschee. 2. Die Moschee von Tinmal (Marokko)* (= Madrider Beiträge 10) (Mainz on the Rhine 1984) 80–128.

Wolf – Faust 2015:
D. Wolf – D. Faust, Western Mediterranean Environmental Changes. Evidences from fluvial archives, *Quaternary Science Reviews* 122, 2015, 30–50.

Yāqūt al-Rūmī 1979–1986:
Šihāb al-Dīn Abū ʿAbd Allāh Yaʿqūb b. ʿAbd Allāh al-Ḥamawī, *Muʿǧam al-buldān* (Beirut 1979–1986).

Zazo et al. 1999:
C. Zazo – C. J. Dabrio – F. Borja – J. L. Goy – A. M. Lezine – J. Lario – M. D. Polo – M. Hoyos, Pleistocene and Holocene Aeolian Facies along the Huelva Coast (Southern Spain). Climatic and neotectonic implications, *Geologie in Minjbouw* 77, 1999, 209–224.

Zazo et al. 2005:
C. Zazo – N. Mercier – P. G. Silva – C. J. Dabrio – J. L. Goy – E. Roquero – V. Soler – F. Borja – J. Lario – M. D. Polo – L. Luque, Landscape Evolution and Geodynamic Controls in the Gulf of Cadiz (Huelva Coast, SW Spain) during the Late Quaternary, *Geomorphology* 68, 2005, 269–290.

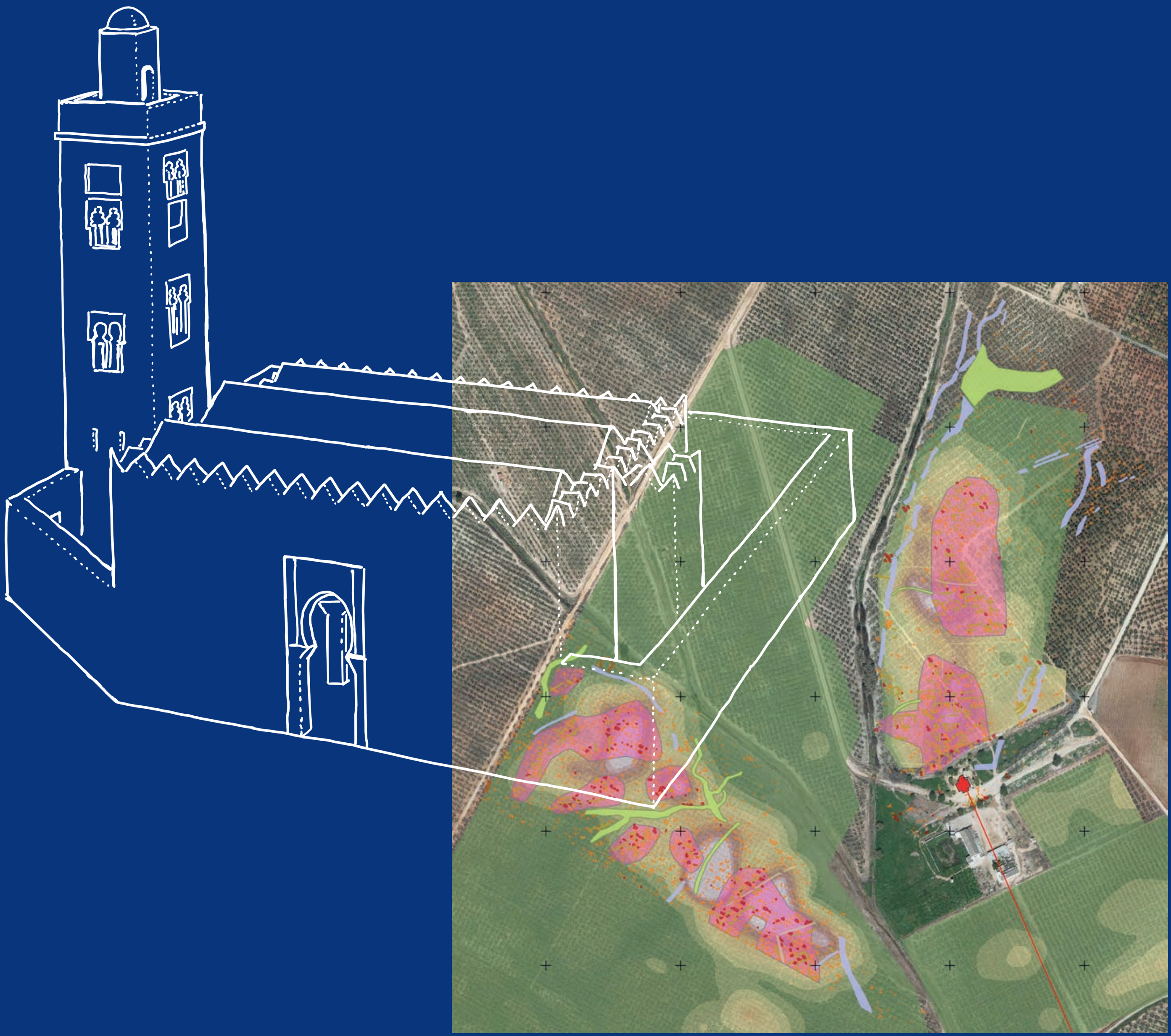
Zazo et al. 2008:
C. Zazo – C. J. Dabrio – J. L Goy – J. Lario – A. Cabero – P. G. Silva – T. Bardají – N. Mercier – F. Borja – E. Roquero, The Coastal Archives of the last 15 ka in the Atlantic-Mediterranean Spanish Linkage Area. Sea level and climate changes, *Quaternary International* 181, 2008, 72–87.

Anja Heidenreich (ed.)

Cuatrovitas

(Bollullos de la Mitación, Prov. of Seville, Spain)

New investigations into the Almohad mosque and abandoned village



Reichert

Anja Heidenreich (ed.)

Cuatrovitas

(Bollullos de la Mitación, Prov. of Seville, Spain)

New investigations into the Almohad mosque
and abandoned village

Reichert Verlag Wiesbaden 2022

Funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) –
KO 2130/8-1, KO 2130/8-2, 464959649.

Cover Images:
Figure: Cornelius Meyer based on the distribution map created by Alejandro Jiménez 2017.
Drawing: Alejandro Jiménez.

Bibliografische Information der Deutschen Nationalbibliothek
Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen
Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über
http://dnb.dnb.de abrufbar.

ISBN: 978-3-7520-0595-0 (Print)
eISBN: 978-3-7520-0078-8 (eBook)
DOI: https://doi.org/10.29091/9783752000788

Printed in Germany

CONTENTS