

THE COPPER AGE IN THE LANDS OF ANTEQUERA (MÁLAGA): INTRODUCTION TO THE SETTLEMENT PATTERNS AND SOCIAL DYNAMICS

La Edad del Cobre en las Tierras de Antequera (Málaga): introducción a los patrones de asentamiento y dinámicas sociales

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ABSTRACT: Antequera (Málaga) is home to one of the most important Neolithic and Copper Age megalithic landscapes in Europe, as proven by its recent declaration as a World Heritage Site by UNESCO on July 15th 2016. This declaration highlights the need to push ahead in the research of the Neolithic and Copper Age periods, when the megalithic phenomenon developed and the three large Antequera megaliths, Menga, Viera and El Romeral, were built. In this paper, stemming from an on-going research project, we present a synthesis of the evidence available for the study of the Copper Age settlement patterns and social dynamics in the Lands of Antequera. Departing from a comprehensive review of the existing literature an assessment is made of the settlement patterns, subsistence economy, exploitation and exchange of abiotic resources, monumentality and burial practices of this time period. The aim is to formulate a preliminary framework of analysis of the cultural and social context in which the construction of El Romeral, the largest tholos monument known in Iberia, took place.

Key words: Chalcolithic; Spatial Analysis; social organisation; subsistence economy; abiotic resources; burial practices; Megalithic phenomenon.

RESUMEN: Antequera (Málaga) alberga uno de los más importantes paisajes megalíticos del Neolítico y la Edad del Cobre en Europa, como lo demuestra su reciente declaración como Patrimonio de la Humanidad por la UNESCO el 15 de julio de 2016. Esta declaración pone el foco en la necesidad de avanzar en la investigación de los periodos Neolítico y Edad del Cobre, en los que se produce el apogeo del fenómeno megalítico y en cuyo contexto se construyen los tres grandes megalitos antequeranos, Menga, Viera y El Romeral. En este artículo, que deriva de un proyecto de investigación actualmente en curso, se presenta una síntesis de los datos disponibles para el conocimiento de las pautas de asentamiento y las dinámicas sociales de la Edad del Cobre en Tierras de Antequera. Partiendo de una exhaustiva síntesis de la literatura existente, se realiza un ensayo de valoración de los patrones de asentamiento, la economía subsistencial, la explotación e intercambio de recursos abióticos, la monumentalidad y las prácticas funerarias en este periodo. Con ello se persigue formular un marco preliminar

de análisis del contexto cultural y social en el que se dio la construcción de El Romeral, el mayor *tholos* conocido en Iberia.

Palabras clave: Calcolítico; análisis espacial; organización social; economía de subsistencia; recursos abióticos; prácticas funerarias; Megalitismo.

1. Introduction¹

Antequera (Málaga) is home to one of the most important Neolithic and Copper Age megalithic landscapes in Europe, as proven by its recent declaration as a UNESCO World Heritage Site on July 15th 2016. The Antequera megalithic landscape is structured around two major ‘natural monuments’ –La Peña de los Enamorados mountain and El Torcal karstic landscape– and three remarkable megalithic monuments built in the Late Neolithic –Menga and Viera–, and the Copper Age –El Romeral–. Despite a long history of research that goes back to the first half of the 19th century AD, however, surprisingly little is known about the settlements used by the builders and users of those monuments, their spatial organisation and landscape patterns as well as their social dynamics, all of which have fundamental importance to understand the processes that led to the creation of what is one of Europe’s most extraordinary prehistoric monumental landscapes. This article is the first attempt at a synthesis looking at the settlement patterns and social dynamics of the Copper Age in the Lands of Antequera. The evidence used for this synthesis comes from the existing literature –both published and grey– and the data set available in the ARCA database –*Archivo de Contextos Arqueológicos* in its Spanish acronym–Archaeological Contexts Archive–, created by the

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authors to collate the enormous inventory of sites recorded in this region (Moreno Escobar and García Sanjuán, 2013). The overall aim of this summary is to evaluate the available archaeological record in order to make a preliminary assessment of the settlement dynamics, economy and social organisation of the Copper Age societies in the region, hence providing a better understanding of the context in which the Antequera megaliths developed.

2. Empirical record

Research into Late Prehistory in the Lands of Antequera² goes a long way back, to the mid-19th century, when R. Mitjana y Ardison published an opuscle in which he presented the results of his excavations at Menga (Mitjana y Ardison, 1847). As J. I. Sánchez-Cuenca’s work (2011) showed recently, from that moment on, Menga became an international benchmark for the study of the megalithic phenomenon world-wide. Within the Iberian context, the Late Prehistory of Antequera became all the more relevant after the discovery in 1903 of Viera and El Romeral, the other two major megalithic monuments of the region (Velázquez, 1905; Gómez-Moreno, 1905; Mergelina, 1922; Hemp, 1934). The Spanish civil war and subsequent post-war era was a time of relative inactivity. Nevertheless, during this period, the Alcaide necropolis of artificial

² The region of the Lands of Antequera, with a total area of 2,640 km², includes the municipalities of Alameda, Alfarnate, Alfarnatejo, Almargen, Almogía, Antequera, Archidona, Ardales, Campillos, Cañete la Real, Carratraca, Casabermeja, Colmenar, Cuevas Bajas, Cuevas del Becerro, Cuevas de San Marcos, Fuente de Piedra, Humilladero, Mollina, Periana, Sierra de Yeguas, Teba, Valle de Abdalajís, Villanueva de Algaidas, Villanueva de Tapia, Villanueva del Rosario and Villanueva del Trabuco.

caves was discovered and excavated (Giménez Reyna, 1946, 1953; and Berdichewsky, 1964: 100-128). From the second half of the 1970s onwards, late prehistoric research in the region intensified thanks to the substantial work carried out by the University of Málaga, which had been founded in 1974. Excavations and studies were undertaken on the Antequeran megaliths themselves (Ferrer, 1997a, 1997b), as well as on other sites such as Las Palomas (Ferrer and Marqués, 1978; Aguado and Baldomero, 1979; Ferrer and Fernández Ruiz, 1987), Marimacho (Leiva and Ruiz González, 1977a; Ferrer *et al.*, 1988; Marqués *et al.*, 2004), Alcaide (Marqués, 1983, 1987, 1990; Marqués and

Ferrer, 1979, 1983; Marqués *et al.*, 1992; Aguado *et al.*, 1997, 2002; Tovar *et al.*, 2014) and El Tardón (Ferrer *et al.*, 1987; Fernández Ruiz *et al.*, 1997).

In addition to these archaeological studies, since the end of the 1990s, numerous rescue excavations and surveys have been carried out in the region due to major public infrastructure work –particularly in connection with new roads and railways–. Consequently, various new Late Prehistoric sites have come to light, including Cortijo de San Miguel (Fernández Rodríguez *et al.*, 1996, 1997, 1999a), Rodahuevos (Fernández Rodríguez *et al.*, 1999b), Cortijo Quemado (Fernández Rodríguez, 2005a), Yacimiento 129 (Fernández Rodríguez, 2005b), El

SITE	MUNICIPALITY	CHRONOLOGY	TYPE	SOURCE	BIBLIOG. REFERENCES (SELECTION)
Alameda	Alameda	CA	settlement	excavation	Márquez <i>et al.</i> , 1999
Alcaide	Antequera	CA/BA	settlement/ burial	excavation	Aguado <i>et al.</i> , 1997, 2002; Marqués, 1983, 1987, 1990; Marqués and Ferrer, 1979, 1983; Marqués <i>et al.</i> , 1992; Márquez and Marqués, 1997; Tovar <i>et al.</i> , 2014
Aratispi	Antequera	CA/BA IA	settlement	excavation	Perdiguero, 1990
Ardales	Ardales	CA	burial (cave)	survey	Sanchidrián <i>et al.</i> , 1989
Arroyo Saladillo	Antequera	NE/CA	settlement	excavation	unpublished
Castillo del Turón	Ardales	CA	settlement	survey	Ramos <i>et al.</i> , 1986
Cerro del Comandante	Antequera	CA	burial	excavation	Fernández Rodríguez <i>et al.</i> , 2014a
Cerro García	Casabermeja	CA	settlement	survey	Marqués, 1985
Chaperas	Casabermeja	CA	burial	excavation	Marqués <i>et al.</i> , 2000
Cortijo Quemado	Antequera	LNE/CA	settlement	excavation	Fernández Rodríguez, 2005a
Cortijo San Miguel	Ardales	CA	settlement	excavation	Fernández Rodríguez <i>et al.</i> , 1996, 1997, 1999
El Castillejo	Almogía	CA	settlement	excavation	Fernández Rodríguez and Rodríguez Vinceiro, 1995
El Cuchillo	Antequera	CA	burial	excavation	unpublished [*]
El Romeral	Antequera	CA	burial/ritual	excavation	Márquez and Fernández Ruiz, 2009; Ruiz González, 2009; etc.
El Silillo	Antequera	CA	settlement	excavation	Fernández Rodríguez <i>et al.</i> , 2011, 2014a
El Toro	Antequera	NE/CA/LBA	settlement (cave)	excavation	Martín Socas <i>et al.</i> , 2004
La Capellanía	Periana	NE/CA/BA/IA	settlement	excavation	Martín Córdoba and Recio, 2004
La Curra	Carratraca	CA	burial (cave)	survey	Sanchidrián, 1985
La Galeota	Ardales	CA/BA	settlement/ lithic workshop	survey	Espejo and Cantalejo, 1990

* Cf. TIA (Taller de Investigaciones Arqueológicas): *Excavación Arqueológica de Urgencia LAV Antequera-Granada, Tramo Nudo de Bobadilla Fase II (Antequera, Málaga). Intervención Arqueológica de Urgencia en la Necrópolis Megalítica de Cerro del Cuchillo*. Memoria Preliminar. Málaga, informe inédito realizado en 2011.

SITE	MUNICIPALITY	CHRONOLOGY	TYPE	SOURCE	BIBLOG. REFERENCES (SELECTION)
La Higuera	Mollina	NE/CA	settlement (cave)	excavation	Márquez, 1987
La Huerta del Ciprés	Antequera	LNE/CA	settlement	excavation	unpublished
La Lentejuela	Teba	CA?	burial	excavation	Baldomero <i>et al.</i> , 2005
La Peña de Ardales	Ardales	CA/BA/IA	settlement	survey	Martín Córdoba <i>et al.</i> , 1992
La Peña de los Enamorados	Antequera	CA/BA	settlement	survey	Moreno and Ramos, 1983; Rodríguez Vinceiro <i>et al.</i> , 1992; Suárez Padilla <i>et al.</i> , 1995
La Pulsera	Antequera	NE/CA/BA	burial (cave)	survey	Leiva Riojano and Ruiz González, 1977b
Las Mezquitas	Periana	CA	settlement (cave)	survey	Ramos Muñoz, 1985
Las Palomas	Teba	CA	settlement (cave)	excavation	Ferrer and Marqués, 1978; Ferrer and Fernández Ruiz, 1987; Weniger and Ramos, 2014
Los Porqueros	Mollina	NE/CA	settlement (cave)	survey	Márquez, 1988
Marimacho	Antequera	CA	settlement	excavation	Leiva and Ruiz González, 1977a; Ferrer <i>et al.</i> , 1988; Marqués <i>et al.</i> , 2004
Peñas Prietas	Archidona	CA	burial	survey	García Serrano, 1980
Peñón del Oso	Villanueva del Rosario	CA	settlement	excavation	Morales <i>et al.</i> , 1983; Moreno, 1987; Márquez, 2004
Tajillo del Moro	Casabermeja	CA	burial	excavation	Ferrer <i>et al.</i> , 1980
Viera	Antequera	LNE/CA/BA	burial/ritual	excavation	Márquez and Fernández Ruiz, 2009; Ruiz González, 2009; Aranda <i>et al.</i> , 2013; etc.

FIG. 1. *Table of Copper Age sites in Lands of Antequera. Only those excavated or studied through intensive surface survey and/or artefact studies are included. Chronology: NE (Neolithic); CA (Copper Age); BA (Bronze Age); LBA (Late Bronze Age); IA (Iron Age).*

Silillo (Fernández Rodríguez *et al.*, 2011, 2014), and Arroyo Saladillo and Huerta del Ciprés³ to mention those that have been published.

As a result, at present, there is quite an extensive literature available for the Late Prehistory of the Lands of Antequera, including 15 monographs—essentially corresponding to Antequera’s megaliths and the Ardales cave and its surrounding area—and some 350 articles published in scientific journals, edited books and conference proceedings. Furthermore, there is also a significant amount of grey literature, particularly unpublished reports of rescue archaeological interventions—both excavations and surveys—, as well as various unpublished PhD and degree theses.

³ Paper presented by L. E. Fernández Rodríguez and M. Cisneros in the *3rd Andalusian Prehistory Congress* (Antequera, 23-25 October 2014), entitled “Aportaciones de la arqueología preventiva al conocimiento de la Prehistoria Reciente en Antequera: Arroyo Saladillo y Huerta del Ciprés (Antequera, Málaga)”.

Regarding the Copper Age, to this date, there are 290 sites recorded in the *ARCA* database, which represents an average density of 0.11 sites per km², in other words, than in the Neolithic period. This is a reflection of the demographic and economic expansion that the region’s communities underwent during this time period. Of these 290 sites, a total of 33 have been explored archaeologically (Figs. 1 and 2). With regard to their basic functional configuration, these sites can be broken down as follows:

- A total of 16 are open-air settlements: Alameda, Aratispi, Arroyo Saladillo, Castillo del Turón, Cerro García, Cortijo Quemado, Cortijo San Miguel, El Castillejo, El Silillo, La Capellanía, La Galeota, La Huerta del Ciprés, La Peña de Ardales, La Peña de los Enamorados, Marimacho and Peñón del Oso.

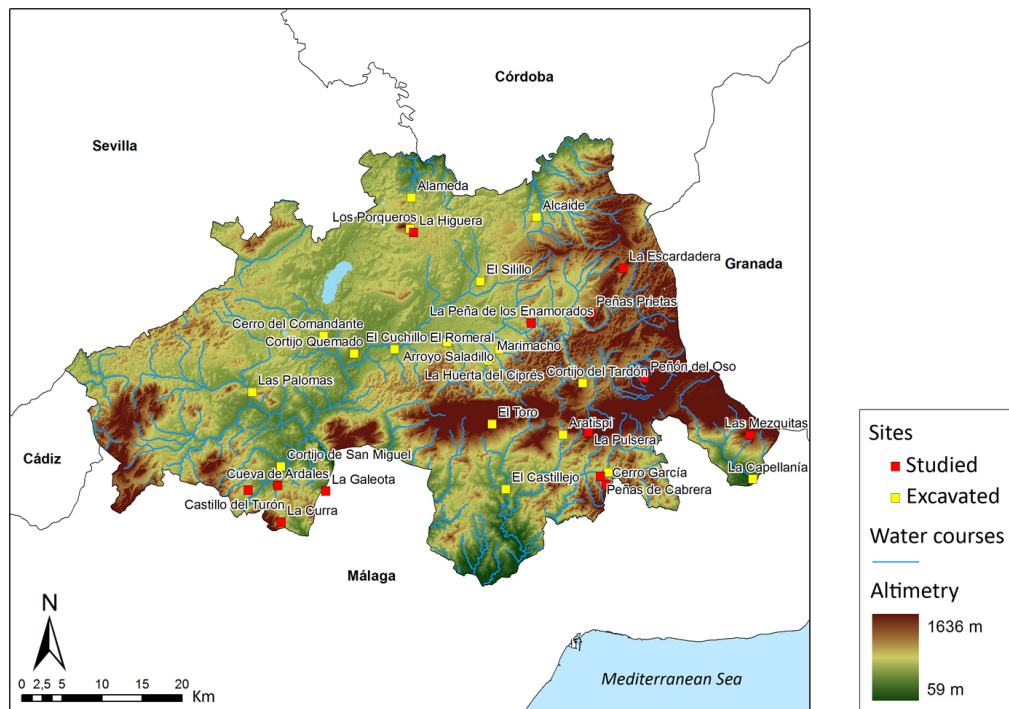
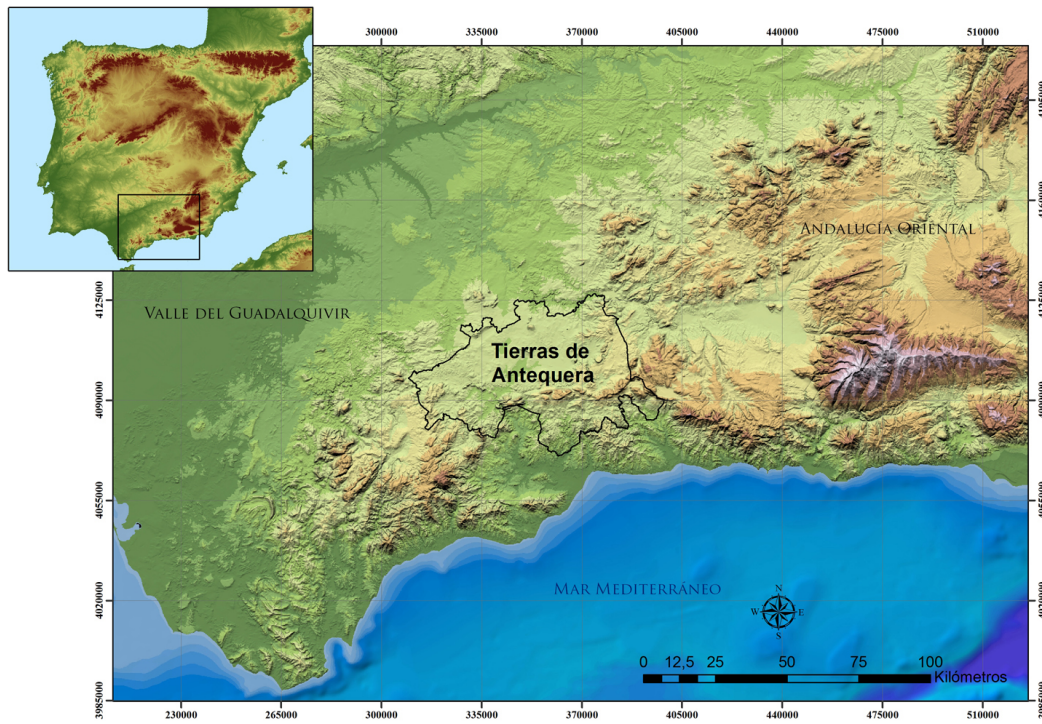


FIG. 2. Distribution of excavated or studied Copper Age sites in the Lands of Antequera.

SITE	MUNICIPALITY	BP	LAB REFERENCE	SAMPLE	BC (2 σ)	TYPE	BIBLIOG. REFERENCE
La Capellanía	Periana	4340 \pm 110	LY-4421	not available	3350-2650	settlement	Rodríguez Vinceiro and Márquez, 2003
La Capellanía	Periana	4180 \pm 80	LY-4422	not available	2920-2490	settlement	Rodríguez Vinceiro and Márquez, 2003
El Toro	Antequera	4120 \pm 120	I-17553	charred material	3050-2300	natural cave	Martín Socas <i>et al.</i> , 2004
Viera	Antequera	4090 \pm 30	Beta-353820	animal bone	2860-2500	megalith	Aranda <i>et al.</i> , 2013
El Castillejo	Almogía	4085 \pm 45	GFA-20691	not available	2870-2480	settlement	Rodríguez Vinceiro and Márquez, 2003
Las Palomas	Teba	4032 \pm 39	COL-2013	human bone	2836-2468	natural cave	Kehl <i>et al.</i> , 2013; Bayle, 2014
Alcaide (Cueva n.º 19)	Antequera	4030 \pm 110	GN-16062	human bone	2900-2200	hypogeum	Marqués <i>et al.</i> , 2004
El Castillejo	Almogía	3980 \pm 80	GFA -20661	charred material	2859-2210	settlement	Rodríguez Vinceiro and Márquez, 2003
El Silillo	Antequera	3980 \pm 40	Ua-35081	charred material	2618-2346	settlement	Fernández Rodríguez <i>et al.</i> , 2011
El Silillo	Antequera	3965 \pm 40	Ua-35082	charred material	2577-2344	settlement	Fernández Rodríguez <i>et al.</i> , 2011
Ardales	Ardales	3885 \pm 36	COL-1636	not available	2471-2212	natural cave	Rethemeyer, 2014
Alcaide (Cueva n.º 20)	Antequera	3830 \pm 180	GN -19198	human bone	2900-1700	hypogeum	Marqués <i>et al.</i> , 2004
El Silillo	Antequera	3775 \pm 40	Ua-35080	charred material	2339-2039	settlement	Fernández Rodríguez <i>et al.</i> , 2011
Alcaide (Cueva n.º 20)	Antequera	3755 \pm 210	GN -19197	human bone	2862-1659	hypogeum	Marqués <i>et al.</i> , 2004

FIG. 3. *Published radiocarbon dates for Copper Age sites at the Lands of Antequera.*

- Another 5 sites are settlement or activity areas in caves and rock-shelters: El Toro, Las Mezquitas, Las Palomas, La Higuera and Los Porqueros.
- A further 11 sites are funerary locations: the Ardales, La Pulsera and La Curra caves, the El Romeral, Viera, Chaperas, Tajillo del Moro, El Cuchillo and La Lentejuela megalithic monuments, and the Cerro del Comandante and Peñas Prietas hypogea. The site of Alcaide presents evidence of burial as well as domestic (or residential) activity.

Of the 33 explored sites, 12 came to light through surface survey and/or artefactual studies (Castillo del Turón, Cerro García, Cueva de Ardales,

La Curra, La Galeota, Las Mezquitas, La Peña de Ardales, La Peña de los Enamorados, La Pulsera, Los Porqueros, La Lentejuela and Peñas Prietas), whilst the other 21 were excavated (Alameda, Alcaide, Aratíspi, Arroyo Saladillo, Chaperas, Cerro del Comandante, Cortijo Quemado, Cortijo San Miguel, El Castillejo, El Cuchillo, El Romeral, El Silillo, El Toro, La Capellanía, La Higuera, La Huerta del Ciprés, Las Palomas, Marimacho, Peñón del Oso, Tajillo del Moro and Viera). Whatever southern Iberian region these figures are compared with, Lands of Antequera stands out because of the very high number of studied Chalcolithic sites, especially with regard to excavated ones.

At present, there are only 14 published radiocarbon dates for this Copper Age date set (Fig. 3), 10

of which date settlement areas –La Capellanía, El Castillejo, Las Palomas, El Toro and El Silillo– while four date funerary locations –the Viera dolmen and Alcaide hypogea number 19 and 20–⁴. These 14 radiocarbon dates are nowhere near sufficient to provide an understanding of the very complex patterns of temporality of the large number of excavated sites and the even more complex sequence of social processes they were part of. The main characteristics of the excavated sites are summarised in Fig. 4.

3. Settlement Patterns

The vast majority –30 out of 33– of the Copper Age sites excavated or surveyed in the Lands of Antequera are located in low-lying areas. Only three of them are in topographically-prominent places: La Capellanía, Aratíspi and El Castillejo. Of these three, the former two were occupied for a long period of time which went beyond the Copper Age into the Bronze Age and the Iron Age. La Capellanía is on a limestone ridge, some 254 m above sea level, bordered by the Guaro River to its east and south, on a naturally well-defended location and with a commanding view of the surrounding area, which includes different ecological niches and abundant natural resources (Martín Córdoba, 1994: 6; Martín Córdoba and Recio, 2004: 342). Aratíspi, on the other hand is located in a very strategic position at the foot of the Las Pedrizas mountain pass, a natural route that connects the coast of Málaga with the Antequera plain and, further north, towards the Guadalquivir valley, Andalusia's natural East-West corridor. Although Aratíspi does not enjoy a particularly remarkable visual control of its surrounding area, its strategic value explains –like is the case with La Capellanía– its long occupation, well into Roman times. Lastly, El Castillejo is located

⁴ From the information published about a date recently obtained from a sample of unspecified material discovered at the entrance of the Ardales cave (Rethmeyer, 2014: 83) it is not clear whether the cave was used as a dwelling or a funerary location in this time period.

on a flat-topped hill surrounded by a meander of the Campanillas River on three sides, which affords it a good natural defence (Fernández Rodríguez and Rodríguez Vinceiro, 1995: 61).

A much larger group of open-air Chalcolithic settlements are located on flat or slightly elevated areas, lacking good conditions for natural defence or visual control of the surrounding areas. This would appear to be specially the case of sites located in the Antequera plain and neighbouring sectors, including Alameda, Alcaide, Cortijo Quemado, Cortijo San Miguel, Marimacho, El Silillo, Arroyo Saladillo and Huerta del Ciprés⁵. All these sites are notable for being well connected with each other and having immediate access to land with high –or very high– agricultural potential. The impression that good natural defence was not a key factor in establishing settlement locations tallies with the absence of substantial stone-walled structures that could have had a defensive character. Alcaide is a good example of this. The fact that the residential area is located on a low-lying, flat area lacking natural defensive conditions, led the excavators to suggest that no defensive concerns were taken into account when the place was first inhabited (Aguado *et al.*, 2002: 371-372). In this respect, a rather remarkable feature of the Copper Age in the Lands of Antequera is that, to this date, there is an almost complete absence of Los Millares-type walled enclosures⁶.

There is scant data available on the size of the Chalcolithic settlements of the Lands of Antequera. Estimates have only been published for El Silillo –9 ha– and Cortijo Quemado –0.2 ha–, which prevents any sort of generalisation being made. It has been suggested that Arroyo Saladillo would have

⁵ The same could be said of Cerro de El Comandante, for which 'domestic' structures have been mentioned (Fernández Rodríguez *et al.*, 2014a), although the description given is rather generic, which is why this site has not been included in this summary.

⁶ In fact, only one stone-walled enclosure has been found so far: La Capellanía. Surveys carried out at El Torcal described El Parque as a 'fortified' settlement (Moreno *et al.*, 2004), although no excavation data exist regarding its precise chronology.

SITE	SIZE	NUMBER OF STRUCTURES	DESCRIPTION OF STRUCTURES	ABOVE-SURFACE RESIDENTIAL STRUCTURES	WALLED ENCLOSURES	METALLURGY	BELL BEAKER
La Capellanía (Early Copper Age)	not available	not available	“weak” structures (perishable materials)	not available	none	no	no
La Capellanía (Middle Copper Age)	not available	not available	“huts associated with stone and sun-dried mud”	not available	none	no	yes
La Capellanía (Late Copper Age)	not available	not available	not available	not available	yes	natural copper	no
La Peña de los Enamorados	not available	not available	“hut structures, circular in plan and with a central post”	not available	none	two daggers with rivets, one punch with square section, plus a dozen fragments of metal items with old fractures and a crucible	yes
La Peña de Ardales	not available	not available	not available	not available	not available	not available	NA
Arroyo Saladillo	not available	152	negative structures “of multifunctional character”	none	none	not available	no
El Sillito	9 ha	58	negative structures	none	none	fragments of a sickle blade, a saw blade and a crucible or mould, as well as a whole nozzle	no
Cortijo Quemado	0,2 ha (2052 m ²)	30	negative structures	none	none	no	no
Alameda	not available	28	negative structures	none	none	no	no
Cortijo de San Miguel	not available	20	negative structures	none	none	no	no
Alcaide	not available	1	sun-dried mud floors and wall-lining material	none	none	no	no
Peñón del Oso	not available	1	hut floor with remains of sun-dried mud for wall-lining	none	none	one Palmela arrowhead and one punch of square section	yes
La Higuera	not available	0	none	none	no	no	yes
Marimacho	not available	not available	not available	none	none	one punch and one chisel	yes
El Toro	not available	not available	not available	none	none	no	yes
Cerro García	not available	not available	not available	none	none	one Palmela arrowhead	yes
Las Mezquitas	not available	not available	not available	none	none	no	no
Castillo del Turón	not available	not available	not available	none	none	no	no
La Galeota	not available	not available	not available	None	none	no	no
Los Porqueros	not available	not available	not available	None	none	no	no
Aratispi	not available	1	hut	two stone walls associated to a hut; the first is 65 cm wide, presented 4 rows of stone and was made with medium-sized stones linked with mud mortar; the second had a preserved width of 50 cm and only two rows of stones	none	no	no

SITE	SIZE	NUMBER OF STRUCTURES	DESCRIPTION OF STRUCTURES	ABOVE-SURFACE RESIDENTIAL STRUCTURES	WALLED ENCLOSURES	METALLURGY	BELL BEAKER
Huerta del Ciprés	not available	70	negative structures	wall: "wind-stopper" of 5.1 m in length and 1.05 m in width, made of blocks of stones held with mud	none	no	yes
El Castillejo	not available	1	hut	single row of stones of large size held with smaller stones, enclosing a large-sized hut	none	one fragment of straight saw, one fragment of chisel, one drop of copper, three fragments of copper slag, one fragment of crucible and two fragments of copper mineral (malachite on sandstone)	yes?

FIG. 4. *Synthesis of available data for Copper Age settlements in the Lands of Antequera. Descriptions are from the original publications (English translation by the authors).*

covered an area of 124 ha⁷, had the ditch found at this site formed a full circular enclosure, a point as yet unconfirmed⁸. In Alcaide's case, its excavators pointed that it must have housed a small community (Aguado *et al.*, 2002: 371-372), although no data were provided on estimated inhabited area.

In an overwhelming majority of cases, these settlements present only negative features –underground or semi-underground structures–. Among the excavated ones, Arroyo Saladillo stands out with 152 features –although only 125 were excavated–, followed by Huerta del Ciprés –70–, El Silillo –58–, Cortijo Quemado –30–, Alameda –28– and Cortijo San Miguel (20). In all the other excavated settlements –Aratispi, Alcaide, El Castillejo and Peñón del Oso– just a single structure has been identified in each of them. Therefore, 262 Chalcolithic negative features have been identified in the Lands of Antequera to date –the number of them that have been excavated would be a little lower–. These counts cannot, however, be taken directly as an indication of settlement size. Firstly, the sites with the highest count

⁷ Paper presented by L. E. Fernández Rodríguez and M. Cisneros in the *3rd Andalusian Prehistory Congress* (Antequera, 23-25 October 2014), entitled "Aportaciones de la arqueología preventiva al conocimiento de la Prehistoria Reciente en Antequera: Arroyo Saladillo y Huerta del Ciprés (Antequera, Málaga)".

⁸ Fernández Rodríguez y Cisneros, *op. cit.* n. 3.

of identified structures are clearly those that have been excavated across a larger area in the context of major public works projects –especially railways–. Therefore, the number of identified structures cannot be interpreted directly with regard to the size –or hierarchical status– of each settlement. Secondly, given the crippling limitations of the available radiocarbon chronology, there is no way of knowing the extent of the diachronic changes each site underwent throughout the Late Neolithic and Copper Age. In fact, from an assessment based on the study of material culture, several sites have been interpreted by their excavators to have been in use for long periods of time. Therefore, any extrapolation of the number of identified structures in terms of the settlement size –or population– would be, in all probability, inaccurate. Although they are still rather insufficient, what these data do suggest is that the Antequera plain was fairly densely populated in the Copper Age, and that both small and large communities must have existed.

With regard to their intrinsic characteristics, despite the large number of excavated Chalcolithic structures (Fig. 4), there are very few references to above-the-surface architecture. The only published references are as follows:

- Aratispi: two small walls of 4 and 2 rows of medium-sized stones, which would have been part of a hut.

- El Castillejo: a large hut enclosed by a one course of fairly large stones secured with smaller stones.
- Huerta del Ciprés: a 5.1 m-long and 1.05 m-wide stone wall made of blocks of masonry worked with mud and described as a “parapet”, given it did not seem to close up on itself, forming an enclosure.

The structures found in Alcaide, Aratíspi and Peñón del Oso are described as “huts”, with hardened mud floors and lumps of mud imprinted with marks of vegetable material that could have been part of walls and roofs made of foliage and sun-dried mud coating. According to its excavators, in light of this evidence Aratíspi would have been a stable open-air settlement (Perdiguero, 1990: 67), but in fact the evidence to go by is very limited. In La Capellanía, huts built from stone and mud have been described for the “Middle Chalcolithic” occupation phase, as opposed to the unstable structures –made from perishable materials– characteristic of the “Early Chalcolithic” period, but no specific information has been published.

Generally speaking, aside from these cases, the vast majority of the Chalcolithic structures found in the Lands of Antequera are underground structures or pits, generally of small size (Figs. 5-8). A host of different –and sometimes multiple– functions have been attributed to these structures: storage, combustion, dumping, dwelling, structured deposition, etc. Although material culture clearly connected with domestic or residential activities –such as stone querns, loom weights, ceramic vessels and lithic artefacts as well imprinted lumps of mud perhaps resulting from hut architecture– is often found inside these pits, in light of their morphology very few

of them could be described as dwellings. That these structures have remains or utensils from domestic activities does not necessarily mean that they would have been used as dwellings themselves, as more often than not their morphology, size and physical conditions are totally inappropriate for such a purpose –for an extended discussion of this issue in the context of Late Neolithic and Chalcolithic southern Iberia see Jiménez and Márquez, 2008: 47–.

The scarcity of above-the-ground stone architecture, and the fact that it is highly unlikely that the majority of the underground structures could have served as dwellings, suggests that a good part of the residential architecture used in the 4th and 3rd



Fig. 5. *Alameda: negative structures* (photograph: J. E. Márquez Romero).



FIG. 6. *El Silillo: Structure 5 after excavation* (source: Fernández Rodríguez et al., 2014).

millennia BCE in the region must have been light and made of perishable materials, with residential

units that were not particularly large in size. The absence of alignments of post holes that could be interpreted as palisades, fences or foundations for larger dwellings, points to a similar conclusion. Although future investigations may change this picture, the currently available evidence suggests more attention must be paid to practices of residential mobility, seasonality and abandonment in the formation of the archaeological record of the 4th and 3rd millennia BCE in the Lands of Antequera.

A good example of this is Cortijo de San Miguel a site which, in view of the light nature of the structures detected and of the absence of significant domestic infrastructures, was described by its excavators as a



FIG. 7. *Huerta del Ciprés: general view of Trench 2 after excavation* (photograph: M. I. Cisneros García).



FIG. 8. *Huerta del Ciprés, Structure 61 (photograph: L. E. Fernández Rodríguez).*

seasonal camp used between spring and summer by a semi-sedentary community (Fernández Rodríguez *et al.*, 1996: 52-53). Another example is Huerta del Ciprés, located in a low-lying and probably floodable location which, according to its excavators was not very well suited for permanent occupation (Cisneros, 2013: 205). As for Las Palomas caves, its Chalcolithic frequentation is believed to have been decidedly seasonal or sporadic (Ferrer and Fernández Ruiz, 1987: 7).

From a macro-spatial perspective, the nearest neighbour analysis shows a concentrated occupation pattern (Fig. 9), statistically significant at a 0.01 significance level –there is a less than 1 in 100 chance that the concentrated patterns are random–. Upon applying Ripley's κ test, the Copper Age site distribution displays –in contrast to the Neolithic and

or whether it is determined by the way the data have been obtained through archaeological excavation and survey.

AVERAGE OBSERVED DISTANCE	AVERAGE EXPECTED DISTANCE	NEAREST NEIGHBOUR COEFFICIENT (R)	Z COEFFICIENT
1095.97	1583.19	0.69	-9.67

FIG. 9. *Results of Nearest Neighbour Coefficient analysis and significance testing for the distribution of Copper Age sites at the Lands of Antequera. The z coefficient is a measure of statistical significance indicating whether the nul hypothesis is rejected or not; in the case of a significance level of 0.01 the z coefficient must be inferior to -2.58 to reject the nul hypothesis.*

Fig. 11 shows the density maps of the Chalcolithic sites in the region, using different radii of calculation. In the case of the kernel density calculations, given this situation is an anomaly inasmuch as the statistically significant and standard radii coincide – $r = 28$ km–, it was decided that this distance would be reflected in the kernel density calculation, complemented by an exploration of the behaviour of the

Bronze Age ones– a total correlation between the statistically significant radius and the standard radius of a concentrated pattern (Figure 10). This suggests there is a statistically significant concentrated distribution in radii below 28 km, which also coincides with the maximum number of sites occupied in the Lands of Antequera throughout Late Prehistory. It is much more difficult to know whether this pattern reflects a cultural phenomenon that was effectively intrinsic to the local communities during the 3rd millennium BCE

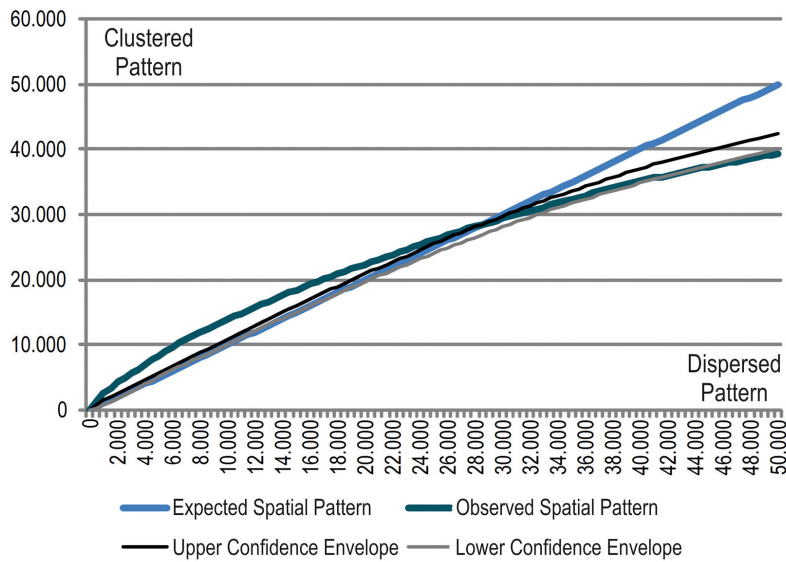


FIG. 10. Ripley's K for the distribution of Copper Age sites in the Lands of Antequera.

occupation intensity through calculations with different radii –10 km, 15 km, 20 km and 25 km– (Fig. 11). The first of the figures (Fig. 11a) shows how the sites are most concentrated in the south-eastern section of the Lands of Antequera, especially in the most westerly part of the Campo de Cámara corridor. Nevertheless, there are various other sections with high levels of occupation in the western side of the Lands of Antequera and in some secondary clusters, which are not particularly significant at this radius of calculation, spread across a large part of the area of study.

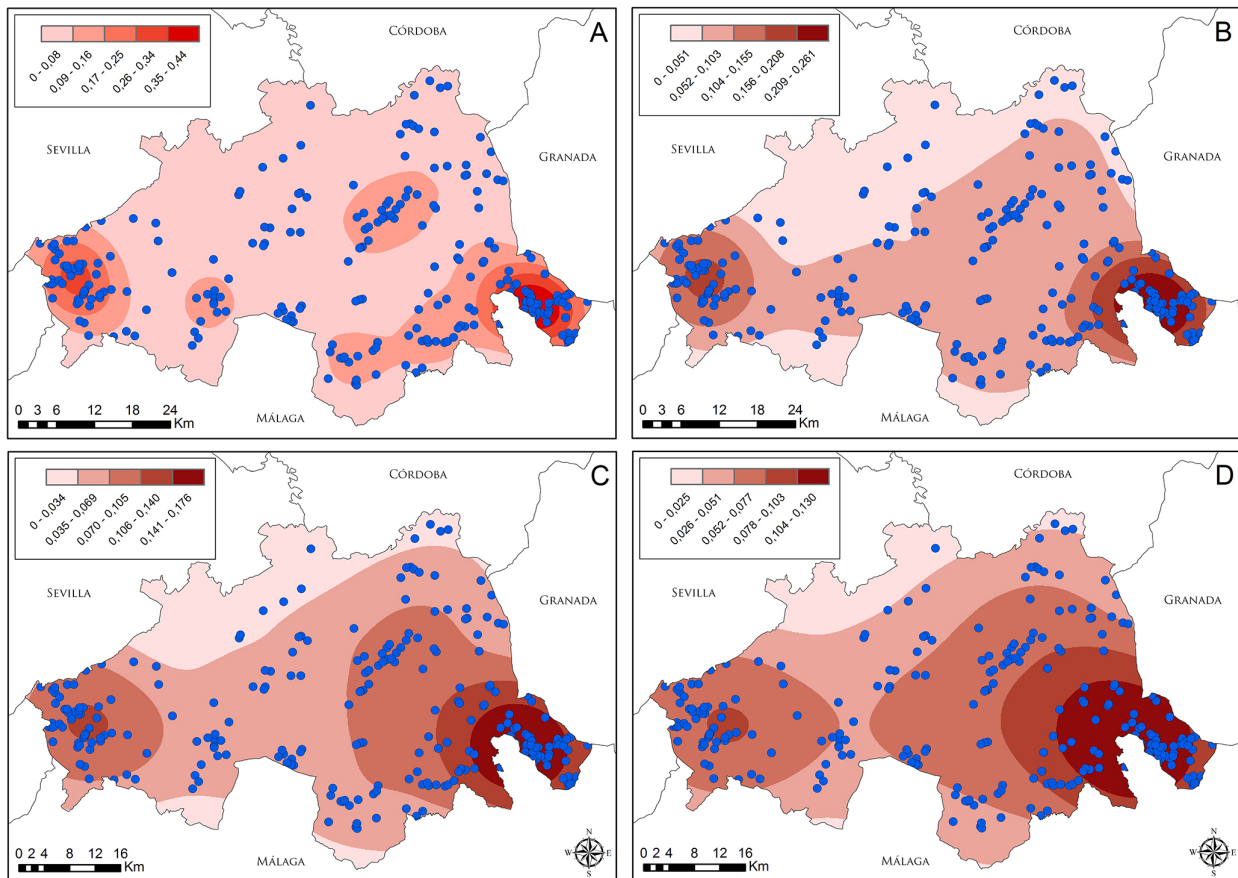


FIG. 11. Kernel densities for the distribution of Copper Age sites in the Lands of Antequera; A) $r = 10$ km; B) $r = 15$ km; C) $r = 20$ km; D) $r = 25$ km (density in number of sites per km^2).

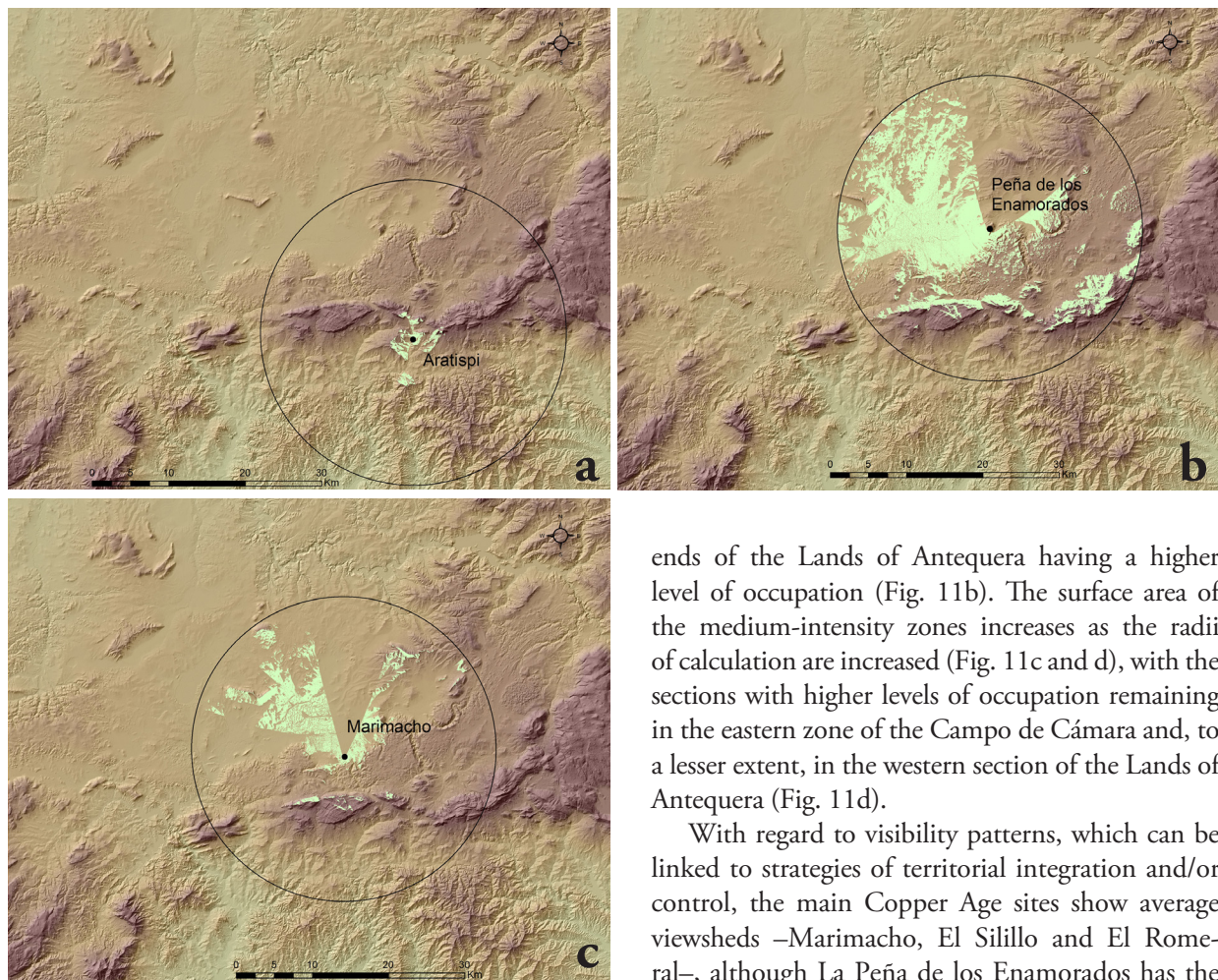


FIG. 12. *Viewsheds of some of the Copper Age sites discussed in the text: A) Aratispi; B) La Peña de los Enamorados; c) Marimacho.*

Some of these areas with quite a high level of occupation appear to be unique when lower search radii are used in the density calculation: using a distance of 10 km, the clusters stand out across the entirety of Campo de Cámara, in the most westerly section of the Lands of Antequera, in the area currently occupied by the Guadalhorce and Guadalteba water reservoirs and in the central zone between Antequera and Archidona, with many other smaller clusters outside of these areas with higher levels of occupation. When the radius is lengthened to 15 km, all these areas are included in a region with a medium-to-low level of density, with only the eastern and western

ends of the Lands of Antequera having a higher level of occupation (Fig. 11b). The surface area of the medium-intensity zones increases as the radii of calculation are increased (Fig. 11c and d), with the sections with higher levels of occupation remaining in the eastern zone of the Campo de Cámara and, to a lesser extent, in the western section of the Lands of Antequera (Fig. 11d).

With regard to visibility patterns, which can be linked to strategies of territorial integration and/or control, the main Copper Age sites show average viewsheds –Marimacho, El Silillo and El Romeral–, although La Peña de los Enamorados has the largest viewshed in the region –23.7%– (Figs. 12–15). There does not seem to be a particularly well defined pattern in the orientation of the viewsheds: the Menga, Viera and El Romeral megaliths have viewsheds essentially facing NE and NW, whilst high-ground settlements, such as La Peña de los Enamorados and Aratispi, display pseudo-circular viewsheds. In terms of inter-visibility relationships, considering viewsheds generated for a 20 km visibility radius and a 5 m observation offset, the three large megalithic monuments turn out to be visible from one another, sharing over 60% of their viewsheds, which is to be expected given how close they are to one another, whilst Marimacho and El Silillo, located more than 10 km away from one another, cannot be distinguished from each other, although they share around 15% of each other's viewshed (Fig. 14).

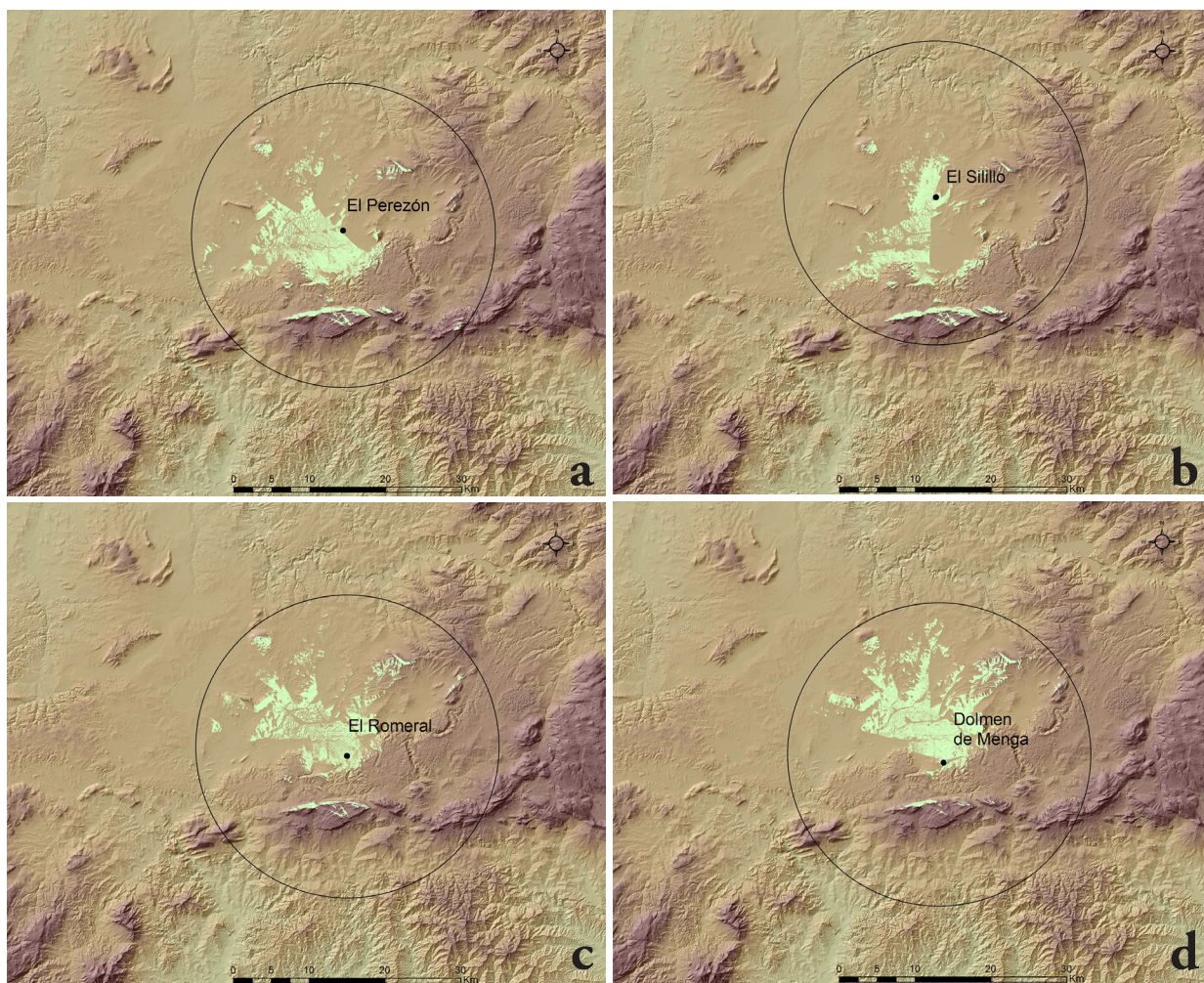


FIG. 13. *Views of some of the Copper Age sites discussed in the text plus Menga: A) El Perezón; B) El Silillo; C) El Romeral; D) Menga.*

To summarise, the settlement dynamics of the Lands of Antequera in the late 4th and throughout the 3rd millennia BCE seem to have included a number of sizeable settlements, such as Arroyo Saladillo, Huerta del Ciprés, Marimacho and La Peña de los Enamorados within a 90-minute isochrone, whilst slightly further north there would have been sites such as El Silillo and possibly El Perezón (Figs. 16-18). According to the date compiled for this paper (Fig. 4), the low profile of their residential and domestic architecture and the absence of major labour investments—such as large walled enclosures like those known of in the neighbouring provinces of Almería and Granada—, suggests that some Late

Neolithic and Copper Age settlements may have been periodically abandoned due to residential mobility linked to factors such as soil depletion, fluctuations in the availability of water resources, demographic crises, or others⁹. The availability of fresh water in particular may have been an issue for the early sedentary communities of the Lands of Antequera, as the region is full of salty water streams and lakes, as reflected even on today's toponymy (Fig. 19). Difficulty in the access to drinking water,

⁹ Site abandonment may result from other social and economic causes—see discussion in Horn, 1996 and Nelson, 2000—.

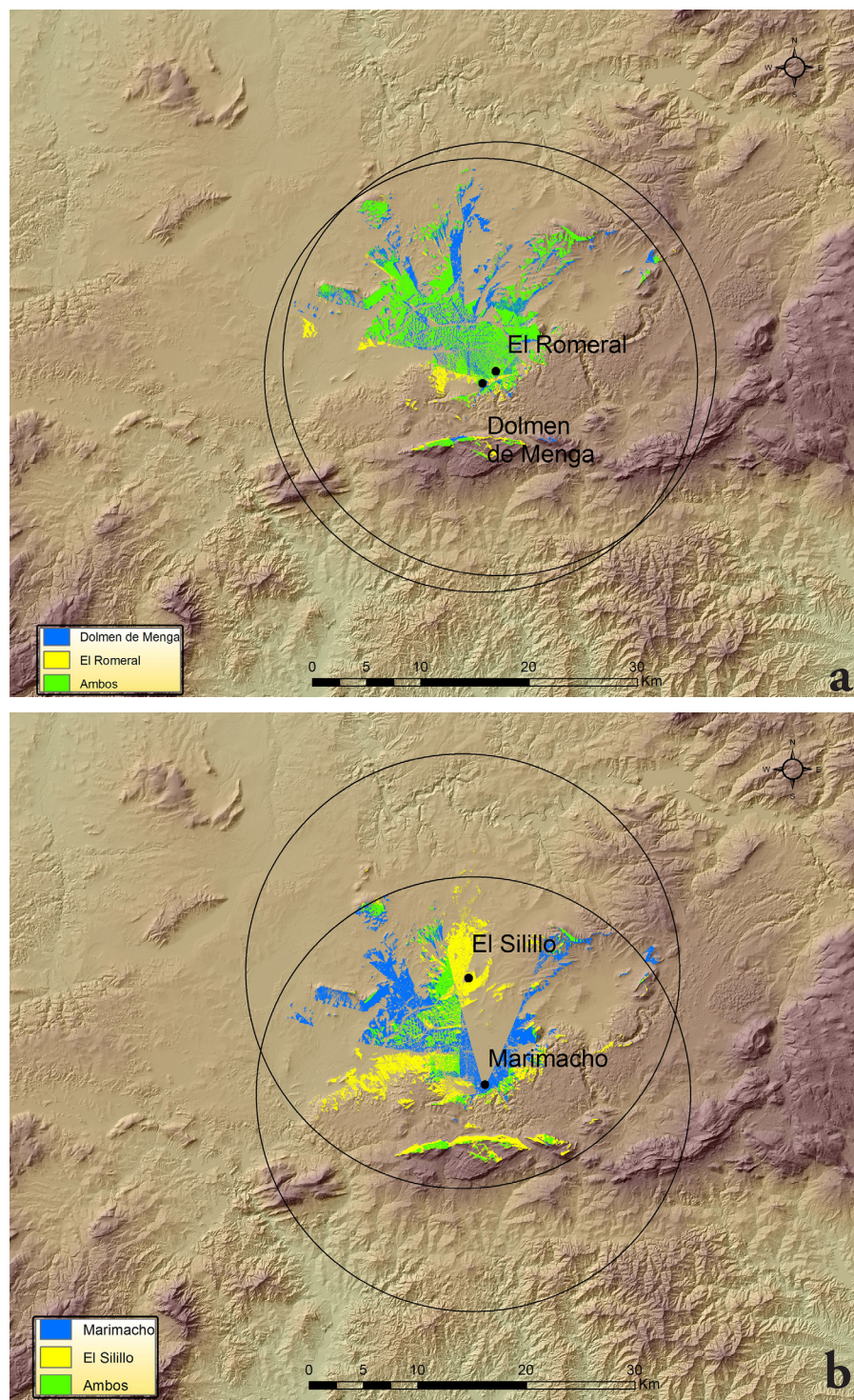


FIG. 14. *Combined viewsheds of some of the Copper Age sites discussed in the text plus Menga: A) El Romeral and Menga; B) El Silillo and Marimacho.*

further complicated with the natural rainfall fluctuations in a Mediterranean region, may be connected to the fact that an extraordinary Neolithic monument such as Menga has a 20 m deep shaft reaching towards fresh water.

The general lack of substantial residential architecture is in stark contrast with the presence in the region of what perhaps is the most formidable Copper Age megalithic monument ever built in Iberia: El Romeral tholos. It is unlikely that a monument of such magnitude and significance, located at a very short distance from all these settlements –at most 2 hours by foot– would have been built unless a significant demographic contingent lived in the region. El Romeral may have played a central role in the lives of the Copper Age communities of the Antequera plain, just like, presumably, Menga and Viera had done for the Late Neolithic communities –and perhaps also for the Copper Age ones–.

4. Social Dynamics

4.1. Subsistence Economy

With regard to agriculture, no archaeobotanical study has been published for any of the 21 excavated Chalcolithic sites, the only available evidence being indirect in character. The excavators of Aratíspi and El Castillejo highlighted the importance of cereal agriculture based on the discovery of lithic tools such as blades, fragments of sickle with polished edges and abundant grinding tools (Perdiguero, 1990: 67; Fernández Rodríguez and Rodríguez Vinceiro, 1995: 68). The excavators

suggested that the pits found at Cortijo de San Miguel were silos that had later been used to dump domestic refuse (Fernández Rodríguez *et al.*, 1996: 52). The study of La Capellanía revealed a remarkable number of large-sized jars, which were thought to be storage containers connected with the intensification of agricultural production (Martín Córdoba and Recio, 2004: 348). Similarly, in the 27 underground structures identified and excavated at Huerta del Ciprés, a large number of grinding tools were found, which, according to the excavators, suggests that this site could have been used agricultural processing (Cisneros, 2013: 259-261).

SITE	VIEWSHED (HA)	VIEWSHED (%)	PREVAILING ORIENTATION OF VIEWSHED	MAXIMUM EXTENT OF VIEWSHED (M)
La Peña de los Enamorados	29750	23.7	NW, SW and SE	20000
Menga	11921	10.5	NW	19000
El Perezón	10273	9.1	SW	19000
El Romeral	9377	8.3	NW	19000
Marimacho	8343	8.6	NE y NW	20000
El Silillo	8088	6.4	S	18500
Aratíspi	1047	0.8	NW, SW and SE	6500

FIG. 15. *Viewshed parameters for a selection of Lands of Antequera Copper Age sites (plus Menga).*

Generally speaking, this indirect evidence has been taken to point to a greater productive capacity and more intensive agriculture in the Chalcolithic compared to the Neolithic period. In reality, however, such evidence is very ambiguous. The pits thought to be silos have not been studied from a geo-chemical, sedimentological or archaeobotanical perspective: it is far from clear whether those pits and their infill were formed as a result of the abandonment and re-filling of silos, or as a result of practices involving structured deposition; the lithic sickle blades with cereal lustre could have been used to reap wild plants; the grinding utensils could have equally been used for grinding wild nuts, fruit, etc. Therefore, in order to evaluate the nature and scope of agricultural production in the Lands of Antequera in the 3rd millennium BCE the most sensible thing to do is to wait until there are direct quantifiable and reliable archaeobotanical data that allow

generalisations about productive scales and agricultural intensification.

In fact, the same can be said about animal husbandry. Out of the 21 excavated Chalcolithic sites, only for El Silillo are archaeozoological data available. Very few remains were found at this site, and only 51 of the 259 fragments could be identified, which gives a total MNI of 10 (Fernández Rodríguez *et al.*, 2014b). The domestic animals present include cows, sheep and pigs, but in such small quantities that they are not statistically significant. Of the other excavated sites, relatively generic evaluations of the identified fauna have been published, but there are no concrete quantitative data. Abundant ovicaprid, and to a far lesser extent suid and bovid remains, were found in Alameda (Márquez *et al.*, 1999: 184-186). In El Castillejo, excavators noted significant livestock activity, which mainly involved ovicaprids and, to a lesser extent, bovinds as well as

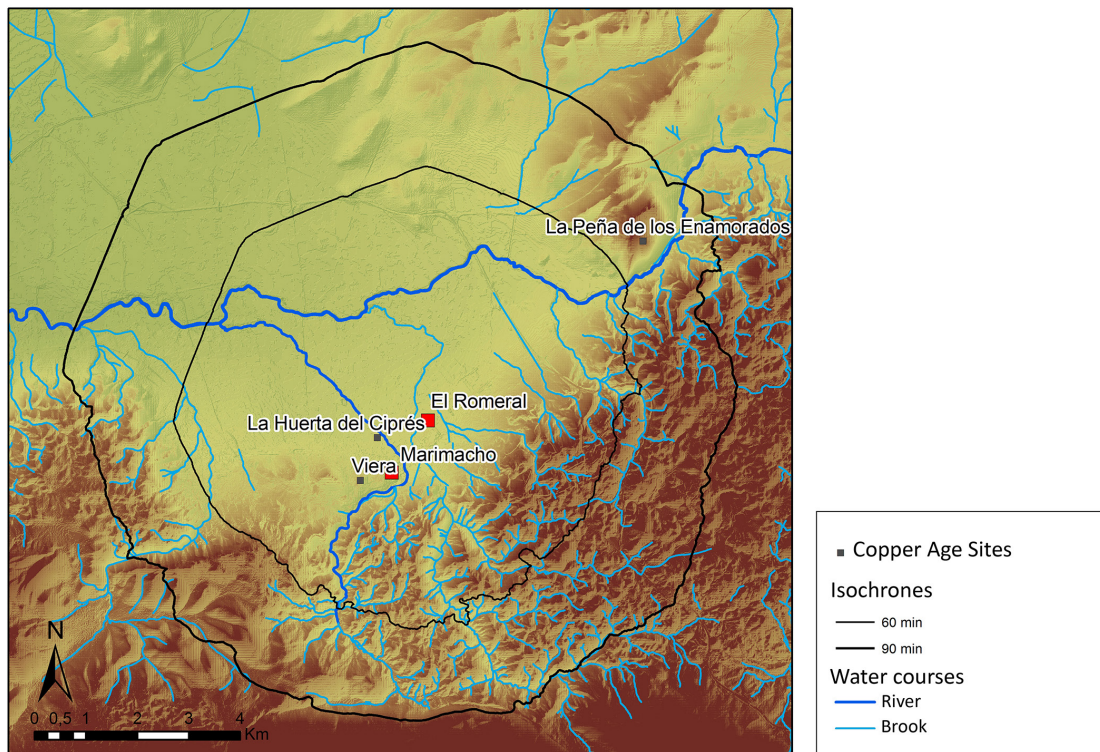


FIG. 16. *El Romeral isochrone areas.*

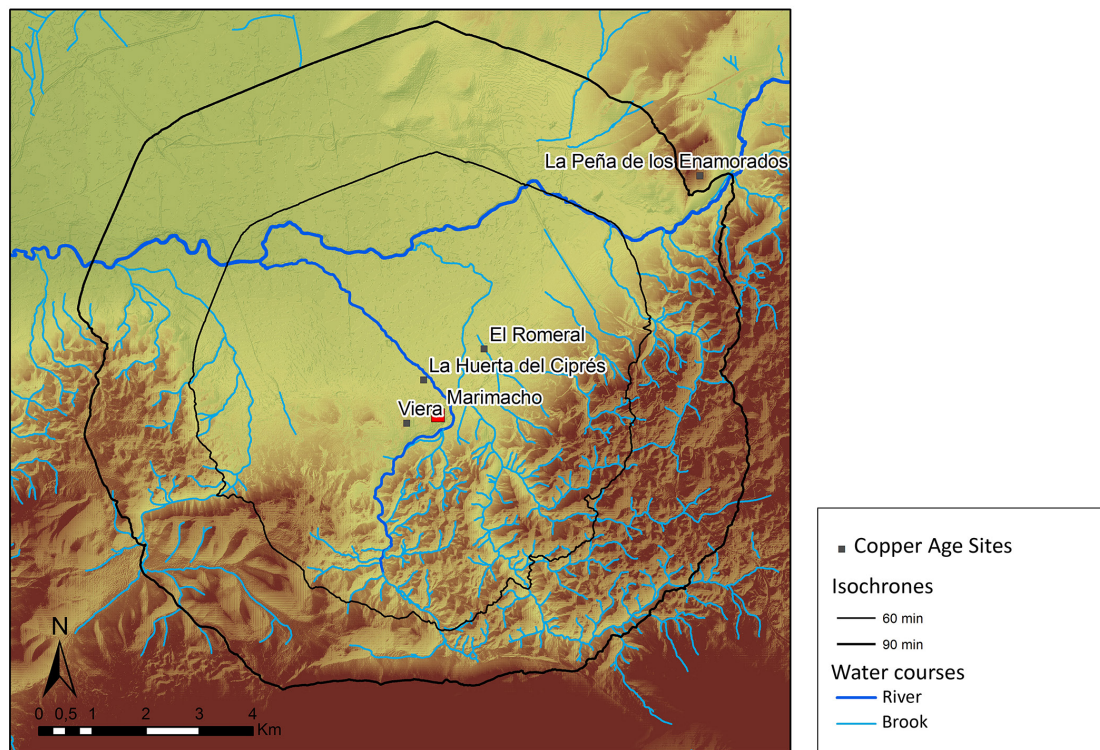


FIG. 17. *Marimacho isochrone areas.*

an abundance of suids in the lower levels (Fernández Rodríguez and Rodríguez Vinceiro, 1995: 68). Livestock farming (mainly sheep, pigs and, to a lesser extent, cows) was considered to be the main basis for subsistence during La Capellanía's "Middle Chalcolithic" phase (Martín Córdoba and Recio, 2004: 346); the faunal remains cited for Cortijo de San Miguel include bovids and ovicaprids, as well as a fair amount of bones of small canids (Fernández Rodríguez *et al.*, 1996: 52); in the unpublished report on Arroyo Saladillo, a large amount of domestic faunal remains are cited, especially in the trench infill, with bovid mandible remains, as well as long bones and ribcage remains, but ovicaprid and suid remains also being collected¹⁰; in contrast, the amount of domestic animal remains found in Huerta del Ciprés was very small, with scant remains of ovicaprids, pigs and possibly some type of equid (Cisneros, 2013: 313).

There is substantial evidence of a significant land mammal-hunting economy in almost all the sites excavated. In El Silillo, the wild fauna would have consisted of deer and possibly horses; in El Castillejo bones from wild boar and deer, among others, were found (Fernández Rodríguez and Rodríguez Vinceiro, 1995: 68); there was a significant percentage of adult deer in La Capellanía in the "Middle Chalcolithic" phase (Martín Córdoba and Recio, 2004: 346); and the wild fauna hunted by the Arroyo Saladillo inhabitants included deer, wild boar and birds¹¹.

There are also numerous examples of the presence of marine molluscs, most probably originating from the coast of Málaga. Wedge clam shells were found in El Castillejo (Fernández Rodríguez and Rodríguez Vinceiro, 1995: 68); limpet and wedge clam shells were discovered at Cortijo San Miguel (Fernández Rodríguez *et al.*, 1996: 52); it seems there was scant malacofauna in Arroyo Saladillo, although a perforated marine shell bead –*Conus*

mediterraneus– was counted amongst the findings¹²; samples of river and marine malacofauna were collected in Huerta del Ciprés (Cisneros, 2013: 313).

Of course, both domestic and wild animals served to provide raw materials for a wide range of products for which there is scant archaeological evidence –horns, bones, leather, skins, etc.–. At Huerta del Ciprés small fragments of ivory –perhaps debris from a manufacturing process– were found (Capel *et al.*, 2014), which is a rare find in the Lands of Antequera, adding to recent studies that have shed light on the circulation and use of this exotic raw material during the 3rd millennium BCE in southern Iberia.

4.2. *Exploitation and Exchange of Abiotic Resources and Copper Metallurgy*

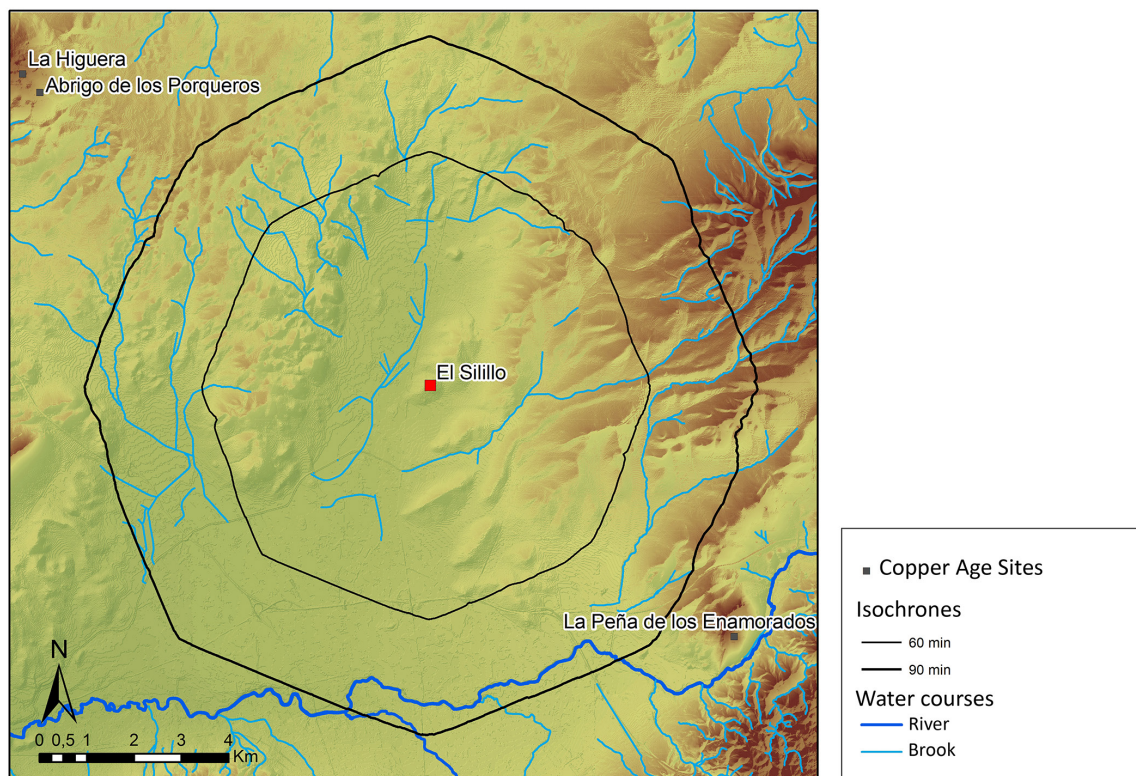
Aside from subsistence production, an important economic and social feature of the region's Chalcolithic communities was the exploitation, processing and exchange of abiotic resources –in particular, flint and copper–.

Flint was obtained and processed at a number of sites. At Peñón del Oso, where a siliceous outcrop is available some 300 m away, evidence was found of the processing of assorted, generally low quality flint. The techno-morphological study of a collection of items from this site suggested that the processing of flint may have been specialised in the manufacture of sickle elements (Márquez, 1998: 290 and 295; 2004: 278). Also in the case of Alcaide a connection was made with a flint quarry located on the western slope of the neighbouring Loma del Viento (Márquez and Marqués, 1997; Aguado *et al.*, 2002: 261). The studies on surface materials conducted on several sites in the Ardales area also indicate there were flint quarries and processing locations: this is the case with Castillo del Turón, thought to be a major workshop associated with a large outcrop of this raw material (Ramos *et al.*, 1986: 98) and La Galeota (Ardales), described as a 'quarry facies' flint workshop (Espejo Herrerías

¹⁰ Sánchez Voigt, L. (2014): *Intervención arqueológica de urgencia en el yacimiento Arroyo Saladillo, Málaga. Memoria Final*. Málaga: Taller de Investigaciones Arqueológicas SL, unpublished report, pp. 51-52.

¹¹ Sánchez Voigt, *op. cit.* n. 12, pp. 51-52.

¹² Sánchez Voigt, *op. cit.* n. 12, pp. 50-52.

FIG. 18. *El Silillo* isochrone areas.

and Cantalejo Duarte, 1990: 39-40). The knapped flint tools recovered from the two underground structures –a pit and a ditch– recently discovered at Marimacho have been linked to the flint of the Late Jurassic period in the External Zones of the Baetic System (García González *et al.*, 2014: 252).

Artefacts made of rare and exotic stone have been found at a small number of sites at Lands of Antequera. Fibrolite axes were identified in the funerary contexts of Tajillo del Moro and Cerro del Comandante, as well as in El Toro cave –although in this instance of more likely Neolithic chronology– (García González, 2014: 413). Evidence was found indicating that red pigments were ground up in both Arroyo Saladillo and Huerta del Ciprés, including a red-stained quern in the former and a possible ingot of red pigment in the latter (Cisneros, 2013: 268). Personal objects and body ornaments made of rare stones have also been documented in some sites. A green quartz bead and two smoky quartz monocrystals were found in Huerta del Ciprés

(Cisneros, 2013: 296-300). Mergelina (1922: 88) mentioned an “obscure polyhedral shard of glass”, now lost, among the findings from the Viera dolmen a piece that, in light of the drawing provided by Mergelina himself, was very probably a prism of quartz or rock crystal (Costa *et al.*, 2011: 267)¹³, although it is impossible to say whether the piece was deposited in the megalith in the Neolithic period, the Copper Age, the Bronze Age or even later.

The presence of rocks such as flint, fibrolite and others show that the communities of the 4th and 3rd millennia BCE in the Lands of Antequera exchanged their resources with other southern Iberian regions. Various studies have linked the siliceous raw materials of sedimentary-diagenetic origin that came from the Baetic mountains in Málaga with blade technology identified in the Los Millares necropolis (Almería) (Lozano *et al.*, 2010: 293; Afonso *et al.*, 2011: 311,

¹³ M. J. Walker (1995: 123) included this piece among the possible faience or vitreous paste-related prehistoric finds of southern Spain.

fig. 9), which suggests the existence of long-distance networks for the exchange of these raw materials. The presence of ivory, fibrolite and rock crystal puts Lands of Antequera in line with the intensification of exchange dynamics that occurred in southern Spain in this time period (Costa *et al.*, 2011).

With regard to metallurgy, evidence of copper mineral processing has been found at six of the 16 settlements and two of the six burial sites excavated in the Lands of Antequera. A total of 13 metallic objects –or fragments of objects– can be dated to the Copper Age in the Lands of Antequera. This count excludes the finds from La Peña de los Enamorados¹⁴, which lack known contexts, and the punch from Viera, for whose chronology there is no reliable evidence either. Overall, considering the size of the region under study, the large number of sites excavated and the long time period evaluated –around a thousand years–, it is clearly a small tally. Remains of copper mineral processing have only been identified at El Silillo and El Castillejo. The sites with a greater number of excavated structures, such as Arroyo Saladillo, Huerta del Ciprés, Alameda, Cortijo Quemado and Cortijo de San Miguel have not yielded metallic objects nor traces of metallurgy, which is partly connected to the fact that they witnessed intense occupation during the pre-metallurgical Late Neolithic.

4.3. Monumentality and Burial Practices

A number of funerary constructions found in the Lands of Antequera have been dated to the Copper Age. Apart from the Viera dolmen and the artificial caves of Alcaide, in all other cases no radiocarbon dates support this chronological attribution –and even in the case of Alcaide the available dates are not particularly helpful–.

¹⁴ According to the information published, two rivet daggers, a punch with a quadrilateral section and more than a dozen fragments of other metallic items as well as a crucible were found at La Peña de los Enamorados (Rodríguez Vinceiro *et al.*, 1992: 227). It is not known whether these materials are from the Copper Age or the Bronze Age, a period during which this major archaeological site was also occupied.

El Romeral is undoubtedly the most majestic monument attributed to the 3rd millennium BCE in the Lands of Antequera. The largest tholos known in Iberia, El Romeral consists of a 26.5 m-long and 1.5 m-wide access corridor made of stone masonry and megalithic capstones, a main chamber built through corbelling with a diameter of 5.2 m and a maximum height of 4 m, and a 2.3 m-wide and 2.4 m-tall secondary chamber, separated from the previous one by a short corridor raised around 70 cm above ground level (Fig. 20). Unfortunately, almost nothing is known of this monument which has never been studied using modern scientific methods. The description published by M. Gómez-Moreno (1905: 91-92), the earliest available and the closest to the moment of its discovery, does not provide sufficient details to know how El Romeral was used during the Copper Age.

Viera was also used or frequented during the Copper Age, as recently proven by a radiocarbon date (Aranda *et al.*, 2013). Just like El Romeral, when it was discovered in 1903, Viera was rather devoid of findings. The small collection of materials attributed to this megalith currently held in the Museum of Málaga, includes an 8 cm-long copper punch or awl, a handmade pottery recipient (bowl), a fragment of handmade rough pottery, 12 lithic blade utensils, two polished axes, a stone with a concave cavity –possibly resulting from it being used for grinding– and two animal bone fragments –one of them being a fragment of horn–. Several of these materials were published in G. and V. Leisner's summary (1943: 182-185 and plate 58). The copper punch or awl could mean the monument was used during the Copper Age, though identically shaped punches are also common in the Early Bronze Age.

Other megalithic monuments, far smaller than El Romeral and Viera, were built or frequented during the Copper Age. This is the case of Chaperas 1 (Marqués, 1979), Chaperas 2 (Marqués *et al.*, 2000) and Tajillo del Moro (Ferrer *et al.*, 1980), located in the municipality of Casabermeja (Málaga). The approximate chronology of use of these three megaliths was established by their excavators through the

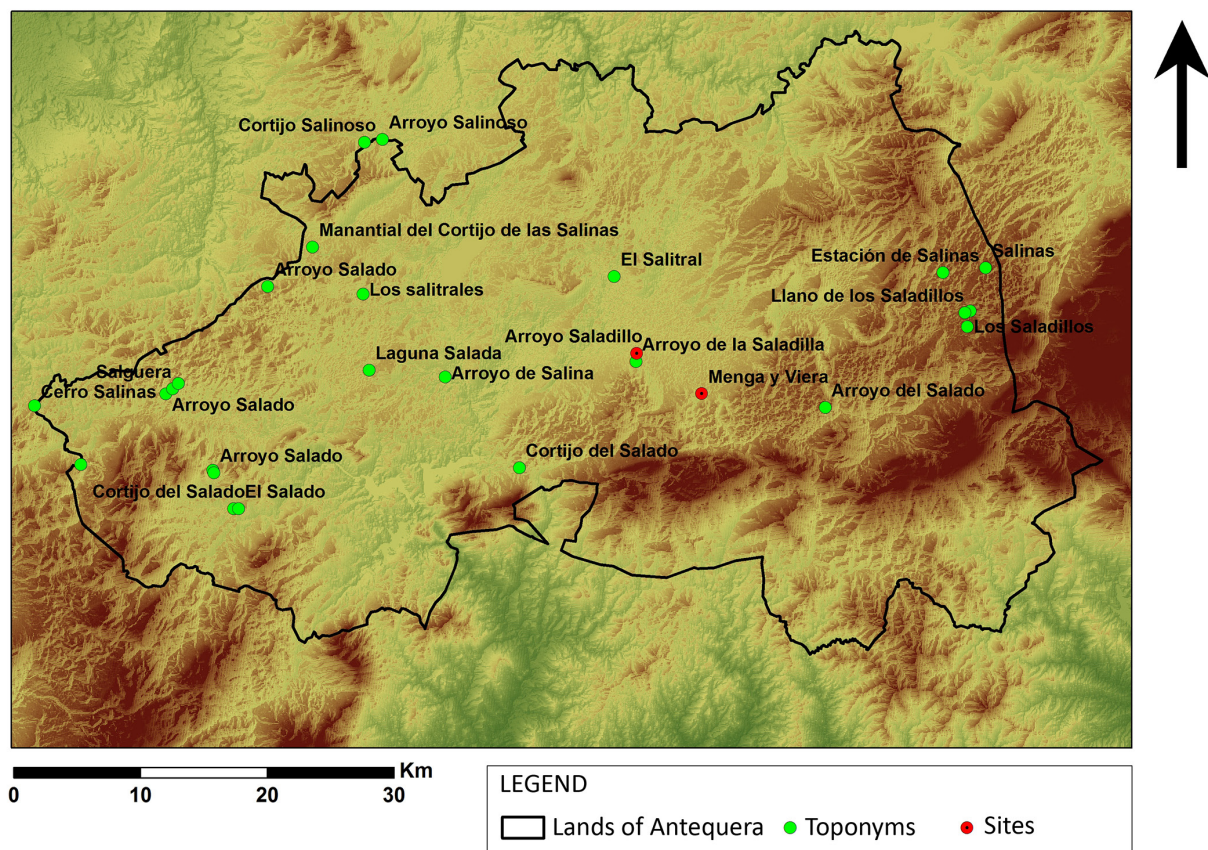


FIG. 19. *Lands of Antequera toponyms referring to salty water.*

study of material culture, as no radiocarbon dates exist. In all three cases, highly fragmented human

remains were found in secondary position, which suggested to the excavators that they had been part of sequential primary or collective secondary burials –no anthropological study into these remains has been published–.



FIG. 20. *El Romeral: Corridor (photograph: M. Á. Blanco de la Rubia).*

Together with the megalithic monuments, there are a significant number of Chalcolithic funerary deposits in rock-cut –hypogea– tombs. The best known of them is the Alcaide necropolis, where 21 hypogea structures excavated in the Miocene sandstone are currently known, to which two smaller pits can be added. The chronology of these structures spans both the Copper Age and the Bronze Age (Marqués *et al.*,

2004: 252; Marqués and Aguado, 2012: 41, 45 and 52; Tovar *et al.*, 2014). Therefore, this is a similar case to that of the great megalithic monuments of Menga, Viera and El Romeral, in that it is not immediately obvious which part of the burial practices correspond to the Copper Age and which part to the Bronze Age. In any case, a recent review by the excavators themselves suggests that the finds of tombs n.º 7 –previously numbered 12–, 9, 14 and 15 and the two pits –referred to as A and B– are of Bronze Age date, whilst the others showed signs of use in the Copper Age (Tovar *et al.*, 2014).

The rescue excavation carried out in Marimacho in 1997 brought about the discovery of two rock-cut chambers. An individual inhumation found at the base of one of them was associated with some pottery that the excavators considered “of very little significance” (Marqués *et al.*, 2004: 246).

As well as the megalithic monuments and rock-cut tombs, a significant amount of Copper Age

funerary activity took place inside natural caves. This is evidenced at La Curra cave –also known as Los Murciélagos–, in Carratraca, a 48 m cavity with two vertical shafts 14 and 6 m in depth respectively. The biggest concentration of human remains can be found at the base of the second shaft and in the subsequent gallery and it includes also pottery, knapped lithic tools, polished stone and ornamental objects –three necklace beads and a pendant made from a shell– (Sanchidrián, 1985: 230). In the walls and speleothems surrounding these deposits, there are traces of red and black paintings, of which the only distinguishable motif is an anthropomorphic motif.

Also, in upper galleries of the Ardales cave evidence has been found of its use as a funerary space, with numerous secondary burials, small stone enclosures and hand prints (Cantalejo and Maura, 2015) (Fig. 21). This material has not been subject to any monographic study as yet, but a radiocarbon



FIG. 21. Ardales cave: human remains from Galerías Altas (photograph: Pedro Cantalejo Duarte).



FIG. 22. *Arroyo Saladillo: burial 90 (photograph: L. E. Fernández Rodríguez).*



FIG. 23. *Arroyo Saladillo: burial 95 (photograph: L. E. Fernández Rodríguez).*

the 3rd millennium BCE (Re-themeyer, 2014).

The last set of known funerary practices in the Lands of Antequera Copper Age is pit burials. This practice has been extensively documented at Arroyo Saladillo, where several instances were identified, including pits number 20, 72, 86, 90, 94, 95 and 107. In pits 72, 86 and 107, the individuals were buried in the foetal position. In structure 20, two infants were identified in a “stretched out or slightly bent” position, one of which –possibly female– was associated with an adze, a bone punch and unidentified animal remains¹⁵. In structure 72 a subadult individual –of unspecified sex– was found under the remains of a what was possibly a small tumulus, associated with an entire sheep or goat skeleton, as well as other faunal bone fragments, lithic tools, pottery and grinding stones¹⁶. In structures 90, 94 and 95, individual pit burials were discovered in a line parallel to the pit, inside the inhabited area. In structure 90, which was covered by a small cairn made of pebbles and stone blocks of varying sizes, including a large block of limestone, an individual burial was found (Fig. 22). This individual had been laid on their left-hand side, very curled up, with no grave goods – although pieces of ochre were found near the head and upper

date recently obtained suggests that some of this funerary activity could have taken place during

¹⁵ Sánchez Voigt, *op. cit.* n. 8, p. 62.

¹⁶ Sánchez Voigt, *op. cit.* n. 8, p. 62.

extremities. In structure 94, which was made of large slabs and completely covered by a subcircular tumulus made of pebbles and blocks –its excavators wondered whether it should be considered ‘proto-megalithic’– an individual had been laid on their left-hand side, on a crouched position, again with no grave goods, although pieces of ochre were also recovered near the head and upper extremities¹⁷. Lastly, in structure 95 (Fig. 23), which was also covered by a cairn made of pebbles and blocks of varying sizes, an individual burial was found where the individual had been laid on a crouched position on their left-hand side, with a single grave good consisting of a small ceramic pot which had been placed in their lap. Finally, inside the ditch found at the southern sector of the site, a fractured human femur diaphysis, possibly belonging to a young male individual of short stature, was found, associated with a slate cruciform idol¹⁸.

The small rescue excavation carried out in 2014 in Marimacho led to the finding of human bone fragments within a pit: a very slender, probably pre-adult humerus diaphysis and a skull fragment (García González *et al.*, 2014).

Overall, the available empirical record suggests that Copper Age communities of the Lands of Antequera engaged in a wide range of burial practices which took place against a backdrop of morphological and architectural diversity, from the magnificent El Romeral *tholos*, perhaps the most

majestic Iberian Copper Age megalith, to simple pits, through far smaller megaliths, perhaps built ‘ex novo’ or possibly erected in the Neolithic period and still used during the Copper Age. The use of natural caves like La Curra and Ardales as burial grounds and the significance of the artificial caves, the best examples of which is found in Alcaide, further underline this impression of social and cultural diversity. Unfortunately, the limitations of the radiocarbon chronology and the dearth of anthropological studies make it impossible to approach this range of funerary practices in terms of social complexity, diversity of identities and diachrony.

5. Discussion

As it was stated at the start of this paper, several factors hamper the analysis of the Lands of Antequera during the Copper Age. Inasmuch as the existing data may be somewhat assessed in terms of settlement patterns and social dynamics, it is however possible to attempt some generalisations.

Firstly, with regard to settlement patterns, throughout the 4th and especially at the start of the 3rd millennium BCE, the farming economy seems to have experienced a significant expansion, the local populations acquiring a new capacity for productive intensification. Seen on a diachronic perspective, the spatial-temporal density of the occupation of

PERIOD	SITES IN ARCA	STUDIED SITES (EXCAVATED + SURVEYED)	SITE DENSITY (PER SQ KM)	SITE DENSITY (PER CENTURY)	SITE DENSITY SPACE-TIME
PALEOLITHIC	33	2 (2+0)	0.01	--	--
NEOLITHIC	54	14 (6+8)	0.02	2.34	0.04
COPPER AGE	290	33 (22+11)	0.11	28.70	3.11
BRONZE AGE	180	18 (14+4)	0.06	13.33	0.90
IRON AGE	211	18 (12+6)	0.07	32.46	2.59
ANTIQUITY	956	--	0.36	106.22	38.46

FIG. 24. *Space-time density of sites in the Lands of Antequera (2640 sq km). The standard duration for each period considered is as follows: Neolithic (c. 5500-3200 cal BC): 23 centuries; Copper Age (c. 3200-2200 cal BC): 10 centuries; Bronze Age (c. 2200-850 cal BC): 13.5 centuries; Iron Age (c. 850-200 cal BC): 6.5 centuries; Antiquity: (c. 200 cal BC-700 AD) 9 centuries.*

¹⁷ Sánchez Voigt, *op. cit.* n. 8, p. 63.

¹⁸ Sánchez Voigt, *op. cit.* n. 9.

Lands of Antequera in the Copper Age clearly surpasses that of the Bronze Age and Iron Age, being only second to that of Roman times (Fig. 24). This was reflected in the spectacular development of the megalithic phenomenon, which reached an extraordinary dimension in the Antequera plain: the construction of Menga, probably in the first half of the 4th millennium BCE, Viera –some centuries later?– and the subsequent erection of El Romeral at some point in the 3rd millennium BCE –three monuments of unparalleled magnitude in Iberia– suggest that Late Neolithic and Copper Age communities had the capacity to mobilise significant amounts of labour force and resources, which is consistent with the available –mostly indirect– evidence for agricultural intensification¹⁹.

In terms of settlement strategies, the data summarised in this study show that residential or ‘domestic’ stone architecture is conspicuous by its absence, which, together with other previously described evidence, suggests that the local populations may have had some degree of residential mobility. It is perhaps partly within this context that the grandiose scale of the Antequeran megaliths may be explained: they probably served to bring together communities from local settlements and from further afield, thus acting as focii for social and cultural interaction.

Thus, Lands of Antequera is a good example of the systemic tension existing between the two major defining factors of the settlement strategies of southern Iberian Late Prehistoric societies: proximity to the best land –and water– on the one

¹⁹ Although the lack of a more precise radiometric framework prevent a more precise assessment as far as Antequera is concerned, monumentality in Late Neolithic and Copper Age Iberia –whether in the form of megaliths, ditched enclosures or others– may have resulted from periodic aggregations of people, as suggested by Camino de las Yeseras (San Fernando de Henares, Madrid), a ditched enclosure for which better chronological resolution is available (Balseira *et al.*, 2015: 153). Successive phases of activity may have rendered the construction of large monuments possible for a smaller labour force, which also calls for a better understanding of the connection between monumentality, agricultural intensification and demography.

hand, and optimisation of protection –in terms of topographic accessibility/inaccessibility and visual control of the surrounding area, including pathways and resources– on the other (García Sanjuán, 2011a, 2011b)²⁰. Among Copper Age communities, the prevailing settlement strategies seem to have prioritised proximity to good soils and intermediate topographies (flat or gentle elevations) that did not necessarily optimise defence. To a certain extent, the Copper Age essentially constitutes a continuation of the pattern established in the Late Neolithic –on a larger scale. A high demographic density was reached in the 3rd millennium, possibly including some large open-air settlements, apparently devoid of residential stone architecture. In the Bronze Age, however, after what appears to have been a significant shift around 2200 cal BCE, the relationship between the two major factors explaining the variability of settlement strategies was inverted: defensive strategies became much more important, with higher grounds being preferred to those closer to soils of high agricultural potential and main waterways (García Sanjuán, 2011b: 214–215).

From an economical perspective, the available data do not enable a precise evaluation of the scale of agricultural and livestock production to be made. From the point of view of the exploitation of abiotic resources, production became increasingly complex in the Copper Age, with more specialisation in raw material processing –flint, copper metallurgy and, possibly, ivory–. The increasing economic complexity suggested by abiotic resources is associated with more social complexity, reflected in the very diverse funerary practises –natural caves, artificial caves, megaliths, trenches and pits, etc.–, themselves stemming from the diversity of social and cultural backgrounds and identities.

The investment in religious resources is nowhere better reflected than in grandiose scale of El Romeral, unparalleled within Iberia. El Romeral was probably the response of Copper Age communities to

²⁰ Also see García Sanjuán, L.; Aranda, G.; Carrión, F.; Mora, C.; Lozano, Á. and García González, D. (2016): “La cronología del relleno del pozo de Menga: radiocarbono y cultura material”, *Menga*, 7, forthcoming.

the challenge emanating from their Late Neolithic predecessors in the form of Viera and, specially, Menga. Indeed, in few other Iberian regions is the legacy and power of the Neolithic tradition as evident as it is in the Lands of Antequera. The Antequeran Copper Age shows plenty of evidence of the continuity of the Neolithic legacy. The scope and depth of cultural continuities versus the impending cultural changes seems more pronounced when the most visible social and cultural traits of the Bronze Age communities are considered. The most noteworthy is the significant continuity of the megalithic phenomenon and the apparent absence of ‘argarisation’, which suggests that the powerful Neolithic past, materialised in Menga, continued to exert a great deal of influence throughout Late Prehistory.

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