

The Fortified Settlement of La Picola (Santa Pola, Alicante) and the Greek Influence in South-east Spain

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THE EXCAVATION OF THE FORTIFIED SETTLEMENT of La Picola, on the south-eastern coast of Spain, was carried out from 1991 to 1994 by a Franco-Spanish team, with the support of the Conselleria de Cultura de la Generalitat Valenciana, the Ayuntamiento of Santa Pola, the French Ministère des Affaires Etrangères and the Casa de Velázquez in Madrid. This excavation programme was preceded by a two-year archaeological survey of the Lower Segura valley (1989–1990), in collaboration with the Archaeology Department of the University of Alicante.

Iberian settlements in the Lower Segura valley (Figure 1)

South-east Spain, between Cape Nao and Cape Palos, had always been an important focus of Mediterranean influence during the first millennium BC. This was mainly due to the strategic situation of the Segura valley, an important commercial route which provided access to Upper Andalucía and to the world of Tartessos. Phoenician influence came first, and was clearly felt in the Lower Segura during the seventh century, in native settlements such as Los Saladares de Orihuela (Arteaga and Serna 1980) and Peña Negra de Crevillente (González Prats 1986; González and Ruiz 1991). The intensity of the oriental impact in this particular area has led many scholars to assume the existence of a coastal trading post, acting as an interface between oriental traders and native communities, equivalent to the Phoenician colonies of the Andalusian coast. This 'missing link' seems to have been identified, with the recent discovery of a fortified

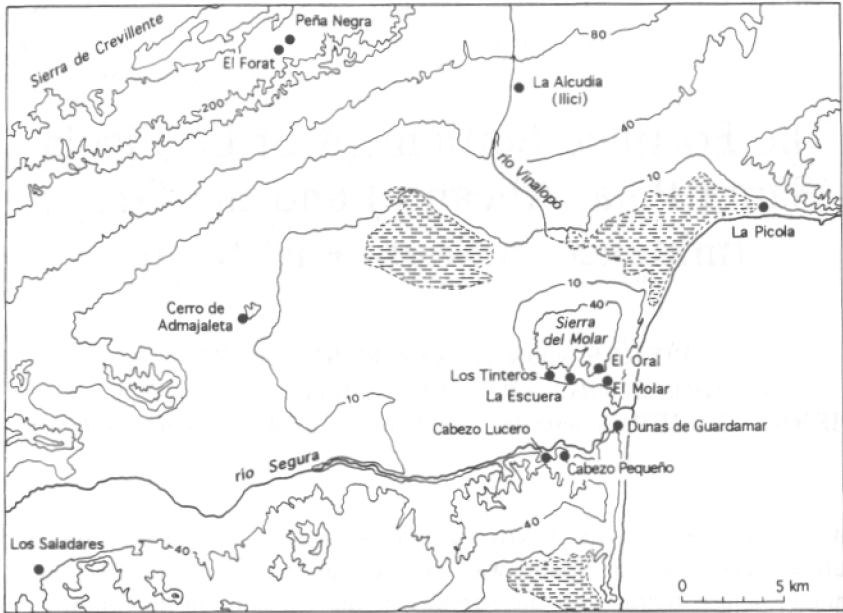


Figure 1. Map of the Lower Segura area, with location of the major Iberian settlements.

settlement at the Dunas de Guardamar, at the very mouth of the Segura (Abad and Sala 1993, 6).

Greek influence came later, from the end of the sixth century onwards. A few Greek imports, dating from the late sixth or the early fifth century, were found at the hillfort of El Oral, close to the ancient delta of the Segura (Abad and Sala 1993, 201–3) while tombs in El Molar, which are likely to belong to the hillfort, contained Attic pottery of the same period (Rouillard 1991, 556). Black-figure Attic vases from the first quarter of the fifth century were also found in the Cabezo Lucero cemetery (Rouillard in Aranegui *et al.* 1993, 87–9). These new contacts increased substantially during the fifth century, giving rise to a brilliant indigenous culture, particularly in the field of stone sculpture whose most famous and finest example is, without any doubt, the bust of the so-called Dama de Elche.

Our knowledge of the geographical distribution of Iron Age settlements in the Lower Segura has improved greatly over the last fifteen years. Important sites such as El Oral (San Fulgencio), Cabezo Pequeño (Guardamar del Segura) and La Picola (Santa Pola) have been discovered and explored; others, like Peña Negra (Crevillente) and Cabezo Lucero (Guardamar del Segura), were the object of productive excavations. In addition, comprehensive syntheses of Iberian settlement in south-east Spain have been recently published (Abad Casal 1987; Santos Velasco

1989). Finally, the survey carried out by our team in the Lower Segura valley provided a better understanding of the distribution and hierarchy of archaeological sites.

Three settlement patterns have been distinguished. The greater concentration of indigenous Iron Age settlements is located on the edge of the Segura delta, a broad alluvial plain named the Vega, part of which may have been a marsh in ancient times. These settlements — Cabezo Pequeño, Cabezo Lucero, El Oral, La Escuera — are built on limestone or sandstone terraces immediately above the Vega. All of them are small villages, with areas of between 0.3 and 1.5 ha (La Escuera may have been bigger at 2 to 3 ha). The two major settlements of this region, La Alcudia de Elche (9.8 ha) and Peña Negra (30 ha, as claimed by its excavator), were established away from the river, at some distance to the north. Lastly, two trading-posts were established on the coastline itself: the phoenicized settlement of the Dunas de Guardamar, mentioned above, and the hellenized site of Santa Pola, which was the object of our excavation.

All these settlements were enclosed by defensive walls, in most cases with the additional protection of square towers (Santa Pola, Cabezo Pequeño, Cabezo Lucero, El Oral, La Escuera). Fortifications appear as early as the seventh century at La Alcudia de Elche (Ramos Fernández 1985), and during the sixth century at Peña Negra (González Prats 1986, 127) and at Cabezo Pequeño (García Menárguez in press). Where domestic buildings have been excavated to a sufficient extent, proto-urban features are noticeable at an early date. In the first years of the fifth century, the village of El Oral exhibited rather regular planning, with large rectangular houses (Abad and Sala 1993), which contrast with the scattered and irregular layout of many contemporary native villages in other parts of Iberia.

From a diachronic point of view, four cultural phases may be distinguished: orientalizing, early Iberian, middle Iberian and late Iberian. For each phase, known examples of the three different settlement patterns — coastal sites, terrace sites along the Segura, and inland sites — are listed below.

Orientalizing phase (700–550 BC)

The coastal settlement of the Dunas de Guardamar is likely to belong to this phase (Abad and Sala 1993, 6). South of the Segura, the tiny site of Cabezo Pequeño del Estañó seems to have been occupied during the late seventh and the first half of the sixth centuries (García Menárguez in press). To the north, in the steep hills that enclose the valley, the large settlement of Peña Negra is at its most prosperous by the end of the seventh and the beginning of the sixth centuries (González and Ruiz 1991).

Evidence for early occupation has been identified at La Alcudia de Elche (Ramos 1985), but the actual area of the site at that time is unknown.

Early Iberian period (550–450 BC)

This is a transitional phase. Phoenician trade rapidly declines, whereas Attic imports, though constantly increasing, are still limited. No coastal settlement is known during this period. Two minor sites have been identified in the Vega area: on the north side, the village of El Oral (Abad and Sala 1993), with the related necropolis of El Molar; on the south side, the village of Cabezo Lucero, whose necropolis has been recently excavated (Rouillard *et al.* 1990; Aranegui *et al.* 1993). The foundation of both settlements is dated to around 500 BC. It is presumably by this time that La Alcudia de Elche begins to play a major regional role (Ramos 1983).

Middle Iberian period (450–325 BC)

A new coastal settlement appears 10 km to the north of the Segura, at La Picola near Santa Pola. This location suggests a close relationship with La Alcudia de Elche, ancient *Ilici*, since Santa Pola (*Portus Ilicitanus* in Roman times) has always been the harbour of Elche, its natural outlet to the sea. This is La Alcudia de Elche's greatest moment of prosperity, and it certainly deserves to be classed as a town. In the Sierra de Crevillente, the site of Peña Negra is abandoned and replaced by El Forat, a few hundred metres away on the opposite slope (Gozálvez Pérez 1975, 165–6). Cabezo Lucero is still active, but El Oral was deserted by 450 BC.

Late Iberian period (325–200 BC)

La Alcudia and El Forat are still flourishing. In the Vega area, a new village, replacing Cabezo Lucero, is built at La Escuera (San Fulgencio) in the last quarter of the fourth century (Nordström 1967). It is situated near the ruins of El Oral, but at a lower altitude. Two other Late Iberian sites — unfortunately destroyed by the recent creation of agricultural terraces — were discovered during our survey along the northern edge of the Vega, at Los Tinteros (San Fulgencio, near La Escuera), and on the Cerro de Admajaleta (Granja de Rocamora). The appearance of these three new sites by the late fourth century, nearer to the fertile Vega, suggests both a demographic growth and a more peaceful social context. No coastal settlement is known at that time.

If we except the two major sites, La Alcudia and the Sierra de Crevil-

lente complex (Peña Negra-El Forat), the life span of the settlements is rather short: hardly more than a century. The turnover is particularly impressive in the Vega area. Cabezo Pequeño appears first on the south side, then El Oral and Cabezo Lucero, one on each side, then Cabezo Lucero alone on the south side, then La Escuera and at least two other villages on the north side. Such instability may be related to changing commercial trends and redistribution networks. It is worth noting that Cabezo Lucero is abandoned at approximately the same time as La Picola. Is it possible that the destruction of the coastal trading post induced the decline and desertion of a native settlement whose *raison d'être* was the redistribution of imported goods?

La Picola: situation and environment of the pre-Roman settlement

The fortified settlement of La Picola is situated in the suburbs of the modern port of Santa Pola, in the province of Alicante (Figure 2). It was discovered during the 1970's and a rescue excavation was carried out by the local archaeological service. Exceptionally fine ceramics, and in particular a beautiful Attic red-figure crater now preserved at the Alicante Museum, hinted at the importance of the site. Nonetheless, the scientific results of this first excavation have never been published, except for a short second-hand note (Alfonso *et al.* 1982). A second rescue excavation was carried

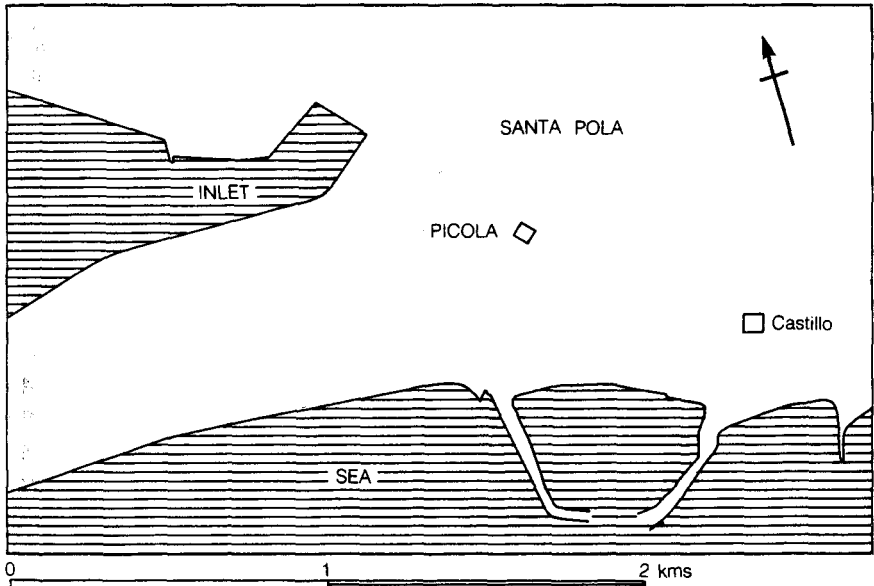


Figure 2. Location of the archaeological site of La Picola in Santa Pola.

out in 1989 by P. Soto, under the supervision of M.J. Sánchez, head of the Archaeological Museum of Santa Pola, and led to the four-year research programme by the above mentioned Franco-Spanish team.

Roman structures from the time of Augustus, belonging to a salt fish factory, lie adjacent to the Iberian site. Presumably, the construction of the latter was responsible for the robbing of many stones from the Iberian wall. Modern farming practices and urban growth have been even more harmful. During the eighteenth or nineteenth century, most of the archaeological layers were destroyed by agricultural terraces, which levelled more than half of the archaeological area to below the ancient ground-level. Lastly, as a consequence of recent urbanization, the site has been cut by a road and two sewers.

Reconstructing the original topographical and environmental setting is still an outstanding matter. The site was very low (3 m above sea-level) and had no natural defences, except for a seasonal rivulet along its south side. The sea-shore was far closer to the settlement than it is today. Our excavations near the west wall revealed the existence of a fossil beach containing water-rounded Roman potsherds of the third century. It is therefore certain that the sea reached the western boundary of the site, at least during the Roman Imperial period. But stratigraphic evidence is still lacking for the Iberian period. We are presently carrying out a geomorphological study, in order to elucidate this point. Obviously, any assessment of the precise function of the settlement will depend upon this variable.

Our excavation project began in 1991 and had a dual strategy. On the one hand, an open-area excavation was carried out near the north-east corner of the defensive wall to elucidate the spatial organization of occupation. On the other, six sondages were planned all around the site, in order to define the boundaries of the settlement and the layout of the defensive system.

Stratigraphy and chronology

The Attic imports suggest that the life-span of the settlement is short, lasting one century, from 430 to 330 BC. No more than one construction phase has been detected. The stratigraphic sequence is therefore very simple. The entire site was covered with a broad layer of reddish clay, deriving from the ruin of the flat roofs and walls. This layer contained many amphora sherds, presumably fallen from the terraces or shelves where they had been stored. Beneath was found an abandonment layer containing a large quantity of Iberian sherds belonging to amphorae, fine painted ware and common pottery. This can be dated to around 330 BC,

on the basis of several crushed Attic red-figure and black-glaze vases (Figure 5) discovered on the ground amongst this pottery.

The only place where several occupation layers have been found was the end of the north street, which formed a cul-de-sac against the defensive wall. These contained hearths and ashes, as well as a few post-holes to support a porch roof. Such evidence points to this part of the street being used as an extension of the domestic space.

General layout and domestic architecture

La Picola was a tiny settlement, comprising 3400 sq m *intra muros* and 5900 sq m within the ditched enclosure (Figure 3). This is a strikingly small area when compared to the 9.8 ha of La Alcudia de Elche, the main city of the Lower Segura. It is still below the 1.5 ha of Cabezo Lucero and the nearly 1 ha of El Oral, and can only be compared with Cabezo Pequeño, whose approximate area was less than 4000 sq m. The general layout is almost square or, to be more precise, slightly diamond-shaped. The length of the sides varies from 57 to 60 m. Unfortunately no entrance — neither gateway nor postern — has yet been detected.

The results of our excavations are rather disappointing as far as habitation evidence is concerned, since the west part of the open-area proved to have been completely obliterated, with no ancient remains surviving. The hope of uncovering a completely preserved house proved to be impossible. Nevertheless, an analysis of earlier excavations enabled a substantial part of the urban plan to be reconstructed. Two parallel rows of rectangular houses have been identified, one of them contiguous to the north curtain of the defensive wall. A broad street, 3.8 to 3.9 m wide, separates them. The second row, on the south side of the street, presumably belonged to a two-fold block of houses, so that the opposite street would have coincided with the central axis of the settlement. All in all, despite the scarcity of evidence, it seems clear that the settlement has been planned on the basis of an orthogonal grid with straight streets and standardized houses.

The dimensions of the five preserved houses of the northern row are fairly constant: 6.4 to 6.8 m in length and 3.4 to 3.5 m in width. The inner area covered 20 sq m and is usually divided in two rooms. Only two houses have been identified on the south side of the street. Their width is unknown, but their length is the same as that of their counterparts on the northern row (6.8 m). The walls were 0.4 to 0.5 m thick. Their footings were made up of stone rubble and the upper part of sun-dried mud bricks (Figure 4). A careful study of the mud bricks, carried out by C.-A. de Chazelles, revealed the use of a standardized module of $37.5/38$ by $28/32$

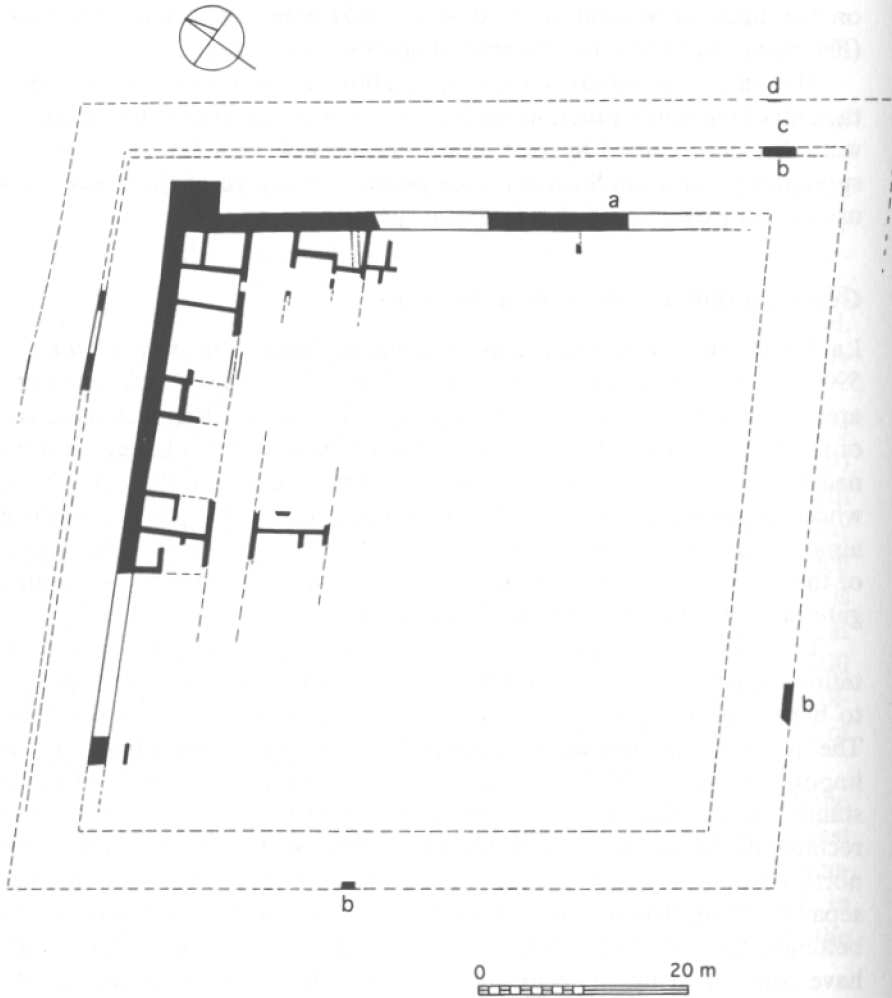


Figure 3. La Picola. Tentative reconstruction of the general layout (after the 1993 campaign). a: defence wall; b: scarp; c: ditch; d: counterscarp.

by 8.5 cm. Half-bricks were also used measuring 28/32 by 18/23 by 8.5 cm. A clay coating covered the whole wall. This building technique proves to have been very common in south-east Iberia, from the Late Bronze Age onwards.

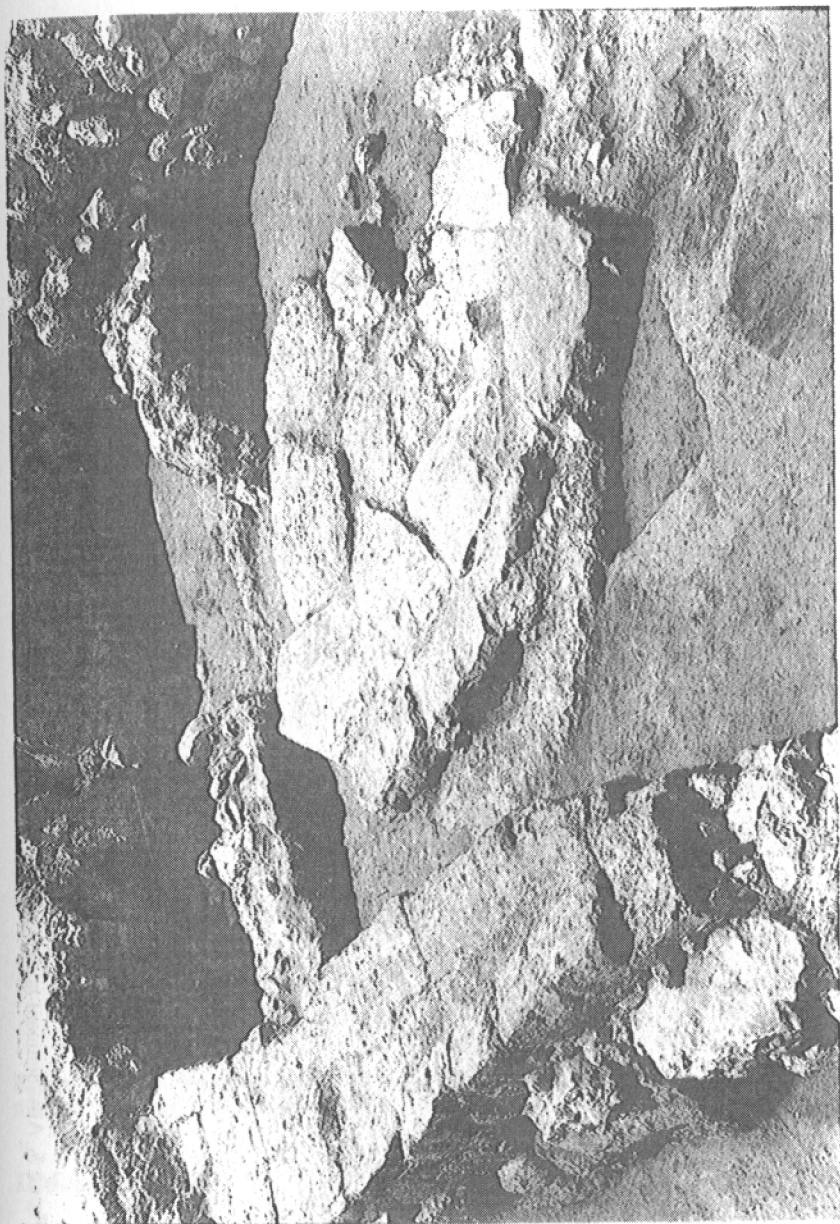


Figure 4. Room 21, with stone pavement. The wall on the left survives as a layer of sun-dried mud bricks upon a rubble stone base.



Figure 5. Abandonment layer with Attic vases and Iberian amphorae (room 21).

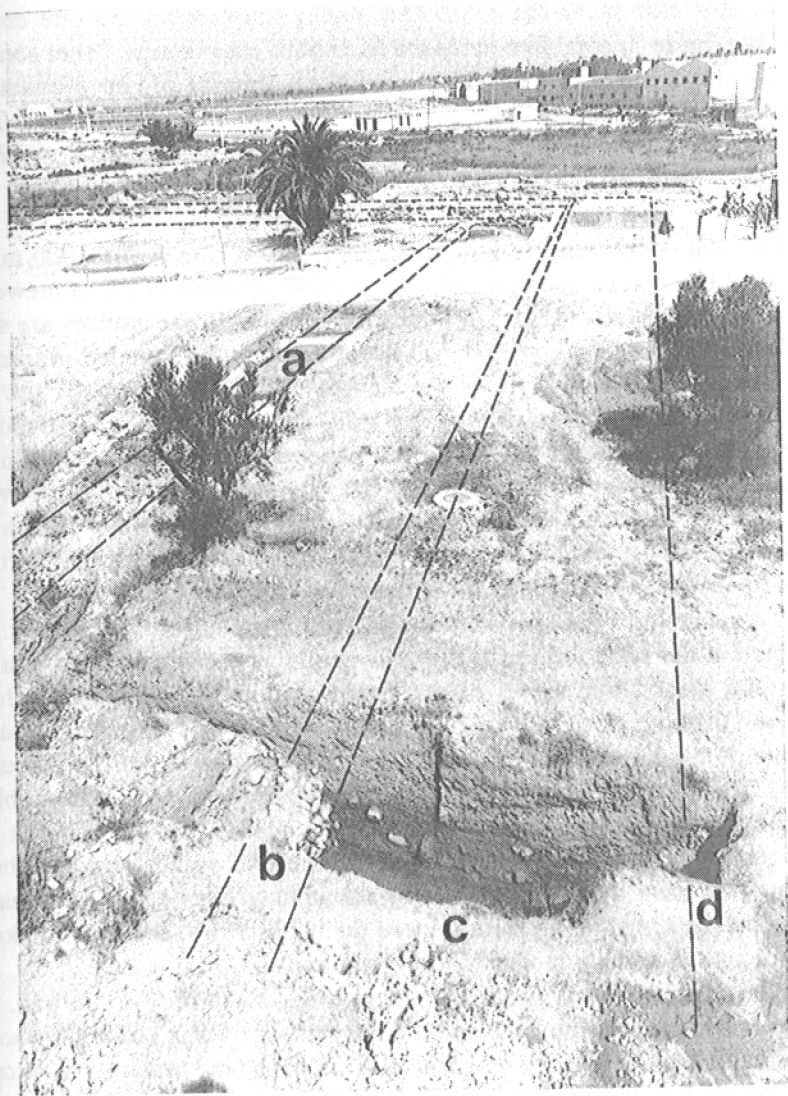


Figure 6. Defensive works on the eastern side of the settlement, seen from the south. a: foundation trench of the wall; b: scarp; c: ditch; d: counterscarp.

Defensive works

The defensive system of La Picola comprised five structural elements: a wall, a berm, a scarp with an outer wall, a wet ditch and a counterscarp (Figures 3 and 6–7): it covered an area more than 12 m wide. Traces of this complex system have been found on the north (near the north-east

angle) and east (near the south-east angle) sides: the composite cross-section (Figure 7) combines evidence from both excavations. Other sondages on the south and west sides uncovered remains of the foundation course of a scarp revetment, far below the ancient ground level. The presence of a counterscarp, however, could not be ascertained. A ditch may have been unnecessary on the west side, given the proximity of the sea and the scarp wall may have acted as a mole.

The wall is not very thick and its width varies from 1.65 to 1.80 m. It was found in a very bad state of preservation, as most of the stonework had been robbed in the Roman period. One or two stone courses are still in place at the north-east angle, but elsewhere only the foundation trench can be traced. The excavations have uncovered evidence for the use of mud bricks in the upper part of the wall, consisting of a thick deposit of reddish clay, including recognizable fragments of semi-decomposed mud bricks at the bottom of the ditch. We can therefore suggest that the wall was a mixed structure comprising coarse masonry at the base with mud bricks at the top, comparable to the walls of the houses. The upper structures (covered way, parapets, battlements) are totally unknown.

A rectangular tower was sited in the north-east angle of the circuit. It was built in the same fashion as the wall, with a base made up from coarse limestone blocks. The layout of this tower is quite unusual, since it has only one flanking side, to the south, while the north side simply continues the line of the curtain wall. It measures 4.75 m (east face) by 3.2 m (south flank). The inner space is filled with a mixture of earth and stone rubble. The present height of the tower does not exceed 0.5 m, so that it is impossible to know whether it possessed an inner chamber or not. Other towers may have existed, particularly a matching one at the south-east angle, but the complete erosion of more than half of the settlement makes any attempt at reliable reconstruction impossible.

There was a berm or glacis, 5 to 5.5 m wide, at the foot of the wall. It sloped gently towards the ditch and was covered with a hard gravel surface. The ditch (actually a moat supplied with underground water) was excavated parallel to the wall: it was roughly U-shaped, measuring 4 to 5 m wide at the bottom and 5 to 6 m wide at the top. It was not very deep (only 2 m), given the high level of the ground water. Stone revetments strengthened both sides of the ditch. The scarp (or inner side) revetment is better preserved and was made up of coarse limestone blocks arranged in the form of a crude *opus spicatum*. The counterscarp is almost completely ruined. Nevertheless, sufficient remains of the foundation courses to suggest that it was built in a similar technique.

Finally, there is limited evidence for the existence of an outer wall or

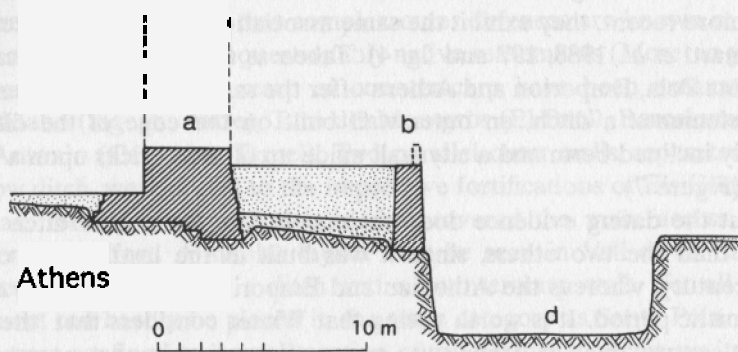
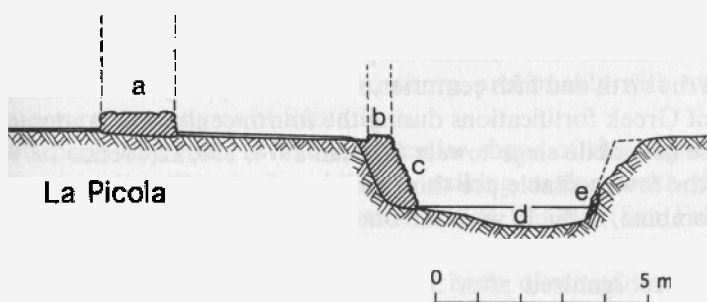
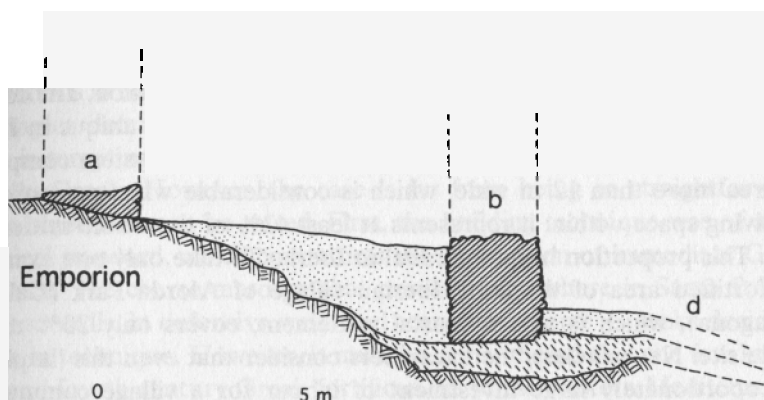


Figure 7. Fortification and outer works at La Picola, Athens (after Winter) and Emporion (after Sanmartí *et al.*). a: defence wall; b: *proteichisma*; c: scarp revetment; d: ditch; e: counterscarp revetment.

stockade (a *proteichisma*, to use the Hellenistic term), 0.7 m broad, standing just above the scarp revetment, at the edge of the berm.

Taken as a whole, this was a very sophisticated fortification. The combination of elements described above is, as far as we know, unique in Iberia at this time. As has been already stated, the defensive system comprised an area more than 12 m wide, which is considerable when compared to the living space within: it represents at least 42% of the whole settlement area. This proportion has no parallel in Iberia. To take only one example, the fortified area of the early Iberian village of Alorda Park (Calafell, Tarragona), which is also a coastal settlement, covers only 20% of the whole site. Nevertheless, the excavators consider that even this 'implies a disproportionately large investment of labour for a village community' (Sanmartí and Santacana 1991, 333).

The great complexity of this fortification justifies a search for possible parallels amongst Greek examples. Greek ditches are still little known. It has been assumed that ditches were rarely used in Greece as defensive works in the sixth and fifth centuries, and that they only became a common feature of Greek fortifications during the fourth century, as a consequence of the use of mobile siege towers (Garlan 1974, 150; Lawrence 1979, 275). Among the few available pre-third century plans of Greek outer defences which combine a ditch with an outer wall, the closest parallel to the fortification of Santa Pola is to be found at the Lykourgan fortification of Athens, as reorganized after 338 (Winter 1971, 275–6 and fig. 312). In the Iberian peninsula itself, we may also mention the outer defences of Emporion. Although these date to the third century and are, thus, considerably more recent, they exhibit the same association of ditch and outer wall (Sanmartí *et al.* 1988, 197 and fig. 4). Taken as a whole, the fortifications of Santa Pola, Emporion and Athens offer the same structural sequence of four elements: a ditch, an outer wall built on the edge of the ditch, a slightly inclined berm and a city wall made up of mud bricks upon a stone base (Figure 7).

But the dating evidence does not match. The Santa Pola ditch is far older than the two others, since it was built in the last quarter of the fifth century, whereas the Athenian and Emporitan ditches belong to the Hellenistic period. It is worth noting that Winter considers that 'the later fourth-century ditch at Athens was among the earliest important outworks in old Greece' (Winter 1971, 283), and we should even add that it was among the earliest known examples in the whole Greek world of a ditch combined with a *proteichisma*. Surprisingly enough, the layout seems to be earlier in the west than on mainland Greece. But it must be remembered that the evidence in Greece and in Magna Graecia is far too scarce to allow any conclusions to be drawn about the first occurrence of the ditch-

and *protechisma* system. In fact, it is likely to be substantially older than suggested by the limited archaeological data available. Nevertheless, the excavations at Santa Pola provide convincing evidence for the early spread of complex defensive systems in the western Mediterranean.

It is tempting to conclude that the defensive system of Santa Pola is actually Greek. However, the case is far from being so straightforward. Three objections can be raised. First, the building technique was of a low technical standard, which contradicts the assumption of immediate Greek influence. The coarse masonry that prevails everywhere in Santa Pola — in house walls, in defensive walls and scarp revetments — looks decidedly native in technique. However, it must be remembered that the few known fifth and fourth century Greek fortifications in the western Mediterranean all have the same crude appearance. If one only mentions Massalian settlements, the first walls of Emporion in the third quarter of the fifth century (Sanmartí and Nolla 1986), Agde in the later fifth century (Nickels 1985, 68), and Olbia in the third quarter of the fourth century (Bats 1990, 207) were all built in coarse masonry, presumably with mud-brick superstructures, exactly as at Santa Pola.

The second objection is that the peculiar shape of the angle tower is more Iberian than Greek. It exhibits a striking analogy with the angle tower at the neighbouring native settlement of El Oral (San Fulgencio). In exactly the same way as at Santa Pola, the tower at El Oral has only one flanking side. The same pattern has been observed farther to the north, at La Serreta (Alcoy). This remarkable shared feature suggests a local tradition.

The third objection is that complex outer defences are known at other Iberian sites, which are unquestionably native settlements (Moret in press). Ditches with a revetted scarp or counterscarp have been excavated at Pech Maho (Sigeac, Aude), Turó del Montgròs (El Brull, Barcelona), and San Antonio (Calaceite, Teruel). Two parallel outer walls, separated by a shallow ditch, were added to the impressive fortifications of Els Castellans (Cretas, Teruel), a tiny stronghold that covered the main access to an indigenous hillfort. A similar layout may be seen in Vall de la Cabrera (Calaceite, Teruel), with a ditch and a counterscarp wall. Yet all these outworks can hardly be placed in the same category as Santa Pola. All of them were confined to a small portion of the defensive circuit, on its most vulnerable side: at Els Castellans and at Vall de la Cabrera, their length did not exceed 16 or 10 m respectively.

All in all, the most original feature of La Picola lies in its geometrical layout. Such orthogonal planning has no precedent in Iberia, nor in the south-east, nor in any other region of Mediterranean Spain. This striking regularity may be explained to some extent by the absence of topograph-

ical constraints. La Picola was built on a flat beach, whereas most Iberian settlements were hillforts, so that their planning had to be adapted to uneven topography. But this is not a sufficient reason. During the last decades, several Iberian villages have been discovered on flat ground, and excavated: for instance, El Molí d'Espigol, in Catalonia, La Seña, in Valencia, and La Alcudia de Elche itself, which lies so close to Santa Pola. All of them are irregularly shaped.

Further investigation is obviously needed in order to reach a definite conclusion as to the nature of the settlement of La Picola and the origin of its occupants, by understanding the exact balance of Iberian features and Greek influences. Anyway, there is little doubt about the commercial function of a coastal settlement which, although tiny, felt the need to develop one of the more impressive fortifications in the country. Whatever name we give to it, trading post or 'petit centre de distribution' (Rouillard 1992, 185), the exceptional diversity of the Greek pottery purchased at that time by the native inhabitants of Cabezo Lucero, a few kilometres to the south, is an unequivocal sign of its activity.

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The fortified settlement of La Picola (Santa Pola, Alicante) and the Greek influence in south-east Spain

South-eastern Spain has always been an important region for the study of Iberian settlement and cultural interaction with the Phoenicians and the Greeks. In recent years archaeological research taught us much about settlement patterns in the region, which developed through an orientalizing phase (700–550 BC), and Early Iberian (550–450 BC), Middle Iberian (450–325 BC) and a Late Iberian (325–200 BC) periods. This paper presents the results of an excavation carried out at the site of La Picola (Santa Pola, Alicante) between 1991 and 1994. The site was a defended enclosure occupied between 430 and 330 BC. The geometrical layout and defences of the site have strong parallels with Greek sites, although its material culture is Iberian. At the very least this was a small trading post which interacted with neighbouring sites like the Cabezo Lucero, and is symptomatic of the broader interaction between Greeks and Iberians in south-eastern Spain.

El asentamiento fortificado de La Picola (Santa Pola, Alicante) y la influencia griega en el sureste de España

El Sureste español ha sido siempre una región destacada para el estudio del poblamiento ibérico y la interacción cultural con el mundo fenicio y griego. En los últimos años, la investigación arqueológica nos ha enseñado mucho sobre las pautas del poblamiento de la región que se desarrolló a partir de la fase Orientalizante (700–550 a.C.), los periodos Ibérico antiguo (550–450 a.C.), Ibérico medio (450–325 a.C.) e Ibérico tardío (325–200 a.C.). Este artículo presenta los resultados de la excavación realizada en el yacimiento de La Picola (Santa Pola, Alicante) entre 1991 y 1994. El lugar era un recinto fortificado ocupado entre el 430 y 330 a.C. La disposición geométrica y las defensas del lugar tienen claros paralelos con asentamientos griegos, aunque su cultura material sea ibérica. Al menos, éste era un pequeño centro comercial que abastecía los asentamientos vecinos como Cabezo Lucero y es sintomático de la fuerte interrelación entre Griegos e Iberos en el Sureste español.