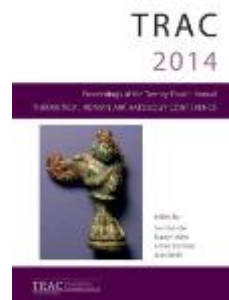

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Riparia Concept: Roman Intervention in the Lacustrine Environment of Fuente De Piedra (Málaga, Spain)

Lázaro Lagóstena, María-del-Mar Castro, Ángel Bastos

Introduction

The environmental concept of *riparia* (Naiman *et al.* 2005) is applied by historians to human relationships with floodplains and coastal wetlands in the past and the environmental characteristics of these transitional spaces generate specific socio-natural systems (Hermon and Watelet 2014). Wetlands can be studied from a variety of perspectives, ranging from the occupation and settlement of a territory, its production and tax function, its relationship with possible lines of communication, its perception as part of a marginal landscape, or its importance a cultural, geographical and political boundary (Lagóstena 2014; Castro *et al.* 2014).

Our research group has undertaken a project that aims to study the territorial articulation of these spaces in the area of the *Hispania Ulterior Baetica* province. Fuente de Piedra Lagoon is the most important wetland in Andalusia (Spain), and presents historical elements that characterise this entity as an essential structure of a territory that has been susceptible to exploitation in Roman times. The analysis of its settlement and paths of communication, the function of this space as a *confinium* (municipal boundary) of several civic communities and economic exploitation aimed at the production of salt have allowed us to explore the role of this riparian area in Roman times, the constitution of its social representation and its historical conceptualisation.

Riparia Project

Currently our research group are developing the *Riparia Project: historic and cultural conceptualization, territorial function and profit of wetland in Roman Baetica* (MINECO – HAR2012–36008). This project will investigate a particular historical subject which has been little studied by Spanish historiography: the analysis of lake and marsh areas in Roman antiquity in the province of *Baetica*. Considering its conceptualization in social representations, the anthropic relationship, material proceedings undertaken for intervention by the imperial and municipal authorities, its value as an economic space that provides resources to both the domestic production level as well as of municipal, but also its role within the framework of ancient landscape and even their role in the political–territorial boundaries as significant geographic border that can help with the difficult task of hypothesizing about the territorial limits of the civic community integrate the political and urban net of the province *Baetica*.

The main objectives for the project are summarized as: the analysis of the classical historiography of the Roman perception of ‘*riparia*’ and its applications in the southern area of

Spain in order to understand rural settlement in relation to these means, the various forms of public and private use of riverside areas, the analysis of lakeside landscape in Roman antiquity and its political–territorial role in provincial Roman *Baetica*.

The essential purpose of this research project is the historical analysis of wetlands in the provincial territory of the Western Roman Empire that was *Hispania Ulterior Baetica*. In addition to using classical literature to gain technical and juridical knowledge of the area, epigraphy and territorial toponymy, archaeological data and the methodological potential of GIS will be examined.

Brief Historiographical Approach to the Study of Wetlands in Ancient Times

The methodology applied to the study of lacustrine and palustrine environments in Antiquity began with a traditional analysis based on the perception of these spaces by ancient literary and epigraphy sources (Traina 1988). The *insalubritas* as a negative quality of these environments contrasts with the existence of civic communities with important roles in defence and communication within these spaces (Borca 1996), and the rearrangement of wetlands through drainage, water works and land improvement (Leveau 1993; Compatangelo–Soussignan 2008). The role of wetlands as fluvial and maritime communication routes is another important line of research (Frezouls–Fasciato 1962; Samsaris 1979).

Moreover, it should be taken into account that the dynamic of a rural settlement linked to wetlands and marshy spaces and its evolution are conditioned by geomorphology and the paleoenvironment (Jansen and Storme 2006; Jorda and Provansal 2006), as are the uses and economic profits of these lands: fishing, farming, fowling, hunting, harvesting and salt extraction in the case of saline conditions (Leveau 1998; Wiseman and Zachos 2003). All these aspects will be used to make an integrated territorial analysis of wetlands in Roman times (Beleza 2002) and of the ecosystem which generate its own specific patterns of interactions between society and the natural environment (Hermon 2010: 239).

Finally, the global perception and social representation of spatial configuration in riparian environments will be considered (Bedon 2010; Chassignet 2010; Compatangelo–Soussignan 2010), in particular the religious and votive practices related to lakes and lagoons (Fernández Nieto 2007: 45), as well as juridical, agronomical and agrimensorial perceptions (Hermon 2010: 231; Zannier 2010; Peyras 2010).

Wetlands and Civic Communities in Baetica

The Andalusian territory is comprised of a large number of lakes, lagoons, deltas, wetlands, and flood plains, all of which respond well to the concept of *riparia*. The project will study the size, location and position of these natural features within the civic landscape and their relationship with other spaces and cultures within the context of Roman *Baetica* (Lagóstena in press). The palustrine and lacustrine zones in *Baetica* have been the subject of few studies (Parodi 2001; Ruíz and López 2001) the principal subject in the historiographical study of littoral areas will cover some of the principal rivers mouths and estuaries such as the Guadalquivir, Cadiz Bay and the Tinto and Odiel Rivers in Huelva.

We have chosen the *Lacus Ligustinus* (Guadalquivir Marshes) and La Janda Lagoon as sites suitable for analysis. The *Lacus* was the large paleoestuary of the *Baetis* (Guadalquivir) and is characterised by a complex geomorphological evolution, intensive settlement and

historical exploitation. Its study has been undertaken from a geomorphological view, analyzing its configuration and subsequent evolution in clear connection with the development of the settlement of this territory from later prehistory to Romanization (Gavala y Laborde 1936; 1959; Pemán 1941; Rodríguez Vidal 1989a; 1989b; Arteaga, Schulz and Roos 1995; Borja 1995; Belén 2000; Escacena and Belén 1997; García 2006; Escacena and Padilla 1992; Ferrer *et al.* 2008). We have focused on the study of its perception and social representation in Graeco-Roman sources, and the intensive settlement that represents a complex social relation with riverside spaces (Lagóstena 2014). Another important wetland, La Janda Lagoon located near the Straits of Gibraltar was situated between the *territoria* of several communities including *Asido Caesarina* (Medina-Sidonia), *Baelo Claudia*, *Besaro* (Vejer de la Frontera) and *Baesippo* (Barbate). Preliminary analysis shows a singular connection between lacustrine, fluvial, estuarine and maritime environments (Castro *et al.* 2014).

Fuente de Piedra: analysis of a wetland in Roman Baetica.

Fuente de Piedra is the largest and most important continental lagoon in Andalusia and one of the most important in Spain (Fig. 1). Its central position within Roman *Baetica* made this zone a potential communication hub. Intense Roman rural settlement, the saline composition of the water and its possible exploitation in Roman times and its location at an inter-community boundary also make this place worthy of study.

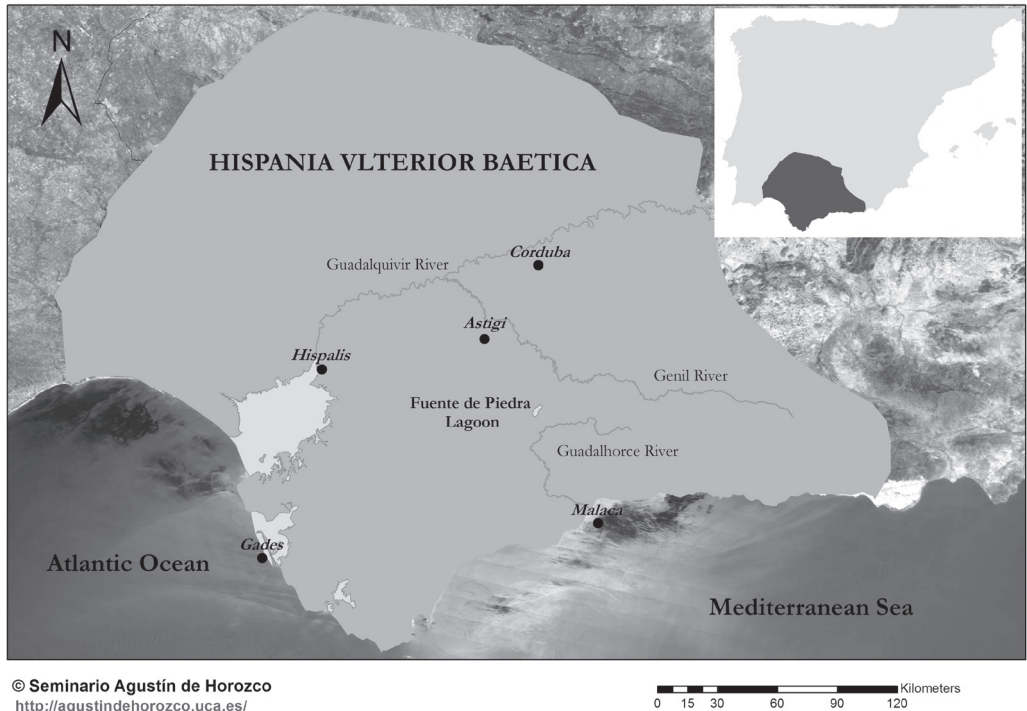


Figure 1: Location map showing the Lagoon of Fuente de Piedra, main rivers and cities

The Lagoon of Fuente de Piedra is located in the north-western sector of the Depression of Antequera (Malaga, Spain). The regional and local historiography has focused primarily on the study of *villae* settlement patterns in this territory and the study of the two main *civitates*, *Singilia Barba* and *Anticaria* (Loza 1983; Atencia 1987; Romero 1990; 1998; 2011; 2012; Corrales 1998). An integral study of the lagoon itself has not been undertaken, but some references have been made to the riverside settlement and its economic profit (Gozalbes and Muñoz 1986; Recio 2007).

Settlement and Urbs. Intercommunitary Boundary Role?

The question of civic centres as municipal entities with this geographic framework is full of controversy and uncertainty. We have demarcated a frame around the lagoon which outlines settlements with a privileged status. Among these, before Vespasian, we can only find *Urso*, which was promoted to a colony by Caesar and occupied throughout the Augustan period (*TIR*, J-30, 2001: 350).

The toponymy recorded in archaeology, epigraphy and the itineraries indicate an important urban settlement in the area, especially after the Flavian municipalization, which encouraged the development of rural settlements and the rise of exploitation of its natural resources (Fig. 2). Using these and historiographic sources we have created a map showing a hypothetical distribution of civic communities (Romero 2011: 55). The chronology of the farms located in the *ager* (land linked to a civic community) of these cities is important, since it seems to be related

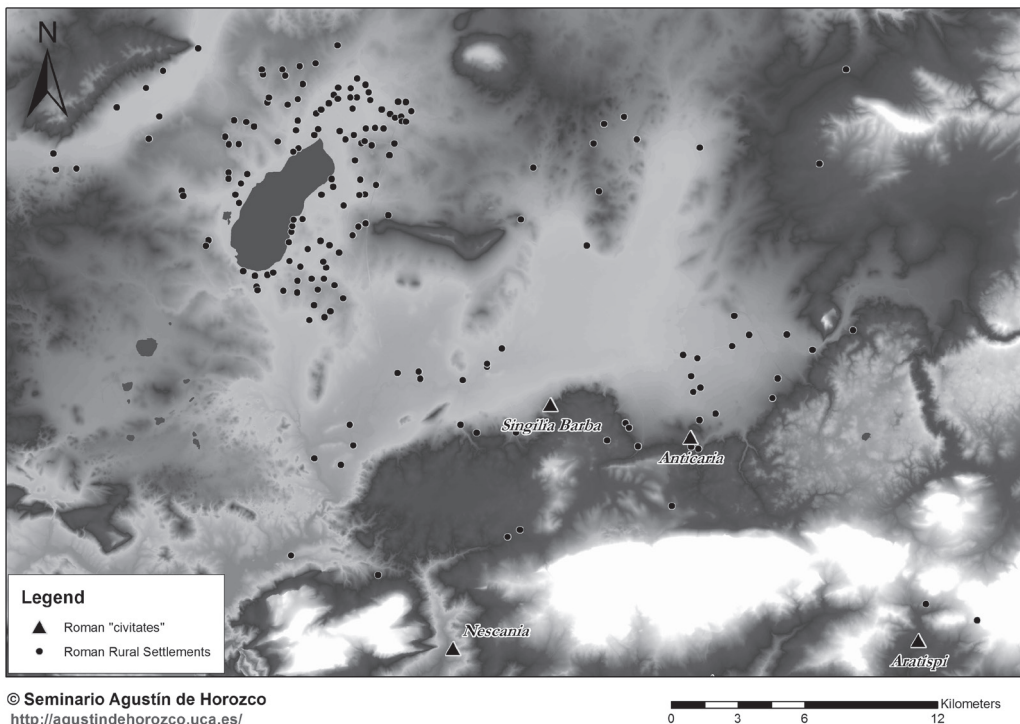


Figure 2: Settlement in the region of Fuente de Piedra and the Depression of Antequera

to the promotion of the indigenous *oppida* into *civitates* with municipal status along the first century A.D. However, most of them are dated between the first and the fourth centuries A.D.

After the extension of *ius Latii* in *Hispania*, sixteen Flavian municipalities were established in our study area. Although we have chosen these cities for territorial analysis (as Thiessen polygons), we will focus especially on those which might have been – by proximity – more closely related to the wetland study area. Among the Roman municipalities closest (20 kms or less) to Fuente de Piedra Lagoon are: *Singilia Barba* (13 kms), *Olaurum* (17 kms), *Nescania* (19 kms), *Ventippo* (19 kms), *Anticaria* (20 kms), *Ilipula Minor* (20 kms) and *Ostippo* (20 kms) (Fig. 3). These cities are briefly described below.

Singilia Barba, municipium Flavianum Liberum it was probably one of the six *oppida libertate* mentioned by Pliny (*Natural History*: III.3.7). After the Vespasianic reforms, it became a *municipium* with *ius Latii*. The epigraphy is extensive and there are many indigenous *cognomina* (CIL II 2/5: 213–230).

Olaurum was probably also promoted to *municipium* by Vespasian, though we have no clear evidence. It was an *oppidum* with its own bonded *ager* and an *origo* (origin of a citizen group): *olaurensis*. Before this, it was probably under the jurisdiction of *Ostippo* or *Ventippo* judging by the epigraphy which makes numerous mentions of *Ventiponensis* and *Ostipponensis* (CIL II 2/5: 265–270).

Nescania was another *oppidum* promoted to *municipium* under Vespasian's *ius Latii*. Historiography suggests it was a place where water was an important resource and was probably

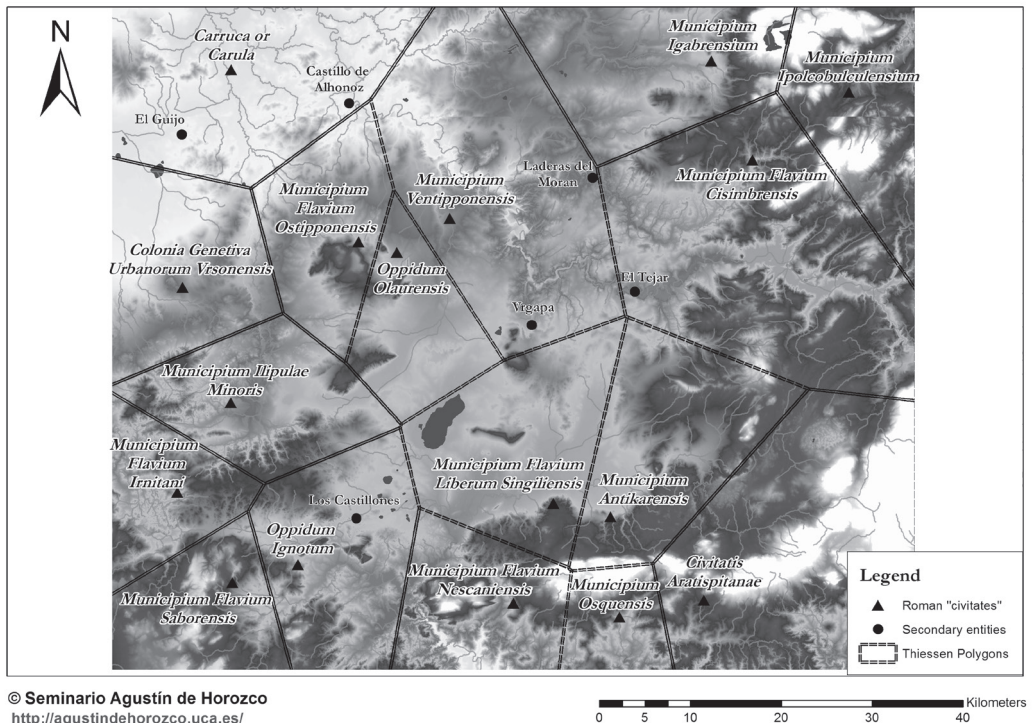


Figure 3: Preliminary analysis of main settlement of the framework with Thiessen Polygon

where the mighty *Fons Divinus* was located (cultural place name contained in *CIL* II 2/5: 231–236; Loza 1992: 105; Beltrán and Atencia 1996: 175).

Ventippo was a *stipendiarium oppidum* promoted to *municipium* by Vespasian's edict (*CIL* II 2/5: 260–264). Its location is not certain although historiography maintains that must have been a city of great importance, with structures including large tanks and underground galleries that could well be drains or sewers (Camacho *et al.* 2004).

Anticaria is mentioned by the Antonine Itinerary in the *iter* from *Gades* to *Corduba*. Some authors said it may have gained municipal status with Galba, however, it seems more likely it was promoted by Vespasian (*CIL* II 2/5: 204–211). Before that, it was considered a *mansio* (*TIR*, J–30, 2001, 85), and served as a node of communications between *Hispalis*, *Corduba* and *Malaca* (Sillières 1990).

Ilipula Minor, was mentioned as a *mansio* between *Carula* and *Ostippo* in the Antonine Itinerary. It was probably a stipendiary *oppidum* before its promotion to *municipium* by Vespasian (*CIL* II 2/5: 249–250).

Ostippo was another of the *oppida* mentioned as free (*libera*) by Pliny. *Ostippo* was also promoted to *municipium Flavium Ostipponensis* by Vespasian's edict (*CIL* II, 2/5: 271–282; Pérez 1981).

We have created Thiessen polygons in order to make a hypothetical proposal about these municipal's territories. As it will be discussed later, Fuente de Piedra lagoon, because of its spatial relationship with the surrounding cities, could act as a territorial *confinium*, or be fully integrated into the *territorium Singiliensis* with the assumed implications.

Lagoon as a Pathway Node

The Antonine Itinerary indicates that the Roman road which linked *Gades*, *Hispalis* and *Corduba* was located in this zone (Sillières 1990) and many of the cities in the study area were also *mansiones* of this Roman *iter* (*It. Ant.* 409–413). According to Ravenna Cosmography, there was probably another branch line which linked *Anticaria* and *Malaca* (*An. Rav.* IV, 45). There is also one epigraphic testimony (*CIL* II 2/5: 205) which confirms the existence of Roman roads in this framework (Fig. 4).

Archaeological surveys show that surrounding the lagoon there may have been branch lines which connected to some of the nearby *villae* in order to ease the transport of products, mainly salt and oil production. These branches also could have been connected to the Roman road between *Anticaria* and *Malaca*, the so-called 'Roman Road of Salt' (Gozalbes and Muñoz 1986).

Economic Profit: Salt Exploitation and Oil Production

Fuente de Piedra lagoon is suitable for the exploitation of salt and several authors have suggested possible extraction from prehistoric and Roman times (Gozalbes and Muñoz 1986), although so far there is no material evidence to support this. However salt exploitation is known to have taken place since the Andalusian period. The historian Ibn al Jatib commended the agricultural and saline wealth of the territory associated with Antequera, the main center of population in the zone during medieval period. Salt exploitation of this wetland in the Muslim period is also affirmed by local historians and scholars of the nineteenth century (Fernández 1842: 38).

At the beginning of the fifteenth century the town of Antequera was taken by the Castilian monarchs in the final stages of conquest by the Nasrid Kingdom of Granada. A valuable source

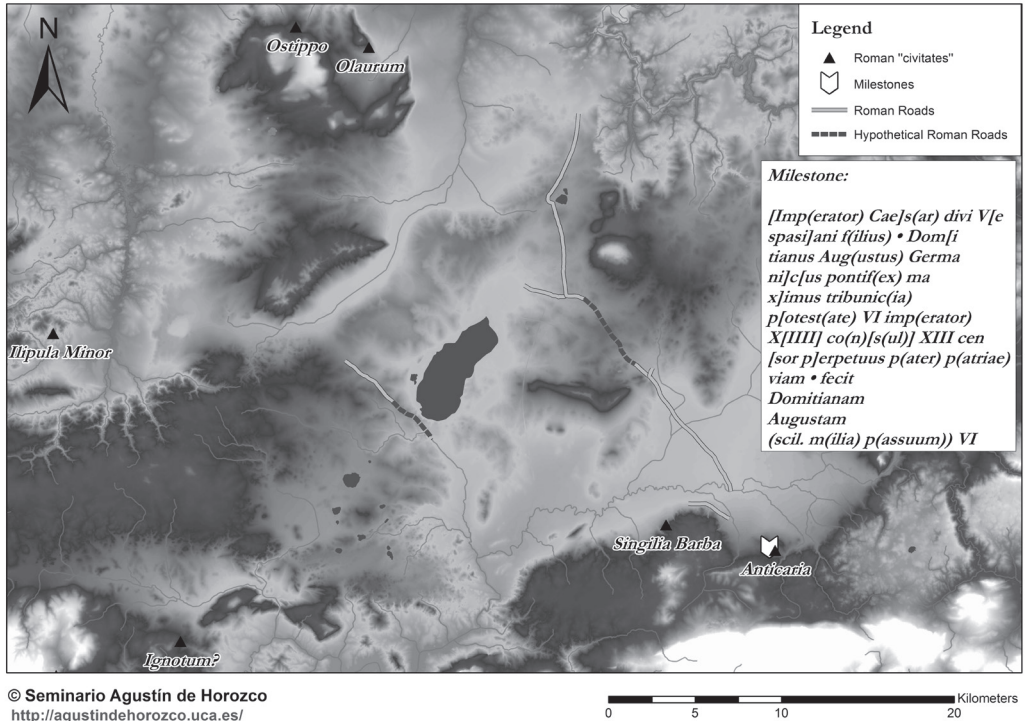


Figure 4: Roman roads around Fuente de Piedra

of historical information for the territory at that time, the *Libro de Repartimiento de Antequera*, refers to the lagoon as ‘Laguna Salada’, its banks being used for agricultural cultivation. It also contains toponyms that refer to the existence of salt mines (Alijo 1983). Another testimony from a local scholar tells of a donation from the monarch to the Council of Antequera of Laguna Salada for its use and exploitation (Méndez 1675: 118–119; Fernández 1842: 291–292; Vázquez 1966: 62).

In the early nineteenth century the monarchy attempted to drain the wetland, claiming its salts were harmful. The municipal authorities managed to stop the project by proving their salubrity (Muñoz and García 1998: 166). In the 1880s, major engineering works carried out in order to increase the production of salt greatly transformed the landscape. However, its lack of profitability in middle of the twentieth century caused the end of the exploitation (Muñoz and García 1998: 167–168).

Regarding farming in the territory, the Antequera Region in the Roman period was characterized by intense rural occupation in *villae*, of which 147 are recorded in the current Municipality of Antequera, and in 30 of them remains of building can be identified. All are linked to the main road axes and in many of them evidence of oil production has been found (Fig. 5). These *villae* were occupied from the first to the fourth century (Romero 2012). In particular, evidence for oil production has been found at a number of riparian sites around the Laguna de Fuente de Piedra (La Doctora, La Torquilla, La Vicaría, Los Corrales, Las Rosillas, Navahermosa and Cerrillo

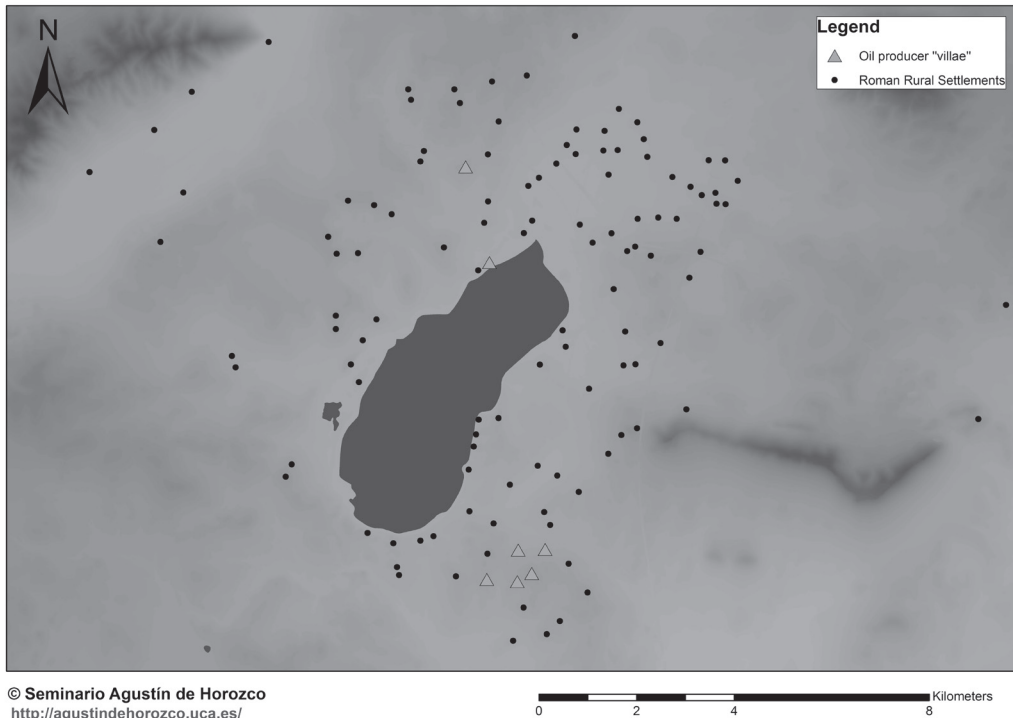


Figure 5: Oil production sites near the Lagoon

Sánchez) (Loza 1983; Gozalbes and Muñoz 1986; Corrales 1998; Romero 1998; Recio 2007). The archaeological remains associated with oil production are widespread, and include structures for processing and oil production (*tabulatum*) as well as decanting and storage (*labrum*), olive presses (*mola olearia*) and reservoirs interpreted as *arcae lapidum* (part of an olive press) and counterweight. A large number of excavated *villae* also have structures and parts intended for the development and production of oil. The Villa de la Quinta is a unique case in which all facilities were intended only for the development of oil (Romero 1998: 118).

The abundance of *villae* oriented towards oil production and their location close to Roman roads suggest extensive olive cultivation and intensive production for trade and export of oil took place in the region. However, there are no *figlinae* or *amphorae* production in neighbouring territories, leaving the method and routes of exportation an unsolved matter. The two alternatives that have been considered are the possibility of transport by river along the Guadalhorce toward the coast of Malaga or by land to the river Genil, connecting with the production and commercial centre in the *Baetis*' basin (Corrales 1998: 94).

Another economic activity that was probably developed in this riparian environment is livestock production, possibly linked to animal's need for salt and the proximity of the aforementioned road network. The wetland surrounded by glens traditionally used as herd passageways might indicate continued use of the area for this activity. The difficult archaeological tracking of this type of activity can be supplemented with evidence related to certain worships, for example the

worship to Hercules recorded in epigraphy (*CIL* II 1436; 2058) which is a deity that herds and protects the cattle (Coarelli 1988: 130; Gros 1995: 313–15) .

Epigraphic Evidence for Territorial Jurisdiction

The distribution of epigraphy within our geographic framework is important and in the area surrounding the lagoon many epigraphic examples mention the *ordo Singiliensis* or the *Singiliensis* people. These help define the hypothetical territory bonded to the *civitates* and to the jurisdiction of the land. We propose that the lagoon and the land nearby was under the jurisdiction of *Singilia Barba* and that the main Roman families nearby the lagoon – *Acilia* or *Cornelia gens*, amongst others – may have participated in the patronage system.

Singilia Barba is located on the hill called Castellón, in the current Municipality of Antequera (Málaga). Its full name is *municipium Flavium liberum Singiliensis* and historiography shows it to be one of the six *oppida libertate* mentioned by Pliny (Ordóñez 1988). It has been suggested that the particle *Liberum* could refer to that ancient dignity, reflected in its Flavian name (Thouvenot 1940: 193; Ordóñez 1988: 321). However, it is worth commenting on the discussion around the origin of the city name. General opinion points to a pre-Roman origin of the name *Singilia*. The word, in a purely adjectival sense (Ordóñez 1988: 320), would refer to the river *Singilis* (Genil). However, while the river Genil flows more than 23 km to the north, epigraphic and onomastic studies show that there are several *cognomina* of pre-Roman origin (*Blandus*, *Blandina*, *Maurus*, *Ruga* (Ordóñez 1988: 325)) located in other areas of the Iberian Peninsula, as well as in *Baetica* (Albertos 1966: 55, 152, 194). The *cognomen Macer*, which is found in the area of *Singilia Barba*, is also attested further North in Aguilar de la Frontera, Montoro, Córdoba (*CIL* II 2/5, 904; *CIL* II 2/7, 155, 166, 341) and Cabra (Sillières 1978: 473). These matches could point to the displacement of an indigenous population group from the middle reaches of the river Genil that then settled in the Roman city of *Barba*. Pliny is the only author who mentions a city called *Singili* (*Natural History*: III.3.10), *Bastetaniae vergentis ad mare*, whose identification with *Singilia Barba* is not entirely clear. However, other sources mention *Barba* including Ptolemy (Ptolemy: *Geography*: II.4.9) amongst *Turduli*, and the Antonine Itinerary (412, 1) between *Ostippo* and *Anticaria*. The epigraphic findings from the area confirm both the term *Singili-* and *Barb-*: *r(es) p(ublica) Barbens(ium)* (*CIL* II 2/5, 779), *(li)beri S(ingiliensis) Barb(ensis) [...]* *m(unicipium) m(unicipii) lib(eri) Sing(iliensis)* (*CIL* II 2/5, 785), *Sing(iliensi) Barb(ensi)* (*CIL* II 2/5, 802, 803), among many others.

Considering the topography, the *Singiliensis* community was well connected with the area of Fuente de Piedra and the flat fertile valley of Guadalhorce lay between the urbs settlement and the lagoon. All other nearby the cities were separated from the lagoon by several montains ranges (to the East, the elevations of *Singilia Barba* and Sierra del Humilladero; to the South, Sierra de Huma; to the West, Sierra de los Caballos; and to the North, Sierra Becerro and the northern foothills of Sierra de los Caballos).

Secondly, we performed an analysis of the visibility between the nearby municipalities. The results show that the only city that had sight of the lagoon and most of the archaeological sites around it was *Singilia Barba*. Thus the city could visually control the Roman road from *Anticaria* to *Hispalis* and the branch surrounding the wetland (Gozalbes 1986: 180).

A third matter that makes us think about *Singilia Barba*'s jurisdiction over the lagoon in Roman times is the result of analysis by Thiessen polygons (Hodder and Orton 1976). Taking the list of selected Flavian municipalities and applying this analytical proximity tool, the resulting

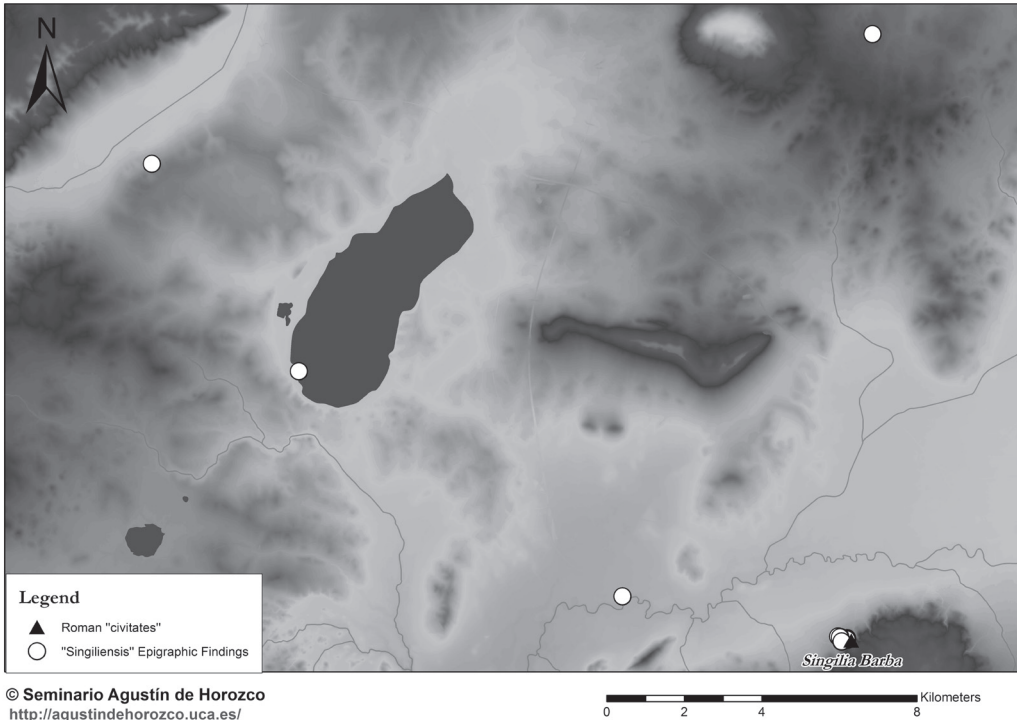


Figure 6: Inscriptions mentioning Singilia Barba

polygon belongs to *Singilia Barba* virtually closed to the north by the current northern bank of the lagoon of Fuente de Piedra. This line coincides largely with the branch of the aforementioned Roman road *Hispalis–Corduba*.

Fourth, we have analyzed the inscriptions that refer to the city of *Singilia Barba* finding multiple matches. The interesting epigraph found in the Cortijo de la Peñuela (*CIL* II 2/5, 215) not only has as dedicator one *Sing(iliensis)*, but also refers to *ordo Sing(iliensis)*. It appears that this epigraph was brought from the ruins of the city of *Singilia Barba* itself in later times. Apart from this we have located a total of 36 epigraphs that can be related to the Flavian *municipium*. From all these, we mapped those that appeared outside the *urbs* of *Singilia Barba*, as an attempt to define the possible *territorium* of the city (Fig. 6).

Preliminary Conclusions

This project has opened a new research line in the context of *Hispania Ulterior Baetica* aligned with current historiographical trends, and focusing on the study of wetlands and ancient societies. We have introduced the issue of methods, research topics and objectives typically applied to the historical study of riparian areas. Fuente de Piedra lagoon will be considered as an experimental laboratory where we will discuss the aforementioned objectives.

We have used the lagoon of Fuente de Piedra to illustrate, for example: territorial function of these unique features of the landscape; its relationship to urban and rural occupation of the

space and the issues of jurisdiction and territorial boundaries between civic communities; the potential of its natural resources and the traces of its exploitation; with social representations useful to our study that remain in this area – as epigraphic testimonies of civic onomastic.

From these preliminary results the immediate challenges of our research are: to design strategies and methodologies that allow us to solve the problems in the current state of the investigation; deepen our understanding of the social, economic, ideological and territorial role of these lacustrine landscapes using historic and archaeological analysis of Baetican cases; challenge assumptions about the roles of social representation of wetlands and their elements in classical societies; finally, to move towards new challenges in the theoretical analysis of the ancient landscape perspectives and incorporate new research lines to those already raised by the historiography.

Facultad de Filosofía y Letras, Universidad de Cádiz.

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