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THE *CHORA* AND THE CORE: A GENERAL LOOK AT THE RURAL SETTLEMENT PATTERN OF (PRE)HELLENISTIC BOZBURUN PENINSULA, TURKEY

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Abstract

This paper aims at explaining the manner of organization of the *demes* (*δήμοι*) of the Bozburun Peninsula (originally identified with the Carian culture) in southwest Anatolia, with a view to consider them with their *chora* which look quite interwoven with an *Acropolis* being the core settlement, and elaborate the rural pattern thereof, within the spatial context. The scope of the formal study area encompasses the region beginning from the southern borders of the *deme* of Hydas (modern Turgut) and extending to the isthmus lying in the south (east of the *deme* of Casarae) of the mainland.

Extensive surveys and aerial applications fused by GIS technique have shown that the orientation of *deme* centers, which are located at 5 km intervals with 30 km^2 *territoriums* on average, are compatible with topography and their dispersed patterns but non-random spatial structure was economy driven during the Rhodian "colonization" which reached the peak during the 3rd-2nd centuries B.C.

Key Words: *Bozburun, Carian Chersonesos, Rhodian Peraea, Rural Settlement Pattern, Demes, Spatial Organisation.*

KHORA VE ÇEKİRDEK: PRE(HELLENİSTİK) BOZBURUN YARIMADASI'NIN KIRSAL YERLEŞİM DOKUSUNA GENEL BİR BAKIŞ

Özet

Bu araştırmanın amacı, Güneybatı Anadolu'da yer alan (esasen Karya kültürü ile tanımlanan) Bozburun Yarımadası'ndaki demelerinin örgütlenme biçimini, çekirdek yerleşim olan *Akropoll*lerle bütünleşik khoralarıyla birlikte ele almak suretiyle açıklamak ve bunların kırsal dokularını mekansal bağlamda irdelemektir. Resmi izinlere dayalı araştırma alanı, Hydas *deme*sinin (modern Turgut) güney sınır çizgisinden itibaren ana karanın güneyindeki kıstağa kadarki (Kasara *deme*sinin doğusu) alanı kapsamaktadır.

Ekstansif yüzey araştırmaları ve CBS yöntemiyle birleştirilen havadan arkeoloji uygulamaları, 5 km aralıklarda konuşlanmış ve ortalama 30 km^2'lik teritoryumlara sahip olan *deme* merkezlerinin topoğrafya ile uyumlu olarak yer seçtiğini ve; M.Ö. 3-2.yy'larda doruğa ulaşan Rodos hakimiyeti süresince düzensiz görünen ancak rastgele olmayan mekansal yapının, ekonomi güdülü geliştiğini göstermektedir.

Anahtar Kelimeler: *Bozburun, Karya Kersonesosu, Rodos Perası, Kırsal Yerleşim Dokusu, Demeler, Mekansal Örgütlenme.*

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INTRODUCTION

The growing necessity to understand ancient territories with their *chorai* has become one of the major concerns of archaeologists, particularly operating within the Classical context. The Bozburun Peninsula (SW Turkey), which has been viewed as a countryside in the nomenclature and in the manuscripts of many ancient writers, offers opportunities to seek the ancient silhouette of a *terra incognita* when compared to large scale urban projects. It was made up of *deme*s whose catchment areas stretched across the near and distant *chora*. As a matter of fact, the Peninsula, situated at the opposite side of Rhodes, is a big network of "*chorai*" (called as the Carian Chersonesos/ Rhodian Peraea/ Tarahye/ Daraçya in the chronological sequence beginning from the Classical era) with masterly deployed agricultural terraces and carefully designed rural settlements scattered over an undulated topography. Arising from the scarcity of resources but mainly water, the spatial patterns must have been formed according to various needs. Athenian Tribute Lists (ATL) is the first tier tangible source with which we become familiar with the acknowledgement of the region being part of Caria during the 5th century B.C while numerous epigraphic material recall it as being an integral part of the Rhodian Peraea in the Hellenistic period.

Situated between ancient Lycia, Phrygia, Ionia and Rhodes, this southwestern part of Caria welcomed many cultures beginning with the Late Geometric period. However, it played an important role, particularly during the late Classical/ early Hellenistic periods, owing to its peripheral status and economic potential in the course of the Rhodian suzerainty. The rural condition of the region, which is characterized with scarce resources, comes to the foreground with *deme*s whose history is traceable back to the Archaic era. We are informed of various studies relating to these typical settlements (particularly from continental Greece and the Aegean Islands) while the bulk of work on the Peraean *deme*s was published by the beginning of the 19th century. However, the majority of studies have fallen back to the problem of settlement and ancient trajectories of the region since the main focus was the follow-up of epigraphy.

Those who are interested in the Peraea and the neighboring communities may come across the imprints left by the Carian culture, particularly up to the Meander line. Typical evidence can be specifically found in the architectural fashion, early implantation plans, the literary network of *komai* and linguistic codes, ATL (through membership to the Delian League) and numismatics down to the mid-4th century B.C. The introduction of a new *deme* system on the mainland in south Caria or the regeneration of old territorial forms of administration based on the *ktoina* practice of the three old *poleis* (Ialysos, Lindos, Kamiros) of Rhodes made the Peraea a land of Hellenized indigenous communities (Hansen and Nielsen, 2004) and a nexus serving the interests of the Island of Rhodes, beginning with the early Hellenistic period.

It seems that the development process of the *deme*s (particularly between the late Classical and early Hellenistic era) may now be vindicated by various indicators addressing a boom in the operation of agricultural terraces. What we also see is the similar designation of the settlement structures which display reconciliation with the natural resources and topographical constraints and express the mode of economy in various instances.

SCOPE AND APPROACH

The discussions herein are based on some main results of the field campaigns carried out in 2009-2012. The scope of the questioned area (henceforth referred to as the Peraea) is limited with the southern horizontal border line of Turgut Village (stretching to Çiftlik Bay) down the isthmus on the mainland in the south. Therefore, it encompasses (from north to south respectively) ancient sites (Fig.1) beginning from the *deme* of Hydas and stretching across Syrna, Losta (hypothetical Hygassos), Tymnos, Thysannos, Phoinix and the eastern tip of Casarae. Although the *territorium* of ancient Casarae had to be partially ignored, observations made in her eastern *territorium* (lying in proximity to Phoinix) have been incorporated into the study, in order to assess the integrity of the rural organization of *deme*s. Likewise, secondary evidence regarding the *deme* of Amos and Hydas (whose *territorium*s completely or partially

fall out of the study area) has been taken into consideration wherever deemed necessary.

A means to attain the objective of the study has been the configuration of the sphere of influence of *deme*s within the environmental background. In doing that, estimations regarding the *territorium*s have been attempted, to further understand their spatial development which triggered growing populations down to the 2nd century B.C. Admittedly, spatial questions relate to geographical, even areal problems arising from physical, socio-cultural, political, military and economic reasons. As the reasons are divergent, scholars greatly need to dwell on integrative means (Dickinson, 1960: 3,5). To put it in specific terms, spatial processes essentially relate to parameters like distance, pattern, site and accessibility (Nystuen, 1968: 35). Hence, the discussions about the rural settlements below are commenced with developing a site typology on the basis of size, function and land use. We also realize that the discussions are short of any apriori questions related to the social or political context and that the spatial context is overwhelmingly referred (Crielaard, 2009: 365). Even though the systematic surveys are the most desired, we had to act in line with the scope of formal surveys which necessitated an extensive study. At the same time, some theoretical models (e.g. central place, thiessen polygons, least effort, etc.) were refrained since they are barely applicable to our case where the geographical factors have great shares on the land (Forbes, 2007: 185-186).Being aware of the pitfalls of this paper, we choose to check the manner of settling in the Peraea from a more spatial approach, surmounting the socio-cultural determinants which need to be taken in a separate discussion.

THE ENVIRONMENTAL BACKGROUND AND NATURAL RESOURCES

As may be recognized, it gets difficult to configure the spatial organization of any ancient region and reconstruct its model unless the environmental framework is looked at. Hence, we opt to revisit and assess some indicators which might conceal clues in the physical context. Before going into that, there is a need to mark down that information in respect of the ancient natural conditions is weak (apart from the limited depictions of Strabo and the earthquakes records in the Aegean arc). Moreover, early researchers' notes of archaeological value should not be anticipated to reveal further; e.g. nothing remarkable can be grabbed from the geological expeditions of Paton and Myres (1897) who travelled all across southwest Caria in 1893.

The morphology of the Peraea presents itself with undulated terrain (Fig.2A) where internal relief is remarkably high. Elevation values decrease towards the southern part (Çınar, 2004: 15). Although topography is "steepest near Karayüksek Mountain (ancient Phoinix)" (Strabo (14.2.4)), the entire area is "mountainous", "rocky and steep", "full of thick vegetation and forests in the north but bare in the south". There are plenty of small bays along the coastline whereas delta formations are concentrated in the north. The geological background reveals the characteristics of the Upper Jurassic. Highly influenced by the Mediterranean zone, the dominant rock type is limestone on which the karstic processes have had a high impact (Campbell, 1971: 259). The limestone formations are observable at the upper sections of uneven and mountainous areas while we see soft rock formations - generally in red tones on which the agricultural terraces (Fig.2B) lie. Brief to say, the limestone determines the limits of the sedentary environment, agricultural terraces and the land for grazing (Ersoy, 1993: 173-176).

The Mediterranean basin is quite familiar with regular tectonic movements as it used to be similar in the past. Hence nothing is unusual about the outlook of the Peraea which is sharply interrupted by a fault running from the westernmost tip of Turgut Village at Delikyol Bay to Çiftlik Bay in the east of Bayır Village (Abulafia, 2003: 40). Understandable from the periods of mass destruction in the neighborhood and tectonic risings in the Menteşe fault which considerably determined the morphology of the Carian lands, the Peraea must have been highly affected between the 4th and 2nd centuries B.C (Erel and Adatepe, 2007: 241-245).

As she is bestowed with karstic reserves, the water which is rich in calcium and magnesium is convenient for drinking and daily usage. On average, groundwater levels measure between 5-10 m whilst karstic cavities can be found in "recrystallized limestones" (Baba and Birsoy, 2001: 249-251, 256). The problem with water arises from the shortage of regular springs, however a dramatic case relates to the southern part which lacks permanent streams whose absence has posed great pressures until so far. That the water resources are scarce in the south makes the situation noteworthy from the point of settlement patterning. This sector is bound with underground water fed by rainfall on a large scale, hence it abounds in wells and cisterns (particularly found in the vicinity of modern Taşlıca) that are often associable with the livestock and ancient ruins. On the contrary, drilling works had adversely affected the terrain, particularly in the environs of Bozburun which now suffers from diminishing groundwater (Özüş, 2009:12) reserves. Despite problems with the running water supply, we may, at the same time, speak of a relative advantage of the northern sector. There is a main stream forming a small cascade in the forest area of Turgut Village. A wetter climatic zone characterized with the woodlands (domination of *Pinusbrutia*, *Quercus ilex*, *Quercuscoccifera* and *Naulusnobilis* (Taşlıgil, 2008: 76)) around Bayır Village is seemingly a benefit, with spring waters welding from the fault between the two mentioned villages.

The Peraea is heavily mastered by the shrubland biome between the central and southernmost sector, however is full of manipulated terrains. Anyone ambitious for seeking out the interplay of geological processes and vegetation needs to consider the conditions affecting the deforestation of karstic areas. For example, dolinas, peculiar to karstic landscapes and which generally fit to small agricultural plots (retaining natural reservoirs of fertile soils) may project environmental interruptions in the past. A comparable case is Trieste Bay in Slovenia where deforestation affected the conditions of karstic areas. From the second half of the 1st millennium B.C, dolinas were affected by overexploitation and population pressures (Novakoviç *et.al*., 1999: 123-126). The Peraea also reveals over-interruptions (Fig.2C-D). Overexploitation, specifically by reason of overgrazing ends up with land degradation, deforestation and abandonment, as was proven in Sardinia (Enne *et al*., 2002: 71-72). Pollen analyses and studies on dendrochronology have shown that deforestation essentially occurred due to the destruction of cedar trees in the Taurus Mountain range (Akkemik *et al*., 2008: 14-22). Evidently, the reasons are miscellaneous. Sloping and rolling topographies where heavy rock fragmentation causes soil degradation (van Wesemael *et al*., 2002: 131) point to the very first terrestrial attribute of the Peninsula. Differently telling is about the northern Caria. Regardless of the level of the population and possible manipulations over the environment, Marchese underscores the minimal effect of deforestation in northern Caria during the Bronze Age. He marks that it was better off in terms of natural vegetation. As may be claimed for sub-regional zones, no great effects caused by human beings on the environmental conditions were there (Marchese, 1989: 30). Held (2001: 196) states that the environs of Bozuk Village (ancient Loryma) was abandoned due to deforestation and erosion in the late Hellenistic period. He may well be implying the deforestation of maquis. It is, however, a possibility that the climatic conditions of the past were more or less the same, semi-arid. Yet, we need to stay away from firm statements since studies on the environmental background of the Peraea are rather poor. Neither pollen analyses nor climatic research (specific to the region) has been carried out over the entire region until now. No matter, it is hard to suggest an availability of "dense" forests in the *deme*s of the Peraea, unless otherwise is proven at some time in the future.

ANCIENT ORGANIZATION AND ECONOMY

In spite of the fact that evidence on the nature of organization is comparatively weak for Early Iron Age Caria (Diler, 2007: 27), we have preliminary evidence about the political organization and the federative structure of the Peraea down to the Archaic era. A widely acknowledged aspect is that Caria was a land of villages created in a decentralized manner, with diverse land-hinterland interactions before the Hellenic

raids. When it was connected to the Greek world, various political forms prevailed until the end of the Hellenistic period (Pimouguet-Pedarros, 1997: 119-120; Ratté, 2005: 136). Turning back to the federative system, Archaic Caria was organized under the main league of the Carian *Koinon* (όίΚάρες), being the highest phenomenon. This entity embraced the regional equivalents (Hornblower, 1982: 53-67) one of which was the *Koinon* of Chersonesos and their local *koine*. For Held, these were Loryma, Amos, Bybassos, Tymnos, Phoinix, Thysannos, Hygassos, Syrna, Hydas and Casarae. He attests that each local *koinon* of the *deme*s was politically organized in the form of a *chora* around a central settlement (Held, 2005: 86-87, 96).

By the time the name "Rhodian Peraea" was being widely used in lieu of the Carian Chersonesos, we understand that the Peraea was administratively connected to the Rhodian League and organized in the form of *deme*s in the 3rd century B.C with the Island's diplomatic onset (Pimouguet-Pedarros, 1997: 129-130). The Rhodians always acted as potential agents in the Peraea (Hornblower, 1982: 52) and withstood any conflict lest she be lost with the advent of the Roman troops marching in Asia Minor. As it has been vindicated by a considerable number of epigraphic inventory and the use of demotics both documented at the Island and the periphery, we can safely state the Peraean *deme*s were maintaining close connections with the Rhodian administrative model (Sherk, 1990: 285) at the end of the 4th- beginning of the 3rd centuries B.C. The government model of Rhodes could enable the residents to enjoy any type property under certain conditions, however a major criteria was holding a citizenship. Reminiscent of a practice in Attica, the notion of *ktoina* (being the smallest political unit based on territorial division) was the oldest institution (Berthold, 1984: 41). Leaving aside some recent debates on the administrative allocation of the *deme*s on the Island(s) and the mainland to the three old *poleis* of Rhodes (Papachristodoulou, 1999: 32-40; Jones, 1987: 243, 245, 249), the Peraea was indeed the miniature of Rhodes in terms of administration (Fraser and Bean, 1954: 82-86) and a system of possibly almost equal allocation of land in itself to the maximum extent.

Truthfully, any regional organization was inseparable from economic matters in antiquity. As may relate to the physical position of the Peraea, the basic flow of interregional relations might be found in the long-term recognized contacts that took place from the Black Sea to the Eastern Mediterranean. The flow of trade from the Aegean islands to Cyprus and Levant over the sea routes since the mid-10th century B.C can be informative as far as the position of the ancient Peninsula and the neighboring lands are concerned.

Trade and agrarian economies in the periphery were the vital aspects of an island state like Rhodes. Obviously, the impetus of trade and the scale of economy, as Wilson (2001) pinpoints, would not have been expected to be identical to, for example, 5th century B.C Athens or the Roman world since the eradication of less predictable factors like piracy could have offered rising opportunities throughout a magnificent geography (272). When Berthold (1984) makes a mark on the limited resources both on the Island of Rhodes and the mainland, he is agreeable for the exceptional cases of honey, olive oil, vine and fruits. In return, export goods like grain and timber were favored. Presumably, it was not the nature and content of the goods exported or imported but Rhodes' strength in the profitable business-commerce and trade network (47-48). That Rhodes lacked grain and had to sustain a densely populated city could have stimulated her to become a real merchant state and a great banker till the mid-2nd century B.C (Morley, 2007: 25). Despite the rightfulness of such a view, we assume little effect of the deficiency of grain on her merits in seafaring. A retrospective approach to the study area seemingly pushes us forward to take it for granted that the Peraea was a real countryside where the type of production was essentially based on an agrarian economy. However, we do not take a firm claim without tossing out the great deal of degraded agricultural terrain. Initial evidence on the financial status may be found in the ATL and Persian tribute lists, and in the minting of, as to be normally expected, different standard coinage that may well reveal her character against continuously changing conjectures of the ancient world. The Peninsula paid 2-3 talents to the Athenian government (at different years) by the mid-

5th century B.C (Meritt *et al*., 1939- 1949- 1950- 1953 (vol.3): 209; West, 1930: 267-269) while 80 (eighty) talents could have been the figure within which, part of or the entire Chersonesos was incorporated into the Persian financial program (Thompson, 1981: 99-100). The scale of the ancient economy of the Carian Chersonesos was relatively small in comparison to the contemporaries in the ATL (*Meritt et al*., 1939- 1949- 1950- 1953 (vol.2): 122-123; (vol.4): 26). Small but remarkable, the economic potential of the Peninsula is also discernible from the ancient terrace systems. The terraces are the basic indicators of agrarian economies that require manpower and are run with a highly organized institution of slavery (Taylor, 2001: 29). They must have been deployed for various types of products. Cereals were vital for the superpowers of the ancient world, hence during the marches of troops at wartimes; e.g. for the campaigns of Xerxes setting out from Sardes to invade the Greek mainland or for those of the "Greeks" during the Peloponnesian Wars. Also, fodder was an essential logistic. Presumably, transport amphorae were used for the shipment of supplies via naval traffic (Roth, 1999: 61-62, 195). Though it may seem arbitrary, we may postulate that the Peninsula could have had a favorable position for the sustainability of fleets (just like Syme) between Samos and Rhodes, during the Peloponnesian Wars (Thucydides (8.43)).

Economy and trade are inseparable. An amphora, often filled with wine, olive oil and garum, is a very good indicator of trade overseas and between regions (Briese, 2005: 184-185). Although it is a valuable material for understanding the ancient economies, statistical studies sometimes provide a weak insight when there is no well-established system of stamping (e.g. verifiable by the case of Italian products during the Roman Republican era) (Rauh, 1999: 163). Amphorae marked notable expansions in the Hellenistic era. To question the economic scale of the Peraea, one has to look at a larger geography for amphora traffic. Agricultural production had to flourish in Cos, the Peraea and elsewhere situated on the main route flowing from the Black Sea to the East. For instance, following her synoecism in the 4thcentury B.C, Cos fell into the orbit of Rhodes and Alexandria and began to produce Rhodian amphora imitations (Georgopoulou, 2005: 179). Close ties between the Ptolemies and Coans could have been a fundamental reason why Coan wines were found in large quantities in the eastern Mediterranean. That the magnitude of export could have been much more than expected now seems to be favorable in the light of recent studies on until now skipped capacity of the Hellenistic Coan amphorae (Johnsson, 2004: 142-145). Traceable back to the 5th century B.C, Halicarnassus could have found her place in amphorae production in the neighborhood, as well (Briese, 2005: 193).

By 300 B.C, the practice of stamping amphorae began in Rhodes and the periphery (Mattheson and Wallace, 1982: 294-301). Tuna and Empereur (1989: 279) well exhibit evidence for the stamped Hellenistic amphorae. In the Peninsula, Hisarönü, Orhaniye (Çubucak), Karaca-Naltaş, Çamlıçınar were specialized in amphora production (Tuna, 1990: 371; Doğer, 2004: 179). It seems that the bulk of the economy was dependent on the exportation of wine. Huge amounts of Late Rhodian discards reported from Hisarönü, Turgut and Bayır verify the Rhodian effect. These were the stamped amphorae with thick bases and mushroom rims (of a potter, Hieroteles), dated to end of the 4th- beginning of the 3rd centuries B.C (Tuna, 1990: 357; Doğer and Şenol, 1996: 59, 61-65). However, chronological and methodological problems with amphorae prevent rigid estimations on the scale of trade in the environs. In other words, the ratio between the stamped and unstamped amphorae needs to be far investigated (Lund 1999: 187-188), considering the Rhodian state imposed productions. On the other hand, there is yet no a systematic survey on how the production patterns of the Peraea could have been after 67 B.C under the political and commercial policy of Rome.

The *deme*s of the Peraea had strong involvement in amphora "industry" unequivocally; however sophisticated pottery is hardly encountered. Nonetheless, some fine and different profiles have been evidenced with kylix, skyphos and black furnished kantharos (5th-4th centuries B.C.). Also, local amphorae pieces (most probably for wine exportation) and daily usage wares of the

3rd century B.C have been reported from the agricultural terraces (Held *et al*., 2009: 223). Doğer and Şenol (1996: 63) write on some base forms of mushroom rim amphorae, appearing with round or sharp silhouettes. A great percentage of ceramic evidence (overwhelmingly made up of coarse wares and amphorae fitting the typical assemblages and forms previously presented by the scholars) recorded in our recent survey has addressed the Late Classical/ Early Hellenistic era (Fig.3), however many were in poor conditions and far from presenting diagnostic profiles (including the Roman and late periods).

The resources of the Peninsula would, at the same time, be expected to be dependent on various kinds of economic activity such as maritime occupation, just like a far neighbor did; Iasos made its living from sea products and fishery (Strabo (14.2.21)). At least, underwater archaeology has helped speculating on the position of the Late Classical Peninsula in naval traffic. A shipwreck dated to as early as the 4th century B.C and found in Serçe Bay has shown the extent of transportation on a single event along with different types of amphorae and many others (Pulak *et al*., 1987: 35-49).

Caria, where the landscape characteristics enabled terracing, was one of the productive centers of olive in Anatolia. To Diler (2004), two modes of olive oil production took place; the local production was realized inland whereas the urban type which was peculiar to the coastline met the commercial needs, insofar associable with the transport amphorae. The second one was made near the olive groves in order to minimize the transportation costs and meet the household needs at the same time (55,57). These could have been "large scale" centers for export, often stationed along the coastline. The region stretching from the eastern Cilicia (Aydınoğlu, 2010: 3-5) to the Cnidus Bay (Tuna *et al*., 2010: 201-204) disclosed outstanding samples for the usage of *mola olearia* and *trapetum*, far back to the 5th-early 4th centuries B.C. That inner Caria was oriented toward domestic production (Diler, 1994: 441-459) points to the very fact that the local types had strong connotations for self-sufficiency. Parallel to how Morley (2007) puts forward (in the most general context of ancient trade and that basic diet or certain materials like wool, timber or clay could be found elsewhere in the Mediterranean), there was perhaps no further need to have a "comparative advantage" in the production of the Peninsula meaning that similar places could have aimed at self-sufficiency at the expense of transportation costs. Except for the distant cases, the persistence of "market-oriented" villas, which became quite professionals of olive, wine or grain in Roman Italy, may be offered to attention under self-subsistence debates, in searching the ancient scales of economy (19, 33). Likewise, the essential customers of Gallo-Roman products, particularly those of wine and ceramics, were again themselves in which matter these goods were not affordable to privileged groups (Woolf, 2001: 58). Limited to the scope of this paper, there is information on the extent of olive oil production linkable with terracing in the Peninsula. Workshops and farmsteads affiliated with press sleeves and beds, spilling canals and some additional utilitarian objects from the sub-regions of Turgut and Selimiye; and some samples from the ancient harbor between Selimiye and Turgut (marking large scale agricultural production for the Hellenistic and Roman periods) have been reported so far (Diler, 1994: 441-459). Further south, Taşlıca and its environs abound in terraces and press stones. The installations for wine processing often appear on rocky platforms, situated next to vineyards and orchards. Some were built in the central localities suitable for plantation or in proximity. An indicator for mass production is that workshops do not lie distant to the ports and transportation networks (Tuna, 1990: 369-370; Doğer, 2004: 82, 85, 93). A majority of them, which were found *in-situ*, did not stand far off the coastal areas while some were recorded within the fortress settlements. Typical ones are attributable to the *chora* of Phoinix (Oğuz-Kırca, 2014b: 288-289) and Tymnos where variants of *mola olearia* and a few complex ones were documented. Many of these samples are comparable with the Hellenistic and Roman types (Fig.4A-C). The workshop in Fig.4B is possibly the one visually given by Uzunel and Taşkıran (2010: 193, 202).

THE *DEMES* AND EVIDENCE FOR SETTLEMENT

Unfortunately, there remain problems with

the Peraean *deme*s and their *loci* all over the Bozburun Peninsula in various sources. Information provided by the ancient writers is either dissimilar or unsatisfactory. However, some recent data relevant to few places are available in the reports of Held (1996; 1999-2003; 2005-2006), Benter (1999; 2001; 2010), Saner and Kuban (1999) and Kuban and Saner (2000; 2005). For the others, the initial reports of the 19th – early 20th century travelers are referable. For the purposes of this text, the issue of identification shall not be highlighted as it has been discussed (Oğuz-Kırca, 2014a: 271-283) recently.

A wide spectrum of findings in relation to settlement has been compiled during 2009-2012 campaigns (Figs.4 (D-F), 5-8). Under a recent silhouette, Fig.9 shows the general profile of the ancient settlement data and the related features attained during the extensive surveys (Oğuz-Kırca, 2014a: 281).

TERRITORIAL BOUNDARIES, SIZE, FUNCTION AND LAND USE

Caria, like many contemporaries, has always been problematic in assigning political borders to any type settlement which overlapped over time. Hence, it is a difficult task to determine the exact territories of the Peraean *deme*s when the real coordinates of the former Chersonessian settlements prove futile. Also, recent pastoral economies which aimed at grazing flocks until the 19th century, make the situation worse (Bradford, 1956: 173), however, our essential criterion for estimation is based on the data acquired through the recent surveys. On one hand, all types of inscriptions addressing a location or an "ethnic" are valuable in estimating the original boundaries of the *deme*s. Hence, the places, which are poor of survey data or excavation, have been reconsidered according to the content and location of epigraphical material, and admittedly the notes of ancient writers.

The *deme*s were territorial organizations. *Horos* addressed the political borders or the division lines between land shares. Notwithstanding, a statement about the boundaries of *ktoina* (Gardner, 1885: 255) is rarely found elsewhere. Peraea is not that fortunate in this sense, either. An upcoming assumption is that the boundaries could have been designated according to geographical attributes and limits, as the modern practices also corroborate the issue. When the ethnic divisions are taken into account- though a difficult task to tackle, the maps supplied by Meyer (1925) and Bresson (1991) are a reference for making the preliminary estimations based on the influential sphere of *trittyes* which made up the *demos* of the Chersonesioi (as inscribed on the ATL). Therefore, the initial method has been applied through (i) the compilation of live data; (ii) a revisit to the geographical borders and (iii) reinterpretation of the domain area of the sub-regional Carian *koine* in the Peninsula. Although it may seem a simplistic way of territorial allocation to each *deme*, there remains no other way but to develop a conjectural approach (paired with partly the middle range theory), before the anticipation of new surveys which can take an advantage on the spatial limits of the *demos* based settlements in the Peraea.

The administrative divisions of the Peninsula are highlighted in the Annals published on the 50th anniversary of the Turkish Republic, covering Turgut, Selimiye, Bayır, central Bozburun, Söğüt and Taşlıca (Muğla 1973 İl Yıllığı: 97). This makes the situation noteworthy because the whole silhouette shows that the boundaries were drawn according to the geographical determinants all over the Peninsula. Moreover, the modern boundaries visible through the materials (dated to 1981) supplied by the Turkish Ministry of Agriculture uphold the divisions stated, with the exception of Taşlıca which also covers Bozuk Village, namely ancient Casarae. Fig.9 shows the estimated ancient divisions in the Peraea unless each *deme* aimed the full or partial transgression of the other's landholdings (Oğuz-Kırca, 2014a: 280-282).

When taken for granted that the *deme*s were politically treated on an equal basis (Held, 1996: 172), the general tendency toward questioning size in this piece of land applies to egalitarianism, bearing in mind that special circumstance could also have prevailed at times of the ancient Peraea. On one hand, ATL is merely a starting point to help figure out the size of settlements in Caria to an extent (Nixon and Price, 1990: 137). For instance,

Amos, whose size is still unknown, was only registered once but identified as a *polis* in ATL, through ethnicity. If her status was to do with size, the urban element- its theatre could be the supporting criteria. Based on the 6th century B.C funerary inscriptions traced out of the fortified area, it was probably much bigger including the *Acropolis* (Flensted-Jensen, 2004: 1111,1117,1123). Likewise, the hinterland of settlements need to be taken into account, e.g. the Classical and Hellenistic *deme* of Amnistos situated between Physcus and Cedrae has a 800 m wide valley which continues 3 km from the coastal area (TAY, 2007 (vol.7)), the entire Chalke measures 29 km^2 in size (Papachristodoulou, 1999: 40), the territory of Classical and Hellenistic Idyma reached 3-4 km from the coastal area to a mountain (Bean and Cook, 1957: 68-70).

The Carian Chersonesos was treated as a *polis* between ca. 450-425 B.C (Flensted- Jensen, 2004: 1114) but the full size is still undefined (Hansen and Nielsen, 2004: 1325). An aspect from the Peraean side may be that "*isolated settlements may continue to exist on abandoned sites, and these may leave casual records such as grave monuments. ..... Even within a city area or otherwise limited size may provide a terminus of some sort or another*."(Woodhead, 1967: 52-53). From this point forth, the potential limits on the *deme*s may be offered to discussion even though the Peraea maintained a rural character over the ages.

Unless there is method, it is vain to question size (Corbier, 2000: 226). The methodology applied by Blanton in the recent Gazipaşa (western Rough Cilicia) survey has been inspiring for this study as meaningful statistics were obtained by dividing the entire size of the area "*by the number of centers to get an average value of territory size of each region*" in the said survey (Blanton, 2000: 67-68) (For five settlements in Rough Cilicia, the mean value occurred as 215 km^2 for the early Roman period. The city hinterlands were quite small (around 21 km^2) whereas for those having a "community pattern", this value was calculated as 36 km^2 for three centers (Blanton, 2000: 67-68.). In the recent surveys, few results pertinent to the issue of size have been conveyed from the north, middle and south of the Peraea. According to Benter (1999), Hydas covers an area of 3.5 ha, including the *Acropolis* and the residential quarters enclosed with Cyclopean? walls while the entire settlement of Thysannos measures 8 ha (excluding the *Acropolis*, the core area of Hydas measures 350x200 m^2 (308); Benter, 2010: 661). Held reports that Loryma encompasses an area of 1.6 ha including the *Acropolis*. He later lays stress on 7 km^2 (as per the surveyed area) including the *Acropolis*, *necropolis*, Hellenistic harbor and 18 farmsteads recorded in close vicinity (Held, 1999: 295; Held, 2006: 187-197). These kinds of figures are often based on the *deme* centers mastering a fertile terrain or an optimum catchment area. As no research has been conducted in detail for all of the *demes* at once to date, estimations on the territorial size have been endeavored in consideration of the geographical limits and the sphere of influence, under quite a macro perspective. Treated as a *polis*, the entire Peraea (including those left out of the study area) is normally expected to have measured a moderate size of 200-500 km^2 but is certainly not very large based on the territorial criteria according to categorization made by Hansen and Nielsen (Hansen, 2004: 71-72; Hansen and Nielsen, 2004: 1313, 1325). Referring to Held's views, the Incorporated Peraea was made up of 10 (ten) *deme*s (Held, 2005: 86) covering an area of ca. 300 km^2 (Benter, 1999: 307). When Blanton's method (Blanton, 2000: 67-68) is applied to the Peraea and is reinforced by the idea of democracy and distribution of land on quite egalitarian terms, the mean value of the average size of the *deme*s (regardless of period) comes out as 30 km^2. The areal calculation of their territorial boundaries through GIS gives the estimations (Table 1) which approximate the mean value stated above. Brief to say, the smallest value attained (Hydas disregarded) is 28,24 km^2 which corresponds to Phoinix (Oğuz-Kırca, 2014b: 301-302) whereas the greatest value is 35,28 km^2 which is of Syrna, within the study area. There is need to note that the missing parts of 1/25.000 maps relate to the rest of Hydas and Amos so no approximate estimation has been further tried but rather, the minimum value is given for each.

As long as functions are sought, elaborations on the land use in the Peraea can be made. In both, there is need to primarily focus

Table 1. Estimated Territorial Size of Peraean Demes

Deme	Territorial Size
Hydas	> 11,90 km^2
Syrna	35,28 km^2
Losta/Hygassos?	27,26 km^2
Tymnos	35,17 km^2
Thysannos	31,91 km^2
Phoinix	28,24 km^2
Casarae	34,87 km^2

on the economic evolutions, particularly of the Hellenistic period. Turning to the recent evidence grabbed in 2009-2012 and information acquired from the scholars' survey results, we can say, all of the *deme*s were economy-oriented (Table 2) in the first instance. The fertile areas compatible with topography and the land over which a wide spectrum of products were grown, were, without doubt, the most favorable. However, the territories where internal relief is quite high often relate to alternative ways of cultivation. Evidently, the main areas suitable for agriculture lie between Losta/Hygassos? and Phoinix. More than that, terracing activity seems to have constituted the essential type of occupation in the rest of the Peraea.

In ancient systems, the selling or transfer of land by a tenant was normal except holding ownership. Evidence extends to Egypt where 2nd century A.D papyrological sources well illustrated the organization of estates in the Fayum village of Tebtynis. The entrustment of plots by their owners to *phrontistai*, who were in charge of the management of land on a contractual basis, required a wide spectrum of tasks such as the maintenance of irrigation works, fertilizing, the hiring of shepherds, burdening the payment of laborers, keeping formal papers, etc. The point is, *phrontistai* had to create a surplus as well as to maintain self-sufficiency in any kind of production at their own expense. Exceptions could be that they could outsource non-agricultural works to the villagers, e.g. ordering wine containers, weaving, pressing, grinding. Hence, the organization and management of land could reveal different models and that there was no single norm for all (Aubert, 2001: 102-103). Regarding the extensive agrarian activity, Amos is a perfect case to obtain information from the leases dated to ca. 200 B.C (Fraser and Bean, 1954; Köktürk and Milner, 2003: 134) although some authors characterize it as a base for piracy at Asarcık Hill (Bayrak, 1994: 495). Valuable evidence comes from a text which disclosed the general instructions about the leasing of land (339/8 B.C) on certain conditions and that the lessees were the *deme*smen as members of an organization (Jameson, 1982: 71-72). Three stelae found at the upper terrace of Amos theatre and numerous verbatim recurrences unveiled complete provisions for doing agriculture. It has become evident that the Amians were the lessors of properties which were owned by the temples. The Rhodian check was there in the course of the approval of the terms and conditions of the leases. Although the *koinon* of Amians was the joint lessors, the direct control of the temple inventory by the so-called *hieromnamones* was subject to limitation (Fraser and Bean, 1954: 6-12,14,19). The habit of buying land by temples has also been proven on Mylasa inscriptions (Dubois and Hauvette-Besnault, 1881: 107). The duration of leasing varied from ten years to lifelong in the 4th century B.C. Leasing small plots was common and they could cover an area of 1.8 and 0.7 ha (Rhodes and Osborne, 2003: 282-284). The temples were active in depositing cash and acting as treasury mechanisms until the 4th century B.C in Rhodes (Fraser, 1972: 118). As various instances reveal, during the Classical and Hellenistic periods, the Peraea could have conducted similar lease agreements under the directorship of the "community" which had the right to state the cultivation regime (Osborne, 1987: 43).

Table 2. Settlement Matrix Table (Peraea)

LOCATION	*DEME* CENTER	AVERAGE ELEVATION	TERRITORIAL SIZE	FUNCTION	POSSIBLE ORIGINAL LOCATION(S)	PERIOD
Hydas (Turgut)	Kaletepe	270 m	> 11,90 km^2	Agriculture Defense Urban Services	?	12th century B.C- LP*
The shortest and safest route for the transportation of goods in north of the scope area, stretches between Hydas and Syrna, in the W-E direction						
Syrna (Bayır)	Yancağız Tepe	200 m	35,28 km^2	Agriculture Defense Urban Services	?	H, R
Losta/ Hygassos? (Selimiye/ Kızılköy)	Asarcık (West of Güncebaşı Tepe)	410 m	27,26 km^2	Agriculture Defense Urban Services	Karatepe Gemecitdüzü?	C, H, R
Tymnos (Bozburun)	Kaletepe (1)	205 m	35,17 km^2	Agriculture Defense Stockbreeding	Avlana-Örenyaka? Kaletepe (2)	C, H, R, LR
Thysannos (Söğüt)	Oyuk Tepe (Ortaca)	199 m	31,91 km^2	Agriculture	Marmarcık Tepe? Kaletepe (3)	C?, H, R
Phoinix (Taşlıca)	Hisar Tepe (Fenaket)	222 m	28,24 km^2	Agriculture Defense Urban Services	Gökçalça Tepe	C, H, R, LR, LP
The shortest route for the transportation of goods in south of the scope area stretches between Phoinix and Casarae, in the N-S direction						
Casarae (Bozuk)	Hisardibi Environs of Hisarüstü?	35 m 226 m	34,87 km^2	Agriculture Defense Urban Services Cultic	Hisardağ? Loryma	A, C, H, R**

A (Archaic), C (Classical), H (Hellenistic), R (Roman), LR (Late Roman), LP (Later Periods)
* Benter. 2001: 177-179.

**Kuban and Saner. 1996: 438-439; Held. 1999: 295.

At times of peace or war, providing surplus or not, leasing with the permission of an authority and cultivation or the feeding potential of a region is inseparable from the logistic function. The Peraea lay at one of the vital junctions of the Mediterranean traffic, so it must have been quite familiar with maritime activity as we mentioned in the previous part. A possible naval base for Rhodes was Cedrae (Diler, 2007: 30; TAY, 2007 (vol.7)). Two ancient harbors were discovered in Bybassos; kilns were used for pottery manufacturing in the northern valley, not far off the coastal area (Held *et al*., 2009: 216-217; Held *et al.*, 2010: 327). The positioning of the ateliers could have facilitated the transportation networks of the Peraea from the northern direction via harbors. As of the geographical properties, the case of Bybassos leads the way to understand how settlement pattern can be linked to trade function and the urban services in the Peraea. Likewise, particularly Hydas, Syrna, Losta/ Hygassos?, Phoinix and Casarae could have held advantageous positions for the domestic or foreign transmittal of goods and services. Even today, carrying fodder, water and various staff with the donkeys is a widely applied form of transportation between Fenaket and Taşlıca Villages. Nowhere in the Peraea is so specialized in such an activity.

For Held, wine was probably the most valuable product in the Carian Chersonesos (Held, 1999: 296-297) so a great percentage of land must have been reserved for the operation of agricultural terraces. Overwhelmingly bound with agriculture, the economic concerns and trade patterns are best reflected by the stamped amphorae (Rauh, 1999: 163) in the Peraea. Round and deep base forms introduced so far diverted the interest to discover more in the study area during our field works. Phoinix (Oğuz-Kırca, 2014b: 288-289), Tymnos and Thysannos are now the main *deme*s which offer distinguished samples. One issue should not be left out when inquiring about the Peraea's involvement in the amphora industry. Obviously, the vast majority of the stamped Peraean amphorae are roughly datable to the 3rd- 2nd centuries B.C. Although no systematic survey specific to the Peraean unstamped amphorae handles have been conducted up to now, we may be inspired by the declining figures of similar Coan amphora beginning from the 1st century B.C under the Roman rule. Admittedly, such cases are very open to debate but part of many unstamped examples documented during our field studies might recall a possible continuation of amphora production in the Roman times under altered circumstances. However, we definitely remain skeptical.

Turning back to the natural/physical indicators, the Peraea is a land of limestone whose infertility comes out with "strip of flysch" full of sandstone on which barley, wheat and rye can grow. It is a zone for raising sheep, goat and cattle, as well (Braudel, 1972: 42). Except for the western side, which seems more suitable for seasonal cultivation and horticulture, Tymnos appears to have maintained somewhat a specialized position in stock breeding as innumerable ruins of sheep-folds catch the eye with dimensions of ca. 13x15 m. on average. Phoinix, in particular could have been familiar with grazing, where numerous trails have connection to the land suitable for pasture but the majority of them has been exposed to degradation. However, the foremost function seems to have been running an agrarian economy and perhaps trade. In connection with the outcrops of seemingly limestone, the site of Kaletepe recorded in Tymnos, if not any other, could have allowed for quarrying as well as grazing, in which case *eschatia* is a usable word (Carter *et. al*., 2004: 127-144) for the *deme*'s eastern territories.

A preliminary condition for the sustainability of economies and a well-established trade is driven by security concerns. Apparently, the robust *korion* in Loryma was in charge of defense, watching the open seas and keeping close contact with Rhodes. Hence, taking into account the ancient farmsteads reported from the vicinity of Loryma (Held, 2001: 196; Held, 2005: 90-91), Casarae could have had a double function in terms of defense and the agrarian economy. A third function is likely if anyone interested runs an eye over the northern sectors. The site of Kıran is a nominee for a gathering place under political and religious purposes (Saner and Kuban, 1999: 289; TAY, 2007 (vol.7)). What makes it a distinguished site by now seems that it could have been a meeting place for the local *koine* in the Peraea.

On the other hand, Diodorus Siculus declares Kastabos (5.62) a meeting place in the Chersonesos. A mention of the neighboring natives (e.g. Hygassians) reported through the inscriptions found at the site inevitably forces the scholars to generate an idea that it could have served the regional *koinon*. This could well be true if we pay attention to its theatre rarely found in the Peraea and the Sanctuary of Hemithea (Cook and Plommer, 1966; Held, 2005: 91-93). However, we can barely enounce a single definite location relating to the political preferences of the Peninsula as shifts might have occurred over time. In the meantime, anyone who looks at the ritual territories of Sparta may discover that the sanctuary of Apollo in Thornax was situated in the *chora*, reminding Kıran (Cavanagh, 2000: 113). Even though both are very distant cases, they can tell us something unusual: the extra-urban sanctuaries could have marked the "extent of the *chora*" (Ainian and Leventi, 2009: 230). If so, Casarae, as Kuban and Saner elaborate (2005), could have functioned as a distinguished area for the community cult.

From a diverse perspective, certain *deme*s could have acted as the land of social attraction. For Thompson (2007), the isthmuses were deliberately occupied by those who accumulated wealth in later times (342). A legendary place like Corinth situated on the Isthmus and mastering the two natural great harbors eased maritime traffic by providing the passage for fleets which would find the shortcut between Asia Minor and the western Mediterranean, even "by land in and out of the Peloponnese". The importance of the isthmus, measurable with the number of goods travelled, might go back to the Mycenaean Age but the volume of traffic is often claimed for the 5th- 4th centuries B.C. Previously acknowledged with Bacchia tyrants in the 8th century B.C, she was an active member of the Peloponnesian League in the 5th century B.C. The wealth of Corinth also finds room in the passages of literary sources where she is acknowledged with revenues earned from the visitors during the "Isthmian Games" (Thucydides (1.13.5); Pausanias (2.1.7); Salmon, 1984: 55-56, 250-380). Along with a favorable position, the volume of commerce is not that hard to predict. When a huge number of uniform shaped 5th century amphorae deposits was uncovered sometime in the 1980s and petrological analyses were made, the results were consistent with the local products of a site/sites situated near the Atlantic coast, possibly from Spain or Morocco (Maniatis *et al*., 1984: 205). Considering the opportunities easily acquired by isthmuses, the advantage offered by the plain area of Hisardibi in Casarae (perhaps partly interrupted by Phoinix) leaves us with the complementariness of the economic interests and religious life, regardless of period. The habit of financing festivals by the wealthiest portion of a community, though needs to be supported with outstanding evidence, might be linkable with the cultic practices whose expenses could have been born by, e.g the southern *deme*s of the Peraea.

ORGANIZATION OF THE *DEME*S

The Peraea functioned as a buffer zone in the midst of Rhodes and the neighbors. As the coastal area was the most vulnerable to raids, the adverse cases must have encouraged the Peraeans to plan a compact network of watch posts on high platforms. Seemingly, the built "urban" areas do not lie far off the secure zones, even inland. They appear in the form of various types of buildings; the fortification walls placed on top or around an *Acropolis*, the dwellings scattered across a lower settlement, the public edifices, e.g. temples and *agora*s and harbor facilities. Another "built" category which corresponds to the elite dwellings, farm complexes and workshops (mostly equipped with water features) seems to have exploited the greatest share of land in the *chora* since these are primarily engaged with an agrarian economy. However, the bulk of land is either waste or suitable for grazing. Osborne's (1987) emphasis that the burials were prohibited on the leased land in the Greek world (43) may be of significance in reconsidering the land reserved to funerary remains in the Peraea. The *necropolis* was designed parallel to hilly zones in Loryma (Held, 2000: 154). The situation is more or less observable in Tymnos (Umar, 1999: 216) and Phoinix (I.Peraia, no.126; Chaviaras and Chaviaras, 1913, no. 98; Bresson, 1991, no. 141: 136) where a special landscape was consecrated to the deceased. In fact, the *necropoleis* or isolated tombs make up a small percentage, either traceable in the *chora* or at

moderate distances to the *deme* centers.

Lying in the north and the east of two *poleis* (Cnidus and Rhodes), the whole Peraea corresponded to a *polis* but the distant case was that it did not possess a single "center" (Held, 2005: 86). The practices of administration could have born semblance to those of the "loose ethnic confederation" of the Boeotian Federation (Snodgrass, 2000: 12-13). Pimouguet-Pedarros (1997) also puts emphasis that the Carian Chersonesos was decentralized (128) while Benter (2010) leaves a firm mark on the same matter. Notwithstanding, an exception could be Thysannos. He, at the same time, diverts the attention to a political and religious league- an *Amphiktyone* whose center could have been Kastabos (660-662). It seems that the author bases his first argument on the vast agricultural hinterland and the advantageous geographical position in Thysannos. However, if the sizes given in Table 1 match up to the real/approximate situation, Syrna, Tymnos and Casarae could have been rivals (in terms of size), regardless of the *deme* centers and topographical advantages offered for agriculture. Furthermore, except administrative decentralization, there is no reason why potential sites, perhaps Kıran or any other yet undiscovered in the south, did not serve as a center for the social league of the Peraea.

The Peraea was organized under a strong defensive network (Fig.10) with the *Acropoleis* which enabled access to the sacred areas, bays and often a harbor (Benter, 2010). Apart from Hydas, Benter indicates 18 more fortifications with lower settlements (whereby 12 of them reveal Cyclopean architecture). Unfortunately, he does not state the names explicitly. A common aspect regarding the settlement areas (some are situated on a hill slope and enclosed with walls) is that they were subject to control by an associated *Acropolis* (Benter, 1999: 308; Benter, 2010: 660-662). The *Acropolis* network of the Peraea is well traceable from inland to the coastal region. In line with what has been mentioned above, the Peraea is a product of careful planning, highlighted with similarly designed enclosures that are positioned at regular intervals, having high visibility. The additional forts and/or *pyrgoi* are situated on the territorial borders mastering the entire land to the maximum extent. It is difficult to come up with firm statements on the fortress gates. However, a few of them were observed to be undisturbed with clear points of entry which all lie in the northeast. The gates are accessible from the most suitable topography; however, they are invisible enough to be alert against and to stay away from an immediate attack. The entries immune to attacks are generally found in the inland Peraea where the best example is the spot called Asarcık in Losta/ Hygassos?. Relationally, the network of a robust Peraean defense system is discussable in terms of the function of fortifications. There are two types of fortifications. The first group includes those directly missioned for controlling the *deme* center, within the administrative context while the second group, which was geared toward defense, is attributable to the military structures having the highest visibility (Oğuz-Kırca, in press).

The orientation of the *deme*s is completely affected by the topographical constraints and Phoinix (Oğuz-Kırca, 2014b: 296, 305, 308), Syrna and Tymnos take the foremost seat. The impact of the environment is seemingly felt on the positioning of the *deme*s and the overall design of the Peraea. The habitats in proximity to water resources or corridors giving way to the coastal outlets were the most preferred. It seems that the location and territorial size of each individual *deme* ensured self-sustained growth as substantial *komai*. A moderate distance between the nucleated settlements was the basic idea to leave enough space for each other. On the contrary, the bulk of land was exploited by a rich number of second order settlements which had easy access to a main route, e.g. unlike Spartan territories.

In general, the vast majority of settlement clusters is concentrated around the land suitable for terracing, except in a few cases. It is almost the same situation, observed for the terraces and the sloping territories of the Peraea today; the ancient boundaries of the cultivated areas fade near the steep slopes where the character of soil and hillside changes. Moreover, the "distance between parallel lines of terracing is not constant due to gradient affect". Understandable from the

vertical photos, earthen terraces are often distinguishable with their average height (5 feet) from those marked with white stone lines, e.g. the "Classical hands could have shaped the origins of the organized layout" at Rhodes (Bradford, 1956: 174-180) while the ultimate silhouette of the Peraean *deme*s could have emerged in the early Hellenistic period. We can convey more about the basic agricultural units. For example, placing new terraces over old the ones was often applied in Attica. Parallel banks of the earth set for terracing down to the sea offers similarities for the Peraean way of shaping land. Continuous ploughing might be the answer for the creation of parallel lines on the agricultural land as observed, e.g. all over Phoinix (Bradford, 1956: 178-179). Apparently, the importance of agriculture (Jameson, 1992: 135-136), even on harsh terrain, can be brought forward with the long-used terraces, reminding the case of Antikythera (Bevan and Conolly, 2011: 1304-1305).

Referable to some instances but disregarding the type of production in Lassithi and Paros (Sevenant and Antrop, 2007: 362-368), two very general patterns of settlement are traceable throughout the Peraea: the inland and coastal *deme*s. The inland *deme*s seem to have exploited the resources of mountainous zones while the coastal *deme*s, appearing with conspicuous patchy patterns stretching across the undulated terrain, must have enjoyed wider access to marine and hinterland resources at the same time. In both *deme* types, the lowlands are associable with the *deme* centers while the pocket plains, which have connection to the *deme* centers, are attributable to the *chora*. Syrna is completely a mountainous settlement whereas Phoinix is acknowledged with the coastal zone. The basin model seems to fit to Syrna and partly to Thysannos. Situated amongst the hilly topographies, Losta/Hygassos? is also conspicuous with its inland positioning and exhibits a compact design scattered over a limited topography. On the other hand, Hydas, Tymnos and Thysannos may be the representatives of the coastal/ quasi-coastal settlements. We can see that the *deme*s, which have easy access to the coastal band, give the impression for a lavish outlook. However, Thysannos reveals a much dispersed pattern.

The Peraea fits to a *chora* system within which the *deme* centers were complemented with secondary order settlements (Held, 2005: 86). We determined that the low order settlements (generally made up of 5-20 dwellings) are situated around a core or in the small plains. They may also appear with individual farmsteads (having catchment areas 0.1 and 1.7 ha). Parallel to the idea, it is not unusual that Benter (2010) underscores a two-tiered settlement system. He is agreeable that the *deme* centers address first order settlements whilst the single farmsteads or the clusters of dwellings out in the *chora* are incorporated into the second level, associable with lower elevations near the valleys or patrolling stations (660-662). In respect of the hierarchy of settlements, the author needs to be backed up as the *Acropoleis* and lower settlements complement each other in terms of physical appearance in the study area. Meanwhile, the lower settlements could have emerged due to various reasons however, relatively safe conditions of the Hellenistic and post-Hellenistic era could have been a main motive. Despite the chronic problem of dating of the ancient and modern terraces, we need to underscore that many small scale enclaves intermingled with the terraces are full of Hellenistic debris. These are rankable under the second or third order settlements, lying at moderate elevations and having physical proximity to the level areas. Briefly, they make up the sporadic silhouette in the *chora* but could have been differently expressed under specific conditions.

Presumably, the pre-Hellenistic settlements lay on relatively steep locations. Some of them were probably situated on the already stated *Acropoleis*, which give the impression to have been replaced by the new administrative elements in the course of the Hellenistic era but the regular domiciles of the lower settlement, under the absolute control of a central authority, might not have gone far (e.g. Loryma (Kuban and Saner, 1996: 433-434). Originally being inland or coastal, the possible early sites recalling the Carian influence were detected on the inner coordinates of the *deme*s, during our field works. We are now interested in, thus working on the possible network of the pre-Hellenistic settlement clusters that form a sharp arc between Tymnos-

Hygassos?-Thysannos triad; and seeking out the possible missing ones stretching from Hisardağ (north of Loryma), to Phoinix and the eastern inland area of Thysannos (Oğuz-Kırca, 2014a: 275, see In Losta/Hygassos?, Phoinix and Thysannos). In Losta/Hygassos?, Phoinix and Thysannos, these potential sites (Table 2) are embraced with terraces worked out over the most suitable land. However, the traces of settlement, approaching the territories of Syrna- in Losta/Hygassos? raise questions on a probable *terminus post quem* for Carian occupation although the two *deme*s do not seem to have a direct connection. A shift from nucleated settlements to dispersed forms could have happened gradually when the Rhodians aspired to the Peraea since an effective utilization of the countryside and the emergence of second order settlements is highlighted through numerous ruins and deposits relating to the *chora*. That the ultimate design of the *deme*s could have been achieved during the Hellenistic period under the Rhodian influence also seems to be supported with the increasing number of sites toward the coastal areas. Interruptions during short-term turmoils could have caused already there sites to become attraction centers under a safer atmosphere. Nevertheless, a sense of security could have survived even after when Delos was declared a free port in 166 B.C and the deliverance of the Peraea rose from the dead. A description of a "network of dependent *koina*" as an "arrested development" by van Bremen (2009: 111-113), contains a core of truth when *polis* type formations had to break down upon Rhodian control in most parts of Caria down to the mid-2nd century B.C. Although a loss of identity may relate to the Peraea in certain respects, the strongholds under the Rhodian rule (like those of Labraunda around Mylasa Plain in Caria (Karlsson, 2011: 247-249) could have helped the survival of old forms of settlement patterns under renewed administrative types as the Peraea grew into later periods.

Typical architectural features which reflect the local design in workmanship and technique are common to all the *Acropoleis* and their catchment areas. Typical gate lentos, well observable e.g. in Cilicia or Lydian Blaundos, highlight the local architecture. Pragmatism is perhaps one criterion as the construction technique in the domestic or public sphere is somewhat based on a lego principle. Coarse polygonal masonry and more specifically the local architecture hallmark the defensive walls whereas much elegant works applied with *isodomic* masonry on Hellenistic elite dwellings and public edifices are observable in the vicinity of the *deme* centers. The defensive structures, terrace walls and dwellings (whatever type) are complemented with water features. Cisterns on top of the *Acropoleis* bear almost identical designs and dimensions; numbers are equal to two or more. The exceptional ones put aside, the majority of the farmsteads is situated at shallow terraces and usually has physical connections to a *deme* center via the ancient roads. Based on the scenario mentioned up to now, Fig.9 is offered to attention for the general assessment of the *deme*s of the Peraea under a chronological follow-up (Oğuz-Kırca, 2014a: 281).

Divergent factors could have been influential on the organization of the Peraea. Cultural problems based on heritage concerns and dowry practices which were central to the agrarian lifestyle, historical trajectories, economic factors, the idea of self-sufficiency, levels of trade could have shaped its settlement patterns. For instance, the Rhodians knew how to intercept and withstand the Spartan fleets in the 4th century B.C. Protecting import grain was so crucial that those who guarded their safe arrival were honored (Osborne, 1987: 102-106; Forbes, 2007: 200-203). The Peraea might have been a derivative of or a guarantee for such protectionism. Indeed, the organization of the *deme*s and the overall design must have owed much to the economic interests and relations with Rhodes. Despite topographical constraints, indicators for intensive land use more or less prove the degree of an efficient economy policy. In modern terms, being a "colony" of Rhodes as back as the early 3rd century B.C could have thrown the Peraea into the status of a cultural partner over time. It would be a vain attempt to come up with the idea of *kleroukhia* (Thompson, 2007: 313-315), or perhaps special conditions may be discussed in favor of an exceptional *apoikia* equivalent to a *polis* disinfected from strict touch. However, a degree of flexibility, as reflected in the loose political organization of the *deme*s, and a sort of self-determination

under the local authorities may eliminate tenets on the presence of a *de facto apoikia*. Rather, conceptualization of the *deme*s as possible Hellenized indigenous communities by Hansen and Nielsen (2004:1395) or as a strategic ally to Rhodes pushes us forward to develop ideas on how they adapted/were adapted to the changing socio-economic conditions in the periphery. The Peraea could well have focused on the domestic needs as well as marketing products (especially wine) outdoors and, perhaps working for the international arena which in return must have affected the layout and exploitation of her landscapes. That is to say, in no other place can an effective manipulation of terraces be witnessed. That the countryside and the *deme* centers are interwoven makes the silhouette of the Peraea a real patchwork in which any part thereof was utilized in the most profitable ways.

CONCLUSION AND DISCUSSION

Bozburun Peninsula is a mini laboratory for hallmarking the role countryside played in antiquity and laying down the rightfulness of the growing interest in neglected ruralities within the modern archaeological context. Regarding the generic history of the *deme*s and their perception in antiquity, the southwest Anatolia helps discover significant aspects on strong relations between the urban and the hinterland, though it may sound trivial in the discussions based on the long acceptance of oppositions between the *polis* and countryside. The introduction and development of rural type settlements and the key elements of the *chora* may be dated back to pre-Classical periods, however, self-realization of the Peraea must have been achieved during the late Classical and early Hellenistic era although a degree of autonomy (Robert, 1946; Marchese, 1989) could never be comparable to that of *poleis* in the north of the Peninsula later, with the ratification of the Peace of Apemeia between the Romans and Seleucids in 188 B.C.

The Peraea, once being the focal point of the Classical Carian Chersonesos (in the 5th century B.C) which was almost equivalent to a *polis* that possibly fell into the category of a moderate/large (Hansen, 2004: 71-72) size territory, became a Hellenistic periphery with the Rhodian takeover. The Peraea- a "peninsula settlement" in the nomenclature, was a network of rural sites revealing dispersed forms and conurbation of at least seven *deme*s (Oğuz-Kırca, 2014a: 282) which began to be explicitly announced from the 3rd century B.C. However, the intersecting chronological set of the Peraean *deme*s may be limited to ca. 400 years- but roughly to an interval between the late Classical and early Roman era. The largest *deme* was possibly Syrna (35,28 km^2) and the smallest being Phoinix. The basic motive behind the development of the *deme*s was the mode of economy in which the center of gravity was the pastoral practice engaged with agriculture and shaped according to environmental conditions. The vast majority of land was reserved to agricultural terraces so the products of economic value must have been treated as inputs to the trade sector and amphora "industry" as a result of Rhodian protectionism.

Generally, the bulk of the settlement clusters are centered on the land suitable for terracing (the way of concentration also implied by Benter 2010). The organization of the countryside and changes in the mode of production is reflected through the practice of land tenure recovered from rich epigraphical materials in content, in the vicinity of Amos (Fraser and Bean, 1954; Bresson, 1991) and, the rising density of utilitarian objects like press stones (Diler, 1994; Diler, 2004) and pottery (Tuna, 1990; Tuna, 1999; Tuna and Empereur, 1989; Held, 1999-2002; Held *et.al*., 2010; Cankardeş-Şenol, 2006), finally leading to interpretations in favor of well-established relations across the boundaries of local peripheries and/or between regions. As an indicator of a dynamic economy in the *territorium* of the *deme*s, the "industrial" spaces whether they be small or large scale, offer huge numbers of amphorae deposits from the late Classical and the Hellenistic era, detectable with mushroom rim amphorae and typical base profiles. The kilns concentrated in the northern sector (Tuna and Empereur, 1989; Held *et al*., 2009) of the Peraea point to the well-established practices of amphorae production. Presumably geared toward self-sufficiency (Diler, 2004), the press stones, often found *in-situ*, add to the vitality of local products like olive oil or wine, which are widespread in the *chora*, on rocky platforms.

It is difficult task to make a claim on the counterbalance of space used for cult, art or a collective attraction center which is only attributable to the far north in Amos and Kastabos or in the south around Casarae. But, a possible political and religious gathering spot (as put forward by Saner and Kuban, 1999)- Kıran in the *territorium* of Casarae is never comparable to places like Corinth where a combination of various creational and economic activities made it a real center of attraction. Nothing serious relates to the monumental architecture (except very rare cases, e.g the sanctuary in Kastabos). Hence, the Peraea was devoid of aesthetic tastes vis-à-vis the neighbors in any period (also understandable from how Fraser and Bean (1954: 41) mention: *"….. comparative dearth of honorific monuments"* ……..), however was rich in terms of practicality. This was probably a matter of functionality in terms of planning and architecture expressed through self-containment. Far from the idea of a *polis* perhaps in the physical sense, the lack of one body standing theatres in the study area is not a perplexity. The case is quite associable with the rural status of the Peraea. The *necropoleis*/ isolated burials constitute only a small portion of the land vis-à-vis the land used/not used as waste land (the majority of which seems to have been run like *eschatia*). The building materials, perhaps local products of the late Classical era and pertinent to Mausolus' reformist movements, are easily distinguished with typical stepped blocks. Of these, huge pyramidal pieces which, according to Bean (2000), could have been used as altars, take a special part. They could also have been any other item regarding the rituals- perhaps reworked as the crumbs of fashionable components of sepulchral architecture often found in the neighboring lands like Cos (particularly attested by Höghammer (2004) for Cos) and Rhodes.

The *deme* centers are located at regular intervals where five km is the average value and the visibility is high on the *Acropoleis*. Indeed, the highest sites with a fortification on top can see partial or a great deal of the *territorium* of at least two *deme*s. The proximity to water or corridors giving way to the coastal outlets seems to have been taken into account in the course of the initial designation of the *deme*s. The water features complement the defensive structures and dwelling areas. The *Acropoleis* reveal commonalities, particularly in the masonry technique, and with the design and dimensions of at least two cisterns. Typical of architecture, coarse polygonal masonry often worked with a rough finish and/or the quarry faces, is observable on the fortifications, while the *isodomic* techniques (appearing in quadrilateral masonry with tooled work) is widely traceable on the Hellenistic structures- the public or elite buildings in particular.

It seems that the inland *deme*s (Syrna, Losta/ Hygassos?) exploited the resources of mountainous zones. They exhibit compact patterns whereas the coastal/ quasi-coastal *deme*s like Tymnos (which seems to have been geared toward seasonal agriculture and grazing), Thysannos (being the most disturbed and dispersed) and Casarae (where the vast majority of land is waste) situated in between marine and hinterland resources unveil dispersed patterns. The common thing about all of them is that, as Benter (2010) notes, plain areas mark the *deme* centers and fragmented topographies address the *chora* which have a connection to the *deme* centers via communication networks. Relevant to the most general manner of organization, the *Acropoleis* and lower settlements complement each other whilst good road networks enable complementarity (Benter, 2010) of the "urban" and rural areas. As the *deme* centers and the countryside look interwoven, a kind of uniformity is observed in the masonry technique, domestic architecture, fortification plans and water features despite the workmanship with slight differences, which are a major concern of chronology.

The *deme* centers left enough space for self-identity and the operation of secondary settlements within the *territorium*. Although the entire Peraea may be treated as a big *chora*, the sub-segmentation may be found in the ranking system of the *deme* components. The low order settlements situated around a core or in the pocket plains, or appearing as individual farmsteads which confront to the ranges in literature (mostly conveyed by Blanton, 2000; Held, 2001; Rhodes and Osborne, 2003; Alcock, 2007; Jameson *et.al*., 1994: 215-254) show the effective utilization

of the countryside. They act as supporting habitats of the *deme* centers. A shift from nucleated settlements to dispersed forms must have occurred in the course of the Rhodian colonization.

When looked at a distinct sub-region, the general manner of organization of the Peraea is reminiscent of the Milesian territory where rural exploitation and physical expansion was realized by dispersed forms of habitation in the late Classical- early Hellenistic period unlike the network of rural localities, which took nucleated forms e.g. in Hellenistic Jordan or Corinth and Athens which experienced expansions before the Classical period (Mueller, 2006: 52-55).

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Figure 1. Map of Bozburun Peninsula and the location of *demes*

Figure 2. Sample photographs showing the morphology of land (A); agricultural terraces (B); land degradation and overexploitation (C,D)

Figure 3. Group of photographs showing samples of sherd profiles from the Peraea

Figure 4. Sample photographs showing samples of pressing installations (A-C) and water features (D-F) from the Peraea

Figure 5. Group of photographs from the category of findings related to settlement data (samples of architectural/cultic remains- public and private)

Figure 6. Group of photographs from the category of findings related to settlement data (views from the samples of typical masonry and ramparts)

Figure 7. Group of photographs from the category of findings related to settlement data (samples of masonry, prygos, epigraphical evidence and ancient roads)

Figure 8. Group of photographs from the category of findings related to settlement data (samples of farmsteads and tombs)

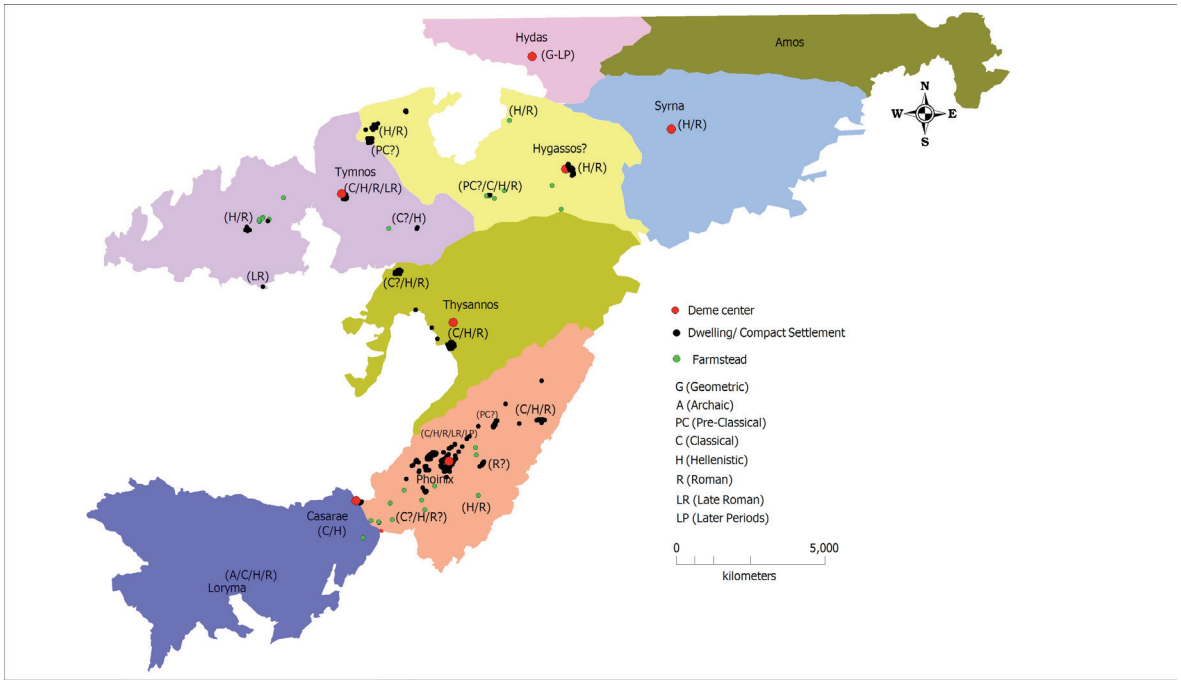

Figure 9. Map of the estimated territorial organization of the Perean demes and profile of the ancient settlement data (Oğuz-Kırca, 2014a: 281, Renewed color version)

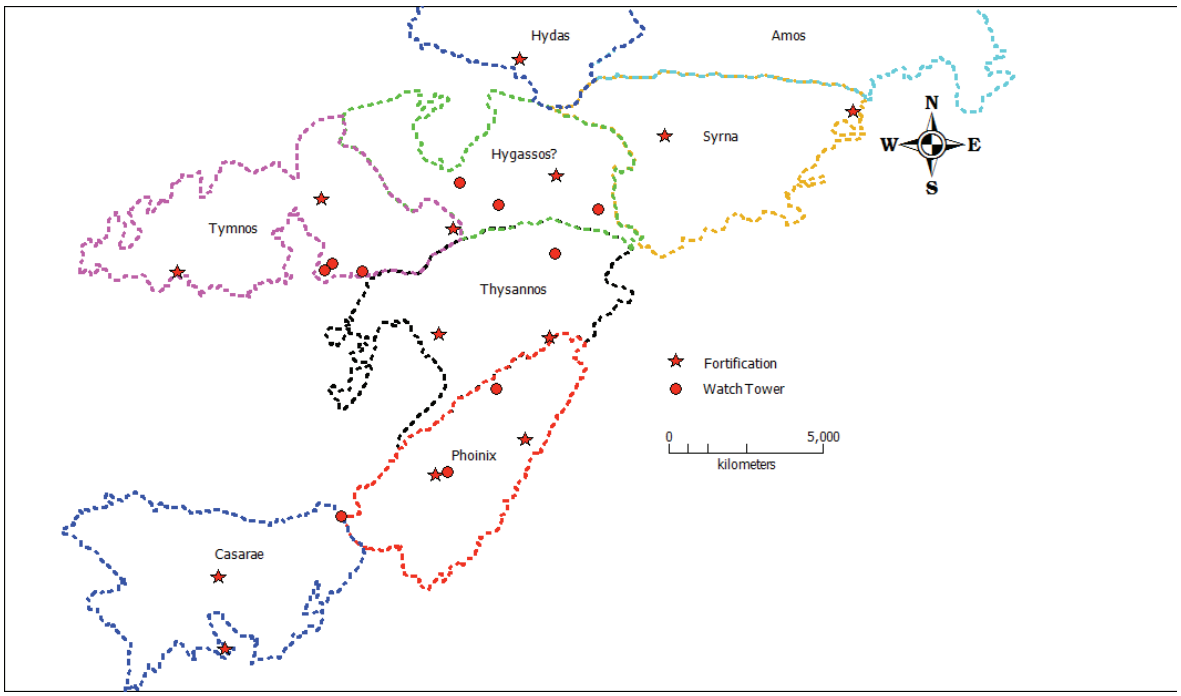

Figure 10. Simple map showing the defensive network of the Peraea (Oğuz-Kırca, in press, 2D version)