From Maple to Olive

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Introduction

The Western Argolid Regional Project (WARP) completed three seasons of intensive pedestrian survey from 2014 to 2016. Conducted under the auspices of the Canadian Institute in Greece (CIG) and the Ephorate of Antiquities of the Argolid, WARP is an interdisciplinary project focused around the upper valleys of the Inachos River to the north and west of Argos (Fig. 1). The project aims to address a lacuna in our knowledge of the northeastern Peloponnese since, despite over a century of excavation and

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1 Durrell 1960, p. 86.
2 Our initial permit request, prior to the reorganization of the archaeological ephorates in October 2014, was made to the 4th Ephorate of Prehistoric and Classical Antiquities and to the 25th Ephorate of Byzantine Antiquities, then under the direction of Alkestis Papadimitriou and Dimitrios Athanassoulis respectively. We warmly thank Drs. Papadimitriou and Athanassoulis for their support of our project. We also thank the CIG and its staff, particularly David Rupp and Jonathan Tomlinson, whose hard work made this project possible. Last but not least we thank the many extraordinary students who have worked on WARP. We count ourselves lucky to have had the opportunity to work with them. We have received financial support from the Institute of Aegean Prehistory, the Loeb Classical Library Foundation, the Social Sciences and Humanities Research Council, the University of Toronto Faculty of Arts and Science and the Archaeology Centre, the University of Colorado Boulder, Wilfrid Laurier University, the University of North Dakota Arts and Humanities Grant Program and the Cyprus Research Fund, and private donors.
survey in the Argolid, little is known about the relationship between Argos and its countryside.

WARP's study area comprises a contiguous 30 km$^2$ section of the Inachos river valley. Research into this part of the Argive plain is lacking since the focus has tended to be on major centres in the central and eastern part of the plain.$^3$ For each of the three field seasons, the project was permitted to investigate a 10 km$^2$ segment of the study area (Fig. 2). In 2014, we examined the western section, a narrow river valley formed by an east–west stretch of the Inachos river, overlooked by the modern village of Lyrkeia, which is approximately 18 km northwest of Argos. To the northeast of Lyrkeia is a fortified acropolis that scholars have identified as the ancient polis of Orneai.$^4$ The southernmost section of the study area was the focus in 2015. This region, which includes the modern village of Schinochori, lies at the edge of the Argive plain and would have been a two or three hour walk from Argos. The ancient town of Lyrkeia, not to be confused with the modern village of the same name, is thought to have stood in this part of the survey area, although its precise location remains unknown.$^5$ In 2016, we investigated the central section of the survey zone which connected the narrow river valley to the Argive plain. This area includes the modern village of Sterna.

Systematic archaeological survey of this region, combined with geomorphological, historical, and ethnographic study, promises to make a substantial contribution to our understanding of Argos and its hinterland despite the tendency in recent scholarship to emphasize the insignificance of this region. When describing Orneai, for instance, Marchand states that it was “an unimportant place in the Bronze Age and in all subsequent

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$^3$ Foley 1988. Previous work in our research area includes excavation of five Mycenaean chamber tombs in 1920 on the hill of Melissi near the village of Schinochori (Renaudin 1923; Hope Simpson and Dickinson 1979, p. 45). In addition, some topographic investigations have been undertaken by Pritchett (1980) and Pikoulas (1995).


To reveal the importance of this region through careful study, WARP has three primary objectives:

1. To reconstruct the settlement history of the hinterland of Argos, an important centre in virtually all periods of Greek history.
2. To assess how influence and control of the region changed through time.
3. To trace the relationships and networks that connected the micro-regions of the western Argolid to each other and to neighbouring valleys.

We are still at the preliminary stages of analyzing data collected during the three field seasons and assessing its potential for addressing these research aims. The goal of this paper is to describe the methodology developed for this project in an effort to achieve the above goals and to present a preliminary overview of results based on analysis undertaken to this point.

Designing WARP

From the 1970s to the present day, Greek survey projects have proliferated, in no small part due to the active involvement of the CIG, which has supported dedicated survey projects on the island of Antikythera, in the Sphakia plain on Crete, and at Eresos on Lesbos, along with intensive surveys carried out as part of larger regional projects in eastern Boeotia, at Kastro Kallithea in Thessaly, and in southern Euboea. WARP, in addition to standing amid this long tradition, is also the most recent of a series of intensive pedestrian surveys situated in the northeastern Peloponnese, including the Southern Argolid Exploration Project, the Berbati-Limnes Archaeological Survey, the Eastern Korinthia

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7 Cherry 2003, p. 144.
Archaeological Project, and the Nemea Valley Archaeological Project.\(^9\)

The sheer amount of archaeological research in the northeastern Peloponnese, unsurprisingly, contributed to the genesis of WARP. All of the authors of the present contribution have longstanding ties to projects in the Corinthia, especially the Excavations at Ancient Corinth (Gallimore, James, and Nakassis) and the Eastern Korinthia Archaeological Project (Caraher, James, and Nakassis). Moreover, the CIG excavations at the Mycenaean cemetery of Ayia Sotira served as an important stimulus.\(^10\) One of us (Nakassis) was a member of those excavations and developed the idea for an intensive survey in the western Argolid while driving between Nemea and Argos. The Inachos valley had at that time become an important conduit for terrestrial connectivity with the construction of the Corinth–Tripoli section of the Moreas motorway from 1984 to 1990, and this spurred the realization that it would have been a significant corridor for movement in many periods of Greek history, as topographers such as Pritchett and Pikoulas had already realized.\(^11\) The relative absence of modern development in this corridor further made the Inachos river valley well-positioned for a systematic, high-resolution research program focused on connectivity in an understudied landscape.

The research program that we developed was heavily influenced by our involvement in modern survey projects that made use of high-resolution data collection strategies. These surveys were, in turn, inspired by the “new wave”, or “second wave”, of projects in the late 20th century.\(^12\) “Their degree of intensity, diachronic focus, interdisciplinarity, and use of the region as the conceptual basis for addressing historical or

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\(^11\) Pritchett 1980, Pikoulas 1995. For the negative impact of the Moreas motorway on the Greek archaeological record, see Cherry 2003, p. 156.

\(^12\) Cherry 1994.
anthropological questions” ensured that these projects stood out from the previous generation of survey in Greece.\textsuperscript{13} Many survey archaeologists at this time also chose to adopt a siteless approach, which maintained the emphasis on collecting high-quality data across the entire landscape, but treated the individual artifact (instead of the site) as the basic unit of analysis.\textsuperscript{14} This increased intensity and focus on methodological rigour was not without its critics, however. In particular, archaeologists working outside of the Mediterranean argued that a type of myopia had set in. Many Mediterranean projects had become so intensive that they could no longer cover sufficient territory to make regional-level arguments and produced data in a way that has made it difficult for even projects situated side-by-side to speak with one another.\textsuperscript{15}

Survey archaeology in the Mediterranean in the 21st century has reacted to this accusation of myopia, in many cases, by doubling down on intensification while embedding artifact-level survey in much more expansive historical, ethnographical, architectural, geomorphological, and environmental approaches to the landscape. For intensification, Caraher, Nakassis, and colleagues have argued in the context of the Pyla-Koutsopeetria Archaeological Project on Cyprus that the intensification of Mediterranean survey has “accentuated the micro-regional niches that formed the basis of small worlds.”\textsuperscript{16} Members of the Troodos Archaeological and Environmental Survey Project (TAESP), conducted in north-central Cyprus from 2001 to 2003, have also discussed the need to recognize such intensive practices in context of regional settlement: “Such an approach is far more productive than restricting analysis to the large obtrusive settlements that represent a fraction of past human society and interaction”.\textsuperscript{17} These dual trends toward setting intensive field practices in a more extensive context has led to the rise of what could be termed the “third wave” of survey archaeology in Greece

\textsuperscript{13} Cherry 2003, p. 141.
\textsuperscript{14} Caraher, Nakassis, and Pettegrew 2006.
\textsuperscript{15} e.g. Blanton 2001.
\textsuperscript{16} Caraher, Nakassis, and Pettegrew 2014, p. 36.
\textsuperscript{17} Given et al. 2013, p. 16.
and the wider Mediterranean region. While “second wave” projects were also often interdisciplinary, “third wave” surveys share the focus on artifact-level distribution patterns with the broader interaction of different datasets for developing ideas of landscapes as holistic, interconnected entities. TAESP, along with the Shala valley survey in Albania, represent two examples of this approach.\textsuperscript{18}

WARP aimed to build on these notions through investigation of a landscape that includes the hinterlands of at least two poleis, Argos and Orneai, the intersections of several overland corridors that connected different regions of the Peloponnese, and terrain that includes mountains, valleys, and plains. We have also pursued a hyper-intensive, siteless approach at the largest scale possible under Greek law. TAESP promoted a similar line of thought by investigating a 164 km\textsuperscript{2} area of Cyprus.\textsuperscript{19} The Greek Ministry of Culture permits only 30 km\textsuperscript{2} for a single survey project, and we opted to request the maximum area allowed. In 2014, we intensively surveyed 2,592 units covering an area of 5.45 km\textsuperscript{2}. The average unit size was 2,104 m\textsuperscript{2}. These numbers rose slightly in succeeding seasons. We surveyed 2,637 units in 2015 across a 6.83 km\textsuperscript{2} area for an average unit size of 2,427 m\textsuperscript{2} and 2,385 units over 6.05 km\textsuperscript{2} with an average size of 2,537 m\textsuperscript{2} in 2016. The total area covered, 18.33 km\textsuperscript{2}, represents most of the walkable ground within the survey area and includes every type of terrain.

From 1999 to 2002, the Eastern Korinthia Archaeological Project, in contrast, covered a total area of 3.85 km\textsuperscript{2} with an average unit size of just under 3,000 m\textsuperscript{2}.\textsuperscript{20} The urban survey of Phlius, conducted as part of the Nemea Valley Archaeological Project, included 337 tracts over an area of 1.2 km\textsuperscript{2} for an average size of 3,560 m\textsuperscript{2}.\textsuperscript{21} The Pyla-Koutsopetria Archaeological Project surveyed just under 1 km\textsuperscript{2} with units averaging ca. 2,100 m\textsuperscript{2}.\textsuperscript{22}

\textsuperscript{18} For the Shala valley survey, see Galaty et al. 2013.
\textsuperscript{19} Given et al. 2013, p. 16.
\textsuperscript{20} Tartaron et al. 2006, pp. 464–466.
\textsuperscript{21} Alcock 1991, p. 440.
\textsuperscript{22} See Caraher, Nakassis, and Pettegrew 2014, p. 23 for a comparison of survey unit sizes and survey areas.
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WARP, then, produced unit sizes comparable to the most intensive surveys conducted in the Mediterranean at an unprecedented scale. This was made possible by using five to six field teams, twice as many teams as most archaeological surveys.23

Preliminary Results

At the time of writing, we are only at the very early stages of analyzing data collected during our three field seasons. In fact, we are also still at the early stages of developing a strategy for the presentation of our results. This is a challenge faced by all archaeological surveys, especially “third wave” projects that struggle with the traditional reliance on site gazetteers and distribution maps: as John Cherry put it, “we can put dots on maps, but we often have little real idea what they represent behaviorally (let alone how such cultural landscapes were conceptualized, experienced, and symbolized).”24 What follows represents our first reading of our survey results.

In the broadest of terms, one persistent pattern in the artifact distributions seems to be that the Inachos river served as a significant boundary with artifact densities much higher north of the river (Fig. 3).25 Of the 3,398 units north of the Inachos, covering 7.49 km², our survey teams counted 16,965 sherds and 47,853 tiles, yielding an average density of 432.7 artifacts per ha; the right (southern) bank of the Inachos, on the other hand, had 4,392 units covering 10.84 km², over which we counted 10,105

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23 In 2014, we fielded five survey teams; in 2015 and 2016, we fielded six. We also had one extra team leader, allowing us to field a mapping team while running all of our field teams. The availability of recent, high-resolution satellite imagery (Worldview-2 and -3) and aerial photographs (Ktimatologio) also increased our efficiency.


25 The distribution map presented in Figure 3 represents total artifact density. We are in process of analyzing the pottery in detail to provide a diachronic representation of settlement, although preliminary results suggest that the pattern of higher densities on the northern bank of the Inachos river is consistent for all periods of activity in the region.
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sherds and 43,377 tiles, yielding an average density of 246.7 artifacts per ha. Thus, the left (northern) bank of the Inachos produced nearly twice as many sherds per ha as the right (southern) bank.

We might tentatively begin to explain this pattern by observing that the major routes through our survey area are largely focused on regions to the north of the Inachos. The right (southern) bank of the Inachos is defined by a steep and rocky ridge called Rachi, and while routes across the ridge exist, they are difficult to traverse and, at least in the past century, almost entirely associated with pastoralists and religious sites. The left (northern) bank of the Inachos, on the other hand, provides access to the hills of the northern Argive plain and a series of semi-mountainous passes to the north: to Alea and Symphalos, to Aidonia and the western Phliasian plain, to Phlious, to Nemea, and thence to the Corinthia and points beyond (Fig. 1). Indeed, part of our initial interest in the western Argolid was its central position within the terrestrial networks of the Peloponnese in all periods. 26

A second, related factor is agricultural. Although all of the agricultural land in the western Argolid is fairly marginal, the slopes of Rachi on the southern banks of the Inachos are especially so, and only became agriculturally viable with the advent of drilled wells. 27 The only large site in the southern part of our survey area, Panayia (see below), is in fact located in an area where water is available from dug wells. 28 The left bank of the Inachos, on the other hand, is slightly better-positioned agriculturally. One indicator of this fact is that the largest modern villages in our survey area, most of which have Venetian and Ottoman roots, are located to the north of the river (e.g., Lyrkeia, Malandreni, Sterna), whereas the only village to the south of the Inachos, Schinochori, was, prior to World War II, far more oriented economically towards pastoralism.

26 See, e.g., Sanders and Whitbread 1990.
27 Karouzou 2014.
28 On this site, see Pikoulas 1995, pp. 97, 265, 289, with references.
Part of the reason for the extreme difference in artifact distributions is certainly the fact that our largest site by far is located to the north of the Inachos. The westernmost section of the survey zone was dominated by the polis of Orneai. Standing architecture there includes a stretch of wall with several towers (Fig. 4). The site is protected by two fortification systems: one in a polygonal style surrounding the acropolis and another in a rougher style on the Sportiza hill above. Early Helladic pottery spread over some 3 ha at Orneai, especially on the crown of the hill and the slopes to the north and east. We found a small scatter of Sub-Mycenaean and Protogeometric pottery and a modest quantity of Archaic pottery, but most of the pottery on the acropolis and the surrounding slopes is Classical to early Hellenistic in date. This ceramic assemblage is dominated by fine wares, but all functional classes are present, including lamps and loom weights. An extensive scatter of Classical to Hellenistic pottery spreads down the arable slopes surrounding the Orneai acropolis to the east toward the Inachos river, covering approximately 1.2 km². Our intensive study of the pottery will certainly refine its chronology and function. The size of this scatter is comparable to that observed for the Classical–Hellenistic city of Thespiae by the Boeotia Project. It seems clear, then, that Orneai was a flourishing settlement in the late Archaic, Classical, and early Hellenistic periods.

Local production predominates in and around Orneai. There is some direct evidence of local ceramic production in the form of a kiln on the slope above the acropolis, as well as additional evidence for kilns in the form of overfired wasters and kiln supports. Local clays were heavily exploited for all kinds of materials, from tiles and pithoi to fine wares. Imports are accordingly rare, but most in the Classical to Hellenistic periods seem to be from Argos and Arcadia.

29 On the identification of the kastro above modern Lyrkeia with ancient Orneai, see Pikoulas 1995, pp. 267–270, with references.
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An important indication of Orneai’s prominence is its place within the broader settlement context. At the opposite end of the Lyrkeia valley, at the confluence of the Inachos river and the Karyiotiko stream (Fig. 2), we identified a second dense concentration of material at an area known as Plati Pigadia. Finds were comparable with material recovered at and around Orneai, including limited traces of Early Helladic and significant quantities of Archaic through Hellenistic ceramics. Fine ware was common along with coarse ware, cook ware, pithoi, and large numbers of terracotta loom weights and spindle whorls. Plati Pigadia may have been a village (komē) under the political hegemony of Orneai that provided control over the western bottleneck of the valley.31 From Plati Pigadia, there are passes to the west and south that lead into Arcadia, as well as easy access to the Kserias river valley to the south.

A different picture came to light in the southern section of the survey zone. The most significant concentration of material in that area occurs at Panayia to the west of the modern village of Schinochori. While there is some Early and Late Bronze Age pottery, most of the material dates from the Late Geometric to Roman periods (roughly 750 B.C. to A.D. 250). To its east, in the area of Makrynari, a large Classical cist-tomb cemetery is known from ephoreia excavations and non-archaeological digging, both agricultural and illicit.32 The diversity of finds from this area is impressive. Sanctuary material was found at Panayia in 11 units, covering 2.4 ha on the slopes surrounding the modern church of the Panayia and on the lower slopes of a hill about 300 m to its north. Artifacts include perirrhanteria, terracotta figurines, miniature vessels, and a ceramic votive mask and range in date from the Archaic to Hellenistic periods. These ritual objects were highly localized and commingled with artifacts typical of domestic assemblages, including fine, cooking, and coarse wares, spindle

31 On the political status of Plati Pigadia, see Pikoulas 1995, p. 272, who suggests an identification of it with ancient Saminthos (Thuc. 5.58.5).
32 Papachristodoulou 1970.
whorls and loom weights, beehives, and hopper mills. Therefore, we believe that the sanctuary was located within the settlement.33

One possible interpretation is that Panayia represents the ancient site of Lyrkeia, a komē of Argos mentioned by Pausanias (2.25.4–5). The southern section of the survey area, located on the western edge of the Argive plain, is about a two to three hour walk from Argos (or about 10 km distant) and was likely under direct Argive influence for much of antiquity. Pritchett and Pikoulas, however, considered this area an unlikely candidate for ancient Lyrkeia, in part because of its upland location.34 An ancient cart road seems to have run to (and perhaps through) this settlement, as wheel ruts, now destroyed, were reported by Pritchett and discussed by Pikoulas. Pritchett believed that this road ended at Panayia,35 but ethnographic parallels with more recent routes through the area suggest that this need not be the case. Although we cannot, at this point, argue that Panayia is ancient Lyrkeia, it seems likely to be a large settlement site like ancient Lyrkeia: in other words, a town or komē of the Argive polity.

The argument against Panayia being ancient Lyrkeia demonstrates one of the difficulties faced by modern survey: how to interpret the connection between ancient and modern road systems. It has usually been assumed that the major cart road connecting Argos and Mantinea, known as the Klimax (Paus. 8.6.4), followed the course of the Inachos River, much like the modern asphalt road, before passing through the mountains to Arcadia.36 Although it seems probable that this “River Road” was the dominant route through our survey area, it is all-too easy to

33 Papachristodoulou (1970, p. 118) reports a 4th century B.C. inscription built into a modern house that reads Λυσίδαμος ἀνέθεκε.
34 Pikoulas 1995, pp. 96–99; Pritchett 1980, pp. 12–17. Another reason to doubt the identification is that Pausanias (2.25.4) reports in his description of Lyrkeia that every year the Argives hold a beacon festival in honour of the beacon that Lykkeus used to signal to Hypermnestra that he was safe; presumably this implies that Lyrkeia and the acropolis of Argos were intervisible, but Argos is not visible from Panayia.
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project uncritically modern road systems and settlement patterns onto the past. Maps of the area made in the mid-20th century, including the British maps of 1944 and the Greek army maps of the 1950s, show a more complex network of routes that cut through the mountains and hills (Fig. 5). While we do not want to assume that these earlier maps simply reflect ancient road networks, they do suggest that other roads and routes are possible. Moreover, we do not have to believe, like Pritchett, that the ancient cart road to Panayia was a dead end. We hypothesize that a second set of ancient routes lay along the base of the Rachi ridge, passing through Panayia before crossing over the hills to Orneai. This route does appear on the maps of the mid-20th century, and several abandoned modern settlements lie along it.

If during the Archaic and Classical period Orneai exercised control over part of the landscape in our survey area while Argos controlled other sections, an important question is whether the transition between these regions is visible in our survey data. Fieldwork in 2016 may have shed some light on this issue. We focused that season on the central part of the survey zone. Artifact densities were significantly lower in 2016 than in the previous two seasons (Table 1). In 2014, we were working in a somewhat circumscribed valley with its own polis (Orneai) and a number of other settlements. The 2015 survey zone appears to be part of the chora of Argos and may have been exploited in part by individuals who lived in and around its urban centre. In 2016, we may have encountered a transitional area at the edges of the influence of the two poleis.

<table>
<thead>
<tr>
<th>Year</th>
<th>Area (km²)</th>
<th>Sherds</th>
<th>Tiles</th>
<th>Artifacts per ha</th>
</tr>
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<tr>
<td>2014</td>
<td>5.45</td>
<td>12,227</td>
<td>44,960</td>
<td>524.65</td>
</tr>
<tr>
<td>2015</td>
<td>6.83</td>
<td>12,170</td>
<td>33,368</td>
<td>333.37</td>
</tr>
<tr>
<td>2016</td>
<td>6.05</td>
<td>3,291</td>
<td>13,152</td>
<td>135.89</td>
</tr>
</tbody>
</table>

*Table 1. Artifact Densities by Field Season*
Conclusions

Euripides’s *Electra* is set in a remote, somewhat mountainous part of the hinterland of Argos, at a poor, smoke-blackened farm, bereft of neighbours. The play opens with an address to the streams of the Inachos river, suggesting a setting within, or close to, our survey area. Euripides’s farmstead is emblematic of the kind of site that Greek archaeological surveys have been obsessed with: the isolated country farmstead of the independent farmer of modest means. Yet the farm in Euripides lies on a busy carriage road that leads to the city of Argos via the horse pastures and irrigated gardens of Aigisthos. This busy, highly networked, and variegated landscape of distinct micro-regions has become a favoured paradigm of Mediterranean history and archaeology. A model in which the landscape is both extremely fragmented into small environmental niches and highly interconnected through constant movement of goods and people is one that has great appeal for our survey in the western Argolid.

Our necessarily brief discussion here provides only a superficial overview of results from the three field seasons of WARP. Much work remains before any holistic picture of the western Argolid can be presented, before the historical equivalents of the farm in the *Electra* can come into focus. With so much attention granted to the major centres of the Argolid plain, this short summary of WARP’s initial findings shows clearly that such work is an important and necessary step forward.

Bibliography


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38 Horden and Purcell 2000.


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Figures

Figure 1. Map showing location of Western Argolid Regional Project, contour lines drawn at 500 m intervals (map by D. Nakassis)
Figure 2. WARP survey area by season, with modern villages indicated (map by D. Nakassis)

Figure 3. Raw artifact density across the 2014–2016 survey areas; shading indicates density (divided into quintiles), with the densest fields shaded in black (map by D. Nakassis)
Figure 4. Aerial view of the acropolis of ancient Orneai (photo by J. Herbst)

Figure 5. Routes through the western Argolid; modern asphalt road is indicated with a solid black line; major paths shown on mid-20th-century maps are indicated with a dashed line (map by D. Nakassis)