

THE BOEOTIA PROJECT 1991: SURVEY AT THE CITY OF HYETTOS

This summer, following on from the Cambridge University three-week season in the countryside around ancient Thespieae, in south west Boeotia, led by Anthony Snodgrass, the three-week Durham season focussed on a different district in the north of Boeotia, the ancient city of Hyettos and its immediate countryside. This was the third year of research here, and has almost brought to completion our planned programme in this small city-state territory.

In 1989 and 1990 we carried out intensive, 100% field survey of some 1.75 km² of countryside immediately north and north-east of the city, discovering 5 rural farm/villa sites of Graeco-Roman date (CN 1, 2, 5, 6 & 7); a previously unknown deserted medieval village (CN 3) which also had prehistoric occupation; and collecting surface material from a known post-medieval convent ruin (CN 4). Our intention in the 1991 season was to complete this continuous block of rural landscape up to the northern boundaries of the city, then accomplish a complete surface survey of the city of Hyettos itself, where a pilot survey on the acropolis had been carried out in 1990.

The team comprised 15 persons at maximum, of whom three were engaged in specialist research separate from fieldwalking; of the remainder on average three were employed in rotation processing finds at base, leaving a maximum of nine people for the day-to-day fieldwalking.

The rural survey

The final block of rural landscape (0.25 km²) was walked, bringing the total around the city to just over 2 km². This block, running from the deserted medieval village (Site CN 3) up to the fringes of the built-up area of the ancient city, produced two significant results. Firstly there was a predictable high density of offsite pottery the closer one got to the city, mirroring the picture found in previous seasons on the north-western city boundaries, and demonstrably due to intensive agricultural manuring with city refuse. Secondly, within 150 m of the DMV a small but rich medieval site was located during fieldwalking (CN 8), exactly contemporary to its larger neighbour and presumably an ancillary satellite to it (occupation: possible early Byzantine, definite middle Byzantine and Frankish periods).

In addition, further work was carried out at two sites discovered in 1990. At CN 6, a medium-sized Roman villa site, the geophysical survey begun in 1990 was completed, under the direction of Mark Gillings (McDonald Institute, Cambridge University). This successfully added additional wall lines to the large rectilinear building complex clearly identifiable from the earlier resistivity plots. At CN 7 another substantial Roman villa site proved, on total intensive surface survey, to overlie a smaller Classical Greek farmstead. The Roman villa may prove to be a major discovery for our understanding of this period in northern Boeotia. On the edge of the small hilltop focus of the villa complex, surrounded by recently ploughed-up Roman roof-tile, modern farmers have removed from the field two large fragments of an olive press. Site CN 7 and its near-neighbour the recently-abandoned convent CN 4 dominate a highly fertile but secluded basin of deep soils 1 km north of ancient Hyettos, where olive trees flourish today as nowhere else in the district, but the significance of the olive press goes further than the likely origin of one of its components. The remains comprise firstly a broken arc in stone of the press base, and secondly a massive stone drum some 1 m in diameter and 1.5 m in height. The latter piece has a square slot in its upper face to hold the beam which lowered the drum onto the olives, but on its lower face there are two small and one large circular depressions which prove that the block was in secondary use in the olive press. The primary use

Hyettos Offsite + City CORRECTED DATA

3642.8

3201.2

2759.6

2318.0

1876.4

1434.8

993.2

551.6

373.6

815.2

1256.8

1698.4

2140.0

2581.6

3023.2

3464.8

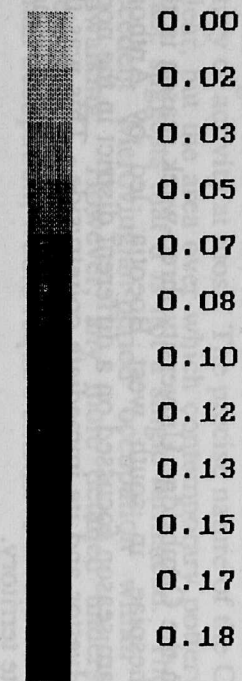
3906.4

4348.0

4789.6

5231.2

ED DATA



sherds per m²

Fig. 1

was almost certainly as a monumental base for a tripod or similar work of art, and the drum will have been removed from the ancient city, where several similar examples have been incorporated into the field walls of the lower town. The speculative interpretation that parts of the Classical city may have been abandoned and subject to the removal of its artistic embellishments to the advantage of Roman villa-owners becomes a serious possibility when we consider the results of the surface survey of the city itself.

The city survey

Building on the Boeotia project's experiences in developing the methodology for urban surface survey during the mid-1980s (at the town sites of Askra, Haliartos, & Thespieae), additional experimentation had been carried out in 1990 on the acropolis at Hyettos to determine the most appropriate set of procedures for this small city, previously estimated to be some 16 ha in extent. The optimum modular study unit seemed to be a square 20 x 20 m in size, and our city survey programme this summer consisted of a continuous grid of 400 m² cells, beginning on the acropolis, until the edges of the city were met with on all sides. In the event, over 640 units were created by the end of the season, and the city was completely delimited on all but the north-east side, where a small area of fields remains to be walked next year. Fieldwalking the city boundaries was intentionally continued into the extramural countryside, to bring out the urban boundary contrast, so that the 26 ha fieldwalked indicates a built-up area of some 20 ha for the town at its maximum extent.

Study of the modular cells proceeded as follows: each fieldwalker was allotted individual squares, and began by walking two separate sample strips 1m wide, one along the edge of the square and one across the centre, counting every artefact in the strips with a manual 'clicker'. The total pottery count for both strips was amalgamated to give a representative count for the surface artefact density for the whole square (in effect extrapolating from the visible density in one tenth of the cell). These figures, accompanied by a visibility count, were transferred each day onto the computer at our base, which was programmed to display our accumulating density map of the city as work progressed across its surface. The decision as to where the city boundary was reached at each point of its circumference rested on cumulative evidence: firstly on a significant shift in average surface pottery density, corrected for visibility variations; secondly on the nature of the the surface artefacts (ie whether they were fresh fragments deriving from *in situ* occupation deposits or small, worn pieces typical of extramural manuring spreads); thirdly on independent information such as the discovery or prior knowledge of city boundary cemeteries (which proved to have existed on all sides of the ancient town). Some novel and potentially highly significant insights into the nature of surface pottery assemblages came from investigations by Dr Peter Reynolds in and around the city (see below).

Following the density count for each square, the person responsible for it would collect a representative sample of its surface pottery, typically 1-200 pieces, but excluding tile. A rapid examination of these sample collections was made on the spot, so that both I and the students concerned obtained a general picture of the chronological range characteristic of each sector of the site, and monitoring of the collection procedures was continuous. Definitive dating of the material awaits the attention of our ceramic specialists next season, but the main lines of the city's history can be sketched in as follows.

Despite claims to the contrary by previous visitors to the site, Hyettos was occupied in prehistoric times, probably throughout the Bronze Age (its name is indeed of a type normally accepted as indicative of a prehistoric settlement). However prehistoric finds come almost entirely from the small acropolis, and suggest a small community; the absence of the city from *The catalogue of ships* in Book II of *The Iliad*, otherwise biased towards Boeotian towns, confirms a minor status in

Mycenaean times. The surface pottery suggests that in the succeeding Geometric period this small community survived and may have begun to grow by the end of the period into a more significant settlement, possibly from more than one hamlet focus across the site. Material of late Geometric to Archaic times shows the settlement both on the acropolis and over several sectors of the lower town. The sixth century BC witnesses the crystallisation of the city-state of Hyettos, characteristic of major settlements throughout Boeotia, and it is now that the fine wall of polygonal masonry is erected around the acropolis and a tantalising dedication from Olympia records a victory of the Thebans over the people of Hyettos.

The Classical - early Hellenistic period is the apogee of the town, with abundant occupation debris throughout the entire 20 ha of the city area. Inferences from the contemporary muster lists for the Boeotian Confederacy suggest a total population of some 3500 people in town and country for the state of Hyettos. An urban area of c. 20 ha may represent some 2500 inhabitants or around 70% of the total population, indicating that the remaining 30% lived in rural hamlets and farms, some of which have been found in our small sample of fieldwalked countryside. An independent calculation of the agricultural resources of the territory believed to have belonged to Hyettos supports these figures, suggesting that under maximum exploitation at least 3000 people could be maintained from local mixed farming (with further numbers supported by exploitation of the famous rich iron ore of the state). In addition, surface finds in the lower town indicate a probable industrial quarter, where amongst other things roof-tiles were being manufactured. In fact, almost all the domestic pottery at Hyettos was made locally, judging by the characteristic filler of magnetite in the fabric.

Evidence from the outer suburbs of the city points to a dramatic contraction of the urban area by late Hellenistic and early Roman times (a phenomenon observed in our previous urban surveys in Boeotia). The reuse of urban monuments implied by the tripod base at the Roman villa CN 7 (see above) may be a symbol of the changing fortunes of the city. However, despite a smaller size, and arguably a smaller population, the Roman town is prolific in its material culture and flourished into late Roman times, probably throughout the sixth century and perhaps into the early seventh century AD. Two historical references in the sixth century, one to the town as amongst the surviving 60-70 urban centres in Greece, and another to a bishop of Hyettos, fit well into the picture of a small but bustling town with abundant signs of external trade in the presence of ceramic imports.

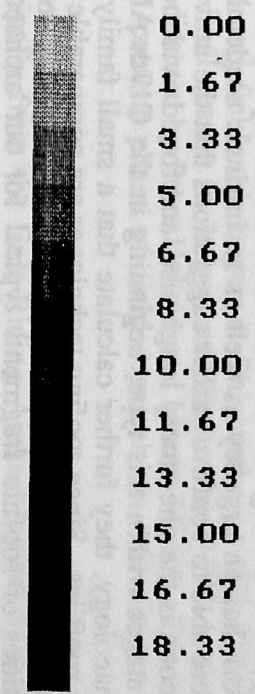
Medieval pottery in the form of glazed wares is strikingly absent from the city, with the exception of a few pieces from the lower town, although future research on unglazed wares may provide better continuity to the next recorded stage in settlement history, when the population seems to have abandoned the site to take up occupation in far smaller numbers at the deserted village site of CN 3. This lies a mere 0.5 km to the north, in a rather secluded shallow valley. The community here grew gradually larger over the following centuries, reaching its peak in the Frankish period (thirteenth to fifteenth centuries AD). At this point there may have occurred a dislocation of population, since although the abandonment of CN 3 coincides with our earliest historic record of the modern village of Loutsi a further 2 km to the west, that reference in the first provincial village census held after the Ottoman Conquest of the region (1466) specifically identifies Loutsi as an Albanian seasonal village of immigrant origin, rather than a permanent Greek settlement.

Additional research programmes

Dr Peter Lock (College of Ripon and York St John) and Mrs T. Lane carried out research on two aspects of the medieval and post-medieval periods. They began a detailed examination of the pottery assemblages from medieval sites found by the project, to determine the range and popularity of particular vessel types and thereby

HYETTOS CITY - Corrected Data

1739.4
1593.4
1447.5
1301.6
1155.7
1009.8
863.8
717.9



sherds per m²

783.9 929.8 1075.8 1221.7 1367.6 1513.5 1659.4 1805.4 1951.3 2097.2 2243.1 2389.0

Fig. 2

move towards a better understanding of the economy and eating habits of the population. On the post-medieval side they reactivated preliminary work commenced by other scholars connected with the project, namely the recording and analysis of traditional house types in the region. As these houses are rapidly being destroyed in all villages, the work has an urgency as well as an intrinsic academic interest. The two researchers were able to confirm earlier suggestions that the universal traditional house-type for Boeotia is the one-storey longhouse, and found evidence for a number of developmental stages within this type, beginning in the C17th AD. In a helpful piece of ethnoarchaeology, they further calculate that a small family house requires over 4000 ceramic roof-tiles. Since roofing techniques are comparable to those typical for Graeco-Roman times, such a large number goes a long way to explaining the phenomenal quantities of roof-tile fragments typical for our archaeological surface collections both urban and rural.

A separate research programme was successfully carried out by Dr Peter Reynolds of the Butser Ancient Farm Project, who joined the Boeotia Project to advise us on ancient agriculture and compare his experimental work at Butser on surface pottery assemblages with the data on the Greek landsurface. Over 10 years of experiments at Butser he has found that a consistent $16\% \pm 2\%$ of pottery in the ploughsoil is found on the soil surface after ploughing. As part of his research with us at Hyettos he dug 10 soil examination pits to the depth of plough penetration (20 cm) in the fields on and around the city, noting the density of sherds at depth in the ploughsoil; the remarkable conclusion of his work is that an average 15.9% of ploughsoil pottery at Hyettos is found on the soil surface. This allows us with reasonable confidence to estimate the real quantities of pottery in the ploughsoil of the Hyettos region, and by implication elsewhere in Europe where fields are ploughed on a regular basis. Thus in the centre of the Hyettos lower town, where sample counts gave 1000 sherds per 40 sq m, the density of potsherds in the 3-dimensional ploughsoil should be of the order of 1.5 million sherds per hectare, whilst even away from the city, in the heavily manured adjacent plain, a ploughsoil density of almost 10,000 sherds per hectare can be calculated.

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