

A FORTIFIED MACEDONIAN MILITARY SETTLEMENT AT JEBEL KHALID, NORTH SYRIA EXCAVATIONS 1986-87

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After the death of Alexander the Great, vast territories he had conquered, stretching from the Mediterranean coast of Syria far to the east, came under the control of Seleucus Nicator. It was a rich land. Many areas near the coast, in the Orontes Valley, and along the Tigris and Euphrates were agriculturally rich; there is a great deal of evidence that the river plains abounded also in animal and bird life; there were plentiful fish in the rivers. In addition, Northern Syria had been for many centuries the point of access for the Greeks to the wealth of the east, via these same valleys and plains and river systems.¹

Seleucus embarked on an ambitious programme of development and control. He built a new harbour and named it Seleucia, founded new cities and refounded old ones, giving them well laid out residential quarters for his own people, and protecting them with fortification walls.² Cities such as Apamea, Laodicea (Lattakia), Beroia (Aleppo), Hierapolis (Membij) and of course Antioch and Seleucia Pieria clearly betray in their names their Macedonian influence.³ North Syria became in fact a second Macedonia.⁴

In addition to cities such as these, other settlements were promoted by the astute Seleucus and his successors. The most important type (there were also purely military forts) is known as *katoikia*, a military colony. The well-known Dura Europos on the Euphrates near the southern border of Syria began life under the Seleucids as just such a foundation. Its task was to protect the river along which passed merchandise from the rich and exotic countries further east. The grid system according to which its streets were laid out is a clear enough indication of its Hellenistic origin.⁵

The settlement at Jebel Khalid, which we now see is itself a *katoikia*, is not previously known except for passing reference as a Roman outpost. Although the ancient constructions have been extensively robbed by local villagers in modern times, since the blocks of the fortification wall in particular afford the simplest means of acquiring material for building their houses, the area is not now inhabited, and offers an unimpeded opportunity for excavation. It became known in 1983 when the University of Melbourne expedition led by Thomas McLellan and the late William Culican began excavations at the Bronze Age site, el-Qitar which is approximately 3 kilometres upstream from Jebel Khalid.

1. The Fortifications

Jebel Khalid (Eternal Mountain, or Rock) is long and narrow, like an elongated bull's head (fig.1); its eastern flank, 1500m long, lies beside the river Euphrates. At

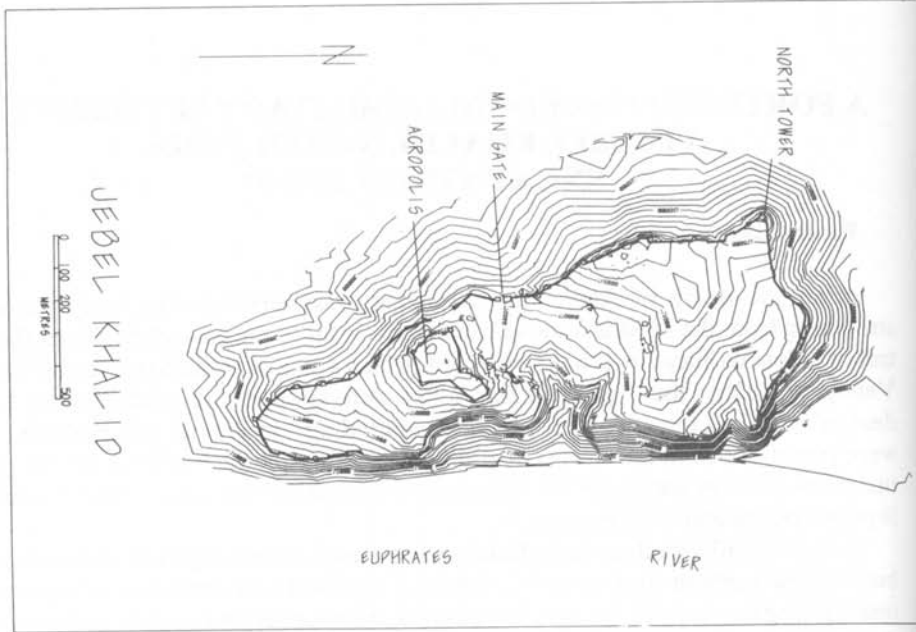


Fig. 1: Contour plan of Jebel Khalib, with trace of walls and towers.



Fig. 2: Compartmented wall on north edge, looking east.

its northern end, the north side itself and the eastern and western sides towards the north, the Jebel is high and steep: precipitous in places. At the south the ascent is not so abrupt, more regular but difficult enough. The ancient site is on the top of the mountain, on the plateau which has itself two prominent ridges dividing the area into three parts: the slopes on each side of the small ravine to the north, the slopes facing the large ravine in the centre, and the area that slopes away rather more gently to the south of the acropolis.

The whole of the plateau is protected by a wall; the whole, that is, except for the central section along the river where clearly the steep cliffs were considered to be sufficient protection.⁶ This encircling of the total area is itself Hellenistic rather than Roman, since the Romans elected normally to concentrate their defences, and define a more clearly geometric-shaped perimeter for their defensive walls.⁷ The wall at Jebel Khalid follows the highest contour of the plateau's perimeter, which means that in its course it pursues a seemingly haphazard line.

At the north east corner of the Jebel, it is plain that the wall abuts the sheer face of the cliff and so ends. Here, as at a number of spots around the circuit, the wall footings carved in bedrock give firm evidence of the course of the wall. The cuttings in bedrock indicate the position of both the inner and outer face, and show an average width of 2.80m, which is also the measurement of the wall where there are blocks still *in situ*. South of this point, up above the river, no evidence of the wall can be detected, though several exhaustive searches have been undertaken along the river front. The clear evidence of the wall that terminates at the rock face, coupled with the largely inaccessible portion of the mountain along the river, reassures us that both terrain and river, as stated earlier, were considered sufficient protection.

As the wall shifts its position to retain throughout its place at the strategic point of the slope, it either simply changes alignment or else a tower is placed at the angle. There are some 28 (T) towers in the circuit, including the autonomous fortifications of the acropolis. Some are quite small; others, as for example the towers flanking the main gates (T11, T12) and the southernmost tower on the western flank (T19), are large. The small towers may have been sufficient only for artillery emplacements and may rather indeed have been bastions, built no higher than the circuit wall itself. The southernmost tower projects strongly forward and incorporates into its foundation structure some of the rocky outcrop which is particularly prominent at this point. Here the ground is not nearly so precipitous as it is at the north of the western flank, but it is clear that a major tower of massive proportions would have been a dominant and powerful element of the fortifications at this spot.

The towers facing the main gate, which is still today the main point of entry to the plateau of the Jebel, cannot yet be mapped accurately, but the plan that can be seen here, gives a clear idea of their size, as they face each other across the entrance. When we are able, after future work, to discern their true dimensions they will not be less than is indicated on the preliminary plan. The entrance is clearly wider than could have been desired at the time of their construction; therefore we can expect to

find something rather more subtle than two rectangular towers facing each other across a wide entrance.

The other major tower is the North West Tower where excavations were conducted in 1986 and 1987, and which will be described shortly.

The wall circuit can be followed with almost perfect accuracy until it ceases at the approach to the southern edge of the large ravine. From the contour that it sustains along the eastern flank, from the south, it dips suddenly towards the river before it once again commands a prominent position and then comes to an end.

The structure of the wall is also clear, both from those portions where at least two courses are preserved above ground level (fig.3) and from the excavation at the

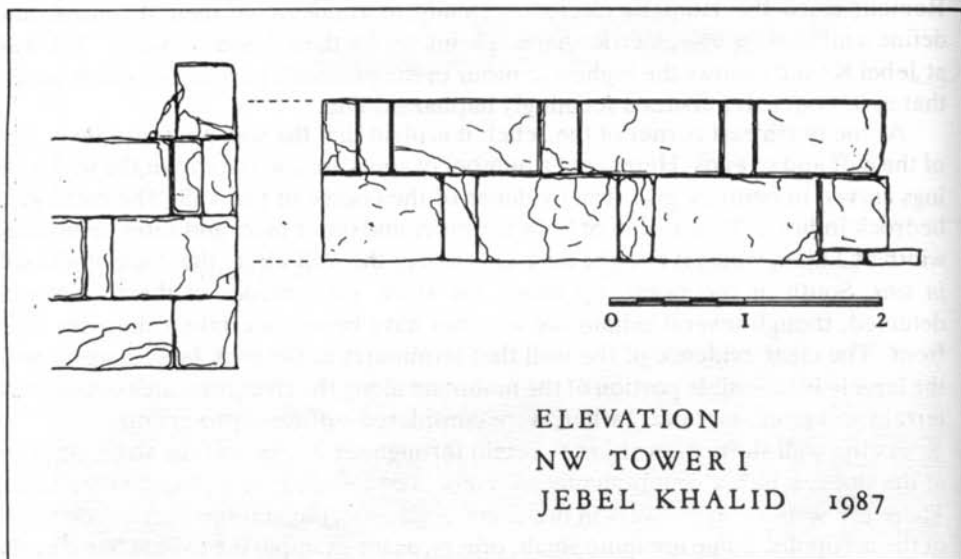


Fig. 3: Elevation of North West Tower Trench 1.

North West Tower. There is a greater regularity and precision of construction than can be found in most other comparable circuits. On Jebel Khalid, stretchers alternate with headers almost without fail. The length of the blocks is approximately 1.10m, whilst their width is about 0.56m. The elevation of the wall of the North West Tower (fig.4) shows that a regular pattern is imposed on the facade; the strict alternation of header and stretcher forms compartments which are filled with large chunks of limestone. Just as in the vertical elevation, one block placed lengthways (a stretcher) does not lie immediately above or below another stretcher, so the compartments too are interlocked and none sits directly above another. At no point is there a large amorphous mass of fill. This technique is that described by Vitruvius as *emplekton*⁸.

Both the circuit of the wall and its construction point to a date early in the third century B.C. Wall 2 at Samos is a fine example of fortification masonry but whilst the construction is impressively careful, the headers replace stretchers less frequently

than the rigorous alternation found at Jebel Khalid. Headers occur frequently also at Heracleia on Latmus, a Seleucid foundation dated to c.300 B.C., though even here a strict alternation is not imposed:⁹ at least two stretchers between headers, and not always so frequently; the stretchers also come in varying lengths. At Ephesos, isodomic quarry face headers and stretchers are particularly prominent in Tower 4, the so-called St. Paul's Tower, and in the Magnesia Gate.¹⁰

At Jebel Khalid, in the towers built forward of the trace, and at some stretches of the curtain on the west, we find a second structural technique named "solid-built".¹¹ The limestone blocks are cut to canonical size, but are placed in contact with one another for the whole of the required wall-width. No doubt, for the towers especially, greater strength is gained, and protection against attack from battering rams. Nevertheless, it is comparatively rare for walls to be built entirely of blocks laid in regular courses, for they are generally keyed and locked together in various ways. We cannot, of course, know whether, at Jebel Khalid, "solid-built" was employed only for the lower courses, acting as a firm foundation.

Since the wall encloses an extensive terrain and is not restricted to a close protection of merely the inhabited space, the fortifications must be placed with those known as *Geländemauer* or "great circuit", a system favoured at the end of the fourth century and the beginning of the third in Macedonia, North West Greece, Asia Minor, and Syria.¹² In most essential respects the Jebel Khalid fortification system resembles that of Dura Europos, which also is bounded by steep cliffs to the Euphrates and by ravines to the north and south. As with Dura and other "great circuit" systems, Jebel Khalid has a separately fortified citadel at the highest and strongest point.¹³

The total length of the wall is approximately 4km; it includes 28 towers. Some other great circuit walls are as follows: Halicarnassus was originally at least 6.5 km with 65 towers; at Seleucia the extant wall measures c.5km; at Ephesos c.9 km; at Dura the surviving length is 2.5 km, whilst the circumference is 3.35 km. These comparisons show that Jebel Khalid is not insignificant when compared with the defences of some important cities of the early Hellenistic period when, because of the wealth and human resources of the "princely rulers", the technique of the "great circuit" was especially in vogue. After about 280-270 B.C., "great circuit" walls were no longer built.

The citadel, a canonical feature of the "great circuit" defence system, occupies the highest point of the Jebel, although an isolated acropolis, as at Jebel Khalid, was rare. It is itself quite an extensive circuit including eight or nine towers, perhaps two entrance gates, and incorporating a long and narrow tongue of high land protruding in a north easterly direction towards the great ravine. Its position prompts the suggestion that it functioned as part of the outer defences above the ravine where the circuit was not continued. At the highest point, but protected from western winds by a bluff along the west side, are traces of a large quadrangular building surrounding a courtyard in which has been sunk an enormous water cistern, cut out of the rock. Around the perimeter, where modern robbing has exposed wall blocks and disturbed

the soil, numerous fragments of painted plaster have been found, in assorted colours, red, yellow with what seems to be a marbling in grey-black, blue, ochre with white and green buds (or leaves) on winding red stalks. All this holds out promise for our future work in this area of the site.

During the first campaign in 1986, major attention was given to surveying the walls, the results of which I have just described. Some excavation was undertaken, and continued in 1987, at what we call the North West Tower (T4), in order to pursue further the investigation of the fortification system. We also excavated in the centre of Jebel at what seemed to be an extensive public building at the head of the large ravine. In 1987 work also began at the domestic quarter.

The North West Tower (fig.4) was constructed on a high peak of rock which affords a commanding view to the west and the north west and also along the northern approaches of the river. Surface remains indicated that an important structure had been placed here: the inner face of the wall was apparent, as were several contiguous blocks that gave the appearance of being a platform; around the outer edges, the bedrock was clearly cut to receive wall-blocks, some of which are still in place fitting tightly in the bedding cut for them.

This area, which must clearly have been much frequented during the active life of the settlement, seemed the obvious place to excavate in the expectation of retrieving artefacts in stratigraphy derived from the construction period and so assist in allocating a date for the fortifications. In addition, the structure of the tower, the significance of the 'platform', and the details of the compartmented wall could be clarified.

Two trenches were laid out: one (tr.1) taking in the join of the circuit wall at the south, and the other (tr.2) towards the north. The combined results of both trenches clarified the structure of the tower, which is horse-shoe shaped with a broad, straight base at the east, where the entrance-way is also placed. The vertical arms and the curved outer edge of the tower are approximately 2.39m wide and solid-built, with two oblong blocks, of slightly varied length but ranging from 1.16m to 1.24m long and 0.54m to 0.60m wide, laid end to end. The outer perimeter of the tower, then, is only slightly less wide than the circuit walls.

The eastern wall of the tower comprises two distinct parts: the compartmented wall at the outside, abutting a solid-built wall on the inside. The compartmented wall continues the structure of the circuit wall with its regular alternation of header and stretcher. The cleared section in tr.1 shows that headers were placed also totally within the wall, making the compartments smaller (and stronger) than would appear from an inspection of the facade; this feature may, however, be special to this tower. The solid-built wall at the east is 1.84m wide (less therefore than the arms of the tower) since it is made up of a length and a width of the usual blocks, rather than two lengths. Together, however, the total width of the east wall (3.49m) is substantial. The tower is 18m long (EW) and 15m wide (NS).

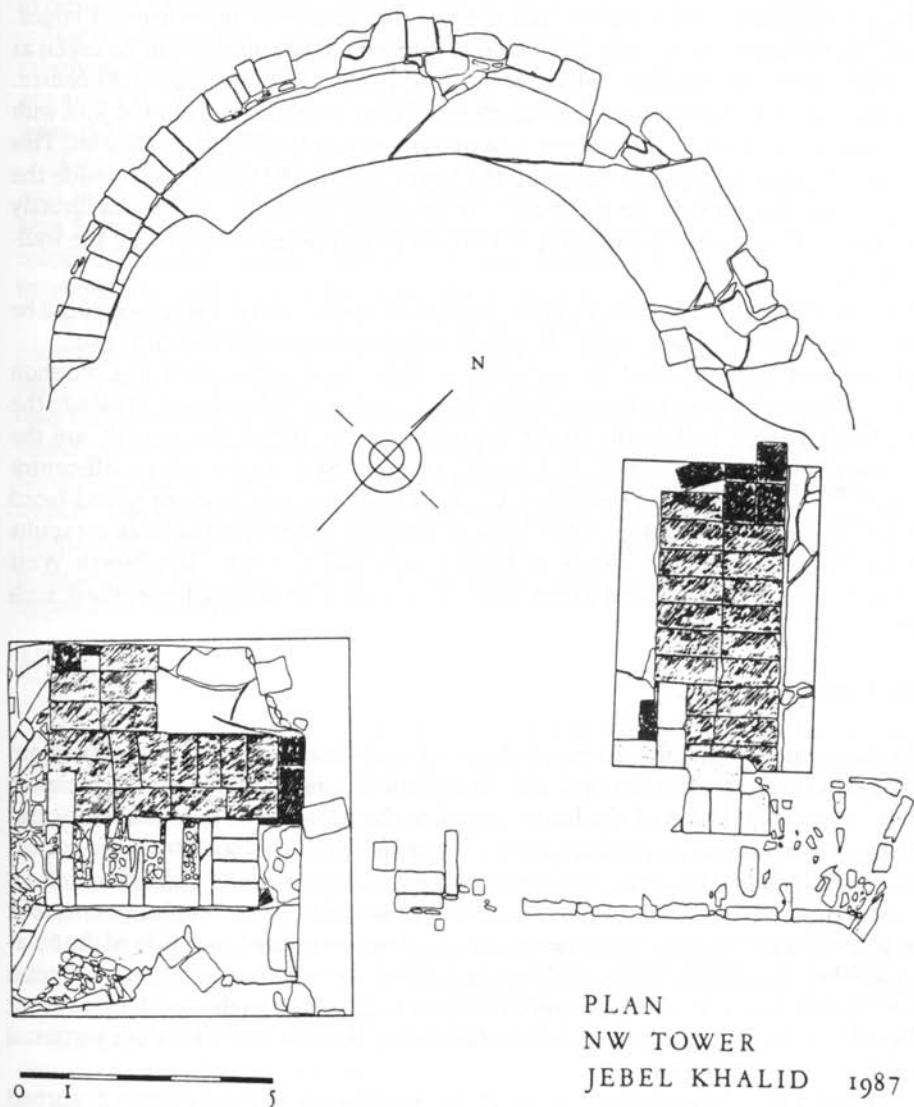


Fig. 4: Plan of North West tower, showing the two trenches, and the traces of wall blocks at the outer perimeter.

The southern frame of the entrance-way came to light in tr.1 where four blocks are laid horizontally; their narrow faces, lining the entrance, have drafted edges. Further to the north the surface blocks show drafted edges and this can be taken as the other edge of the entrance, giving a width of 2.68m. The entrance is off-centre. From the join with the curtain at the south the distance is 4.25m; from the join with the curtain at the north to the nearest face of the gateway the distance is 8.90m. This seems appropriate here, since access to the tower is from the south east, beside the wall from the direction of the acropolis. On the other side, the wall stands directly above the vertical face of the quarry, so that the only passage would be on the wall-walk itself.

Very few fragments of pottery came from the trenches so no assistance could be gained on dating the construction. A spindle-whorl was found in the entrance.

Horse-shoe or half-round towers seem to make their appearance at Colophon and Heracleia on Latmus by the end of the fourth century.¹⁴ The closest in plan to the North West Tower, and dating to the beginning of the Hellenistic period, are the horse-shoe towers at Heracleia on Latmus, where Tower 4 also has an off-centre entrance.¹⁵ During the third century B.C., increasing use was made of round-faced towers perhaps because of the wider fields of fire they allowed to the huge catapults that had become common means of both attack and defence. The North West Tower, if it can be truly dated about 280 B.C., should be among the earliest such towers

2. The Public Buildings

In the central area, immediately at the head of the large ravine and entered from it through an arch cut into the rock and up a flight of rock-cut steps of which eleven remain, the configuration of the land pointed to the presence of a large rectangular building. Added to this, a jumbled heap of broken blocks and soil and large craters in the ground pointed to a major building recently robbed. Architectural elements lie around at random: a length (1.01m) of unfluted column, for example, in a robber trench; a much weathered limestone capital of octagonal shape (each side of the octagon c.0.40m) decorated with a knobbed or beaded frieze at the junction of column and octagonal capital proper; a battered column length close to the south east corner of the robbed area (0.83m long, 0.51m in diameter). Broken roof-tiles were scattered around.

A trench (4m x 5m) was marked out at the western edge of this greatly disturbed area in order to ascertain with more certitude the nature of the building at this point. Work was difficult because of the untidiness resulting from recent robbing, and also because many battered limestone building blocks and shattered column drums littered the soil accumulated over the untouched area in the trench.

Beneath the tumble emerged a flooring of ashlar limestone blocks which are a uniform 0.30m in thickness where measurements can be taken, but vary in length

(c.1.03m) and width (a number are 0.52m). The flooring is therefore irregular in plan, but level. This flooring was placed on a foundation of field stones, which rested in turn on a dark brown soil; the field stones were levelled off by a limestone slurry.

Of the large fragments that lay collapsed over the ashlar pavement were eight relatively well-preserved column lengths, all unfluted. They vary in diameter: two are about 0.77m; three about 0.83m; and three about 0.90m; their length lies between 0.38m and 0.57m.

Two building blocks with sockets cut into them must have been used for holding roof beams; there were very many pieces of broken tile. It could be that the paved area formed a central courtyard which was itself unroofed but was surrounded by a colonnaded portico roofed with tiles. In any case the flooring must have proceeded in 'steps' if it continued further west where the slope rises considerably.

A trench excavated to the west of this brought to light no further evidence of the paved floor, nor of any structure that could be placed contemporary with the building just described. Across the west end of the trench lay a wall of rather flimsy make, only field-stones with the lowest course resting on soil. This is clearly a wall of a later phase of occupation, and may be a temporary structure of as late as the end of the seventh century A.D., since a coin of Heraclius was found in the upper strata of this trench. The small finds from both these trenches were consonant with those from the Domestic Quarter to which we shall now turn. It is clear that a great deal more work is required in this area in order to clarify the shape and status of what were clearly impressive buildings.

3. Houses

To the north of the great ravine, the slope that looks towards the acropolis is gouged by numerous quarries and for the rest is littered with stones. These stones, however, are very likely tumble from the walls of houses; for dotted about are sizeable tall stone slabs: door posts *in situ*. In addition, a closer inspection reveals that certain stretches running both north-south and east-west are relatively clear of stones and that certain patches of ground here and there over the whole area are also relatively uncluttered. The former seem to be streets and the latter courtyards.

In order to test this assumption, two trenches were opened, more or less in the middle of the area. The results are mixed, but go towards assuring the location of the domestic quarter and suggesting that it is extensive.

Sondage δ was laid out at a point which seemed to be an intersection of streets, though the trench was kept inside the presumed area of the house; in its north-west corner is an *in situ* door-jamb. The trench, in order to incorporate the door-jamb, measured 6m along its north-south axis and 5m along its east-west axis. The door-jamb is 0.88m from the north boundary of the trench; 0.50m from the west boundary. Directly opposite the door-jamb, towards the east, was a pronounced depression in the surface soil which looked as though it could be the location of a robbed-out house-wall.

The current state of the trench shows clearly that substantial walls, built very largely of medium sized field stones, line both the east and the south boundaries of the trench. At the south, the outer (or southern) face of the wall is approximately 0.50m from the south boundary of the trench, and this area has been excavated to the considerable depth of 1.04m from the top surface of the corner block, concluding at what appeared to be the solid surface of a hard-packed floor: from the east this surface is smooth for a distance of about 1m: further to the west small stones are packed into the surface. The elevation shows that the full height of the wall has not yet been uncovered; but the space for working proved too narrow for proceeding further with excavation, particularly since it would mean destroying what could well be a street surface, since an exterior floor (if such it is) could well have accumulated (slightly) higher than the foundations of the house along which it ran. The foundations of the wall can, it would seem at the moment, be more easily exposed from the inside.

The wall is constructed from a random mixture of small stones though it does include two large squared limestone blocks (one, 1.12m, with a slight keying cut into its upper surface) of the canonical proportions observed in the fortification wall. These large blocks are not placed low in the wall. The elevation (fig.5) shows that some stones in the outer surface are now missing; but the width of the wall measures a substantial 0.75m, so other, internal, blocks or stones must lie behind the soil now evident in the wall face, and left undisturbed. This is loose-packed soil. Between the uneven stones, especially in the lower interstices, is rammed a glutinous clay to act as a binding agent.

Beneath the top soil, to the south of the east-west wall, in which was found a small fragment of glass (87.081) and a small metal object with pinched sides (87.082),

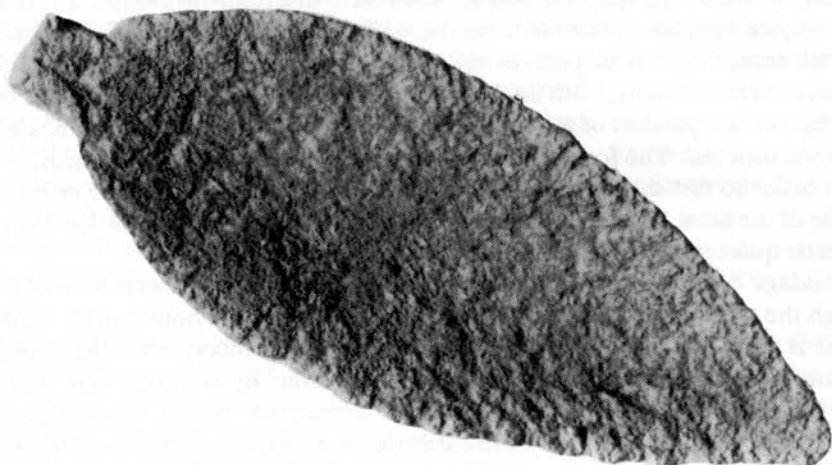


Fig. 5: *Cosmetic spoon of bone (87-136)*

Stratum 2 was a fine dark-brown soil, but with patches of grey to a distance of 1.80m westwards from the east boundary; at the west a more yellowy soil emerged. This stratum yielded, for example, a rim fragment of a bowl with dark-brown glaze and impressed with horizontal lines (87.092) and fragments of glass (87.093).

In Stratum 3, a reddish-brown hard-packed soil situated 0.69m down from the preserved top of the wall, were found fragments of wall plaster decorated with red paint (87.143; 87.182). Other fragments were found within the house, and all resemble surface finds from the acropolis, where fragments have a faceted edge such as would fit at the perimeter of a wall or constitute the shaped sides of panels as in the Pompeian First Style. These fragments show that the wall surface must have been punctured with a regular pattern of tiny holes to assist the bonding of the plaster (which was therefore plaster on a preliminary coating of plaster?) since they contain raised bumps at the back. From Stratum 3 also came 2 small fragments of a fine fabric with lustrous black glaze (87.178 the exterior of which has a button-shape with a cross in added colour; 87.179) and the figurine fragment (87.206). This stratum yielded also much coarse ware of an orangey fabric, as well as rim fragments of coarse ware echinus bowls (3 of which were partially painted ware) and 1 rim fragment of the fine walled semi-coarse ware bowls with grooves at the rim, and a tile fragment.

At approximately 1m from the preserved upper surface of the wall, the reddish-brown soil now has an admixture of limestone chips. Below that, 1.15m down from the upper surface of the large block, comes a yellowish-brown stratum, also with limestone chips. From here came 6 rim fragments of echinus bowls including 1 partially-painted; 7 rim fragments of coarse ware including 2 fragment of bowls with flaring rims, partially painted; 6 base fragments of coarse ware bowls; and 1 rim fragment of a gray burnished ware.

If it is correct that south of the wall is the public street, these fragments have been dislodged from inside the house; nothing resembling a deposit on the presumed road surface has been found. In any case, in essential features the finds from the various strata outside the house wall are characteristic of finds within the house. Special mention should be made of a fragment of a relief bowl decorated with comic masks (87.197), which, though not from the same bowl, very much resembles the fragment found inside the house in Stratum 4 (87.221).

The north-south wall at the east of the trench is also substantial and also constructed of field stones. So far hardly more than the upper surface has been cleared, but enough to show that the width is approximately 0.96m on average. The east boundary of the wall is very close to the east boundary of the trench.

Progress of work has not so far revealed a wall to the east of the *in situ* door-jamb, though to the south a stretch of tumble (1.40m from its south edge to the door-jamb), which lies roughly east-west but falls away southwards and does not reach the north-south wall, might conceivably be from such a structure. Perhaps the true east-west wall, in line with the door-jamb, lies further below the surface. At the west the tumble is situated 2.08m from the north boundary of the trench. Various stones



Fig. 6: Relief moulded bowl with commic masks.

associated with this tumble, and now removed, lay over fragments of pottery, testifying to a gradual collapse; so far this tumble, after clearing, has not been removed, with the prospect of relating it visually to an east-west wall just to its north. There does seem to be some measure of continuity of the strata to north and south, although special characteristics are to be noted in the very north west corner, for example, where a marked whitish colour of crushed limestone and limestone chips was observed in the soil. This would seem to have a special relationship to the *in situ* door-jamb.

Apart from this whitish patch the soil is fine and light-brown in colour in the northwest of the trench and seems identical with that closer to the east-west wall at the south. At the south, beneath this fine, light-brown stratum were traces of an elusive harder-packed yellow stratum; but this could be ascertained in a few spots only.

More consistently lying below is a dark-grey stratum of fine soil moving quickly to black; it lies 0.25m down from the extant upper surface of the north-south wall and extends 1.77m westwards from it.

In all of this, the upper strata assume a great importance because it seems that finds from the top soil are synchronous in a broad way with those from lower strata. For example from the top soil, in addition to amphora toes and handle fragments and body fragments of a cooking ware of brown to black fabric, came the stamped amphora handle (87.112); the bases of coarse-ware jars (87.069, 87.130); a base fragment which shows traces of green glaze (87.198); and the terracotta plaque with the reclining figure (87.161). In the centre of the trench, south of the east-west tumble, came the bone spoon (87.136 fig.6) and the bone spatula (87.137) which emerged more or less simultaneously. From here also come the lamp fragments (87.138; 87.164; 87.181) and the small twisted handle (87.135); the lamp fragments (87.164; 87.181) come from more in the south west corner of the trench. Fragments of so-called fish-plates, featuring a central depression at the centre of the interior and a nipple under the base, also come from the top soil. Note too that the fragments of glass (87.081; 87.083), clearly Hellenistic, came to light in Stratum 2 towards the north. This is a yellower soil (with touches of gray east of the door-jamb); it yielded that fragment of a relief bowl with Heracles (87.266) and also a fragment of gray ware (87.257).

From Stratum 3 in the north west of the trench came the fragment of the relief bowl with comic masks (87.221 fig.7) and the amphora handle (87.222 fig.8) stamped with the name of Antimachos and the accompanying caduceus; also the lamp fragments (87.237; 87.245); the black-glaze fragment with 2 zones of rouletting (87.240) and the coin (87.241). In Stratum 3 towards the south of the trench came a fragment of West Slope ware; the fragment of the relief bowl in red-brown glaze; a rim fragment of a bowl decorated with a yellowy-green glaze; a fragment of fine black-glaze; the figurine fragments (87.223; 87.224; 87.244); there are fragments of tiles; several bases and rims of the usual echinus bowls, including one quite large and partially painted.

All objects belong to the Hellenistic period. The diagnostic finds from each locus and stratum on each day comprise a narrow band of characteristic wares. Each separate lot can be expected to contain a small fragment of fine red or black glaze, of which some are very lustrous, in shapes of bowls (or fine-walled cups) and plates; some have carefully executed ribbing or are stamped with palmettes or have concentric rouletting. There are usually rim and base fragments of echinus bowls, often locally made, with a weak black glaze or partially painted in a dull matt red to brown paint; there are also bowls with outturned rim, often at a sharp angle (cf. 87.164); rim fragments of a fine-walled semi-coarse fabric (with perhaps a wash of yellowish paint); small bowls with a variety of notches at the rim; body fragments of amphorae; the occasional fragment with a flaky weak glaze; small lamps of poor quality with incised ribbing as decoration (found also in Sondage γ ; 87.116; 87.138). There is the



Fig. 7: Stamped amphora handle: ANTIMACHOU and caduceus.

occasional fragment of grey fabric with a polished surface

Sherds collected from the surface of Sondage δ represented a good number of these categories, including a tiny fragment of red glaze of a good pale orange clay, and a body fragment with pale green glaze.

A shape that is common elsewhere, and hardly (if at all) represented in the finds so far, is the unguentarium. There are two or three fragments tentatively identified at first as lid-knobs, (they are of solid fabric; one such example, of a hard grey fabric was found on the surface of Sondage ϵ) which could conceivably be unguentaria toes. If so there are still very few.

Sondage ϵ was placed a little to the east and north of Sondage δ , across the supposed street, where traces of a wall on the surface seemed to imply house-rooms close to the sunken space of a presumed courtyard, to the southwest. The trench, measuring 6m x 5m, incorporated in its north west corner, two *in situ* door-jamb, the easternmost of which was shorter (H.026m) and placed slightly to the north so that its southern edge was aligned approximately against the northern edge of its companion; its dimensions at the base are 0.32m x 0.28m; the other door-jamb is 0.95m high with base dimensions of 0.59m x 0.24m They are 0.875m apart, and between them is a "step" roughly cut into the bedrock; a block of 0.55 x 0.25m. that lay between them, with a round socket cut into one end, (diameter c.0.11m and c.0.05m deep), was found to rest on soil and was removed to reveal this rock-cut step.

Bedrock emerged so close to the present surface that very little information has been retrieved from Sondage ε. Immediately below the top soil was an almost total cover of loose stones making it difficult to discern which were *in situ*. Since there seemed initially to be a wall in the south west corner, an area of 3m x 1.5m was measured from the south west peg to serve as a test area. This revealed a wall running north-south, and along the scuth boundary a wall for a distance of 1.54m to the east, followed by a gap of 0.87m, with sparse traces of the wall further east; the width of this wall, which is not fully uncovered since more of it lies beyond the south boundary of the trench, is 0.71m.

Subsequently the full 6m of the trench, retaining the test-width of 3m, was cleared to bedrock, leaving the eastern portion (6 x 2m) unexcavated except for the top soil. At the west, the wall has been traced from the corner of the room at the south to the short wall which runs to the door-jamb; 2.4m. from the south boundary of the trench, there is a gap of 0.76m in this wall where the bedrock is quite high and has been exposed: it is possible that the stones could have slipped out of place here. The uncovered width of the wall south of the gap is 0.61m North of this gap, which may or may not have been a doorway, the wall continues a further 1.53m before it abuts a short wall running east-west opposite the nearest door-jamb. A block 0.72m long forms the southern face of this wall which appears to be constructed of cut blocks with rubble fill between them. The end block of the northern face of the wall is laid along the thin northern edge of the door-jamb.

At the north east of the excavated area, remains of a wall run eastward from the nearest door-jamb and are joined by a wall whose inner-face runs diagonally towards the south-east.

Within the excavated area, the bedrock appears to have been the floor and yet it sloped gently towards the south, so the room cannot have been important. There is a pronounced though uneven step a little more than 1.5m. north of the south boundary of the trench. North of this step, a thin reddish stratum, 4, mixed with loose pebbles and only c.0.05m deep disappears; it is found only in the east part of the southern portion of the trench, as is also a loose gray soil mixed with a few small stones, not found north of the "step" in the bedrock. Throughout the excavated area, however, the top soil (a loose grey-brown), the stones beneath that, and the loose grey-brown soil which lies beneath the stones (similar to the top soil) are all consistent.

From the soil around the tumble, there came to light a body fragment of an open vessel with green glaze on both interior and exterior, 4 fragments of lustrous red glaze of pale orange fabric, the usual base and rim fragments of echinus bowls; from the north part of the trench came a body fragment of fine black glaze of a pale orange-pink fabric.

Below the tumble there were similar finds, including a very fine-walled red glaze rim fragment of pale orange fabric; rim fragments of a fine-walled coarse ware bowl with parallel incisions below the rim; rim fragments of echinus bowls, partially painted. An assortment of animal bones came from the top soil and from beneath the

tumble; a solid donkey bone was wedged near the base of the easternmost door-jamb. And always a few (only) fragments of roof tiles.

Conclusion

In many cases, the Hellenistic settlements in this 'second Macedonia' have been overlaid by later Roman occupation, in such a way that very often the total picture of the original Greek foundation is not entirely recoverable. At Jebel Khalid the signs are, as we read them to date, that there is no significant Roman occupation of the site at least in the areas we have been able to investigate during our first two seasons.¹⁵ What we have in prospect therefore is the rare opportunity of researching a purely Hellenistic foundation: the fortifications, the public buildings, the private dwellings and the 'governor's palace' on the acropolis. One Hellenistic grave, containing a gold earring with garnets, has been excavated on the summit of el-Qitar; but otherwise the graves contemporary with the settlement, and scattered on the hills roundabout, have either been robbed by the local villagers or not yet been located.

NOTES

1. See J. Boardman, *The Greeks Overseas* (London, 1980) 38ff.
2. A.W. McNicoll, *Hellenistic fortifications from the Aegean to the Euphrates*, (diss. Oxford, 1971), esp. 127ff.; F.E. Winter, *Greek Fortifications* (London, 1971), 111ff.
3. W.W. Tarn and G.T. Griffith, *Hellenistic Civilisations*, 3rd ed. (London, 1952), 144-50.
4. Tarn and Griffith, *op.cit.*, 150.
5. For a plan of Dura Europos, see recently J.J. Pollitt, *The Art of the Hellenistic Age* (Cambridge, 1986) 278 fig.295 and R. Martin, *L'urbanisme dans la Grèce antique* (Paris,) 166 fig.26; 168 fig.27.
6. Cf. Procopius, *Buildings*, 2.6.1ff.
7. As for example at Resafa in Syria: J. Wagner, *Die Römer an Euphrat und Tigris* (*Antike Welt* Sondernummer 1985) 59 fig.92.
8. Vitruvius, *De Architectura*, 2.8.7; R.A. Tomlinson, *Journal of Hellenic Studies* 81, 1961, 133ff. For clear illustration of the compartmented construction, cf. C.H. Kraeling, *Ptolemais. City of the Libyan Pentapolis* (1962), pl.2; H.A. Thompson and R. Scranton, *Hesperia* 12, 1943, 301ff.
9. Samos: H. Kienast, *Samos* 15, 28 fig. 13; pls 26; 27; 28, 2.1.2. Heracleia: McNicoll, *op.cit.*, pl. 47b; F. Krischen, *Die Befestigungen von Herakleia am Latmos* (1922).
10. Winter, *op.cit.*, 180 fig. 176; McNicoll, *op.cit.*, 164.
11. McNicoll, *op.cit.*, 5; pl.55b;
12. McNicoll, *op.cit.*, 127ff.; Winter *op.cit.*, 111ff.
13. McNicoll, *op.cit.*, 114; 116ff.; pl. 42.
14. Y. Garlan, *Recherches de poliorcétique grecque* (Paris, 1974) 259, fig.25.
15. The participants were: 1986, G.W. Clarke and P.J. Connor (Co-directors), E.B. Joyce (geologist) and C.L. Ogleby (surveyor); 1987, G.W. Clarke and P.J. Connor, B. Raworth and G. Shepherd.