

**TELUL EDH DHAHAB AND ITS
ENVIRONS SURVEYS OF 1980 AND
1982
A PRELIMINARY REPORT**

by
Robert L. Gordon
and
Linda E. Villiers

Introduction

The Telul edh-Dhahab, twin "gold peaks" in the canyon of the lower Zarqa River seven kilometres east of Deir 'Alla, have often been discussed, but rarely described. A *caveat* is therefore in order at the outset. The present report is not concerned with any conjectural "identifications" of this or neighbouring sites. Such theories will be discussed elsewhere. Here we attempt to fill a long-standing *lacuna* in regional archaeological evidence.

A thorough surface survey of Tell edh-Dhahab el-Gharbi, the western peak, was begun in September-October 1980 with the support of an ASOR-NEH fellowship. Dr. R. Gordon was ably assisted by Mohammad Darwish, Representative, and Mr. Mohammad Jamra, Assistant, both from the Department of Antiquities. Dr. James A. Sauer, then Director of ACOR Amman, provided material and professional aid. Survey work on both peaks and in their southern environs was conducted during August-September 1982 under the auspices of the Centre for Jordanian Studies, Yarmouk University. R. Gordon, Director; L. E. Villiers, Assistant Director; Mr. Sa'd Hadidi, Representative for the Salt District, and a team of Jordanian students took part. Dr. Mahmoud el-Ghul and Dr. Mo'awiyah Ibrahim, successive Directors of the Centre, fully supported the project. Mssrs. Dani Petocz, Hubert den Haas and Henry Cowherd produced illustrations. The cooperation of the Department of Antiquities and its Director-General, Dr. Adnan Hadidi, was welcome at all stages.

Telul edh-Dhahab remains the largest historic site in the survey area. As such, it receives full description in Part I of this report. The regional survey has now

covered a semicircular area of a four to five kilometre radius east, west and south of the central site. The sites located are briefly described in Part II. The most informative of the prehistoric, lithic sites, the Epipaleolithic site of El Huna (on Zarqa) is treated in some detail by L.E. Villiers in Part III.

Part I: Telul ed-Dhahab Survey (Robert L. Gordon)

Topography

These two steep, rocky peaks stand enclosed by a wide meander of the Zarqa River. A narrow saddle connects Tell edh-Dhahab esh-Sharqi, the eastern peak, to the southern escarpment of the Zarqa canyon and the El 'Ardha plain above. A similar, lower saddle links Tell edh-Dhahab el-Gharbi to the northern slope and to 'Ajlun Mountain (Fig. 1: plan; Pl. LIV). The peaks were cut out by the river after the subsidence of the Jordan rift valley due to the subsequent fall in the level of the Lissan Lake. The summits are of shell limestone, while a massive red sandstone layer forms sheer cliffs on the middle slopes of both peaks. Conglomerates which outcrop on the eastern peak could be of Pleistocene date. The present level of the river at this point is -120 m./-140 m. BMSL; of the summits, -17m. (east) and -11 m. (west) BMSL; of giving them a total height of 100.00 and 130.00 m. respectively. Recent downstream cutting of the meanders has made the eastern and north-eastern slopes of both peaks particularly precipitous and has caused the collapse of some walls and slag deposits on Tel edh-Dhahab el-Gharbi. The same movement

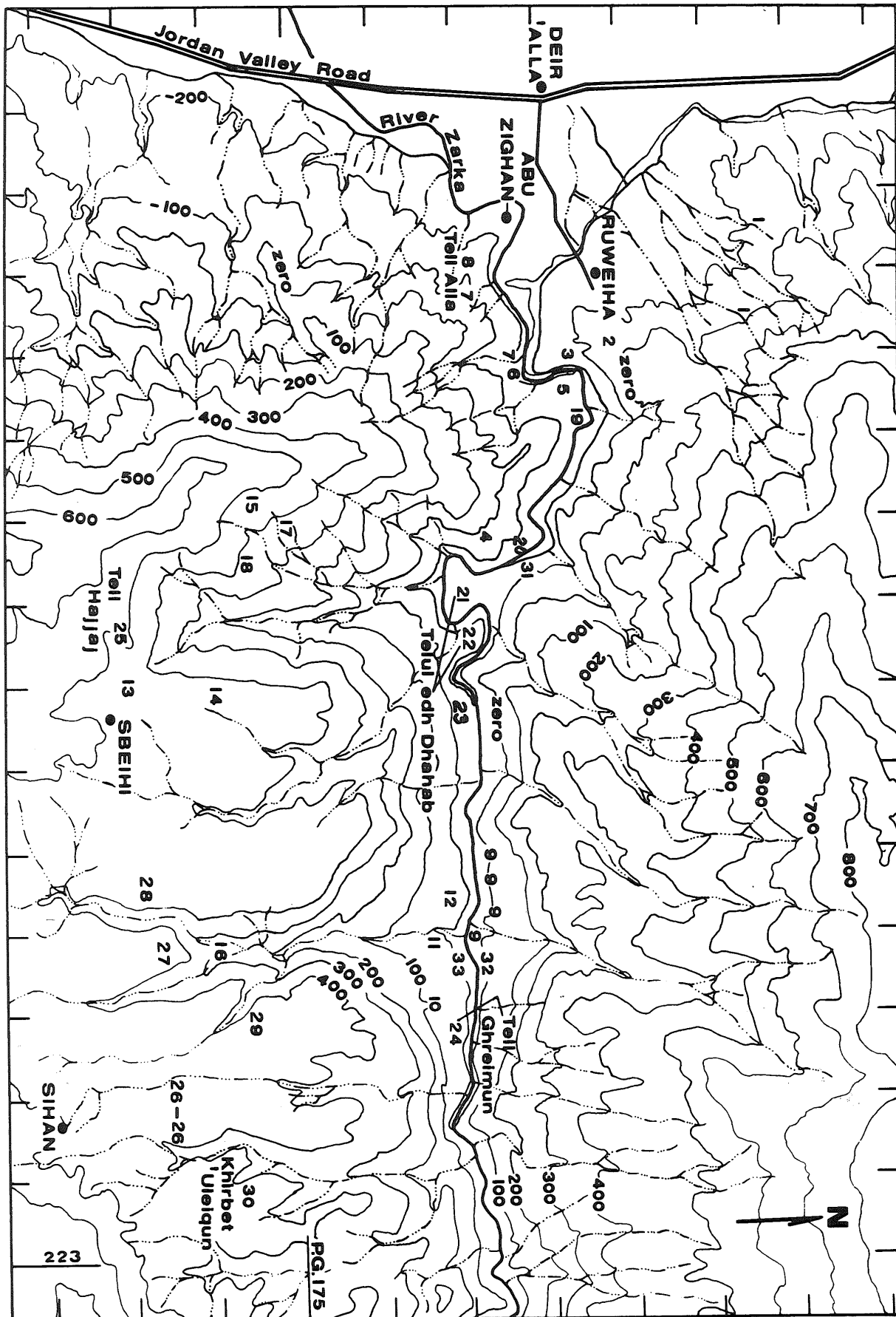


Fig. 1: Survey S. of Telul edh-Dhahab.

has also produced new terraces at river level at the NE base of the eastern peak and the SE base of the western one. If there were any ancient remains there, they have been swept away by action of the river. In addition, earthmoving operations related to the deep cutting of the north saddle for a water pipeline and the construction of a pier between the peaks may have destroyed remains on the broad terrace at the NW base of Tell edh-Dhahab el-Gharbi.

On the map, these peaks appear nearly equal in size. Both are very steep, but the area suitable for occupation is far greater on the western peak. Only the narrow summit of Tell edh-Dhahab esh-Sharqi (3 dunums) and small terraces east and west of it (4 dunums) are level enough for regular construction. Aside from a summit terrace of similar area (5 dunums), Tell edh-Dhahab el-Gharbi has broad terraces near the top (14 dunums) and at its NW base (30 dunums) with a series of narrow terraces between (9 dunams), giving a total habitable area approximately seven times that of the eastern peak. As is shown below, both wall remnants and artefact collections confirm that occupation on the western peak was several times more extensive and intensive.

Architecture

On both peaks the architectural remains consist of numerous surface walls or foundations which are rarely preserved as much as one metre above ground level. The only carved stone architectural members are the remains of colonnades on the west peak (Steuernagel, 1927: 288). In the previously published short descriptions of the two sites (De Vaux, 1938: 411-413; Glueck, 1939: 232-234), it is often difficult to determine which features are meant.

The summit ridge of the eastern peak (Pl. LV, 1) runs from a high point at its eastern end (-17.00 m. BMSL) to a slightly lower one (-23.00 m.) at its west end, 100.00 m. apart. These points are covered with rubble, the remains of two substantial structures, the plans of which are difficult to define. The eastern tower appears the more regular (11.00 m. N-S, 16.00 m. E-W) as defined by wall traces averaging one metre in width. The west tower

appears trapezoidal (10.00 m. W, 7.00 m. S), but the walls are obscured by the rubble. These were free-standing structures, not part of the summit circuit wall, which appears much lighter from intermittent traces and defines a long, narrow triangle 140.00 m. in length, 50.00 m. wide at its west end, narrowing to a point at its east end, the two towers centred within this area at either end. Numerous light walls within this space form a regular rectilinear pattern, suggesting a planned complex of structures. No signs of structures were found on the series of small, stepped natural terraces which lead gradually from the east end of the summit down to the saddle. This area, though level, was apparently considered indefensible.

A line of heavy rubble parallel to the south side of the summit terrace, some thirty metres away on the steep slope below it, may indicate the line of a heavier outer defensive wall, which could not be clearly defined. Nor could we determine, as Glueck (1939: 233) appears to suggest, whether a wall continued around the other slopes at this level (-42.00 m.).

It is strange that neither De Vaux nor Glueck reported the northwestern long wall which runs from the summit to the base of this hill, even though they both emphasized the corresponding southwestern long wall. These walls are the heaviest visible construction on the site. They are identical in construction, average 2.40 m. in thickness, and consist of a double row of massive, roughly squared blocks, normally more than one metre in length. Beginning from points below the west end of the summit (the level of the postulated outer circuit wall) these walls descended at least to the flood level of the river (-90.00 m.) where traces of them disappear. The SW wall ends atop a cliff, (Pl. LV, 2) directly above the tunnel, entrance described below. The NW wall is lost in recent alluvium near the modern pier, (visible on Pl. LIV).

Together, these walls enclose the entire western quadrant of the hill (Pl. LVI), the side facing Tell edh-Dhahab el-Gharbi, and run toward its base at either end. The long walls did not enclose a choice area for settlement, as this face is

only marginally less steep than the others. The slopes immediately below the west end of the summit and small terraces just south of the NW wall were indeed occupied by some structures, but otherwise the space between these walls appears devoid of terraces and wall traces. As defensive walls, however, they are admirably positioned, as the general plan (Fig. 1A) clearly shows. Both followed prominent spines of bedrock for added height and strength. Outside the SW wall, the rock-cut subsidiary *wadi* served as a moat, while the steep north slope and the River Zarqa provided impediments ahead of the NW wall.

Midway between the lowest preserved portions of the long walls, perched on a cliff immediately above the river, stands a solid structure (18.00 m. N-S, 7.00 m. E-W) of smaller limestone blocks (Pl. LVII, 1). It consists of retaining walls and fill built to produce a projecting terrace platform against the hillside facing the river at its flood level (terrace at -99.00 m.), at the point of least distance between the two hills. Rougher, heavier walls of sandstone boulders extend to north and south for some twenty metres either side of this structure, always on the brink of the cliff, which in turn provides a natural line of defence southward to the foot of the SW long wall (Pl. LVI). Glueck's date for the structure, Byzantine to medieval Arabic (1939: 233) was apparently based on the construction techniques, as no sherds from the walls are mentioned. We found none, but now believe this structure must be read in association with the long walls, despite the clear differences in construction. The structure and its wings could be remnants of a third line of defense along the river. Their proximity to the river level and to the opposite hill could also have been significant factors in determining their positions.

The tunnel in the SW base of Tell edh-Dhahab esh-Sharqi, which opens directly beneath the foot of the SW long wall, was explored by night to avoid the nuisance of the numerous bats which inhabit it. Our findings differ significantly from the previously reported description (De Vaux, 1938: 411-412). The entrance

tunnel is indeed 2.50 m. high and 1.00 m. wide. The walls are uneven. It runs relatively straight and level 53° NE for 22.50 m., at which point it enters the west side of the south end of an irregular ovoid chamber (7.00 m. E-W; 12.00 m. N-S). The floor of the chamber dips 0.50 m. lower and its ceiling rises 1.00 m. higher than the entrance tunnel. The floor level rises nearly two metres as it approaches the narrow north end of the chamber. Aside from a natural recess, no opening was found at its end. The only continuation from the chamber is a tunnel just large enough to crawl through which begins opposite the entrance tunnel, offset 1.50 m. to the north, and runs less regularly in approximately the same direction 40° NE for 24.40 m., then 65° E for 6.90 m. A slight rise in level is detectable, though this tunnel is neither straight nor even. It enters a slightly larger opening (2.00 m. high; 2.00 m. wide) which turns 170° S for eight metres and ends abruptly. A thorough search revealed no other openings. The total length of the tunnels is thus less than 70.00 metres. It was certainly not part of a water system. It may have been a tomb. The floor throughout is carpeted in guano, which may hide some cuttings in the chamber.

Steuernagel described two terraces on Tell edh-Dhahab el-Gharbi; De Vaux, three terraces; and Glueck, less certainly, four. We count six terraces in all from the summit to the NW base as shown on the plan (Fig. 2).

The Summit Terrace (I) of oval shape, stands at the extreme southeastern end of the occupied area. This, together with the Main Terrace (II), was surrounded by a fortification wall which most resembles a casemate wall of light construction, walls 0.70 m. thick, 2.50 to 7.00 m. wide, with salients or towers up to 9.00 m. square. This structure is clear for the past side of the Summit Terrace and in its SE tower (Pl. LVII, 2) but on the south, the casemate structure is obscured by several walls, probably the foundations of the southern parts of the main structures on this terrace. At the centre of the summit stands a low rock outcrop covered with rubble. Foundations and possibly steps at

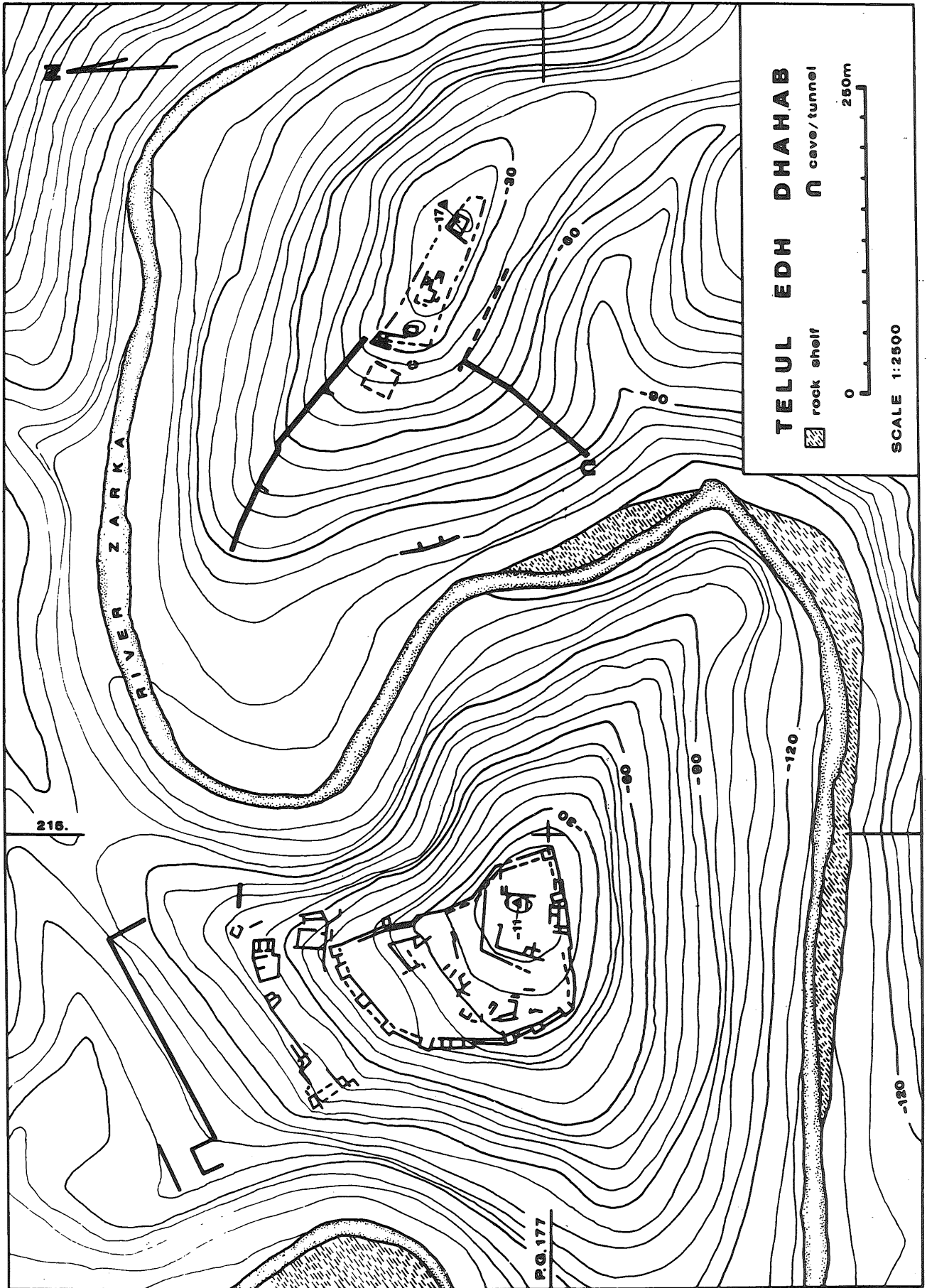


Fig. 1A: Telul edh-Dhahab. General plan

PG 177.4 N

TELL EDH DHAHAB EL GHARBI

SCALE 1:500

Contour Interval 3 meters

PG 215 E

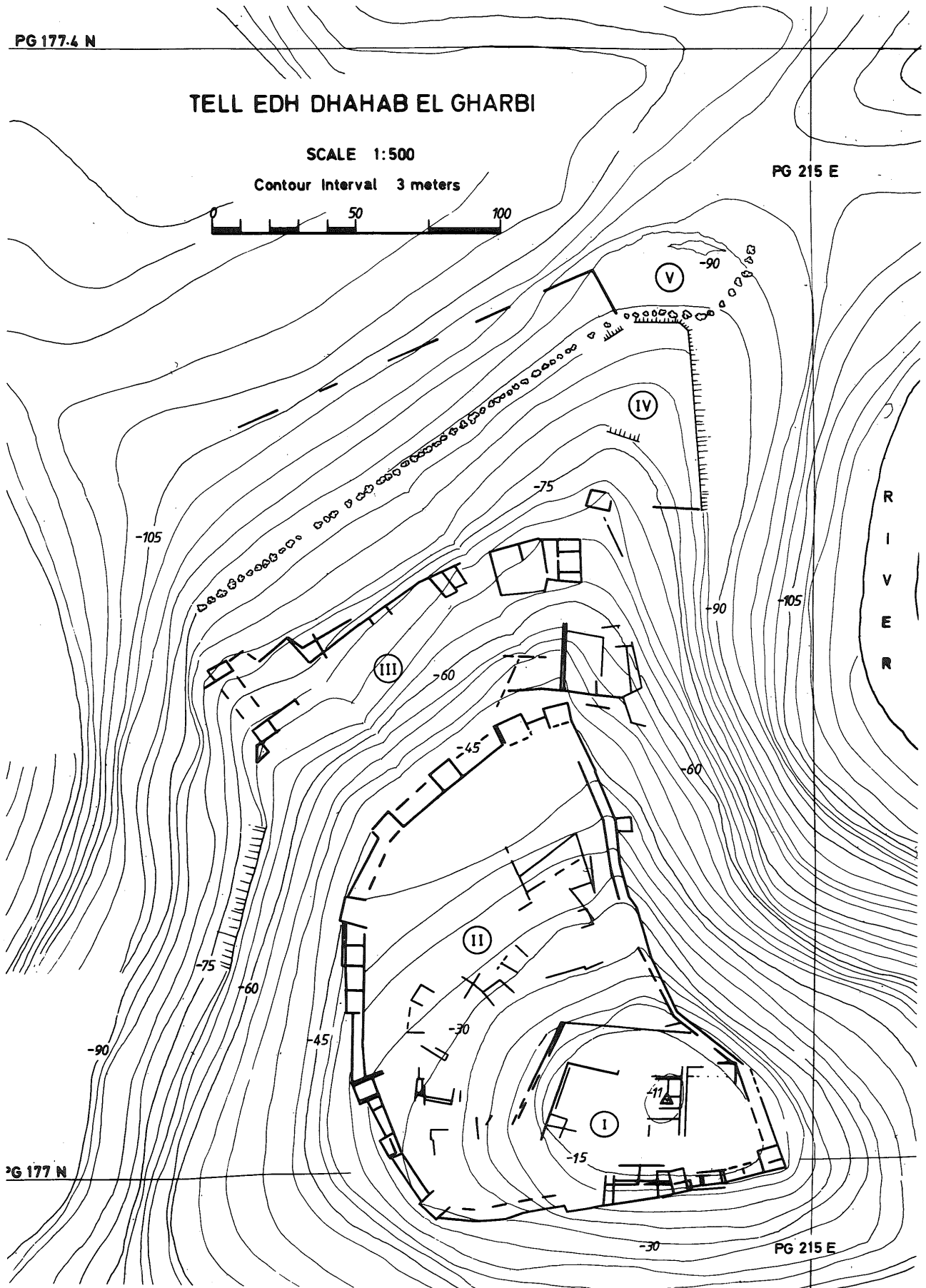


Fig. 2: Tell edh-Dhahab el-Gharbi plan

the south end were cut in this bedrock. Wall traces indicate a rectangular structure at least 16.00 m. N-S by 11.00 m. E-W, oriented precisely north-south, with two E-W dividing walls and the northern segment again divided by a N-S wall. These remains probably do not represent the complete structure, however, at least in its final form, as only the eastern limit is fixed and other unreadable wall stubs to north and south follow the same orientation, as do also those attached to or overlying the south fortification wall. The complete structure, or central complex, could have extended entirely across the terrace (up to 55.00 m. N-S; 22.00 m. E-W).

A parallel structure covering a similar area is indicated by the remains of peristyle columns scattered over the eastern third of this terrace. The long west wall of the peristyles is separated from the east wall of the central building by an interval of two metres. The only column bases definitely *in situ* are the northern row, at the extreme NE corner of the Summit Terrace (I): two corner pillar-columns with two columns between, giving the colonnade a width of eleven metres. Around these, the corresponding north, west and east walls lie 3.50 m. from the colonnade. The northeastern foundations encroach on the inner foundations of the fortification wall. A complete pillar-column lies fallen just south of this corner with its capital to the north (Pl. LVIII, 1-2). This shows that the north peristyle was short, possibly square. It certainly did not account for all the extant column drums. It was from this fallen column that the best profiles were taken. Another series of fallen pillar-column blocks is shown in (Pl. LIX, 1). This lies by the west wall of the peristyles twenty metres south of the north colonnade. Two column drums, possible *in situ*, and a further set of corner blocks, from a row south of these, as shown in the Plate. To the east of these, another standing column drum may also be *in situ*, (Pl. LIX, 2), near the southern fortification wall. Together, this evidence suggests a second, larger peristyle south of the first, with its south wall by the southern fortification wall, as shown on

the plan (Fig. 2; Pl. LX, 1). The total length of these courtyard areas on the summit would have been 40.00 m., their width at the north end 18.00 m., wider on the south.

The northwestern slope of the Summit Terrace was built up behind massive retaining walls of blocks up to two metres in length. A toppled series of these in alternating positions at the south end of the remaining segment shown on the plan (Fig. 2; Pl. LX, 2), represents a fallen corner. A return at this point might mean that a southwestern, indirect entrance to the Summit Terrace was used. Above the remains of these retaining walls, a third large structure can be discerned on the western part of the Summit Terrace (at least 31.00 m. N-S; 18.00 m. E-W) but with its orientation NNE in accordance with the line of the retaining wall.

The Main Terrace (II on the plan Fig. 2) fans out west and north of the Summit Terrace. The double fortification wall was narrow above the precipitous eastern slope, widening along the south and southwest, and fully developed with evenly-spaced towers for the northwestern portion where it faced the lower terraces. At the eastern end of this last portion stood two towers flanking the only entrance, the Main Gate, with an opening seven metres wide. Bedrock lies exposed on the higher levels of the Main Terrace all round the base of Terrace I. Over the rest of its area, narrow walls with various orientations can be noted, but no clear building plans emerge. It thus appears that the structures on Terrace II were not built to a unified plan, but were small separate units which followed only the contours of the terrace. A large discoid millstone was found near the south end of the terrace by the fallen retaining wall blocks, and modern burials here and along the western edge of the terrace. Considerable recent digging was noted inside the Main Gate.

On the slopes outside the Main Gate were several unusual features. To the southeast lies the slag concentration discussed below. North and northeast of the gate numerous walls are visible. Some of these could have supported a roadway leading up to the gate. Other heavy walls

lead down the rock spine to the north to no apparent purpose.

The third terrace (III) is long and narrow, parallel to and below the NNW rim of the Main Terrace. At its eastern end, directly below the Main Gate and the walls just mentioned, lie the foundations of a large, nearly rectangular building (32.00 m. E-W; 19.00 m. N-S) the North Building. Its southern foundations are cut in bedrock. Its western divisions are obscure. The east end was divided to form a central room (8.00 by 7.50 m.) with narrow flanking rooms and a central door leading to a N-S corridor. A column drum from the summit peristyles lies in this building. Retaining and fortification walls lead westward and enclose the west end of this terrace.

Terrace IV is a natural terrace of massive red sandstone which exists only NNE of the North Building. A single lightly-built room stood on the spine which leads down from the North Building. A heavy wall was built downslope eastward from this, apparently to protect the southeast corner of the terrace. The natural sandstone cliff protects the east side of the terrace. No other structures were found here.

As a natural terrace, Terrace V occupied only the northern tip of the hill, facing the saddle which connected Tell edh-Dhahab el-Gharbi with the adjacent slopes. This portion is protected by a natural limestone barrier three metres high on its north side. The slope southwest of this point was terraced by construction of a heavy retaining wall 180.00 m. long with foundations for a tower (20.00 x 20.00 m.) at its SW end. Another terraced platform lay midway along behind the wall. A second above and behind the SW tower marks the line of defense which continued upward to the SW end of Terrace III, on the brink of the cliff which descends to the river (Pl. LXI).

The broad terrace which extends beyond the long retaining wall to the northwest (VI) has been severely disturbed in recent years. It is entirely possible that it was walled, as Glueck appears to indicate, but only heaped ranges of boulders remain. No walls were

found *in situ*.

Details of the Peristyles

The only visible carved architectural members on either site belong to columns and pillar-columns of the peristyles which stood on the east end of the Summit Terrace of Tell edh-Dhahab el-Gharbi. All are of a relatively porous light gray limestone which is severely weathered wherever it has been exposed above the surface. Recent digging shows, however, that the pieces are in excellent condition below the present ground level. Every measurable column and half-column (on the corner pillars) has a diameter of 0.57 to 0.62 m., including the drum found in the North Building on Terrace III. The drums were cut in taller segments (0.50-0.90 m.) than the corner pillar-column blocks (heights 0.36-0.42 m.). A centering hole was noted on one recently tipped pillar-column block and a cutting for a central dowel (side 5.50 - 6.00 m.; depth 0.04 m.) on one fallen drum near the south end of Terrace I.

The dimensions of profiles of the capital of the fallen pillar-column at the NE end of Terrace I could be measured. The block is 0.34 m. high. Its total length can be estimated at 1.03 - 1.05 m. of which the pillar capital crown would account for 0.69 - 0.70 m. and the half-column abacus 0.34 - 0.35 m. and the half-column abacus 0.34 - 0.35 m. The Doric capital (Pl. LXII, 1), consists of the normal abacus (height 0.12 m.) and a slightly convex echinus (0.085 m.) but the rings at the bottom of the echinus are replaced by a prominent cavetto (0.02 m.). The spread of the echinus is almost certainly exaggerated on the pillar-column, where the projection reaches a maximum of nine centimetres from the shaft, although only six centimetres seem to have been allowed on either side of the columns. The pillar capital (Pl. LXII, 2), profile resembles a flattened sima moulding (height 0.185 m.), the convex portion divided by a groove, with one prominent and one subsidiary fillet below (height 0.05 m.). The block includes a portion of the shaft below both profiles. Parallels and dates are discussed

below.

Surface Collections

Aside from selective samples, over 12,000 sherds and numerous artefacts of other materials were collected from thirty random sampling points on the top two terraces of Tell edh-Dhahab el-Gharbi, from a total area of 750.00 square metres. Transects covering 500.00 square metres of the eastern hill yielded only 324 sherds. Thus, the periods of occupation on the west peak can be determined with much greater accuracy. A full report of sampling procedures will appear elsewhere. Only a brief summary is included here.

Lithics show a Middle Paleolithic and a post-Paleolithic presence on both peaks. Sherds of the Early Bronze Age were numerous (675) on the west peak, with all phases from EB I through EB IV clearly indicated (Pl. LXIII, 1). Most identifiable sherds from both sites were either Iron Age or Hellenistic. These were found in nearly equal quantities on the western site (4681: 5697) whereas Iron Age sherds predominated on the eastern site (104: 20). Of the Iron Age material from the west peak, painted sherds of the Iron Age IB phase (Pl. LXIII, 2) include bowl and krater rims and an unusual form applied to the body of a vessel. From the IC phase comes (Pl. LXIV, 1) a broad platter rim and numerous jar rims, but very few fragments of the normal cooking pots or of the fine burnished ware. Identifiable Iron II pottery was not common, but a figurine head of this phase confirms continued occupation. An oddity of the Iron Age collections is a wide shallow basin with a spout (Pl. LXIV, 2) represented by several fragments.

Among the Hellenistic pottery, fragments of fishplates (Pl. LXV, 1-2) accounted for a large percentage of the finds. Both ware and surface treatment vary, but none have the fine fabric and true sintered slip of imported products. Black or red paint or combinations of these, varying through orange and brown, dipped and dripped, regularly imitate the better wares. The same is true of numerous incurve-rim bowls and goblet rims,

though the fabric of these always ranks with the best of the fishplates. Relatively few imported pieces were found (Pl. LXVI, 1) including only one fragment of a platter with the true black "glaze." Folded jar rims of small jars were common, but cooking ware was rarer than expected. Unguentaria and amphoriskoi are lacking entirely. The Hellenistic period is also represented on the west peak by numerous fragments of moulded glass bowls with engraved grooves near the rim, several fragments of gray-ware lamps, and at least three coins. The coins are listed below.

Roman occupation was noted on both sites (299:17 sherds). This material is limited in quantity and none of it can be clearly attributed to any but the very earliest phase of Roman domination. Folded-rim jars are common; "Pergamene A" ware, rare. One plain bow lamp nozzle was found. A limited Byzantine presence was identified only on the west peak (82.0 sherds), though we do not doubt earlier reports that Byzantine sherds were found on the east peak. None of our sherds of this period was particularly informative.

Objects

Five objects of some note have been found.

- 1) Head of terracotta figurine, broken off at neck and badly worn, of red clay with yellowish-white slip. Facial features enlarged, especially the almond-shaped eyes. Headdress unclear. Mould-made with impressed details. H:4.2; W; 3.2; Th: 3.0 cm. Terrace II SW. Eighth or seventh century B.C. ('Amr 1980 personal communication). (Pl. LXVI,2).
- 2) Bronze Coin. Obverse: anchor in circle of dots, inscription: BA. Reverse: star in circle, illegible letters between rays. Irregular shape, poorly struck, Diam. 1.6 cm. Random Point 7, Terrace II. Alexander Iannaios, late issue, 83-76 B.C. (Naveh, 1968: Pl. 2-3) (Pl. LXVII, 1-2).
- 3) Bronze Coin, As No. 2, found attached to it. Worse struck and worse preserved. Plate (LXVII, 1-2).
- 4) Bronze Coin. Obverse: Jugate busts

facing right. Reverse: single cornucopiae with vertical stalk and hanging vines. Inscription illegible. Diam. 1.2 cm. Terrace III SW. Ptolemais-Akke, late second to early first century B.C. (Newell, 1939: Pl. II-III).

- 5) Handle attachment of jar with inscribed cross. Lentoid section, gray core, brown fabric, red exterior. Much limestone temper. Cross lightly incised before firing. H: 7; W: 4.2; Cross: H: 3.2; W: 3.8 cm. Iron Age (Abright, 1932: 81).

Iron Industry

Numerous small bits of dark slag or dross were found in virtually every sample from the upper terraces of Tell edh-Dhahab el-Gharbi. Numerous fragments of iron objects were also collected. Slag, cinder, treated ore, and a furnace bottom were found in a concentrated deposit, weathering out at the top of the eastern scarp just SE of the Main Gate. This deposit appears as a dark patch on Plate LXVIII. The slag had flowed freely, producing layers only one centimetre thick. The furnace bottom is bowl-shaped (0.20 x 0.15 x 0.06 m.), not strongly magnetic, and exhibits flow structure in section. Portions have been sent to various laboratories for testing.

Conclusions

The chronological linkage of the two sites and the marked differences in their areas of occupation deserve special emphasis. The collections from the eastern hill are poor precisely because occupation there was naturally limited. Glueck's (1939:234) theory of a chronological separation of the two sites — the east peak Iron Age and earlier, the west peak Hellenistic and later — must be rejected. It clearly contradicted his own evidence, for he found late pottery on the eastern site and early pottery on the western one. Both sites are eminently defensible, but in case of hostilities, it would be practically impossible to hold one for long without also occupying the other. On preliminary reading, the systematic samples are

compatible with this argument and with the previous evidence. The poverty of ceramic material from the eastern site must be kept in mind. The absence of a given phase from this site is not meaningful. It appears that both sites were occupied during the Early Bronze Age, the Iron Age, and the Hellenistic to Byzantine periods, but with a marked decline during the Roman and Byzantine periods. The long walls of Tell edh-Dhahab esh-Sharqi further emphasize this linkage, at least for one of the main periods of occupation (Iron Age or Hellenistic), since they serve to conjoin the defensible areas of both hills.

The preserved evidence of fortifications cannot be dated without excavation, though present evidence warrants some suggestions. There can be no doubt now that the west hill as well as the east was occupied during both Iron I and II. Moreover, and quite naturally, the western peak was much more intensively occupied. The extensive casemate walls on the western peak would be at home in the Iron Age or in the Hellenistic-Early Roman period. They do, however, appear to underlie the peristyles of the later period on the summit. It seems quite possible that they were founded during the earlier period.

The Hellenistic material from the western peak barely outweighs that of the Iron Age. Yet it appears to represent a much shorter period of occupation. None of it can definitely be ascribed to the early Hellenistic phases. Instead, as Glueck recognized, late Hellenistic and early Roman material predominate. We find that a large quantity of late Hellenistic finds are linked to a much smaller quantity of material which represents only the earliest phase of Roman domination. The Roman Imperial period is not definitely represented. Coins, glass and lamp fragments likewise point to the first century B.C. The peristyle colonnades on the summit fit comfortably within this phase. In the Hellenistic world, heart-shaped corner pillar-columns were used exclusively for the Doric order from 300 B.C. onward (Busing, 1970: 56-63). The cavetto on the Doric echinus at Tell edh-Dhahab is paralleled

on the Doric capitals of the Tomb of the Beni Hezir in Jerusalem (Avigad, 1954: 44; fig. 30) which belong to the late second or early first century B.C.

The destruction of these peristyles appears to mark the end of intensive occupation on the site. Where the columns fell, the drums remained stacked against each-other from that day to this. Few of them have been disturbed and those only recently. If intensive occupation had continued, these blocks and drums would surely have been reused. We tentatively suggest that this destruction occurred very early in the Roman period. After that time, only a very limited Byzantine presence is suggested by the finds. The heavy fortifications represented by the long walls and the west base structure of the eastern hill and the lowest terrace wall and tower (Terrace V) on the western one should be read in conjunction. Together, they bespeak the most ambitious fortification plan ever applied to these twin peaks. In form, structure and placement, they suit the Greek tradition and the age of artillery, though we cannot rule out an iron Age date for them.

The iron ore of Ajlun Mountain was certainly exploited during the Ayyubid-Mamluk period. One major source was the Mugharet Wardah mine, which lies only four kilometres north of Telul edh-Dhahab, high on the southern slopes of the mountain (Coughenour, 1976: 71-76). The iron industry of Telul edh-Dhahab must be earlier, since not a single Islamic sherd was found on either site. Just how early it was remains to be determined, since Byzantine sherds were found in the slag deposit, along with those of the earlier periods.

Part II: Survey South of Telul Edh Dhahab a Short Preliminary Report

(Robert Gordon and Linda Villiers)

During August and September, 1982, the Centre for Jordanian Studies of Yarmouk University in cooperation with the Department of Antiquities conducted a survey of the southern environs of Telul edh Dhahab in the lower Zarqa basin. The author, L. E. Villiers, Sa'd Hadidi, and a team of Jordanian students took part.

An intensive area survey covered a roughly semicircular area of four to five kilometre radius east, west and south of Telul edh-Dhahab (Fig. 1) excluding the modern villages of Sbeihi and Sihan DeVaux, 1938: 410). All habitable ground was walked in transects, sites were sampled with finer transects (usually following the cardinal directions) and all structures and large sites were mapped. Preliminary sorting of site collections has been completed.

Sites at the borders of the survey area had been surveyed in varying detail: Tell 'Alla (Site 8, Ibrahim *et al.* n.d.); Telul edh-Dhahab (Sites 21-22, Glueck, 1939, 233); Tell Hajjaj (Site 25, DeVaux, 1938, 411); The Roman road on 'Arqub Abu Buseila (Huppenbauer, 1962; Mittmann, 1963, 1965); and Khirbet 'Uleiqun ("Aleqouny" De Vaux, 1938, 415). Yet within the area thus enclosed, no sites were noted in R. De Vaux's general survey of 1937, and no detailed regional survey had been undertaken since that time. The map (Fig. 1) shows the positions of the sites studied during the 1982 survey. Tables 1 and 2 show the periods of occupation of each site according to preliminary analysis of artefacts collected.

Lithic artefacts were collected from over thirty sites or scatter areas. Acheulian to Middle Paleolithic sites cluster along the lower reaches of the Wadi Zarqa, with only one diffuse occurrence in the upland areas. The occupation is sparse and scattered. Only Tell Mubarrad and Tell Mghanni West (Sites 1-2) above the mouth of the Zarqa canyon show any density. No Upper Paleolithic sites were located in the area surveyed. Site distribution during the Epipaleolithic to Early Bronze Age periods is expanded. A major Late Kebaran site (El Huna, Site 9) lies by the Zarqa River east of Telul edh-Dhahab. 'Ain Sabha (Site 6) also had an Epipaleolithic phase.

The earliest proven occupation in the upland El 'Ardha plain is of the Pre-Pottery Neolithic B phase (Sites 13-14). From that time on, the lithic evidence shows presence or occupation at numerous locations. Among the ceramic collections, however, very few possible Late Neolithic

Table 1: Telul edh-Dhahab Area Survey--South Half, Prehistoric Sites, 1982

Area	Site	Coordinates	P.G.	N	E	LP	MP	EP	PPN	LN	CH	EB	LB	EI	P	H	R	BZ	UM	AM	OM	Islamic	
	1. Abu 'Aubeida Dolmens	180.211																					
	2. Tell Mubarrad*	180.212	XXXX																				
	3. Tell Mghanni (West) ++	178.212	p	////																			
	4. T. Dhahab Extension W.	177.214	?	p																			
	5. Wadi Hawārith Pump Sta.*	178.212	p																				
	6. 'Ein Sabha	178.212																					
	7. Sabha & Zighān Caves	177.211																					
	8. Tell 'Alla (Handaquq)	177.211																					
	9. El Huna (on Zarga River)	177.219	XXXX																				
	10. El Mu'allagah (Khuyuf)*	176.220																					
	11. El 'Azab (on Zarga)*	177.219																					
	12. Abu en-Najr	177.218																					
	13. Ed Dibāb (Ṣbeihī) !!	173.216																					
	14. 'Arqūb er-Rāshid	174.216																					
	15. Abu Buseilla	174.214																					
	16. Wadi Dafali	174.219																					
	17. Khirbet Umm el-'Idhām	175.215	p																				

KEY: *=Destroyed. !=Endangered. +=to preserve. XXXX=main period of occupation. ////=occupation.
 p=Presence. ----p?----- = time range of possible presence.

Table 2: Telul edh-Dhahab Area Survey--South Half, Historic Sites, 1982

Area	Site	Coordinates	P.G.	N	E	LP	MP	EP	PPN	LN	CH	EB	LB	EB	LB	EI	P	H	R	BZ	UM	AM	OM
	3. Tell Mghanni (West)	++		178.212	?	////										////		XXXX	////	P			P
	20. 'Irāq et-Tahūna South	::		178.214												XXXX		XXXX	pp	pp			P
	19. Pump Station Structure*			178.213														P					
	21. Tell edh Dhahab West	++		177.215	P											XXXX		XXXX	////	P			
	22. Tell edh Dhahab East	++		177.215	P											XXXX		////		?			
	23. Gypsum mine west	++		177.216												////		////	////	////			P
	24. Tell Ghreimūn	++		177.220												?	P?	////	////	////			P XXXX
	17. Khirbet Umm el-'Idhām	:		175.215	P											?	////		P	XXXX	////		
	18. Arqūb Abu Buseila			174.214																P		P	
	25. Tell Hajjāj	++		173.215												XXXX		////	////			P	?
	26. Khirbet Mshatta-Quseib*			173.220																////	XXXX	P	////
	27. Ed-Dukheināt (Cuttings)			173.219																P		P	
	28. Khirbet Beyuda	::		173.218																P	////	P	XXXX
	29. Khirbet Jarrīsh	::		174.220																?	P	////	XXXX
	30. Khirbet 'Uleiqūn	++		174.222																?		?	XXXX
	31. 'Iraq et-Tahuna (Mill)			178.214																			P
	32. Khuyuf Mills (N & S)			177.219																			P

KEY: *=destroyed. !=endangered. +=to preserve. XXXX=main period of occupation. ////=occupation.
 p=presence. ----p?----- = time range of possible presence.

sherds and none of the standard Chalcolithic types have been found. By contrast, ceramics of the hitherto elusive transition from the Late Chalcolithic to the Early Bronze Age (e.g., elongated, serrated ledge handles) were remarkably numerous, especially in the Khuyuf area (Sites 10-11) and at Ed Dibab near Sbeihi (Site 13). It thus appears that true Chalcolithic occupation may have been concentrated near the Jordan Valley, while renewed expansion in the Wadi Zarqa and up onto the 'Ardha should be attributed to this transitional phase.

Within the survey area, most of the sites of that phase were not reoccupied during the Early Bronze II-IV phases. Instead, other centres apparently grew during Early Bronze I and continued into Early Bronze IV. These same sites were regularly reoccupied in the Early Iron Age and during the Greco-Roman period. No settlement of the Middle or Late Bronze Age has been found. This hiatus was succeeded by another rapid efflorescence during Early Iron I. Aside from the well-known sites of this period (Telul edh Dhahab, Sites 21-22; Tell Hajjaj, Site 25) at least four others have been found, plus lesser establishments, particularly along the River Zarqa (Sites 3, 17-24).

The survey has shown that all these sites were intensively reoccupied during the Hellenistic period. The population in the *wadi* appears to have risen during that time, then slowly declined during the Roman and Byzantine periods. During these later periods population shifted out of the valley onto the highlands (large new foundation: Khirbet Mshatta-Quseib, Site 26). Probably only three of the remaining sites at the end of the Byzantine period continued in Umayyad times: Tell

Ghreimun, Khirbet Mshatta, and Khirbet Jarrish (Sites 24, 26, 29). These grew again under the Ayyubid and Mamluk rulers alongside two seemingly new foundations, Khirbet Beyuda and Khirbet 'Uleiqun (Sites 28, 30), again in the highlands. Tell Ghreimun was the only Mamluk site found within the Wadi Zarqa. Only rare evidence of Ottoman-Mandate period predecessors for the present population boom were found. Three mills by the River Zarqa are reportedly late Ottoman or yet more recent. They were in use a generation ago.

It is sad to note that most of the sites found have already been destroyed or are being destroyed by new housing and intensive agricultural development. For salvage, one Epipaleolithic site (El Huna, Site 9) deserves soundings. The largest, richest transitional Late Chalcolithic/Early Bronze site (Ed Dibab, Site 13) is now being destroyed by house construction. Immediate soundings are recommended. The neighbouring Rujm Hafayir (Huppenbauer, 1962: 174-175) is similarly threatened. Tell edh-Dhahab el Gharbi was surely the largest of the many Iron Age/Hellenistic sites in the area, but the newly discovered satellite sites on the terraces upstream and downstream from Telul edh Dhahab are in greater danger. 'Iraq et-Tahuna South (Site 20) is rapidly being destroyed by plowing. Of all the other sites noted in the Wadi Zarqa, Tell Mghanni (Site 3) at the west end and Tell Ghreimun (Site 24) at the east end of the survey area could offer the best historical stratigraphy. Tell Ghreimun is the only true cultural *tell* in the area with significant stratigraphic depth. These two should be preserved along with the best-preserved Mamluk site, Khirbet 'Uleiqun (Site 30).

Robert Gordon
Linda Villiers
Yarmouk University
Irbid, Jordan

Bibliography

- W.F. Albright, *The Excavations of Tell Beit Mirsim*, I. *AASOR* XII, New Haven, 1932.
- 'Abdul-Jalil 'Amir, *Iron Age Figurines of Jordan*, Thesis, Institute of Archaeology, London, 1980.
- N. Avigad, *Ancient Monuments of the Kidron Valley*, Jerusalem, 1954.
- Robert A. Coughenour, Preliminary Report on the Exploration and Excavation of Mugharet el Warda and Abu Thawab, *ADAJ*, XXI (1976) p. 71-76.
- R. De Vaux, Chronique: Exploration de la region de Salt, *RB*, 47 (1938) p. 411-413.
- Nelson Glueck, *Explorations in Eastern Palestine, III*, *AASOR*, XVIII-XIX (1939).
- Hans Watter, Huppenbauer, Die Romische Strasse im Sudlichen Gildead, *ZDPV*, 78 (1962) p. 171-179.
- Mo'awiyah Ibrahim, James Abbott Sauer and Khair Yassine, The East Jordan Valley Survey, 1976 (Part 2) *BASOR*, forthcoming.
- Siegfried Mittmann, Die römische Strasse in der nordwestlichen Belka, *ZDPV*, 79 (1963) p. 152-163; *ZDPV* 81 (1965) p. 85-86.
- Joseph Naveh, Dated Coins of Alexander Janneus, *IEJ*, 18 (1968) p. 20-26; Pls. 2-3A.
- Edward T. Newell, *Late Seleucid Mints at Ake-Ptolemais and Damascus*, Numismatic Notes and Monographs, Vol. 84, New York, 1939.
- Gottlieb Schumacher, *Der "Adschlun* (C. Steurnagel, ed.) 281-290, 1921 (*ZDPV*, 48 1925 289-298).