

TELL QARAMEL

EXCAVATIONS 2007

Ryszard F. Mazurowski

The ninth season of excavations at Qaramel lasted from April 4 to May 18, 2007. The Syro-Polish Archaeological Mission was a continuation of the joint undertaking of the Polish Centre of Mediterranean Archaeology of the University of Warsaw and the Directorate General of Antiquities and Museums of Syria, partly financed by the Institute of Archaeology of the University of Warsaw.¹

The main goal of this season was the final exploration of the deepest layers with traces of occupation from the Proto-Neolithic, or transitional, horizon to the very Early Pre-Pottery Neolithic A (PPNA) (in squares J-8b,d, J-7b,d and K-7). In this area, four rounded towers had been discovered and some architectural elements of a possible fifth tower were observed in the last days of the 2006 season. Another priority was the exploration of the southernmost square (K-3/L-3,4), where the oldest layer on the site with a house dug into culturally sterile soil had been found in the previous season [Fig. 1]. The continuation of excavations in squares L-5 and L-4/M-4 aimed at verifying the presence of occupation from the final stage of the Pre-Pottery Neolithic settlement. There had been some indications that at that time the settlement had been located a little farther to the south than during previous stages, which would explain why in squares J-8, J-7, K-7 and K-6, situated farther to the north, no material or structures typical of the final PPN horizon could be found.

1 We would like to express our gratitude to Dr. Bassam Jammous, Director General of Antiquities and Museums in Syria, and Dr. Michael Al-Maqdissi, Director of the Excavations Department in DGAM Damascus for their hospitality, continuous help and kindness. Words of thanks are addressed also to the staff of the Regional Directorate of Antiquities and Museums in Aleppo and in particular to its Director, Dr. Nadim Fakesh.

The mission was co-directed by Ryszard F. Mazurowski (photographic documentation, ground and pecked stone finds), and Youssef Kanjou (processing of human bones). On the Polish side, the staff included: archaeologists Marcin Białowarczuk (supervision of squares J-7 and K-7; special finds registrar), Andrzej Gackowski, Joanna Gawrońska (supervision of squares L-4/M-4; general registrar), Artur Grabarek (supervision of square L-5), Piotr Karczmarek (chipped <flint> industry finds, flotation of paleobotanical samples), Tomasz Kowalski, Bartłomiej Paprocki, Julita Wojciechowska; documentalist Katarzyna Odyń; and archaeozoologist Anna Gręzak. The Syrian part of the Mission included Qaies Abbout Gorge and Abdalla Aref Nasser.

SQUARE J-8B,D

Levels belonging to the Proto-Neolithic (stratum IX) and Early PPN (stratum VIII) were investigated in this northernmost of the excavated trenches. The features were practically completely destroyed by two

huge Early Bronze Age pits which had been dug down to culturally sterile soil. The work in square J-8b,d ceased after culturally sterile soil was reached over the whole surface.

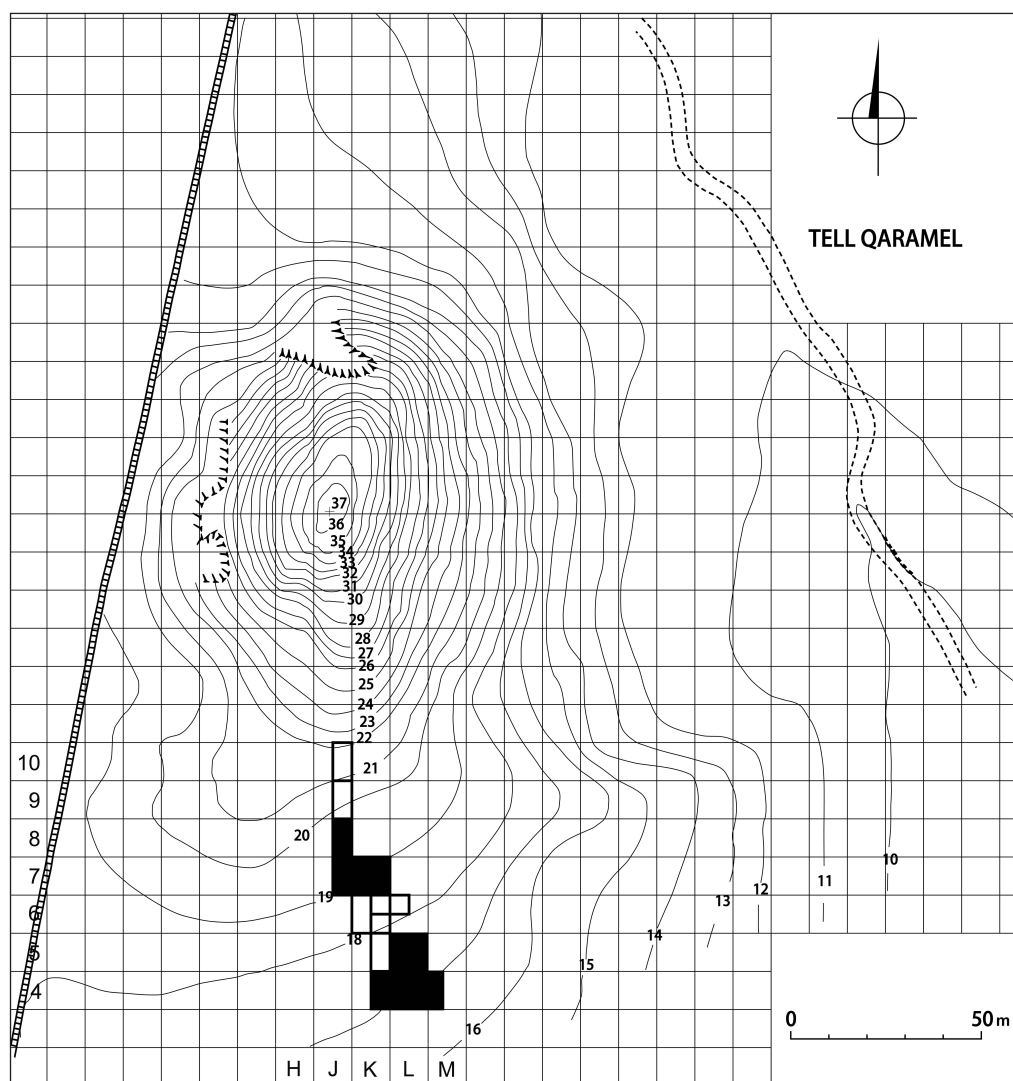


Fig. 1. Trenches excavated in the 2007 season
(PCMA mission archives; digitizing R. Mahler)

STRATUM VIII — LEVEL 14

Part of house(?) (Loc. 22) of rounded shape and PPNA dating was found in the south-western corner of the square [Fig. 2, left]. The diameter could not be ascertained as the structure lay partly concealed under the baulk. The wall, approx. 0.30 m thick, was built of flat pebbles stacked in a single row and plastered with yellow mud.

A specially constructed pit (Loc. 23), its sides faced with elongated flat pebbles

raised in a single row and plastered with yellow mud, was traced under the remains of Loc. 21, which were explored last season. It was oval in shape and measured approximately one meter across. Loc. 23 may have been a solid hearth, which remained in use for a long time.

Another, more primitive hearth (No. 16), approximately 0.50 m in diameter and 0.30 m deep, was found in the northwestern part of the square. It was filled with gray ash.

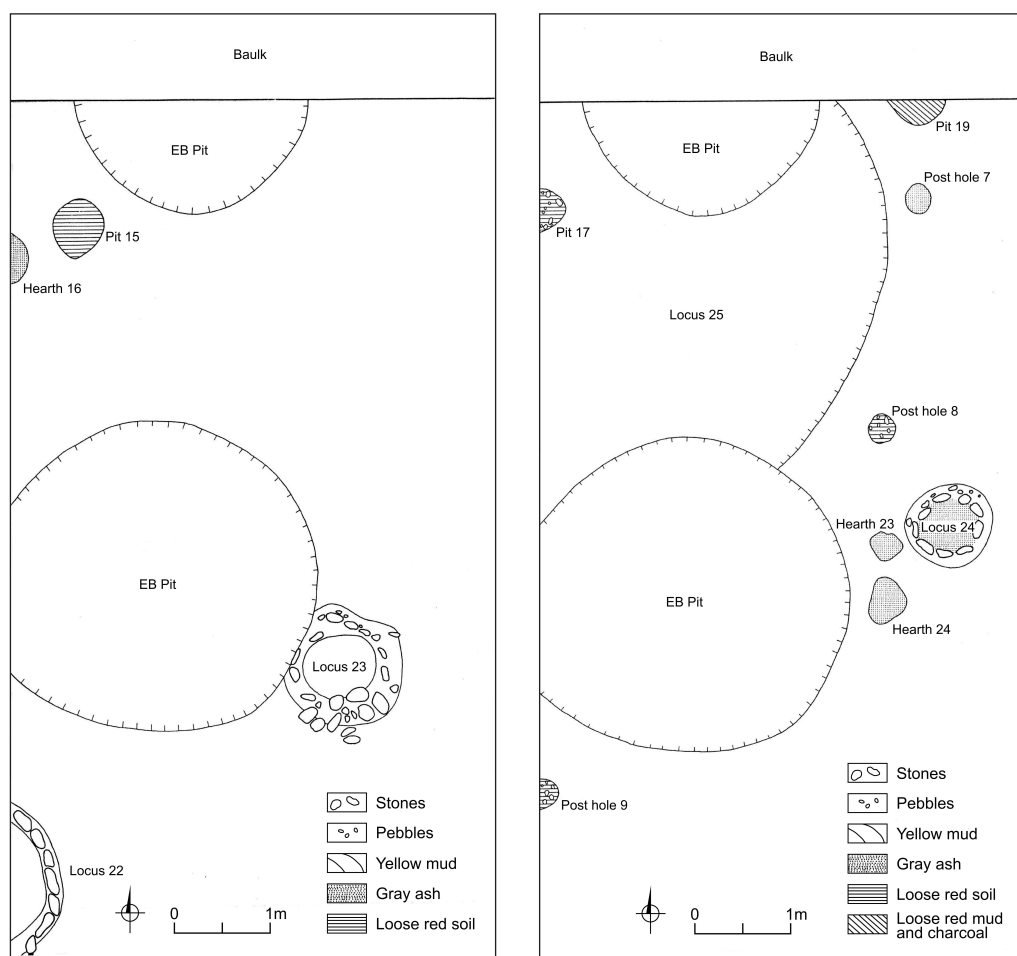


Fig. 2. Square J-8 b,d. Stratum VIII, levels 14 (left) and 15 (Drawing P. Kaczmarek, T. Kowalski)

Nearby was a rounded pit with flat bottom (No. 15), approx. 0.60 m in diameter and 0.30 m deep, filled with loose, red soil.

STRATUM VIII — LEVEL 15

The largest structure in the next level [Fig. 2, right] was Loc. 25, a large round house destroyed to some extent by the Early Bronze Age pits, partly situated outside the square. It was probably over 6 m in diameter and was slightly conical in cross-section, sinking approx. 0.50 m deep into the ground. Its fill consisted of alternating layers of gray ash with charcoal and red soil mixed with burned stones. A large number of wild animal bones was recovered from this house. Two typical postholes (Nos 7 and 8) were situated near its eastern border. Another posthole (No. 9) was discovered in the southeastern part of the square.

Locus 24 resembles Loc. 23 from the later level. It is a solid, round hearth (approx. 0.90 m in diameter), made of flat elongated pebbles plastered with a coating of yellow mud, 0.10–0.15 m thick. It was filled with gray ash and charcoal devoid of artifacts. In the vicinity of the hearth were two small and irregular traces (Nos 23 and 24), only 3–4 cm thick. They may have been used no more than once.

Also found were two rounded pits (Nos 17 and 18; 0.40 and 0.50 m in diameter respectively); they were conical in section and filled with red mud.

STRATUM IX — LEVEL 1

Structures, tentatively dated to the Proto-Neolithic Period, were covered by 0.15 m of clean red soil. All were concentrated in the northern part of the square and lay directly on culturally sterile layers [Fig. 3].

The main structure in this level was Loc. 26, a round feature (approx. 0.50 m in diameter) sunk into culturally sterile soil and overlaid with pebbles, few of which

were preserved. It was filled with gray ash and charcoal.

Other features found in the vicinity of Loc. 26 included two typical postholes (Nos 10 and 11) and three pits (Nos 21–23). The pits were round or oval, flat-bottomed, filled with red soil and pebbles, some of which were burned, and in one case also light gray ashes and gray soil. Some small animal bones came from the fill along with some flint artifacts and a bead made of bird bone.

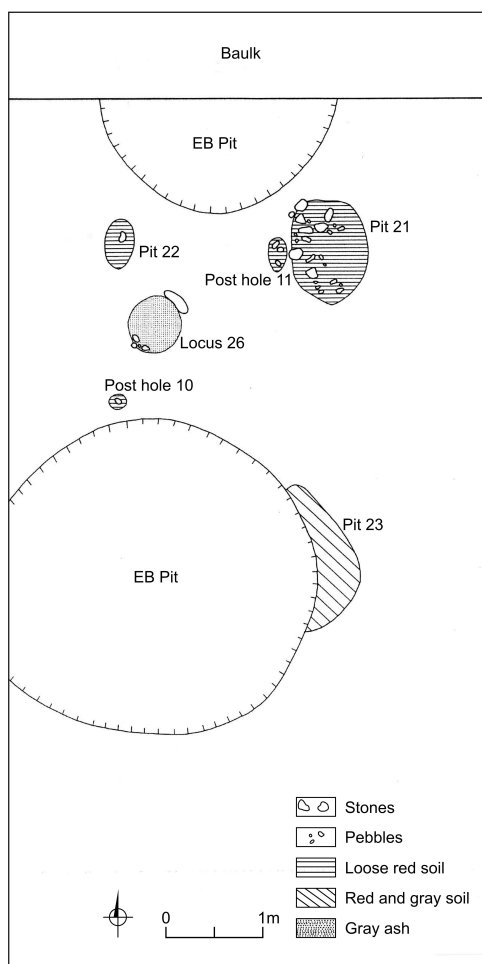


Fig. 3. Square J-8b,d. Stratum IX, level 1 (Drawing P. Kaczmarek, T. Kowalski)

SQUARES J-7B,D AND K-7

Exploration in squares J-7b,d and K-7 concentrated on two occupational levels (13 and 14) connected with the Early PPNA Period (Stratum V).

STRATUM V — LEVEL 13

The level contained a richness of architectural features: four houses and some hearths and pits concentrated around a stone pavement used for everyday activities [Fig. 4].

One of the best preserved structures was a house (Loc. 62), located in the northern part of the square. It was a partly subterranean, oval structure (approx. 2.80 by 2.40 m across and 0.20 m deep). The house was sunk into a layer of hard, red mud used as a floor.

Six postholes were connected with this structure: four (Nos 5, 7, 8 and 11) located symmetrically along the edge of the pit, two (Nos 9 and 10) inside the house. Five of these were typical postholes, round in shape, approx. 0.20–0.30 m in diameter and 0.05–0.25 m deep. Post hole 5 was additionally surrounded by a small, approx. 0.05 m thick, mud “wall”. The postholes and the absence of anything to suggest walling indicates that Loc. 62 was a kind of shelter.

Loc. 62 was contemporary with a crescent-shaped platform of beaten red mud located about 3 m to the south of it. In its center was a round hearth (Pit 4; approx. 0.40 m in diameter). Just beside the platform was another round hearth (Pit 2; approx.

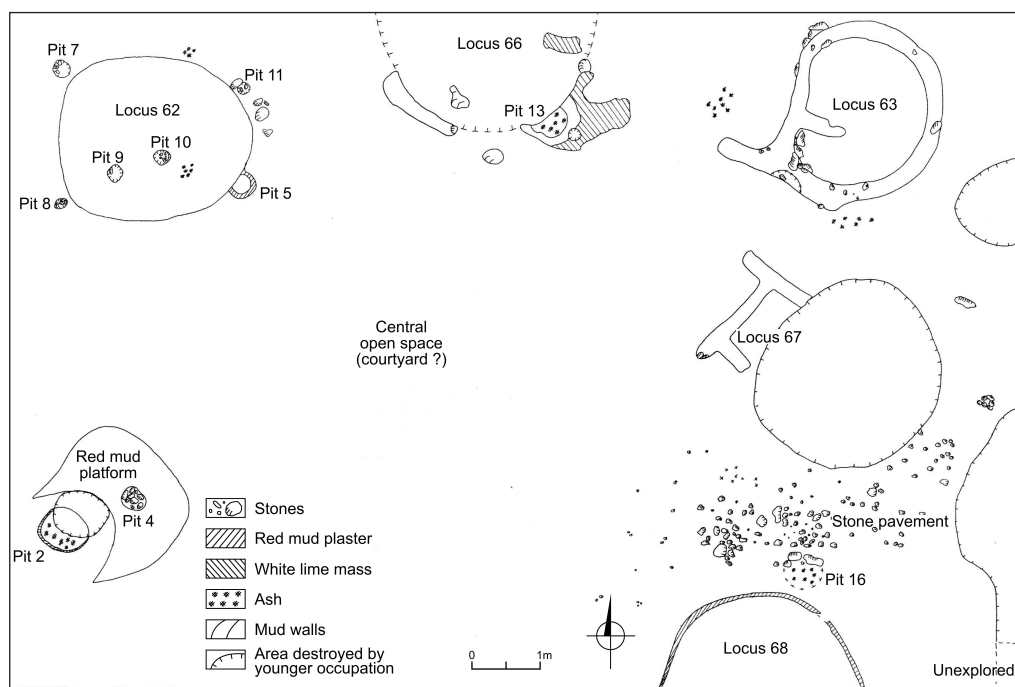


Fig. 4. Square J-7b,d. Stratum V, level 13
(Drawing M. Białowarczuk, B. Paprocki)

0.70 m in diameter) covered by a 3 cm thick layer of mud plaster. It was partly destroyed by a younger pit (No. 1) connected with level 12.

About two meters east of Loc. 62, another presumably oval house (Loc. 66; approx. 3.00–3.50 m by 2.50–3.00 m across) was located. Part of a curved wall, probably *pisé*, and a fragment of an internal hearth have survived. No traces of a floor were found inside it.

East of Loc. 66, in the northeastern corner of square K-7, there was Loc. 63. It measured approx. 2.60 m in diameter. An external wall projected on the southwest, suggesting the presence of a second room or side building. The walls were approx. 0.30 m thick and were made of mud mixed with crushed limestone and pebbles. The floor was formed of a layer of the same mud mass laid on a stone sleeper, spread unevenly, that is, thinning toward the east. The space inside this single-room structure appears to have been divided by a small internal wall projecting from the west side. The sectioned off part of the room functioned as internal storage. The fill contained fragments of animal bones, flints, one complete celt and a shaft straightener [Figs 18–20].

The badly destroyed remains of another house (Loc. 67) were located about one meter southwest of Loc. 63. It was clearly oval in shape and divided into a few small rooms, in similarity to structures discovered during previous seasons in squares K-6a,c and K-5b,d. Its wall and floor were made in the same technique as those in Loc. 63.

The open space around which these structures had been built was paved at the southern end with pebbles set into a layer of mud. At the southeastern edge of the pavement there were: a large round storage pit with mud-plastered sides (Loc. 68; approx. 2.50 m in diameter and 0.20 m deep;

5 cm thick mud lining), a hearth (Pit 16) and another small round hearth, approx. 0.50 m in diameter, surrounded with stones.

STRATUM V — LEVEL 14

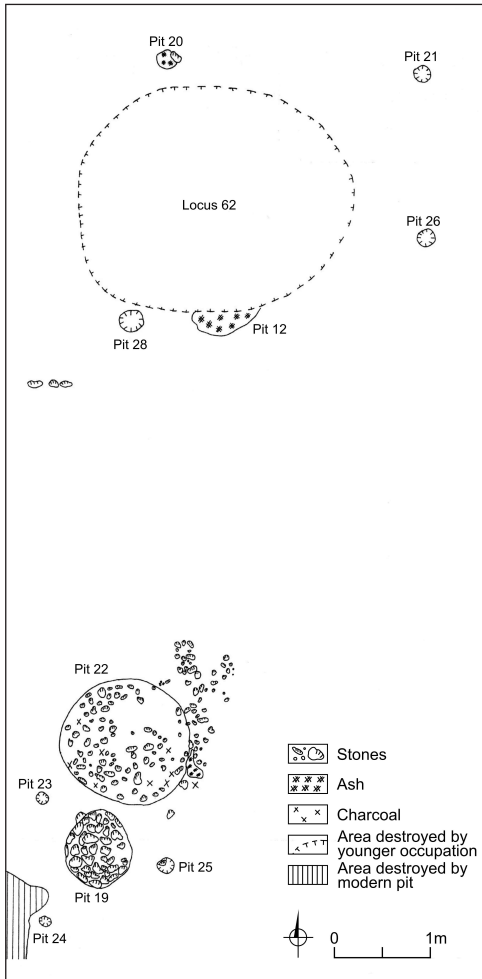
Level 14 has been identified so far only in squares J-7b,d and K-7a,c. Two phases, A and B, have been recorded. Phase B is the younger of the two and this season it was recognized only in square J-7b,d. It contained the remains of a shelter with a hearth at an edge and a storage pit outside it [Fig. 5].

The inside of the shelter situated in the northern part of the square was damaged by a younger house (Loc. 62, see above). Only four postholes and a fragment of a hearth survived the damage. Judging by the arrangement of postholes, the shelter was of trapezoid shape, approx. 2.50 by 2.50 m in size. The round hearth (approx. 0.70 m in diameter) was located at the southern edge of the shelter.

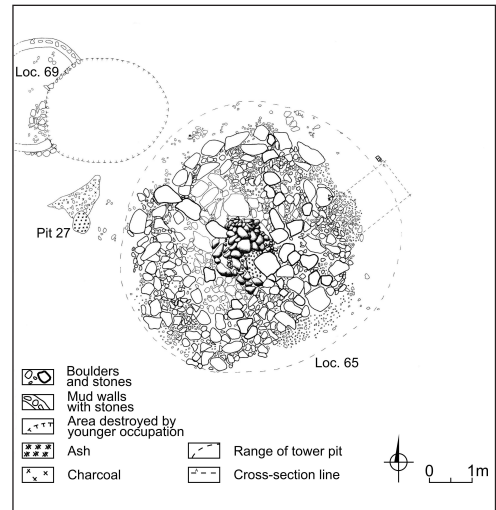
Two pits (Nos 19 and 22) located in the southern end of square J-7b,d were contemporary with this structure. The round Pit 19 (approx. 0.70 m in diameter and 0.15 m deep) was a typical hearth. Three postholes positioned around it suggest roofing of some kind. A large round storage pit (No. 22, diameter approx. 1.20 m, depth 0.35 m) located just north of the hearth contained large animal bones without burning traces. Both pits were dug into a hard layer of red mud.

The most important structure belonging to the older Phase A is Tower 5 (Loc. 65) [Fig. 6]. Its remains underlie those of the four towers discovered in previous seasons (see, e.g., Mazurowski 2006; 2008), but it differs from the later structures in construction methods and internal divisions.

Tower 5 is oval in plan (approx. 5 to 6 m across), the longer measurement on the



NE-SW axis [Fig. 7]. It was semi-subterranean, sunk approximately 0.50 m into a natural layer of red mud. A cross-section of its wall shows clearly the technique of its construction. The external wall was built of huge limestone boulders in several



▲ Fig. 6. Square J-7b,d /K-7. Stratum V, level 14, phase A
(Drawing B. Paprocki)

◀ Fig. 5. Square J-7b,d. Stratum V, level 14, phase B
(Drawing B. Paprocki)



Fig. 7. Square J-7/K-7, general view of Tower 5 (right) and close-up seen from the north
(Photo R.F. Mazurowski)

rows, set inside a trench dug wider than the planned circumference of the building, the space in the trench outside the wall being packed with red mud. The maximum thickness of this wall was approx. 1.20 m. The superstructure has not survived.

The structure demonstrates a sophisticated set of internal divisions. In the center, there was a round, conical feature (approx. 1.00 m in diameter and 0.70 m in height) with a small hearth on top. Four rows of limestone blocks erected in vertical position ran from the wall to the hearth, two from the southeastern part and two from the northwestern part of the wall, both pairs parallel but the second pair more widely separated than the first one. The entrance to this building led down a few steps made of limestone slabs, towards the hearth, from the northwest, along the western face of one of the rows of limestone blocks.

The localization, monumental character, construction and internal space organization suggest that Tower 5 was a kind of a shrine and/or “common house”. Exploration will be continued in the next season.

The tower structure was contemporary with a partly preserved house (Loc. 69) discovered in the northwestern corner of square J-7b,d. The house appears to have been round (approx. 2.60 m in diameter) with a wall made in the “skeleton technique”, approximately 0.20 m thick. The floor was a 5 cm thick layer of red mud overlying a stone sleeper. The fill of the house contained a rich collection of flint artifacts, including a complete big side scraper and a few sickle blades.

A small oval pit (No. 27), about one meter southeast from the house, contained a thin layer of small pebbles mixed with ashes and fragments of animal bones.

SQUARE L-5

Three levels of occupation identified as Stratum II were unearthed in square L-5 situated at the bottom of the southern slope of the tell. A few loci from the PPNA were discovered in the northeastern corner of the trench, but on the whole the earlie layers have been largely disturbed by Bronze Age features in the form of pits and concentrations of pebbles (especially in the center of the square).

STRATUM II — LEVEL 1

Level 1 consisted of a house (Loc. 14), two graves, nine pits and a posthole [Fig. 8, top left]. The house, partly destroyed and partly concealed under the baulk, lies in the eastern part of the trench. It is almost rectangular in shape (at least 4 by 3 m). Walls were made of sizable limestone boulders forming the two faces with a core

of small pebbles. A storage pit (Loc. 7) in the middle of the house contained pottery, bones, a small quantity of flints, pebbles and hard, burned, black soil. The material from the house and the pit indicates a Middle Bronze Age date for these structures.

Of the two graves, both of which were dated to the Middle Bronze Age, one lay by the west baulk and the other by the north baulk about 8 m apart and on the same level. The former grave pit (No. 1) was of almost circular shape, approx. 2 m in diameter. Inside it, there was a big storage jar surrounded by stones, containing an infant skeleton (*Infans* I) and grave goods in the form of toilet articles made of bronze. The other grave pit had been damaged by a locus dating from the same period, but remains of a jar holding the remains of a child (also probably *Infans* I) were still discovered.

All nine pits discovered in this level (Loci 6, 7, 9–13 and Pits 1, 4) were rounded in plan with diameters ranging from about 1 m to over 2 m. The fill contained pottery in large quantities, animal bones, flints, small pebbles and burned soil. Some of them, as Loc. 9, had sides and bottoms coated with dried, red mud.

STRATUM II — LEVEL 2

The thick concentration of stone pebbles present all over the trench had largely destroyed level 2 of this stratum. The most important structures belonging to this level included a white floor/platform and a red mud structure (Loc. 15). [Fig. 8, top right]. The white floor/platform (approx. 3.20 m by

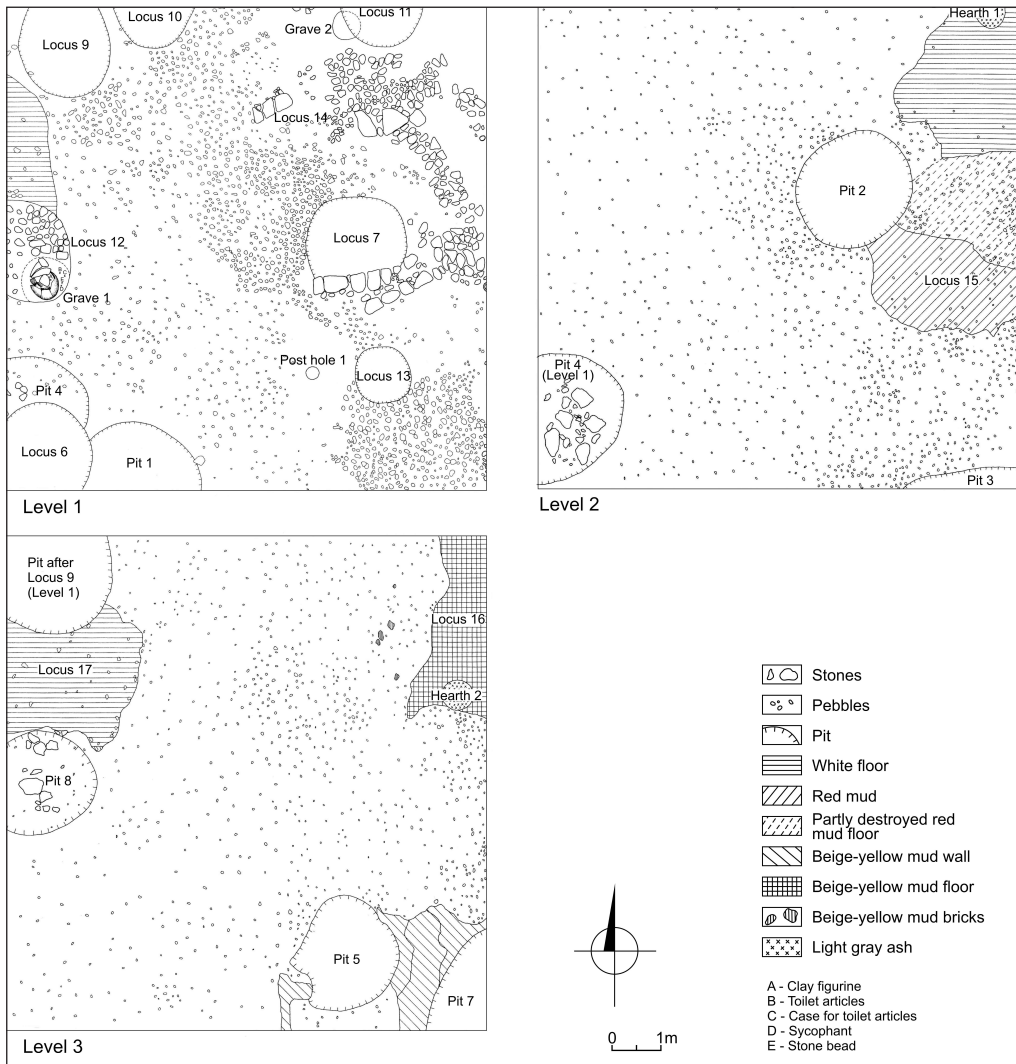


Fig. 8. Square L-5. Stratum II, level 1 (top left), level 2 (top right) and level 3 (Drawing J. Wojciechowska with M. Nowakowska for top left)

2.60 m) of unidentified function was located in the northeastern corner of square L-5b. The uncovered part of this structure (the rest is concealed under the baulk) was made of mud and limestone. A hearth (No. 1; approx. 0.50 m in diameter, 0.20 m deep) set in this floor contained in the fill some animal bones, a few flints, and some gray ash without pottery. The remains can be attributed tentatively to the uppermost horizon of the PPNA settlement.

A layer of red mud (Loc. 15) of irregular shape, approx. 3.80 by 3.20 m and up to 8 cm thick in the best preserved places, was located in the eastern part of the trench. Superimposed was a substantial layer of burnt soil with pottery, bones and small quantities of flint. Pottery found under the platform structure precludes a PPNA date for it.

Other features in this level included a round pit (No. 2) of Middle Bronze Age date, containing small pebbles, pottery, animal bones and small quantities of flints in a matrix of hard, burnt soil, and an assemblage of big limestone blocks which turned out to be the irregular bottom of pit 4.

STRATUM II — LEVEL 3

Loc. 16 was situated directly under the white floor/platform from level 2, but

because it was partly concealed under the trench baulk, its dimensions could be estimated only approximately (c. 3.50 m long and at least 1.20–1.50 m wide) [*Fig. 8*, bottom left]. It consisted of a yellow-beige mud floor with a hearth (No. 1) on it in the southern part. The fill of the hearth was composed of gray ash and small quantities of animal bones. A PPNA date for the structure is indicated by sun-dried mud bricks in its western part and the absence of pottery.

Locus 17 opposite Loc. 16 was also only partly visible within the borders of the trench. It was of irregular shape (at least 3.50 m by 3.00 m across) and consisted of a white floor made of mud with limestone. A pit (No. 8) situated south of Loc. 17 turned out to be filled completely with big, irregular chunks of limestone; pottery found in the fill placed it in the Early Bronze Age.

Two mud wall sections and a pit (No. 5) containing pottery, animal bones, flints and pebbles were noted by the eastern trench baulk.

The layer of pebbles in the center of the trench, but despite the appearance of pottery, bones and flint artifacts, no traces of Neolithic structures were found.

SQUARE L-4B,D / M-4A,C

Further explorations in Square L-4/M-4 situated at the bottom of the tell revealed the next two strata (II–III) predating the Iron Age stone structure discovered here in the previous season (Mazurowski 2008).

STRATUM II — LEVEL 1

Three of eight pits unearthed in this level (Nos 3, 4 and 7) belonged to the Iron Age, the others to the Early Bronze Age [*Fig. 9*].

The younger pits were round or oval, one even dug in another one. The fill contained red and dark soil with large quantities of pebbles mixed with pottery, flints and animal bones. The bottom of these pits was not reached this year.

The Early Bronze Age pits (Nos 1, 2, 5, 6, 8) were mostly oval or round, approximately one-and-half meter across and from 0.70 to 1.00 m deep. The fill consisted of dark-

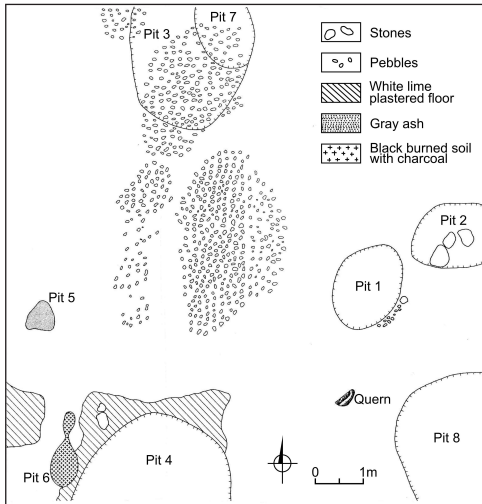


Fig. 9. Square L-4b,d / M-4a,c. Stratum II, level 1 (Drawing J. Gawrońska)

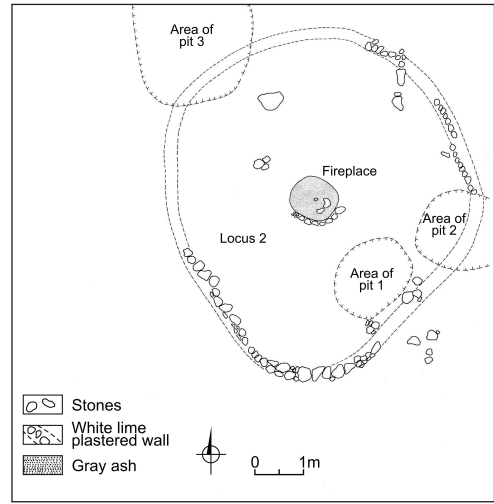


Fig. 10. L-4 b,d / M-4 a,c. Stratum II, level 2 (Drawing J. Gawrońska)



Fig. 11. Squares L-4B,D/M-4A,C. Platform in Stratum II, level 2, view from the north (Photo R.F. Mazurowski)

brown soil containing pottery, animal bones and flint artifacts, except for the smaller Pit 5 which contained gray ash and the long and narrow Pit 6 which was only 0.15 m deep and was filled with dark, burned soil and charcoal.

The assemblages from these pits, mostly flint artifacts and some broken stone tools, are attributable to the PPNA Period and should be considered here as being in secondary position.

A whitewashed floor laid on a thin layer of small pebbles, approximately 0.15 m thick, was found in the southern and southwestern parts of the trench.

STRATUM II — LEVEL 2

A platform (Loc. 2), partly destroyed by younger pits, was discovered in the center of the square [*Figs 10, 11*]. It was circular in plan (6.80 m in diameter) and about 0.15 m thick. A thin level of pebbles was spread with lime plaster and surrounded by a double row of stones, the latter rising to 0.20 m in height. Sunk in the middle of this courtyard was a circular hearth (approx. 1 m in diameter) surrounded by bigger pebbles. The fill consisted of gray ash and animal bones. A macrolithic burin was found in the courtyard. The structure seems to belong to a very late phase of the PPNA Period (no pottery finds), a dating corroborated by the construction method, the hearth and the archaeological context. It seems to have been used for household activities.

STRATUM III — LEVEL 1

The next stratum in the trench, III, corresponds already to the late PPNA horizon. In level 1 of the stratum two houses (Loci 3 and 4) were unearthed, as well as a hearth and a grave (No. 2) [*Fig. 12*].

The houses were rectangular, Loc. 3 situated in the southwestern part of the trench, partly concealed under the baulks, Loc. 4. extending to the east of the first one.

The uncovered part of Loc. 3. was about 1.70 m long and 1.00 m wide. The stone walls of the structure were plastered with lime. They measured approx. 0.30 m in width and were about 0.20 m high at discovery. The lime-plastered floor of the house was about 5 cm thick. Loc. 4 was a multi-room structure that covered approximately 4 by 3 m.

Pit 4 had partly damaged its wall which was preserved to a height of approx. 0.20 m. The wall was approx. 0.40 m wide and made of stones covered with lime plaster. The lime plaster floor was about 0.15 m thick. A circular hearth, about 1 m in diameter, was sunk into the floor in the southeastern part of the house. The fill of the hearth contained light gray ash.

A woman's burial (Grave 2) was discovered dug into the floor of the house in its western part. The skeleton was in an embryonic position, the front facing to the south. The head had been removed from the body, which was otherwise intact. Helwan points and a stone pendant were discovered by the body.

STRATUM III — LEVEL 2

Three houses (Loci 5, 5a and 6) and seven graves (Nos 3–9) from the Late PPNA horizon were discovered in this level, in the southern part of the square [*Fig. 13*]. Locus 5 was a round, approximately 4 m in diameter, single-room house in the southwestern part of the square. The lime-plastered wall, the northern and southern sections of which were missing, was approx. 0.40 m wide and stood about 0.20 m high at the moment of discovery. Its floor, made of pebbles and covered with lime plaster, was preserved only in the western part. A human burial was found below the floor, near the west wall, partly concealed under the baulk [*Fig. 14*], making it possible to examine only the lower part of the skeleton. It was lying on its back,

legs bent, oriented SE–NW, the head to the northwest. A medium-sized arrowhead was discovered by the body. To the east of the grave, below the floor of Loc. 5, an offering of an onager(?) was found. The head and shanks were missing, the body lying on an E–W axis. Some small pieces of ochre were found next to the bones.

Another house (Loc. 5a) was situated east of Loc. 5. The structure was divided into two parts. The northern one was rectangular

(2.00 by 1.50 m) and further subdivided into two small cubicles (1 m² each). The southern, circular part was partly destroyed by Loc. 6. The walls and the floor of Loc. 5a were made of pebbles covered with lime plaster. The walls were preserved to a height of 0.15 m and were about 0.40 m wide, while the floor was approx. 10 cm thick.

Loc. 6, found to the south of Loc. 5a, was severely destroyed by Pit 8. The preserved part consisted of three rooms forming an

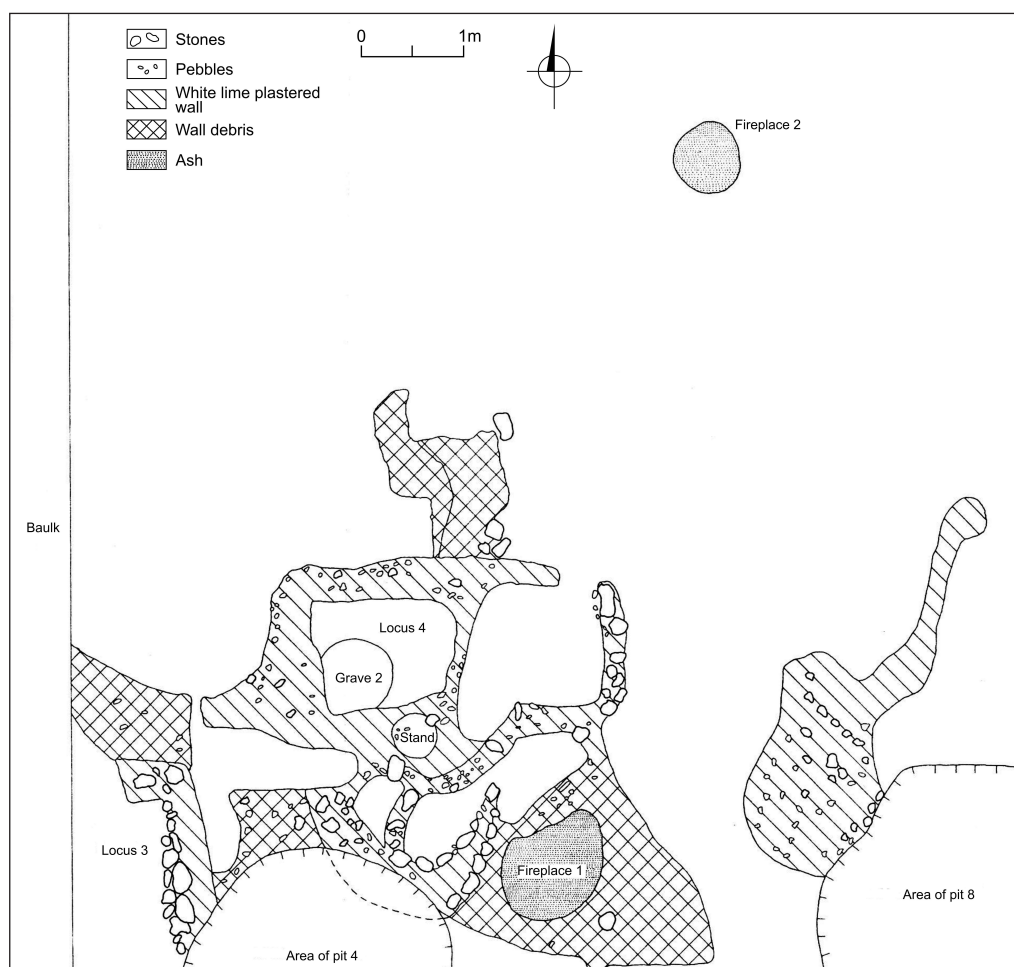


Fig. 12. Square L-4b,d/M-4a,c. Stratum III, level 1
(Drawing J. Gawrońska)

irregular quadrangle that was approx. 3 m long (E–W) and 2 m wide (N–S). The outer wall was approx. 0.35 m and stood about 0.30 m high at discovery. Small pebbles coated with lime plaster were used both for wall construction and for the floor. Three burials (Graves 5, 6, 8) were located below the floor. Each contained a human skull which

had been severed from the body [Fig. 16]. Grave 7, found approximately half a meter to the south of Loc. 6, was probably part of the same complex. The upper part of a decapitated human skeleton was found also in Grave 9 situated in the southwestern corner of the trench, by and partly under its southern baulk.

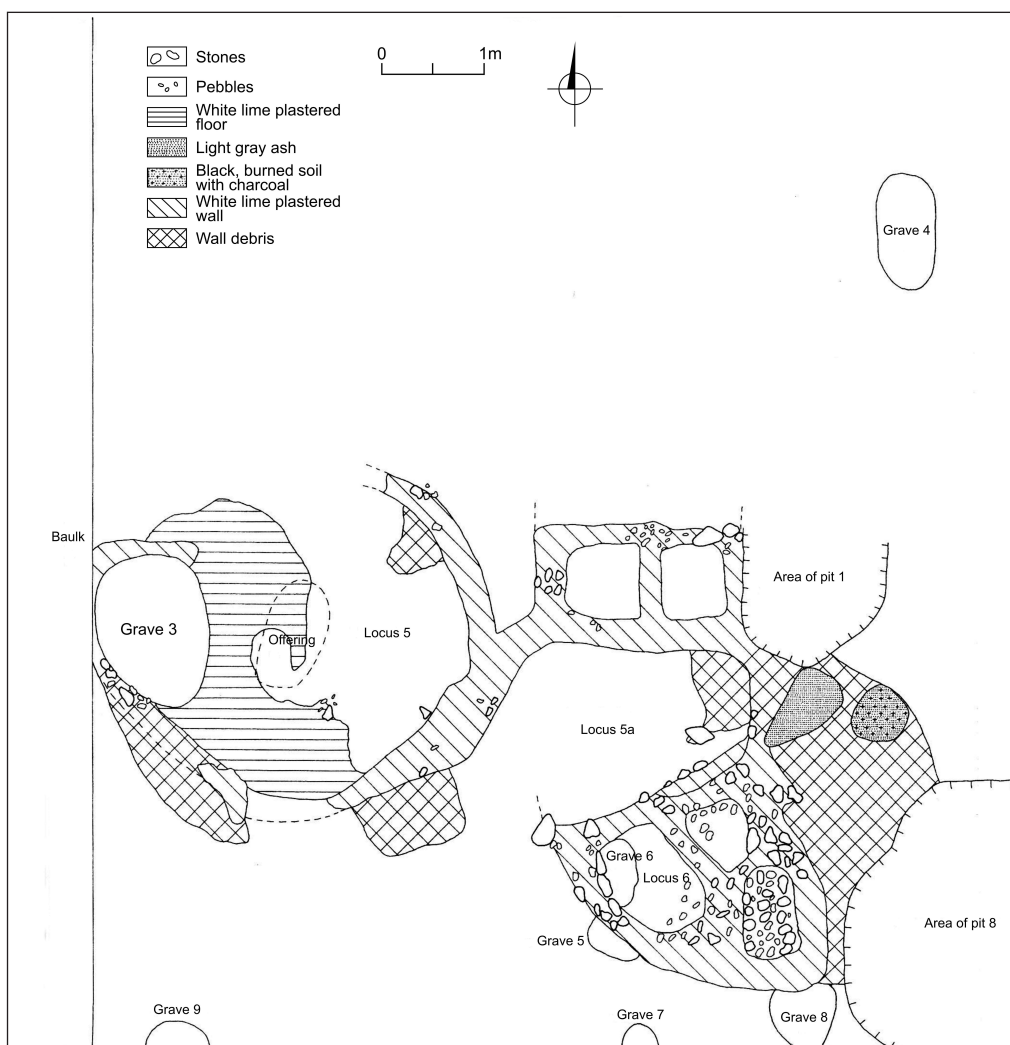


Fig. 13. Square L-4b,d / M-4a,c. Stratum III, level 2
(Drawing J. Gawronska)

Grave 4 was located in the northeastern part of the square. The grave pit (about 0.50 m in diameter) was surrounded by large, flat stones [Fig. 15]. The body, which was found in a sitting, embryonic position,

had been decapitated. The neck of the deceased was lowered between the knees and the torso was facing north. A few flint arrowheads and stone beads were found near the skeleton.

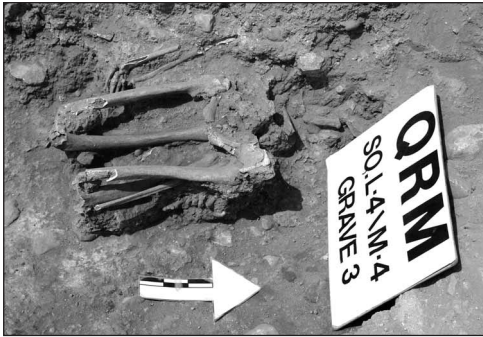


Fig. 14. Square L-4 b,d / M-4 a,c. Grave 3
(Photo R.F. Mazurowski)

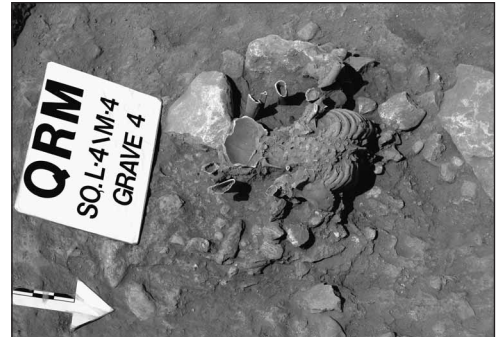


Fig. 15. Square L-4b,d / M-4a,c. Grave 4
(Photo R.F. Mazurowski)

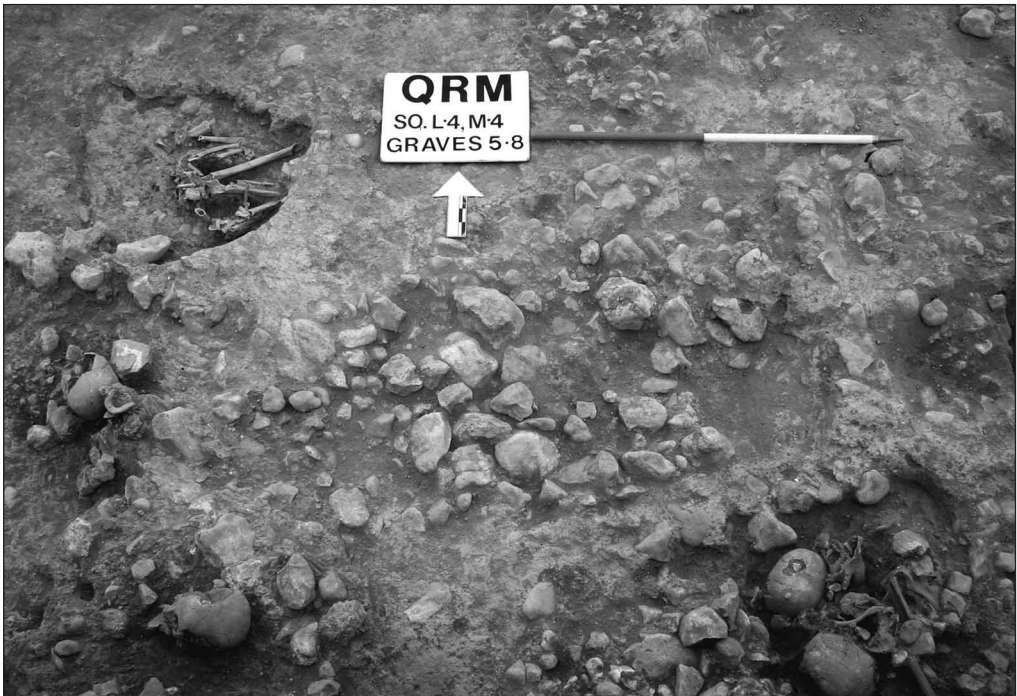


Fig. 16. Square L-4b,d / M-4a,c. Graves 5, 6, 7, 8
(Photo R.F. Mazurowski)

FLINT (CHIPPED STONE) INDUSTRY

Over 100 kg of flint artifacts were picked up, most of them from the southernmost trenches L-5 and L-4b,d/M-4. The Late PPNA levels are characterized by the usage of bipolar cores with a single striking platform, similar to "navy core forms" but with less intensive preparation on both sides. Blades 8–10 cm long and 2–3 cm wide were struck from such cores and used for making many types of tools. Sickle blades in the form of long-backed pieces with the back on the shorter side were the most prevalent. Next in line were points of the Helwan type and forms similar to the Mureybet type, but smaller, with one pair of recesses close to a massive handle. Points were the most characteristic form of tools in this assemblage. Other numerous tools were borers and perforators with long, slender and straight shafts, wedge and corner burins, end-scrapers made of flakes with cortex, retouched blades and some semi-backed pieces. Tools from the Late PPNA levels were generally larger than those coming from older levels where Early PPNA occupation was confirmed.

Comparatively less flint artifacts were recorded from the earliest PPNA levels in squares J-8b,d, J-7b,d, and K-7. These were mainly unipolar cores used usually for the production of blades, characterized by changing direction of striking. The blades

were 4–7 cm long and 1–2 cm wide. Most of the other tools belonged to the same types as in the younger levels, except for the points. El-Khiam type and some specific Qaramelian handle-points without recesses were only present in these older levels. Usually, they were 2–3 cm long and 1.00–1.50 cm wide. The number of burins (also made of flakes) was larger than before, while the proportion of sickle blades in the shape of backed pieces dropped. Three fragments of lunates were recorded from the lowest layers, but even so this kind of tool remains very rare.

The flint artifacts from the presumed Proto-Neolithic settlement in square J-8b,d, comprised only some blades struck from unipolar, probably conical cores, approx. 1.00 cm long and 1.50 cm wide.

Almost 96% of the tools and other flint artifacts were made of chocolate flint. In Late PPNA levels, a 0.5% frequency of gray obsidian was observed (fragments of blades, retouched blades, fragment of a core for a massive blade), which is completely absent in Early PPNA levels. The remaining material consists of burned, undefined flints and some flints of poorer quality which were sporadically collected in the neighborhood, in wadis and local outcrops on both banks of the Nahar Quoeiq River.

GROUND AND PECKED STONE INDUSTRY

The ground and pecked stone industry of the transitional horizon from the Protoneolithic to the Early Aceramic Neolithic, and of the developed PPNA was represented by 157 objects (for a selection of the finds, see *Figs 17–20*). The assemblage contained the following classes (symbols referring to

R.F. Mazurowski's classification system [1997] are given in parentheses): a *bolas* ball made of gray flint (IA2); a circular, quern-like form with trough-shaped cross section (IIA1); one complete and 23 fragments of oval querns with trough-shaped cross-sections, nearly all made of basalt and

sporadically of calcareous mudstone (IIB1a); 23 complete or fragmented single (IIIA1) or double-pole (IIIA2) pestles made of chlorite, five of them grooved; 15 complete or fragmented basalt unilateral or bilateral oval grinders, most with traces of usage on the lateral edges (IIIE1a,b; IIIE2a,b); 10 complete or fragmented pounders for mortars made of basalt (VD1, VD2); 16 two-sided trapezoidal celts with oval (VIIA1a, 15) or elliptical (VIIA1b, one) transverse sections, made of chlorite, calcite or green diabase ("greenstone") pebbles, among them one decorated with grooves on the lateral edges; two trapezoidal adzes (VIIIa) made of chlorite, one of them grooved on the edge; two grinding and polishing plates made of flat pebbles (IXB1) of calcareous mudstone or limestone; two fragments of "kitchen" plates (IXB2) made of limestone or calcareous mudstone; a decorated spherical macehead (XA1) made of calcareous mudstone; an ovaloidal macehead (XC1) made of a calcareous limestone pebble; three slender pebbles of chlorite with one end pointed and the other broad and used as a grinder (XIB), one of them decorated with zigzag grooves; a needle (XIC1) of dark-gray chlorite with a groove; three awls (XIC2) made of chlorite pebbles; five hemispherical bowls with rims directed inwards (XIVA2) decorated in the Jerf el-Ahmar style and made of chlorite; a miniature (XIVD1) elongated vessel made of chlorite; two chisels (XID) made of chlorite; 12 complete or fragmented oval (XVA, five) or rectangular (XVC, three) shaft straighteners made of chlorite pebbles, seven of them decorated; 20 beads made of white marble or chlorite pebbles, including the following forms: two cylindrical, long tubular specimens (XVIA1a), 12 small, circular specimens (XVIA2a), rectangular in transverse sections with lengths between 1/1 to 1/3 of their diameters, eight barrel-shaped beads with ovoid (XVIA3a, five), elliptical

(XVIA3b, one) or sub-rectangular (XVIA3c, two) transversal sections; nine pendants (XVIB1) of natural chlorite pebbles without any processing of surface or edges, one decorated; a trapezoidal pendant with one frontal hole near an edge (XVIB2b) made of a chlorite pebble; a decorated plaquette (XVIK) remade from a broken shaft straightener made of chlorite; a fragment of a massive disc (XVIC1) or macehead (XC1) made of a calcareous mudstone pebble; a fragment of a zoomorphic figurine (XIXB) made of a chlorite pebble.

The raw material used for the industry consisted of fine and colorful pebbles, collected selectively from the nearest riverbed and from rich limestone banks in the Quoeiq River valley. Decoration, which interestingly appeared on many tools of everyday use, comprised a prevalence of geometrical motifs, mainly parallel lines of incisions, grooves and zigzags. Anthro-po-morphic and zoomorphic images were also present. In style, the ornaments on shaft straighteners, bowls and plaquettes bring to mind parallels from Early Aceramic Neolithic sites in the Taurus and Middle Euphrates regions. This suggests



Fig. 17. Fragments of stone bowls
(Photo R.F. Mazurowski)

a universal system of beliefs among the populations of these areas, but at the same time the material culture demonstrates a number of important differences.

Nearly all of the "heavy duty" tools, such as querns, mortars, grinders and pounders, were made of basalt and only sporadically of limestone or calcareous mudstone. While the latter two raw materials are easily obtainable in the nearest vicinity of the site, the source of basalt has not been located as yet.



Fig. 19. Ground and pecked stone industry: beads (above) and pendants (Photos R.F. Mazurowski)

Characteristically, and this is in keeping with the findings of previous seasons, stone artifacts are seldom found on occupational floors inside houses and on platforms. They come mostly from fill and are reused as



Fig. 18. Ground and pecked stone industry: shaft straighteners and plaquettes (left and center), grinders and axe (right) (Photos R.F. Mazurowski)

building material in walls, floors and external stone pavements.

Another trend which is observable in the Tell Qaramel assemblage is a steady increase in the number of stone objects from the oldest to the younger phases of the

settlement. Many small beads and pendants were found in or beside human graves in the Late PPNA horizon. This was the case especially near the so-called “common house” (Mazurowski 2004: 364–365) discovered to the east of square L-4/M-4.

ANIMAL BONES

The osteological material from the PPNA layers comprised more than 20,000 animal bones, bone fragments and teeth which were analyzed typologically and anatomically. The age, sex and morphology of the animals were estimated and the different kinds of traces on the teeth and bones were evaluated. Following a preliminary analysis, it can be said that the overwhelming majority of the faunal remains (approx. 99%) belonged to mammals. Bones of various bird species were rare and, oddly, no fishbones were found despite the nearness of a river. Shells of snails and mollusks remained rare. Tortoise (or turtle) remains were not numerous but appeared red in almost all the layers, pits and other archaeological contexts.

Predominant among the mammalian remains were the bones of aurochs, sheep, goat, gazelle, onager, donkey, horse and wild boar. Represented but rare were red deer, fallow deer, carnivores (probably dog and an animal smaller than a dog) and animals from the *Leporidae* family (hare or wild rabbit).

It seems that all parts of the skeleton of the most common mammals are found in the material. Adult individuals were extensively represented.

Post-consumption traces on mammalian bones are frequent. Most are due to the quartering and filleting of the carcasses. A few limb and vertebrae bones of aurochs and sheep bones demonstrated pathological



Fig. 20. Bone ornaments and shell pendants
(Photos R.F. Mazurowski)

changes owing to an inflammatory condition. Processing traces include the making of simple tools, of which several dozen were identified. These were made by splitting the bone (mainly of ruminants) and smoothing the edges, the size and shape of the material determining whether needles, awls, perforators or chisels were produced. Some bone ornaments and a shell pendant were also recorded [Fig. 20].

There were no evident traces of domestication on the examined bones. However, the observed changes in bone dimensions over time may indicate domestication. The material from square J-8b,d stratum VIII, level 14, which was particularly rich in animal remains (approx.

8000 skeletal fragments), has provided a good idea of the game hunted by the inhabitants of Qaramel. These were (percentages are given regarding the sum total of mammal bones from the assemblage): large ruminants, *Bovidae* family (aurochs) (36.35%); medium-sized ruminants, probably of the *Cervidae* family (fallow deer or red deer) (3.20%); small ruminants, *Bovidae* family (goat, sheep, gazelle) (39.95%); *Equidae* family (horse, onager, donkey) (15.32%); *Suidae* family (wild boar) (4.64%). Members of the *Leporidae* family (hare or rabbit) and birds were also hunted sporadically, and the human diet was supplemented with tortoise meat, mollusks and snails.

CONCLUSION

Examination of the stratigraphy in squares J-8 b,d and J-7 b,d following this year's fieldwork confirmed the presence of an occupational horizon connected with the transition from the Proto-Neolithic tradition to the PPNA, a horizon which seems different from the Natufian and Post-Natufian traditions known from the middle and southern Levant. Several factors, including the small amount of microlithics, suggest development from a still obscure local epipaleolithic cultural tradition. A gap noted between the oldest traces of occupation and the PPNA tradition could reflect a temporary shift in location, an assumption confirmed by the obvious restriction of Late PPNA occupation to the southernmost squares L-5, M-4, L-4 and L-3.

The multi-room buildings of ovoid, sub-rectangular and rectangular shape, made in the *pisé* technique or, occasionally, of primitive irregular bricks are characteristic of the PPNA horizon. The chronological identification of this architecture is also

confirmed by the chipped stone (flint) industry assemblage discovered this year in the southernmost squares, as well as in squares L-4/K-4 in previous seasons.

Another significant discovery of this season was Tower 5, attributed to the Proto-Neolithic period. A radiocarbon dating to the 11th millennium BC (calibrated) makes it the fifth oldest tower in the world. Indeed, all five of the Qaramel towers have been demonstrated by radiocarbon dating to predate the tower in Tell el-Sultan in Palestine. The excavators propose to interpret the towers as an official public and ritual meeting place for the inhabitants of the village throughout practically all of its existence. Despite the technological differences in their construction, the five towers occupied the same location inside the settlement. The stability of settlement in Qaramel over a long period of time has been evidenced by the continuity in house locations in many of the fourteen levels of occupation recorded at the site.

REFERENCES

Mazurowski, R.F.

- 1997 *Ground and pecked stone industry in the Pre-Pottery Neolithic of Northern Iraq*, Warsaw: University of Warsaw
- 2004 Tell Qaramel. Excavations 2003, *PAM* XV [= *Reports 2003*], 355–370
- 2007 Tell Qaramel. Excavations 2005, *PAM* XVII [= *Reports 2005*], 483–499
- 2008 Tell Qaramel. Excavations 2006, *PAM* XVIII [= *Reports 2006*], 571–586