

Early Bronze Age I Settlers and Transhumance in the Wadi az-Zarqa Basin: Stations on the Way from the Jordan Valley to the Badia Region

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Abstract: This paper discusses the settlement patterns in the Wadi az-Zarqa based on the results of the excavations and surveys. It will discuss the various kinds of settlements in the az-Zarqa Basin and the evidence of relationships between the EBI camps and hamlets and villages such as the Amman Citadel, Jebel Mutawwaq, Jebel Abu Thawwab and Umm Hammad. Stress will be on the idea that the az-Zarqa Valley was a link between the Jordan Valley, in the west, and the Badia Region to the east. This study is basically based on a discussion of the excavated material culture such as architecture and pottery «Jawa Ware» found at the sites of Jawa, Abu Thawwab and Umm Hammad.

History of Research:

The archaeological fieldwork recently done throughout Jordan has shown an increased number of Early Bronze Age sites in comparison with the number of sites dated to the Chalcolithic period. A good example can be given from the Wadi ez-Zarqa Basin. Following the intensive archaeological surveys conducted during the 1930s by Nelson Glueck, several surveys were undertaken in this area during the past decades.

In 1984 J. W. Hanbury-Tenison started a survey of Chalcolithic and EB sites in the Jerash vicinity in order to check the idea proposed by R. T. Schaub that the heavy concentration of the EBI-EBII sites in the region located to the north and west of the Jordan Valley was the consequence of a shift of settlement pattern. The result was that there was definitely a shift since the EBI- II sites were registered all over the surveyed area, whereas the Chalcolithic and Proto-Urban sites were only found in the open land to the east of the city of Jerash. Hanbury Tenison argued that the Chalcolithic sites were the evidence of a mobile society with a pastoral economy (Hanbury-Tenison 1986).

In 1985 A. Knauf and R. Gordon in

association with the project of Abu Thawwab (Yarmuk University) studied the area located to the west of the area surveyed by Hanbury-Tenison and reached the King Talal Dam on the Zarqa River. The results of the survey indicated an increase of Early Bronze Age sites in comparison with Chalcolithic ones (Gordon and Knauf 1987:291). Twenty-four sites out of the forty-two visited have EBI components. Seven sites were considered as belonging to villages that were occupied during the Proto-Urban or transitional phase from the Late Chalcolithic

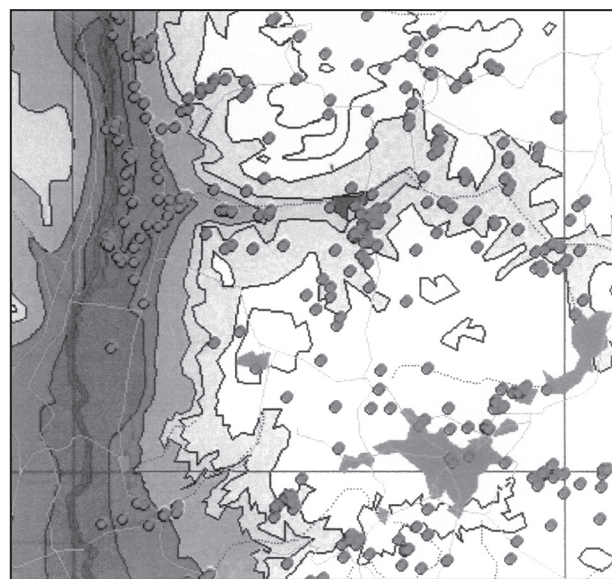


Fig. 1. (after Savage <http://archaeology.asu.edu/jordan/index.html>)

into the Early Bronze Age 1 phase (Gordon and Knauf 1987:291).

In addition the surveyor argued that the site of Jebel et-Tuweim (Site 4) served as an EBI town in as much as it appears from the aerial photographs that it has an enclosure. Also, the site occupies an area reaching 2.4 hectares. It has been assumed that this site corresponds to similar ones in the lower Zarqa Valley (Gordon 1984; Gordon and Villiers 1983) and on the north with Jebel Mutawwaq in the Jerash region (Hanbury-Tenison 1986). Generally speaking most of these sites were erected either directly on a perennial water source or very close to it. Several wadis diverting into Wadi az-Zarqa (e.g. Wadi er-Rumman and many springs, such as 'Ain Ras el-Mayita, Ain Safsafeh, Ain Um Karam and Ain Al-Ghathyan) are located in this region. Based on the result of this survey it seems that the area of the er-Rumman survey was intensively occupied during the EBI; out of the 42 visited sites 24 have EBI components. Early Bronze Age I towns, villages and camps were registered from this region. This area may be considered as an extension of the Jerash region.

In 1987, A. Simmons and Z. Kafafi conducted an archaeological survey along the Upper Wadi az-Zarqa River in the northern suburbs of Amman. One of the major objectives of this survey was to document the evolution of the occupation in the Ain Ghazal Project area: 108 sites were registered: 4 were identified as Chalcolithic/Early Bronze Age and 4 as Early Bronze Age. Some of these sites were relatively large settlements consisting of several blocks of rooms (Simmons and Kafafi 1988).

In 1993, G. Palumbo (University of Rome/Italy) explored the Upper az-Zarqa /Ad-Dulayl Wadis region. And in 1996; 1997 and 1999 this survey was continued in a joint project of

Yarmouk University/ Jordan -Z. Kafafi/ Rome University- G. Palumbo. The main objectives were the study of the evolution of settlement from the Early Bronze Age to the Late Iron Age, both in terms of settlement hierarchy, land use, and intra-site organization at selected locations. This survey clearly showed that the EBI/II sites are mostly sherd scatters that might be the remnants of pastoral camps and hamlets. On the other hand, large and fortified sites such as Jabal ar-Ruhayil EBII were registered and some test trenches were made (Kafafi et al 2001; 1997; Palumbo et al 1996).

In the eighties and early nineties S. Helms suggested that the inhabitants of sites located in an area close to the mouth of the Zarqa Valley during the EBI such as Umm Hammad were in contact with other sites of the Jordanian Plateau like Jawa (Helms 1986; 1984). The so-called Jawa-type, first encountered at the site of Jawa in the Badia area, was found at many sites extending alongside the Zarqa Basin; e.g., Jabal Abu Thawwab and Jabal Mutawwaq. The Badia region during the EBI might have been a region of transhumance. This would be an explanation for the large number of camps and hamlets registered during the surveys conducted in the az-Zarqa Basin. The groups or part of them probably moved through that area according to the seasons of the year.

The this paper studies the various kinds of settlements in the az-Zarqa Basin and discusses the evidence of relationships between the EBI camps, hamlets and villages such as the Amman Citadel, Jebel Mutawwaq, Jebel Abu Thawwab and Umm Hammad. The paper will also stress the idea that the az-Zarqa Valley was a link between the Jordan Valley in the west and the Badia Region to the east.

Interpretations of Cultural History in the Second Half of the Fourth Millennium BC:

The location of Jordan at the extreme southeastern end of the Fertile Crescent, on the fringe of the desert made it vulnerable to environmental and social changes. Thus, the geographical situation must be taken into account while studying the transhumance and settlers movements in the different geographical zones in Jordan, especially the Badia, the hilly regions, and the Jordan Valley.

The resettlement process and the cultural change in the south of the Levant during the beginning of the Early Bronze Age were under study during the last decades (Gophna 1995). It must be argued that studying the settlement patterns can help clarifying the geographical origins of the cultural change during a period of time.

Regarding the transitional period from Late Chalcolithic to the Early Bronze Age I A in Jordan, the archaeological excavations proved that the sites (e.g., Teleilat el Ghassul and Abu Hamid), located in the Jordan Valley, were totally deserted by the end of the Chalcolithic. In the meantime, other sites such as Um Hammad and Babe dh-Dhra' continued to be occupied through the beginning of the Early Bronze Age.

The discussion below is based totally on the results of the surveys and excavations conducted in the Wadi az-Zarqa. However, Banning (1996) argued that the conducted archaeological surveys in the Near east have encountered many methodological and theoretical problems but they show promise for addressing previously unexamined questions in the history and prehistory of the Near East. He added that surveying techniques that are highly productive are different from one region to another.

As a matter of fact, all of the surveys discussed below were conducted by a field walking techniques. However, the Wadi Ziqlab Survey

followed a different methodology in exploring the settlement patterns in this region. There, the surveyors have taken advantage of the different environmental conditions to conduct a subsurface survey of one stretch wadi floor by small soundings (Banning 1996: 38; Banning and Fawcett 1983; Banning et al 1987).

S. Helms suggested that Jawa represented a staging point of a large pastoralist influx into Palestine from the northeast, using the Wadi az-Zarqa for entry into Palestine. It must be stated here that the Jawa-Umm Hammad argument received more support from the recent archaeological surveys conducted in the Wadi az-Zarqa Basin. Helms states that during the end of the Chalcolithic period these southern paleo-beduin may have played a role in changes of settlement strategy together with other factors such as over-grazing, soil exhaustion, social conflict and short time climatic fluctuation (Helms 1987:51). However, we may accept this assumption with minor modification as is stated below.

J. W. Hanbury-Tenison (1986:10-32) presented a detailed study for the changing interpretations of cultural history in the fourth millennium BC in the southern part of the Levant. He divided his study into three different stages: before 1945, after 1945 and the general view in 1983. This presentation does not aim to repeat what Hanbury-Tenison stated or cited, but to question the results of several excavations and surveys conducted in the Wadi az-Zarqa after 1986 and to examine the ideas he and others have proposed.

The transitional period from the so-called Chalcolithic to the beginning of the Early Bronze Age was studied by scholars such as K. Kenyon, P. de Vaux, E. Wright; J. A. Callaway, B. Hennessy, P. Lapp, J. Perrot and P. de Miroschedji; and several hypotheses

were presented for understanding this period. In 1982 T. Schaub said that there was continuity of occupation in Palestine from the Chalcolithic to the Early Bronze Age, but it was accompanied by a shift of settlement patterns (Schaub 1982:73). To examine the change of settlement patterns and contacts amongst the EBI social groups settled in the Wadi az-Zarqa, we decided to study the excavated and surveyed archaeological remains at sites in this area. It is not our intention to discuss the artifacts changes from the Late Chalcolithic to the Early Bronze age I or to determine if this was a result of economic needs or introduction by a new ethnic group.

Settlers and Transhumance in the Wadi az-Zarqa:

Based on the results of his excavations at the sites of Jawa in the Badia region and Umm Hammad in the Jordan Valley, Svend Helms suggested that a group of technically competent pastoralists were forced into the desert and dwelt at the site of Jawa. Apparently they could manage with their skills to adapt to the nature of the desert and start an organized urban life. Moreover, after some time, they were forced to leave and move towards the west, entering into Palestine through the Zarqa Valley. This hypothesis is based on the similarity of the excavated pottery vessels at both sites of Jawa in the east and Umm Hammad in the west. However, Helms modified his hypothesis and tried to see Jawa as part of a group of sites extending in the area from Hama in the north of Syria to the Jordan Valley (Helms 1987). The inhabitants of this area exploited the semi-arid zones of the northern Jordanian and southern Syrian steppe (Helms 1984; 1986).

To discuss this hypothesis a study of the recently excavated or surveyed archaeological EBI data is presented below.

It should be assumed that the results of recent archaeological field work in the Wadi az-Zarqa provided evidence to study the Early Bronze Age I settlement patterns from this region of Jordan. It has been proved that several diverse communities inhabited this area and were described as either settlers or transhumances. For their economy, they practiced agriculture, agro-pastoralism as in the case of Abu Thawwab, or pastoralism as it has been shown from several surveyed sites, especially in the semi-arid zones in the vicinity of the city az-Zarqa.

In his survey in the Jerash region, Hanbury-Tenison registered 38 sites and dated them to the fourth millennium BC and to be attributed to the Late Chalcolithic, the Early Bronze Age IA (Jawa-type) culture named as «Proto-Urban» by the surveyor, the EBIB, the EBII; and the EBIII. Hanbury-Tenison stated that there is only a slight distinction between the EBI and the EBII settlements, which is due to the fact that the pottery found at the EBII sites was fairly homogeneous. He added that, the plain hole-mouth jars, small rounded ledge-handles with thumb impressed edges and lines painted decoration were considered as a diagnostic pottery for the EBI (Hanbury-Tenison 1986: 44).

According to Hanbury-Tenison, three of the surveyed EBIA sites of the Jawa-Type in the Jerash region were built high on southwest facing terraces and well away from water, situated in the open steppe, and of a pastoralist culture (1986: 48, 76). The rest of the sites were found closer to water, still founded on hill slopes, generally south or west facing, and at least two hectares in area (Hanbury-Tenison 1986: 46). However, in other cases the EBI sites are much smaller, more numerous and situated on gentle slopes right down to the water. It has been deduced by Hanbury-Tenison that there was no continuity of settlement between the

Late Chalcolithic, the EBIA «Proto-Urban» and the EBI, but there was a continuation in settlement from the EBI to the EBII. Also, he added that during the Chalcolithic/EBIA settlers of the region of Jerash practiced pastoralism but this had changed during the following periods to arable farming.

The results of the Wadi az-Zarqa/Wadi Ad-Dulayl survey indicated a small number of EBI sites, and this was attributed to a limited occupation, possibly mostly pastoral, of the region (Palumbo et al 1996:385). In this survey there were only eight sites thought to include Early Bronze Age components (Site 8, 26, 95,122,438,440,441 and 447) (Caneva et al 2001).

The Wadi az-Zarqa EBI Villages:

During the EBI small agricultural villages developed on the sides of the wadis and along watercourses, although some maintained pastoral components. At some sites a transitional period has been detected, an example of what has been recognized as continuity from the Chalcolithic to the following Early Bronze Age I. This is obvious in Jordan at several sites such as Shunah North, Pella, Tell Abu el-Kharaz, Um Hammad and Bab edh-Dhra'. Also, one should consider that some sites served as camps for the nomadic or semi-nomadic groups that lived and still live in Jordan alongside the sedentary population.

Despite the fact that the EBI unfortified village was the dominant type of settlement in Jordan, this does not prevent us from concluding that during the whole EBA the City-State as a unit was the main type. This may be explained as follows: a town/large village surrounded by villages/farmsteads that form its agriculture hinterland and for which the town/large village provided protection and other services. One example is Abu Thawwab and its surrounding

area, where over twenty small EBI sites were registered in the large village vicinity (Gordon and Knauf 1987). A similar example in another part of Jordan is the Madaba area (Harrison 1997). However, the origin of the EBIA populations and their relationships with the surrounding areas or regions is still an open question.

Several sites in the Wadi az-Zarqa, either excavated or surveyed, may be identified as villages. Of these we may mark out Umm Hammad to the west, Abu Thawwab and Jebel Mutawwaq area in the center, and the Amman Citadel to the east. A brief discussion is presented below explaining the nature of these villages in terms of architecture, economy and material culture.

The site of Tell Umm Hammad was first explored by N. Glueck in 1939-1940 and 1942-1947 (Site 199). This site is described as a very large double mound (Tell Umm Hamad Gharbi 199a and Tell Umm Hamad Sherqi Site 199b) separated by a very slight dip in the land (Glueck 1951a:318-329) and may represent the largest site in the entire Jordan Valley (Glueck 1951a: 318-329). The two parts of the site cover an area measuring over a kilometer long and a half kilometer wide. It is situated in a farmland south of Ghor Abu Obeideh between the converging Jordan and Wadi az-Zarqa (Betts 1992).

Glueck stated that the majority of the collected sherds surveyed at Tell Um Hamad esh-Sherqi should be attributed to the Late Chalcolithic period and dated to a period ranging from 3400 to 3200BC (1951a: 319). The site is large in size and is characterized by intensive irrigation agriculture, and has a large amount of several pottery types that indicate a widespread and flourishing Late Chalcolithic civilization, according to the surveyor. A large number of EBIA pottery sherds were collected from the

site but after the EBIA, the site was abandoned then reoccupied during the Iron I-II periods.

The occupational history of the site began in the second half of the fourth millennium, was followed by a break which lasted till the beginning of the second millennium BC (MBI), and was followed by another gap, which lasted till the beginning of the Iron Age I-II; then there was a break in occupation till the Roman and Byzantine periods.

The site Jebel Abu Thawwab was first discovered in 1980 and then excavated by Z. Kafafi for four seasons (1984; 1985; 1989; 1990; 2001). The site occupied an area measuring 200m from east to west and at least 300m from north to south. The site is situated on a slope overlooking Wadi er-Rumman that empties its water in Wadi az-Zarqa and in which a perennial spring (Ain Ras Al-Mayteh) flows. Early Bronze Age I architectures and several types of EBI pottery, including the Jawa-type, were excavated (Kafafi 2001).

To elaborate: several archaeological sites dated to the Early Bronze Age I (such as Jebel Mutawwaq, Abu Thawwab and Um Hammad, located in the az-Zarqa Basin) have been explored and produced parallel material culture. In addition, the above studied surveys in this region yielded pottery sherds similar to those found at the excavated sites. This shows that human groups were crossing the az-Zarqa Valley from the Badia in the east to the Jordan Valley in the west, or visa versa. In addition, it may be argued that the settlers in both regions were in contact with each other, which resulted in the similarity of way of living and in the produced material culture.

Below we present a discussion of the recognized types of architecture and pottery excavated at sites such as Jawa in the east and Umm Hammad in the west. This kind of parallel

study may be of great help to the understanding of the nature and type of settlements in the az-Zarqa Valley.

Architecture:

Two types of houses were recognized in the Wadi az-Zarqa Valley, the curvilinear and the rectilinear.

a. Curvilinear structures:

Several scholars tried to associate the curvilinear structures with gray burnished ware, although gray burnished pottery is also encountered at sites that have no oval houses. Jebel Mutawwaq and Abu Thawwab in the Wadi az-Zarqa Basin contained curvilinear houses that were associated with the so-called Jawa Ware but not the Gray Burnished Ware (Kafafi 2001; Nicolle 1999; Hanbury-Tenison 1989).

In March 1986 J. W. Hanbury-Tenison conducted a short season of excavations at Jabal Mutawwaq, which is a large hill occupied by a 28 hectare EBIA walled town. A systematic site survey revealed 300-400 oval houses, each measuring from 6 to 10m long with a narrow entrance in the center of one of the long walls. The houses were built of irregular stone slabs set on their sides. There were two narrow opening gates on the southern part of the site (Hanbury-Tenison 1989: 137). EBIA shaft tombs and a large number of dolmens were also observed.

The Jabal Mutawwaq structures were resurveyed and excavated by a French expedition (Nicolle 1999). However, similar stone circles were also registered at other parts of Jordan as at Iraq Al-Amir to the west of Amman (Ji 1997: 57).

The excavated curvilinear structure at Jebel Abu Thawwab consisted of a rounded feature with two walls in the eastern side narrowing at the doorway and lining up the passageway

to the house, and another one to the west that curved at the end (Kafafi 2001; 1999). Based on the results of the excavations of this site, we assume that it served as a large unfortified village.

At Umm Hammad, attributed to Stage 2, well-constructed units built with large mud-bricks, sometimes on stone foundation, characterize the uncovered architectures remains dated to the EBIA. The walls were either straight or curved. Similar curved walls were found alongside Wadi az-Zarqa as at Kataret es-Samra, Tell Mafluq, Ruweiha, Abu Thawwab, and Jebal Mutawwaq

Unfortunately, at Jawa only a small area was cleared and most of the excavated houses dated to the EBI were rectangular, many with some rounded corners. Several houses were mono-cellular and partly subterranean, with beaten earth floors, stone foundations, and plastered walls and stone slabs down the central axis

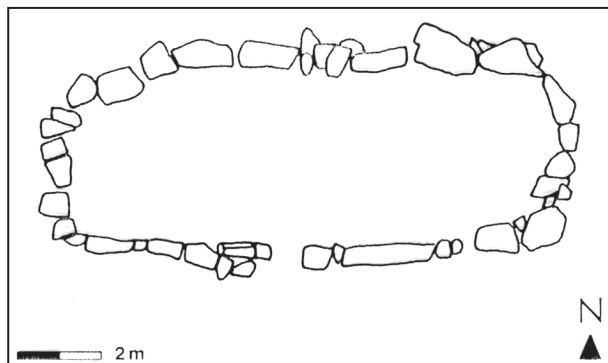


Fig. 3a: Oval Structure at Jebal Mutawwaq (after Hanbury-Tenison 1989: fig. 3).

to carry the ceiling. Some of the houses had benches alongside the walls for sitting, as well as pits, silos and hearths (Helms 1981; 1977; 1976; 1975). An enclosure with gates was built during the EBI at Jawa. This site, dated to the fourth millennium, has been described as “a large, militarized, nucleated settlement” (Helms in Betts 1991: 12).

b) Rectilinear Structures:

At the site of Umm Hammad structures found in Stage I, dated to the EBIA, showed rounded and rectilinear forms. The excavator thought it probable that the domestic houses were built packed close to each other and there was evidence of much rebuilding and reusing. However, during the EBIB (Stage II) the structures became no longer curvilinear and less congested. A large pit with at least two sub-phases of fill was considered a mark for the

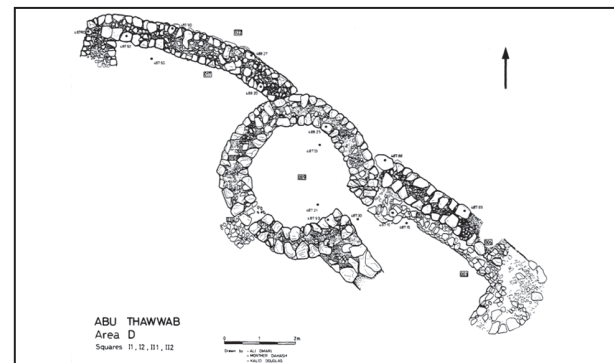


Fig. 3b: South Gates at Jebal Mutawwaq (after Hanbury-tenison 1989: fig. 4)

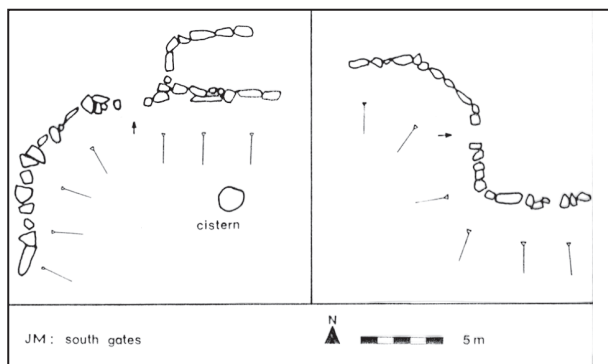


Fig. 3c: Curvilinear House at Jebel Abu Thawwab (after Kafafi 2001: fig. 32).

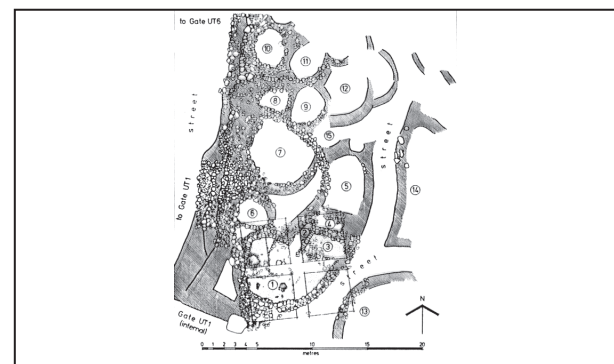


Fig. 3d: Domestic Architecture at Jawa, Plan area UT Trench 1 (after Helms 1981: fig. 57)

beginning of this stage (Helms 1984: 40-42). Jawa Ware was found in Stage I (Helms 1984: Fig. 11:1-7) and Grain Wash (Helms 1984: Fig. 14: 8-11), and Umm Hammad Wares or the so-called Proto-Urban D (Helms 1984: Fig. 14:15 and 15:1-7) are characteristic of Stage 2 at the site.

In the Wadi az-Zarqa Basin, the site of Abu Thawwab produced several complexes of rectilinear houses built of boulders. One of them is a broad room, with a bench constructed at both the north and west walls. Also it has a stepped entrance in one of the long walls (Kafafi 1999: Fig. 2; 1986; 1985).

At the site of Tell 'Umeiri in central Jordan, a broad house dated to the EBIB was excavated that probably had a roof supported by pillars. That house was provided with storage spaces built beneath it (Herr et al 1994:155).

Rectilinear EBI structures were also excavated at other parts of Jordan. At Tabaqat Fahl (Pella) in Trenches XXXIID and XXXVIII A, Early Bronze Age architecture dated to the EBIB/EBII structures were reported. They were all ascribed as domestic architecture. Some of the walls are double ones and neatly constructed of small fieldstones topped with mud-bricks, the

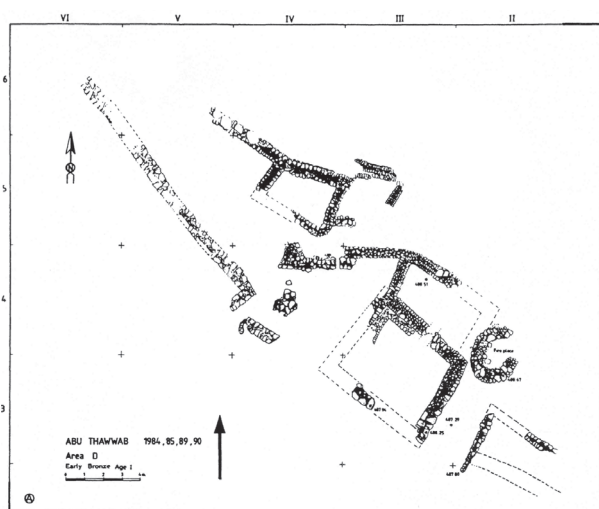


Fig. 4: Rectilinear Structures from Jebel Abu Thawwab (after Kafafi 2001)

area in between the two rows was filled with gravel and small stones (Bourke et al 1998: 182-183).

Unfortunately, the EBI sites registered in the Ain Ghazal Archaeological Survey, 1987, did not produce indicative architectural remains. Site 10, a relatively large settlement, has been badly disturbed by modern development. It appears that there are two components present at the site, based on ceramic analysis: EB and Late Neolithic (Simmons and Kafafi 1988). This site had been previously visited and published (Petocs 1987).

Site 49 is a large habitation site overlooking the neck point of a wadi that drains into the main wadi Huweija and is only 600m from 'Ain Rabat. Although the pottery sherds were abundant on the surface, those from the Chalcolithic/EB are rare. A hole-mouth jar with traces of a vestigial handle parallel to those known as Jawa Type was noticed amongst the pottery sherds collected from the site.

Site 51 is a possible kite site that consists of two parallel walls down slope, with four interior rujum. At the top of the hill, right off the walls, is another very large (ca. 30m diameter) circular stone structure. This site produced a large number of pottery sherds dated to Chalcolithic/EBI and Late Roman.

Site 54 is a rectangular structure sitting on a knoll overlooking the confluence of two wadis. The site is mainly of PPNB component, but it yielded very few pottery sherds and may belong to the end of the fourth millennium.

Site 59 is a relatively large settlement located on a bench overlooking both Wadi Zarbi and Ras Al-'Ain. Its principal components seem to date to the Chalcolithic or Early Bronze Age and Iron Age, although Late Bronze Age sherds are also present, as are some Roman pieces. Several structure walls can be discerned

on the ground, although most are buried up to their tops. Several EB pottery sherds belonged to hole-mouth and necked jars were collected from the site. A ledge handle bearing thumb indentations similar to those attributed to the Jawa Type was also present.

To summarize, only two sites (10 and 59) from the <Ain Ghazal Archaeological Survey yielded pure EBI archaeological material. Both are located at a place very close to a perennial water source. Only Site 59 located farther to the east and closer to the steppe region than Site 10, yielded Jawa Type pottery vessels.

Pottery:

The regional published studies of the Early Bronze Age I pottery assemblages from south of the Levant enable us to distinguish the settlement patterns during this period (Gophna 1995:272). Some of the excavated EBIA pottery vessels show a continuation in forms and techniques from the Chalcolithic period (Kafafi 1996). This, however, was not the case in all regions of the southern Levant.

Although we mostly agree with the remarks published by Graham Philip (Philip 1997: 163) regarding Helms's work, it might be said that the Jawa assemblage shows distinctive characteristics. However, in studying the Jawa pottery assemblage Helms used new terms, "genre and repertoire," when classifying the vessel forms, and each genre includes various types (Helms 1984; 1986; 1992). These are considered by Philip (1997:163) to be unclearly defined and confusing. A specific pottery type that links Jawa and Umm Hammad is the hole-mouth jars with four pushed-up lug handles located just below the rim (Fig. 5a).

Parallel pottery vessels were found at several sites in the az-Zarqa Basin (Douglas and Kafafi 2000: 102). These are similar to Umm Hammad,

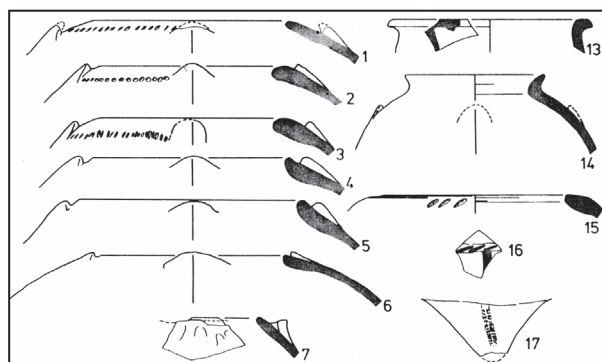


Fig. 5a: Jawa Ware from Umm Hammad (after Helms 1984)

and based on the stratigraphical sequence the excavated EBI/Jawa-type pottery assemblage at Jebel Abu Thawwab fits completely in the beginning of the EBI (Douglas and Kafafi 2000) and precisely in the EBIA. This may indicate that the Jawa-type should be included with the EBIA pottery assemblage while the line painted pottery becomes common in the EBIB.

Moreover, it has been remarked from the analytical study of the excavated EBI sites in the Wadi az-Zarqa Basin that the uncovered Jawa-type pottery vessels were mostly connected with the rounded structures.

A very little group of lines painted ware has been noticed in the Wadi az-Zarqa sites. Flaring rim hole-mouth jars, vestigial, pushed-up lug-handles and incised lines or patterns of dots or striations particularly around the rim, characterize the Jawa Ware. Handles commonly have thumb impressions around the edge. The fabric is generally of poor quality, low fired to an orange buff with inclusions. The vessel forms consist of hole-mouth jars, necked-jars, jugs, bottles and open rounded bowls. The hole-mouth jars with the pushed-up lug-handles and sometimes with punctuate decoration seem to appear only in the Wadi az-Zarqa sites and at Jawa (Helms 1987: 53-59; figs. 5-7).

The registered EBIA pottery sherds from the Wadi az-Zarqa/Wadi Dulayl survey are

characterized by the general absence of the painted ware. The studied pottery sherds from Sites 8, 95, 122, 438, 440 and 447 consist of three rims belonging to hole-mouth and necked jars while the rest are body sherds. The fabric is pinkish in color and has basalt inclusions. One of the collected sherds (Site 438) has a robe-molding decoration, and another one (Site 95) has a red painted slip and might be part of a dipper juglet.

The twenty-four EBI sites registered in the area of Jebel Abu Thawwab yielded typical EBI pottery vessel types especially the hole-mouth jars. The absence of the Jawa Ware is obvious, although there are a few pieces with pushed-up ledge handles found at the sites of Ain el-Karm II (Site 15/2) and el-Mastaba (Site 36) but with fabric tempered with basalt inclusion similar to EBI ware at Jebel Abu Thawwab.

It should be noted that no typical Jawa-type pottery was encountered in the Ain Ghazal Archaeological Survey. The EBI repertoire collected at the visited EBI sites consisted mostly of hole-mouth jars and undecorated vessels. However, one ledge-handle dated to the Chalcolithic/EBI was collected (Simmons and Kafafi 1988).

Conclusion:

To conclude, most of the Early Bronze Age sites either excavated or surveyed in the Wadi az-Zarqa region were small in size, clustered along wadis or adjacent to springs and established in fertile areas. In addition, few of the sites portray features of the preceding period. These are modest in size and belong to unfortified agricultural villages. But it has been recognized that the inhabitants of those sites were in contact with other settled parts of Jordan. The so-called Jawa Ware was encountered at many sites extending along the Wadi az-Zarqa Basin. This may suggest that the inhabitants of the Badia region during this period in a way served as

transhumance, moving with their flocks through this area according to the seasons of the year. This argument is reinforced by the presence of stamp seal impressions that are similar in character to those found at Jawa in the Badia region and Tell el-Handaquq and Um Hammad in the Jordan Valley area (Helms 1987).

Nevertheless, it might be thought that the presence of a number of Jawa-type sites argues against any mass movements into Palestine along the Wadi az-Zarqa. But it may indicate that Jawa was a center site for transhumance groups that moved in all the surrounding areas. Also, one may raise the question: Were the transhumance groups moving along the Wadi az-Zarqa part of the same societies of EBI people settled at Jawa, Jabal Muttawwaq, Abu Thawwab and Umm Hammad?

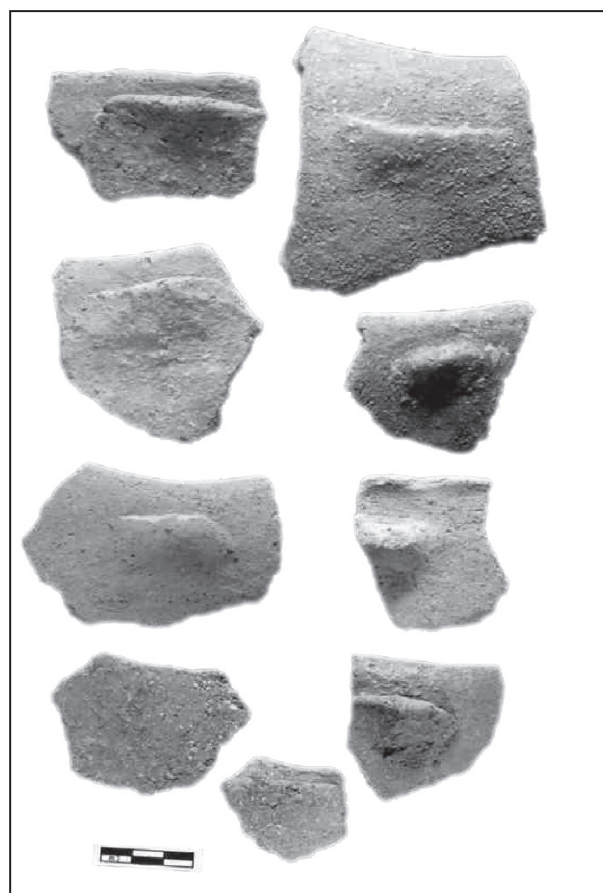


Fig. 5b: Jawa Ware from Jebel abu Thawwab (Photo by Yousef Zu'bi)

The appearance of the Jawa-type pottery at sites spread over a large area covering the southern part of Syria (Umbashi and Hebariyeh) and several sites in northern Jordan (Pella and Tell el-Handaquq) may place Jawa in the context of town or large village culture in the south of the Levant. It may be that Jawa, Jebel Muttawaq, Abu Thawwab and Um Hammad were centers for several small villages and camps. These

settlements may have been stations for settlers and transhumance on a passageway that led through the Harra down to the Jordan Valley. In addition these centers were in contact with others outside this region.

The author would like to express his deepest thanks to Mrs. Dolloris Burke for her great help editing the English language of this manuscript.

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ملخص: يهدف هذا البحث لتقديم دراسة ومناقشة لطرق الإستيطان في وادي الزرقاء خلال العصر البرونزي المبكر الأول، وذلك إعتماً على نتائج الحفريات والمسوحات الأثرية التي أجريت في هذه المنطقة خاصة في مواقع جاوه وجبل أبو الثواب وأم حمّاد. كما ويقدم شواهد على العلاقة التي كانت قائمة بين بعض المواقع الموصوفة بأنها كانت إما مخيمات أو عزب أو قرى. كما وتظهر هذه الدراسة العلاقة التي كانت قائمة بين منطقتي وادي الأردن في الغرب والبادية الأردنية في الشرق. ويناقش البحث العلاقات التي كانت قائمة خلال العصر البرونزي المبكر الأول بين مجموعات من القبائل الرّحل في البادية وسكان حوض نهر الزرقاء على إمتداده. وأثبتت هذه الدراسة، من خلال مراجعة نتائج المسوحات الأثرية التي أجريت في حوض نهر الزرقاء، وجود عدد من المخيمات والعزب إضافة لقرى زراعية تعاصرت مع بعضها بعضاً خلال العصر البرونزي المبكر الأول بدلالة الكشف عن آثار متشابهة فيها، خاصة ما يعرف بإسم «فخار جاوه». وبناء عليه يقدم البحث أدلة على التحركات والإتصالات التي قامت بها مجموعات بشرية، رعوية، دأبت على التحرك في حوض الزرقاء تبعاً لفصول السنة وبحثاً عن الماء والكلأ خلال المرحلة الواقعة بين حوالي 3500-3100 قبل الميلاد.

References

- Banning, E. B. 1996. "Highlands and Lowlands: Problems and Survey Frameworks from Rural Archaeology in the Near East", **Bulletin of the American Schools of Oriental Research** 301: 25-45.
- Banning, E. B. and Fawcett, C. 1983. "Man-Land relationships in the Ancient Wadi Ziqlab: Report of the 1981 Survey", **Annual of the Department of Antiquities of Jordan** 27: 291-307.
- Banning, E. B., Dods, R., McCorriston, J., Monckton, S., and Sheppard, P. 1987. "Report on the Wadi Ziqlab Project 1986 Season of Excavations", **Annual of the Department of Antiquities of Jordan** 31: 321-342.
- Betts, A. V. G. (ed.) 1992. **Excavations at Tell Um Hammad. The Early Assemblages (EBI-II). Excavations and Explorations in the Hashemite Kingdom of Jordan**, Edinburgh: Edinburgh University Press.
- Caneva, I., Hatamleh, M., Kafafi, Z., Munzi, M., Palumbo, G., Parenti, F., al-Shiyyab, A., Wilson, M., Bianchi, B., Conti, P. and Qadi, N. 2001. "The Wadi Az-Zarqa/Wadi Ad-Dulayl Archaeological Project. Report on the 1997 and 1999 Fieldwork Seasons", **Annual of the Department of Antiquities of Jordan** 45: 83-117.
- Douglas, K. And Kafafi, Z. 2000. "The Main Aspects of the Early Bronze I Pottery From Jebel Abu Thawwab, North Jordan". In G. Philip and D. Baird (eds.), **Ceramics and Change in The Early Bronze Age of Southern Levant. Levantine Archaeology** 2. Sheffield: Sheffield Academic Press, pp. 101-111.
- Glueck, N. 1951a. "Explorations in Eastern Palestine, IV, Part I: Text", **The Annual of the American Schools of Oriental Research** XXV-XXVIII, New Haven: The American Schools of Oriental Research.
- Glueck, N. 1951b. "Explorations in Eastern Palestine, IV, Part II: Pottery Notes and Plates", **The Annual of the American Schools of Oriental Research** XXV-XXVIII, New Haven: The American Schools of Oriental Research.
- Gophna, R. 1995. "Early Bronze Age Canaan: Some Spatial and Demographic Observations". In: T. Levy (ed.), **The Archaeology of Society in the Holy Land**. London: Leicester University Press, pp. 269-296 .
- Gordon, R. 1984. Telul edh-Dhahab Survey (Jordan) 1980 and 1982. **Mitteilungen des Deutschen Orientgesellschaft** 116: 131-137.

- Gordon, R. and Knauf, E. A. 1987. "Er-Rumman Survey 1985", **Annual of the Department of Antiquities of Jordan** 31: 289-298.
- Gordon, R. L. and Villiers, L. E. 1983. "Telul edh-Dhahab and its environment survey of 1980 and 1982: Preliminary Report", **Annual of the Department of Antiquities of Jordan** 27: 275-289.
- Hanbury- Tenison, J. W. 1986. **The Late Chalcolithic to Early Bronze I Transition in Palestine and Transjordan. BAR International Series** 311. Oxford.
- Hanbury-Tenison, J. W. 1989. "Jabal Mutawwaq 1986", **Annual of the Department of Antiquities of Jordan** 33:137-144.
- Helms, S. 1975. "Jawa 1973: A Preliminary Report", **Levant** VII:20-38.
- Helms, S. 1976. "Jawa Excavations 1974: A Preliminary Report", **Levant** VIII: 1-35.
- Helms, S. 1977. "Jawa Excavations 1975: Third Preliminary Report", **Levant** IX: 21-35.
- Helms, S. 1981. **Jawa-Lost City of the Black Desert**. London.
- Helms, S. 1984. "Excavations at Tell Umm Hammad esh-Sharqiya in the Jordan Valley", **Levant** XVI: 35-54.
- Helms, S. 1986. "Excavations at Tell Um Hammad, 1984", **Levant** XVIII: 25-50.
- Helms, S.W. 1987. "Jawa, Tell Um Hammad and the EBI/Late Chalcolithic Landscape", **Levant** XIX: 49-81.
- Helms, S. W. 1992. "The Pottery Typology". In: A. V. G Betts (ed.), **Excavations at Tell Um Hammad. The Early Assemblages (EBI-II). Excavations and Explorations in the Hashemite Kingdom of Jordan**. Edinburgh: Edinburgh University Press, pp. 39-121.
- Hennessy, B. J. 1967. **The Foreign Relations of Palestine During the Early Bronze Age**, London.
- Ibrahim, M., Sauer, J. and Yassine, K. 1976. "The East Jordan Valley Survey", **Bulletin of the American Schools of Oriental Research** 222: 41-46.
- Ji, Chang-Ho C. 1997. "The Chalcolithic and Early Bronze Cemeteries Near 'Iraq Al-Amir and the Preliminary Report on Salvage Excavations", **Annual of the Department of Antiquities of Jordan** 41: 49-68.
- Kafafi, Z. 1999. "Early Bronze Age 1 Domestic Architecture from Jebel Abu Thawwab, Jordan". In: H. Kuehne, Bernbeck, R. and Bartl, K. (eds.), **Fluchtpunkt Uruk: Archaeologische Einheit aus methodischer Vielfalt. Schrift fuer Hans-Joerg Nissen**. Leidorf: Rahden/Westf, pp. 215-222.
- Kafafi, Z. 1996. "Processes of Urbanization in Jordan: Example from Jebel Abu Thawwab", **Newsletter of the Institute of Archaeology and Anthropology** 19: 8-10.
- Kafafi, Z. with contributions by Abu Jaber, N., Hermansen, B.D., Koehler-Rollefson, I., Neef, R., Qadi, N., Quraan, R., al-Saad, Z., Stordeur, D. and Wada, H. 2001. "Jebel Abu Thawwab (er-Rumman), Central Jordan. The Late Neolithic and the Early Bronze Age I Occupations", **Bibliotheca neolithica Asiae meridionalis et occidentalis and Yarmouk University, Monograph of the Institute of Archaeology and Anthropology**, Vol. 3. Berlin: ex oriente.
- Kerestes, T. M., Lundquist, J. M., Wood, B.G. and Yassine, K. 1977-1978. "An Archaeological Survey of Three Reservoir Areas in Northern Jordan 1978", **Annual of the Department of Antiquities of Jordan** 22: 108-135.
- Leonard, A. 1981. "The Proto-Urban/ Early Bronze Age 1 Utilization of the Kataret es-Samra Plateau", **Bulletin of the American schools of Oriental research** 251: 37-60.
- Mirosschedji, P. R. de 1971. **L'Epoque pre urbaine en Palestine**, Paris.
- Mittmann, S. 1970. **Beitraege zur Siedlungen und Territorialgeschichte des Nordlichen Ostjordanien**, Wiesbaden: Otto Horrossowitz.
- Nicolle, C. 1999. **L'Epoque des Premiers Bourgs Fortifies. Pertinence de L'Existence d'Un Processus d'Urbanization dans le Levant Sud au Troisieme Millenaire. Bibliotheque Archeologique et Historique. T. CLVI**. Beyrouth: Insitiut Francais d'Archaeologie du Proche-Orient.

Palumbo, G., Munzi, M., Collins, S., Hourani, F., Peruzzetto, A. and Wilson, M. 1996. "The Wadi Az-Zarqa/Wadi Ad-Dulayl Excavations and Survey Project: Report on the October-November Fieldwork Season", **Annual of the Department of Antiquities of Jordan** XL :375-419.

Petocs, D. 1987. "An Early Bronze Age Site at 'Ain Ghazal, Amman", **Levant** 19 : 27-32.

Philip, G. 1995. "Jawa and Tell Um Hammad: Two Early Bronze Age Sites in Jordan: Review Article", **Palestine Exploration Quarterly** 127: 161-170.

Schaub, R. T. 1982. "The Origins of the Early Bronze

Age Walled Town Culture of Jordan". In: A. Hadidi (ed.), **Studies in the History and Archaeology of Jordan 1. Amman**: The Department of Antiquities of Jordan, pp. 67-75.

Simmons, A. and Kafafi, Z. 1988. "Preliminary Report on the ,Ain Ghazal. Archaeological Survey, 1987", **Annual of the Department of Antiquities of Jordan** 32:27-39