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Khirbat al-Batrāwī: a Case Study of third Millennium BC Early Urbanism in North-Central Jordan

Premise

The rise of urbanization in Transjordan during the third millennium BC, which was a development of the Early Bronze Age culture that emerged in the region during the last centuries of the fourth millennium BC (Kenyon 1957: 93-102; Esse 1989: 82-85; Nigro 2005: 1-6, 109-110, 197-202, 2007a: 36-38), is a distinct historic-archaeological phenomenon which has attracted the attention of scholars aiming to produce a reliable definition of early urbanism, if indeed it existed, in this fringe area of the Levant. After coping with terminological issues, derived mainly from the fact that 'urbanism' in this region of the ancient Near East was very much a local phenomenon with its own characteristics (Liverani 1999: 227-231; Rast 2001; Greenberg 2002)¹, scholars have attempted to elucidate the different implications of the rise of urbanism as reflected — if indeed it is reflected — in the archaeological record. These include:

- 1- The social organization of early communities, introducing concepts such as heterarchical society, or urbanism within a chiefdom model of social organization (Gophna 1995; Philip 2001: 166-168).
- 2- The economic basis of such groups (Esse 1989: 88-89) and their relationship with landscape, shifting from adaptation to territorial domination (Philip 2003).

- 3- The levels and trajectories of interaction and exchange between communities and regions, through the Jordan valley, Palestine, southern Syria and the coastal Levant (Esse 1991).
- 4- The physical remains of these early settlements, in which meaningful public architecture – namely, massive fortification works – first appear (Kempinski 1992; Herzog 1997: 42-97; Nigro 2006b). There is general consensus that these fortifications, often referred to in the context of "walled towns" or "fortified settlements" (Schaub 1982; Schaub and Chesson 2007), are the most meaningful witnesses of early southern Levantine urban culture.

Scientific debate has focused on paradigms, models and interpretations² because empirical data have been sparse, frequently only partially published and difficult to compare on both typological and stratigraphical / chronological grounds³. Theoretical studies have proliferated, alongside anthropological and sociological explanations, while the gap between hard evidence and more general historical reconstruction has become wider and wider.

Looking for an "Urban" Phenomenon: The Case Study of Khirbat al-Batrāwī

A preliminary step in conducting a regional study of human settlement and social organization, as reflected in the spatial distribution of communities

¹ The use of terms as 'urbanism', 'urbanisation' and 'city' to define the Palestinian and Transjordanian phenomenon is up to now a matter of discussion (firstly, Schaub 1982: 67; Seger 1989: note 1), because of its restricted and local character in comparison with the Mesopotamian and Egyptian urban experiences (Liverani 1986); on this issue see also: Philip 2001: 163-168; Chesson and Philip 2003; Rast and Schaub 2003: 17; Savage *et al.* 2007, suggesting caution in employing such a terminology in the Southern Levantine context.

² A turning point dealing with this issue was the Emmaus Colloquium organized in 1986 (de Miroschedji ed. 1989), followed by

several dedicated studies (Joffe 1993; Gophna 1995; Finkelstein 1995; Philip 2001; 2003; Rast 2001; Chesson and Philip 2003; Harrison and Savage 2003).

³ The major EB II-III settlements in Jordan were the following (from north to south): Tall al-Huṣn/Irbid, Khirbat az-Zayraqūn, Tall al-Huṣn/Pella, Tall Abū al-Kharaz, Tall al-Handaqūq North, Tall as-Sa'idiyah, Tall al-Handaqūq South, Khirbat al-Batrāwi, Tall al-'Umayrī, Khirbat Iskandar, al-Lajjūn, Bāb adh-Dhrā', Numayra, but just a few of them have been thoroughly investigated and systematically published.

within a given area, is to establish a site hierarchy on the basis of settlement size and location (Finkelstein 1995: 55-64). It is an approximate process, however, as each cantonal area would have had its own territorial resources which would, in turn, have influenced settlement size and location (Liverani 1999: 227-231). Nonetheless, site size is generally accepted as being an approximate reflection of site rank. On this basis, a series of key sites can easily be identified in different parts of Early Bronze Age II - III Jordan, e.g. Khirbat az-Zayraqūn, Tall al-Husn / Pella, Khirbat al-Batrāwī, Bāb adh-Dhrā' and possibly al-Lajjūn. These sites provide plentiful information on different aspects of early urbanization in Jordan. However, a coherent picture has yet to be sketched out, owing to differences between areas and incomplete archaeological data.

In this context, the archaeological survey carried out by Rome "La Sapienza" University in the Upper Wādī az-Zarqā^{'4} and subsequent excavations at the Early Bronze Age II - III site of Khirbat al-Batrāwī (FIG. 1) — the main focus of the project⁵— have provided a unique opportunity to study urban origins and developments in north central Jordan on the basis of a reliable set of fresh data. It has the potential to provide insights into the basic issues involved in any attempt to define this "urban" phenomenon, *viz.* relationships with landscape, the gradual shift from village-based subsistence to urban economies (involving accumulation, specialized food production and craftsmanship), exchange, long-distance trade, road networks and monumental architecture.

The Origins of the City: Urban Catalysts in the Upper Wādī az-Zarqā'

The development of a fortified settlement at Khirbat al-Batrāwī during Early Bronze Age II, or the first centuries of the third millennium BC, has been investigated as a case study in the upper Wādī az-Zarqā' area by the Rome "La Sapienza" University expedition to Palestine and Jordan.

The upper Wādī az-Zarqā', from the river's sources in 'Ammān down to its confluence with Wādī aḍ-Dulayl (Nigro ed. 2006: 4-8), provides a series of geo-ecological niches that are extremely favourable for human occupation. The most famous of these, for the Pre-Pottery Neolithic period, is 'Ayn Ghazāl (Rollefson and Kafafi 2007; Simmons 2007: 176-181), situated close to one of the sources of the river (Douglas 2006: 49). During the Chalcolithic period, the valley⁶ seems to have been only sparsely occupied, but in the Early Bronze Age the area attracted semi-nomadic groups who gradually settled in encampments, hamlets and villages along the banks of the river and on the hills overlooking it (Kafafi in press: fig. 2).

From EB I Villages to Urban Formation: Synecism and Catalysts

EB I rural villages were distributed along the river's banks from its sources — one major site was



1. General view of the site of Khirbat al-Batrāwī from north, with the EB II city-wall and city-gate (2007).

- ⁴ This regional study was started by G. Palumbo in 1993 and carried on systematically until 1999 (Palumbo, G. *et al.* 1996, 1997; Caneva *et al.* 2001). The survey was then resumed in 2004 under the direction of the writer, as a corollary research activity of the systematic excavations at Khirbat al-Batrāwī (Nigro 2006a: 229-230; Nigro ed. 2006: vii-viii, 1-8).
- ⁵ The preliminary reports on the first season (2005) were published in 2006 (Nigro 2006a; Nigro ed. 2006; Nigro 2007b). I take the opportunity of this conference to thank deeply the General Director Dr. Fawwaz al-Khraysheh for the strong help given by the Department of Antiquities to the project of archaeological investigations in the Upper Wādī az-Zarqā' and, namely, to the excava-

tions at Khirbat al-Batrāwi; to the Inspector Romil Ghrayib and to the colleagues of the Queen Rania's Institute of Tourism and Cultural Heritage of the Hashemite University of az-Zarqā⁴. The Italian Ministry of Foreign Affairs has also given a basic financial support to the project, as well as Rome "La Sapienza" University; to all the Academic Authorities responsible of this contribution, the Rector, Prof. Renato Guarini, the Vice-Rector Prof. Paolo Matthiae, and the Dean of the Faculty of Humanistic Sciences, Prof. Roberto Antonelli, is addressed my deepest thank.

⁶ No real Chalcolithic settlements but only two seasonal encampments were found during surveys carried out in the Upper Wādī az-Zarqā' (Palumbo *et al.* 1996: 385; Douglas 2006: 49).

KHIRBAT AL-BATRĀWĪ: A CASE STUDY OF THIRD MILLENNIUM BC



2. Early Bronze Age sites in Wādī az-Zarqā'.

'Ammān Citadel itself (Douglas 2006: 50-51) down to the point where the river swings round to the west, where a number of large sites were clustered around a major religious centre, Jabal al-Mutawwaq — one of the largest EB I sites in Jordan (Hanbury-Tenison 1987: 132; Douglas 2006: 51-52; Fernández-Tresguerrez Velasco 2004, 2005; Polcaro and Polcaro 2006). These sites of the middle Wādī az-Zarqā' were concentrated on its north bank. This is in stark contrast to the upper reaches of the wadi, where hamlets and villages were more evenly distributed. The main site in this area was Junaynah (FIG. 3), a 3 ha. village located on a flat terrace overlooking the west bank of the river just 1.5km. south-west of Khirbat al-Batrāwi⁷. Junaynah and al-Batrāwī are in the central part of the



3. The site of al-Junaynah, on the western bank of the Wādī az-Zarqā', south of Khirbat al-Batrāwī.

upper Wādī az-Zarqā'⁸, a strategic location which controlled a ford and relatively large area of cultivable land⁹.

marks (FIG. 4) on emerging bedrock on the Acropolis and by the funerary utilization of some caves in the surrounding cliffs during this period (Nigro ed. 2006: 38-39).

⁷ The site of al-Junaynah was identified by K. Douglas roughly 500m to the south-west of Khirbat al-Batrāwi on the other side of the Wādī az-Zarqā' (Douglas 2006: 50-51, figs. 1.4, 2.16, maps 4-5); Jneneh also had a major Iron Age II occupation (*JADIS* nr. 2516.016, p. 2.172).

⁸ The possibility of a proto-urban frequentation of the hill of al-Batrāwi already in the Early Bronze I is suggested by some cup-

⁹ Khirbat al-Batrāwi and al-Junaynah are in sight: it has been suggested that the population of al-Junaynah was one of the components settling at al-Batrāwi; a relationship comparable with that suggested for Tall al-Fukhār and Khirbat az-Zayraqūn (Douglas 2006: 51).

A comparison of EB I and EB II settlement patterns in the upper and middle Wādī az-Zarqā' is enlightening. In the upper Wādī az-Zarqā', one of the sites, Khirbat al-Batrāwī, arose as a major fortified centre. This suggests that a synecistic process occurred, with the inhabitants of surrounding villages moving in to al-Batrāwi¹⁰. The dimensions of al-Batrāwi suggest that more distant populations may also have been attracted to the emerging fortified centre. This can be partially explained by observations from the middle Wadi az-Zarqa', where a significant proportion of EB I villages were abandoned without a nearby EB II centre taking their place (Douglas 2006: 52-54). In Early Bronze Age IB, it seems that at least a proportion of the seminomadic population of Jabal al-Mutawwaq and the surrounding villages moved down into the Jordan valley, where a number of settlements may have benefited from their arrival¹¹. However, it is equally possible that another part of this population moved upstream, in the opposite direction, attracted by the process of urban formation which was taking place in the upper Wādī az-Zargā'. The synecistic process may therefore have extended its reach beyond the territorial niche which hosted it, i.e. the upper Wādī az-Zarqā'.

A related phenomenon can be surmised on the basis of analysis of settlement patterns. The sharp increase in the population of the upper Wādī az-Zarqā' and concentration of people in the new town may have induced other semi-nomadic groups to settle in the town itself or in the rural villages under its control, the latter including sites such as Khirbat ar-Rusayfah, Tall as-Sukhna North and Tall al-Bira. This process can be referred to as an urban catalyst, i.e. the capability of the rising urban centre to attract other populations into a stable settlement and to generate changes in the social and economic functioning of nearby communities, as well as the integration of groups previously outwith the the village system within the urban socio-economic framework

Two processes — synecism and catalysis were probably involved concurrently in the emergence of the fortified town of Khirbat al-Batrāwī, which went on to extend its territorial control over the entire upper Wādī az-Zarqā', from 'Ammān to Tall al-Bira (FIG. 2).

Town Location: Landscape, Road Network and Territorial Control

As discussed above, there seems to have been a connection between the emergence of al-Batrāwī and the abandonment of EB I sites in the upper Wādī az-Zarqā' and, possibly, some of the larger sites in the middle Wādī az-Zarqā'. The community originally responsible for the foundation of the fortified centre may have been the EB I inhabitants of Junaynah, who seem to have moved to the rocky hill on the opposite bank of the river. Elucidating the reasons for this shift is an important objective of the current research, but in the meantime a tentativ suggestion may be put forward, i.e. a cult place already existed on the hill of al-Batrāwī during EB I (FIG. 4).

In any event, the location of al-Batrāwī was a strategic one, both from the point of view of its relationship with the surrounding landscape, and for the control over territory and road networks its occupation would have assured.



4. Cup-marks on the bedrock on the Acropolis of Khirbat al-Batrāwi.

¹⁰ The shrinking and abandonment of many EB IB sites all over Palestine and Transjordan is actually a general trend registered in the transition from Early Bronze I to Early Bronze II (Esse 1991:

^{146-152;} Finkelstein 1995: 50).

¹¹ Tall as-Sa'idiyah, Dayr 'Allā, Tall al-Handaqūq South, Tall Umm Hammād.

A Hill Dominating the Upper Wādī az-Zarqā'

The EB II - III town of Khirbat al-Batrāwī was constructed on the southern summit of a range of limestone hills delineating the upper reaches of Wādī az-Zarqā' to the west (Khrisat 2006). To the south, the hill overlooks the whole valley as far as Khirbat ar-Ruṣayfah, while to the west and north it controls both the ford across the az-Zarqā' river and the narrow stretch of wadi leading down to Tall as-Sukhna North and Tall al-Bīra. To the east, the site overlooks the tracks coming in from al-Qihati and Azraq.

A 'Gateway' into the Wādī az-Zarqā' and Down into the Jordan Valley

The location of the site seems especially relevant with regard to the ancient routes through the Jordanian highlands, which led north from the source of the az-Zarqā' river at 'Ammān and east, towards the Syro — Arabian desert (FIG. 5). The identification of Early Bronze Age settlements and small outposts in the latter region hint at the existence of commuities that were unknown when Jāwā was discovered three decades ago¹² and which should be investigated further¹³. From this perspective, Khirbat al-Batrāwī on the one hand represents the western end of a route coming in from the east, and on the other a "gate" controlling access into the Wādī az-Zarqā' at the point where it becomes narrower and gradually descends, in a long turn to the west, into the Jordan valley¹⁴. This strategic location hints at the existence of relations with seminomadic communities living between the desert and the steppe, which has also been suggested by finds from the site itself and the survey area to its east, and of long-distance trade, as evidenced by the presence of seashells and carnelian at the site.

In the 'Throat of a Funnel': Territorial Control Through Control of Communications

If we examine the location of al-Batrāwi with re-



¹² A survey was carried out in years 1984-1993 in the Hauran and Jabal Druz regions (Braemer 1993), and in the 1990ies other surveys were carried out also along the Wādī Rājil and Wādī al-'Ajīb (Betts *et al.* 1995, 1996). Thus, a substantial Early Bronze Age occupation has been identified at some sites in between the al-Mafraq district and the EB I site of Jāwā, along the Wādī al-'Ajīb, as well as further to the north in southern Syria, as the significant cases of Khirbat al-Umbāshī and Labwe testify to (Braemer *et al.* 2004; al-Maqdissi and Braemer 2006). Some of these Early Bronze Age Jordanian sites in the western fringes of the Syro-Arabic Desert are, from west to east, Tall al-Qihati, Qaṣr al-Hallābāt, Rukays, Salāțin, Qaryat Khisha al-Sletin, Tall Umm al-Qutayn, Hawshiyan (Betts *et al.* 1995, 1996). Investigations in the al-Mafraq province has been recently and more system Satellite view of the bight of Upper Wādī az-Zarqā', including the territory and road network under the direct control of Khirbat al-Batrāwī.

atically resumed (Bartl *et al.* 2001); this northern district is still partially known as it concerns its Early Bronze Age occupation.

- ¹³ A preliminary survey from the eastern edges of the az-Zarqā' and al-Mafraq districts towards the Syro-Arabic Desert (in the socalled al-Harra region) was carried out in 2004 under the direction of the writer and with the cooperation of the DoA Inspector of the al-Mafraq district, Mr. Nasser K. al-Khasawneh, thanks to the support of the General Director of the Department of Antiquities of Jordan, Dr. Fawwaz al-Khraysheh. A provisional account of these results is offered by Sala 2006.
- ¹⁴ The Wādī az-Zarqā' is the easternmost permanent river at western border of the Syro-Arabic Desert, in direct connection with the major wadis of the Black Basalt Desert of Southern Syria and Northern Jordan. Al-Batrāwi controlled the upper entrances to the wadi.

spect to the ancient road network in the upper Wādī az-Zarqā', it becomes evident that the site is located at the 'throat of a funnel', with the largest part of the valley to its south, including a series of lateral wadis leading from 'Ammān to al-Batrāwī, and a constriction between al-Batrāwī and the confluence with Wādī ad-Dulayl, in which sites were restricted to the river banks. This location assured effective control over the cultivable part of the valley on the one hand, and the road which ran alongside the river and down into the Jordan valley on the other.

Site Topography and Defence

The topography of Khirbat al-Batrāwī was particularly suitable for defence as well as for territorial control (Nigro 2006a: 233-235; Nigro ed. 2006:

16-23). This appears to have been a major reason for establishing the town at this particular location. The site covers 4 ha. and has an approximately triangular shape, with a 'base' along its west side where it faces Wādī az-Zarqā'. Steep rocky cliffs protected the entire perimeter of the site, except for a short stretch in the middle of the north side, where a shallow saddle linked it to a nearby hill. These natural defences were reinforced and completed by a massive system of fortifications, which transformed al-Batrāwī in an almost unassailable citadel. The top of the site sloped gradually down from west to east and was sub-divided into five terraces, delimited by scarp-walls, which regularized the natural contours of the hill. The acropolis was on the summit of the western terrace (FIG. 6).



6. Topographic plan of Khirbat al-Batrāwi.

The Erection of Fortifications in Early Bronze Age II

The defensive system at al-Batrāwī was constructed around the edge of the rocky hill during EB II by exploiting any cliff or spur. The main fortification work was a solid stone wall from which, at irregular intervals which depended on the natural morphology of the edge of the khirba, bastions and towers projected. This wall was repaired and reconstructed many times during the life of the city, growing progressively thicker and more complex during EB III. There were at least two major episodes of reconstruction in EB IIIA and EB IIIB, which involved the addition of an outer wall and a series of towers and bastion which were often rebuilt. More detailed archaeological investigation is needed to clarify the history of each point in the defences.

The earliest city wall has so far been systematically investigated in just two areas, one on the north (Area B; Nigro in press a: § 5.4) and one on the south (Area E; Nigro in press a: § 8.2) sides of the site. These areas will be discussed below, stressing their historical significance in the context of urban development. In addition, the general layout of the fortifications has been surveyed around the entire site (Nigro 2006a: 235-236; Nigro ed. 2006: 25-37).

The EB II - III Fortifications Around al-Batrāwī

Owing to the triangular shape of the mound, the strongpoints of the defensive system were at the corners, where huge tower-fortresses were located, many of which were added to the main wall or re-constructed with it during Early Bronze Age II - III.

The north-west corner (Area C) had a rectangular tower (Tower C1), built directly on a rock terrace with big limestone boulders (Nigro ed. 2006: 26-27, figs. 1.29-1.33). This tower protected a strategic point, namely a postern gate (identified but not yet excavated). Approximately 20m. to the east, two major parallel walls (W.305 and W.307) projected from the line of fortifications as far as the edge of the spur in order to protect this point. Continuing anti-clockwise, the west side of al-Batrāwī was the best protected one, owing to the steep cliff. At least two projecting terraces had offsets or protruding towers, constructed of large boulders set on bedrock, built upon them, which allowed for observation of the edge of the hill. In the south-west corner, a huge tower (Tower D1) controlled the az-Zarqā' valley and provided a panoramic overview (Nigro ed. 2006: 32-33, figs. 1.39-1.42).

The city wall, though badly eroded, was preserved along the whole southern side of the site. A probe excavated the approximate centre of the southern fortification line (Area E) demonstrated that the city wall that is preserved here dates to EB II, since the later EB III reconstructions collapsed and have been almost completely obliterated by erosion (Nigro in press a: § 8). A typical feature of this phase is the presence of crushed light-grey mud-bricks, which apparently belonged to the superstructure of the EB II city wall.

Roughly 45m. west of the east corner, a ravine in the edge of the hill indicates the position of a gate, which was approached up a ramp turning left from the foot of the cliff and into the city. This entrance was flanked by large piers and was further protected by structures built on the higher spur to its west (Nigro ed. 2006: 32, figs. 1.37-1.38). A third massive tower defended the eastern corner of the city, but is partially buried under a cairn (Nigro ed. 2006: 31). The north side of the town was investigated in Area B (see below), where the main entrance to the city was located at the point of easiest access.

The Earliest (EB II) City Wall and Main Gate in Area B

Excavations in Area B North reached the earliest occupation layers, which lay directly over bedrock and consisted of the earliest fortification wall, which dates to Early Bronze Age II (2900-2700BC). The city wall was constructed of huge limestone blocks and boulders (some more than 1.5m. in length), set carefully into the rock with battering foot for stability and strength (FIG. 7; Nigro ed. 2006: 175-176, fig. 4.32). It was built in separate stretches 6 to 8m. in length, a technique used at many fortified Early Bronze Age sites in Palestine and Jordan in order to provide a degree of protection from the effects of earthquake (Nigro ed. 2006: 176-177). Examples include Tall al-Mutasallim (Loud 1948: 66, figs. 152-154, 391), Tall Ta'annak (Lapp 1969: 9, fig. 2), Khirbat al-Karak (Maisler, Stekelis and Avi-Yonah 1952: 170-172, Pl. 9), at-Tall (Callaway 1980: 113-114, figs. 75, 85), Tall as-Sultān (Kenyon 1957: 174-175, Pl. 36, 1981: 100, 213, 262, 374, Pls. 83a, 201; Nigro 2006b: 370-371), Bāb adh-Dhrā' (Rast and Schaub 2003: 280-283) and Numayra (Rast



7. EB II city-wall W.103 made of huge limestone blocks and boulders, carefully set into the bed-rock with a battering foot, from north.



8. EB II city-gate L.160 of Khirbat al-Batrāwi, from north.

and Schaub 1980: 42, fig. 15). The inner fill of the wall was of medium-sized undressed limestone stones, placed in layers with pebbles, limestone chips and mud mortar. This construction extended up as far as the level of the gate lintel (*ca.* 2.3m. above ground surface), above which mud-brick was used. Several fragments of mud brick were found inside the city wall, despite the fact that the terminal EB II collapse deposits were removed during subsequent reconstructions of the city.

In spite of the monumentality of the city wall, the gate itself was a simple opening, 1.6m. wide (FIG. 8). This may have been because the town could only be approached by pedestrians and possibly donkeys along a street which flanked the wall. The outer jambs of the gate were reinforced with big blocks, with a step marking the entrance itself. The gate lintel was a monolith on the outer face and a wooden beam on the inner face of the passage. There is no evidence that towers ever adjoined this early gate, notwithstanding the fact that the area was completely reconstructed when the gate was blocked at the beginning of Early Bronze Age IIIA. Two earthquake cracks on both jambs may indicate that the gate lintel collapsed, which presumably caused the abandonment of the gate itself. The simple layout of the gate has parallels in the contemporary EB II defensive architecture of the region, such as at Khirbat al-Karak¹⁵, 'Ayy¹⁶, 'Arād¹⁷ and, subsequently, at Bāb adh-Dhrā'¹⁸.

The Socio-Economic Significance of the Earliest City Wall

The overall length of the city wall (FIG. 9), in combination with its width and elevation, has allowed us to calculate the approximate volume of stones and mud brick required to construct it and to infer the approximate number of worker involved in its construction, assuming it would have been constructed over the course of one season of four months. If this was the case, more than 400 workers would have been involved in the construction of the earliest al-Batrāwī defences (sub-divided into 80 juxtaposed wall stretches), which would have in-



9. General view of the main EB II-III city-wall (W.103) of Khirbat al-Batrāwī, from east; in the foreground, the restored stretch of city-wall W.103; in the right background, the EB III outer wall (W.155) and scarp-wall (W.165); in the left background, Building B1 with installation T.413 erected inside the main city-wall in the Early Bronze IIIB.

Lower City Gate (Callaway 1980: 114-115, figs. 74-75) at Site L.

¹⁵ The south-east gate in Wall A, possibly also blocked at the beginning of the Early Bronze III (Greenberg and Paz 2005: 84, 86-89, fig. 8, 10-14).

¹⁶ The Citadel Gate at Site A (Callaway 1980: 63-65, figs. 38, 41); the Postern Gate (Callaway 1980: 72-73, figs. 48-49, 51) and the

¹⁷ Amiran - Ilan 1996: 20-22.

¹⁸ The EB III West Gate in Fields IV and XIII, also blocked during the Early Bronze III (Rast and Schaub 2003: 272-280).

volved the quarrying of and transportation of more than 11,000 tons of limestone and the production of around one million mud-bricks, along the use of an enormous quantity of water for mud-mortar. This task would have been a tremendous enterprise for a community of no more than 2000 people and one in which non-urban communities would also presumably have been involved, perhaps by supplying skilled labour and animals. The organization of the work and food supplies for the workers, as well as the procurement of raw materials (straw, wood, clay and huwwar), implies the existence of a centralised ruling administration which planned and executed the construction of the city wall. Some structural details, such as the partition between the various stretches of wall, the regular placement of blocks of similar size at the same elevation and the cutting of regular, squared blocks, testify that a strong central authority was responsible for the work, and thereby constitute indirect evidence for the existence of an established social hierarchy.

This does not, however, necessarily mean that the city walls were erected primarily as a demonstration of the power of of this ruling institution over the surrounding landscape and road networks, thereby identifying the city as an emerging social institution that ruled over the whole valley. This was of course one of the results of their constuction, but their major social impact was probably not ideological but economic, as a large proportion of the population of the district is likely to have been involved in the building work. Moreover, the walls testify to a perceived urgency for protection of the material and symbolic values incorporated into the new town by the agricultural communities of the upper Wādi az-Zarqā'.

The Broad-Room Temple and Origins of the City

Why did the people of Junaynah and some other villages in Wādī az-Zarqā' move to the hill-top site of al-Batrāwī at the beginning of EB II? One reason was apparently defensive, as the city walls themselves testify. A second reason for the choice of Khirbat al-Batrāwī is suggested by the cup-marks still visible on the bedrock surface of the acropolis (FIG. 4). It is possible that there may have been a cult-site on this hill-top during Early Bronze Age I. When the town was established, it would have included any early religious compound that may have existed there.

In 2006, excavations on the easternmost terrace of al-Batrāwi (Area F) led to the discovery of a major building, aligned east-west and covering an area of approximately 400sq.m. The building, which included a forecourt (L.504) and some cult installations (FIG. 10; Nigro in press a: § 9.3), consisted of a broaroom (L.500) delimited by a solid wall 1-1.2m. wide, with a protruding pilaster on both sides of the entrance, which was located two-thirds of the way along the room's length. The inner dimensions of the broad-room were 2.7 by 11m., giving it a width to length ratio of 1:4. Inside the broad-room, a slab embedded in the floor on its western side suggested that, at least in one phase of its use, the roof of the *cella* may have been supported by a central row of wooden pillars. The entrance was 1.36m. wide and opened southwards onto a forecourt paved with crushed limestone. Abutting the southern façade was a bench or base for a protruding pillar (S.536). In the courtyard, a stone-lined round platform (S.510), 0.35m. high and with a diameter of 2.5m., was built around a bedrock protrusion and faced the entrance. In the centre of the platform, there was a slab with a circular hollow in its middle. Just to the west of the entrance, a circle of stones in the courtyard floor may have been another cult installation, perhaps the base for a betyl.

The overall plan of the building and the circular platform in its forecourt lead us to interpret it as a broad-room temple, of a type well-attested to in the southern Levant during the Early Bronze Age, similar to the renowned EB II - III sanctuary at Bāb adh-Dhrā¹⁹.

The presence of this religious building, of a type in which the earlier religious architectural traditions of the Chalcolithic period (e.g. the sacred precincts of 'Ayn Gidī and Tulaylāt al-Ghassūl; Sala 2007: 3-30, 291-294) were preserved, at such a panoramic location suggests that the broad-room temple was a major focal point in the town and the valley below when the city of al-Batrāwī was emerging. The sacred building was founded in Early Bronze Age II at the same time as the town itself and may, therefore, indicate another function of the fortified town, i.e. to host the religious centre of the district

¹⁹ Rast and Schaub 2003: 157-166, 321-335. For a general appraisal on the Early Bronze Age sacred architecture in the Southern Le-

vant see Sala 2007.

after the sanctuary of Jabal al-Mutawwaq had been abandoned (see above § 2.1).

The Sudden end of the EB II Town

A violent earthquake brought the earliest EB II city (Batrawy II) to a sudden end, as was probably also the case at other north and central Transjordanian sites. In the Jordan valley, Pella / Tall al-Husn, Tall Abū al-Kharaz and Tall as-Sa'idiyah were all apparently destroyed at the same time and in the same way (Bourke 2000: 233-235)²⁰. Traces of this dramatic event have been detected in both Area B, along the northern and southern city walls (Nigro in press a: § 5.4), and Area E (Nigro in press a: § 8). It caused the near-complete collapse of the mud-brick superstructure of the city wall and se-



10. Schematic plan of the EB II-III broad-room temple and circular platform in Area F.

²⁰ A large amount of Early Bronze Age Palestinian and Transjordanian sites underwent a violent destruction at the end of the Early Bronze II, some of them being definitively abandoned (as Tall al-Fār'ah North, Tall Abū Kharaz and Tall as-Sa'īdiyah, Arad). It seems that such conflagrations were caused for the most part by an earthquake, as attested to at Megiddo (Finkelstein *et al.* 2006: 49-50), Pella/Tall al-Ḥuṣn, Tall Abū al-Kharaz and Tall as-Sa'idiyah (Bourke 2000: 233-235), 'Ayy (Callaway 1980: 147, 1993: 42), Jericho/Tall as-Sulṭān (Kenyon 1957: 175-176, pl. 37A 1981: 373; pls. 200-201, 343a; Nigro 2006b: 359-361, 372-373).

riously damaged the 2m. high stone foundations, which still exhibit cracks and evidence for internal collapse. Additionally, the main town gate was destroyed (both jambs show vertical cracks corresponding to the position of the lintel) and subsequently abandoned and blocked by a secondary wall (see below). The grey mud-bricks of the city wall superstructure spilled over the stone foundations and left a thick layer of crushed material all around the defences. The main façade-wall of the temple and its entrance were also damaged.

Landscape Exploitation and the Flourishing EB III City of al-Batrāwī

The intrinsic nature of the "fortified town culture" of Early Bronze Age Jordan lies, as stated above, in the role performed by the fortifications (Schaub and Chesson 2007: 251-252) which, in the case of al-Batrāwi, were subjected to a continuous process of reconstruction and structural improvement. These fortifications had an internal role, in terms of the economic impact of such building enterprises on the local community, and an external role, concerning the control exercised by the fortified city over the surrounding landscape. The latter points to some sort of military role for the newly-established town, perhaps as a major centre of power at the end of the tracks crossing the Syro-Arabian desert. Nonetheless, such impressive fortifications suggest that some centralization of agricultural production and trade was pursued in order to collect and protect economic surpluses. Both of these two roles - territorial control and centralization of goods and population — would have been linked to the "fortified town culture".

In the case of al-Batrāwī, the city walls clearly show the progressive grow of the urban centre, which apparently allocated a large proportion of its resources to the construction and maintenance of its defences. Early Bronze Age III is the period when the city's growth and the strengthening of its defences becomes more evident. Archaeological finds, especially paleaobotanical and zooarchaeological data from EB III contexts inside the city attest to an extraordinarily richness of food and other agricultural products, which went well beyond the requirements of basic subsistence. Moreover, surface survey across the site has revealed the presence of nuclear concetrations of finds, such as pottery or flint débitage, which hint at the existence of productive units within the town, at a specialized and extra-household level ²¹.

The EB IIIA Growth of the City and Reconfiguration of the Fortifications

The earthquake which interrupted the life of the town of al-Batrāwī at the end of Early Bronze Age II was followed by a total reconstruction of its defences, which stratigraphically and architecturally marks the transition to Early Bronze Age III, the period which witnessed the major flourishing of the town (Nigro in press a: § 5.3). The EB II gate was blocked and a new one opened, presumably somewhat further to the west, which was still approached by a street²² running between the inner and outer walls (FIG. 11)²³. The main wall (W.103) was reconstructed using stones instead of mud-bricks; previously separate wall sectors were joined at elevations varying from 1 to 2m²⁴. A curvilinear outwork (W.185) was added to the defences just in front of the blocked gate (FIG. 12), similar to those known from EB IIIA Khirbat Karak (Greenberg and Paz 2005: figs 84, 94-96).

In the meantime, some apparently public buildings, unfortunately very badly preserved, were constructed on the acropolis, thereby testifying to internal sub-divisions within the town — one of the main features of the emerging Early Bronze urban centres. They have been excavated in Area A, respectively to the east (Nigro ed. 2006: 109-114) and west of Cairn I (Nigro in press a: § 4.3). The temple in Area F was also kept in use, with some major repairs following damage by the earthquake.

²¹ For a methodological approach on this topic see the recent survey and analyses carried out at al-Lajjūn; Jones 2007: 280-283.

²² The street running along the city-wall became a corridor in between the outer (W.155) and the main city-wall (W.103) leading to a new gate located further west; its floor (L.144; Nigro ed. 2006: 191, figs. 4.53-4.54) was re-plastered and was in use until a new violent destruction.

²³ The outer wall W.155 had an outer battering face made up of polygonal boulders and an inner face made of medium size stones

regularly displaced; in between there was a filling of stones and limestone chops.

²⁴ The original stretches in which the wall was subdivided (Nigro ed. 2006: 176-177) were linked one to the other (and this indicates in several spots the height upon which the wall was reconstructed), and a 1.6 m wide massive outer wall (W.155) was erected around 1.5m off of the main wall, thus doubling the line of fortification.



11. Plastered floor L.144 in the corridor in between the main city-wall (W.103) and the outer wall (W.155) during the Early Bronze IIIA, from east.

The EB IIIA Destruction: Structural Crisis and the Relationship Between Urbanism and War

The EB IIIA town was also dramatically destroyed, which testifies to structural crises within the southern Levantine Early Bronze Age "urban culture". A certain degree of political turbulence would have been provoked by the centralization of goods, especially in centres like al-Batrāwī which were located at the boundary between different (sometimes antagonistic) social groups / landscapes. The widespread occurrence of violent destruction (Seger 1989: 117-119; Nigro in press b) during Early Bronze Age III ²⁵, as well as the progressive enlargement of EB III defensive systems²⁶, which is repeated at contemporary urban sites elsewhere, suggests that urbanism was in some way linked to war, perhaps as a more direct means of securing territorial control and the goods which had been concentrated within the walls of a town.

The EB IIIB Reconstruction: Multiple Fortifications and Building B1

After the violent destruction, which marked the end of the EB IIIA town, the fortifications of al-Batrāwi were rebuilt and strengthened with the addition of a scarp-wall (W.165) to the outer wall, which brought the overall thickness of the defensive works in Area B up to 15m (FIG. 12)²⁷. A new street was paved by levelling the collapse layer between the main and outer walls. The upper section of the main wall was also reconstructed. A staircase (W.181) of wooden posts and stone steps was uncovered in Square BoII6: it was fixed into the inner face of the wall and protruded 0.3 to 0.5m. from it. This staircase suggests that the overall height of the city wall was approximately 8m. The outer gate seems to have remained in use and was protected by a rectangular bastion protruding from the line of the fortifications (Nigro ed. 2006: 26-30, fig. 1.34).

A huge building (Building B1) was constructed just inside the blocked city gate during Early Bronze Age IIIB (FIG. 13). It had a rectangular plan and a staircase (W.421) to an upper floor. Against the eastern, outer, side of the building, a semi-circular oven (T.413) was built with a corbelled vault and flooring of basalt paving stones. Its dimensions suggest that it was used for food production on a communal scale. Building B1 had solid stone foun-

²⁵ At the end of EB IIIA may be attributed a series of destructions: a 3.5m deep layer of ash marks the end of the EB II-IIIA occupation at Tall al-Khuwaylfah (stratum XV; Seger 1989: 125); similarly, at Tall al-Hisi the end of EB IIIA occupation (phase 4b) was marked by heavy deposits of ash and mixed debris (Seger 1989: 127-129); at 'Ayy signs of destruction were detected in the EB IIIA fortification walls (Callaway 1993: 43); and at Jericho/Tall as-Sultān the EB IIIA city came at a sudden end, being drastically destroyed around 2500BC (it is not clear if again an earthquake was the cause of such destruction, or it was due to a military attack, since at some spots fierce fire is documented; Nigro 2000: 16-17; 2006c: 18, fig. 24). Also the end of Early Bronze IIIB has appeared distinguished by destruction layers in many sites (Lapp 1970: 114-115): Beth Shan (Mazar 1997: 65-

⁶⁶⁾ and Khirbat Karak (Greenberg - Paz 2005: 102) apparently succumbed being fired at the end of the Early Bronze III; around 2350 BC a definitive conflagration destroyed the city of 'Ayy (Callaway 1993: 44) and Jericho (Kenyon 1981: 212, pl. 124b; Nigro 2006b: 374, 2006c: 18-22, figs. 26, 28, 30-32); and at Tall al-Khuwaylfah stratum XII of the EB IIIB settlement ended with a violent destruction (Seger 1989: 126), just to mention a few instances.

²⁶ We can quote the emblematic cases of 'Ayy (Callaway 1980: 147-158, 185-189), Tall Ta'annak (Lapp 1969: 9-14) and Khirbat al-Yarmük (de Miroschedji 1990).

²⁷ Such a battering wall (W.165) was constructed with irregular boulders leaning on a rubble filling lying against the face of the outer wall W.155.





13. General view of Building B1 and attached semicircular installation T.413, erected inside the blocked city-gate in the Early Bronze IIIB, from south.

dations and remained in use for a relatively long period of time before being destroyed by fire. Ceramic finds from the building include jars and painted jugs/bowls, as well as the so-called 'stoppers' which may have been used as units in a proto-bureaucratic, illiterate system of counting. 12. General view of the EB IIIB triple line of fortifications in Area B, from west, with main city-wall W.103 in the background, outer wall W.155 in the middle, and reinforcing scarpwall W.165 in the foreground. To the left, EB IIIA curvilinear defensive outwork W.185, and the to right the EB IV supporting embankment.

The EB III Economic Floruit

The massive fortification works, as well as the public buildings and finds from various areas of the site, all testify to an extraordinary flourishing of the economy at al-Batrāwī during Early Bronze Age III. A preliminary study of the material culture has yielded some interesting insights into the organization of that economy.

The EB III material culture horizon shows a strong standardization of ceramic production, in terms of shape, fabric and function, as well as a major increase in the number and variety of pattern-combed and other metallic wares. This points to an increase in the production of agricultural and animal products (mainly olive oil, goat fat, lentils, beans etc.). Specialized wares, such as painted, red-burnished and polished wares, also became more widespread, indicating a horizontal diffusion of items which had initially had a more limited, socially symbolic distribution.

With regard to the internal organization of the al-Batrāwī subsistence system, an exemplary case study is that of pattern-combed ware storage vessels. These can be divided into two broad morphological groups: (1) jars with flared neck and averted rim and (2) hole-mouth jars with flattened or slightly recessed rims; both have a flat base ²⁸. A few

²⁸ Pattern-combed storage vessels include both medium size jars for temporary storage and transportation, and big storage jars. The combing is mainly horizontally applied, alternated with perpendicular crossing. These vessels employed medium coarse yellow-

ish red, reddish-yellow and light brown fabrics, or grey and light grey ones, with white and grey limestone grits and volcanic sand tempers of medium or medium-high frequency. Vessels were usually medium-high fired, and mainly handmade.

of these pattern-combed storage jars can be attributed to metallic ware production with high-fired, depurated fabrics. A comparison of pattern-combed fragments from the site with those from the upper Wādī az-Zarqā' survey area demonstrated that the vast majority of metallic and pattern-combed jars found at al-Batrāwī came from the surrounding countryside, particularly the hilly areas west of the az-Zarqā' river. Here olive trees were widely cultivated, suggesting that these storage vessels may have contained olive oil and were sent to al-Batrāwī from farms in the surrounding area, which may have been subjected to a degree of centralized administration. Moreover, the high frequency of pattern-combed jars, suggest that olive oil, stored and transported in this type of container, was not locally produced but was brought in from districts to the north and west.

Faunal remains provide evidence for a balanced diet, with a variety of domestic animals represented in the assemblage, as well as a high frequency of donkey²⁹, surely the main means of transport at the time.

Foreign imports recovered from the site, such as sea-shells, mother of pearl, carnelian, obsidian and copper fragments, as well as stone weights for metals, shed light on economic links and exchange; an extended network of tracks crossing the desert and steppe converged on the site.

The Final Destruction of al-Batrāwī

The renovation and expansion of the fortifications and the construction of Building B1 during Early Bronze Age IIIB did not save Khirbat al-Batrāwī from another, this time definitive, destruction some time at the end of the 24th century BC (see Note 25). The town was set alight, with traces of this dramatic event clearly visible on structures and in the stratigraphy (preserving a huge quantity of material culture for archaeologists). There is no evidence to suggest who may have been responsible for this destruction. As natural calamity can probably be ruled out, an attack by a foreign enemy seems the most likely explanation, with a subsequent deportation of the population since the site was temporarily abandoned. After a hiatus, the khirba was re-occupied in EB IV, but only with a few sparse structures.

A New Rural Landscape: The Early Bronze IV Village on the Acropolis

Excavations at Khirbat al-Batrāwī have yielded some interesting information about settlement dynamics in the upper Wādī az-Zarqā' during the Early Bronze Age. In the last century of the third millennium BC, the ruins of the EB II-III town were re-settled by a rural community, which erected dwellings over the site. The evidence from al-Batrāwī suggests that this EB IV occupation occurred towards the end of the third millennium, but that it only lasted for a relatively short period of time span — perhaps a century or slightly longer — and therefore illustrates the final phase of this period: EB IVB.

On the summit of the acropolis (Area A), two separate sectors of this rural village were exposed (Nigro ed. 2006: Plan II). In Area A East, a boundary wall delimited a group of houses (Nigro 2006a: 237-238; Nigro ed. 2006: 77-88); each rectangular domestic unit had several structures adjoining it, as well as food-producing and storage installations, e.g. silos, working platforms etc. Distinctive features of these structures include their irregular arrangement around courtyards and lanes, their curvilinear layout and the use of walls constructed of a single line of irregular fieldstones. In Area A West, a rectangular (5.8 by 2.7m.) house (L.20) with walls made of a single line of large fieldstones opened out on to a central courtyard (FIG. 14). Another feature of this house was a triple installation with two square cists made of vertical stone slabs (Nigro 2006a: 238-240; Nigro ed. 2006: 89-100). Similar food-producing installations were found in other domestic units at the site (see below). A second house (L.240), excavated in 2006, had a flagstone-paved installation with a fireplace and basin. Another group of houses was exposed in Area F (Nigro in press (a): \S 9.2). These seem to have been built in a single phase of construction and therefore presumably represents a short-lived occupation of the site towards the end of Early Bronze IV. Another major house included a large unit (L.530) with a raised platform and cist in the middle, a round bin in the south-eastern corner and a separate rectangular room (L.560) in the south-western corner, along with a series of curvilinear structures and storage

²⁹ The high percentage of donkeys among domestic species present in the inventory of animal remains, moreover, seems to confirm

that the town played the role of caravans station (Alhaique in press).

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14. General view of EB IV House L.20 with courtyard L.30 in the western sector of the Acropolis, from south-east.

installations nearby³⁰.

These simple structures nevertheless yielded quite a rich assemblage of material belonging to the last phase of EB IV (FIG. 15). At this time, the major site in the upper Wādī az-Zarqā' area was Jabal Ruhayl (JADIS nr. 2417.022; Palumbo *et al.* 1996: 393-401). The pottery, chipped stone and ground stone from these dwellings are all indicative of a reversion back to rural economy in which there was scarce specialization and limited typological variety.

The area of the northern fortifications was favoured by the EB IV occupants of al-Batrāwī (Nigro in press a: § 6.2). In Area B, the the most recent occupational phase included several houses built inside the collapsed EB III city wall. A rectangular struc-



 EB IV pottery sherds and domestic tools retrieved in the houses excavated in Area F, on the easternmost terrace of Khirbat al-Batrāwī.

one of which (S.538) cut into the western wall of the house. The entrance to this unit was through the short side, marked by a flat stone (L.558), as also noticed in Area A West (House L.20: Nigro 2006a: 238, figs. 17-18; Nigro ed. 2006: 89, figs. 3.31-3.33). A third domestic unit (L.520) was unearthed in square CpII18, delimited by wall W.559. It was added to the southern wall of House L.530, possibly as a successive enlargement of the latter.

³⁰ A semi-circular storeroom (W.515) was adjoined to the western side of the unit. West of the house, the area of the earlier public building was left open, even though another circular device (S.511) leaned on its southern wall, while to the north of it another unit was erected with a main wall (W.519) and a mortar embedded into the floor west of it. Further to the north-west, in square CnII16, a rectangular unit (L.540) was partly preserved, apparently joined with other subsidiary curvilinear structures,

ture (L.450), which directly abutted the inner edge of the collapsed EB II-III city wall, was characterized by a twin stone-paved installation, presumably used in the processing of liquids, perhaps wine. This suggests that structured agricultural activities had undergone some degree of reappraisal, perhaps reverting back to the house-hold level (FIG. 16). A more substantial house (L.122), excavated in 2005 (Nigro 2006a: 242-243, fig. 21; Nigro ed. 2006: 170-174, figs. 4.19, 4.24-4.26), also hints that locations inside the previous city walls were preferred. In the central sector of Area B South, two constructional phases were identified. The more recent phase included a wide, square house (L.354), with a semi-circular central installation (L.370) devoted to food production and storage, a bin and a bench



16. The EB IV stone-paved double installation erected directly over the inner edge of the collapsed EB II-III city-wall, from south.

/ platform. This house was apparently abandoned, as demonstrated by a flint blade found on the working platform (B.374) that abutted the inner side of the western wall (W.353). A child burial (D.350) was found underneath the north wall (W.359) of the house ³¹ (FIG. 17).

Conclusions

Three seasons (2005-2007) of archaeological investigation at Khirbat al-Batrāwi have confirmed that it was the major Early Bronze Age centre in the upper Wādī az-Zarqā'. It consisted of a fortified town in the Early Bronze Age II-III (2900-2300BC; Stager 1992: 35-39) and was re-occupied by a rural village in Early Bronze Age IVB (2200-2000BC), with almost no subsequent superimpositions (Nigro 2006a: 229-233, 246-248; in press (a): § 3; Nigro ed. 2006: 37-40). The archaeological investigation is still in its early stages, so it is not possible to come to any firm conclusions at the current time. However, even this preliminary investigation has provided evidence for public architecture and material culture (especially pottery and flint tools) that are typical of a flourishing urban centre of the period. The faunal remains indicate that the inhabitants of al-Batrāwi had a rich and diverse diet, which included the wild animals of the steppe, the fish of the az-Zarqā' river and domestic sheep, goats and cattle (Alhaique in press). Also, intensive agriculture was possible owing to the proximity of the az-Zarqā' river. Some olive oil was apparently imported from the north and west, since the area around al-Batrāwī was not suitable for olive cultivation. All data therefore point to a successful and established relationship between the site and its rural hinterland, which could be easily controlled owing to the geomorphology of the upper Wādī az-Zarqā'.

As the regional survey has demonstrated, at the beginning of EB II the Wādī az-Zarqā' area witnessed a synecistic process which led to al-Batrāwī becoming a major fortified town at a crossroads on some of the main Early Bronze Age tracks of the southern Levant. The most important feature of the site was its ability to control (1) the tracks coming in from the steppe and desert to the south and east and (2) access down into the Jordan valley to the west. Territorial control of a crucial crossroads

³¹ This is the second burial of this kind found on the mound; the first one (D.200) was discovered in 2005 in Area D, on the south-

western spur of the hill (Nigro ed. 2006: 11, figs. 1.11-1.12).

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17. Jars and hole-mouth jars retrieved in the ephemeral initial EB IV occupation detected in Area B, inside the collapsed EB II-III city-wall.

in the Early Bronze Age trade network, as demonstrated by several finds (see § 7.4), was therefore a key characteristic of the al-Batrāwī early urban experience.

Further and more detailed investigations are however required to clarify the city plan and its history, as well as to evaluate the socio-economic role of the site in the wider historical context of the southern Levant, the latter being a specific perspective of the Rome "La Sapienza" School of Near Eastern Archaeology.

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