

The Transition from Village to Town in the Southern Levant during the Early Bronze Age: Architectural Evolution and Ceramic Revolution

AMIR GOLANI
Israel Antiquities Authority

The transition from village to town in the Southern Levant gave rise to an urban culture that was a catalyst for social stratification and the development of local civilization. This crucial phase in the evolution of Canaanite society took place during the Early Bronze Age period (henceforth EB) and was a slow and gradual development spanning several hundred years, from the middle of the fourth to well within the third millennium B.C.E. At the beginning of this period, the local population of the Southern Levant was primarily village-oriented. At the end of the Early Bronze Age, near the end of the third millennium, large fortified towns with a developed urban plan and monumental architecture already existed for several hundred years, evidence of a developed urban society that may have been centered around city-states.

The present article highlights two outstanding developments within this process and their ramifications. The first is the evolution of domestic architectural styles during the transition from the EB I to the EB II periods. The second is the sudden appearance and distribution of a new class of ceramics known as “Metallic Ware” at the onset of the EB II. The evolution of architectural styles is an expression of the changing needs of ancient Canaanite society during its transformation from a village-oriented to urban society. In the EB I period, these structures are usually broadrooms. This buildingzation process. The appearance and distribution of Metallic Ware is an expression of the changing socio-economic and political situation during the EB II, when city-states appear to have already been established.

The Evolution of Architectural Styles in the EB I-II Transition

At the beginning of the EB I period in the second half of the fourth millennium B.C.E., one of the prominent characteristics of domestic architecture is an oval-shaped building plan (Braun 1989). Though the curvilinear building style is typical of the EB IA period, it is not exclusive to this period and an earlier rectilinear tradition beginning in the Neolithic period is often found to continue alongside the curvilinear one (Bar-Yosef 1992). The curvilinear building tradition is well-known throughout the Southern Levant during the EB IA and is found at numerous sites from Byblos in the north to Ashkelon in the south (Braun 1989, 2000a) . At sites where such curvilinear buildings have been found, especially in large-scale

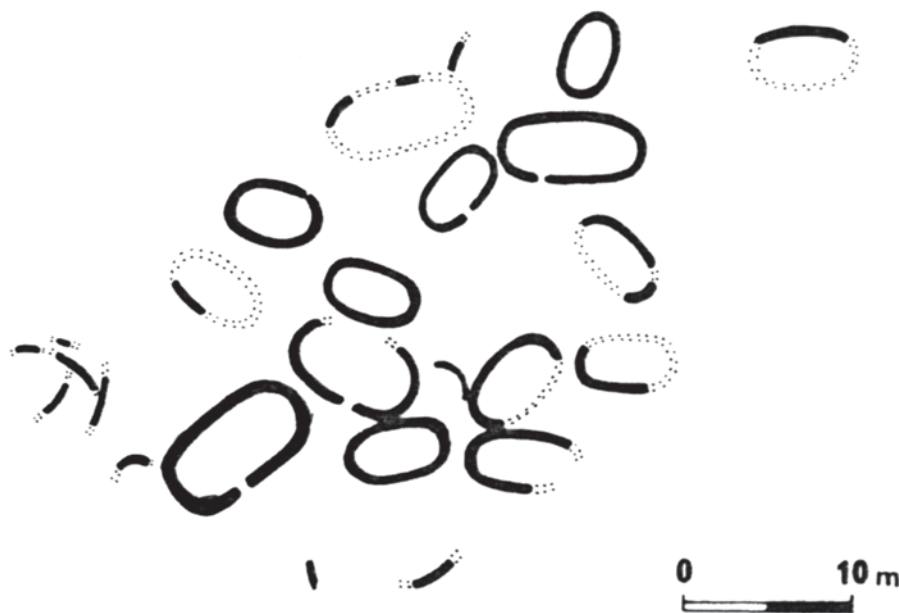


Fig. 1. Agglomeration of curvilinear structures of the EB IA from Sidon Dakerman (after Saidah 1979: fig. 2).

lateral exposures such as at Yiftah'el Stratum II (Braun 1997b) and Sidon-Dakerman (Saidah 1979), no evidence of fortifications, public architecture or any form of preconceived urban plan is evident. These oval buildings represent a haphazard, randomly-positioned collection of structures (Fig. 1).

The curvilinear building tradition continues into the EB IB period, nearing the end of the fourth millennium B.C.E. At sites such as Qiryat Ata Stratum III, several oval-shaped buildings dated to the EB IB have been excavated (Fig. 2) (Golani 2003; Golani and Braun 1992). Similar buildings of the EB IB have been

found at Tel Kabri Stratum 9 (Kempinski and Niermeier 1991: 2–3, fig. 3) and at En Shadud Stratum I (Braun 1985: fig. 28b). All sites where this building style is found appear to have been non-fortified villages or hamlets with oval-shaped buildings spread out randomly over a large area.

Near the end of the EB IB period appears another distinct architectural tradition of rectangular buildings with rounded outer corners (Fig. 3) (Golani 1999). The inner corners of the buildings may also be rounded, yet are usually angular. Wherever found, these structures are usually broadrooms. This building plan has been found at numerous sites in the same region where the curvilinear oval building tradition flourished earlier (Fig. 4). These include Byblos during the Énéolithique period (Dunand 1973: Stations 14, 15, 46; 215–16, 227), Rosh Han-niqra Stratum II (Tadmor and Prausnitz 1959: fig. 4), Me'ona Strata I–II (Braun 1996: plan 1), Qiryat Ata Stratum II (Golani 1995, 1996, 2003; Golani and Braun 1992), Tel Qashish Strata XV–XIIa (Ben-Tor, Portugali and Avissar 1981: fig. 15; Zuckerman 1996: plans 3–7), Megiddo Stage V and Stratum XVIIIb (Loud 1948: fig. 391; Engberg and Shipton 1934: figs. 2–3, Pl. 1; Braun 1989: 3–4), Tel Bet Yerah (E. Eisenberg, pers. comm.), Tel Megadim (S. Wolff, pers. comm.), Tel Kitan Stratum VII (Eisenberg 1993), Tell Um Hammad Stage 2 in Jordan (Helms 1992: figs. 29–31, 38, 39), Tel Esur (Assawir) Stratum II (Yanai 1997), Magal (U. Ad, pers. comm.), Tel Aphek Area G Strata G12–13 (Kochavi and Beck 1985), Ai Phases IIIA–B (House 238 at Site L, House MN at Site G; Callaway 1980: 81–83, figs. 49, 57, 59), Horvat 'Illin (Lower) Strata IV–III (Braun 1993), Jericho Phase N (Kenyon 1981: 323–25, pl. 314), Palmahim Strata





Fig. 3. A rounded corner building from Area A at Qiryat Ata, Stratum II.

I-II (Braun 1991, 1997a, 2000b), Nahal Tilla Stratum IIB (Levy et al. 1995: 27–29), Nahal Yarmut (E. Eisenberg pers. comm.) at Lod Strata IV–V (E. Yanai and O. Marder, pers. comm.) and possibly also at Tell Maguss, located near Aqaba in Jordan (Khoury 2000).

At several sites, rounded-corner buildings were found to supersede oval-shaped buildings. At Qiryat Ata Stratum II, a rounded-corners building was found built directly upon an earlier oval building of Stratum III (Fig. 5). Excavations at Tel Asawir also exposed oval structures dated to the EB IA, succeeded by rounded-corner houses dated to the EB IB (Yannai 1997). A similar sequence is known from the very end of the EB I at Kathleen Kenyon's excavations at Jericho (Kenyon 1981: 323, 325, pl. 314) and at the Palmahim Quarry (Braun 1991: fig. 20; 2000b).

Whereas the oval building tradition begins in the EB IA and ends during the late EB IB, the rounded corner building tradition replaces it during the EB IB and continues into the EB II period. The rounded corner buildings from Ai Phase IIIB, Tel Qashish Stratum XII and Meona Stratum I are dated to the EB II. At these three sites, rounded corner buildings are found in the first EB II occupational stage, immediately after a late EB IB settlement, indicating that all examples of such buildings dated to the EB II are to be associated to the beginning of this period. Wherever found, such buildings appear to be characteristic of the transition from the EB IB to the EB II period. A ^{14}C date from an EB IB rounded corner building from Tel Megadim (Wolff 2000. The author wishes to thank Dr. S. Wolff of the IAA for making this unpublished information available) and another ^{14}C date from a similar building at Ai dated to the early EB II (Callaway 1980: 85–86), pinpoint this transition to around 3000 B.C.E.

At many sites of the late EB IB where rounded corners buildings have been exposed, the overall plan of these structures in relation to one another indicates a certain degree of central planning, often characterized by fortifications and a preconceived street system that divided the area between the houses in a regular manner. At Qiryat Ata, all the rounded corner structures were found aligned on the exact same axis while some of these buildings were also found separated by streets. A similar picture preconceived urban planning involving rounded corners buildings emerges from the Late EB IB strata at Tel Kitan, Tel Assawir, Tel Aphek, the Palmahim Quarry and Horvat Illin. The late EB IB is also witness to the initial appearance of

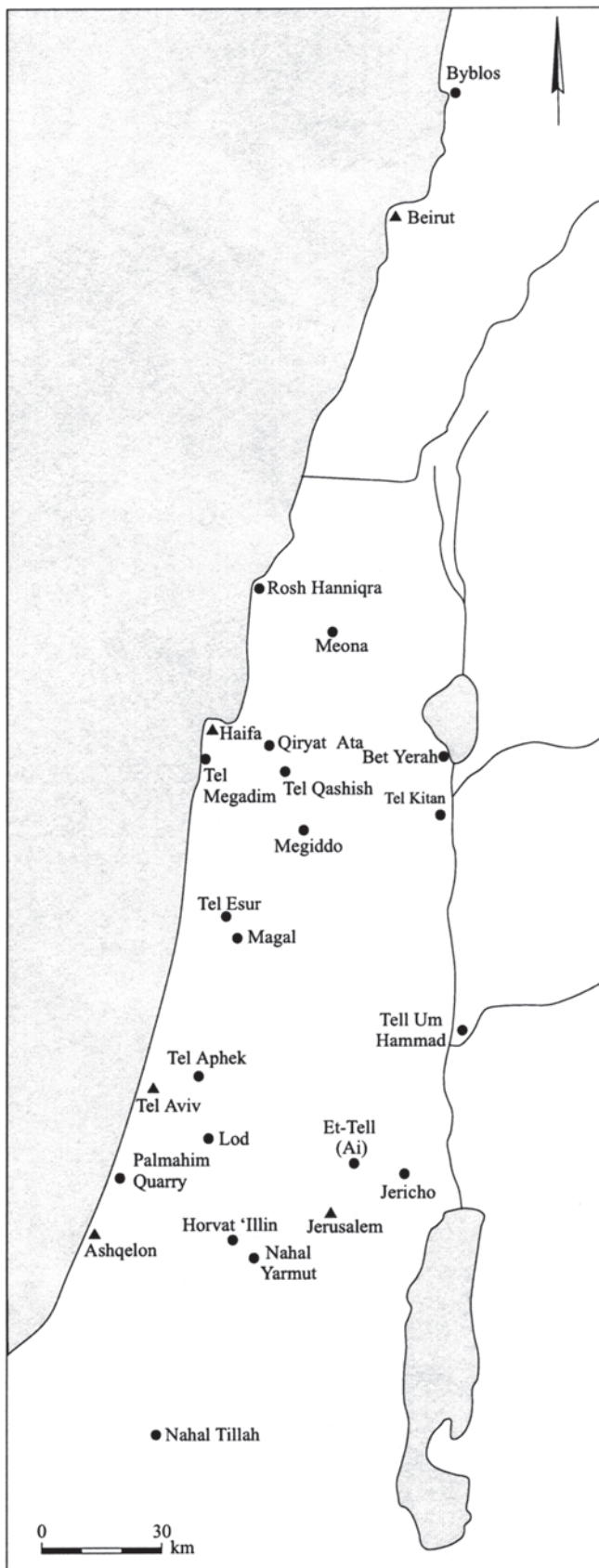
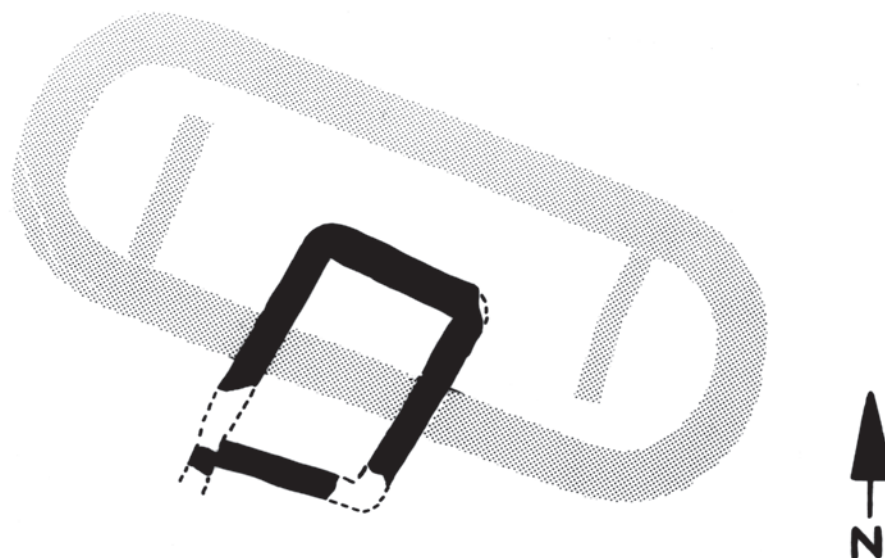


Fig. 4. Sites in the Southern Levant where rounded corner buildings have been found.

Fig. 5. A rounded corners building of Stratum II superimposed upon an oval building of Stratum III from Area A at Qiryat Ata



massive fortifications such as at Tel Aphek (Kochavi and Beck 1985) Tel Bet Yerah (Getzov 1998), Tel Shalem (Eisenberg 1996) Tell Abu el-Kharaz (Fischer 1995), Tell el-Farah North (Vaux 1962), Megiddo (Finkelstein et al. 2000), Tell es-Saidiyeh (Tubb 1996) and Tell es-Sakan (Miroshedji 2000a, 2000b). Monumental public architecture also makes its first appearance at this time, such as the newly discovered EB IB temple complex at Tel Megiddo (Finkelstein et al. 2000). The available architectural evidence of preconceived settlement plans along with fortifications and public architecture thus indicates that the initial stages of urbanization in Canaan should be dated to the late EB IB period.

Rounded corner buildings during the initial stage of urbanization in Canaan may be understood as an adaptation of the curvilinear architectural tradition of the village-oriented EB IA to the later needs of an urban architectural plan at the end of the EB IB. Rectilinear building forms are better suited to a compact and more efficient urban plan as they may be easily extended and connected to one another. In addition, rectilinear architecture makes the most efficient use of space for the area circumscribed by its walls. In contrast, curvilinear buildings are not easily enlarged and do not readily lend themselves to an ordered plan, let alone an efficient use of ground space for living area. As an architectural hybrid between curvilinear and rectilinear building traditions, rounded corner structures represent an attempt to construct a dense concentration of buildings by conforming the curvilinear building tradition to an overall and regular plan. The impact of population growth and the formation of larger extended families as a result, further highlights the need for easily enlarged architectural units in a growing urban society.

One of the best examples of this are the numerous rounded corner buildings at Tel Qashish dated to the initial EB II settlement phase (Zuckerman 1996: plan 6). The plan shows a residential quarter of rounded corner buildings adjacent to a massive fortification wall while a narrow alleyway separated these houses from another block of similar buildings (Fig. 6). The walls of the building units are built abutting one another and their agglomeration may actually be seen to represent *insulae* of buildings, separated by alleyways. When rounded corner buildings are thus attached to one another, the curvilinear element in their plan is minimized.

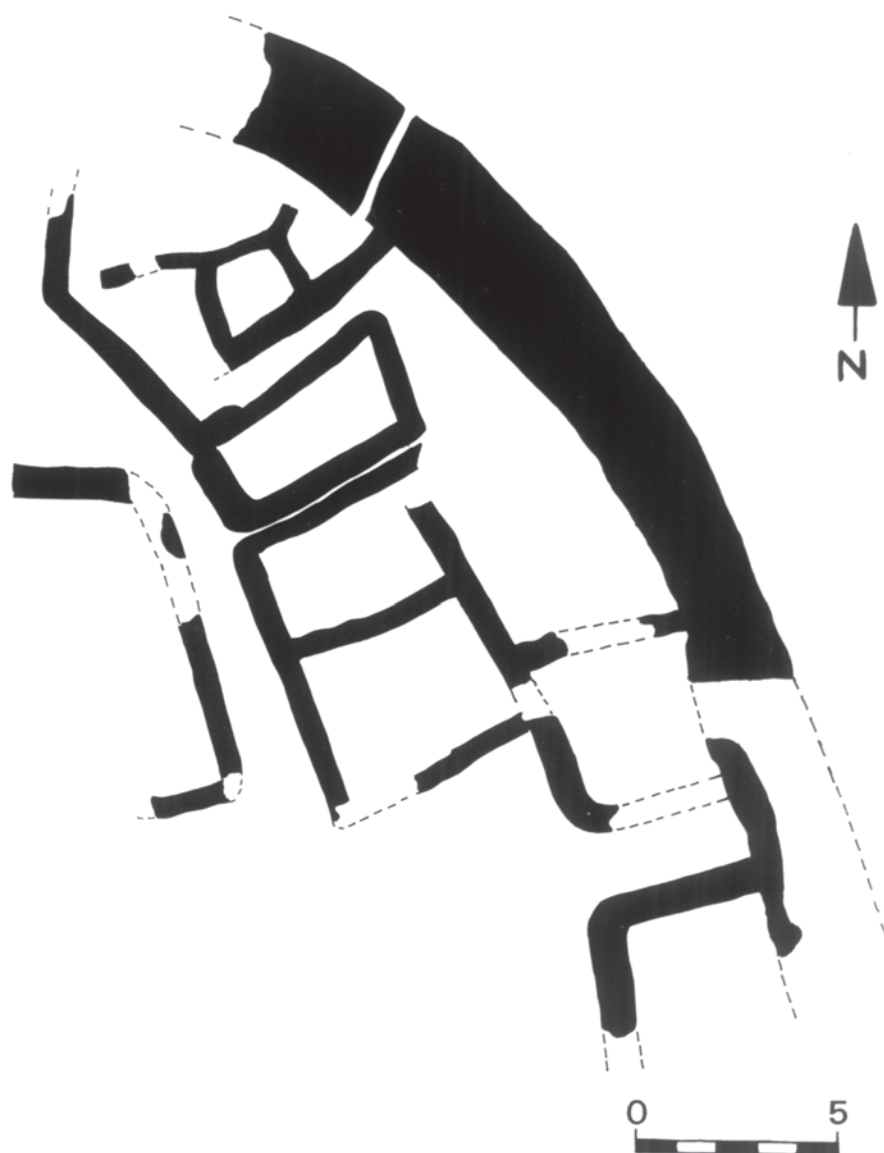
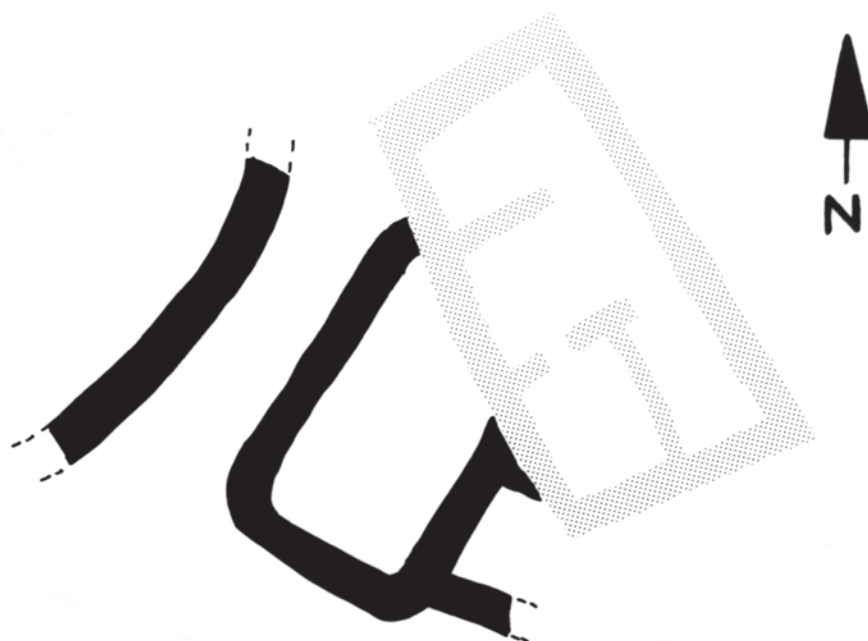


Fig. 6. Schematic plan of Tel Qashish, Stratum XIIB (adapted after Zuckerman 1996: plan 6).

These factors caused the rounded corner building tradition to completely die out at the beginning of the EB II period, making way for the comeback of the rectilinear architectural tradition that was more suitable for the needs of urban Canaanite society. Stratum I of the early EB II period at Qiryat Ata is characterized by rectilinear broadroom structures that replaced the rounded corner buildings of Stratum II (Fig. 7). Throughout the remainder of the EB II and the EB III, rectilinear broadrooms are already the norm, as witnessed by the numerous dwelling units found throughout Strata I–III at Arad (Amiran 1978).

The three-stage evolution of domestic structures from the curvilinear oval buildings of the EB IA to the rounded corner structures of the EB IB–EB II transition and further on to the rectilinear houses of the EB II, may be understood as an organic development in architectural styles. The curvilinear aspect of domestic architecture slowly dies out because pragmatic utilitarian considerations make rectilinear forms more suitable for the creation of a dense and ordered urban plan that makes an efficient use of limited space. This is an expression of

Fig. 7. A rounded corners building of Stratum II cut by a rectilinear building of Stratum I in Area E at Qiryat Ata.



the changing needs of Canaanite society as it developed from a village-oriented to an urban-centered culture.

The Ceramic Revolution in the EB I-II Transition

Hand in hand with the architectural evolution described till now, the transition from a village-oriented to an urban-centered society is also marked by a ceramic revolution. Ceramic assemblages of the EB I period in the Southern Levant are characterized by a pronounced regionalism in typology and choice of raw materials (Philip and Baird 2000); apparently the result of their manufacture in local village workshops. Occasionally, a specific class of pottery such as gray burnished bowls may be widely distributed from a specific manufacturing region (Goren and Zuckerman 2000), yet the ceramic assemblage of each region is often quite distinct in many of its components from other regions.

During the late EB IB in northern Canaan and concurrent with the final appearance of oval and rounded corner structures, the ceramic repertoire of northern Israel is typified by a large and varied repertoire of handmade forms and most prominently, the widespread use of a red slip or wash decoration. Analyses of red slip frequency on all vessel types from the last EB IB stratum at Qiryat Ata showed that over 75 percent were decorated in this manner (Fig. 8).

With the final manifestation of rounded corner houses and the re-appearance of rectilinear architecture in the early EB II, an abrupt and significant change took place in the ceramic repertoire of northern Canaan with the sudden occurrence of a new class of vessels known as “Metallic Ware”. Also termed in the literature as “combed” or “Abydos” ware, Metallic Ware is primarily defined by its unified typology of forms which derive from a north Canaanite potting tradition and its probable origin near the foothills of Mount Hermon or the region of southern Lebanon (Greenberg and Porat 1996). However, the most striking feature of Metallic Ware is the high firing temperature, resulting in a brittle composition that often sounds a distinctive ‘metallic’ ring when struck.

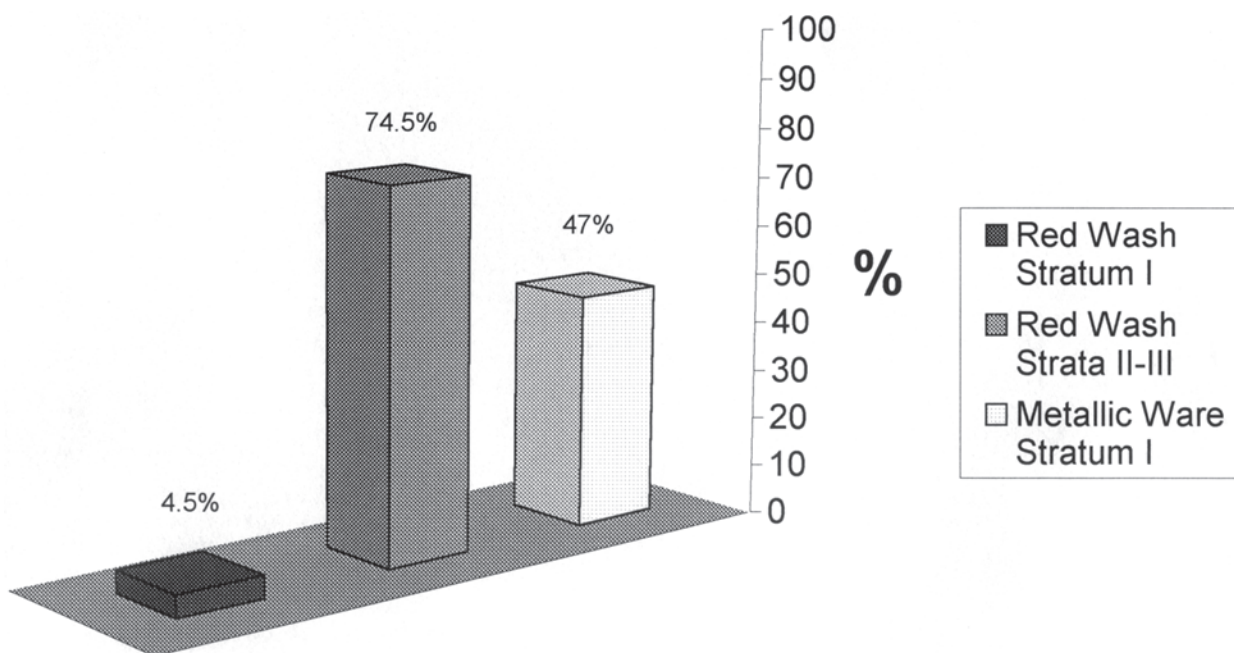


Fig. 8. The relationship of ceramic technology during the EB IB – EB II transition at Qiryat Ata.

One of the most outstanding changes from the EB IB to the EB II may be seen in a statistical comparison between the ceramic assemblages of these periods at Qiryat Ata. Whereas a red wash or slip decoration was found on almost 75 percent of all the EB IB ceramics of Strata II–III, this decorative feature nearly disappears altogether in the EB II assemblage of Stratum I, where less than 5 percent of the ceramics had red decoration, while 47 percent of this assemblage was now composed of Metallic Ware (Fig. 8).

As a whole, Metallic Ware vessels bear a unified typology. With minor variations, the same forms recur wherever Metallic Ware is found. This ceramic family includes large and small, open and closed vessels (Fig. 9), but does not include cooking pots and holemouth jars used over an open flame for which the composition of this ware is unsuitable. The larger store jars often bear a combed decoration arranged in patterns (Fig. 10). The high firing temperature enabled the construction of thin walls for these vessels, enabling them to be easily transported due to their light weight. In addition to utilitarian ceramic vessels, symbolic objects such as animal figurines were also made of Metallic Ware.

Archeological and petrographic examination has shown that from the very beginning of the EB II, Metallic Ware appears in significant amounts at numerous sites throughout northern Canaan (Greenberg and Porat 1996) though isolated examples are found in southern Canaan, reaching all the way to Arad (Amiran 1978: pl. 23:7). Petrography has shown that Metallic Ware vessels originated in the region of southeastern Lebanon, especially the southern foothills of Mount Hermon, prompting Greenberg and Porat (1996) to suggest a manufacturing region centered around the the foothills of the Hermon massif.

The unified typology of Metallic Ware and their apparent singular origin indicates that they were probably produced at one manufacturing center or region which may have had several workshops that dealt in a comprehensive mass-production of pottery and other ceramic objects. Metallic Ware was then exported from this manufacturing region in large quantities over a considerable distance. At sites near the manufacturing region, such as Tel Teo in the Hula



Fig. 9. An assemblage of EB II ceramic vessels from Stratum I at Qiryat Ata.

valley, Metallic Ware comprises up to 85 percent of the EB II ceramic assemblage (Eisenberg, Gopher, and Greenberg 2001: 134). The amount of Metallic Ware decreases as one moves away from this region. At sites such as Qiryat Ata and Tel Qashish, located not far from one another near Haifa and the Jezreel valley, this ware makes up about 50 percent (Golani 2003; Zuckerman 1996: tables 2–3). The massive appearance of Metallic Ware at sites throughout northern Israel, sites that were often removed nearly a hundred kilometers from its probable origin, indicates that this ware was an important trade commodity during the EB II period.

Wherever Metallic Ware is abundant, it appears in its full typology of open, closed, small and large forms. This indicates that this ware was imported as a commodity in itself and not as a container for something else. The use of imported Metallic Ware severely diminished the production of local pottery workshops that now manufactured only 50 percent or less of all household pottery at sites throughout northern Israel during the EB II period. The finding

of such a large amount of imported ceramics shows that these were not prestige items and that an extensive and well-developed trade system existed for their distribution. Overland transport may have caused some, if not many, ceramic vessels to fracture in transit, but this factor was apparently not significant enough to limit the massive distribution of Metallic Ware throughout northern Israel during the EB II.

Conclusions

Urbanization in the transition from the fourth to the third millennium B.C.E. was marked by numerous developments in the social organisation of ancient Canaanite society. Its changing needs during the transformation from a village-oriented to an urban-centered culture were shown to have been manifest in the gradual evolution of architectural styles. This evolution demanded a change in mental templates from the curvilinear tradition of the EB IA villages that recoiled from using anything but curving walls, to the pragmatic realization in the Late EB IB and the EB II, that only a rectilinear building plan was feasible if numerous dwelling units had to be built together efficiently in an ordered urban plan. Along the way, the hybrid development of the sub-rectangular or rounded corners building as described here, was the compromise that eventually led to the use of the rectilinear broadroom building plan during the fully urban EB II.

At the same time, the changing socio-economic and political organization of Canaan at the beginning of the EB II is highlighted by the ceramic revolution in the sudden appearance of Metallic Ware in massive amounts throughout northern Canaan. The introduction of Metallic Ware at the beginning of the EB II represents a distinct and unmistakable change in ceramic styles and nothing short of quantum leap in pottery technology in relation to previous local ceramic industries. However, the most important aspect of this development is its distribution in massive amounts throughout northern Canaan. That fact that sites far removed from the center of production imported 50 percent or more of their daily household ceramic wares is an expression of the virtual monopolization of pottery production and distribution at the beginning of the EB II. This could only have been the result of an efficient and well-developed trade network that could safely transport massive amounts of pottery vessels from one manufacturing center or region throughout northern Canaan. This situation is an expression of a high level of economic interaction and integration that existed between sites

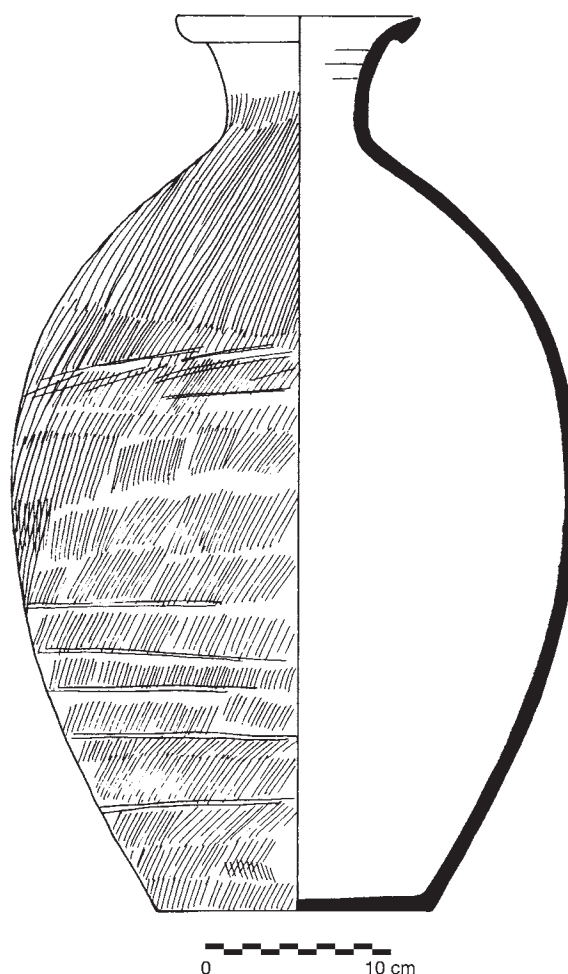


Fig. 10. A Metallic Ware store jar from Stratum I at Qiryat Ata.

far-removed from each other and the strong economic interest for the distribution and use of a certain commodity. These factors strongly suggest the existence of a developed and well-organized power that operated a large-scale economic manufacture and distribution system, possibly centered around one or more city-states whose authority extended over the region where this ware is most prevalent. Only such an authority would have been able to organize and ensure the function of such a developed trade system that not only brought Metallic Ware as a commonplace product to every EB II household in northern Canaan, but also was able to export it outside its area of control. The seeds of this socio-economic and political revolution appear to have sprouted already during the Late EB IB with the creation of the first urban centers and were already matured at the onset of the EB II.

References

- Amiran, R.
1978 *Early Arad. The Chalcolithic Settlement and the Early Bronze Age City*. Jerusalem: Israel Exploration Society.
- Bar-Yosef, O.
1992 Building Activities in the Prehistoric Periods until the end of the Neolithic Period. Pp. 31–39 in *The Architecture of Ancient Israel from the Prehistoric to the Persian Periods*, eds. A. Kempinski and R. Reich. Jerusalem: Israel Exploration Society.
- Ben-Tor, A.; Portugali, Y.; and Avissar, M.
1981 The First Two Seasons of Excavations at Tel Qashish 1978–1979. *Israel Exploration Journal* 31: 137–64.
- Braun, E.
1985 *‘En Shadud: Salvage Excavations at a Farming Community in the Jezreel Valley*. BAR International Series 249. Oxford: British Archaeological Reports.
1989 The Problem of the Apsidal House: New Aspects of Early Bronze I Domestic Architecture in Israel, Jordan, and Lebanon. *Palestine Exploration Quarterly* 1989: 1–43.
1991 Palmahim, Quarry–1989/1990. *Excavations and Surveys in Israel* 10: 21–23.
1993 H. ‘Illin (Lower). *Excavations and Surveys in Israel* 12: 79–80.
1996 Salvage Excavations at the Early Bronze Age Site of Meona: Final Report. *‘Atiqot* 28: 1–31.
1997a Palmahim, Quarry. *Excavations and Surveys in Israel* 16: 87–88.
1997b *Yiftah’el–Salvage and Rescue Excavations at a Prehistoric Village in Lower Galilee, Israel*. IAA Reports No. 2. Jerusalem: Israel Antiquities Authority.
2000a Area G at Afridar, Palmahim Quarry 3 and the Earliest Pottery of Early Bronze Age I: Part of the ‘Missing Link’. Pp. 113–28 in *Ceramics and Change in the Early Bronze Age of the Southern Levant*, eds G. Philip and D. Baird. Levantine Archaeology 2. Sheffield: Sheffield Academic Press.
2000b Post Mortem: A Late Prehistoric Site at Palmahim Quarry. *Bulletin of the Anglo-Israel Archaeological Society* 18: 17 – 30.
- Callaway, J.A.
1980 *The Early Bronze Age Citadel and Lower City at Ai (et-Tell)*. Cambridge, MA: American Schools of Oriental Research.
- Dunand, M.
1973 *Fouilles de Byblos V*. Paris: Maisonneuve.
- Eisenberg, E.
1993 Kitan, Tel. Pp. 878–81 in *New Encyclopedia of Archaeological Excavations in the Holy Land* Vol. 3. E. Stern, A. Gilboa-Lewinson and J. Aviram eds. Jerusalem: Israel Exploration Society and Carta.
1996 Tel Shalem–Soundings in a Fortified Site of the Early Bronze Age Ib. *‘Atiqot* 30: 1–24.
- Eisenberg, E.; Gopher A.; and Greenberg R.
2001 *Tel Teo–A Neolithic, Chalcolithic and Early Bronze Age Site in the Hula Valley*. IAA Reports No. 13. Jerusalem: Israel Antiquities Authority.

- Engberg, R., and Shipton, G.
1934 *Notes on the Chalcolithic and Early Bronze Age Pottery of Megiddo*. Studies in Ancient Oriental Civilisations 10. Chicago: The Oriental Institute of the University of Chicago.
- Finkelstein, I.; Ussishkin, D.; and Halpern, B.
2000 *Megiddo III*. The Institute of Archaeology Monograph Series 18. Tel Aviv: Tel Aviv University.
- Fischer, P.M.
1995 Tell Abu el-Kharaz – The Swedish Jordan Expedition 1993, Fourth Season Preliminary Excavation Report. *Annual of the Department of Antiquities of Jordan* 39: 93–119.
- Getzov, N.
1998 Tel Bet Yerah. *Excavations and Surveys in Israel* 18: 106:20–21.
- Golani, A.
1995 Qiryat Ata. *Excavations and Surveys in Israel* 13: 30–31.
1996 Qiryat Ata. *Excavations and Surveys in Israel* 15: 31–33.
1999 New Perspectives on Domestic Architecture and the Initial Stages of Urbanization in Canaan. *Levant* 31: 123–133.
2003 *Salvage Excavations at the Early Bronze Age Site of Qiryat Ata*. Israel Antiquities Authority Reports 18. Jerusalem: Israel Antiquities Authority.
- Golani, A., and Braun, E.
1992 Qiryat Ata. *Excavations and Surveys in Israel* 10: 99–100.
- Goren, Y., and Zuckerman, S.
2000 An Overview of the Typology, Provenance and Technology of the Early Bronze Age I ‘Grey Burnished Ware’. Pp. 165–82 in *Ceramics and Change in the Early Bronze Age of the Southern Levant*, eds. G. Philip and D. Baird. Sheffield: Sheffield Academic Press.
- Greenberg, R., and Porat, N.
1996 A Third Millennium Levantine Pottery Production Center: Typology, Petrography, and Provenance of the Metallic Ware of Northern Israel and Adjacent Regions. *Bulletin of the American Schools of Oriental Research* 301: 5–24.
- Helms, S. W.
1992 Stratigraphy and Architecture. Pp. 15–38 in *Excavations at Tell Um Hammad – The Early Assemblages*, ed. A.V.G. Betts. Edinburgh: Edinburgh University.
- Kempinski, A., and Niemeier, W. D.
1991 *Excavations at Kabri Preliminary Report of 1990 Season *5*. Tel Aviv: Tel Kabri Expedition, Tel Aviv University.
- Kenyon, K.
1981 *Excavations at Jericho III*. London: The British School of Archaeology in Jerusalem.
- Kochavi, M., and Beck, P.
1985 Aphek-Antipatris–1985. *Excavations and Surveys in Israel* 4: 5–6.
- Khouri, R.
2000 Jordan Antiquity #153: Tel Maguss. Posted on the internet 25 June 2000.
- Levy, T.; van den Brink, E. C. M.; Goren, Y.; and Alon, D.
1995 New Light on King Narmer and the Protodynastic Egyptian Presence in Canaan. *Biblical Archaeologist* 58: 26–35.
- Loud, G.
1948 *Megiddo II*. Oriental Institute Publications 62. Chicago: University of Chicago.
- Miroschedji, P. de
2000a Travaux archéologiques à Tell Sakan (Bande de Gaza) en 1999. *Orient Express* 2000/2: 30–32.
2000b Tell es-Sakan 2000. *Orient Express* 2000/4: 98–101.
- Philip, G., and Baird, D.
2000 *Ceramics and Change in the Early Bronze Age of the Southern Levant*. Levantine Archaeology 2. Sheffield: Sheffield Academic.
- Saidah, R.
1979 Fouilles de Sidon-Dakerman: l’agglomération chalcolithique. *Berytus* 27: 29–55.

Tadmor, M., and Prausnitz, M.

1959 Excavations at Rosh Hanniqra. *‘Atiqot* (English Series) vol. 2: 72–88.

Tubb, J. N.

1996 Interim Report on the Eighth (1995) Season of Excavations at Tell es-Sai’diyeh. *Palestine Exploration Quarterly* 128: 16–40.

Vaux, R. de

1962 Les fouilles de Tell el-Fâr‘ah. *Revue Biblique* 69: 212–53.

Wolff, S.

2000 Tel Megadim (Tel Sahar) *Excavations and Surveys in Israel* 20: 23*–24*.

Yannai, E.

1997 Tel Esur. *Excavations and Surveys in Israel* 16: 75–77.

Zuckerman, S.

1996 *The Pottery of Tel Qashish and the Jezreel Valley during the Early Bronze Age*. Unpublished Masters Thesis. Hebrew University, Jerusalem (Hebrew).