

Is there an 'Ammān-Zarqā' Family? New Light on the EB IV Pottery Repertoire of North-Central Jordan from Recent Excavations in Wādī Az-Zarqā'

1. Previous Research

Following the breakdown of the 'urban' system in the southern Levant, Early Bronze Age (EB) IV (2300-2000BC) was characterised by major changes in socio-political organization, settlement patterns, subsistence strategies and material culture, especially when compared to EB II-III (3000-2300BC) (Palumbo 1990, 2001, 2008; Nigro 1996-1997: 208-211). In Palestine and Jordan, regionalization of cultural horizons has always been regarded as a very distinctive feature of this period (Amiran 1961, 1969: 79-89, 1974; Dever 1971, 1973, 1980), largely owing to non-standardised and de-centralised production at a household or village level (Palumbo 1990: 21, 80-81; Nigro 1999: 12-13, 2003: 138-139, 2009: 670-672, 2010a: 113-114).

The pottery repertoire of the 'Ammān area was described in a preliminary fashion by Svend Helms (1989) on the basis of assemblages from the necropolis at Umm al-Bighāl (Helms and McCreery 1988; Helms 1989: 18-27) and other funerary contexts around 'Ammān, including Jabal at-Tāj, Sport City, Jabal al-Jufah and Tilā' al-'Alī (see Dajani 1968; Zayadine 1978; Hadidi 1982; Suleiman 1985) (FIG. 1).

Helms' work was soon followed up by Gaetano Palumbo and Glen Peterman (1993), who defined a regional group – the 'Ammān-Zarqā' family (AZ family) – on the basis of these assemblages. They proposed that, although mainly concentrated in Wādī az-Zarqā', it might extend from Tall al-Ḥuṣn in the north to Mādabā in the south, also taking in the sites assessed by Helms: Jabal Ruḥayl, al-Muṣhayrifah and Tall al-'Umayrī (Palumbo and Peterman 1993: 29-30).

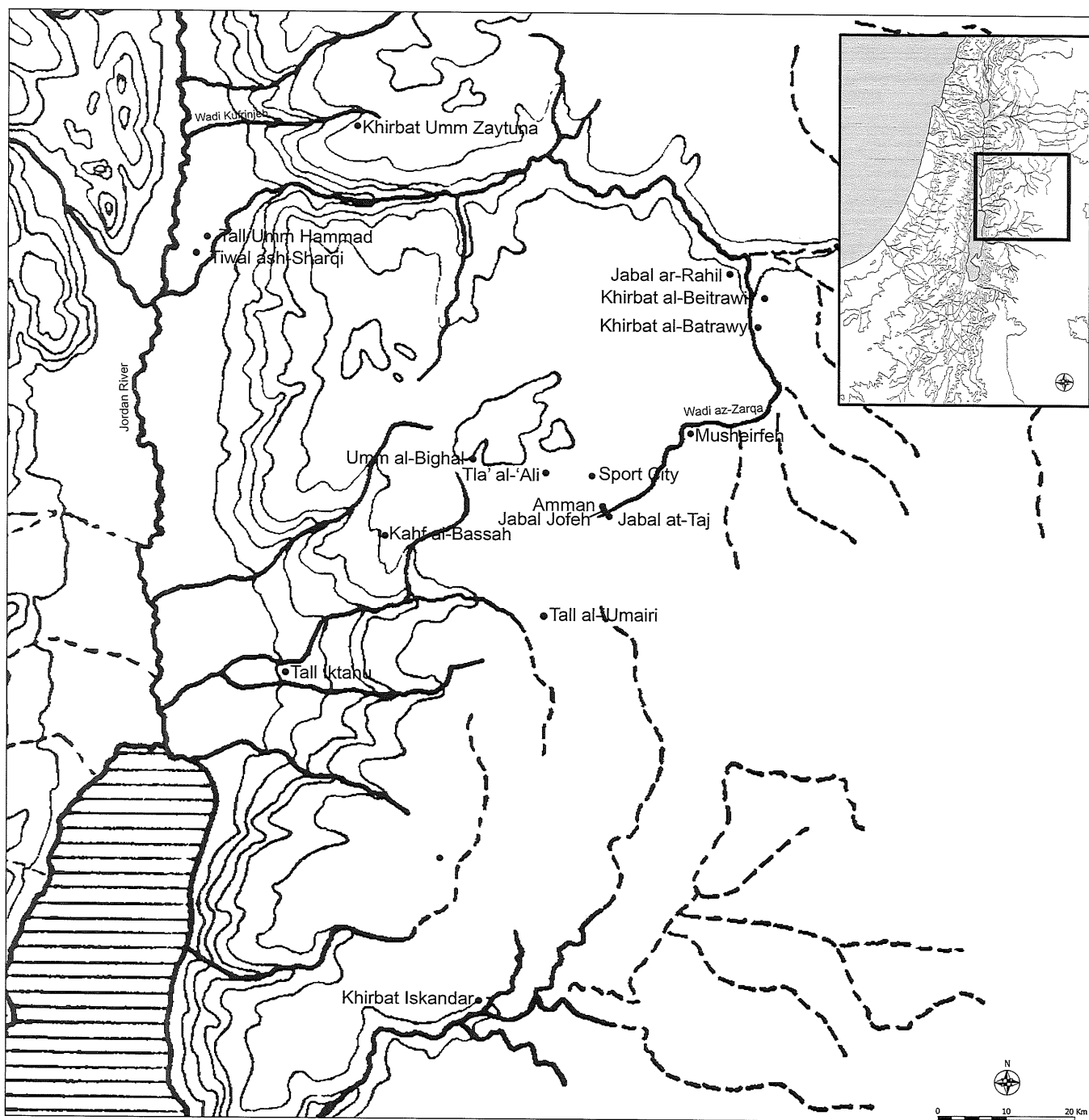
A re-appraisal of the geographical distribution of this very distinctive regional repertoire is pro-

posed here (see sections 3-4 below) on the basis of recent excavations carried out in the upper Wādī az-Zarqā' by a team of the "Sapienza" University of Rome, directed by Lorenzo Nigro (Nigro 2006, 2008; Nigro 2009, 2010a, 2010b).

2. The 'Ammān-Zarqā' Family: Typological Features and Early Bronze IIIB Antecedents

Two particular vessel-shapes were identified first by Helms (1989: 19-27) and then by Palumbo and Peterman (1993: 23-27) as distinguishing the regional horizon defined by these geographic boundaries. These are (1) the jug with strap-handle (FIG. 2) and (2) the globular flat-based jar with single strap-handle and two enveloped ledge-handles (FIG. 3). Both vessel-types usually, but not exclusively, bear distinctive incised decorative patterns on the upper part of the body and / or on the strap-handle. The latter were tentatively linked to the volume of the vessels by Helms, who proposed to predict a system of measurement symbols within them (Helms 1987, 1989: 24-25).

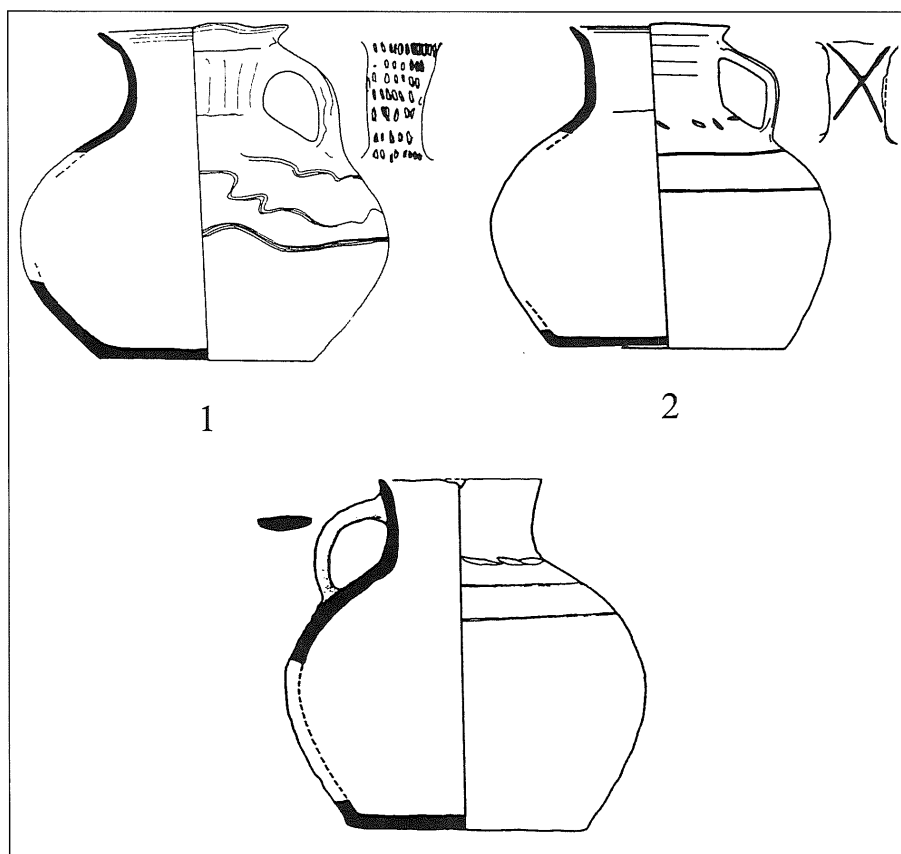
Regarding the continuity of southern Levantine Early Bronze Age pottery traditions during the last quarter of the third millennium BC, it is worth noting that the very first antecedents of the jar with single strap-handle and two enveloped ledge-handles are found in southern Palestinian contexts dating to EB IIIB (2450-2300BC), many of which have already been listed and examined by Amiran (1973) and Helms (Helms 1986: 27; Helms and McCreery 1988: 338-339). In these contexts, this vessel-type occurs in two variants, a jar and a jug, which were most likely linked to function and are differentiated primarily on the basis of size. As a jar, it is found at Tell as-Sultan (Sellin and Watzinger 1913: pl. 21:C.i), there with a slender ovoid body in EB III fashion. However, better predecessors of the EB IV



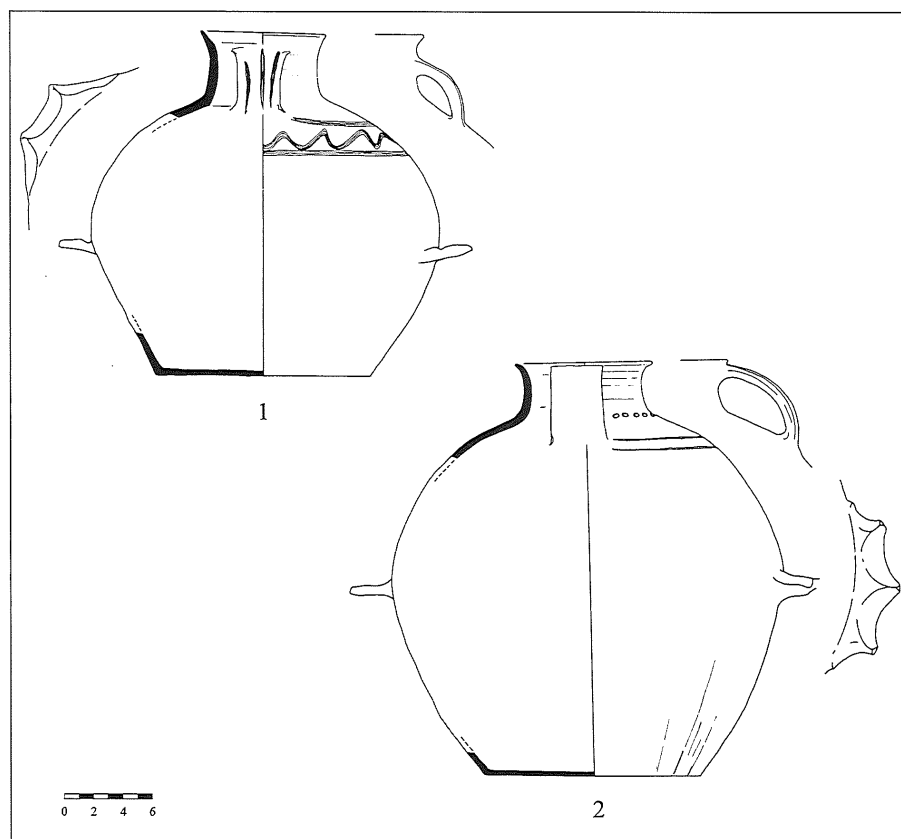
1. Map of the EB IV sites, necropoleis and isolated tombs in north-central Jordan mentioned in the text.

type come from Khirbat al-Yarmūk (Ben-Tor 1975: pl. 31:4, figs 8:4, 11:2; de Miroschedji 2000: fig. 18.9:10-11), Tall ad-Duwayr (Tufnell *et al.* 1958: pls 15:3, 69:285-286, 288) and Tall al-Judaydah (Bliss and Macalister 1902: pl. 23:2), where the jars are characterised by a globular flat-based body and a general morphology closely resembling that of the EB IV examples. As a jug, it is found at Tall ad-Duwayr (Tufnell *et al.* 1958: pls 16:44, 17:34-

35, 38, 59:172, 176-177, 60:226), et-Tell / 'Ay (Marquet-Krause 1949: pl. 65:11.1565) and Tell as-Sultan (Kenyon 1960: fig. 47:3). Finally, the recent recovery of a similar jug at Khirbat al-Batrāwī, in the upper Wādī az-Zarqā' of north-central Jordan, has provided the first evidence for this vessel-shape on a Jordanian settlement dating to EB IIIB (Nigro 2010a: figs on pp. 92-93). However, as will be seen below (see section 3), this vessel-form seems not



2. Jugs with strap-handles and incised decoration from the funerary assemblages of (1 - 2) Umm al-Bighāl and (3) al-Mushayrifah (respectively after Helms and McCreery 1988: figs 9:2-3, 13:2; Palumbo and Peterman 1993: fig. 5:1).



3. Jars with strap-handles, two enveloped ledge-handles and incised decoration from the necropolis of Umm al-Bighāl (after Helms and McCreery 1988: figs 13:2, 14).

to be present at the site during the EB IV, in contrast to sites and necropoleis in the 'Ammān and al-'Umayrī districts to the south-west, where it seems to continue into this period.

To date, around Amman strap-handled jugs and jars dating to EB IV have only been found in funerary assemblages, *viz.* Jabal at-Tāj, Sport City, Jabal al-Jufah and Tilā' al-'Alī (see Dajani 1968: pl. XL, figs 1, 2:2, 3-5; Zayadine 1978: figs 3:2-4, 11, pl. X:2-4, 11; Hadidi 1982: pls LXXIX:1, 3, LXXX:5; Suleiman 1985: pl. X:2), Umm al-Bighāl (Helms and McCreery 1988: figs 8-11, 12:1-2, 13, 14:116, 16:1, 3), Kahf al-Baṣṣah near 'Irāq al-Amīr (Waheeb *et al.* 1994: fig. 2:8-10), al-Mushayrifah (Palumbo and Peterman 1993: figs 1, 2, 5:1-2; Ibrahim and Qadi 1995: figs 6:1-2, 7:4-5) and Tall al-'Umayrī, where they have been mostly found in Tomb 13 (Waheeb and Palumbo 1993: figs 3, 4:4-5, 5) and only sporadically at the settlement (Herr 2002: fig. 6.1:2). Further south, a jar of this type was recovered at Khirbat Iskandar in the 'public complex' of Area B (Phase B) (Palumbo and Peterman 1993: 25, fig. 3; Richard 2000: fig. 3:8). Petrographic analysis of this vessel has confirmed a non-local origin somewhere in Wādī az-Zarqā' (Richard 2010: 106; Richard and Long 2010: 275). Finally, further finds are reported from Tall Iktānū (Prag 1974: fig. 8:9, 1988: fig. 7:1; Palumbo and Peterman 1993: 25), which may also have come from Wādī az-Zarqā', although this has not yet been confirmed by scientific analysis.

3. The Contribution of Excavations at Khirbat al-Batrāwī in Upper Wādī az-Zarqā' by "Sapienza" University of Rome

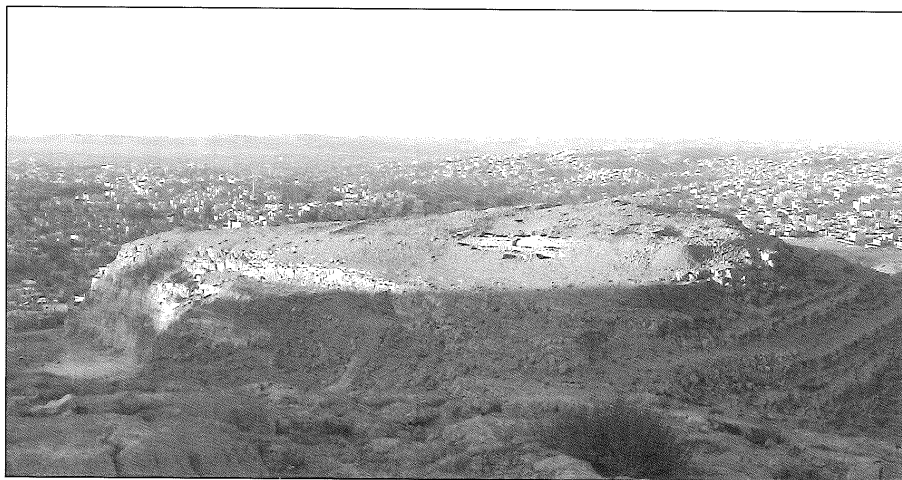
In spring 2005 a team from "Sapienza" Univer-

sity of Rome, directed by Lorenzo Nigro, started to excavate at Khirbat al-Batrāwī (FIG. 4), located within the modern city of az-Zarqā'; investigation of the site is still ongoing.

The site, which has a stratigraphic sequence spanning the entire third millennium BC, from EB II to EB IV (Nigro 2006: 37-40, 2008: 7-8), is the first example in this area of an extensively investigated EB IV rural village (Batrawy Phase IVb) (Nigro 2006: 63-72, 77-102, 155-158, 167-174, 2008: 13-16, 28-36, 67, 102-103, 129-133, 163-176, 244, 294-305, Nigro 2009: 670-672, 2010a: 111-112, 2010b: 441-443). It yielded a broad *corpus* of ceramic finds from a variety of domestic contexts, which has permitted a re-appraisal of previous assumptions concerning the pottery repertoire of the az-Zarqā' district. This has suggested a higher degree of internal fragmentation within the EB IV cultural horizon of north-central Jordan than was previously thought to be the case.

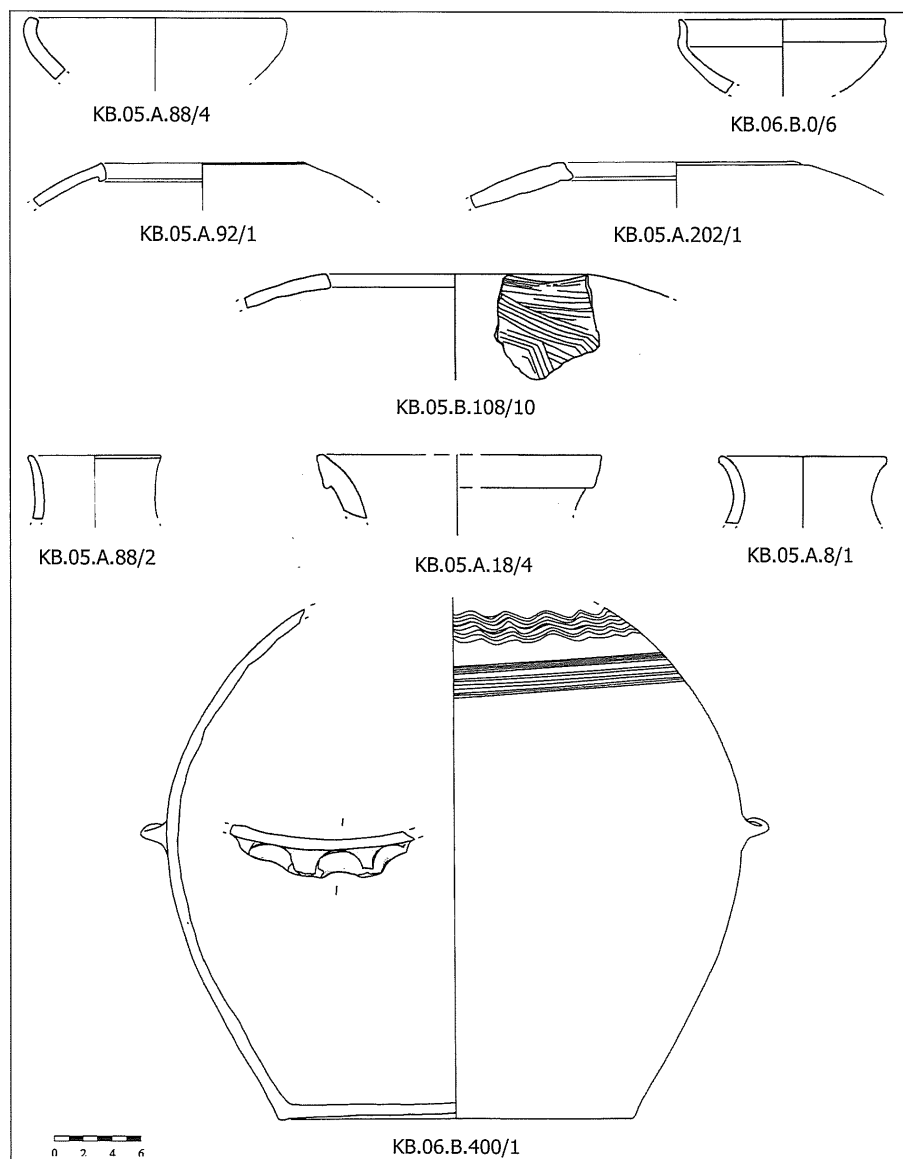
The pottery repertoire of the Batrāwī Phase IVb village (EB IVb; 2200-2000BC) (FIGS. 5, 6) is characterised by a typologically limited, albeit carefully manufactured, range of vessels (Sala 2006; Nigro 2010a: 112). Potters used a slow wheel to make open vessels and the upper parts, i.e. necks and rims, of closed ones.

Plain ware is represented by a few open forms, mostly hemispherical bowls (FIG. 5: KB.05.A.88/4) and bowls with in-turned rims, and a large number of small- and medium-sized jars with flaring necks and everted rims. Holemouth vessels, usually with hammered or recessed rims (FIG. 5: KB.05.A.92/1; KB.05.B.202/1; FIGS. 8, 9), are commonly represented in plain ware, storage ware and cooking ware. The latter often exhib-

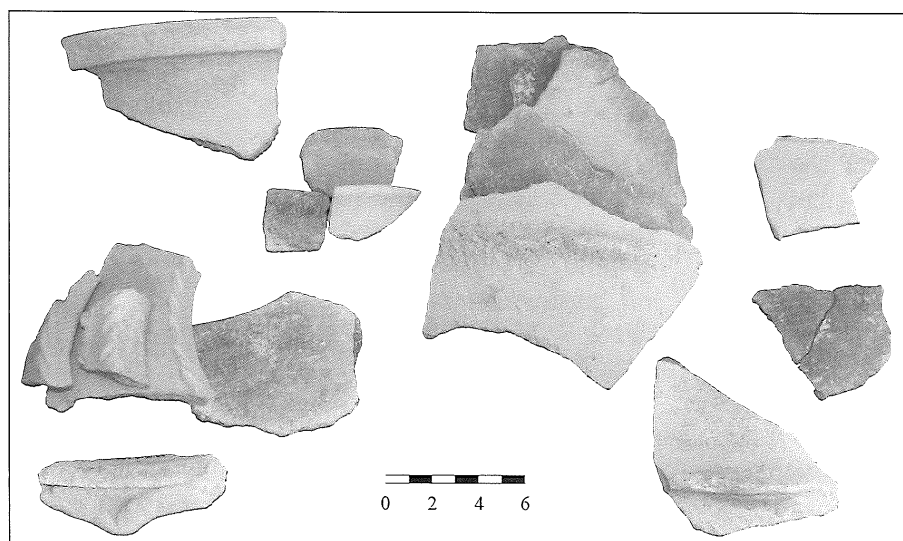


4. General view of Khirbat al-Batrāwī, upper Wādī az-Zarqā', looking south (© ROSEPAJ).

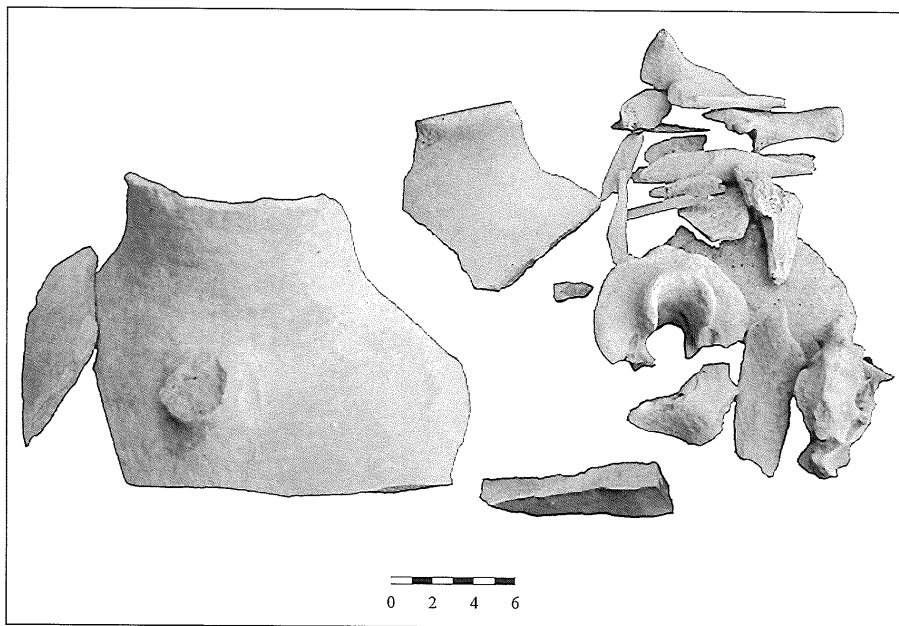
IS THERE AN 'AMMĀN-ZARQĀ' FAMILY? NEW LIGHT ON THE EB IV POTTERY



5. Selection of al-Batrāwī Phase IVb (EB IVB; 2200-2000BC) pottery from Khirbat al-Batrāwī (© ROSEPAJ).



6. Khirbat al-Batrāwī: selection of plain, cooking and storage ware sherds from the al-Batrāwī Phase IVb village (EB IVB; 2200-2000BC) (© ROSEPAJ).



7. Khirbat al-Batrāwī: finds from *in-tramural* burial D.350, al-Batrāwī Phase IVb (EB IV; 2200-2000BC) (© ROSEPAJ).



8. Khirbat al-Batrāwī: (top left) hole-mouth jars with recessed and hammered rims and (bottom left) jars with straight or flaring necks with everted rims from the al-Batrāwī Phase IVb village (EB IVb; 2200-2000BC) (© ROSEPAJ).

it a vertical, irregular combing all over the body (FIG. 5: KB.05.B.108/10; FIG. 10), which is a cultural marker of the north-central Jordanian pottery repertoire. Band and wavy-combing also occur frequently (FIG. 5: KB.06.B.400/1) on both plain ware and storage ware. Storage vessels include flat-based globular jars with everted rims and enveloped ledge-handles, and *pithoi* with flaring necks and triangular rims (FIG. 5: KB.05.A.18/4). A fair amount of metallic ware has also been recovered at the site (FIG. 11).

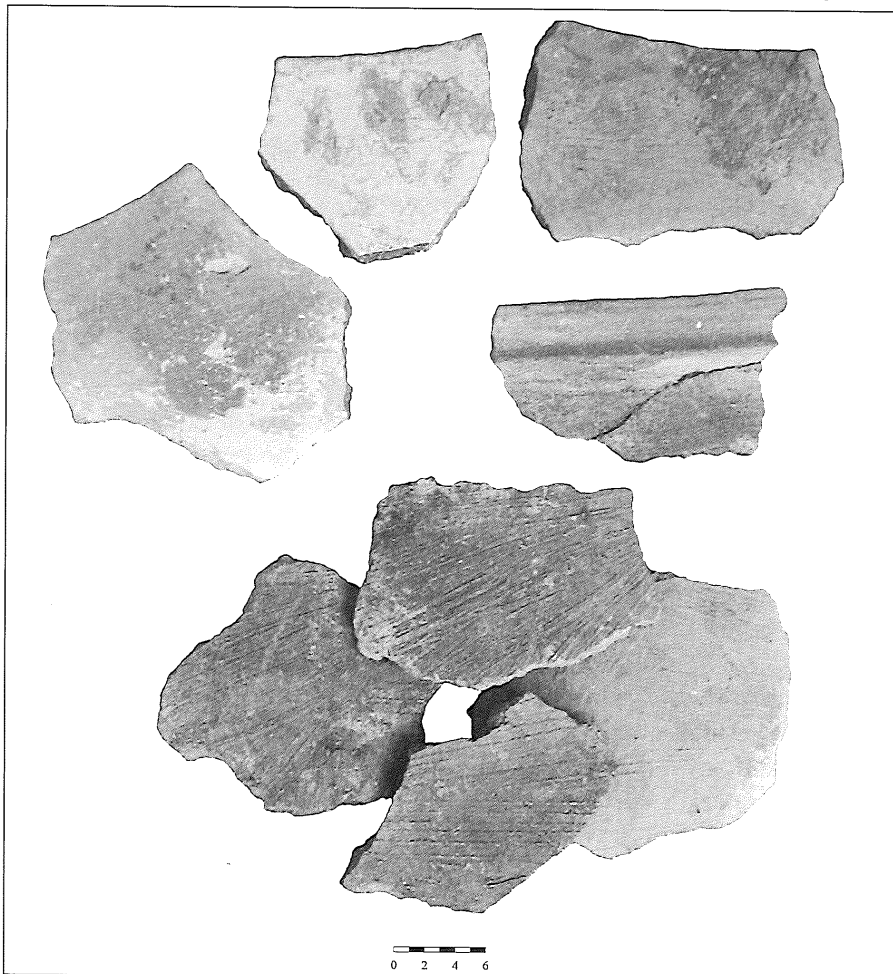
As far as the definition of the regional bounda-

ries of ceramic horizons within north-central Jordan is concerned, the most outstanding feature is the complete absence – whether in domestic assemblages (FIGS. 5, 6 and 8) or in the intramural burials discovered in the Batrawy IVb village (FIG. 7; Nigro 2009: 672, 2010a: figs on pp. 117-118, Nigro 2006: figs 1.11-1.12, pl. III, 2008: 135-136, 174, figs 4.15-4.16, 4.82-4.84, pl. XXVI: KB.06.B.350/1-2) - of the distinctive ceramic types of the so-called AZ family. Within the az-Zarqā' district, it is worth noting that they also appear to be absent at the settlement site of Jabal Ruḥayl (Pa-



9. Khirbat al-Batrāwī: holemouth jar with recessed rim from the al-Batrāwī Phase IVb village (EB IVB; 2200-2000BC) (© ROSEPAJ).

lumbo 1990: figs 51:5-7, 52-53, 54:1-5; Palumbo and Peterman 1993: fig. 6; Palumbo *et al.* 1996: fig. 35:2-10) and in a funerary assemblage from a tomb at nearby Khirbat al-Batrāwī (Prag 1995: fig. 3).



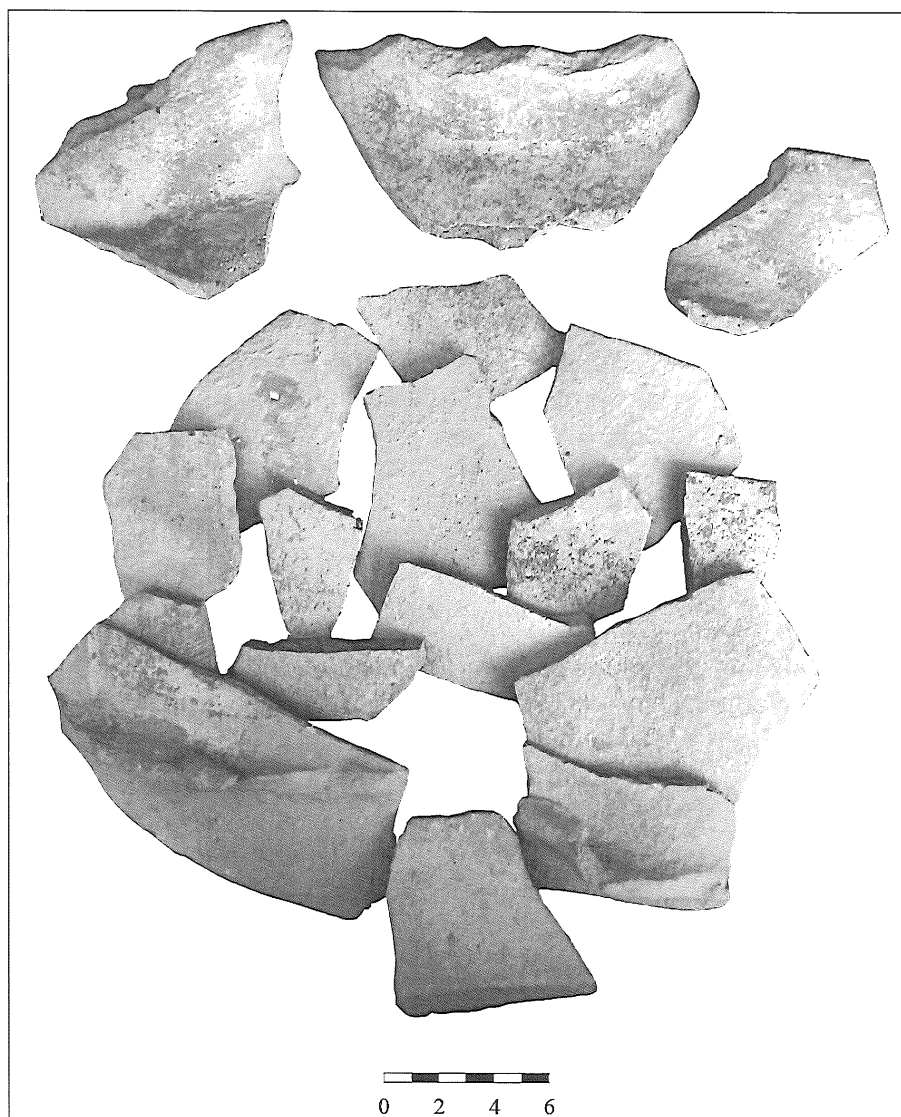
10. Khirbat al-Batrāwī: (top left) holemouth jars, cooking pot with double outer-folded rim and (in the middle, at right) cooking and storage ware sherds with vertical irregular combing from the al-Batrāwī Phase IVb village (EB IVB; 2200-2000BC) (© ROSEPAJ).

4. Characterisation of the EB IV Ceramic Horizon of North-Central Jordan

Summing up the data outlined above, the picture that is emerging suggests that the so-called AZ family represents a typologically and stylistically distinct regional pottery repertoire, very restricted in geographical distribution, that preserves an Early Bronze Age pottery tradition previously known only in Palestine but which is now also beginning to emerge in Jordan.

Considering the geographical distribution and context of the finds, two hypotheses can be put forward:

The absence of strap-handled jugs and jars described by Palumbo and Peterman as typical of the AZ family on settlements – at Khirbat al-Batrāwī and Jabal Ruḥayl, and also further south at Tall al-‘Umayrī where they are common in burials but scarcely represented in the village – could, if not the result of bias in the archaeological record, suggest that they were conceived as funerary productions only.



11. Khirbat al-Batrāwī: selection of metallic ware sherds from the al-Batrāwī Phase IVb village (EB IVB; 2200-2000BC) (© ROSEPAJ).

What has previously been referred to as the AZ family actually defines only a 'cantonal' horizon, extending from 'Ajlūn to Mādabā, within the wider ceramic province of north-central Jordan. Find-spots outside this area, such as at Tall Iktānū and Khirbat Iskandar (see section 2), are interpreted as the result of contact between neighbouring communities within the region.

The second hypothesis seems more feasible and provides the better explanation for the absence of strap-handled jugs and jars both at settlement sites and in funerary contexts, in Wādī Kufranjah and the lower Wādī az-Zarqā' (see below) as well as in the upper Wādī az-Zarqā' (Beitrawi tomb and intramural burials at Khirbat al-Batrāwī). These probably represent 'cantonal' distinctions within the wider ceramic province of north-central Jor-

dan, along with the previously defined AZ family centred on 'Ammān. As for the geographical extent of the latter, finds from Tall al-'Umayrī confirm that it reached as far south as the Mādabā plains. However, its proposed extension northwards as far as Tall al-Ḥuṣn seems unlikely in view of the apparent absence of its distinctive pottery types at excavated sites and necropoleis in Wādī Kufranjah and the lower Wādī az-Zarqā' (e.g. Khirbat Umm az-Zaytūna, Tall Umm Hammad and the associated necropolis of Ṭiwāl ash-Sharqī; Waheeb and Palumbo 1994; Helms 1983, 1986; Tubb 1985, 1990).

Finally, the previously noted absence of these vessels in the pottery repertoire of the az-Zarqā' district – they were not identified at Jabal Ruḥayl or at Khirbat al-Batrāwī – now finds further support by their absence at Khirbat al-Batrāwī.

Acknowledgements

I wish to express grateful thanks to Prof. Lorenzo Nigro, Director of the Rome "La Sapienza" Expedition to Palestine and Jordan (ROSEPAJ), for giving me the opportunity to participate in the excavations at Khirbat al-Batrāwī over several seasons, and to study and present this material from the Batrawy Phase IVb village.

Bibliography

- Amiran, R. 1961. Pottery of the Middle Bronze Age in Palestine. *IEJ* 10: 204-255.
- _____. 1969. *Ancient Pottery of the Holy Land from the Prehistoric to the Persian Period*. Jerusalem: Masada Press.
- _____. 1973. More About the Vounous Jar – Some EB IV Antecedents. *BASOR* 210: 63-66.
- _____. 1974. A Tomb Group from Geva'-Carmel. *'Atiqot* 7: 1-12.
- Ben-Tor, A. 1975. *Two Burial Caves of the Proto-Urban Period at Azor, 1971. The First Season of Excavations at Tel Yarmuth, 1970*. (Qedem 1), Jerusalem: The Hebrew University.
- Bliss, F.J. and Macalister, R.A.S. 1902. *Excavations in Palestine During the Years 1898-1900*. London: Palestine Exploration Fund.
- Dajani, R. 1968. An EB-MB Burial from Amman. *ADAJ* 12-13: 68-69.
- Dever, W.G. 1971. People of Palestine in the Middle Bronze I Period. *HTR* 64(2): 197-226.
- _____. 1973. The EB IV-MB I Horizon in Transjordan and Southern Palestine. *BASOR* 210: 37-63.
- _____. 1980. New Vistas on the EB IV ("MBI") Horizon in Syria-Palestine. *BASOR* 237: 35-64.
- De Miroschedji, P. 2000. An Early Bronze Age III Pottery Sequence for Southern Israel. Pp. 315-345 in G. Philip and D. Baird (eds.), *Ceramic and Change in the Early Bronze Age Southern Levant*. (Levantine Archaeology 2), Sheffield: Sheffield Academic Press.
- Hadidi, A. 1982. An EB-MB Tomb at Jebel Jofeh in Amman. *ADAJ* 26: 283-286.
- Helms, S. 1983. The EB IV (EB-MB) Cemetery at Tiwal esh-Sharqi, in the Jordan Valley, 1983. *ADAJ* 27: 55-85.
- _____. 1986. Excavations at Tell Umm Hammad, 1984. *Levant* 18: 25-49.
- _____. 1987. A Note on EB IV "Symbols" from Palestine/Transjordan. *Akkadica* 52: 32-34.
- _____. 1989. An EB IV Pottery Repertoire at Amman, Jordan. *BASOR* 273: 17-36.
- Helms, S. and McCreery, D.W. 1988. Rescue Excavations at Umm el-Bighal. The Pottery. *ADAJ* 32: 319-347.
- Herr, L.G. 2002. The Pottery. Pp. 135-155 in L.G. Herr et al. (eds.), *Madaba Plains Project 5: The 1994 Season at Tall al-'Umayri and Subsequent Studies* (Madaba Plains Project Series 5). Berrien Spring MI: Andrews University Publications.
- Ibrahim, M. and Qadi, N. 1995. El-Musheirfeh 'Schnellar' Tombs. An Intermediate Bronze Age Cemetery. Pp. 81-102 in S. Bourke and J.P. Descœudres (eds.), *Trade, contact, and the Movement of Peoples in the Eastern Mediterranean, Studies in Honour of J. Basil Hennessy* (Mediterranean Archaeology Supplementum 3). Sydney: Meditarch.
- Kenyon, K.M. 1960. *Excavations at Jericho I. The Tombs Excavated in 1952-1954*. London: The British School of Archaeology in Jerusalem.
- Marquet-Krause, J. 1949. *Les fouilles de 'Ay (et-Tell) 1933-1935. La résurrection d'une grande cité biblique* (Bibliothèque Archéologique et Historique XLV). Paris: Geuthner.
- Nigro, L. 1996-1997. Gerico: le origini della città in Palestina. Caratteri originali, sviluppo e crisi della prima urbanizzazione palestinese nel III millennio a.C.: il caso di Tell es-Sultan. *Atti della Pontificia Accademia Romana di Archeologia. Serie III, Rendiconti* LXIX: 187-218.
- _____. 1999. Sei corredi tombali del Bronzo Antico IV dalla necropoli di Gerico ai Musei Vaticani. *Bollettino dei Monumenti Musei e Gallerie Pontificie* 19: 5-52.
- _____. 2003. Tell es-Sultan in the Early Bronze Age IV (2300-2000 BC.). Settlement Vs Necropolis - A Stratigraphic Periodization. *CMAO* IX: 121-158.
- _____. 2009. Khirbat al-Batrāwī: a Case-Study of Third Millennium BC Early Urbanism in North-Central Jordan. Pp. 657-677 in F. al-Khaysheh (ed.), *Studies in the History and Archaeology of Jordan X*. Amman: Department of Antiquities of Jordan.
- _____. 2010a. *In the Palace of the Copper Axes. Khirbet al-Batrāwī: the discovery of a forgotten city of the III millennium BC in Jordan/Nel Palazzo delle Asce di Rame. Khirbet al-Batrāwī: la scoperta di una città dimenticata del III millennio a.C. in Giordania* (Rome «La Sapienza» Studies on the Archaeology of Palestine and Transjordan/Colour Monographs I). Rome: «La Sapienza» Expedition to Palestine and Jordan.
- _____. 2010b. Between the Desert and the Jordan: Early Urbanization in the Upper Wadi az-Zarqa - the EB

- II-III fortified town of Khirbet al-Batrawy. Pp. 431-458, Vol. 2, in P. Matthiae *et al.* (eds.), 6 *ICAANE. Proceedings of the 6th International Congress of the Archaeology of the Ancient Near East. 5 May – 10 May 2008, "Sapienza", Università di Roma*. Wiesbaden: Harrassowitz.
- Nigro, L. (ed.). 2006. *Khirbet al-Batrawy. An Early Bronze Age Fortified Town in North-Central Jordan. Preliminary Report of the First Season of Excavations (2005)*. (Rome «La Sapienza» Studies on the Archaeology of Palestine & Transjordan, 3), Rome: «La Sapienza» Expedition to Palestine and Jordan.
- _____. 2008. *Khirbet al-Batrawy II. The EB II city-gate, the EB II-III fortifications, the EB II-III temple. Preliminary report of the second (2006) and third (2007) seasons of excavations*. (Rome «La Sapienza» Studies on the Archaeology of Palestine and Transjordan, 6), Rome: «La Sapienza» Expedition to Palestine and Jordan.
- Palumbo, G. 1990. *The Early Bronze Age IV in the Southern Levant. Settlement Patterns, Economy and Material Culture of a «Dark Age»*. (Contributi e Materiali di Archeologia Orientale III), Roma: Università degli Studi di Roma «La Sapienza».
- _____. 2001. The Early Bronze IV. Pp. 233-269 in B. MacDonald, R. Adams and P. Bienkowski (eds.), *The Archaeology of Jordan*. Sheffield: Sheffield Academic Press.
- _____. 2008. The Early Bronze IV. Pp. 227-262 in R. Adams (ed.), *Jordan: an Archaeological Reader*. London: Equinox Books.
- Palumbo, G. *et al.* 1996. The Wadi az-Zarqa'/Wadi ad-Dulayl Excavations and Survey Project: Report on the October-November 1993 Fieldwork Season. *ADAJ* 40: 375-421.
- Palumbo, G. and Peterman, G. 1993. Early Bronze Age IV Ceramic Regionalism in Central Jordan. *BASOR* 289: 23-32.
- Prag, K. 1974. The Intermediate Early Bronze-Middle Bronze Age: an Interpretation of the Evidence from Transjordan, Syria and Lebanon. *Levant* 6: 69-116.
- _____. 1988. Kilns of the Intermediate Early Bronze-Middle Bronze Age at Tell Iktanu. Preliminary Report, 1987 Season. *ADAJ* 32: 59-72.
- _____. 1995. The 'Built Tomb' of the Intermediate Early-Middle Bronze Age at Beirawi, Jordan. Pp 103-113 in S. Bourke and J.P. Descœudres (eds.), *Trade, Contact, and the Movement of Peoples in the Eastern Mediterranean, Studies in Honour of J. Basil Hennesy* (Mediterranean Archaeology Supplementum 3). Sydney: Meditarch.
- Richard, S. 2000. Chronology vs. Regionalism in the Early Bronze IV. Pp. 399-415 in L. E. Stager, J. A. Green and M. D. Coogan (eds.), *The Archaeology of Jordan and Beyond: Essays in Honor of James H. Sauer*. (Studies in the Archaeology and History of the Levant 1), Winona Lake, In: Eisenbrauns.
- _____. 2010. The Area C Early Bronze IV Ceramic Assemblage. Pp. 69-111 in S. Richard *et al.* (eds.), *Khirbat Iskandar. Final Report on the Early Bronze IV Area C "Gateway" and Cemeteries*. (ASOR Archaeological Reports), Boston: American Schools of Oriental Research.
- Richard, S. and Long, J.C. 2010. Summary and Conclusions. Pp. 271-279 in S. Richard *et al.* (eds.), *Khirbat Iskandar. Final Report on the Early Bronze IV Area C "Gateway" and Cemeteries*. (ASOR Archaeological Reports), Boston: American Schools of Oriental Research.
- Sala, M. 2006. Pottery from the Batrawy IV Village. Pp. 103-108 in L. Nigro (ed.) *Khirbet al-Batrawy. An Early Bronze Age Fortified Town in North-Central Jordan. Preliminary Report of the First Season of Excavations (2005)*. (Rome «La Sapienza» Studies on the Archaeology of Palestine and Transjordan, 3), Rome: «La Sapienza» Expedition to Palestine and Jordan.
- Sellin, E. and Watzinger, C. 1913. *Jericho. Die Ergebnisse der Ausgrabungen*. (Wissenschaftliche Veröffentlichung der Deutschen Orient-Gesellschaft 22), Leipzig: Deutsche Orient-Gesellschaft.
- Suleiman, E. 1985. An EB/MB Tomb at Tla' el-'Ali. *ADAJ* 29: 179-180.
- Tubb, J.N. 1985. Excavations in the Early Bronze Age Cemetery of Tiwal esh-Sharqi: a Preliminary Report. *ADAJ* 29: 115-130.
- _____. 1990. *Excavations at the Early Bronze Age Cemetery of Tiwal esh-Sharqi*. London: The British Museum Publications.
- Tufnell, O. *et al.* 1958. *Lachish IV (Tell ed-Duweir). The Bronze Age*. London: Oxford University Press.
- Waheeb, M. and Palumbo, G. 1993. Salvage Excavations at the Bronze Age Cemetery near Tell el-'Umeiri. *ADAJ* 37: 147-163.
- Waheeb, M., Palumbo, G. and Abu Abileh, M. 1994. Salvage Excavations at the Bronze Age Cemetery of Khirbet Umm Zaytuna, Wadi Kufrenjeh. *ADAJ* 38: 63-73.
- Zayadine, F. 1978. An EB-MB Bilobate Tomb at Amman. Pp. 59-66 in P.R.S. Moorey and P.J. Parr (eds.), *Archaeology in the Levant: Essays in Honor of Kathleen M. Kenyon*. Warminster: Aris and Phillips.