Susanne Kerner
Kemer@hum.ku.dk

Susanne Kerner

The Ritual Landscape of Murayghāt: The Excavation

Introduction

The Ritual Landscape of Murayghāt project studies the area of Murayghāt, situated in central Jordan close to Mādabā. The project consists out of two main components, the landscape study and an excavation. At the same time it is also a field-school of Copenhagen University and a salvage project.

The large dolmen site of Murayghāt has been known for many years and was mentioned by several early travellers (Irby and Mangles 1985: 465-66; Conder 1889: 184). Later visitors reported Chalcolithic as well as Early Bronze Age pottery there and made some surveys in the area (Mallon, Koeppel and Neuville 1934; Harrison 1997; Dubis and Savage 2001; Savage and Rollefson 2001; Savage and Metzger 2002; Savage 2010). Three quarries in the direct neighbourhood of the site are still expanding and threaten the dolmens (Savage 2010; Scheltema 2008). This danger has subsided slightly, as the Department of Antiquities and the Jordan Government have bought the dolmen fields west of the central knoll. A large number of dolmens have, however, already disappeared. Other disturbances were caused by both agricultural and pastoral activities on and around the central knoll. The Ritual Landscape of Murayghāt is thus also a salvage project that will document as much of these unique monuments as possible. Projects concerning cultural heritage management have only been planned on a small scale so far, but will play a larger role during the continuation of the project.

The Site

The site is formed by the central knoll (Area 1; FIG. 1) that is surrounded by low hills to the north (Area 3), west (Area 4) and southwest (Area 5 and Area 6). A road east of the knoll separates it from a field that runs towards the steep sides of Wādī Mā'īn. This field (Area 7) contains some rather large dolmen and continues northwards until the *ḥajar al-Mansūb*, a large standing stone, *ca.* 1km from the centre of the central knoll; the stone has been mentioned in all earlier reports of the site. The northern hill (Area 3) is nearly eaten up by the northern quarry, but these activities that also threatened the south-western hill (Area 5) have stopped

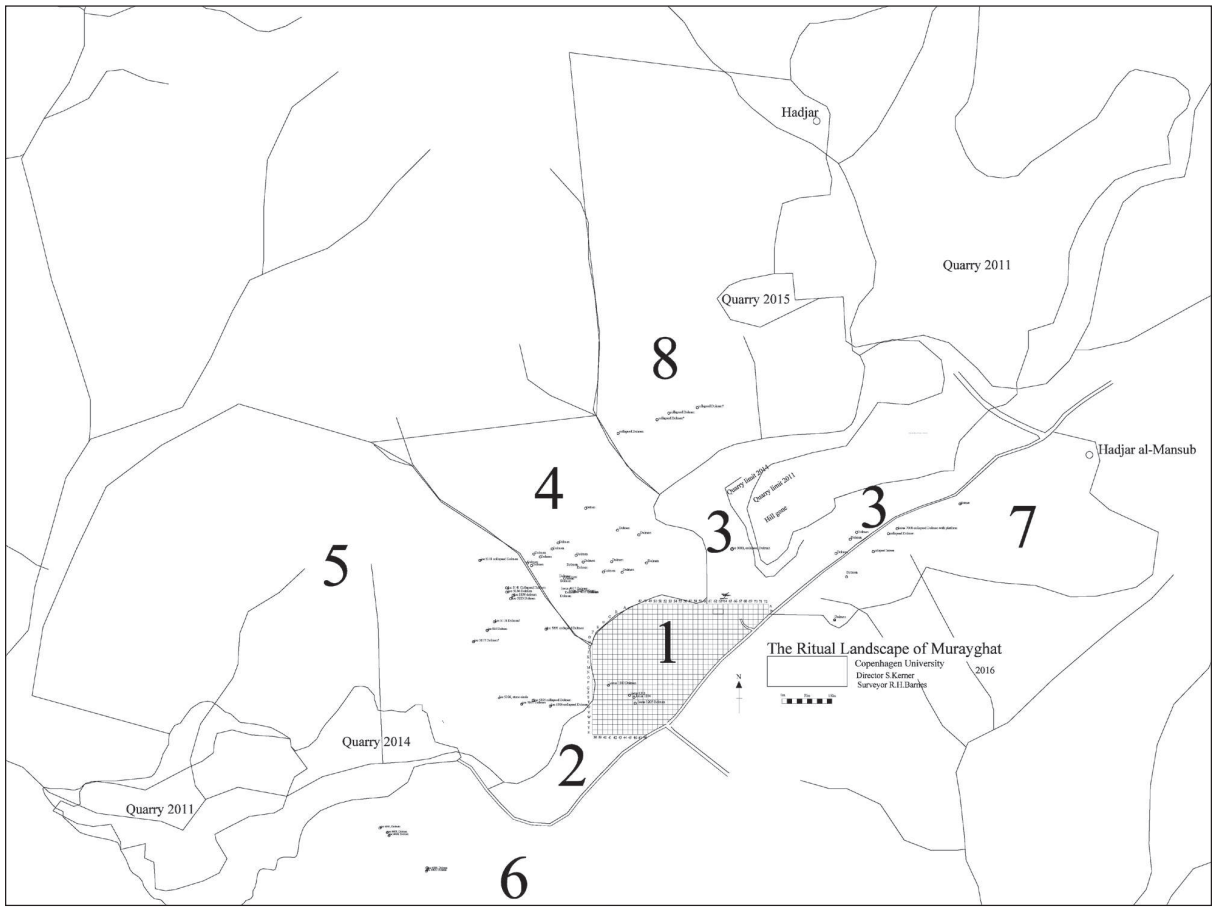
in 2015, resulting only in natural erosion. The quarries still work to the west and the south. Along the road (in Area 3 and 7) are some broken down dolmen; according to the information by the local population, some of these have been blown up during the last decades. Some disturbance is thus still continuing in area 6 and 8. The modern road might well indicate that Murayghāt had always been at an important position, where the entrance towards the Wādī Mā'īn and thus the Jordan valley was possible.

The Survey

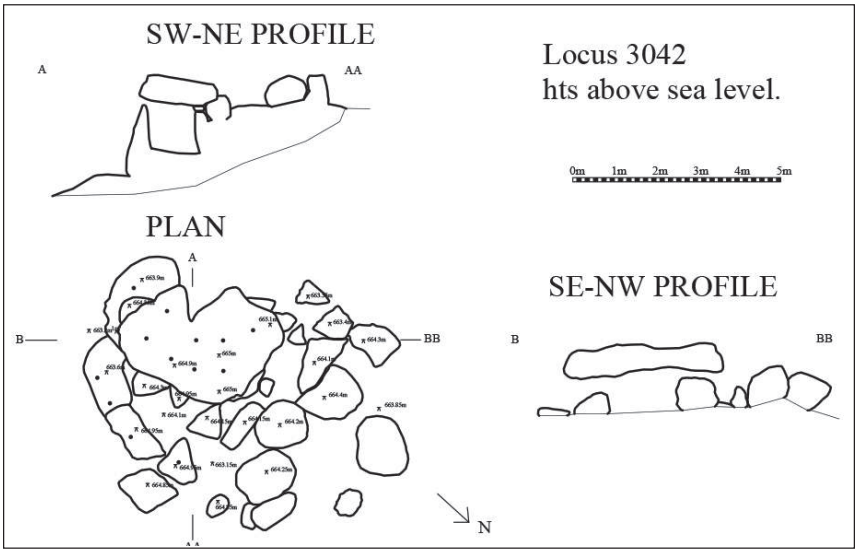
The systematic survey of the surrounding of the central knoll has been carried out in five different areas (delimited by natural and cultural borders such as wadis or roads). Each has been subdivided into fields, which were systematically surveyed and all cultural structures were documented.

Area 3

Area 3 is the smallest of the survey areas (FIG. 1), just north of area 1 and occupying the remains of the hill around the northern quarry. Several stone concentrations have been found there, some might be destroyed dolmens, but some could also be the result of the neighbouring quarry activities, which would have rolled large stone boulders over the top. Four small caves have been found, which are all relatively small and might have been artificially cut. Four dolmens have been documented and the largest dolmens are positioned along the road (L.3042, L.3043, L.3044), so on the lower slope of area 3. Only L.3042, with 14sqm a large example (FIG. 2), was well preserved with its roof-stone still *in situ*, while the broken down side-stone slabs are the last remains visible from L.3043 and L.3044. In the eastern fields L.3000 and L. 3010, also on lower ground, numerous cup-marks were found.



1. Map showing all areas in Murayghāt (H. Barnes).



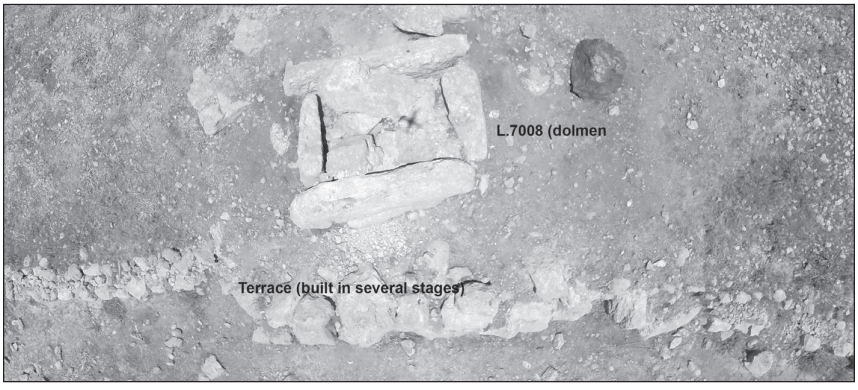
2. A large dolmen in area 3 (L.3042) – (H. Barnes).

Area 7

Area 7 is situated east of the modern road and contains some of the largest dolmen of the area. One of the dolmens is further downslope towards the steep Wādī Zarqā' Mā'īn, and does not allow any line of sight to the central knoll of Murayghāt (and is rather singular in this). five dolmens have been found, of which only L. 7001 is complete, while all others are collapsed (L.7002, L.7004, L.7005, L.7006). the outmost north-eastern corner of area 7 is formed by *ḥajar al-Mansūb* (L.7007, scheltema 2008; savage 2010), the large standing stone widely visible. one other large stone, either being originally part of a dolmen or a former standing stone, was also documented (L.7003). the dolmen in area 7 are clearly built on artificially formed terraces, as can be seen for L. 7008 (FIG. 3). the eastern part of area 7, sloping into the Wādī Ma'īn will be surveyed in the next years.

Area 4 and 5

Area 4 and 5 are to the west of the central knoll and can be divided into a number of geographical or geological zones: a ploughed field at the bottom of the eastern slope and steep slopes toward Wādī Murayghāt as well as steep slopes to the side wadis. One of the side *wadis* divides area 4 and 5 from each other. The lower parts of the steep slopes are only partly covered with soil, from which the steep bedrock layer rises up as a cliff (up to *ca.* 10-15m) to the lowest rock terrace at mid-slope, which is formed by slightly less hard rock formations. There are several rock terraces forming the slope of both areas up to the hilltop, some might have been artificially enhanced. The survey fields were



3. Area 7: Dolmen L. 7008 on artificial terrace (photo distorted) - (S. Kerner).

usually arranged along these geographical formations. The Murayghāt project has counted over 90 dolmens here, of which 23 dolmen are complete and *in situ* or only very slightly disturbed, while 55 of them are collapsed, but can quite certainly be considered dolmen. In area 4, twelve dolmens have been documented completely, while the remaining ones have only been registered. These 12 dolmens are mostly arranged along the terraces.

Central Knoll

The central knoll encloses *ca.* 3.5 ha and is limited in the west by Wādī Murayghāt (flowing into the Wādī Mā'īn) and in the east and south-east by the street towards Wādī Mā'īn. The northern edge of the knoll is limited by an artificial rubble wall, formed by bulldozing activities since the 1970s. The knoll itself consists of hard limestone bedrock, a material that breaks in relatively straight slabs, easy to use for the construction of dolmen without the need of much further work, with some slightly less hard limestone overlaying it.

A net of 10×10m squares was laid over the site and *ca.* 40% have been surveyed, documenting the visible bedrock, lines of standing stones, cup-marks and assembling surface collections. The central knoll shows two possible circular alignments on the highest point on the bedrock (O-P/50-51). From there a good view is provided to the surrounding areas, almost all dolmen on the hills (area 3, 4, 5, 6 and 7) would have been visible from that point, or better that point would have been visible from nearly all dolmens on the surrounding hills (kerner 2017). The *ḥajar al-Mansūb*, however, is not visible from that location. Other structures on the central knoll are four large horse-shoe shaped arrangements, of which HS1 (P-Q/47-48), HS2 (I-J/55-56) and HS4 (F-H/54-55) appear on the northwestern and southwestern side of the central knoll. Only HS 3 is on the northeastern side of the knoll (E/61-61) and thus directed towards the larger dolmen along the modern road. the dating of HS3 is very uncertain, it might be a much later construct used as an animal pen. Another very large horseshoe-shape (HS5) just south of hs4 was recognised in the geo-magnetic survey carried out in 2015 (only small parts of it are visible on the surface).

Several rectangular structures have also been documented. The R2 (F51) and R3 (J/50–51) are again on the western side of the central knoll on the flatter area outside the immediately visible bedrock. They are built from smaller stones and on flat, even ground. The R1 is built from large standing stones and on the bedrock east of the hilltop (H57). The south and west of the central site is delimited by a wall which has for most parts an interior and exterior face. On the eastern slope of the central knoll are two other double walls visible forming an entrance-like structure (L57 and K58), while the western slope again has an entrance like structure, where two larger standing stones form a gap in a longer wall made from orthostats (O49).

Three possible dolmen are inside the surrounding wall, one well preserved dolmen is south of the wall. The latter has *ca.* a dozen cup-marks on the top of the roofing stone. Over 40 cup-holes have been documented; there is a concentration of them along the edge of Wādī Murayghāt, where in some cases groups of five or more have been found (FIG. 4)[1]. They are usually around 15 to 20cm in diameter and of differing depth (up to 60 cm deep, although most are shallower).

The survey on the site showed very fragmented pottery material dating mostly into the MBA and EBA, but with some material from the Late Antique and Islamic periods. The squares from E-H/53-56 produced stone tools of Neolithic origin, while the other surveyed areas brought a mix of MBA and EBA material.

1. Their function is still not entirely clear as several of them do not look like the typical more shallow mortar or even grinding facilities as described *e.g.* by van den Brink (2008).

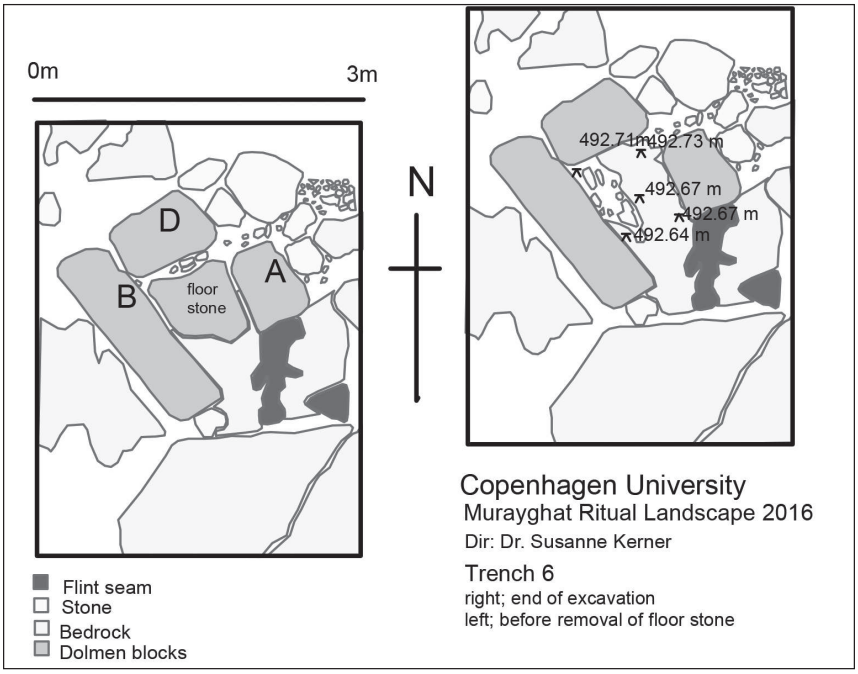
4. Example of cup-marks on western edge of central knoll (S. Kerner).

Dolmen Excavation

Only one dolmen has been excavated so far. The specimen was a broken dolmen, situated in area 1, on the actual central knoll (FIG. 5). A group of possibly three dolmens, two being very ruined and therefore not clear in their portrayal as dolmen, existed south of the central circles. The dolmen L. 1205 (Trench 6) was standing but incomplete, which allowed easy access. The side-stones enfolded the floor-stone very tightly, causing considerable difficulties, when the floor-stone was removed with the side-stones still standing. Smaller stones were used to wedge the larger ones in place. EB I material was found in the fill layers, as well as some finger bones.

Dolmen in Murayghāt

All together 122 dolmen have been recorded, but not all have been documented in detail. The dolmen are mostly consisting of one side-stone slab (sometimes two), one capstone and a floor-stone.They can be built on a platform and some show the last remains of a surrounding circle.



5. Trench 6: dolmen excavation (L. 1205) (H. Barnes).

The dolmen in Murayghāt occur mostly in two different sizes, they are either 2-3m long or longer than 4.5m, the latter forming the exception.

All dolmen studied so far have been empty, and most of them, even the still standing ones, are in a state of disorder that does not allow a secure interpretation of front or back. It is therefore very difficult to make decisive statements about the orientation of the dolmen. The dolmens in Murayghāt in their majority point towards the centre of the site, but not all follow this rule. The direction of the dolmen opening, as far as that can be determined, is also every so often governed by the location of the dolmen on the terraces along the hill slopes.

Excavations

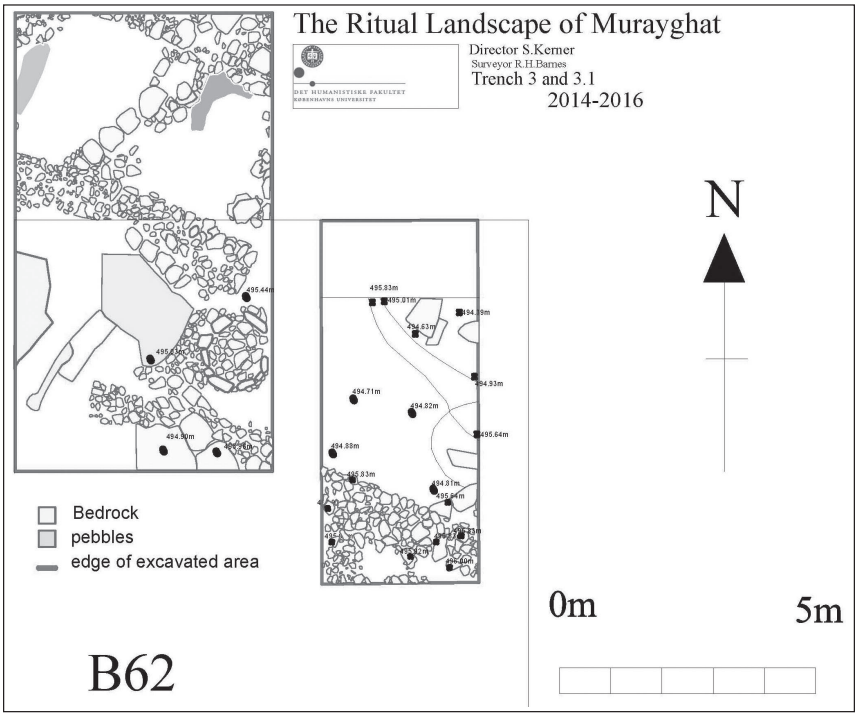
Five other trenches have been laid out on the central knoll itself and in its direct surrounding. The **Trenches 1** (O49) and **2** (N49) were each *ca.* 30 square meter and on the top of the central knoll, close to two lines of standing stones. Regrettably work on those trenches had to be stopped after only seven days; it was thus only possible to uncover surfaces of cobbled stones and a potential wall (Kerner *et al.* 2017).

Trench 3 and 3.2 (A62/B62) have been opened with just over 50m^2 and led to the excavation of some late Antique, very scant remains in the uppermost layers, several, but disconnected layers of Middle Bronze Age material and some Early Bronze Age remains before the virgin soil.

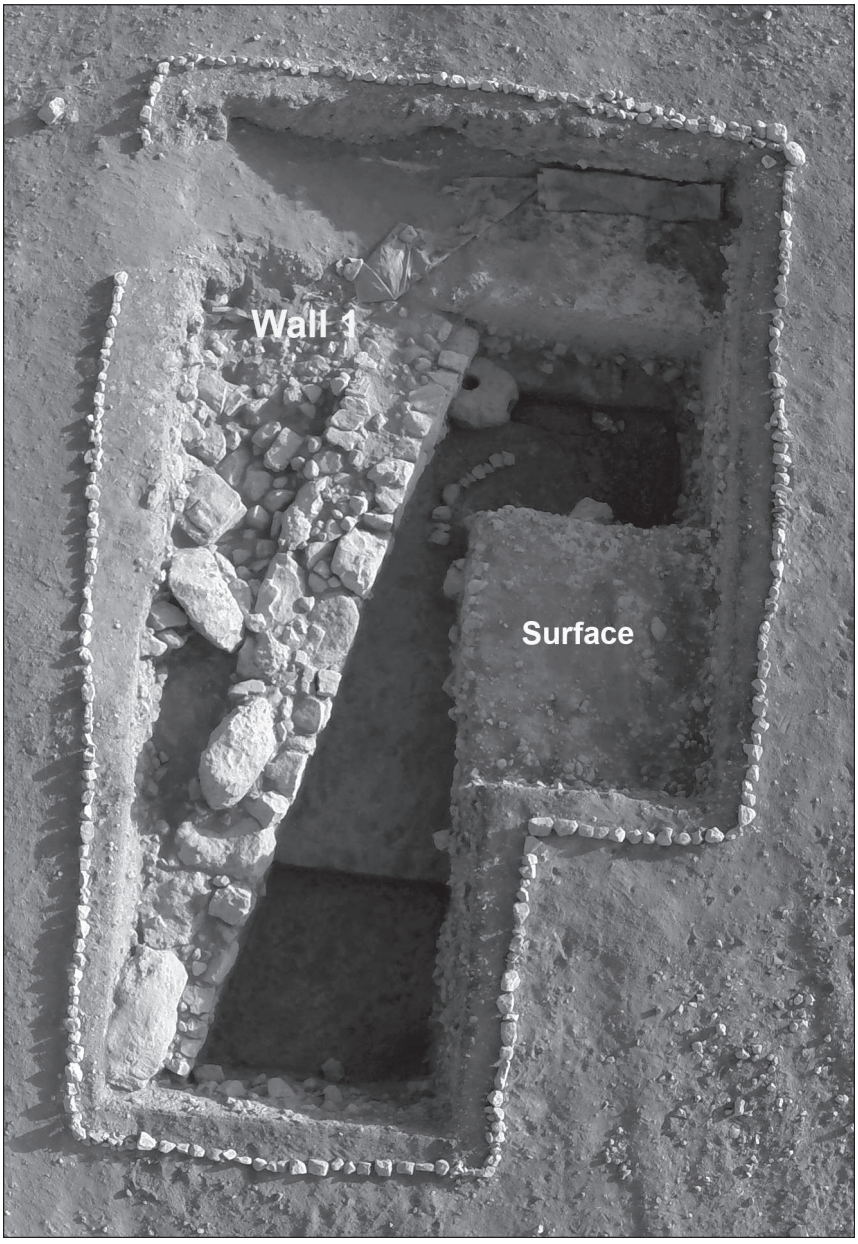
The latest MBA wall (wall 7, L.1457) consists of middle-sized and larger stones (FIG. 6), held together with a clayish matrix. The whole wall leans slightly, but appears solid and was excavated up to 1.2m height. The fill north of the walls was partly ashy, also including ashy pits. Smaller walls from different MBA phases filled large parts of the trench (FIG.7), partly connected by a surface, which was more an open air surface than an inside floor. One very well preserved stone lined pit is part of the earliest MBA occupation.

The EBA material, consisting of pottery and stone-tools, the former in a very fragmented state, appeared in fill layers without any architectural association.

Trench 4 and 4.2 (B63/C63) has been excavated since 2014 with an entire size of just under 50 m^2. Again a very late, large wall was



6. Plan of Trench 3 and 3.2 (combination of excavation results 2014-16) with small scale walls and stone-lined pit (H. Barnes).



7. Aerial Photo of Trench 4 and 4.2 (2016 photo distorted) – (S. Kerner).

found directly under the surface, followed by a very broken, grey crust (L. 1338, L.1308, L.1330 and L.1321) covering both a large wall (wall 1), a clayish, nearly sterile layer, which gave the impression of being flooded in, and several fill layers. The fill layers both above and below the crust dated to the MBA (FIG. 7).

Underneath Wall 1 was a very large limestone block situated (L. 1360 at least 65×55cm) with one hole each on top and in the front. The top-hole is flat bottomed and has straight walls (a post-hole?), while the one in the front is more in the shape of a cup-hole with narrowing walls.

The large double-faced Wall 1 (L.1307) is made of mostly large natural boulders and a few squared blocks with a smaller rubble core. In the eastern face of the wall, which is the only face exposed so far, there is mostly only one course remaining, though in places there are two courses. Interestingly, this east face is quite straight and relatively flat-faced, as if stones had been chosen carefully because this face of the wall was intended to be visible. In contrast, the top of the west face being just visible, is

not very straight and there does not seem to be any attempt to create a flat face. Only one long stone stretches across the whole width of the wall, otherwise it is a double-faced wall. There are small stones between the boulders, and presumably some sort of mud mortar to fill the gaps.

Discussion

Although a dating of the dolmen in Murayghāt still proves very difficult, due to the robbed out state of the structures, an Early Bronze Age date can be assumed. The indications are the dates for other trilithon dolmen (Fraser 2015; Polcaro 2013; Polcaro *et al.* 2014), the scant indications from the excavated dolmen L. 1205 and the existence of EBA layers in the excavations. There are strong indications for a connection between 4th Millennium BC sites and dolmen fields (Fraser 2015; Prag 1995). The interesting fact of a strong MBA re-use of the site might be closely connected to the dolmen fields. One has to realise that the dolmen, once they were constructed, would have changed the landscape forever. While humans shape landscape, landscape also effects humans; objects and subjects constitute each other (Thomas 1996). With such landscaping the people also made statements about their presence, leaving an imprint on the land. The dolmen fields around Mount Nebo also point towards both a connection between an EB I settlement (Conder's circle) and a later re-use, when several of the smaller circular structures were built (Mortensen and Thuesen 1998; Thuesen 2009). The dolmen are on ground that would not have been useable for agriculture, *e.g.* nearly the entire area 2 in Murayghāt, still used today for growing wheat, is free of dolmen[2].

The excavations have not yet provided an extensive Early Bronze Age settlement, which might be expected to have existed with the dolmen. The character of the Middle Bronze Age occupation as excavated so far, indicates an area intensively used for cooking, preparing and possibly storing of food (the most common single pottery form is a cooking pot) without being necessarily domestic (FIG. 9). The walls do not form private dwellings, they have far more the character of demarcation walls and possibly larger structures (with upper walls made from different material than stone).

Summary

The settlement activities in Murayghāt might start during the PPNB indicated by a concentration of stone tools found on the western part of the central knoll. The main activity periods on the central knoll and in the excavation are the Early and Middle Bronze Age, the latter with mostly domestic activities. The dolmen date most probably into the EBA period. There are Late Antique activities on the site, very likely connected to the use of several caves as tombs; and a later re-use in the Mamluk/Ottoman period, which is substantiated by a small amount of pottery and pipe fragments on the central knoll.

Bibliography

Conder, C. R. 1889. *The Survey of Eastern Palestine: Memoirs of the Topography, Orography, Hydrography, Archaeology*, *etc*. Vol. I: The Adwân Country: London.

Dubis, E. and Savage, S.H. 2001. Moab Archaeological Resource Survey: The Dolmen Field at al-Murayghât. *Archeologia* 52: 91.

Harrison, T.P. 1997. Shifting Patterns of Settlement in the Highlands of Central Jordan during the Early Bronze Age. *BASOR* 306: 1–37.

Irby, C.L. and Mangles, J. 1985. *Travels in Egypt and Nubia, Syria and Asia Minor during the Years 1817 and 1818*. London: Darf.

Kerner, S., Barnes, R.H., Flender, M., Ruben, I. and Andersson, A. 2017. The 2014 Season in the "Ritual Landscape of Murayghat" Project. *ADAJ* 58: 359-374.

Mallon, A., Koeppel, R. and Neuville, R. 1934. *Teleilat Ghassul I: Compte Rendu des fouilles de l'Institut Biblique Pontifical*: Rome.

Mortensen, P. and Thuesen, I. 1998. The Prehistoric Periods. Pp. 84-99 in M. Piccirillo and E. Alliata (eds.), *Mount Nebo. New Excavations 1967–1997*. Studium Biblicum Fransiscanum Collectio Maior 27, Jerusalem.

2. The existence of one dolmen in area 2 leads to questions of the importance of this particular dolmen.

Polcaro, A. 2013. The Stone and the Landscape: The Phenomenon of Megalithic Constructions in Jordan in the Main Historical Context of the Southern Levant at the Beginning of the 3rd Millennium BC. Pp. 127–132 in L. Bombardieri *et al.* (eds.), *SOMA 2012: Identity and Connectivity. Proceedings of the 16th Symposium on Mediterranean Archaeology*. Oxford.

Polcaro, A., Muniz, J., Alvarez, V. and Mogliazza, S. 2014. Dolmen 317 and its Hidden Burial: An Early Bronze Age I Megalithic Tomb from Jebel al-Mutawwaq (Jordan). *BASOR* 372: 1–17.

Prag, K. 1995. The Dead Sea Dolmens: Death and the Landscape. Pp. 75-84 in S. Campbell and A. Green (eds.), *Archaeology of Death in the Ancient Near East*. Oxford.

Savage, S.H. 2010. The Endangered Chalcolithic/Early Bronze Age Site at al-Murayghât-Hajr al-Mansûb. *Near Eastern Archaeology* 73-1: 32–46.

Savage, S.H. and Metzger, M. 2002. The 2001 Field Season of the Moab Archaeological Resource Survey. *ADAJ* 46: 217–236.

Savage, S.H. and Rollefson, G.O. 2001. The Moab Archaeological Resource Survey: Some Results from the 2000 Field Season. *ADAJ* 45: 217–236.

Scheltema, G. 2008. *Megalithic Jordan. An Introduction and Field Guide*: Amman.

Thomas, J. 1996. *Time, Culture and Identity: An Interpretive Archaeology*: London.

Thuesen, I. 2004. Messages in Stone: The Megaliths of the Nebo Region in Jordan. Pp. 105–117 in K. von Folsach, H. Thrane and I. Thuesen (eds.), *From Handaxe to Khan*. Aarhus.