THE MEGALITHIC LANDSCAPE AT TALL AR-RĀS IN WĀDĪ AR-RAYYĀN: THE 2007 SEASON OF THE NORTH JORDAN TOMB PROJECT [1]

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Introduction

This report presents some preliminary results of a season of fieldwork investigating megalithic monuments in Wādī ar-Rayyān (formerly Wādī al-Yābis). The wadi, which runs from the ʻAjlūn highlands to the Jordan Valley, has been known for its extensive dolmen fields ever since the area was first visited by explorers such as Schumacher (Steuernagel 1924) and Glueck (1951: 210-211). More recent surveys, however, have shown that the dolmens exist alongside other, less-obvious megalithic structures including rubble rujm cairns, standing stones, stone circles and alignments (Palumbo 1992: 52; Lovell *et al*. 2005: 192; Scheltema 2008: 69-70). Together, these monuments constitute a complex megalithic landscape that probably spans a considerable period. In order to investigate this landscape in detail, a team of ten archaeologists from the University of Sydney and Department of Antiquities spent six weeks in late 2007 surveying and excavating a field of megaliths on Tall ar-Rās, a ridgeline near the village of Kufr Abil, mid-way up Wādī ar-Rayyān (**Fig. 1**)[3]. This fieldwork forms part of the North Jordan Tomb Project (NJTP), which is an ongoing field-project developed by the principal author (JAF) as part of his postgraduate study of prehistoric megalithic monuments in the southern Levant.

Previous Research

Wādī ar-Rayyān was first systematically investigated by the Wādī al-Yābis Survey between 1987 and 1992 (Mabry and Palumbo 1988; Palumbo, Mabry and Kuijt 1990; Palumbo *et al*. 1993). Although the survey noted hundreds of dolmens throughout the wadi system, Gaetano Palumbo, in a special dolmen survey completed as part of the 1989 season, documented a particularly dense cluster of dolmens and cairns between the villages of Kufr Abil and Ḥalāwah (Palumbo, Mabry and Kuijt 1990: 111-113; Palumbo 1992)[4]. The Tall ar-Rās ridge, on the northern side of the wadi, contained the highest density of megaliths in this concentration, and was selected for re-survey by the current project as it provides a representative sample of monuments found throughout the wadi system[5]. In addition, Lovell re-visited some of the dolmen fields on the south side of the wadi near Ḥalāwah as part of her survey of the Chalcolithic and Bronze Age site of al-Khawārij (Lovell *et al*. 2005).

Environmental Setting

The headwaters of Wādī ar-Rayyān receive

1. We thank Dr Fuwwaz al-Khraysheh, Director-General of the Department of Antiquities, and his staff in the Irbid and al-Kūra Offices for their assistance during our time in the field. The fieldwork was funded by the Carlyle Greenwell Bequest and the Leonie Crawford Travel Grant (Near Eastern Archaeology Foundation), both of the University of Sydney.
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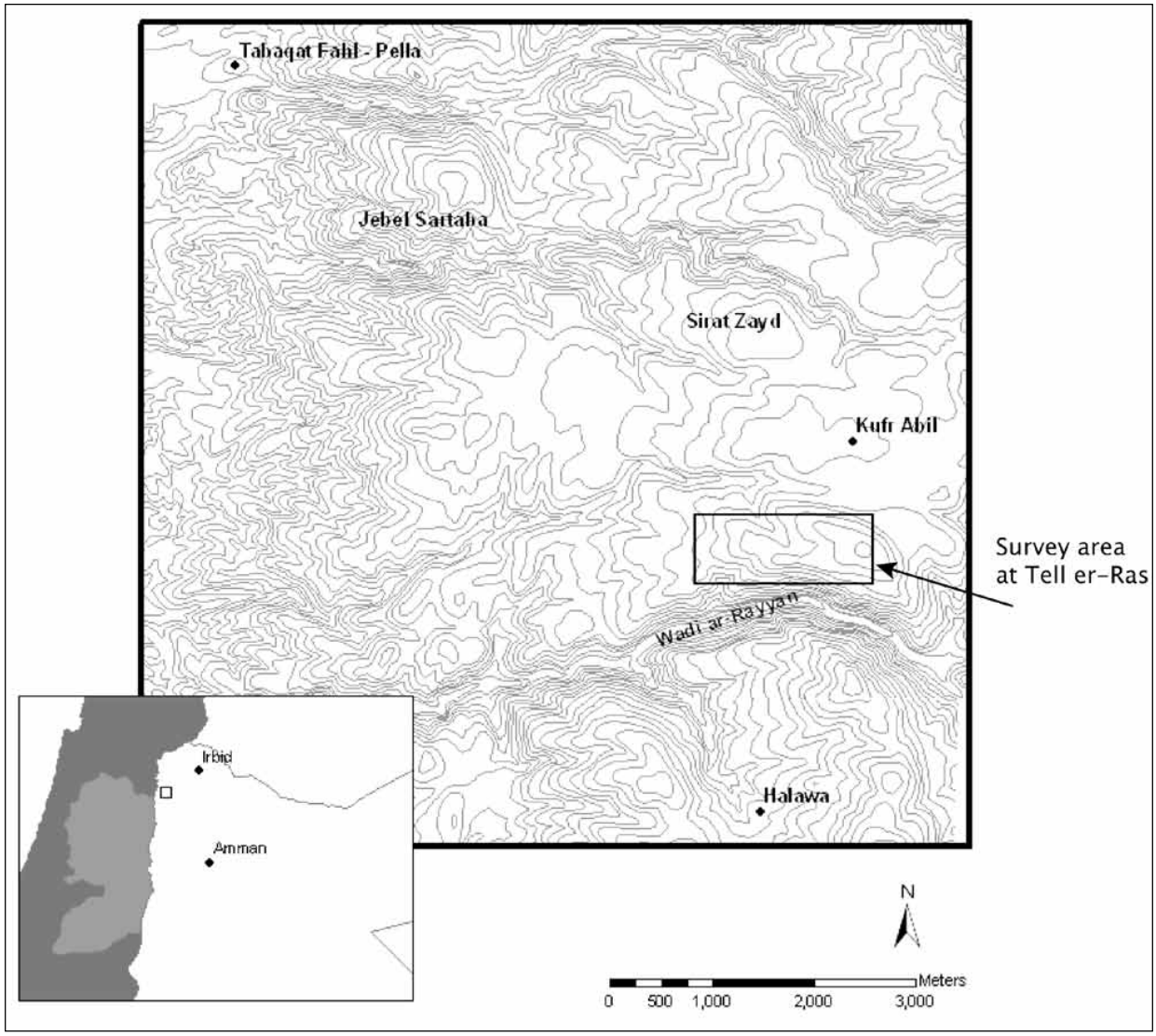
3. James Fraser (Director), Lena Beccar (Department of Antiquities Representative), Ben Anderson (Surveyor/GIS), Anne-Marie Beavis (Archaeologist), Adam Carr (Photographer), Amanda Dusting (Archaeologist), Kerrie Grant (Archaeologist), Kristen Mann (Archaeologist) and Tamara Treffiletti (Bio-Archaeologist).
4. These monuments are concentrated in several clusters that Palumbo recorded as dolmen or tumulus fields WY27, WY118, WY121, WY 133, WY134 and WY169.
5. We are grateful to Gaetano Palumbo for allowing us to continue work on the megalithic monuments in this area.



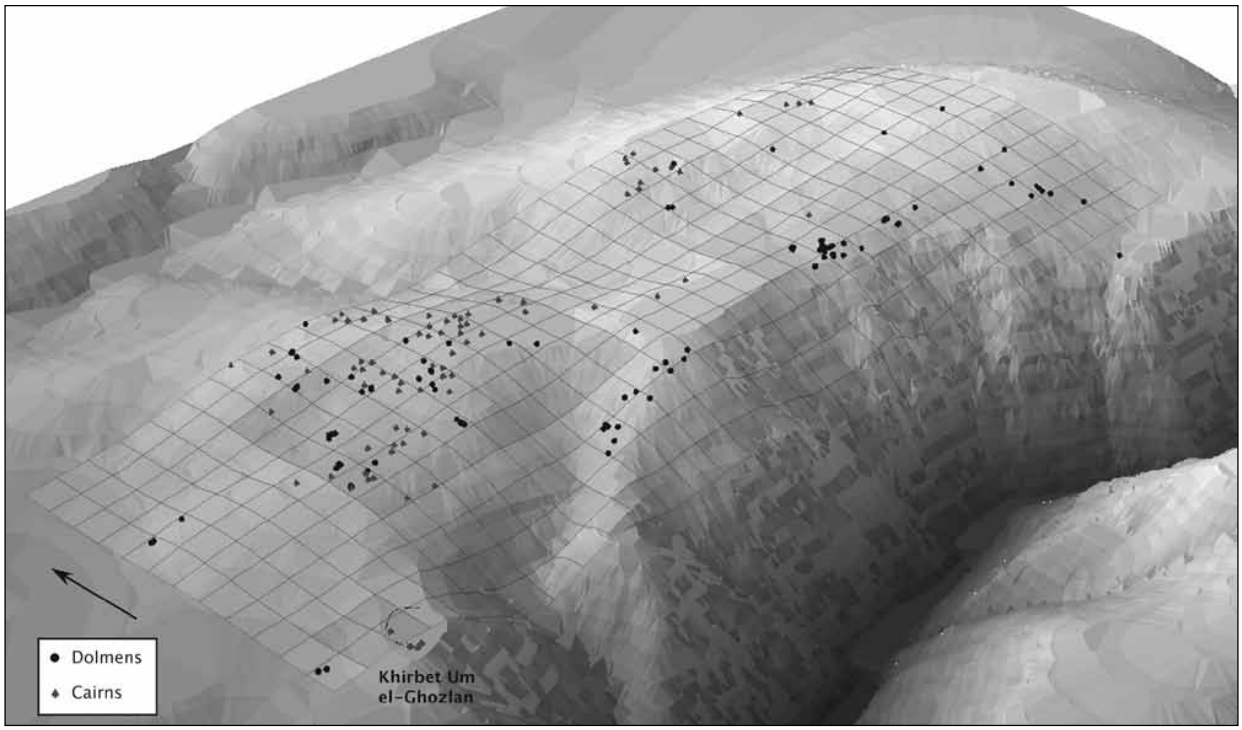
1. Map of Tall ar-Rās in Wādī ar-Rayyān.

some of the highest rainfall in Jordan, which is why the name of the wadi was changed from *yabis* ("dry") to *rayyan* ("well-watered"). The visually striking, natural ridgeline of Tall ar-Rās is found mid-way up the wadi, rising from around 350m.a.s.l. at its western end to 500m.a.s.l. at its eastern 'head' (**Fig. 1**). The ridge is part of the 'Ammān Silicified Limestone Formation and contains beds of fine, brown chert.

This area of Wādī ar-Rayyān lies within a *Mediterranean maquis* zone of open oak and scrub forest (Palumbo, Mabry and Kuijt 1990: 95). Low scrub and exposed bedrock cover the south side of the ridge, which drops sharply into the wadi. A small strip of deeper soil on the northern, gentler side of the ridge is cultivated with olive groves and fields of onion and *fūl* beans. A network of ancient field walls suggests that this area has been used for agricultural production since Classical antiquity at least.

Methodology

As shown in **Fig. 2**, the area surveyed on Tall ar-Rās extended 1.55km east-west and 0.60km north-south, the north-west corner of which was at UTM 749000E 3589050N. The survey thus covered most of the ridge-line and all the dolmen and cairn fields Palumbo identified between Kufr Abil and Wādī ar-Rayyān. The survey area was divided into 372 squares (50 x 50m), which



2. 3D image of Tall ar-Rās showing the distribution of dolmens and cairns.

were walked in 10m transects. Surface artefacts were collected in 82 squares that contained the highest densities of monuments. Over 350 features were found on the ridge using the general categories of dolmen, cairn, standing stone, wall-line and rock-cut feature (**Table 1**). Each feature was mapped using a differential GPS system, recorded on a detailed feature sheet and photographed. Select examples were drawn and, upon completion of the survey, one dolmen and six cairns were excavated.

General list of features found on Tall ar-Ras, 2007	
Dolmens:	106
Dolmen quarry sites:	15
Cairns:	
Featureless rock piles	154
Cairns with architectural features	77
Standing Stones:	3
Rock-Cut Features:	
Basins	18
Cup-Hole Sites	43
Wine-Presses	5
Gaming Boards	5
Walls	58

Dolmens

106 dolmens were recorded in the survey area and, as shown in **Fig. 2**, these clustered in three groups: on the immediate ridge-top, on the upper reaches of a spur running into the wadi, and on the upper slope of the western descent of the ridge. Most of the dolmens therefore had a clear line-of-sight to the wadi.

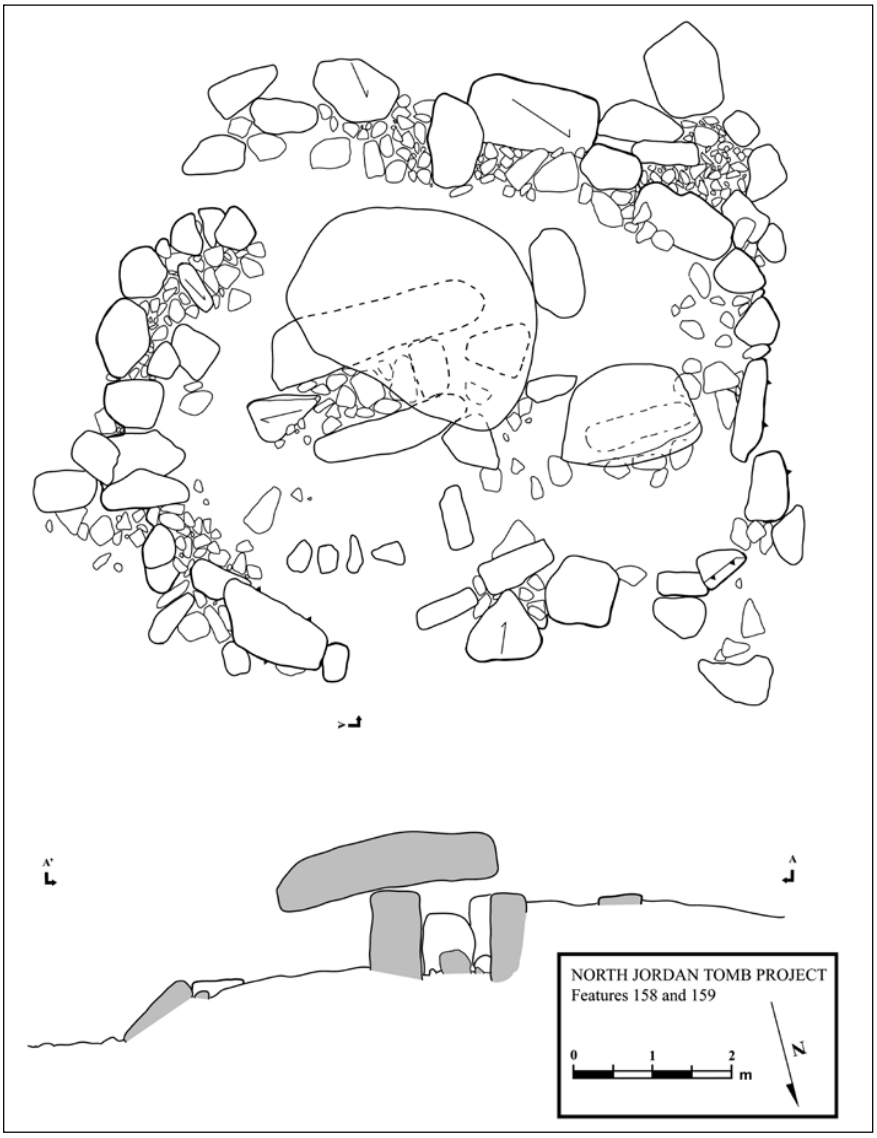
Typology

A typical dolmen at Tall ar-Rās stands 1.5m high with a roof-slab between 2 and 3m in diameter. As Palumbo has described in detail (Palumbo 1992: 46-47), all the dolmens are of the simple "trilithon" type defined by Epstein (1985), which is Type A in Zohar's revised typology (1992). Accordingly, two vertical limestone slabs were erected ca. 75cm apart, either embedded in the soil or resting on bedrock, and a larger roof-slab was placed on top to create a rectangular chamber. Smaller vertical slabs usually enclosed the chamber at one or both ends, and the base of the chamber was either lined by several rough, flat stones, or incorporated the bedrock itself.

While all the Tall ar-Rās dolmens can be classified as "trilithons", this typology focuses

upon the immediate architectural construction of each monument and fails to account for the tremendous variety of architectural features associated with most dolmens. While several dolmens were free-standing, others, for example, were surrounded by a low ring-wall, often recessed into the slope to create distinct platforms on which the dolmens stood. Ring-walls usually contained two or three dolmens, although a few enclosed four or even five (**Fig. 3**). Occasionally a rubble tumulus covered the platforms to the level of the roof-stones. While it has been suggested that all dolmens were once covered by tumuli that have subsequently been eroded (Ilan 2002), it is unlikely that the few tumulus-covered dolmens on Tall ar-Rās represent the only surviving examples. The lack of dispersed rubble around the other dolmens, combined with good preservation of large rubble cairns in the area, suggests that the few dolmens distinct for their tumulus today were equally distinct in antiquity.

These additional architectural features reflect deliberate choices made by the dolmen-builders, although their significance remains elusive. As Thuesen suggests for the Jadīdah dolmen field in the Mount Nebo region, the inclusion of several monuments within the same ring-wall or tumulus may reflect lineage or kinship structures (Thuesen 2004: 114), which may be more broadly represented in the general clustering of dolmens in groups across the ridge.



3. Plan of two dolmens within a ring-wall.

Orientation

The orientation of the chamber itself also varies between dolmens. Palumbo noted that most chambers faced between 90 and 160 degrees, and related this to the rising sun in autumn and late winter (Palumbo 1992: 58). Astronomical theories recur in discussions of dolmen orientation, and owe their currency to the orientation of nawamis in Sinai, which have been shown to relate to the setting sun during certain times of the year (Bar-Yosef *et al.* 1983). However, while nawamis have a very precise orientation, the dolmens at Tall ar-Rās span over 70 degrees and it is equally possible that they were built to align with the dominant topographic feature in the landscape, the wadi. Certainly this would account for such a broad axis, as the orientation of the dolmens gradually changes relative to the wadi across the ridge. Intriguingly, 11 dolmens — more than 10 % of the sample — were orientated between 20 and 40 degrees, perpendicular to the rest of the monuments. This marked difference emphasises the potential significance orientation may have had, and suggests that neither astronomical nor topographic explanations are definitive.

Construction

All dolmens were hewn from the local limestone, and the undersides of the roof-stones and interior sides of the orthostats were fashioned smooth. At least 15 'quarries' were found in exposed bedrock outcrops (**Fig. 4**). These features were vertical scars left in the bedrock and were of roughly the same proportions as the roof-slabs used in the dolmens themselves. They were all found slightly upslope of one or several dolmens, suggesting that the dolmen-builders manoeuvred the quarried slabs downslope into position.

One semi-complete example provides a window into this process, in which a roof-stone, partially hewn from the bedrock, was found abandoned during manufacture (**Fig. 5**). Two fractures in the bedrock had been enlarged into channels with vertical, tooled sides, and the base of the slab rested on a seam of chert, presumably targeted as another plane of weakness. The chert, more brittle than the surrounding micritic limestone, had been broken and partially removed, so that the middle of the slab was completely

5. Photograph of a partially quarried dolmen slab. Note the two grooved channels over natural fractures in the bedrock.

4. Photograph of a dolmen "quarry-site". Note the seam of flint at the base.

undercut, before, for whatever reason, the task was abandoned. If completed, the enlarged, vertical fracture-lines and the removed seam of chert would have allowed the dolmen-builders to cleave the limestone slab from the bedrock. Interestingly, as shown in **Fig. 4**, several quarry-scars also show flint seams at their base, suggesting that these seams were deliberately targeted. An analysis of these features will hopefully give us a better understanding of the techniques involved in building the dolmens, and so provide a window into the social contexts surrounding their construction, such as the amount of time taken to carve and erect the monuments, and the number of people involved.

Excavation and Dating

All the dolmens had been robbed out, most, no doubt, in antiquity. Dolmen 88, however, was targeted for excavation as only the top 30cm of the orthostats were visible above the ground and, like an unrobbed dolmen excavated at Tall al-'Umayrī (Dubis and Dabrowski 2002), its capstone had been removed making it less visible than most other dolmens. A small sounding was opened in the chamber, which yielded several human hand and foot bones, although no ceramics or worked stone were recovered. Given the presence of phalanges with both fused and unfused epiphyses, we can infer that at least one adult and one juvenile had been interred [6].

The extensive robbing makes it difficult to date the dolmens with any precision. Similarly, transect walking in the surrounding area failed to yield any significant surface material, despite the good ground visibility in autumn. Given the proximity of two late prehistoric sites, Jilmit ash-Shāriyah near the base of the wadi, and al-Khawārij[7] on the opposite slope, Palumbo suggested that the dolmens date to the late Chalcolithic-EBI period (Palumbo 1992: 59), a suggestion supported by the EBI pottery found inside the unrobbed dolmen at Tall al-'Umayrī.

The paucity of surface artefacts is surprising, as it is reasonable to assume that robbers would have discarded unwanted broken vessels and human remains around the dolmens they were robbing. The absence of sherds may be no more than a function of geomorphological processes on the ridge. It is interesting to note, however, a comment made by Gajus Scheltema who, after visiting several dozen dolmen fields in Jordan, observed that while some fields contained ample surface material, others yielded almost none (Scheltema 2008: 46). As Scheltema suggests, the difference may be cultural, which raises the possibility that some dolmens fields were used as cemeteries more frequently than others, or were not even built as cemeteries at all.

Cairns

Distribution and Typology

In his dolmen survey, Palumbo also observed an extensive cairn field on the west slope of Tall ar-Rās (site WY133), which he identified as possible tomb monuments (Palumbo 1992: 9) similar to cairn-tombs elsewhere in the region (e.g. Bradbury 2009; Fujii 2004; Greenburg 2000; Haiman 1992; Paz 2005). There are important methodological issues in defining a "cairn-monument", however, as a rubble tumulus concealing a burial may look no different than rubble piled up by a farmer to clear his fields. For our purposes, a "cairn-monument" was defined as a pile of rocks in which any sort of architectural structure was visible, such as a kerbed edge or inner wall-line. Of the 231 cairns recorded by the survey, only 77 met this criterion. While many of the remaining 154 featureless rock piles may actually be deliberately constructed monuments, their general proximity to the modern and ancient field-walls in the north of the area suggests that this distinction was, at least broadly, correct. As shown in **Fig. 2**, most of the 77 "cairn-monuments" were clustered on the uncultivated western slopes of the ridge, as Palumbo had originally noted. Without a rigorous program of excavations, it is impossible to establish the chronological relationship of all these structures, let alone determine how many cairns were actually tombs. Nevertheless, the cairns do fall into a series of basic types.

6. We thank Tamara Treffiletti, of the Australian National University, for her analysis of the human remains.
7. A sounding at Jilmit ash-Shāriyah revealed a late Chalcolithic-early EBA sequence (Palumbo, Mabry and Kuijt 1990: 109-111), while extensive excavations at al-Khawārij have exposed significant Chalcolithic occupation (Lovell *et al*. 2006, 2007).

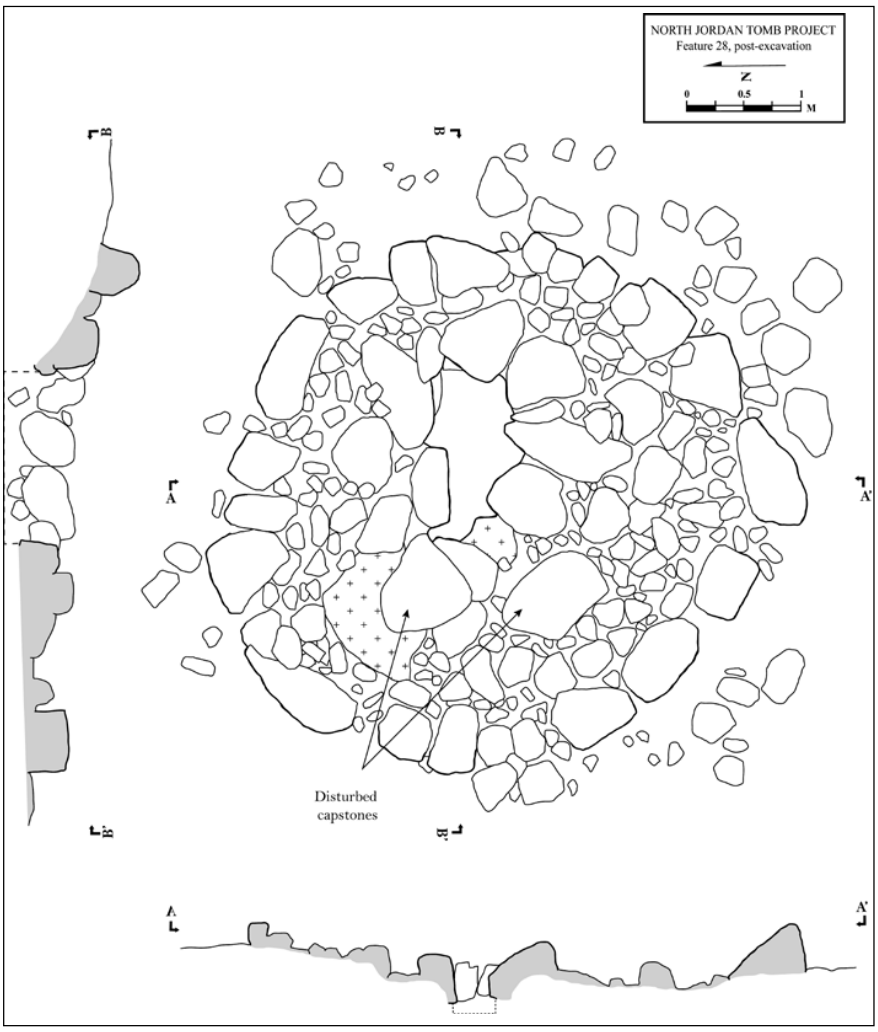
Kerbed Cairns **(Fig. 6)**

Kerbed cairns are small, circular rubble spreads around 5m in diameter and less than 0.5m high. Their defining characteristic is a ring of large boulders containing a tumulus of small and medium rocks. Few kerbed cairns were found on the Tall ar-Rās ridge, although several examples are known from the Pella hinterlands (P. Watson, pers. comm.). The best parallels for these features are found in the cairn field at Ramat Hanadiv, on the southern tip of the Carmel range, which dates to the EBII - III period based on the few artefacts recovered (Greenberg 2000).

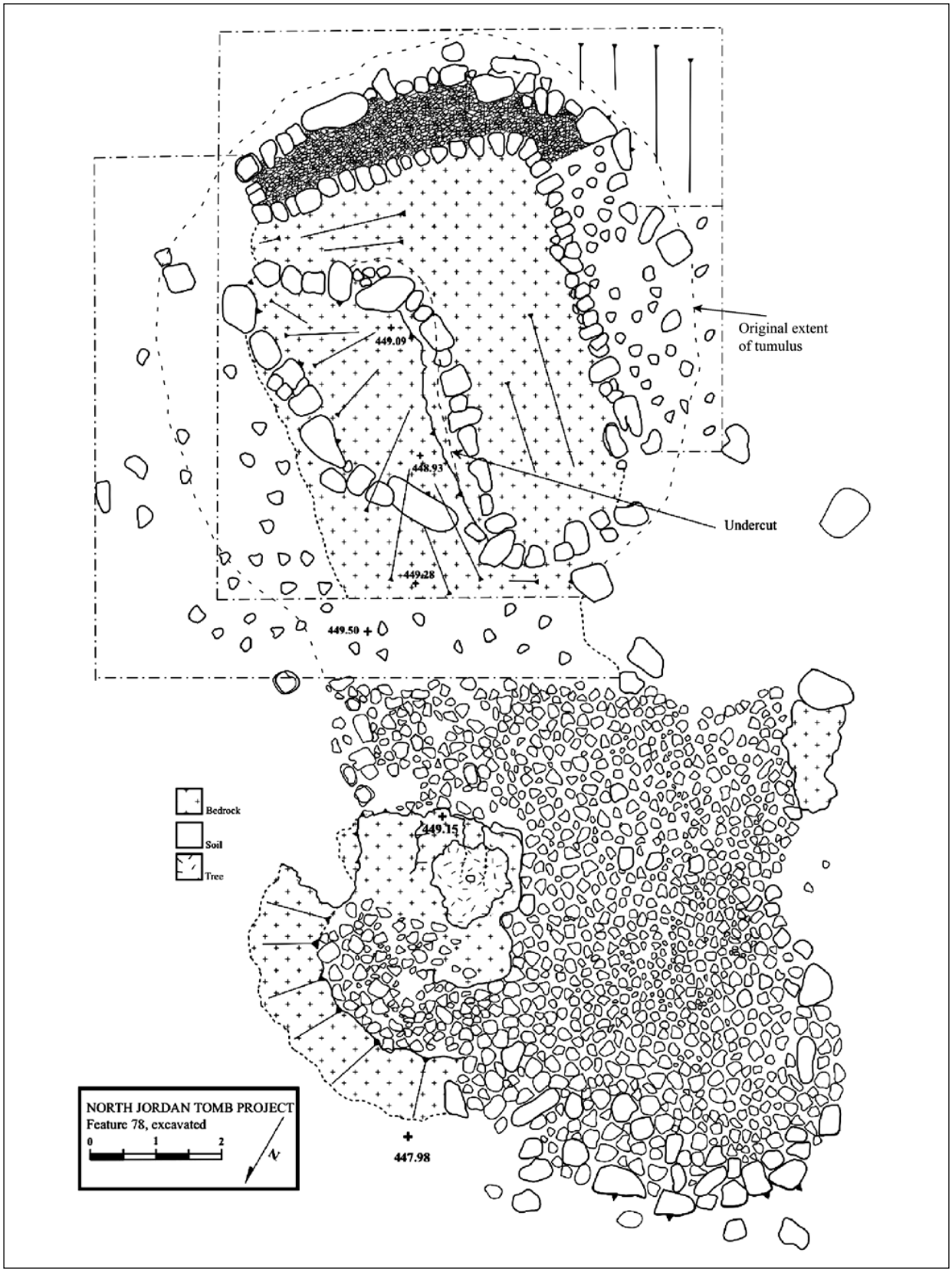
The rubble tumulus from one kerbed cairn, Cairn 28, was removed to fully expose a ring-wall of flint and limestone blocks resting on a reasonably level pavement of medium rocks and bedrock (**Fig. 6**). Several large limestone and flint rocks were set into the centre of the pavement to create a roughly rectangular chamber orientated east-west, the east end of which was marked by two upright blocks. Although several large, flat slabs once covered the chamber, these had been disturbed and so were removed when the tumulus was cleared. No base slabs or paving stones were found to mark the bottom of the chamber.

Rubble Cairns **(Figs. 7 - 11)**

The vast majority of cairns surveyed on the ridge fall into the "rubble cairn" category. These are large, amoeba-like rubble piles of small and medium rocks. While significantly larger and higher than the kerbed cairns, their size and shape vary: some are low, circular piles, but most are ovoid and can be up to 15m long, 10m wide and 2m high. Their tumuli conceal archi-



6. Plan of Kerbed Cairn 28.



7. Plan of Rubble Cairn 78.

tectural structures such as wall-lines, kerbing and cells built of medium and large limestone and flint blocks. Often a low wall, two or three courses high, defines part of the edge of these features, particularly the upper edge if the cairn was constructed on a slope. Excavations were conducted in three rubble cairns: Cairns 78, 45 and 85.

Cairn 78 **(Figs. 7 and 8)**: The rubble spread of Cairn 78 ran 14m down a gentle slope, measured 7m across at its widest point, and stood ca 0.75m high. A vague line of rocks could be seen curving around the southern, upslope end of the feature, while an L-shaped wall was visible within the tumulus itself. The removal of the upslope half of the tumulus, however, revealed a more intricate network of wall-lines. A second L-shaped wall was exposed a metre inside the curved boundary wall, referencing the inner L-shaped wall that had been visible within the tumulus and thereby creating a passage of empty space.

Curiously, the inner L-shaped wall lined the edge of a small cave that lay directly beneath the centre of the upper tumulus, and a lower, linear wall enclosed this cave on a third side, like the hypotenuse of a triangle (**Fig. 8**). Flat-lying flint blocks lined the base of the cave, although these may have been natural. No artefacts or human remains were retrieved from the cave or from the tumulus itself, and there are no obvious parallels. The feature does, however, recall a description of a cairn at Ramat Hanadiv, in which the excavator noted "an L-shaped 'construction' of large stones" that "was cleared and found to be filled with smaller stones and apparently virgin soil" (Greenberg 2000: 605).

Cairn 45 **(Fig. 9)** Cairn 45 was a similar rubble spread that ran 22m downslope, measured 9m across at its widest point, and stood ca. 0.50m high. A series of curved walls visible in the tumulus suggested a series of cells extending down the slope, possibly accreted on to each other over time, and a larger wall was visible in the tumulus still further downslope (**Fig. 9**). Given the size of the monument, it was excavated in two areas. Limited excavations in the upper, eastern end exposed an outer kerb of large limestone and flint rocks that enclosed a curved chamber. The chamber was paved with small stones set into the natural *terra rossa* soil, and was partially covered by a large boulder. In addition, a small chasm or fracture in a raised area of adjacent bedrock was joined to the chamber by a small wall.

A larger area was cleared in the lower third of the cairn, exposing a curved, double-rowed wall running against the slope. A boulder marked one end of the wall, which returned in a curve at the other. While it is unclear how the wall relates to the upper chamber, both areas were covered by the same tumulus. The wall may have defined a

8. Photograph of inner walls and cave beneath the tumulus of Cairn 78. Facing west.

9. Plan of Rubble Cairn 45.

ritual area used in the funerary process, although neither area yielded any artefacts to support this theory.

Cairn 85 **(Figs. 10 and 11)**: With a diameter of 10m and a height over 2m, Cairn 85 was the most visually impressive cairn to be excavated (**Fig. 10**). A rough ring-wall was visible within the tumulus. Removal of the tumulus exposed no more architectural features; instead, the ring-wall contained an area of raised bedrock notable for three natural, basin-like cavities. A depression in the upper rubble tumulus directly over one cavity yielded several dozen sherds from a single Galilean grooved-lip cook pot, suggesting that the cairn was re-used in the early Roman period. As shown in **Fig. 11**, three slabs had been deliberately placed over another of the cavities at the level of the bedrock under the tumulus. While no human remains were found beneath these 'capstones', the cavity contained over 50 sherds with a coarse, pale-buff gritty fabric that may date to the late prehistoric period. Unfortunately, no diagnostic pieces were recovered, and a definitive date awaits scientific analysis.

11. Photograph of capstones over a bedrock cavity beneath the tumulus of Cairn 85.

Retaining Cairns

These semi-circular or square features, less than 5m in size, are defined by a retaining wall, several courses high, on one or more sides of the structure. Often these cairns were built against a raised bedrock outcrop, which was incorporated as an additional side. The retaining walls were usually well-built and well-faced, although the orange patina on some examples, coupled with their proximity to ploughed or terraced areas, suggests that these features may be nothing more than elaborate field cairns. The removal of the tumulus from one example, Cairn

10. Photograph of Cairn 85 before excavation.

248, showed that the walls bottomed out within the topsoil, suggesting that the cairn was nothing more than field-clearance piled between the bedrock and an off-set retaining wall. Palumbo sounded a similar cairn with the same result (Palumbo 1992: 56).

Ringed Features

Given their lack of rubble tumuli, these features are not really "cairns" at all. Rather, they consist of a small, circular wall of medium and large rocks. Few such features were found on the Tall ar-Rās ridge and only one, Feature 86, was excavated. It was constructed of a ring of upright, white limestone slabs that formed three-quarters of a circle against an exposed seam of bedrock. A rubble spread on the immediate downslope side of the feature suggests that it may have once been covered by a tumulus, in which case the feature would have resembled a kerbed cairn discussed above. The inner soil was removed to bedrock, upon which a flat layer of medium stones had been laid. Once again, no finds were recovered.

Standing Stones (Fig. 12)

Given the well-known spatial relationship between standing stones and other megalithic monuments (Scheltema 2008: 53-58), it was surprising that only three standing stones were recorded in the survey area. The largest of these stood over 1.5m high and 2m long (**Fig. 12**). Unlike the white limestone slabs used to construct the dolmens, this standing-stone was hewn from a band of brown chert, an interesting contrast as the stone had been erected on the very edge of the ridge next to one of the densest clusters of dolmens in the south-eastern third of the survey area. Like the dolmens, the standing stone is roughly parallel with the wadi.

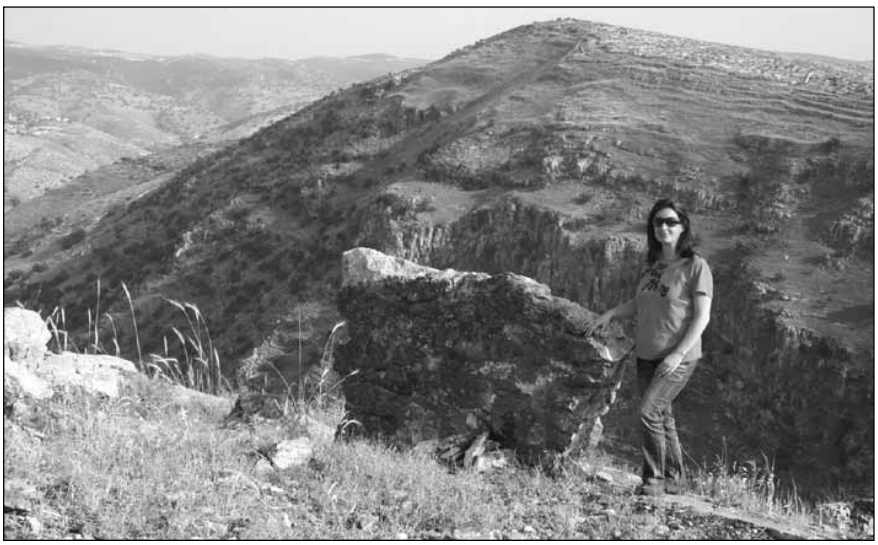
Wall-Lines

In addition to several modern field-walls, 58 wall-lines were recorded across the ridge, falling into two distinct types. The first type comprised roughly faced linear walls built of two rows of large fieldstones filled in with small and medium rocks. All walls of this type were found on the gentler, northern side of the ridge, and many define large areas that are no longer ploughed but which probably reflect ancient field systems. Given the correspondence between these areas and a peak in the Roman-Byzantine material collected during the surface survey, it is likely that these walls represent field-walls built during the Classical period.

The second type of wall consists of single, unfaced lines of boulders and large rocks. These walls do not appear to enclose parcels of land, but were instead usually associated with dolmens and cairns, and may have served some symbolic function defining ritual or sacred spaces in the cemeteries.

Rock-Cut Features

The survey recorded 110 features cut into ex-



12. Standing-stone (with Charlotte Whiting as scale).

posed areas of bedrock, most of which probably served agricultural purposes. These features were concentrated on the northern side of the ridge, in the same area as the ancient field-walls, and fell into several sub-categories.

Winepresses **(Fig. 13)**

Of the five winepresses recorded, four consisted of a small, rectangular upper basin or treading floor, and a lower oval collection vat. A channel or hole in the base of the upper basin allowed the juice to flow into the vat from the treading floor. This type of press shares several parallels with the Type 1 winepress defined by Watson on the basis of her survey in the Pella hinterlands (Watson 2004: 487).

A single example of a far more complex type of winepress was also recorded, namely Feature 170 which had a square, flat treading floor, 4.1 by 4.1m, with traces of plaster around the lipped edges (**Fig. 13**). An oval depression, 0.4 by 0.5m, in the centre of the floor probably received the upright pole of a wooden screw press (see Watson 2004: 493). A small channel through the wall of the treading floor allowed the juice to collect in a lower, rectangular vat, although the vat has since been deepened to create a water collection tank. This press corresponds to Watson's Type 4 winepress (Watson 2004: 492-494), a common type in north Jordan (El-Khouri 2008: 82-84). A particularly good example sits on top of the Jesus Cave (*Kahf as-Sayyid al-Masīḥ*) at Bayt Idis, in which a large oil press is also found 8. The size and complexity of the Type 4 press at Tall ar-Rās suggests that ancient wine-production in Wādī ar-Rayyān had developed into a sophisticated industry by the late Roman and Byzantine periods.

Cup-Holes

The 43 cup-hole 'sites' recorded on the ridge probably related to this industry. Most cup-holes are circular, about 20cm in diameter and depth, often with several cup-holes clustered together on the same patch of bedrock as a single cup-hole 'site'. Nearly all these sites were located on the northern side of the ridge, where all winepresses and most ancient field-walls were found; many cup-holes are adjacent to the presses themselves. Although it has been suggested that cup-holes may have served a ritual purpose associated with dolmens (Scheltema 2008: 24-25), it is more likely that the cup-holes at Tall ar-Rās functioned more practically as supports for posts or jars used during wine production (see Ahlstrom 1978: 44; Watson 2004: 487).

Basins

Fifteen broad, shallow circular depressions, about 40cm in diameter, were recorded as "ba-

13. Winepress Feature 170.

8. The oil and wine presses at the Jesus Cave are currently undergoing conservation and restoration by Amjad Batayneh, Inspector of the al-Kūra Antiquities Office. We thank Mr Batayneh for drawing the site to our attention.

sins" although some of these features may have been natural. In contrast, three other "basins" were cut rectangular features with fashioned vertical sides, 1.0 by 0.8m and at least 0.8m deep. It is difficult to identify the function of these features, although the proximity of one example to the large winepress suggests that they served a similar agricultural purpose, possibly relating to storage. Today, these basins collect water used by flocks grazing along the ridge, and they may have had a similar function in antiquity.

Gaming Boards **(Fig. 14)**

Five gaming boards were recorded in two areas. As shown in **Fig. 14**, four were inscribed into the capstone of a dolmen, although they probably post-date the dolmen itself. Three of these boards were "mangella" boards, each containing two rows of seven small holes, although a separate board with a medium hole surrounded by a circle of nine smaller holes was also present. A single mangella board was carved into a bedrock outcrop elsewhere on the site.

The Monumental Site of Khirbat Umm al-Ghuzlān

In addition to the off-site features and monuments discussed above, the survey area contained one large site: Khirbat Umm al-Ghuzlān (**Fig. 2**). This monumental complex of large curved walls, rubble rings and cairns was originally recorded as site WY28 by the Wādī al-Yābis Survey and dated to the EBIV period and the second /third centuries AD on the basis of its surface pottery (Palumbo 1992: 48). The site was briefly revisited by the NJTP survey as it fell within the south-west corner of the survey area, although we returned in 2009 to map the site in detail. The results of this more recent field-work are discussed in depth elsewhere (Fraser and Batayneh, this volume).

14. Gaming boards engraved in the capstone of a dolmen.

Khirbat Umm al-Ghuzlān sits on the top of a knoll that protrudes from the base of the Tall ar-Rās ridge into the steep drop of Wādī ar-Rayyān (**Fig. 2**). A series of curved walls, built from large and megalithic field stones, surround the base of the knoll to form a discontinuous oval enclosure 100 by 50m. Two rubble rings, each 30m in diameter, sit inside the enclosure and are connected to the outer perimeter wall by smaller, radial wall-lines. Several rubble cairns, some with visible internal structures, sit between these rings and the outer enclosure wall, and one of the largest dolmens seen anyway in the area (Palumbo 1992: 48) is found at the base of the western side of the knoll.

The lack of regular architectural remains within the enclosure wall suggests that the site was never a permanently occupied settlement, although its function can only be clarified through excavation. Regardless, the monumentality of the enclosure walls, enhanced by the site's distinct location, adds a new dimension to the megalithic landscape at Tall ar-Rās (see Fraser and Batayneh this volume for an extended discussion).

Discussion

The Tall ar-Rās ridge consists of two very different cultural landscapes. During the Classical period the ridge was exploited for its agricultural potential, evidenced by the ancient field-walls, winepresses and cup-holes concentrated along the flatter, northern side of the ridge-top. The earlier, megalithic landscape of Tall ar-Rās is more difficult to understand. The following discussion raises some preliminary ideas and points towards avenues for further research.

Firstly, the way the dolmens are distributed across the ridge appears to reinforce group affinities, a suggestion made by Thuesen concerning the Jadīdah dolmen field (Thuesen 2004). Not only do the dolmens cluster in three areas, but certain monuments within these areas are grouped within the same ring-wall, platform or tumulus. Patterns in the relationship between the dolmens, their additional architectural features, and other characteristics such as orientation and

size may reflect social structures such as kin-groups, or, as Thuesen suggests of the Jadīdah dolmens, their "lay-out in the landscape may symbolise family trees" (Thuesen 2004: 114).

The processes involved in constructing dolmens also have significant socio-economic implications, although these processes are rarely considered. The partially quarried capstone and the residual scars of other quarries allow us to explore these processes in detail, including issues concerning the technologies available to the dolmen builders, the time it took to construct a monument, and the resources and labour required. The cairns present us with more methodological problems. Critically, there is, as yet, no definitive way to tell a "cairn monument" from a pile of field-clearance. While this survey identified only those rock-piles with visible architecture as "monuments", some of these features, such as the retaining cairns, proved upon excavation to be field-clearance. Conversely, we cannot be certain how many piles of "field-clearance" contain built structures beneath their tumuli, although the general relationship between these features and cultivated areas suggests that most are modern.

The more intriguing issue concerns the function of the "cairn monuments" themselves. Some structures are clearly tombs. Kerbed Cairn 28, for example, contained disturbed capstones and a built chamber, and there are good architectural parallels with tombs from Ramat Hanadiv. Other structures, like the rubble cairns, are more ambiguous, even though they are deliberately conceived and constructed monuments. Cairn 78, for example, was clearly built with a specific purpose in mind, evidenced by its intricate network of wall-lines enclosing a small cave. This purpose is unlikely to have been funerary as the cairn did not contain any human remains or cultural artefacts, even though robbers had not disturbed its tumulus and wall-lines. Similarly, although the tumulus of Cairn 85 overlay a ring-wall enclosing three bedrock cavities, one sealed by *in situ* capstones, this feature also failed to yield human remains. Consequently, we must be wary of generalised descriptions of cairns as late prehistoric burial structures, as their function remains just as elusive as their date.

Given the paucity of artefacts both on the surface of the ridge and inside the monuments themselves, it is impossible to identify with certainty the societies that constructed the megaliths at Tall ar-Rās. Arguments attributing dolmens to nomadic or semi-nomadic pastoralists are well known (Prag 1995; Zohar 1992), and the spatial and visual relationship between the dolmens and Wādī ar-Rayyān may have reinforced lines of movement between highland and lowland pastures. Palumbo, however, associates the dolmens at Tall ar-Rās with the pastoral components of nearby Chalcolithic and EBI village communities at Jilmit ash-Shāriyah and al-Khawārij (Palumbo 1992: 58). It may therefore be fruitful to consider the Tall ar-Rās dolmens from the perspective of "rural economies" (Palumbo 1992: 58; also Prag 1995), and their significance may relate to the negotiation of land between various components of these hinterland populations.

This suggestion tallies with Philip's argument that megalithic monuments legitimised corporate claims to resources, the symbolic capital of which derived from their significance as prominent burial markers (Philip 2003: 118-120). In this respect, not only does the location of the monuments on a prominent ridge-line underscore the importance of visibility, it also emphasises the significance of 'place'. The Tall ar-Rās ridge contains a variety of monuments built over a considerable period, at least from the EBI, to judge from the dolmens, to the EBIV, to judge from the enclosure of Khirbat Umm al-Ghuzlān. It is easy to envisage such a landscape becoming self-referencing, in which later monuments were built with respect to earlier ones. As such, we must consider that the monuments were significant just as much for where they were as for what they were.

The cairns are, perhaps, best understood from this perspective. While their function remains elusive, the three excavated examples were all built over splits or chasms in the bedrock, including a cave (Cairn 75), three basin-like depressions (Cairn 85), and a raised bedrock fracture (Cairn 45). Possibly coincidental, we must nonetheless consider the implication of the situation of these monuments within an enduring and visible dolmen cemetery that may have charged the ridge with a spiritual significance, such as an association with the ancestors (but cf. Whitley 2002). The enclosure of bedrock

fractures and then the burial of these fractures beneath a rubble tumulus may have been a way of engaging with or managing the ancestors in a landscape already charged with meaning.

This suggestion is, inevitably, highly hypothetical. Articulating patterns in the way monuments relate to each other in spatial terms will hopefully illuminate some of the meaning embedded within the megalithic landscape at Tall ar-Rās. We must nevertheless be aware that the landscape itself has been significantly altered by later activity. Just as Palumbo noted the destruction of hundreds of monuments originally observed by Schumacher and Glueck, the current survey can attest that several monuments recorded by Palumbo have since been destroyed by encroaching development and cultivation. As stated by H.R.H. Prince El Hassan bin Talal in his forward to *Megalithic Jordan* (Scheltema 2008), "the challenge for us today is to manage our demographic and economic growth, without destroying what our ancestors have left behind".

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