

EXCAVATION OF AN UNDISTURBED DEMI-DOLMEN AND INSIGHTS FROM THE AL-ḤAMMĀM MEGALITHIC FIELD, 2011 SEASON

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Abstract

Viewed in the light of data arising from the excavation of Tall al-Ḥammām (TaH) proper – now recognized as the urban nucleus of a significant city-state – along with substantial related research over the past decade, al-Ḥammām Dolmen B (HD.B.B¹) and its ‘stable-mates’ in the al-Ḥammām Megalithic Field (HMF) are fostering significant advancements in our understanding of dolmens and of the larger megalithic culture in which they evolved. In this article, we offer new perspectives on dolmens from our analysis of material excavated from two undisturbed dolmens within the HMF. We have augmented this analysis with insights gained over a decade of intensive study and observation in and around the TaH city-state and the HMF. Additionally – with the recognition that dolmens are often related to a variety of megalithic features – new mapping and survey techniques, along with data from the important al-‘Umayrī dolmen, will enter into our synthesis of thought on the subject.

(Note: For the purposes of this article, no information regarding the location of specific dolmens is provided. Because the ‘night diggers’ (site robbers) are bold enough to walk right up to active excavations, or ‘spy’ across wadis in order to watch teams at work or visitors coming to observe a site, we feel this is justified. Night digging is particularly destructive in the HMF. If you would like geo-documentation, it can be arranged through the Department of Antiquities of Jordan).

Introduction

The Tall al-Ḥammām Excavation Project (TaHEP) is a joint scientific project between Trinity Southwest University, Albuquerque, New Mexico, USA and the Department of Antiquities of the Hashemite Kingdom of Jordan. The goal of TaHEP is to study the relationship of this immense and strategically-located site within its ancient socio-cultural, economic and political contexts, and to ascertain its position, function and influence within those contexts (Collins 2011). A key component of this research is the relationship between Tall al-Ḥammām (TaH) and the contiguous al-Ḥammām Megalithic Field (HMF) to the east, south-east and south of TaH proper. Six field seasons (2006 - 2011) of identification, surveying, excavation and interpretation of al-Ḥammām’s discrete megalithic fields and individual features – such as dolmens, menhirs, menhir alignments, henges, stone circles and ritual avenues – have provided significant data for analysis of the socio-cultural dynamics of Bronze Age civilization in the Middle Ghawr.

During Season Five (winter 2010), the excavation of an undisturbed dolmen (HD.A.78) in discrete Field A (the ‘Tiberius Group’) revealed a long period of ‘re-entry’ for ceremonial purposes of late Chalcolithic, Early Bronze and Intermediate Bronze Age ceramics. Each period (and sub-period) was represented by ritual deposits in chronological multiples over a period of at least 2,200 years. The ceramic repertoire of

1. HD.B.B = al-Ḥammām Dolmen of discrete Sub-Field B, Dolmen B. A new, comprehensive dolmen identification system for the al-Ḥammām Megalithic Field (HMF) is in the offing, which will give GPS coordinates for each ritual monument within the registration number. This new system will replace all of the previous survey identification numbers – done by various

researchers over several decades – thereby integrating all previous ‘dolmen fields’ into the larger HMF which served the Bronze Age city-state centered at TaH. The HMF consists of many related but distinct features such as dolmens (of varying types), menhirs, menhir alignments, stone circles, henges and ritual avenues.

HD.A.78 was a direct reflection of the chronological ceramic sequence of TaH, with which it has a direct (and obvious) visual connection. That HD.A.78 existed within a discrete group of megalithic structures and features in (deliberate?) alignment with the Bronze Age sacred precinct at the geographical center of TaH's lower *tall* approximately 800 m to the west was unmistakable. The arrangement of the discrete Sub-Field A dolmens around a large, central menhir which, itself, faced the TaH sacred precinct squarely, strongly suggested an integral relationship between the 'urbascape' (city proper) and the megalithic landscape. There are numerous other connections that we do not have space to discuss here. Our research is also examining solar, lunar and other possible orientations of the TaH megalithic alignments.

Between TaHEP Seasons Five and Six, during July 2010, the authors – K. Schath, S. Collins and H. al-Jarrah – revisited the HMF to take additional measurements and examine newly-identified megalithic features with obvious visual alignments oriented to TaH. By the end of that on-site assessment, several observations had presented themselves for further study:

1. The HMF seems to have distinct construction clusters, which we now refer to as 'discrete sub-fields'.
2. Discrete sub-fields often contain menhir alignments - with or without associated stone circles - and dolmen groups (two, three or four) positioned in approximate symmetry (often as far as the immediate topography would allow) in relation to the overall arrangement of

the sub-field.

3. Given the considerable number of newly-discovered undisturbed dolmens within the HMF, additional excavations could provide uncontaminated data for analysis.
4. When disturbed (robbed-out) dolmens are meticulously examined, artifactual materials such as pottery, bones and stone objects come to light, providing valuable information that can augment *in situ* data derived from excavated, intact dolmens.
5. Dolmens comprise only one component of TaH's extensive 'sacrescape'² (Collins 2011: 21-23), which covers a large geographical area and spans more than two thousand years of utilization, all of which requires comprehensive evaluation. Note that Collins' 'necroscape'³ (Collins 2011: 21-23) is similar to Savage's 'ceremonial landscape' (Savage 2010: 32-46).

These are a sampling of the general observations that set the tone for research activities during the following season.

The 2011 excavation season (Collins 2011) produced yet another undisturbed dolmen – a demi-dolmen designated al-Ḥammām Dolmen B.B (HD.B.B)⁴. We excavated HD.B.B along with 11 additional dolmens – all B types (Zohar 1992) – producing data that, together with the larger excavation on TaH proper, provide significant new understanding of dolmen (megalithic) phenomena that are reflected in questions such as: Who built them, and when? Why did the ancients build them? What societal structure(s) do they suggest? What insights are apparent re-

2. 'Sacrescape' is a term coined by S. Collins to describe all the elements of a city-state landscape utilized by local cult practices (religion) – on behalf of the living and the dead – including both natural (topographical and geological) and artificial (architectural and megalithic) features. He defines 'sacrescape' as "that portion of the landscape utilized, augmented and altered by the collective religious / ritual practices of the city-state community, including many or all of the following components: sacred architecture (such as temples and ritual enclosures), ritual monuments (such as menhirs, stone circles, megalithic alignments and dolmens), sacred places (such as hilltops, groves and other topographical features of ritual significance), the 'necroscape' and the processional thoroughfares by which they are connected and accessed" (Collins 2011: 21-23). Thus, the 'necroscape' (landscape features servicing the dead) is included within the 'sacrescape' along with other cult elements such as sacred precincts and temples within

the principal urban center.

3. Collins defines 'necroscape' as "that portion of the landscape utilized, augmented and altered by the collective funerary activities of the city-state community, where the dead are treated, tended, buried and memorialized, including tombs and monuments of all types devoted to the passage, remembrance, or worship of ancestors, such as cave and shaft tombs, dolmens (various types), menhirs (and alignments), stone circles and ritual avenues" (Collins 2011: 21-23).
4. A demi-dolmen consists of both *in situ* natural stone (bedrock) and artificially-placed stones. Currently, our dolmen recording system is undergoing a transformation that will eventually identify each dolmen and dolmen field feature with a number designating its precise coordinates. We are using old designations until the new system is complete. HD.B.B is located in discrete Field B.

garding ritual practices performed in and around them? While this article focuses primarily on the excavation of HD.B.B, we will also suggest interpretations of TaH megalithic phenomena rising from our analysis of them over the past six years.

Geographical and Topographical Context

Tall al-Ḥammām is located 12.6 km north-east of the Dead Sea, 11.7 km east of the Jordan River, 8 km south of the modern village of South ash-Shūna (the location of Tall Nimrīn) and approximately 1 km south-south-west of the al-Kafrayn Dam. This area of the southern Jordan Valley, particularly the eastern half of what should properly be called ‘the Jordan Disk’⁵ (the circular alluvial area north of the Dead Sea, approximately 25 km in diameter, also called the Middle Ghawr), lies at the crossroads of the region’s ancient north-south and east-west trade routes⁶.

Several significant sites, all variously occupied during the high points of Levantine Bronze Age⁷ civilization, hug the eastern edge of the Jordan Disk beyond the spread of the ancient flood plain, bounded on the north by the throat of the Jordan Valley, and on the south by the rocky terrain of the Dead Sea area – Tall Nimrīn with Tall Bulaybil and Tall al-Muṣṭāḥ in close proximity, and sprawling TaH encircled by Tall aṭ-Tāḥūna (north-east), Tall Barakāt (north), Tall al-Kafrayn (north-west), Tall ar-Rāma

(south-west), Tall Muways (south-south-west), Tall Iktānū (south-south-east), and several small un-named sites, all within a 0.75 to 2.7 km radius of al-Ḥammām (cf. Glueck 1945; Ibrahim and Yassine 1988; Khouri 1988; Leonard 1992; Chang-Ho and Lee 2002). Although the ancient eastern Jordan Disk towns and villages vary site to site as to periodization, particularly during the Bronze Age, TaH was their connecting common denominator positioned at the center of what must surely be described as a city state – and a relatively large one at that.

Tall al-Ḥammām is the largest of the Jordan Disk sites. It is certainly one of the largest, if not the largest, Bronze Age site in Jordan. The *tall* proper spreads over approximately 36 ha (360 *dunam*), bounded by Wādī al-Kafrayn on the north and Wādī ar-Rawḍa on the south, and by the main road to the east of the *tall*, against the foothills, and the confluence of these two wadis to the west. The site footprint for general settlement is well over 400 *dunam* (>100 acres). These dimensions approximate the areas of the site occupied in more remote antiquity, from at least the Chalcolithic period through to the Middle Bronze Age (a smaller, late Iron Age walled town was built on the upper *tall* after a six or seven century occupational hiatus⁸).

From every angle, TaH and the features of its immediate geography are commensurate with the criteria for a city-state (Collins 2011; cf. Savage *et al.* 2007⁹). S. Collins has identified

5. The wide, circular, flat alluvial area of the southern Jordan Valley immediately north of the Dead Sea is approximately 25 km in diameter, and split down the center by the Jordan River. The Biblical term for this phenomenologically disk-shaped region is *kikkar* (= disk, circle), appearing as *hakikkar* (the disk / circle) and *kikkar hayarden* (disk / circle of the Jordan River). When not used geographically, *kikkar* refers either to a talent (flat, circular weight of metal) or a flat, circular loaf of bread. Although cognate forms of *kikkar* appear in virtually all ANE languages (including Akkadian, Ugaritic and Egyptian), the term is never used in a geographical sense outside the Old Testament, but always refers to a disk-like “talent” or “loaf”. The rare, geographical usage of *kikkar* lies at the core of the phrases “Plain (*kikkar*) of the Jordan River” and “Cities of the Plain (*kikkar*)” as seen in Genesis 10-19. The entire area was visible from the highland hilltops near the Jordan Valley west-north-west of Jericho, the location of Bethel and Ai (see Genesis 13:1-12). For a detailed discussion see Collins 2002.

6. There is debate regarding whether or not some kind of traversable road or track existed on or near the eastern and western shores of the Dead Sea by which travelers

could move north and south through the Dead Sea valley. Even though much of the terrain was difficult, it is hard to believe that at least some kind of footpath did not exist, affording one the opportunity to move from towns / sites near the Dead Sea shore northward into the Jordan Valley without having to climb up into the high terrain to link up with roads on the Trans- and Cis-jordan plateaus, then descend back down to the Jordan Valley at a location farther to the north. There is also some historical evidence to support the idea of boats traversing a north - south ‘shipping’ corridor along the eastern side of the Dead Sea.

7. See the new archaeological period abbreviations in section “V. Stratigraphy” in Collins, Hamdan, Byers *et al.* 2009a.

8. The Iron Age occupation, confined mostly to the upper *tall*, covers approximately 12 ha.

9. The conclusions of Savage *et al.* (2007) are based on incomplete data gleaned mostly from past geographical surveys. Indeed, the data from TaH and its surrounding satellite towns, villages and hamlets is almost entirely missing from their analysis. In our opinion, TaH and its neighbors collectively meet or exceed every city-state criterion put forth by scholars over the past 75 years.

five general components of the TaH city-state which occupies approximately 250 square kilometers of the eastern Jordan Disk as follows:

Urbascape

That portion of the landscape utilized, augmented and altered by the principal population of a city-state incorporating political, religious, administrative, economic, domestic and defensive architecture, the perimeter of which is defined by fortifications, the aggregate of which is phenomenologically defined by the city-state's inhabitants as the 'core' of their 'kingdom'.

Agriscape

That portion of the landscape utilized, augmented and altered by the collective agricultural enterprises of the city-state for fields and groves, water management, housing of laborers, processing installations, storage and distribution facilities, and the handling of traded agricultural commodities, including interspersed towns (perhaps fortified), villages and hamlets inhabited by farmers, workmen and their families.

Sacrescape

That portion of the landscape utilized, augmented and altered by the collective religious / ritual practices of the city-state community, including many or all of the following components: sacred architecture (e.g. temples and ritual enclosures), ritual monuments (e.g. menhirs, stone circles, megalithic alignments and dolmens), sacred places (e.g. hilltops, groves and other topographical features of ritual significance), the 'necroscape' and the processional thoroughfares by which they are connected and accessed.

Necroscape

That portion of the landscape utilized, augmented and altered by the collective funerary activities of the city-state community, where the dead are treated, tended, buried and memorialized, including tombs and monuments of all types devoted to the passage, remembrance or worship of ancestors, such as cave and shaft tombs, dolmens (various types), menhirs (plus alignments), stone circles and ritual avenues.

Infrascape

That portion of the landscape utilized, aug-

mented and altered by the collective activities of the city-state population in support of building and maintenance activities, transportation needs, refuse / sanitation management and various industries including stone, earth and clay quarry sites, roadways and production facilities for the manufacture of mud-bricks, ceramics and objects of metal, stone, wood and other materials.

Each of these macro-components of the TaH city-state has a distinct, visual impact on the observer. These are the 'larger than life' physical manifestations of city-state life which incorporate, overlay and sculpt the landscape via the human enterprise of surviving and thriving within a local environment. The al-Ḥammām Megalithic Field is particularly striking in this regard. When spending time in the area getting a 'feel' for the peculiarities of the landscape from a holistic, integrative perspective, one cannot escape the relationship between the religious life of the city and the ritual utilization and modification of the surrounding terrain. We should, in this context, note that the compartmentalization of various facets of city-state life (as given above) is artificial to a certain degree, as the reality of daily life in any society is not so ordered. Indeed, each 'category' crosses into and affects all the others. It is, however, generally convenient to classify observable data (such as architecture and artifacts) into such pigeon-holes for analytical purposes.

In terms of TaH's ritual landscape, the discovery not only of a Bronze Age temple but also an entire sacred district in the center of the fortified EBA / IBA / MBA city, coupled with the massive HMF, is an important step in the direction of unraveling the cultural meaning of the TaH 'sacrescape' (Collins 2011: 21-23). Similarly, S.J. Bourke (2008: 109-160) devotes considerable discussion to Tulaylāt al-Ghasūl's sanctuary area (or temple complex) and alludes to its connection with the adjacent Dāmyah dolmen field. Tulaylāt al-Ghasūl is a mere 5 km south-east of TaH, and the Dāmyah dolmen field adjoins the al-Qutṭayn and Maṭābī dolmen fields (now recognized as belonging to the larger HMF). Bourke is correct that the Adeimeh field can no longer be relied upon for data, since it has been lost to development in the area; for this, we must rely on sources such as Stekelis (1961, 1977). To a significant degree, it seems

that Tall al-Ḥammām became the region's principal population center during the late Chalcolithic period, after the collapse of the large agricultural community at Tulaylāt al-Ghasūl owing to the loss of its main water resource(s). From that point, 'dolmen culture' continued unabated from its new center at TaH, lasting all the way through to the Middle Bronze Age. Surely, the 'organic' relationship between the temple precinct and 'necroscape' persisted.

The Tall al-Ḥammām Megalithic Field

From a chronological point of view, there is little doubt that Tall al-Ḥammām exercised a more enduring influence over the area's megalithic culture than did Tulaylāt al-Ghasūl. While many of the HMF dolmens were built during the mid to late Chalcolithic period while Tulaylāt al-Ghasūl dominated the local scene, a significant number were also constructed while TaH was on the rise during the late Chalcolithic, after 4200 BC. By the time Tulaylāt al-Ghasūl collapsed, its namesake Ghasulian Culture had been building dolmens for perhaps 500 years. At the time of its demise toward the end of the Middle Bronze Age, the urban population of Tall al-Ḥammām had been engaging with the megalithic, ritual landscape for over 2,500 years. As the cultural center of the southern Jordan Valley from at least the late Chalcolithic period, TaH long endured as a major player in the evolution – if not in the founding – of megalithic ritual practices in the area. Thus, the name 'al-Ḥammām Megalithic Field' is well justified.

The HMF occupies approximately 17 km², including areas known to have been 'leveled' for military, agricultural, commercial and residential development. Just over 500 HMF dolmens are now documented. Based on information from past researchers and the personal accounts of scholars who have worked in the area, we estimate that at least 1,000 dolmens have disappeared as a result of various destructive processes, not the least of which is a major gravel-processing operation just south of Tall Iktānū (2 km south of TaH). The overall HMF is comprised of a dozen or more discrete sub-fields (a subject for future publication) but, again, many are fragmentary or lost altogether. On the bright side, there are several relatively intact, and a few virtually intact, sub-fields that

are the subject of continuing analysis from an anthropological standpoint (again, a subject for subsequent publication).

Through three seasons of focused work in the HMF, the material excavated from its dolmens is accumulating into a significant body of new information. Our methodology for handling dolmens and other HMF features continues to evolve, but it remains systematic and meticulous. To date, we have recovered mendable and complete ceramic vessels from three dolmens, significant numbers of diagnostic sherds from several others, and have collected sherd scatters from across the entire field (an ancillary activity during our survey work). Thus far, Chalcolithic forms are well represented, as are vessels from the EBA, IBA and MBA. Not a single sherd dating to the Late Bronze Age or later has emerged from HMF dolmen chambers or in direct association with any of the more than 500 dolmens we have documented and studied in the HMF. However, occasional sherds from both the Iron Age and Roman Period are found on the surface in certain areas, but they are rare – for example, HD.B.B is located very close to Khirbat al-Ḥabbas, which is a well-known Roman site.

Tall al-Ḥammām's Megalithic (Discrete) Sub-Fields

Survey activities in order to identify megalithic configurations and alignments occupied a critical part of Season Six (2011) in the TaH 'necroscape', particularly the detection of discrete sub-fields. We define 'discrete sub-field' as a megalithic configuration that is separable from adjacent clusters or arrangements either by 'unaltered' topographical space, visible barrier(s), organizational pattern(s) or other delineation(s). Based on our observations thus far, discrete sub-fields seem purposefully determined by factors other than topographical necessity. These factors may include, but are not categorically limited to, societal structures such as tribes, clans and families, or social rank and group affiliation (whether religious or political).

Numerous discrete fields exist within the 17 km² of the HMF, all of which are associated with several styles of tombs. The megalithic configurations are generally located on 'flatter', higher terrain above the tombs which are mostly found on the steeper slopes of adjacent

wadis. That there is a relationship between the tombs and the dolmens is relatively clear – as we shall suggest subsequently. The distinction between the function of a tomb and that of a dolmen is determinable, at least in part, on the basis of general location, contents and associated megalithic features (Each season, the ‘meaning’ of the megalithic monuments has become a bit clearer, but there remains much work to be done in this arena).

TaH Discrete Sub-Field A: the ‘Tiberius Group’

During Season Five (winter 2009 / 2010), K. Schath supervised the mapping of discrete Sub-Field A, all of which lies in full view of Tall al-Ḥammām (we have also designated this sub-field as the ‘Tiberius Group’ in honor of the financial sponsors of this part of our Project. It is roughly ovoid in shape, measuring approximately 100 x 200 m, with the long axis ‘piercing’ its large, central menhir and, if extended to the west, crossing directly over the sacred precinct at the hub of lower TaH. Its orientation and symmetry seem intentional and beyond coincidence.

In addition to the survey performed by Q. Dasouqi, the ‘dolmen team’ also took photographs (including boom shots) of its multiple dolmen clusters, menhirs, menhir alignments, stone circles and other features. Interestingly, the ‘face’ of the central, large menhir of Sub-Field A is distinctly visible from the Bronze Age sacred precinct platform at the heart of the lower *tall*, approximately 800 m to the west. Many of the field’s components – particularly its dolmens – are arranged symmetrically around the central menhir with detectible solar, lunar and sacred precinct alignments (checked by on-site, real-time observations and measurements; *tbp*).

One particular type-B dolmen within this sub-field, HD.A.78, had all the indications of being undisturbed, so we scheduled it for excavation. That assessment was correct. HD.A.78 turned out to be remarkable both for the size of its chamber and for the quantity of deposited

goods (mostly ceramic vessels). The date-range of the pottery was also notable: late Chalcolithic, EB1, EB2, EB3 and IB1 / 2. HD.A.78 produced two distinct human bone deposits (interments) in separate ‘strata’¹⁰ and over forty ceramic vessels (some whole, some broken but mendable, with others represented by sherd scatter), six stone beads and a small basalt grindstone.

The sheer quantity of data being gathered from Sub-Field A is substantial on a number of fronts – including numerous papers and doctoral dissertations – and will, no doubt, lead to many new insights and interpretations of the phenomena of the TaH megalithic culture. Thus, we will not pursue these data and interpretations here.

TaH Discrete Sub-Field B

Discrete Sub-Field B lies across two wadis and one ‘hill’ to the north of Sub-Field A, and is quite a bit larger (its arrangement is currently being researched). During the 2011 season, pottery fragments were found in eight of the twelve dolmens studied, several of them in this area, with many of them coming from previously excavated (not by TaHEP) and / or robbed dolmens. However, the soil of the blocking matrices at the entrances of the dolmens seems never to have been excavated (or robbed out) – perhaps an indication of the inadequate nature of methods applied by previous investigators. Our process of excavating previously ‘emptied’ dolmens has provided a considerable amount of additional data, enhancing our understanding of the dolmen phenomenon. Because of the care we have exercised in selecting subject dolmens, augmented by an intimate understanding of the dolmen architecture found in the HMF, even dolmens previously excavated by professional archaeologists are providing new material for research.

The first dolmen we examined in 2011 had been ravaged long ago. We selected it for an examination of its undisturbed entrance area which yielded four complete vessels. Two were of poor quality, barely fired – found crumbled

10. Stratified material within the context of a dolmen chamber can be a complex matter. Indeed, there is no semblance of horizontal stratification simply because the ceremonial procedure employed for multiple interments over often vast periods of time resulted in the ‘re-organization’ of the chamber as the ancient users made room for new deposits. Because of this, it is not uncommon to find Chalcolithic material side

by side with much later Bronze Age goods and bones. Thus, the terms ‘stratum’ and ‘strata’ in a dolmen context refer to period-separable materials deposited during different archaeological periods, often covered by blown-in or washed-in sediments (deposited between interments) that are likewise removed or ‘re-arranged’ by subsequent activities in the chamber.

within the hard matrix— and likely manufactured as funerary goods, not for daily use. Each of the type-B dolmens we investigated in Sub-Field B had been robbed out, yet still produced artifacts for study, including numerous pottery sherds, a few small (intact or mendable) vessels and fragments of human bone.

In addition to our examination of the eleven previously ‘emptied’ dolmens and the systematic excavation of intact dolmen HD.B.B (described below), we started to excavate of a 3 x 3.5 m rectilinear stone structure, the nature of which we have not yet determined. This structure, enclosed by large boulders and presently designated ‘funerary monument’, is still in the early phases of excavation. What appears to be the upper (surface) portion of the structure has been disturbed by pilfering, but we are relatively optimistic that the matrix underneath may still be intact. At this point we have no conclusive evidence to definitively date its construction and periods of use, but the ceramic mix is suggestive. From the first 30 cm of disturbed material we have collected hundreds of sherds and more than 50 ‘readable’ diagnostics dating from EB3, MB2 and IA2, all periods of major occupation at Tall al-Ḥammām. From the same 30 cm of disturbed matrix we have accumulated hundreds of human bone fragments, some of which appear to be charred. In addition to the bones, excavators sieved out four carnelian beads and a piece of ancient ‘wire’ (toggle?). A funerary or ritual interpretation for this structure is not out of the question. The excavation of the rectilinear structure will continue during Season Seven (2012).

Excavation of HD.B.B: an Undisturbed Demi-Dolmen

HD.B.B is a demi-dolmen. In this case, ‘demi’ designates that the builders of this dolmen made use of the natural bedrock as dolmen components for which they would otherwise have used individual, slab-style stones, i.e. orthostats and top-stones. In the case of HD.B.B, the top-stone is a slightly up-thrust slab of bedrock that provides a small space (chamber) underneath, facing the wadi to the south. Thus, it was constructed with the top-stone already in place.

A single orthostat was added underneath the leading edge of the top-stone as a side-wall closing off the chamber. The builders made the

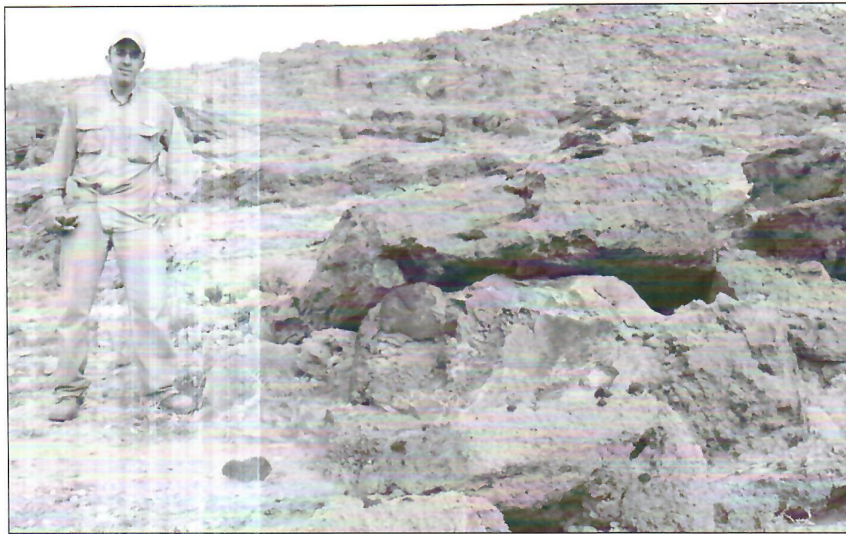
chamber larger by cutting out the natural rock towards the back and downward. The floor consists of several stone slabs installed just inside the entrance, providing a surface at the same gradient as the adjacent bedrock inside the chamber. However, the chamber floor is not entirely level. There is a ‘window’ (gap between the stones) on the south side, quite close to the edge of the wadi (5 m), and a significant drop. From across the wadi, the prominent ‘window’ is still visible. The chamber was accessed from the west by a narrow entrance, which was subsequently filled with several stones, one a large blocking-stone installed on a leveling-slab.

The ‘natural’ look of this demi-dolmen had made it difficult to identify, which is probably why no one discovered it during previous surveys (thankfully, it was also ‘invisible’ to the ‘night diggers’). Looking at the photographs of HD.B.B, it is easy to see how difficult the identification was. Figures 1 and 4 show the window and the low profile, as well as the entrance. In Figure 4, the top-stone seems to show several windows and cover multiple chambers; however, there was only one chamber.

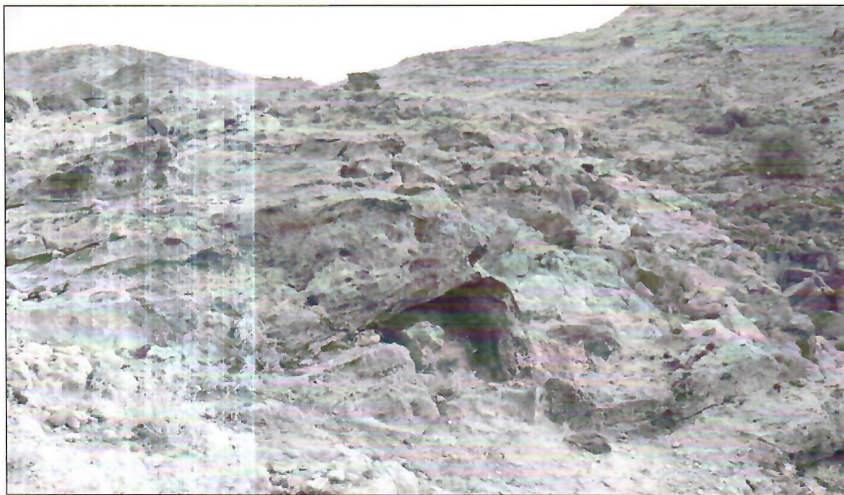
Due to ‘night digger’ activity in the HMF the previous week, we felt that we had to proceed immediately with the excavation of HD.B.B. Two days were allocated for the excavation, with two armed guards being left at the site overnight (indeed, that evening several men – treasure hunters – arrived to find guards, then left). TaHEP field archaeologist, K. Schath, supervised the excavation, assisted by doctoral students and TaHEP cinematographer, D. Galassini.

To begin the documentation process, four photographs (**Figs. 1-4**) were taken from a distance of four meters looking to the north, east, south and west. TaHEP surveyor, Q. Dasouqi, provided a benchmark and its location on the TaHEP grid. Three stakes were placed, creating a 1 m corner to excavate toward the entrance.

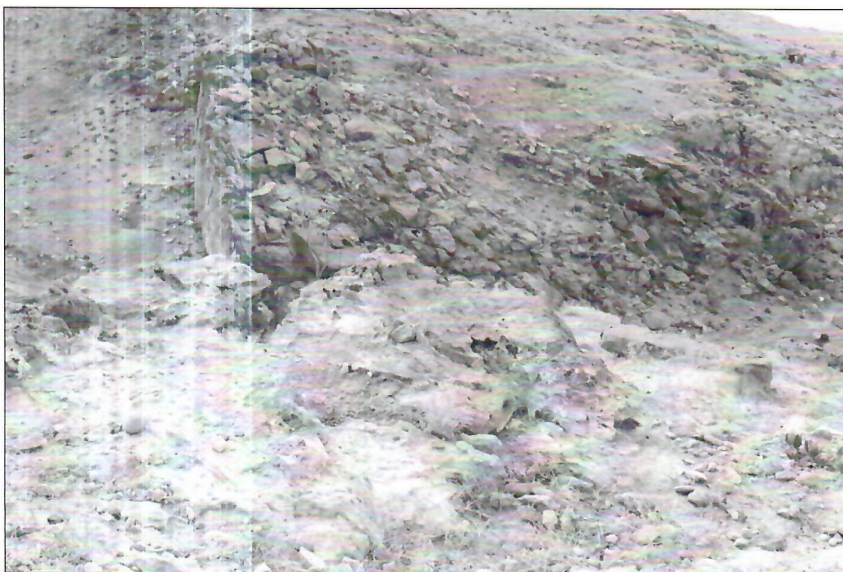
The soil outside the dolmen was removed to bedrock (**Fig. 5**) and screened. Figure 5 also shows the chamber with the large blocking-stone in place, which is removed in Figure 6. Excavation of the blocking-stones was further documented by cinematography, capturing the entire process of removing the three stones blocking the entrance to the chamber. Immediately behind the blocking-stones were five stones placed in a



1. HD.B.B looking north (D. Galassini, TEO16723).



2. HD.B.B looking east (D. Galassini, TEO16724).



3. HD.B.B looking south (D. Galassini, TEO16728).



4. HD.B.B looking west (D. Galassini, TEO16731).



5. HD.B.B entrance (D. Galassini, TEO16746).



6. HD.B.B entrance at bedrock (D. Galassini, TEO16760).

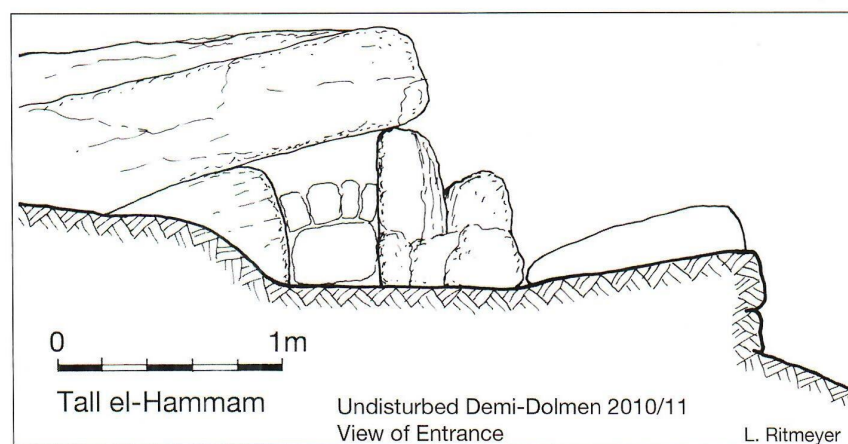
horizontal arc and held in place with clay-mortar. The section drawing (**Fig.7**) shows the four visible stones in the arc. The blocking-stones, as well as the arc of stones, demonstrate a methodology for ‘closing’ the dolmen seen in most of the type-B dolmens throughout the HMF.

In securing the chamber post-interment – a process repeated many times over the ritual life of HMF dolmens – a mud-mortar material had been packed into it immediately after the placement of the pottery in the chamber (ritually-placed¹¹ human bones were also present). Then the blocking-stones were placed in order to seal the entrance. In this case, the ritual closers of the dolmen chamber created the arc of five stones secured in a mud-like matrix before putting the blocking-stones in place. It is likely that this particular dolmen had been cleaned and re-used many times during its 2,500-year history (Chalcolithic to MB2). We can only assume that the

re-blocking in each case – a ritual process performed with care – was carried out using methods similar to the final, MB2 interment.

Once the excavation team had removed the blocking-stones and the soft soil had been brushed from the hardened mud material, the first piece of pottery emerged (*in situ* **Fig. 8**). This sherd was located just above the floor (the immediate thought was that it had been left behind during a subsequent clearance of the chamber). Then the arc of stones was removed and the soil excavated to the floor. Just behind the stone arc, another stone was present, seemingly placed as a marker of some sort, yet nothing was discovered under or around it. Then a vessel emerged (**Fig. 9**) – in fact, it was a vessel minus the sherd seen in Figure 8.

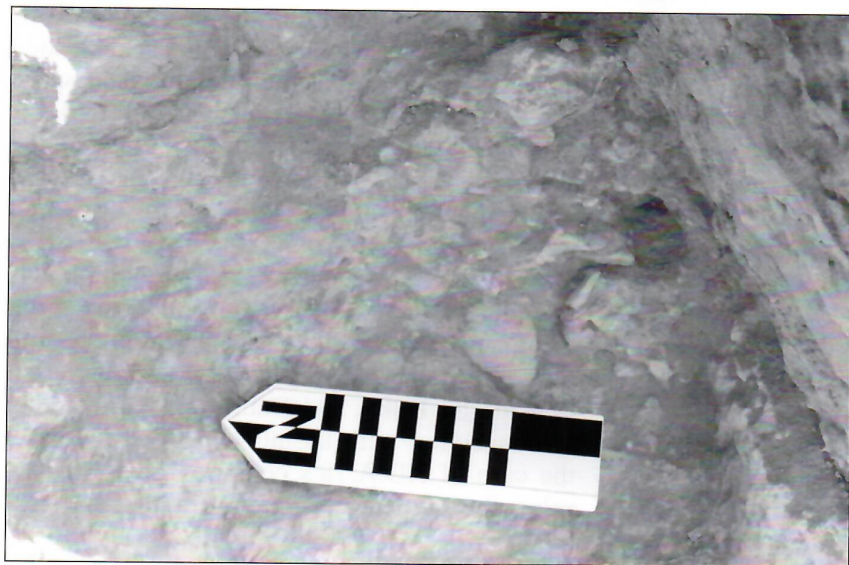
The chamber was excavated from front (i.e. entrance) to back in 10 cm increments¹². It was relatively small, with a horizontal depth of 1.5



7. Section drawing: view of entrance (L. Ritmeyer).

11. That the ‘selected’ human bones had been placed in the dolmen chamber during a ritual process is virtually a given. The building of the monuments themselves and intermittent opening of chambers to receive new ‘memorial’ objects and / or ‘ancestral’ bones were certainly driven by formalized religious practices pursued over many centuries. The sheer number of dolmens and associated megalithic phenomena in the HMF attests to the power of the religious beliefs which motivated their continued ritual significance over more than two millennia.
12. We have developed a distinct philosophy of dolmen excavation designed to provide the most logical “reversal” of chronological interment activities. From our now-extensive experience with HMF dolmens, it is a general rule that dolmen chambers were not “filled” in a horizontal manner that might have resulted in some kind of correlation between vertical levels and chronology. The excavation of dolmen HD.A.78 is instructive in this regard. In that large chamber,

Chalcolithic material “shared” the floor with later material, and earlier material was not infrequently found “above” later items, having been pushed aside, up and over them in a subsequent cleaning (or “re-organization”) in preparation for another interment. Thus, the resultant “strata” of the chamber consisted of a complex “shuffling” that could only be sorted out by the utilization of ceramic typology. Further, we have observed that, if there is a chorological “rhyme or reason” to a dolmen chamber, it is usually represented in a “back-to-entrance” fashion, with older material positioned toward the deeper recesses away from the entry, and later material deposited (progressively) closer to the entrance. This is only a general rule of thumb, and is not strictly the overall case by any means. However, since “back-to-entry” is generally more representative of “earlier-to-later” than “bottom-to-top,” we have chosen, whenever possible, to proceed from the entry horizontally to the back of the chamber.



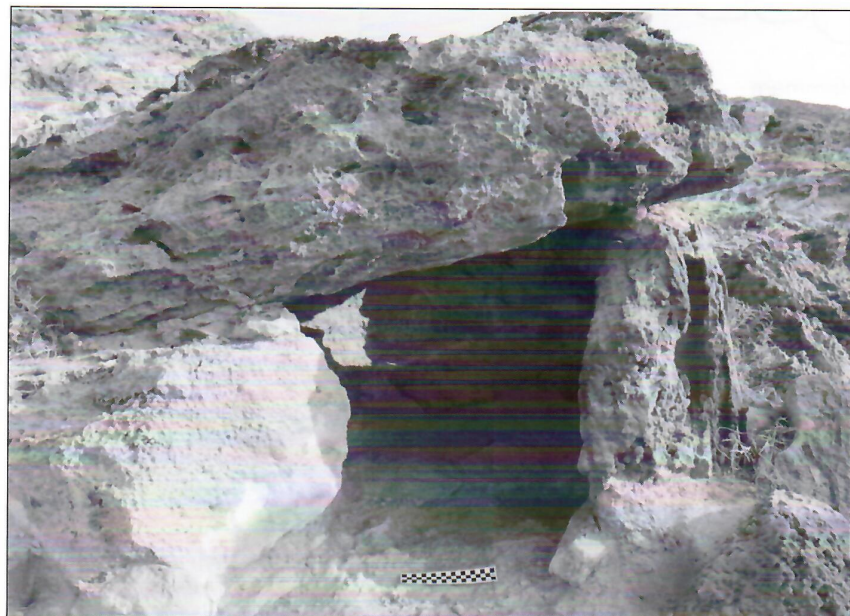
8. *Sherd in situ* (D. Galassini, TEO16769).



9. *Vessel in situ* (K. Schath, DSC00952).

m on the floor, and a vertical depth of only 70 cm at the highest point (As a result, the excavation was accomplished from a prone position.)

Figure 10 shows the chamber completely excavated. The orthostat had several leveling-stones placed under it in order to bring it up to the level of the top-stone. The original installation of the orthostat and the creation of the hewn chamber had certainly been a time-consuming process as the ancient builders produced a unique monument of the dolmen style. The volume of the chamber had certainly been dictated by the formation of the natural rock layers, lim-



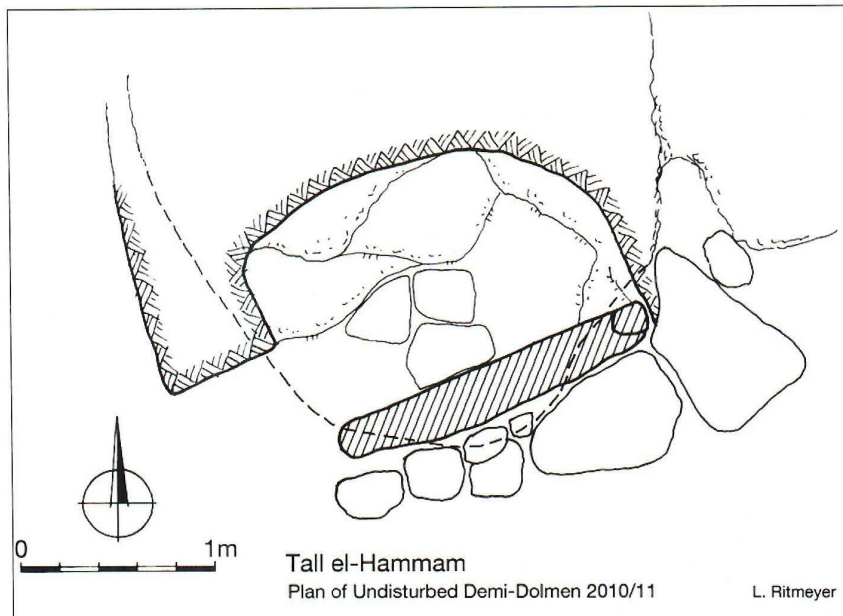
10. *HD.B.B excavated* (D. Galassini, TEO16814).

iting the size of the demi-dolmen (Figs. 11, 12).

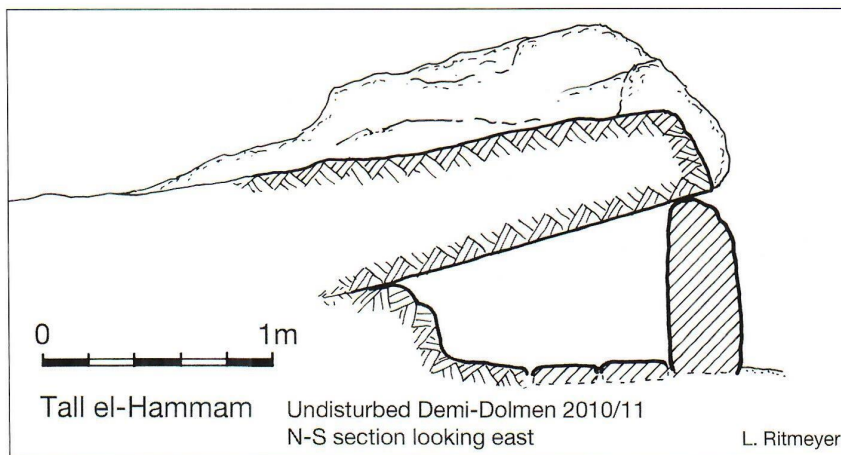
In the chamber, sherds belonging to four different ceramic vessels were found. As stated previously, the first came from just under the stone arc at the chamber entrance, at a depth of 33 cm below the benchmark. The second was discovered approximately 10 cm back at a depth of 38 cm. The third emerged just under the window at a depth of 1 cm, and the fourth was found on the floor far into the chamber at a depth of 43 cm. (Figs. 13, 14, 15 and 16 show the four vessels excavated from HD.B.B; Figure 9 shows one of the vessels *in situ*).

One observation made throughout the excavation of dolmen HD.B.B (and HD.A.78) is the lack of stratification relating to the date

of the pottery (indicating that serial interments were not layered-in over previously deposited materials). Looking at the chronological space between the four vessels in HD.B.B (EB1 - MB2) we theorize that, with the re-use of the dolmen, the 'ritual' called for the preparation of the chamber in a manner that often required previously deposited objects to be moved or removed - not infrequently smashing older bowls and juglets - even to the extent of clearing out the chamber altogether, perhaps leaving behind only a few stray sherds. This same observation is made by Dubis and Dabrowski (2002: 172) in connection with the al-'Umayrī dolmen. In the case of HD.A.78's ceramics (over 40 vessels), the earlier (Chalcolithic and EB1) ves-



11. Section drawing: plan of undisturbed demi-dolmen HD.B.B (L. Ritmeyer).



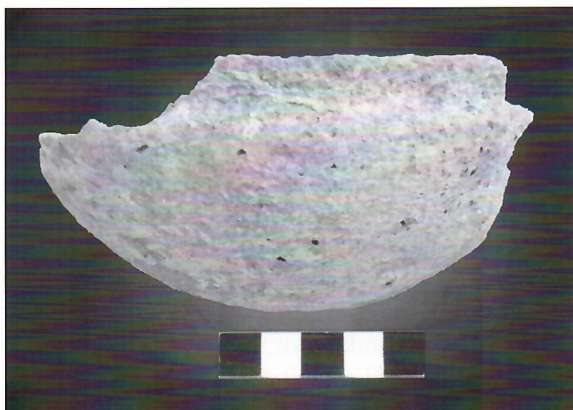
12. Section drawing: north - south section looking east (L. Ritmeyer).



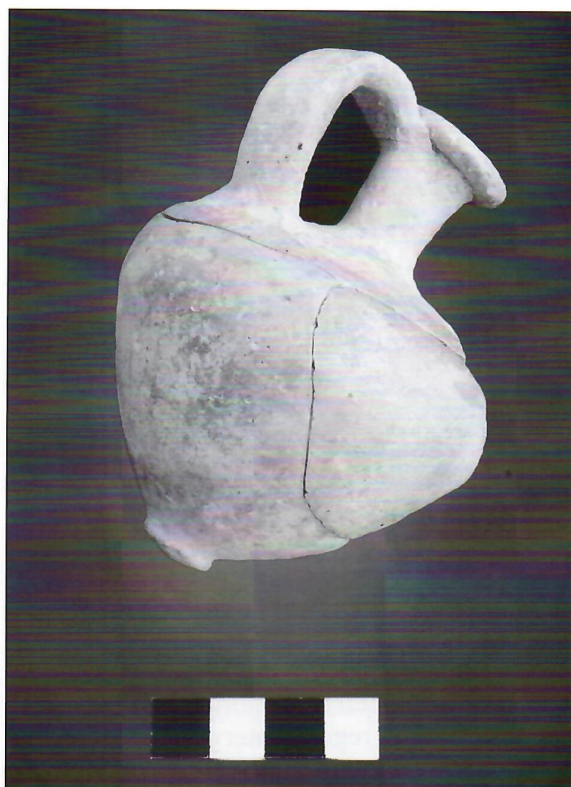
13. Ceramic vessel, HD.B.B, Early Bronze 1 (M. Luddeni, C123).



14. Ceramic vessel, HD.B.B, Early Bronze 3 (M. Luddeni, C125).



15. Ceramic vessel, HD.B.B, Middle Bronze 1 (M. Luddeni, C126).



16. Ceramic vessel, HD.B.B, Middle Bronze 2 (M. Luddeni, C120).

sels were severely damaged or broken, while the later (EB2, EB3, IB1) vessels were generally in much better shape, many of them intact. Of course, HD.A.78's chamber was about three times larger than that of HD.B.B, suggesting that there was ample room for moving earlier articles around rather than removing them in order to make room for a new interment.

Only two fragments of human bone were discovered in HD.B.B (Fig. 17). They were together and near the floor toward the rear of the chamber. Again, with the re-use of the chamber, it seems that only a symbolic deposit of (ancestral?) bone had been made. In the HMF chambers, no large bones or complete skulls have been found¹³. However, in five of the twelve dolmens examined during the 2011 season, human bone fragments were present. At least three of the five had been excavated previously¹⁴. The frequent occurrence of human bone fragments

13. With regard to the so-called Adeimah Field, Stekelis used 'cist', 'cella' and 'dolmen' almost interchangeably; but this was a fundamental error. Contrary to Stekelis' thinking, it is almost certain that cist / cella

tombs did not evolve into dolmens. They were functionally different. In fact, whole skeletons, including skulls, were only found in cist / cella tombs, but never in HMF dolmen chambers.



17. Human bones, HD.B.B (M. Luddeni, C117).

in the chambers of HMF dolmens demonstrates some sort of funerary, memorial, and / or ritual use (occurring at regular intervals?) over an extremely long period of time – all in parallel with the long, unbroken occupation at TaH (from the late Chalcolithic to MB2).

Insights and Conclusions

Interpreting the socio-religio-cultural implications represented by the features of the al-Ḥammām Megalithic Field is anything but an exact science. Without ancient written documents explaining how the HMF worked in the daily and ritual life of its builders / users, we are left to piece together an approximate, theoretical understanding from mute architecture and artifacts. But, to a large degree, this is the nature of the disciplines of archaeology and anthropology. We offer the consequent ideas tentatively, but with reasonable confidence that we are, over the whole of this complex subject, ‘in the ballpark’.

In our comments below, one must realize that, while we are focusing on the HMF dolmens in particular, there is the typical danger of compartmentalization in ignoring other important (and equally impressive) features of the megalithic culture, e.g. menhirs, menhir alignments, stone circles, henges, ritual avenues. Let

us state here that we recognize the organic, integral relationship between all of these megalithic phenomena and their (likely) simultaneous employment within the religio-ritual activities carried out upon the ‘sacrescape’ and ‘necroscape’ belonging to the al-Ḥammām city-state. The inter-relationships between dolmens and dolmen rituals, associated megalithic features and nearby tombs are assumed in our discussion below; however, we do not have space here to address the subject adequately (The larger matter is being developed separately for publication).

Who Built the Dolmens, and When?

Tulaylāt al-Ghasūl dominated the cultural life of the eastern Jordan Disk for roughly the first half of the Chalcolithic period, but after 4000 BC Tall al-Ḥammām had advanced to that position and retained its dominance over the area for the next 23 centuries or more (until MB2). The development of the area’s megalithic culture began at about this mid-point in the Chalcolithic period, and continued into and through the transition from the large, open agricultural settlement (Tulaylāt al-Ghasūl) to the rise of fortified urban sprawl and the evolution of a full-blown city-state (Tall al-Ḥammām).

HMF dolmen ceramics range from the late Chalcolithic to MB2, a mirror-image of the occupational profile of Tall al-Ḥammām and its ‘stable’ of satellite towns and villages (considered collectively). In light of the fact that TaH preserves several lines of evidence for a consistent, unbroken occupation across this extensive time span, it is tempting to suggest that its 2,500 year history was marked by ethno-cultural continuity to a considerable degree. This would mean that the people(s) of the area’s Ghasulian Culture – who provided the initial impetus in the development of the HMF – were the seedbed for the ensuing EBA, IBA and MBA population of the TaH city-state. Their ethno-linguistic identity is presently unknown; however, the ceramic repertoire of TaH and the HMF is commensurate with the Cisjordan Bronze Age Canaanite culture typical of most sites in the Jordan Valley. The fact that the HMF dolmens continued in use as ceremonial monuments through the MB2 – until the termination of Jordan Disk Bronze Age

14. Dajani and Swauger excavated and studied these three dolmens.

civilization – is also a noteworthy indicator of cultural continuity.

As it stands, the ceramic evidence seems to favor the idea that the HMF dolmens continued to be built over a considerable period of time, throughout the Early Bronze Age, Intermediate Bronze Age and Middle Bronze Age. After the first monuments came into existence, additional dolmens were added ‘as needed’ according to the perceived necessities of local religious practices.

Why Did the Ancients Build Dolmens?

It appears logical to theorize that the evolution of the megalithic dimension of the local culture was, in large part, a function of the consolidation of religious power, influence and oversight within a formalized ritual community concentrated in one or more local sacred precincts from which a priestly class (including a high priest?) dictated the evolution of physical / visual manifestations of reverence across the surrounding landscape. The end result was a ‘sacrescape’ (inclusive of its ‘necroscape’) of impressive proportions.

Why dolmens? Perhaps we will never be able to answer this question with any degree of satisfaction. Certainly, the availability of ‘dolmen-friendly’ stones is one factor. It is relatively clear that the transportation of large stones in order to build dolmens in ‘stoneless’ areas did not occur in the HMF. They built dolmens where stones of appropriate size and shape were readily available. In areas where such stones did not exist, there are no dolmens. It is safe to say that, if dolmen-ready stones had not been available in and around the HMF, the dolmen phenomenon would not have evolved at all. It is reasonable to posit that a large, aggressive population superimposed the socio-religious energies of its collective ritual will upon the available landscape, altering it in conformation to their metaphysi-

cal worldview. Unquestionably, their worldview fostered the creation of visually (physically) impressive structures which satisfied a ritual need to memorialize the dead (ancestors), probably according to a ceremonial calendar. (Again, if there had been no stones for dolmen building, they would have developed another means of ritual manifestation.)

No doubt, ritual function(s) motivated dolmen design (the old anthropological adage “form follows function”). For example, it is easy to build below ground-level cist (cella) enclosures that would accomplish the same ‘repository’ purpose as dolmen chambers. So, why the massive top-stones? “Because they wanted to and could” is not a suitable answer, at least not from an anthropologist’s perspective. Whether or not we can (eventually) provide a definitive answer to this question remains to be seen. However, it is entirely plausible that dolmen chambers were topped by large ‘table’ stones for some distinctive ritual function¹⁵, and that that function was, in some organic manner, related to the ceremonial deposits found within the chamber underneath. Indeed, what would one do with such a large (typically 2 - 3m) top-stone? Was it merely placed as a roof, or did it also function as a ritual ‘platform’ upon which (token? food?) offerings were placed? Could the dolmen table-top have served as a desiccation platform upon which a deceased family member was exposed to the elements for a period of ‘defleshing’ (not unlike later Zoroastrian funerary practices)?

We may find answers to the above questions not by focusing on dolmens alone, but by seeing them as part of a larger complex of HMF features, which includes various tomb styles, menhirs, stone alignments, stone circles, henges and ritual avenues. It is instructive that the vast majority of EBA tombs contain mostly large and long (‘cleaned’) bones (skulls, femurs etc.) and not whole skeletons, suggesting that a defleshing

15. This discussion must also consider whether or not dolmens were ‘free-standing’ or covered by a tumulus (earthen mound) or cairn (stone mound) as they generally were in Europe (Giot 1979). Their European counterparts (of approximately the same chronological period) were constructed as artificial ‘caves’ in the creation of ‘passage’ tombs – also associated with menhirs (Sellier 1991), as in the HMF. However, our close examination of the 500 or more surviving dolmens in the HMF reveals virtually no evidence that they had ever been covered by tumuli or cairns.

While there are indications that the ground around and against some dolmens (particularly B-types) had been artificially raised up to within a few centimeters of the undersurface of the top-stone, there seems to be no evidence that any of the HMF dolmens had its table-stone covered by any kind of mound. We take from this that in antiquity, across the entire HMF, dolmen tops were always entirely exposed and standing in clear view above the natural terrain (particularly A-types which tend to be taller than B-types).

(ritual) process had taken place prior to tomb interments (usually with associated objects). It is not at all unreasonable to propose that such desiccation practices may have taken place on the platforms provided by dolmen top-stones. There also is an apparent relationship between the sheer numbers of HMF dolmens – the largest such assemblage of such ceremonial monuments in the southern Levant – and the immense Bronze Age population centered on Tall al-Ḥammām. Such a thriving civilization would have necessitated a commensurately-sized ‘necroscape’ – in this case including the HMF.

It is a short step to conclude that the construction of the dolmens themselves was a function of ritual need, and that the large numbers of dolmens in the HMF (estimated at 1,500 original monuments) was a function of population size and concentration.

What Societal Structure(s) Do Dolmens Suggest?

The HMF contains numerous, separable dolmen clusters between the series of ridges and wadis extending north from Wādī Ḥisbān to Wādī al-Kafrayn. We theorize that each of these discrete megalithic fields was likely a segment of the al-Ḥammām ‘necroscape’ utilized by a given clan. It follows, then, that an individual dolmen may represent an extended family unit. Interestingly, the demographic computations of this conjecture work quite well.

With a moderate estimate of 360 people per hectare (= 150 per acre), the 36 hectare size of Bronze Age Tall al-Ḥammām proper – exclusive of the smaller sites within 0.5 km of its city walls, not to mention several satellite towns and villages within a 3 km radius – would yield a population of approximately 13,000. If each extended family had an average of ten individuals (say, one grandparent, two parents and seven children), this would translate into 1,300 representative dolmens. If each extended family had an average of fifteen individuals (say, one grandparent, two older parents with seven children, and five grandchildren), this would translate into 867 representative dolmens. Given the close proximity of additional towns, villages, and hamlets, a total of 1,500 family dolmens – the actual estimate of dolmens originally in the HMF – would constitute a reasonable reflection

of the area’s population at any given time from the Early Bronze Age to the Middle Bronze Age.

Further, we have thus far (conservatively) identified between fifteen and twenty five discrete sub-fields, each containing an average of 30 to 50 dolmens. The higher computation – which is probably reasonable given the large percentage of obliterated dolmens in the HMF – yields a total of 1,250 dolmens grouped into 25 sub-fields. Presently (research is ongoing and evolving), we estimate that about 80 - 85% of HMF dolmens exist(ed) within sub-field groups, with 15 - 20% standing in smaller clusters (2 - 10 dolmens) or as solitary monuments. If discrete megalithic fields represented clans, then it would appear that an average clan had between 30 and 50 extended families consisting of between ten to fifteen individuals each. The 15 - 20% of dolmens not belonging to discrete sub-fields may be interpreted as monuments owned / used by poorer area residents (clans or multiple family ‘co-operatives’), reflecting the fact that the enterprise of dolmen building and usage required both significant labor and financial expenditures.

During the July 2010 visit to the HMF, our team realized that many of the dolmens classed as trilithon (A-type) dolmens by previous observers were actually B-type dolmens. Many of these dolmens are partially below ground and have subtle orthostats and passages. The study of these design features is important because this type of dolmen required considerably more planning, material and energy to construct. They also demonstrate a kind of ‘planned distribution’ over the discrete field. These data could suggest that the more complex B-type dolmens belonged to families higher on the social ‘ladder’ than those who built the simpler A-type. That social status would have driven the size and type of monuments existing within a clan sub-field is neither surprising nor unpredicted.

The undisturbed dolmens identified in this article – HD.A.78 and HD.B.B, each belonging to a different discrete field – have similar and distinct features which suggest that they may have belonged to families of different social status. While they both seem to occupy a prominent place within their respective discrete fields, the HD.A.78 chamber is four times the volume of the demi-dolmen HD.B.B. While they were both

re-used and re-sealed many times, the number of remaining vessels in the larger chamber was ten times greater than in the other. The passages of each had been closed with care. For both, there was a sense of chaos within the chamber as offering vessels had been pushed around, yet a few intact vessels remained. Both were used over a very long period of time. From these two dolmens we sense not only a ritual continuity through time, regardless of social standing, but also we detect a distinct difference in the hierarchical ranking of the two 'families' that maintained them.

In the midst of both discrete fields A and B is a large, distinct menhir, but only the menhir in Sub-Field A has direct line of sight to the Bronze Age sacred precinct on Tall al-Ḥammām proper. Circular alignments of stones (with radii from 5 to 10 m) also exist in both sub-fields, but each is visually distinct enough to imply original design. Another important visual factor is the proximity to TaH which is less than 500 m for HD.B.B (in Sub-Field B) and 600 m for HD.A.78 (in Sub-Field A). While both discrete fields are closer to the main city than the city's own east - west diameter of over 750 m, only in Sub-Field A do all the megalithic elements have line of sight to TaH's sacred precinct. Some of the more prominent dolmens of Sub-Field B do have a view of the Bronze Age temple area, but not all of them, and one cannot see the TaH sacred complex from most of Sub-Field B's megalithic features. Sociological implications of these observations include: (1) the clan of Sub-Field A had greater social prominence than that of B, (2) the clan that developed Sub-Field A selected its megalithic site-with-a-view well before the creators of Sub-Field B chose theirs, suggesting that the clan of A was older and more influential in the

social scheme of things than the clan of B and (3) some of B's dolmens have a view of the TaH sacred precinct while some do not, suggesting that older and / or more prominent families were able to secure a 'plot-with-a-view' because of chronological and / or social advantage. These ideas are minimal and suggestive, but they recognize that the al-Ḥammām Megalithic Field was a sacred landscape wrought not only by ritual necessity, but also by the social structures and hierarchical layering of the local population.

What Insights are Apparent Regarding Ritual Practices Performed in and Around Dolmens?

Without written texts describing Bronze Age rituals within a megalithic context, any definitive description of such practices must remain speculative¹⁶. Nonetheless, recurring data and observations from the HMF give rise to a number of reasonable conjectures. We are in the process of producing a much more comprehensive analysis of HMF ritual phenomena, but the following ideas can serve as a 'springboard' for discussion of the subject.

Regarding dolmens, one question that researchers have continuously wrestled with is: Did dolmens function as tombs or did they have another ritual purpose? In the comments that follow, we will not speculate about dolmens outside the HMF, but will confine ourselves to that for which we have extensive, first-hand experience.

Stekelis (1977: 827) expressed a certainty that cist tombs in the vicinity were burials. The cists near Tall Adeimeh (beginning 3 km south of TaH) were, according to Stekelis, an early dolmen form (we disagree with this idea) associated with the Chalcolithic settlement at Tulaylāt al-Ghasūl. Adeimeh was also in close proximity

16. Interestingly, there is a specific Biblical reference in Genesis 50: 7-13 to ritual activities performed in the vicinity of the al-Ḥammām Megalithic Field. The site of "Abel of the Egyptians" was the location Joseph chose for a seven-day ritual mourning of his father, Jacob. Abel means "place of mourning". This Abel is the same as later Abel - Shittim ("acacias of mourning") in the Moses story. Abel is also found on Egyptian map lists of the New Kingdom as the final landmark on the Transjordan route from Egypt to the Jordan River north of the Dead Sea, and has been identified by a number of scholars as Tall al-Ḥammām (Krahmalkov 1994; Kitchen 1979: 11, 260, 15, nos. 10-13; Simons 1937: 111-115, 157-159, 174), by far the most logi-

cal choice. However, the story implies that Abel was not a settlement or city at the time, but simply a place of solemn ceremonial significance. This strongly suggests that the mourning of Jacob occurred after the terminal MB2 destruction of TaH proper, and that the massive, ancient HMF still remained (which it did) as a well-known, regionally important ritual center. It should be noted that traveling to Abel in Transjordan was a strange, circuitous route for getting to their final, Cisjordan highlands destination near Hebron, unless there had been a powerful (ritual) reason for visiting there. The complex, impressive ritual landscape of the HMF would have provided the 'ceremonial gravity' for such an event.

to the dolmen fields of al-Qutṭayn (now incorporated within the HMF). Swauger (1966: 106) had worked there and also concluded that the dolmens had been built for burials. When Dajani (1967) excavated in the same dolmen field, he discovered human bones. But in no case were more than a few 'disparate' bones found in any dolmen chamber. By contrast, the area tombs of various kinds – cave, rock-cut, cist, cella, shaft – typically contain greater quantities of bones, particularly long bones and skulls, likely deposited as burials, perhaps after a period of defleshing since complete skeletons are extremely rare, particularly in the EBA tombs.

Stekelis used the term 'interments' in his articles. However, when he found skeletons they were from cella or cist tombs rather than the dolmens in the area. The large al-'Umayrī Dolmen, which we examined in January 2011, is an excellent example of a dolmen related to a settlement with a diverse funerary history. The dolmen sits in a cemetery with several types of tombs. Shaft tombs exist all along the base of the rock hill of the settlement. The dating of the burials are EB to MB (similar to the HMF) and demonstrate differing customs (Herr *et al.* 2002; Dubis and Gorniak 1997, 1999). In the al-'Umayrī Dolmen, excavators found the bones of up to 20 individuals. They described the bones as semi-disarticulated, and skulls were also present in the chamber. The discovery of skulls in the al-'Umayrī chamber seems to imply a funerary use of the dolmen rather than a ceremonial purpose, as is likely the case with HMF dolmens. It should also be noted that the al-'Umayrī Dolmen was found without its topstone (perhaps it had had a wooden rather than a stone roof), and is of singular design among associated tombs. Its contents and setting suggest a purpose distinct from 'true' dolmens of the HMF – i.e. funerary rather than memorial.

In comparison to the quantities of human bones found in HMF area tombs, the meagre dolmen bone deposits signal a ceremonial as opposed to a funerary function. HD.B.B produced only two fragments of human bone, but these pieces are significant in light of bones found in other HMF dolmens. HD.B.B and HD.A.78 are special dolmens because they were both undisturbed (extremely rare at this time in history). They both contained bones and pottery. But the

absence of heavy bones in all of the dolmens explored in the HMF brings into question the nature of the rituals associated with them. One thing seems clear: these human bone deposits are not primary burials. There seem to be only symbolic, 'token' bones deposited in dolmen chambers. The ritual placement of smaller bones – ribs, radius or ulna, or fragments – and periodic 'cleaning' of the chambers could explain why the discovery of bones is rare in dolmen contexts. But why 'token' bones and small vessels (mainly juglets and bowls)? What was their ceremonial significance? Perhaps something like the following occurred in antiquity (cf. Scheltema 2008: 49).

For practical (and obvious) reasons, the dead were housed, honored and memorialized at some distance from cities and settlements. Death was ever-present, inescapable. Ancestor 'worship' and / or 'memorializing' must have been a prominent feature of society in general, engendered by the sight of frequent ceremonial processions from the city into the surrounding hills where tombs held the dead and obligatory burial goods. Dolmen chambers received memorial offerings and 'token' ancestral bones ceremonially lifted from nearby family tombs; solitary menhirs stood to represent the gods (or ancestral 'great ones'); menhir alignments reflected the ritual calendar, marking the movement of the sun at solstices and equinoxes and the moon through its courses and phases; stone circles delineated sacred spaces (for ritual dancing, singing and chanting?); henges (a circle of ancestors?) stood in silent witness to the power of death in forging family / clan continuity and unity in the never-ending struggle for survival in a harsh and often unforgiving environment.

Conjectural? – yes. Far-fetched? – not in the least. The HMF ritual landscape has a marvelously human quality to it, and abounds in ethnographic parallels. Our principal point here is that the dolmen phenomenon cannot be isolated from other, equally important, HMF features. We must take them all in concert, with an integrative, holistic eye. Past research mostly focused on dolmens, likely for at least three reasons: (1) they were visually impressive, (2) they were repositories of pottery, objects and human bones and (3) they were readily accessible (and thus a favorite target of treasure hunters). How-

ever, such a 'tunnel-vision' approach is insufficient. Dolmens are only one component within a highly complex, organized system of ceremonial monuments with interrelated functions and symbolisms. Thus, all of TaHEP's work in the HMF is proceeding from a holistic perspective in attempting not only to ascertain the ritual significance of the HMF itself, but also to study its interconnectedness with the life and culture of the TaH urban population and supporting communities within the area.

Thus, a funerary – memorial sequence of events may have looked something like this: (1) the 'prepared' body was moved from an urban home or sacred precinct, through a city gate, up a ritual avenue to the 'family' dolmen within a 'clan' section (discrete field) of the HMF, (2) the deceased's body was ceremonially laid on top of the family dolmen, (3) the body remained on the dolmen top for a period during which the flesh was 'returned' to the elements (similar to Zoroastrian practice), (4) after the period of defleshing, the remaining bones were ritually gathered and placed with funerary objects into the family cave or shaft tomb and (5) periodically, according to a ritual calendar, the family returned to the tomb, ceremonially selected a token ancestral bone, or piece of bone, and proceeded to the family dolmen where the chamber had been prepared to receive the bone and a small ritual offering in memory of the ancestor(s). Periodically, the entire HMF may also have been used collectively by the community during larger annual celebrations associated with solstice and equinox events. The entire complex of HMF features certainly had family, clan and societal functions.

Summary Comments

The excavation of two undisturbed dolmens in two separate, defined areas – containing menhirs, stone circles, menhir alignments and other features – leads to the conclusion that complex, sacred practices were carried out amid the HMF monuments. The organization of the HMF into discrete fields suggests that the society's clan structure may have been responsible for that particular feature. The ceramic chronology reveals that the HMF and its dolmens remained a prominent feature of the local culture for over 2,500 years. Certainly, related rituals evolved

over time, but the duration of usage still argues for a remarkable cultural continuity through time. The scarcity of human bones in association with dolmen pottery indicates 'symbolic' deposits rather than funerary rituals.

The HMF dolmens were unmistakably tied to the rituals of life and death, but at this point cannot be interpreted as primary burials. Care was not exercised when placing the bones and vessels in the chamber; prior deposits were pushed around or even removed in order to create space for the most recent ritual objects. The chamber was not cleaned, or even made neat, for the next deposit. Between deposits, the build-up of soil in the chambers leads us to believe that extended periods of time (perhaps as much as several decades) passed between one deposit and the next. Thus, the collective phenomena of the HMF likely comprised a well-used sacred landscape ('sacrescape' and 'necroscape') utilizing a long-term ritual calendar in which dolmen deposits served as one component of the larger ceremonial life of the local population.

Indeed, our theories about the nature of the HMF are continuing to evolve.

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