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New Spanish - Italian Excavations at the Jabal al-Muṭawwaq Dolmen Field on the Middle Wādī az-Zarqā': Preliminary Results of the 2012 Season

Jabal al-Muṭawwaq is located in the middle Wādī az-Zarqā' valley, between the modern cities of Zarqa to the south and Jarash to the north. The site has been occupied since at least Early Bronze (EB) Age IA, as testified by the village on its summit - partially excavated by the Spanish mission of Oviedo University directed by the late Professor Tresguerres Velasco. The recent Spanish excavations mostly concentrated on the settlement (Fernandez Tresguerres Velasco 2005, 2008a, 2008b). The large megalithic necropolis, with its hundreds of dolmens, was not investigated in detail. Thus, in 2012 Juan Muniz (Pontificia Salamanca University, Spain) and Andrea Polcaro (Perugia University, Italy) resumed excavations in the dolmen field, with the collaboration of the Department of Antiquities of Jordan².

Many EB I sites are located along the middle Wādī az-Zarqā' Valley (FIG. 1); these sites

reflect a cultural and historical context more complex than that of pastoral communities moving seasonally along the river. The topographical locations of the settlements and their relationship to the megalithic necropolis clearly indicate complex interrelations between agricultural and pastoral communities, living in the same area and sharing the same necropolis and settlements³.

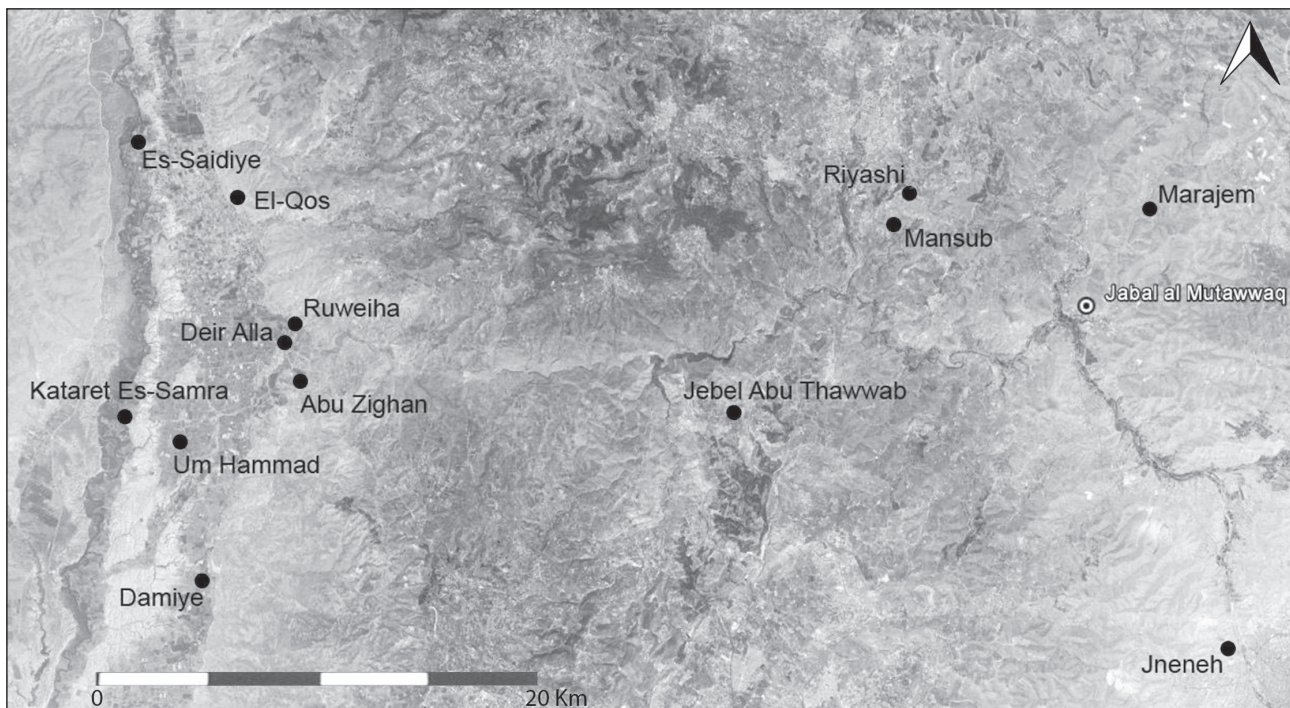
The megalithic landscape generated by the construction of dolmens, *viz.* large, highly visible burial monuments scattered around settlements and along the entire valley on high and strategic ground, is particularly evident in this part of the valley⁴. In particular, around Jabal al-Muṭawwaq there is a higher frequency of dolmens and the most impressive megalithic landscape of the entire Wādī az-Zarqā' valley. There were also at least other three large dolmen fields in the vicinity of the mountain,

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2. We wish to thank the Director General of the Department of Antiquities of Jordan, Fares al-Hmoud, our departmental inspector, Samia Khouri, and all of the staff of the Department of Antiquities for their constant support. We also wish to thank our departmental surveyor, Ehab Jariri, for help in creating a topographical map of the site and the final plan of the excavation areas. We also wish to thank the staff of the Spanish and Italian Embassies at Amman (in particular Spanish ambassador Dr Santiago Cabanas

Ansorena and Italian ambassador Dr Patrizio Fondi), the Cervantes Institute of Amman (in particular director Dr Luisa Fernanda Garrido Ramos) and the Dean of the Faculty of Literature and Philosophy at Perugia University, Prof Giorgio Bonamente, for their great support of the project.

3. The relationship of mobile pastoralism with early state- and city-formation in the ancient Near East has recently been carefully studied, in the case of northern Mesopotamia, by A. Porter (2012).

4. There are many dolmen fields in the middle river valley, in particular around Qreisan spring near Jabal al-Muṭawwaq (see Nigro, Sala and Polcaro 2008).



1. Satellite image of Wādī az-Zarqā' showing the location of Jabal al-Muṭawwaq and major EB I sites in the area.

unfortunately not as well-preserved as that of Jabal al-Muṭawwaq⁵. Therefore, the Jabal al-Muṭawwaq settlement and dolmen field were at the center of a complex system of settlements and necropoleis.

The EB I settlement is located on the southern slope of the mountain, surrounded by a wall, the nature of which needs to be more fully investigated in future. Hundreds of dolmens are preserved at the site, in four separate clusters: one on the southern cliff near the village, one along the eastern slope of the mountain, one to the north-east and the last on the western slope (FIG. 2). This last cluster has almost completely disappeared because of increased agricultural activity in recent years; the northern area and dolmens located closer to the mountain top have suffered from destruction by tractors.

When the new archaeological investigation started, we decided to investigate the southern cluster of the dolmen field first. Two reasons lay behind this decision: (1) this cluster is closest to the EB IA settlement (FIG. 3), and one of the most important aims of our research

is to better understand the chronological and historical relationship between the village and the necropolis; (2) the best-preserved monuments are in this area because the steep slope has led to the deposition of soil over the structures, thereby preventing the heavy stone slabs from being easily stolen. Last season we investigated three dolmens: Dolmen 318, excavated by the Spanish team, and Dolmens 228 and 232, excavated by the Italian team (see Alvarez *et al.* in press).

We opened 5 × 5 m excavation squares centered on each dolmen in order to investigate the structures and stone 'platforms' surrounding them. Only in the case of Dolmen 232 was the megalithic surrounding wall (damaged in antiquity) partially removed in its north-eastern section in order to better understand the building technique.

Dolmen 228 was the larger and better-preserved of the two monuments excavated by the Italian team (FIG. 4). It was completely covered to the height of the larger capstone - still in view - by an accumulation of soil derived

5. The Spanish mission of Juan Antonio Fernandez Tresguerres-Velasco investigated the dolmen field of Jabal Khazua (see Alvarez, Muniz and Vazquez 2012).

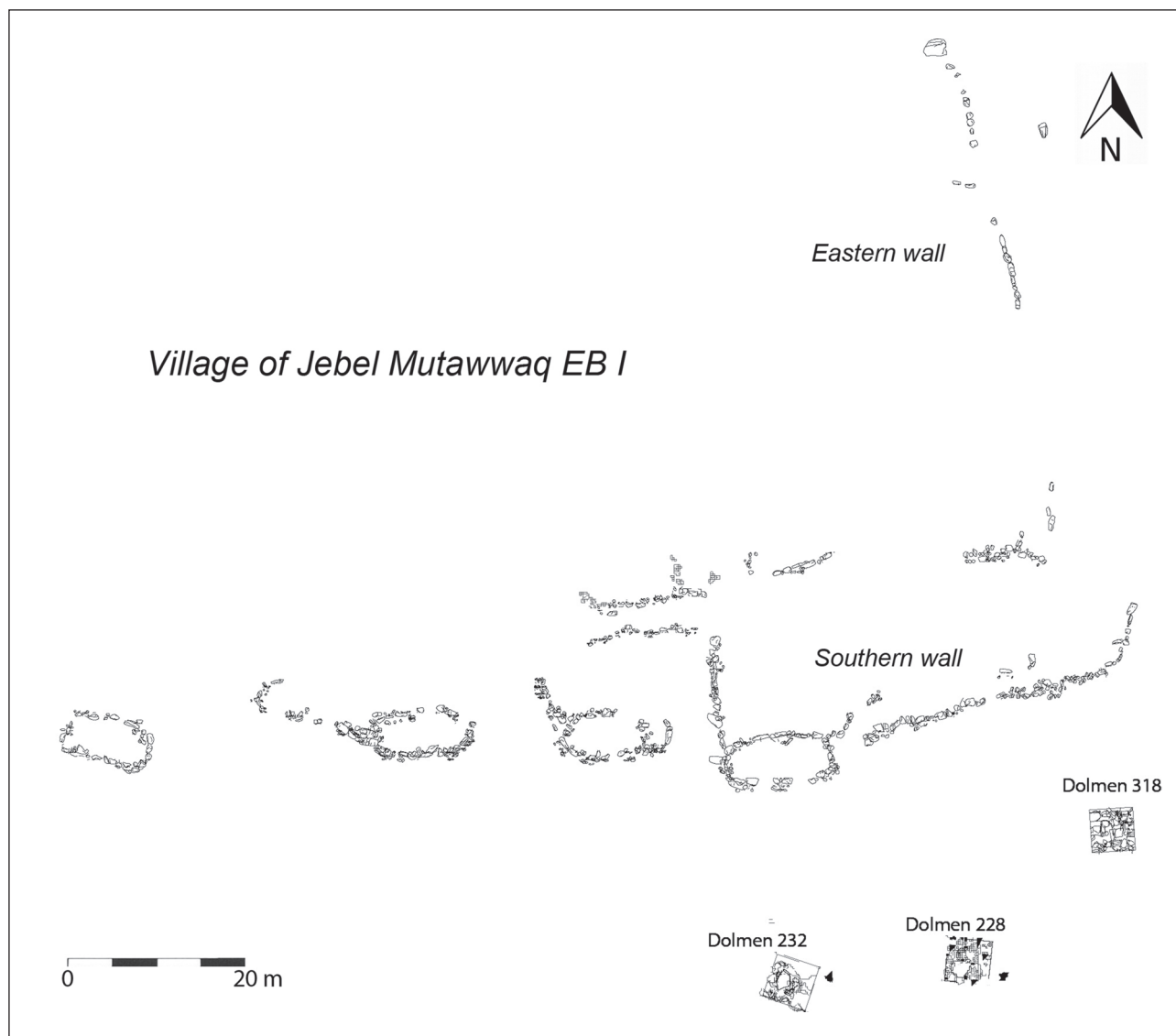


2. Photo of the upper area of the megalithic necropolis of Jabal al-Muṭawwaq (archive of the Spanish - Italian Archaeological Mission to Jordan).

from upslope. Furthermore, it had a massive, clearly intact apsidal stone platform around it. The dolmen was constructed close to the cliff, following the steep slope of the mountain in its southern area. Even before excavation, it was evident from the outside that the dolmen was built in an elongated form, with steps going from the southern rear slab to the northern entrance and the rear of the stone wall being at a lower level than the front stones. The excavation of Dolmen 228 revealed five different phases. The first is the construction phase (Phase I): it consisted of the stone slabs, one stratigraphic layer of small stones and compact earth used to level the natural bedrock in some places before the slabs were laid, and another layer of earth and larger stones recovered between the stone external wall and the lateral slabs of the dolmen. The phase of use (Phase II) was not recovered, because the monument had been emptied out at the end of its life; this last phase

(Phase III) was actually recognized as a thin layer lying directly on the floor slab. The sealing phase (Phase IV) consists of different layers of small stones and earth filling the entrance and funerary chamber of the monument (FIG. 5). Finally, an abandonment phase was identified all over the excavation square (Phase V). The elongated shape of Dolmen 228 is the result of a corridor built just in front of the entrance, delineated by another two large stone slabs (7 and 8). The corridor, filled with Stratigraphic Units (SU) 61 and 60 (see below), slightly shifts the orientation of the dolmen to the west. A series of steps is present inside, rather like a *dromos* leading from the outside down to the funerary chamber. The corridor was covered by the same large capstone covering the dolmen chamber and by another thin stone slab under it.

SU 52 and 54, representing the fill of stones and earth between the external wall and the dolmen, were not present in front of the dol-



3. Area of the 2012 excavations, showing the village in the west and the three excavated dolmen in the East.

men entrance, but only around the sides, reaching almost to the height of the lateral slabs of the dolmen itself (FIG. 6). This strongly suggests the presence of some sort of cairn covering almost the entire dolmen chamber, leaving just the capstone and entrance in view. If this hypothesis is correct, the external stone wall would not be a ‘fence’ or platform, but just the retaining wall of a tumulus covering the monument⁶. During the excavation of Dolmen 228, we removed part of the large capstone, which had previously broken into three parts, and it was immediately clear that the layer of small

stones and earth filling the corridor was different to that exposed outside the lateral slabs of the *dromos* and dolmen. Moreover, there was also a thin second roof slab covering the corridor. Inside the dolmen, we exposed SU 60, 61 and 62, which filled the inner chamber and covered the floor slab of the dolmen, after completely removing the sealing and infilling layers (FIG. 6). Three large stones, placed directly on the sloping bedrock, were used to establish the corridor steps which were then leveled step-by-step with this layer of small stones associated with construction Phase I (FIG. 7).

6. This was confirmed by the 2013 excavations, when the Spanish - Italian team discovered an almost completely intact tumulus covering one of the dolmen in a nearby area (the preliminary re-

sults of the 2013 season will be presented to the International Congress on the Archaeology of the Ancient Near East [9th ICAANE], Basel, 9 - 13 June 2014).

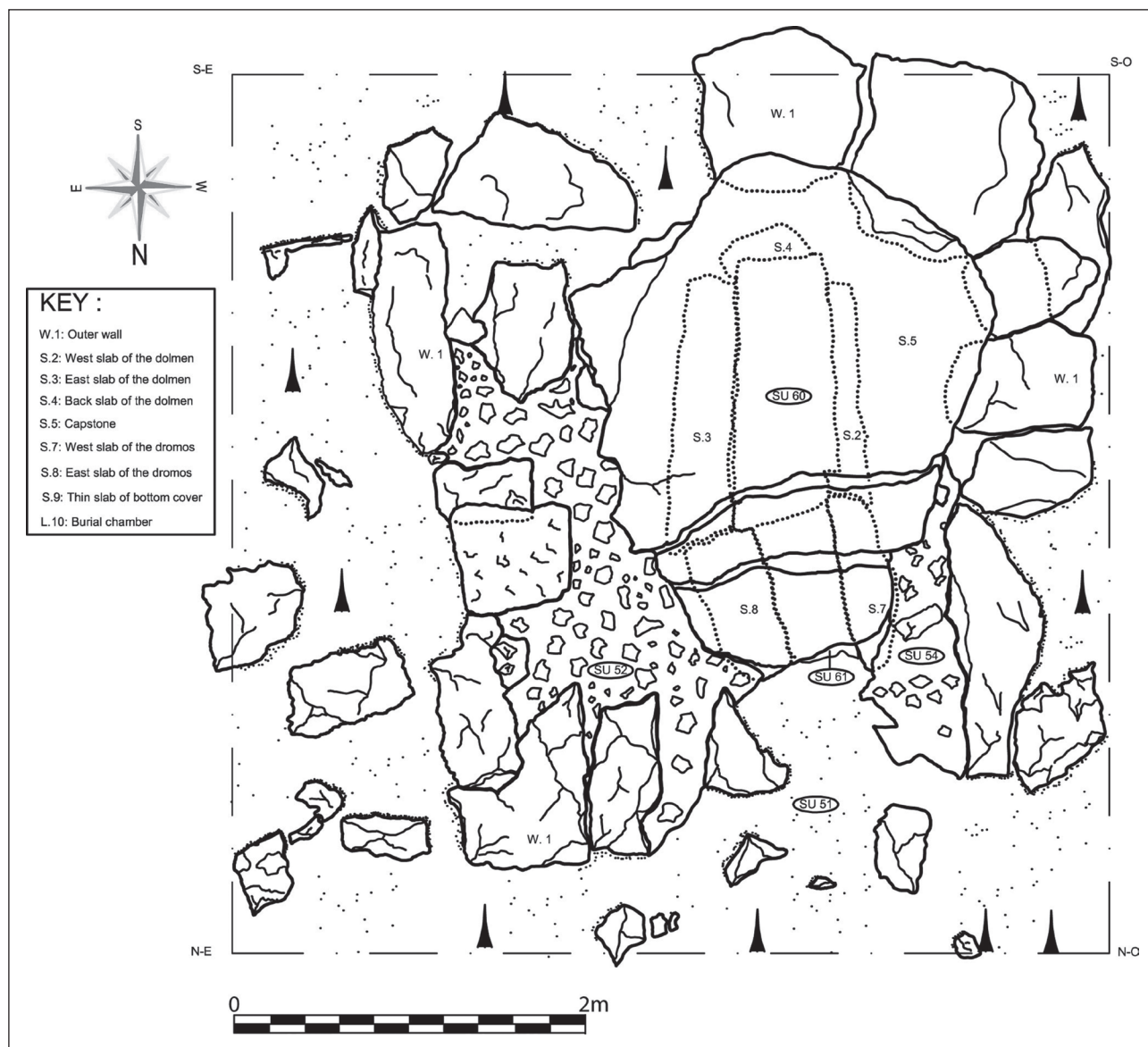


4. Dolmen 228 during the 2012 excavations, from the north (archive of the Spanish - Italian Archaeological Mission to Jordan).

We recovered a good sample of selected pottery from each phase, in particular from sealing Phase IV. The pottery is hand-made and low-fired, with many limestone inclusions and a reddish or orange fabric; it consists mostly of common ware, sometimes with traces of red slip. All the samples are chronologically homogeneous and associated with EB IA (see Alvarez *et al.* in press). The absence of wheel-made pottery, band- or net-painted decoration and other features of later-period common ware suggests that the dolmen was constructed, used, emptied, sealed and abandoned before the EB IB of the second half of the 4th millennium BC. All of these vessels have good parallels at Jabal Abū Thawwab, Dāmyah, Umm Ḥammād phase I, the EB IA phase of the Jericho and Bab adh-Dhrā‘ necropoleis, and in the form of Jāwā ware.

Dolmen 232 (FIG. 8), also excavated by the Italian team, was less well-preserved than Dol-

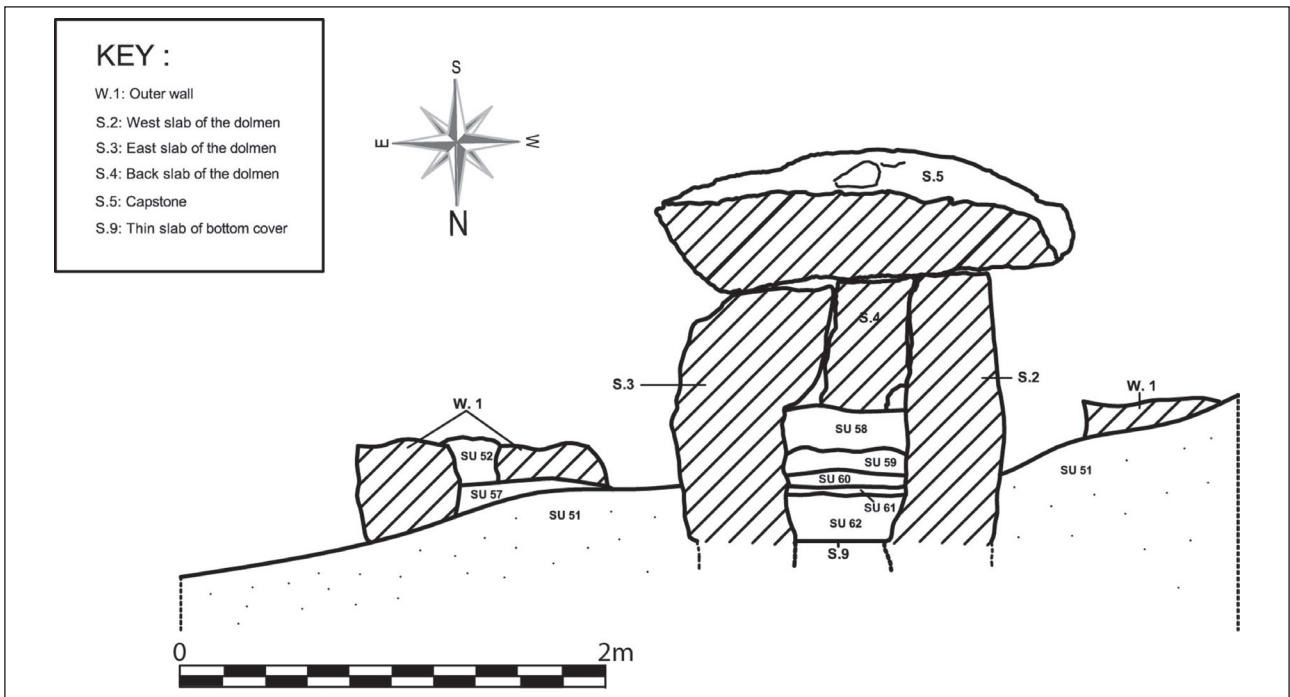
men 228. Some of the large stones in the external circular wall had been moved from their original positions and the dolmen entrance was not completely sealed. Six different phases were identified. The dolmen was in fact robbed and re-used in mediaeval times and, after this last use, was resealed with the same materials that originally filled the funerary chamber. SU 5 (FIG. 9), which covered the floor slab and filled the funerary chamber, is similar to the same fill found in Dolmen 228. The recovered pottery dated mostly to the same period of EB I but, right on the floor slab, a fragmentary Islamic jar was found (see Alvarez *et al.* in press). This probably means that after the mediaeval re-use, the people who violated the tomb covered the dolmen once again with the material originally removed from inside, perhaps showing some kind of respect for this ancient monument. Associated with the original construction phase (Phase I), we identified a leveling layer of small



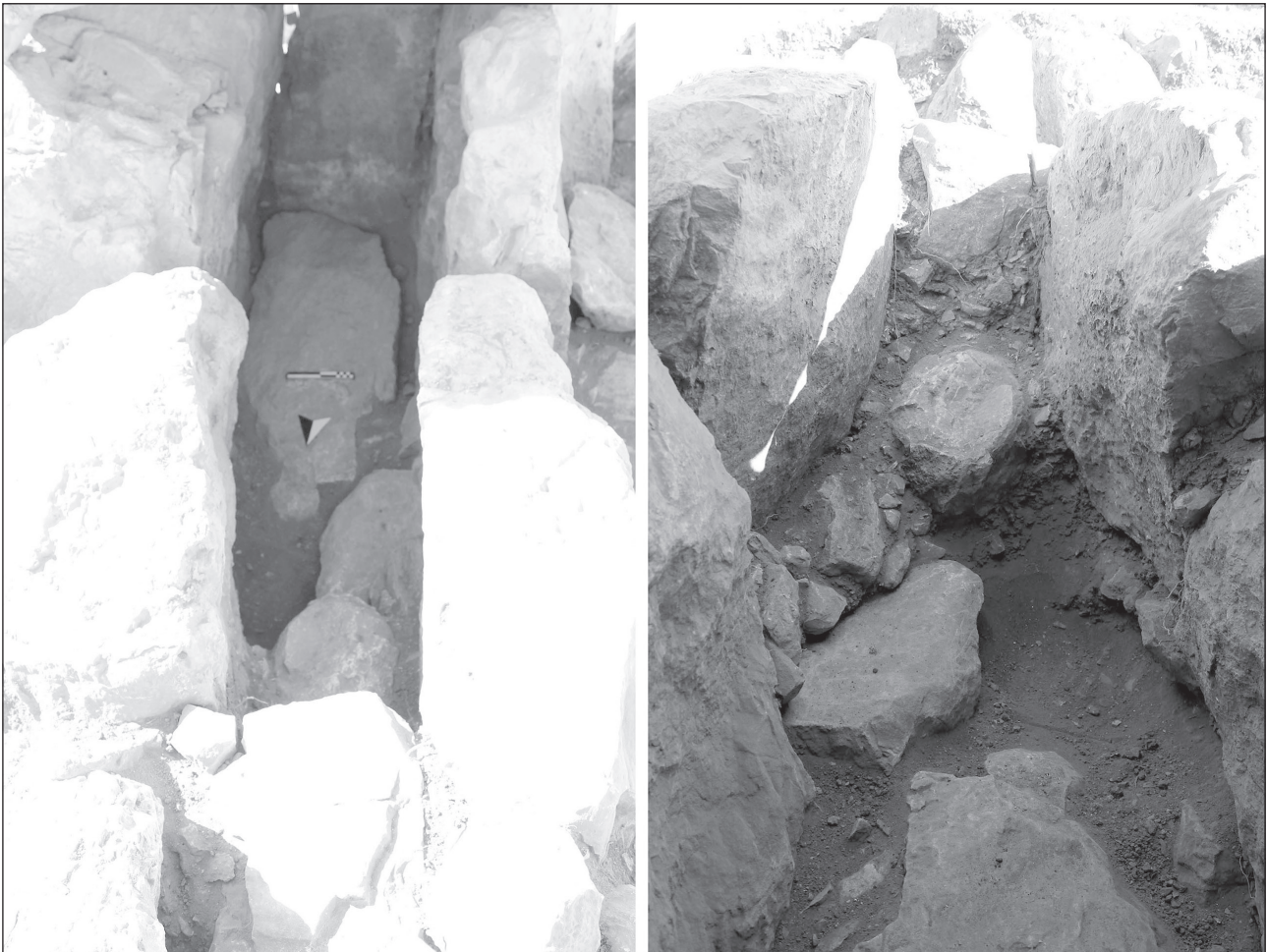
5. Plan of Dolmen 228: Phase IV - sealing (by Nicolò Cecconi).

stones (SU 4) located in front of the entrance and under the stones of the platform. A layer of larger stones and earth, filling the lateral and rear spaces between the external wall and the dolmen itself, was recovered just in a small eastern area, strengthening the hypothesis that stone cairns originally covered the Jabal al-Muṭawwaq dolmens. The building technique of Dolmen 232 was the same as that of Dolmen 228: *i.e.* the bedrock was leveled with small stones and earth, the lateral stone slabs were laid and the external stone wall was built with the space in between being filled with a stone cairn, leaving just the entrance and capstone in view. In this particular

location, the absence of sloping bedrock probably discouraged the addition of a *dromos* entrance, even if different ideological motivations lay behind the construction of this type of feature, which clearly increased the dimensions and monumentality of the tomb. Regarding the finds from Dolmen 232, there was no chronological homogeneity: we found a few examples of EB IA vessels from the construction and resealing phases and, as noted above, two fragments of a white-on-brown painted, geometrically decorated jar on the floor slab, comparable with Mamluk jars dated to the 13th and 14th centuries AD (see Alvarez *et al.* in press).



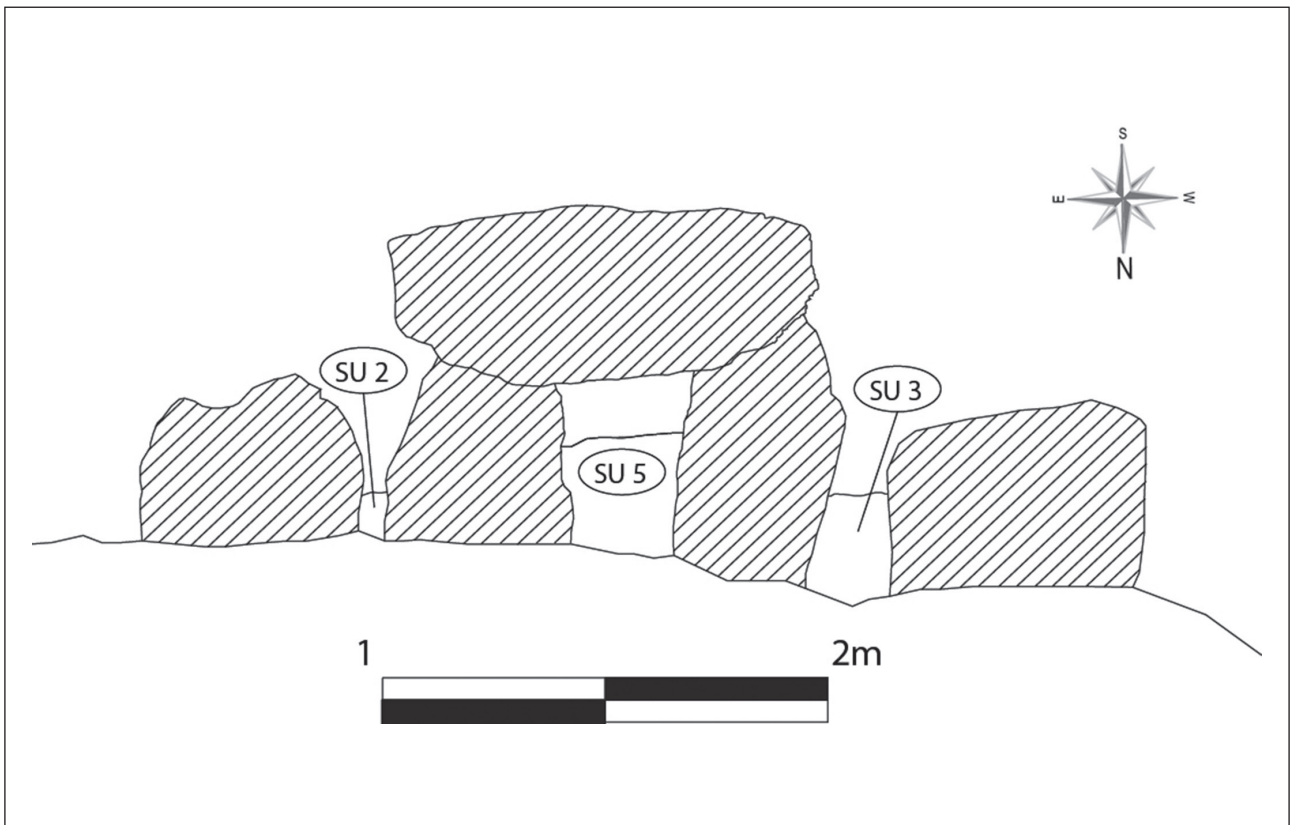
6. Section of Dolmen 228 (by Niccolò Cecconi).



7. Stepped dromos of Dolmen 228 after excavation: from outside (left) and from inside (right) (archive of the Spanish - Italian Archaeological Mission to Jordan).



8. Dolmen 232, from the east (archive of the Spanish - Italian Archaeological Mission to Jordan).

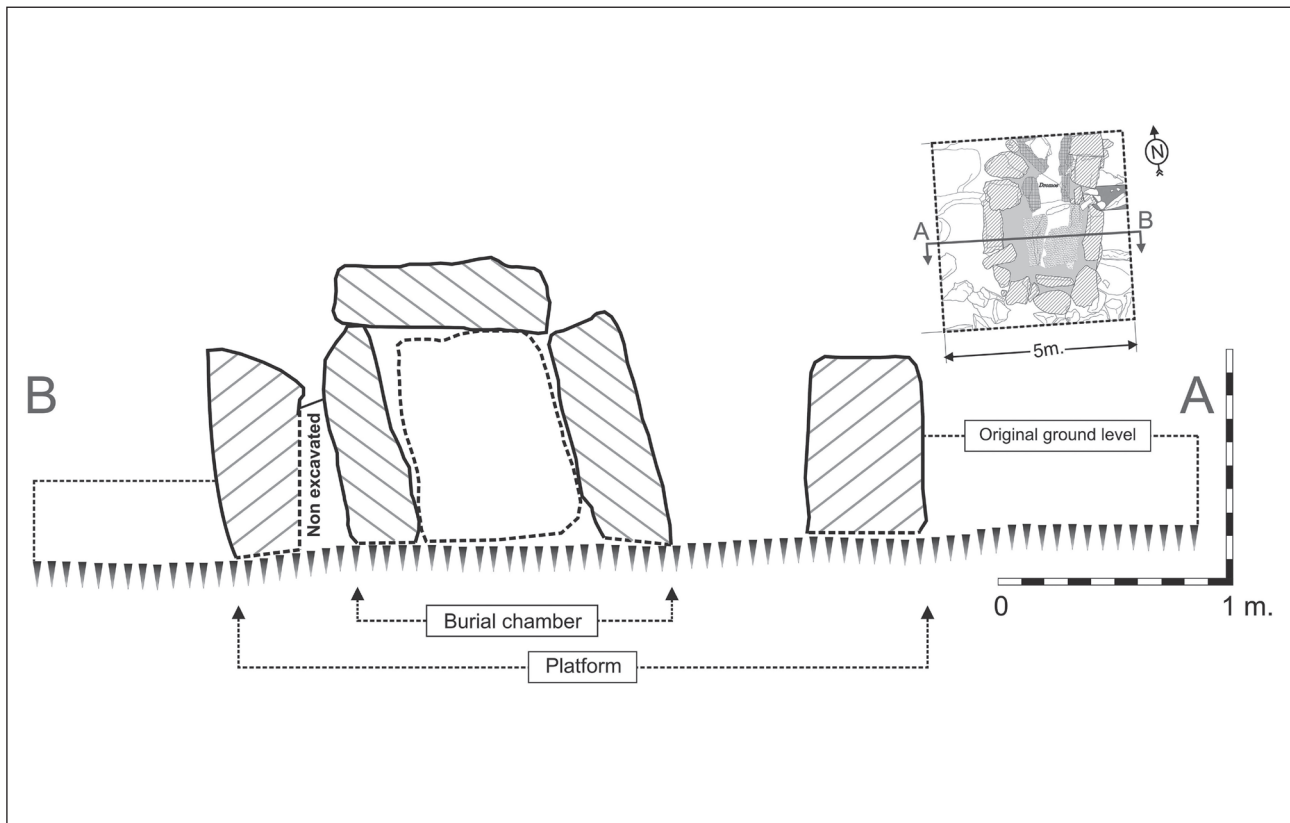


9. Section of Dolmen 232 (by Niccolò Cecconi).

Dolmen 318 was excavated by the Spanish team. It is located in a higher position, north of Dolmens 228 and 232, and east of the Jabal al-Muṭawwaq settlement wall. Even before excavation, it seemed smaller than the other two, but was well-preserved and covered by accumulated layers of soil which completely sealed the entrance of the chamber. Like Dolmen 228, Dolmen 318 had five phases: construction, use, emptying, sealing and abandonment (FIG. 10).

Phase V (SU 100) corresponds to the modern ground surface, where a lot of material (pottery sherds and lithic tools) was discovered. Phase IV corresponds to SU 101 and 107, identified all around the dolmen and characterized by a similar morphology, *viz.* earth and limestone stones. Phase III (SU 102, 105 and 108) belongs to the abandonment phase of the structure; these layers were found outside the dolmen to a height of 50 cm and inside the burial chamber. Most of the archaeological finds were made here, in particular EB I sherds, lithic tools and

animal bones (including the remains of sheep). These layers correspond to natural wash from upslope, noting that - owing to the proximity of the EB village - most of this material could derive from there. Phase II corresponds to the intentional sealing of the monument. The two layers recovered for this phase are SU 106, excavated in the access corridor, and SU 109, excavated inside the burial chamber. Both consisted of earth and small and large stones, which blocked the entrance of the tomb. In these layers just few examples of sherds and stone tools were discovered, all dating to EB I (see also Alvarez *et al.* in press). Finally, Phase I corresponds to the first construction of the monument. It consists of layer SU 104, associated with the stone base of the dolmen and created by leveling the natural bedrock with slabs and large stones. Layer SU 103, also associated with this phase, represents the artificial tumulus filling the space between the circular, external stone wall and the lateral slabs of the dolmen; it consisted of stone slabs



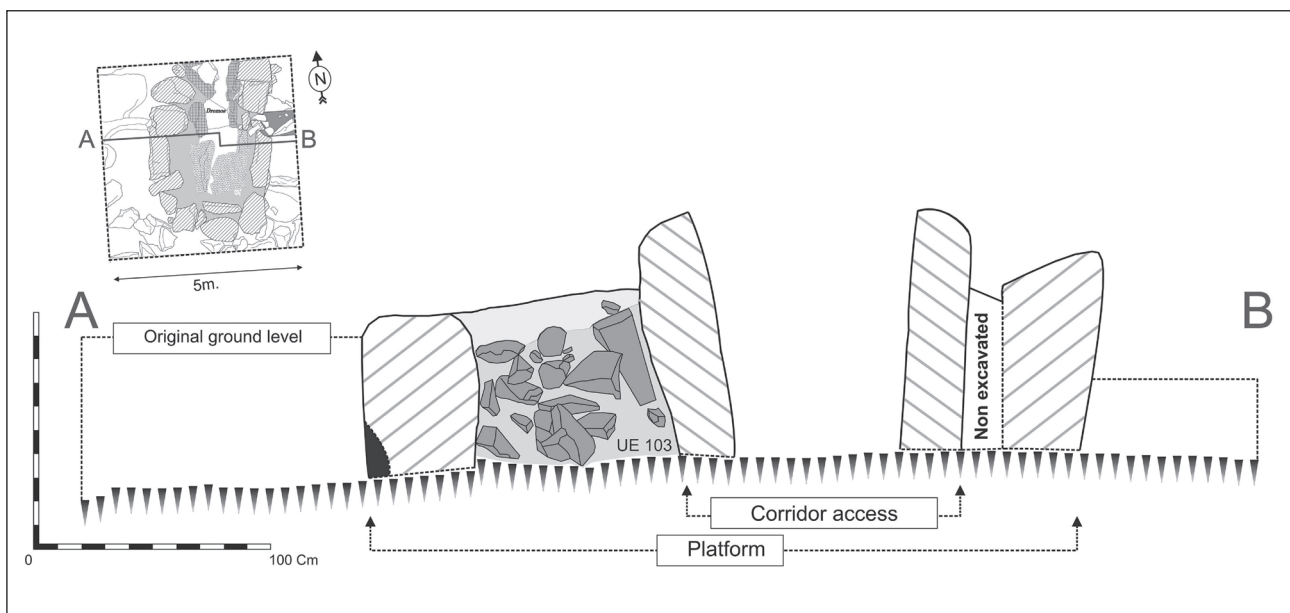
10. Section 1 of Dolmen 318 (by Valentin Alvarez).

set in a matrix of compact earth (FIG. 11). Its main function was to give stability to the whole structure, binding all the architectural elements together in a single, compact block. Regarding the architecture, Dolmen 318 has a squared external wall and an entrance corridor with steps inside, like Dolmen 228 but smaller. The most important feature is that in Dolmen 318 the space between the external wall and the lateral and rear slabs of the dolmen was also filled with layers of stone and earth, suggesting the presence of a cairn leaving just the entrance and capstone of the dolmen in view.

The finds were similar to those from Dolmen 228, all relating to EB IA. The material (pottery; flint) was recovered primarily from the surface of the excavation areas, but also from fill layers within the burial chambers of the monuments. There are many examples of arrowheads, flat scrapers, small tabular flint sickles and basalt grinding stones. These tools, mostly broken, come from eroded deposits upslope, derived from the village area on the mountain-top. Some broken Canaanian blades were also recovered. It seems that the flint tools, like the pottery, all date to the Early Bronze Age (see Alvarez *et al.* in press).

One category of find recovered from the burial chambers of all dolmens excavated in 2012 consists of small bone fragments, some likely human, some definitely animal. These will be analysed in the near future. If samples are confirmed as being of human origin, it could constitute further proof that the dolmens were originally used as tombs⁷.

The preliminary results of the 2012 season at the megalithic necropolis suggest that the Jordanian dolmens, at least at Jabal al-Muṭawwaq, originally had a different appearance to that of today. The dolmens themselves are stone chambers, like cists, but larger and built above the ground. These chambers were covered by a stone cairn, which was in turn retained by a surrounding wall (FIG.12). These cairns left the capstone in plain view and the entrance clear, in order to permit re-opening of the tomb. These cairns also had an architectural function, facilitating the placement of a heavy capstone on top of the lateral slabs. The dolmens are all different to each other, some smaller, some larger and some with a *dromos* entrance. All the dolmens seem to have been emptied after their use as tombs,



11. Section 2 of Dolmen 318 (by Valentin Alvarez).

7. This was also confirmed by the 2013 Spanish - Italian mission to Jabal al-Muṭawwaq, with the discovery of an intact skeleton in one of the excavated dolmens.



12. Reconstruction of the original appearance of the Jabal al-Muṭawwaq dolmens (by Alessandro Marozzini).

leaving behind just small bone fragments and broken pottery sherds, after which they were finally sealed with stones, a ritual action to prevent the violation of the dead ancestors of the community.

These preliminary results allow the Jabal al-Muṭawwaq dolmen field to be compared with that of Dāmyah, the other large dolmen field excavated along Wādī az-Zarqā' (see Stekelis 1961). There are of course some differences between these two necropoleis: (1) the type of stone used for the slabs, *viz.* travertine at Dāmyah and limestone at Jabal al-Muṭawwaq; (2) the (famous) presence of portholes in the front slabs of the Dāmyah dolmens; (3) the distance to the nearest contemporary EB I settlement - Umm Ḥammad, the nearest settlement to Dāmyah, is 4 km away (Betts 1992: 152, fig. 3)⁸; (4) the claimed presence of incinerated human bone in some of the Dāmyah dolmens - actually it is not clear from Stekelis'

publication if these bones derive from later burials that re-used some of the EB monument. There are also three clear similarities: (1) the initial construction of dolmens at both these sites in EB I; (2) the presence of stone cairns covering at least part of the dolmens (even if at Dāmyah these cairns were made of the same large, flat, travertine slabs as the dolmens themselves, rather than the earth and small-stone tumuli at Jabal al-Muṭawwaq; (3) the topographical position of the sites, at two key points on Wādī az-Zarqā'. Dāmyah is located in the so-called Zarqa triangle, overlooking the confluence of the *wadi* and the Jordan river, while Jabal al-Muṭawwaq is situated in the middle Zarqa valley, where the river turns from south to west⁹. Moreover, the orientation of the dolmens in the two necropoleis is very similar, showing a strong prevalence at these two sites of a northern orientation, in contrast to the eastern orientation more generally attested at

8. Re. the Early Bronze Age I settlement of Tall Umm Ḥammād, see Betts 1992.

9. This type of location can be seen at many dolmen fields in Jordan. Generally this type of megalithic necropolis is located

at strategical points along the *wadis* running east - west from the Transjordan plateau towards the Jordan valley (see Polcaro 2013).

the other southern dolmen fields in Jordan, such as Murayghāt or Wādī Judaydah (Belmonte *et al.* 2013).

In conclusion, the Spanish - Italian archaeological mission to Jabal al-Muṭawwaq has three main objectives for the future. (1) To protect the excavated monuments, restoring some dolmens and creating a path for visitors and explanatory panels to support the development of the site for Jordanian students and foreign tourists. This is a priority, because the Spanish team has documented the destruction of at least 400 dolmens between the first surveys at the dolmen field, carried out by Oviedo University in the 1980s, and the most recent survey done by Juan Muniz and Valentin Alvarez in 2011. (2) We are planning to excavate other megalithic monuments, not only in the southern area of the necropolis, but also on some of the better preserved portions of the northern and eastern slopes of the dolmen field. The aim is to gather more evidence for the practice of emptying and sealing the monuments, and the presence of a tumulus covering part of the structure. (3) We hope to extend the excavation between the southern area of the dolmen field and the eastern part of the settlement wall, where it has been hypothesised that the entrance to the village was located. This will hopefully give us a good stratigraphic link between the EB I settlement and the necropolis. Moreover, we also hope to investigate other structures / houses, presently visible on the ground surface outside the settlement wall, with the aim of establishing whether or not the village entrance is in this area.

Bibliography

Alvarez, V.A., Muniz, J.R. and Polcaro, A. *in press*. Preliminary results of the first Spanish-Italian excavation campaign to the Jabal al-Muṭawwaq

- dolmen field, August-September 2012. *Annual of the Department of Antiquities of Jordan* in press.
- Alvarez, V.A., Muniz, J.R. and Vazquez, G.M. 2012. Reconocimiento y censo de dólmenes en Jebel Khazua. Quneya 2011. Jordania. Pp. 399-427 in J.R. Muniz (ed.), *Ad Orientem, Del final del Paleolítico en el norte de España a las primeras civilizaciones del Oriente Próximo. Estudios en homenaje al Profesor Juan Antonio Fernández-Tresguerres Velasco*, Oviedo: Ménsula Ediciones.
- Belmonte, J.A., Gonzalez-Garcia, A.C. and Polcaro, A. 2013. On the Orientation of Megalithic Monuments of the Transjordan Plateau: New Clues for an Astronomical Interpretation. *Journal of the History of Astronomy* 44: 429-455.
- Betts, A.V.G. (ed.) 1992. *Excavations at Tell Um Hammad, The Early Assemblages (EB I-II)*. Edinburgh: Edinburgh University Press.
- Fernández-Tresguerres Velasco, J. A. 2005. Jabal Muṭawwaq. *Annual of the Department of Antiquities of Jordan* 49: 365-372.
- 2008a. The “Temple of the Serpents”, a Sanctuary of the Early Bronze Age I in the village of Jabal al-Muṭawwaq (Jordan). *Annual of the Department of Antiquities of Jordan* 52: 23-34.
- 2008b. Jebel al Mutawwaq (Jordania). Pp. 39-50 in V. Álvarez, D. González and J.I. Jiménez, (eds.), *Actas de las I Jornadas de Arqueología en Asturias*. Oviedo: Ediciones de la Universidad de Oviedo.
- Nigro, L., Sala, M. and Polcaro, A. 2008. Preliminary report of the third season of excavations of Rome “La Sapienza” University at Khirbat al-Batrawi (Upper Wadi az-Zarqa’). *Annual of the Department of Antiquities of Jordan* 52: 209-230.
- Polcaro, A. 2013. The Stone and the Landscape: the phenomenon of megalithic constructions in Jordan in the main historical context of Southern Levant at the beginning of the 3rd Millennium BC. Pp. 127-136 in L. Bombardieri *et al.* (eds.), *SOMA 2012. Identity and Connectivity: Proceedings of the 16th Symposium on Mediterranean Archaeology, Florence, Italy, 1–3 March 2012*, (BAR 2581), Oxford: Archaeopress.
- Porter, A. 2012. *Mobile Pastoralism and the Formation of Near Eastern Civilizations*. Cambridge: Cambridge University Press.
- Stekelis, M. 1961. *La necropolis megalítica de Ala-Safat, Transjordania*. Barcelona: Diputación Provincial de Barcelona. Instituto de Prehistoria y Arqueología.