PRELIMINARY REPORT OF THE SHAWBAK NORTH ARCHAEOLOGICAL PROJECT (SNAP): 2012 - 2013

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1. Introduction

Despite its rich archaeological potential, the Shawbak area has for some reason been poorly investigated. Apart from Shawbak castle (e.g. Brown 1988; Vannini 2011), well-known archaeological sites in the area are restricted to a large-scale Palaeolithic flint scatter along the Fjayj escarpment (Rollefson 1981a, 1981b, 1985), the PPNB settlement of Wadi Badda (Fujii 2007, 2010), the dolmen field of Umm Tuwyrat (Dubis *et al*. 2004; Scheltema 2008) and a few Iron Age sites around Khirbat ad-Dabba (Whiting *et al*. 2008, 2009). In comparison with surrounding areas such as the Faynan drainage basin (e.g. Levy *et al*. 1999, 2001, 2002; Barker *et al*. 1999, 2007; Finlayson and Mithen 2007), the Wadi al-Hasa catchment area (e.g. Miller 1991; MacDonald 1988; MacDonald *et al*. 2004) and the Petra intermontane plateau (e.g. Gebel 1988; Lindner *et al*. 1990, 2001; Knodell and Alcock 2011), the deficiency of basic archaeological information about the Shawbak area skews the regional picture and demands urgent attention.

The Shawbak North Archaeological Project (SNAP) aims to shed new light on the general occupational history of the large depression below the Fjayj escarpment and the surrounding hilly terrain. The survey area corresponds to the western extension of the Jafr basin, the main focus of our long-term research project (JBPP [the Jafr Basin Prehistoric Project]) and, in this sense, has the potential to bridge an information gap between the 'desert' and the 'sown'. It is also anticipated that the survey will go some way towards connecting the Kerak / Tafila area to the north with the Petra area to the south. Taking the results of a pilot study in 2010, the first season of the new project took place in 2011 and located a total of 16 archaeological sites, ranging in date from the Palaeolithic to the Islamic periods (Tarawneh *et al*. 2011; Fujii *et al*. 2012). This report briefly summarizes the results of the second to fourth seasons, conducted from 2012 to 2013.

2. Survey results

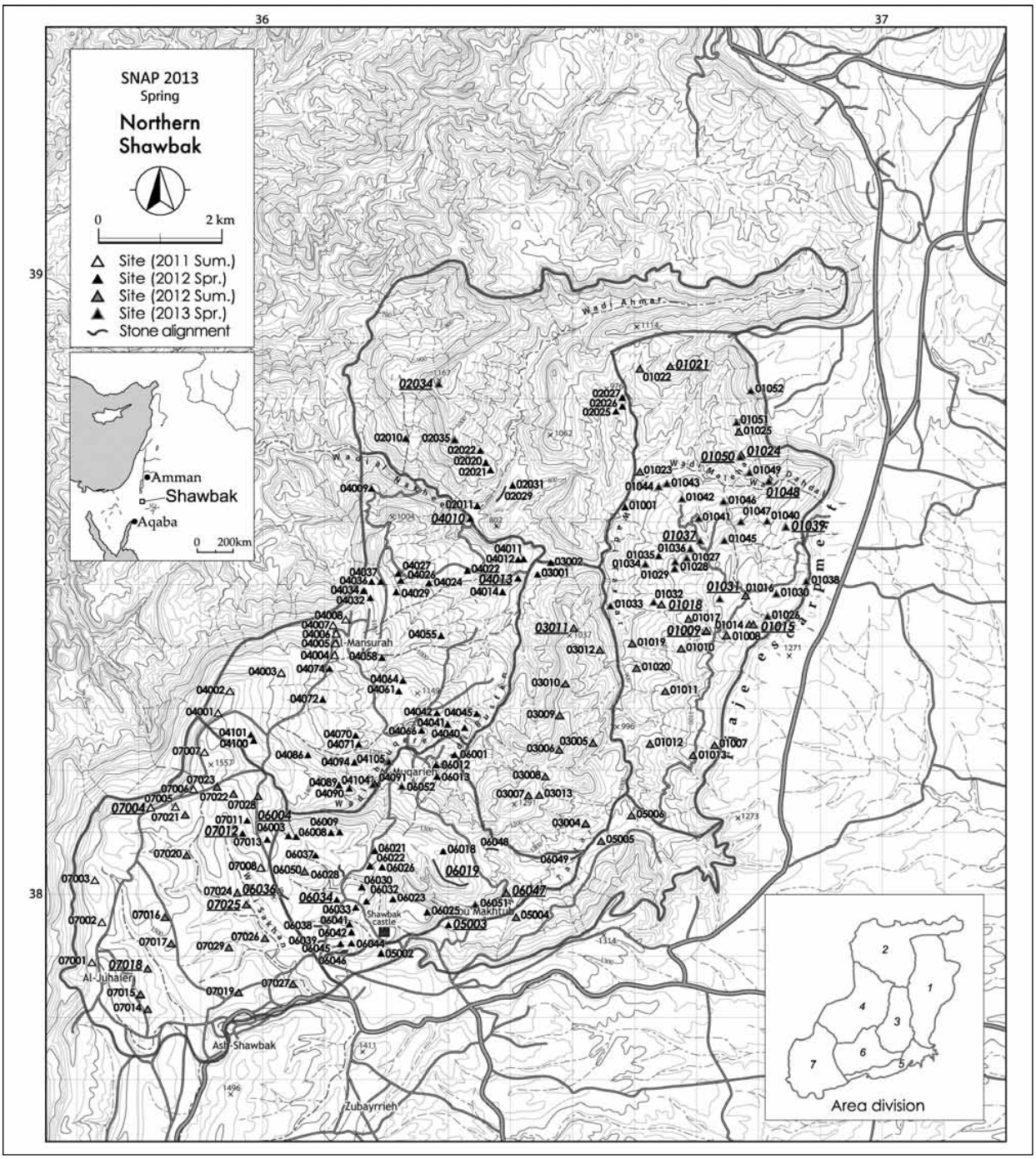
A series of surveys identified a total of 166 new archaeological sites (**Fig. 1**), described below in chronological order.

Palaeolithic

A total of eight Palaeolithic flint scatters were located, most of which clustered on the eastern edge of an isolated hill in Area 3 (**Fig. 2**). The surface finds included finely retouched handaxes that probably date to the final Acheulean (**Fig. 3**), as well as robust blades and flakes that possibly belong to the Middle to Upper Palaeolithic period. The location of these sites and their artifacts suggest some sort of relationship with the neighboring site of Fjayj (Rollefson *op.cit*.)

Pre-Pottery Neolithic B (PPNB)

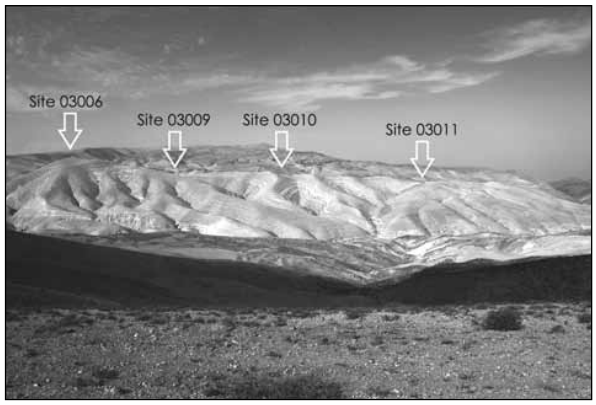
A total of five sites (including two small settlements) were identified. Site 01048 (Wadi Badda) occupies a terrace overlooking Wadi Dahdal, which flows west in the northern part of Area 1 (**Fig. 4: 1**). This small settlement (*ca* 1 - 2 ha) was found for the first time in 2007 (Fujii 2007) and has been revisited several times thereafter (Fujii 2010: 375-380). As previously reported, several masonry wall alignments are exposed on the present ground surface (**Fig. 4: 2-3**). Surface artifacts include naviform core and blade components, Amuq and Byblos



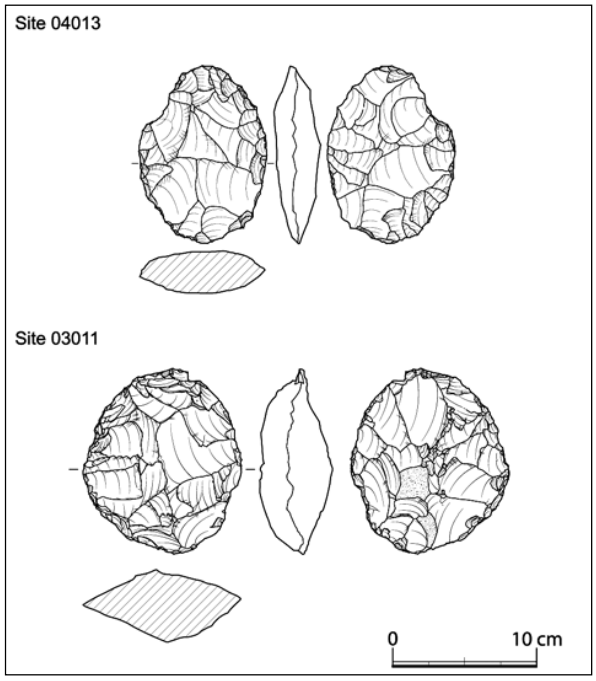
1. Registered sites, 2011 to 2013. Underlined numbers present the sites referred to in the text.

points, a heavy-duty digging tool and other miscellaneous retouched tools (**Fig. 4: 4**). This is the most promising PPNB site in the research area.

Site 04010 ('Ain Nattaf), another settlement site, lies on the south bank of Wadi Nakheel bordering Areas 2 and 4 (**Fig. 4: 5**). The site was found for the first time in the summer of 2010 when we conducted a few days' trial survey with young colleagues from al-Hussein Bin Talal University. The fourth season reconfirmed the presence of several masonry structures (**Fig. 4: 6-7**) and a PPNB flint assemblage, including a naviform core (**Fig. 4: 8**).



2. Distant view of Palaeolithic sites in Area 3 (looking W).



3. Surface finds from the Palaeolithic sites.

Early Bronze Age

A total of 34 EBA-related sites (including a few small settlements) were identified. Overall, the sites were concentrated in the western part of the research area, being scarce in the eastern part.

Site 07012 occupies the flat top of a small hill and extends over *ca* 1 ha (**Fig. 5: 1**). EBA sherds, especially those of EB II and IV, are the predominant surface finds (**Fig. 6: 1-13**). A few small square or round masonry structures are exposed on the ground surface.

Sites 01015 and 01024 are located on a gentle slope overlooking Wadi Tartar to the west (**Fig.** 5: 2-3). Both sites consisted of several round features *ca* 5 - 10 m in diameter and yielded a number of EBA coarse-ware sherds (**Fig. 6: 14-15**). These included a few EB I examples (**Fig. 6: 16-17**).

Site 07004 was discovered in the first season (Fujii *et al*. 2012) and was subsequently revisited to collect further information. Though seriously looted, the site includes at least five to six elongated tumuli arranged in parallel (**Fig. 5: 4**). The largest example measures *ca* 20 m in length, *ca* 5 m in width and *ca* 1.5 - 2 m in height. Simple ware sherds that probably date to EB II and EB IV were found around them. The surface collection included lamp bowls and jars (of red-washed, mica-tempered ware), both of which feature in the pottery repertoire of Tel Arad in the northern Negev (Amiran *et al*. 1978). Similar examples have been reported from two small settlements near es-Sadeh and at Umm Saysaban (Lindner *et al*. 1990: 199-204, 2001: 302-304, 309), suggesting that in the EBA southern Jordan was closely tied with the contemporary Negev highlands.

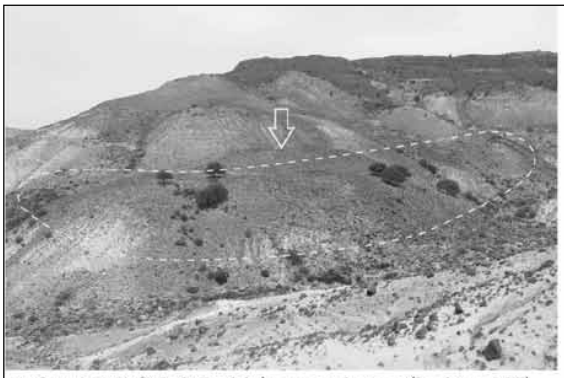
Iron Age II

A total of 73 sites (including a settlement and a few tumulus fields) yielded Iron Age II pottery. Unlike the EBA sites, they were concentrated in the south-western and eastern parts of the research area.

Site 05003 is a small settlement, *ca* 1 ha in area, that is located on a small hill on the south bank of Wadi Tartar (**Fig. 7: 1**). The site includes several structures and is surrounded by a perimeter wall built of roughly dressed limestone boulders *ca* 20 - 80 cm in length (**Fig. 7: 2**). The surface collection includes a large number of sherds dated to Iron Age II (**Fig. 8: 1-15**). The occurrence of two fragments of slag (probably iron) suggests that this hamlet-sized settlement was engaged in metallurgy.

Site 01009 is located on a small hill overlooking Wadi Tartar far to the west (**Fig. 7: 3**). It consists of several structures of various types, which form a small complex measuring *ca* 50 m north - south by *ca* 20 m east - west. The surface finds suggest an Iron Age II date for the site (**Fig. 8: 16-21**).

Site 06004 occupies a flat top of a small hill in the north-western part of Area 6. The site includes several tumuli *ca* 5 - 6 m in length and *ca*



1. Site 01048 (Wadi Badda): general view (looking NE).

2. Site 01048: exposed structures (looking E).

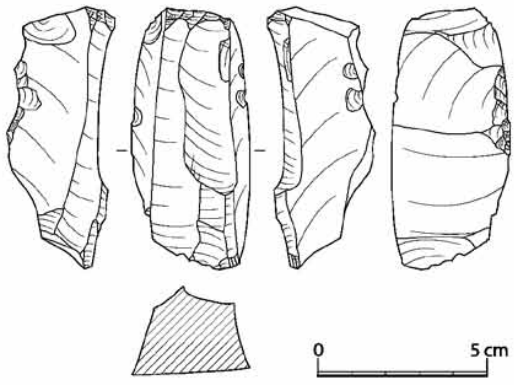
3. Site 01048: exposed wall (looking N).

4. Site 01048: surface finds.

5. Site 04010 (Ain Nattaf): general view (looking NW).

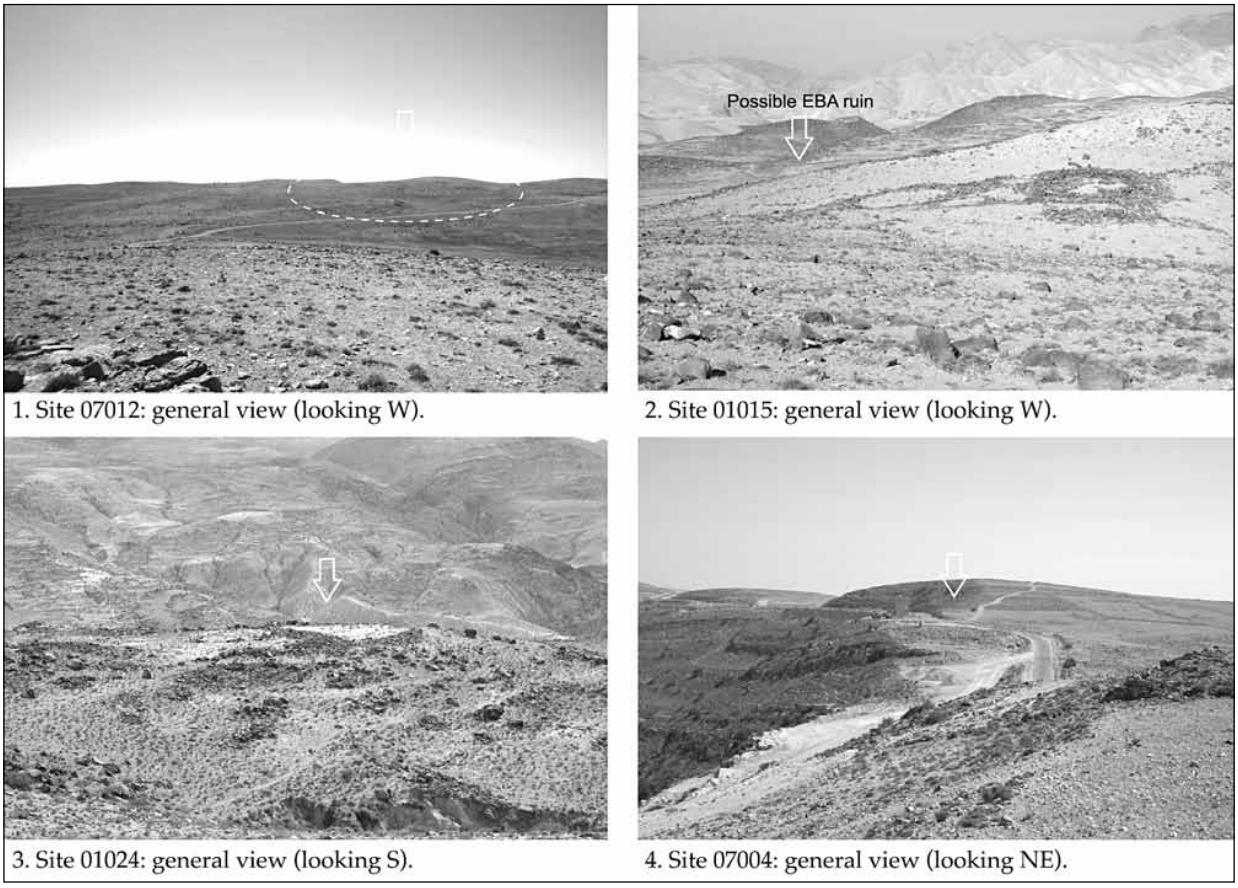
6. Site 04010: exposed structure (looking SW).

7. Site 04010: exposed wall (looking W).

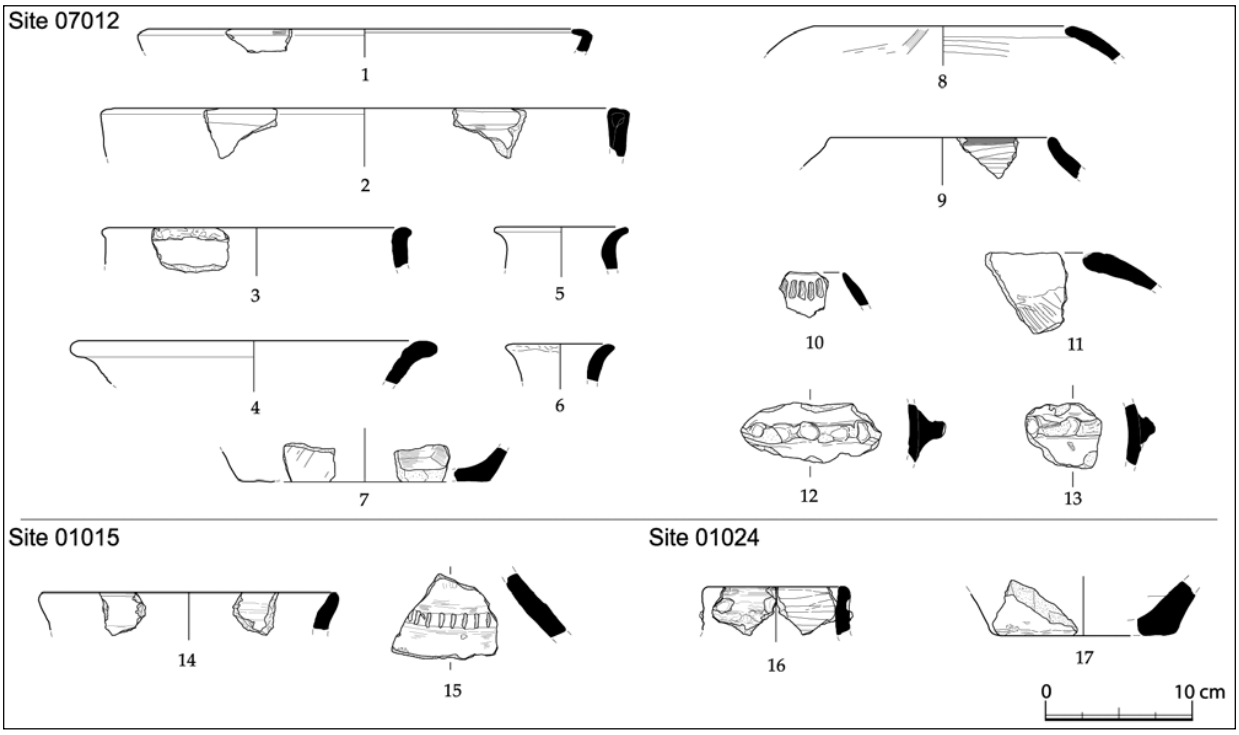


8. Site 04010: Naviform core.

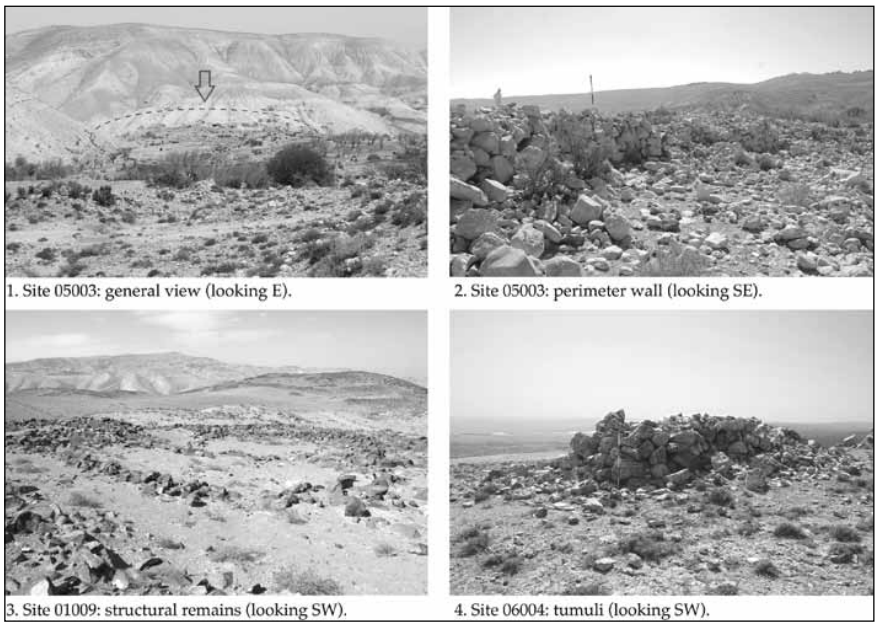
4. PPNB sites.



5. Early Bronze Age sites.

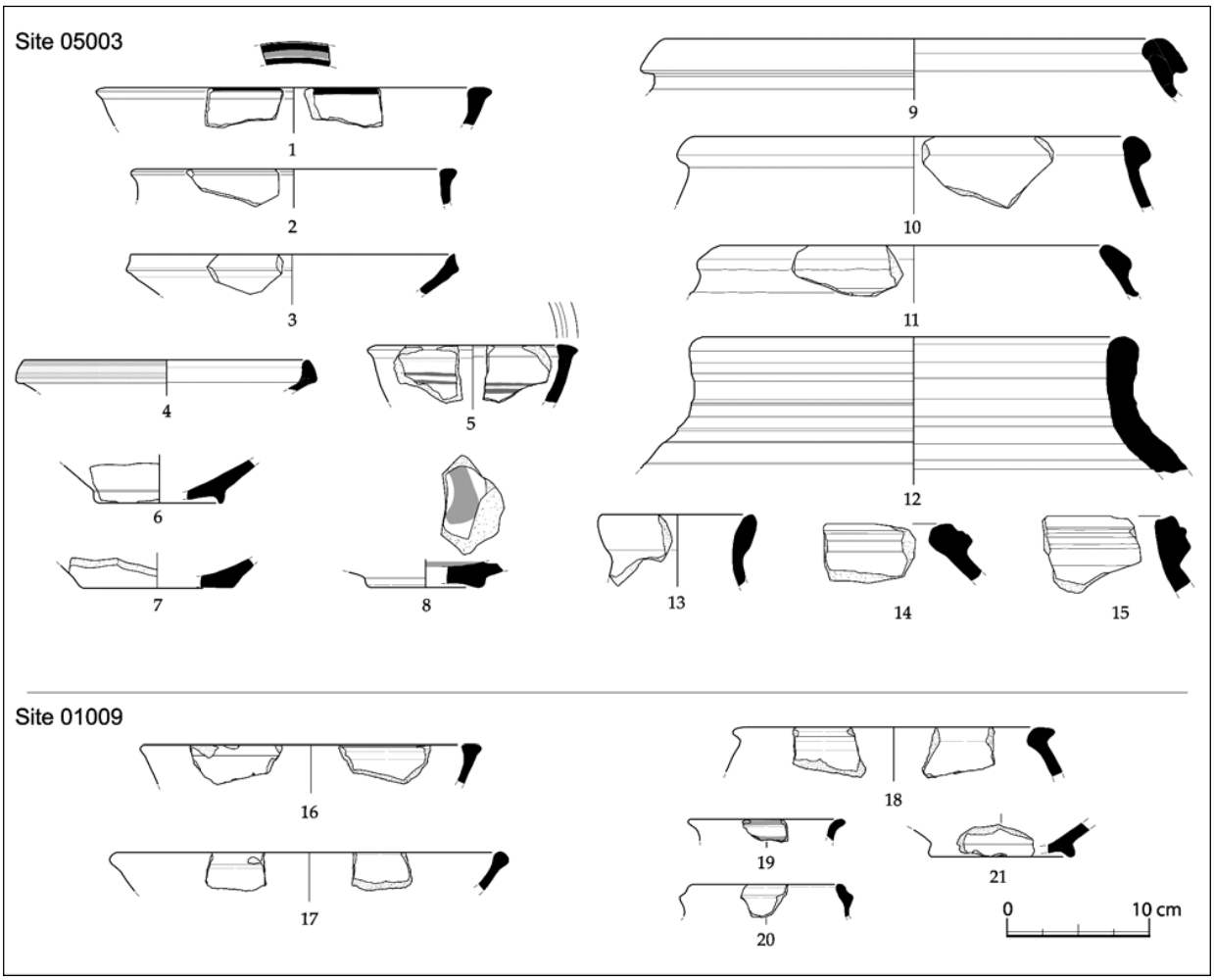


6. Surface finds from the EBA sites.



1. Site 05003: general view (looking E).
2. Site 05003: perimeter wall (looking SE).
3. Site 01009: structural remains (looking SW).
4. Site 06004: tumuli (looking SW).

7. Iron Age II sites.



8. Surface finds from the Iron Age II sites.

1 - 1.5 m in preserved height, and an elongated feature *ca* 23 m in length, *ca* 3 m in width and *ca* 2 m in preserved height (**Fig. 7: 4**). A small number of Iron Age II pottery sherds were collected. The surface finds include Nabataean and Roman sherds as well.

Hellenistic and Nabataean

A total of 67 sites yielded archaeological materials related to the Hellenistic and Nabataean periods.

Site 01037 is located in the northern part of Area 1, on a terrace along Wadi Tartar (**Fig. 9: 1**). The site is commonly known as Khirbet Badda (Lower) and forms a small settlement *ca* 1 ha in area. Many rectangular structures built with basalt cobbles and boulders cover the whole area of the site. As at Site 02034, described below, a large number of Nabatean sherds (including fine painted ware) were found in and around them.

Site 01018 is located at the southern edge of a gently sloping terrace along Wadi Tartar (**Fig. 9: 2**). It measures *ca* 20 m north - south by *ca* 40 m east - west and consists of a cluster of several round features built with a single row of roughly dressed basalt cobbles. Some Nabataean painted and fine ware sherds were collected (**Fig. 10: 1; Fig. 11: 1-5**).

Site 02034 is situated on the highest hill in Area 2. It consists of a tumulus *ca* 5 m in diameter (**Fig. 9: 3**) and an oval structure *ca* 12 m by *ca* 6 m in floor area (**Fig. 9: 4**). A number of Nabataean fine and painted ware sherds were found around them (**Fig. 10: 2**).

Roman and Byzantine

A total of 122 sites were recorded. These ranged from settlements to isolated rectangular structures, tumulus fields and freestanding walls.

Site 07018 is a small settlement *ca* 2 ha (*ca* 100 m north - south by *ca* 200 m east - west) in area, located on the west bank of a small *wadi* in Area 7 (**Fig. 12: 1**). The site contains many rectangular and round structures, *ca* 5 m in width or diameter, which are enclosed within perimeter

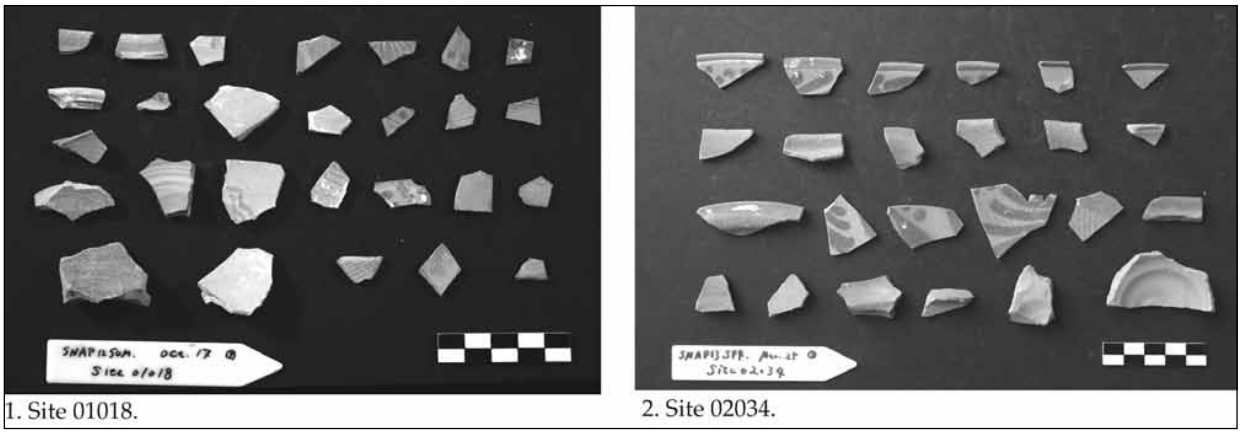
1. Site 01037 (Khirbet Badda Lower): general view (looking W).

2. Site 01018: structural remains (looking W).

3. Site 02034: tumulus (looking E).

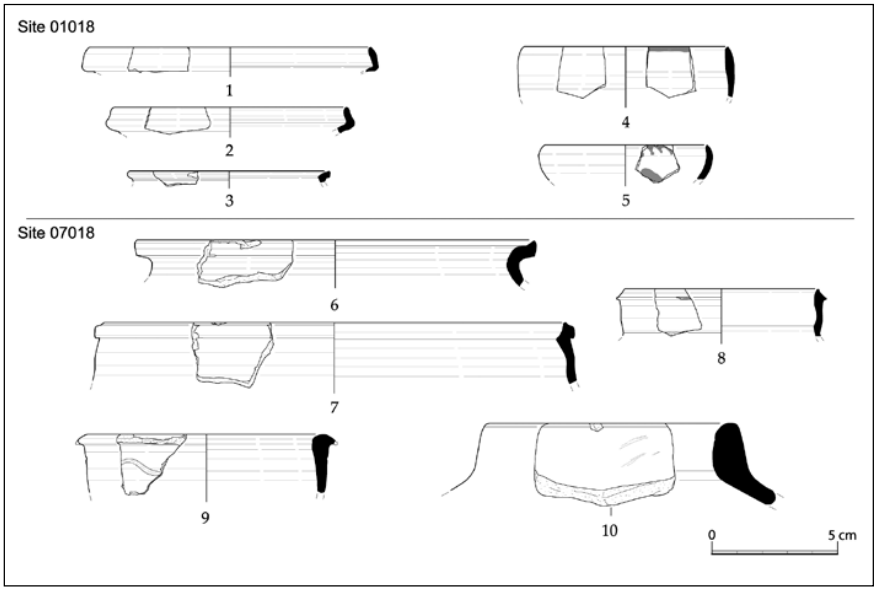
4. Site 02034: structural remain (looking SE).

9. Hellenistic and Nabataean sites.



1. Site 01018. 2. Site 02034.

10. Surface finds from the Hellenistic and the Nabataean sites.



11. Surface finds from the Nabataean and the Roman-Byzantine sites.

walls preserved to a height of several courses. A few diagnostic sherds were collected on the ground surface (**Fig. 11: 6-10**).

Site 07025 occupies the west bank of Wadi Sakhan and consists of a large square structure with a floor area of *ca* 20 m north - south by *ca* 20 m east - west and perimeter walls *ca* 2 m in preserved height (**Fig. 12: 2**). The surface collection includes a small quantity of sherds dating to the Roman - Byzantine periods.

Site 06047 is located on a slope immediately above the modern village of Abu Makhtuv (**Fig. 12: 3-4**). The surface finds include a number of Roman - Byzantine pottery sherds. The site was sounded by a DoA team several years ago but has not yet been published.

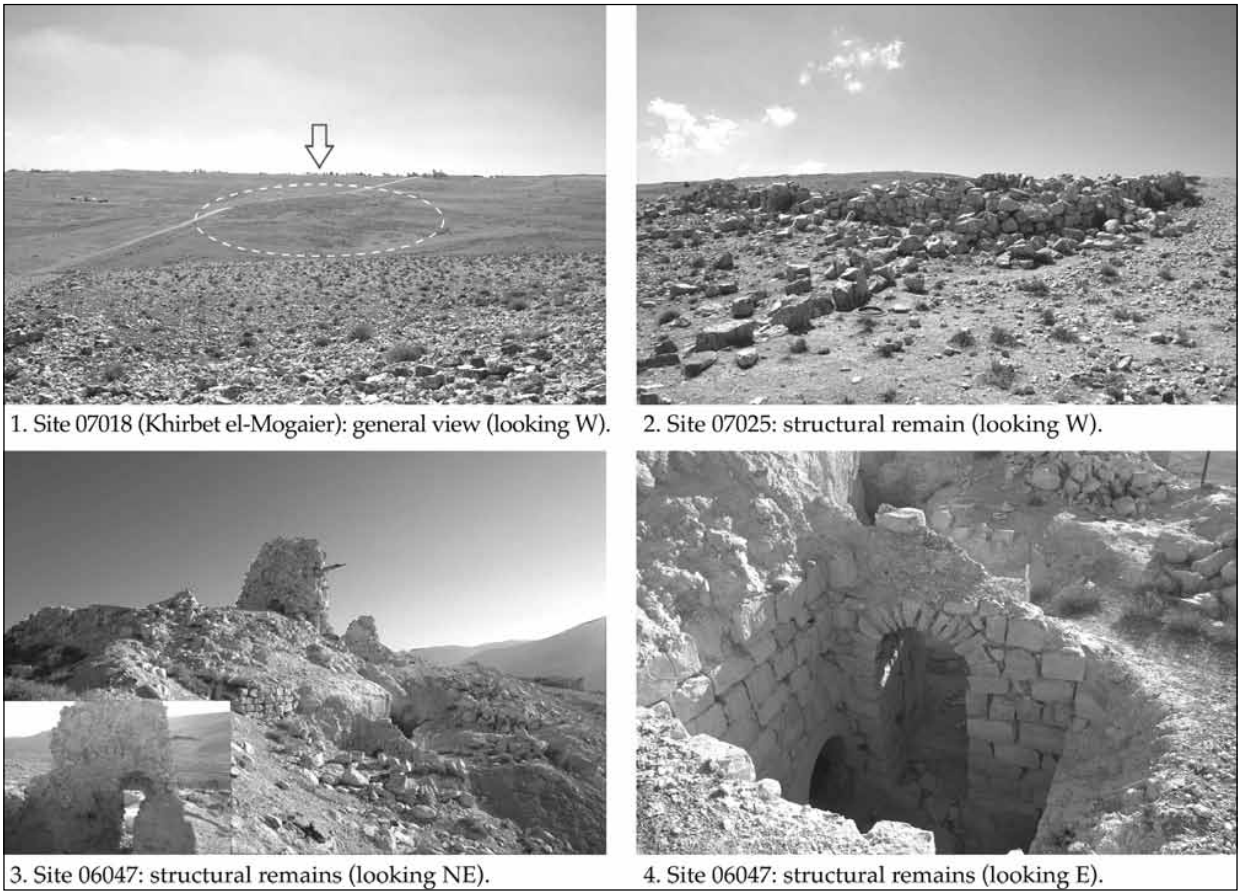
Middle to Late Islamic

A total of 62 sites yielded material dating to the Middle to Late Islamic periods. The most typical example is Site 01039, commonly known as Khirbet Badda (Upper), which is located on a gentle slope immediately below the Fjayj escarpment (**Fig. 13: 1**). Rectangular structures extend over the whole area of the settlement (*ca* 2 - 3 ha) (**Fig. 13: 2**). Coarse ware sherds predominate, some of which are decorated with black paint (**Fig. 14**).

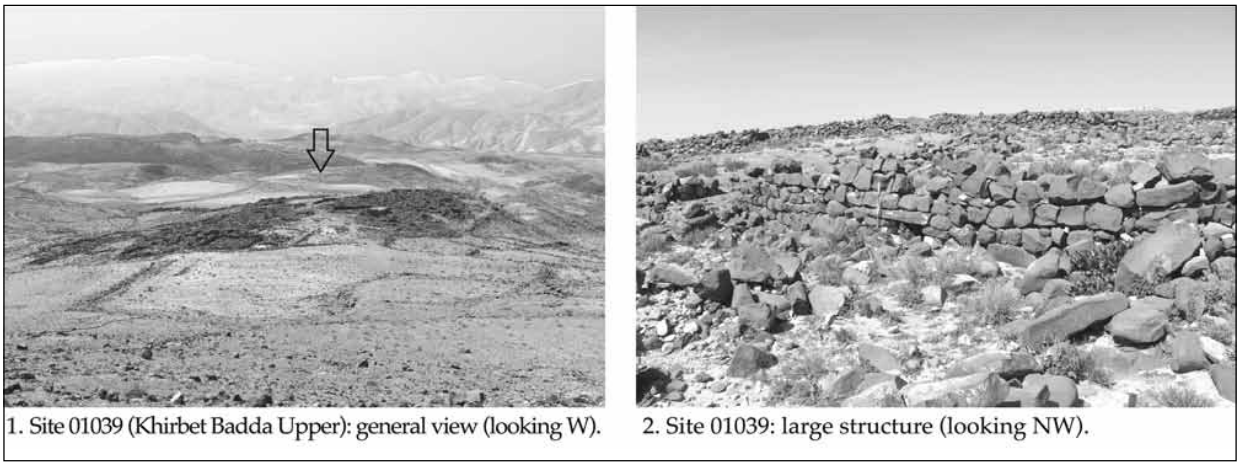
Miscellaneous

Stone alignments

A total of 20 freestanding stone alignments were recorded. A few of them are very long, being up to *ca* 800 m in total length (**Fig. 15: 1-2**). The date of these unique features is still unknown owing to an absence of diagnostic finds. The same is true of their function, but in



12. Roman-Byzantine sites.



13. Middle to Late Islamic site.

view of the concentration of these features on gentle slopes in Area 6, many of them might be regarded as fences to delimit cultivated land.

Petroglyphs

The survey located a total of 14 petroglyph clusters, most of which cluster on the basalt plain in the center of Area 1. Both pecking and line-drawing techniques are used to depict what are largely hunting scenes. Individual iconographies include gazelle, dogs, felines, camels, ostriches and other miscellaneous wildlife (**Fig. 16: 1, 2**). In addition, human figures fitting arrows to their bows are also depicted. Dating the

14. Surface finds from the Middle to Late Islamic site.

petroglyphs is one of the main issues that we have to tackle in the future.

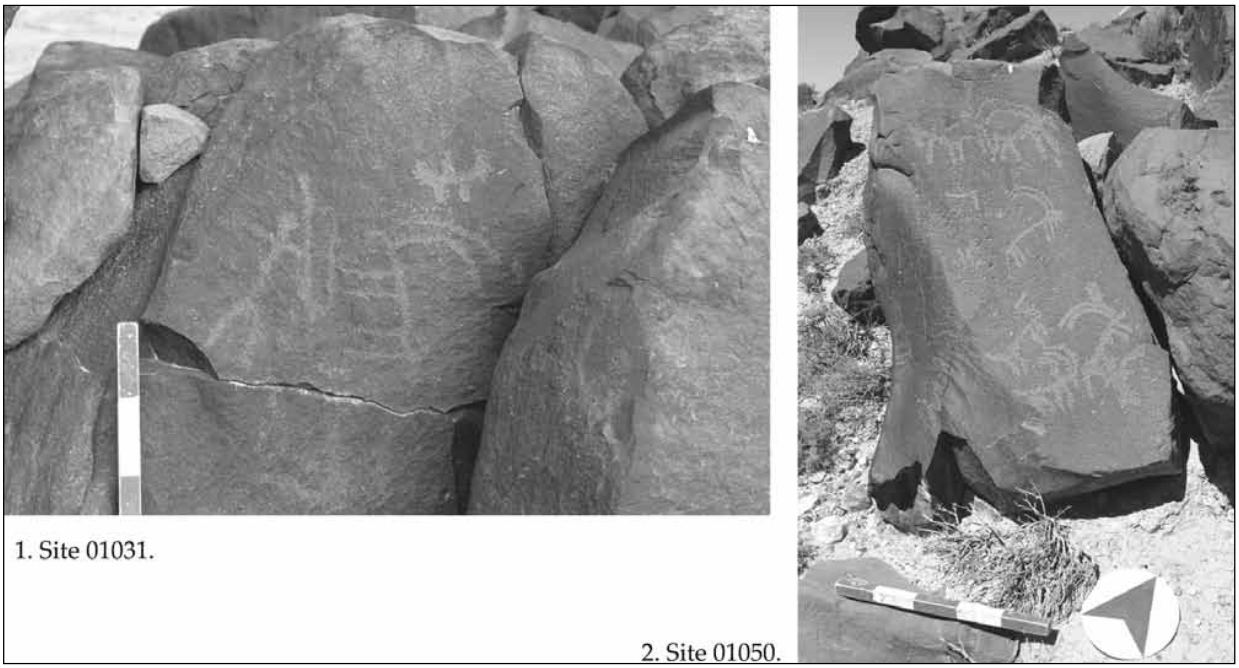
Cupmarks

Two sites include cupmarks on exposed limestone bedrock. The examples at Site 01021 are typically circular in plan, measuring *ca* 20 - 30 cm in diameter (**Fig. 17: 1**). Those found at Site 06034 may have been used for grape and / or olive pressing (**Fig. 17: 2**). A limited number of Iron Age II and Late Islamic sherds were found at the latter site, but nothing conclusive can be said about the date of the site itself. The dating

1. Site 06019: general view (looking NW).

2. Site 06036: general view (looking N).

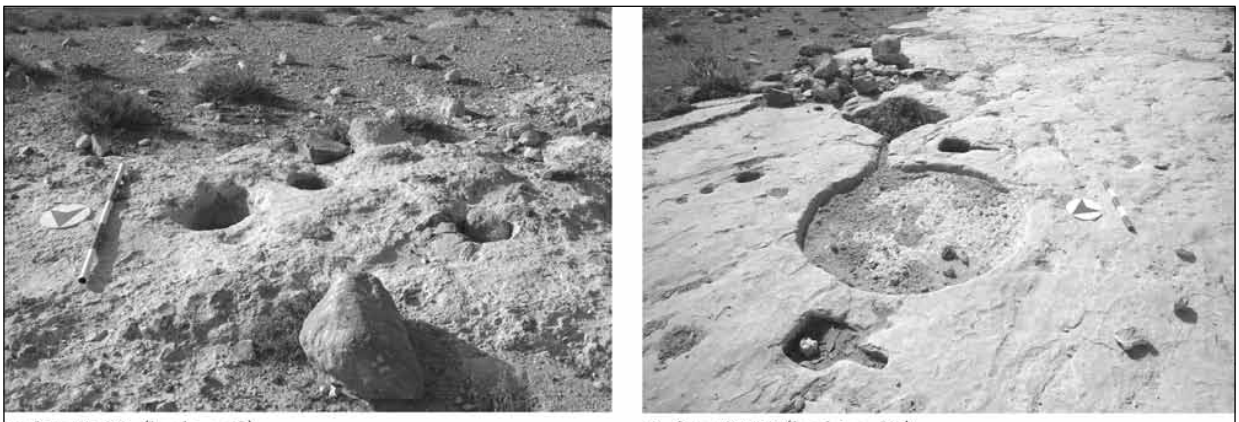
15. Stone alignments.



1. Site 01031.

2. Site 01050.

16. Petroglyphs.



1. Site 01021 (looking S). 2. Site 06034 (looking SE).

17. Cupmarks.

of these extramural facilities requires in-depth research that takes local settlement patterns into account.

3. Concluding Remarks

This series of general surveys has provided some insight into the occupational history of the research area. What interests us is the lack of clear evidence for several periods, including the Late Neolithic, Chalcolithic, Middle to Late Bronze Ages, Iron Age I and Early Islamic period. A similar trend has been noted in surrounding areas as well (e.g. MacDonald *et al.* 2010, 2011, 2012). The only possible exception is a base fragment found at Site 01039, which bears the impression of a coarse spiral matt and hints at temporary utilisation of the area in the Chalcolithic period (MacDonald 1992: Pl. 9: 7; Fujii 2004: Figs. 7: 8, 10: 5).

Another notable characteristic is an absence of large settlements throughout all periods. This is inexplicable, when we consider that neighboring areas (e.g. the Kerak region and northern Negev) include town-sized settlements such as Bab edh-Dhra' (EB II-III), Tel Arad (EB II-III) and Buseirah or *Bozrah* (Iron Age II). Differences in general topography, especially the extent of available arable land, may lie behind this phenomenon.

Also of interest is the scarcity of EBA cairn fields. Bearing in mind that the adjacent EBA Jafr basin is well-known for burial cairns (Fujii 2004), as well as for the large-scale exploitation of flint (Fujii 2011), this phenomenon is unexpected and might possibly be understood as an aspect of habitat segregation between the 'desert' and the 'sown'. As a matter of fact, our survey results suggest that the Shawbak area was linked with the west during EB II rather than with the east (Lindner *et al.* 1990, 2001). Petrographic analysis of pottery sherds has also corroborated a close link between the central Negev highlands and central and southern Jordan (Goren 1996). These perspectives require us to review the survey results in a broader context.

With these issues in mind, we would like to proceed to the next stage of our research, namely limited soundings at a number of promising sites located during the course of the surveys.

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