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**SURVEYING THE RURAL VILLAGE OF
AL-JĀYYAH (MA'AN GOVERNORATE,
JORDAN): ARCHAEOLOGICAL
METHODOLOGIES AND FIRST
RESULTS.**

**A CONTRIBUTION TO THE KNOWLEDGE
OF THE SHAWBAK TERRITORIAL
SETTLEMENT IN THE *LONGUE DURÉE***

Abstract: This paper presents some preliminary results about systematic Light Archaeology surveys (integrating Building and Landscape Archaeology) that the author is leading in the village of Al-Jāyyah, SE of the Shawbak castle, within the archaeological investigations on the landscape surrounding the fortress managed by the Italian archaeological Mission 'Medieval Petra,' University of Florence.

The aim of the surveys is to investigate the historical connection between the castle and the village, suggested by some Medieval written sources. The research's preliminary outcomes are confirming that even if the present appearance of the village is modern, it preserves significant Medieval material evidences plausibly linked to the Crusader suburb and the Islamic madīnah of Shawbak.

Keywords: Light Archaeology; Building Archaeology; Landscape Archaeology; vernacular architecture; rural villages

1. The research context

The Italian archaeological Mission ‘Medieval Petra,’ directed by the University of Florence, has been operating in Jordan for over thirty years, studying settlement dynamics in Transjordan from the arrival of Crusaders to the Ayyubid and Mamluk expansions. Since 2000, the researchers have been investigating the material culture of Shawbak castle, Ma’an Governorate (Jordan), according to a structured program of archaeological campaigns (Nucciotti and Vannini 2020) (Pl. 1: 1).

In this framework, the Mission started to develop a tourist master plan in 2010, co-funded by the European Union, to communicate the results of research carried out in the territory and to reinforce and manage a stream of international heritage-tourism that reaches Shawbak castle and its surroundings (Segnini 2011; Bonacchi and Burtenshaw 2012)¹ (Pl. 1: 1). The neighboring villages have, therefore, been surveyed in order to record briefly their environmental and building characteristics with the intention of promulgating the value of the historical and rural heritage of the area.²

Among these villages, Al-Jāyyah has always played a special role in the Mission’s research, and it has been the subject of various investigations (e.g. Burri *et al.* 2011; Nucciotti and Pruno 2016; Vannini and Nucciotti 2018), given its close connections with Shawbak castle, suggested by Medieval written sources, too. This paper attempts to give the first results of systematic archaeological surveys, which started in 2016 and are still ongoing, aimed at defining and cataloguing its archaeological potential.

2. Al-Jāyyah: landscape and written sources

The asphalt road that forks from King’s Highway at the crossroad for Maa’n leads NW to Abū Makhṭūb, Al-Maquairia, and Al-Mansūrah villages,

¹ The ‘Shawbak Tourist Masterplan,’ in collaboration with the University of Pisa and the Municipality of Shawbak, focused on designing a museographic project for Shawbak castle with visiting paths and display panels as well as connecting the surroundings rural villages through three thematic paths. The project had two updating seasons in 2013 and 2016.

² The author led the surveys of the villages in 2015-2016 campaigns, starting the first documentation on the main characteristics of each settlement (former settled tribes, crops, and craft activities) to consider possible criteria for their preservation as well as their narrative potential in terms of slow-tourism development. A specific historical research on them is now in progress, thanks to a degree thesis by Giacomo Ponticelli on the archaeological and environmental contextualization of the area surrounding Shawbak.

NE to Shawbak castle and Al-Jāyyah. This village is located on the southern slope of the wadi and consists of about forty houses, almost ruined and deserted, except for a few reused by Bedouin families which are slowly becoming sedentary. There are a small mosque, a traditional tourist shop run by Mr. Mohammad Abd-Allah Malaheem, and two reception facilities for tourists (Pl. 1: 2). On the opposite side of the wadi, there are other ruined houses which are locally known as Ṭūr Abū Rās. Traces of many terraces and walls in a poor state of conservation are visible between the houses and their immediate vicinity along the wadis.³ Furthermore, there are three water springs which irrigate occasionally cultivated fields with very seasonal flows: Ain Al-Raghayia in the South bottom of the castle hill, Ain Al-Unsuir on North, and Ain Al-Asi on the NE side⁴ (Pl. 2: 1).

The present-day aspect of the village and its surroundings is neglected, but things were totally different in the past (Pl. 2: 3). Indeed, some travelers across Jordan in the 19th and the early 20th centuries described the Shawbak region as intensively inhabited with many scattered villages and cultivated fields along the sides of the hills (e.g. Burckardt 1822, 416;⁵ Irby and Mangles 1844, 115;⁶ Mauss and Sauvaire 1874, 145;⁷ Glueck 1935, 89⁸) (Pl. 2: 2).

Moreover, the area must have been fertile and productive in the Middle Ages, the historical period we are more interested in, because written sources of the 12th-14th centuries give the description of the land around Shawbak as abundant with fruit, with plentiful springs, olive trees, grain, and vineyards (e.g. RRH, 897, 240-241;⁹ William of Tyre 1943, 1, 506-507¹⁰

³ According to oral sources (Mr. Mohammad Abd-Allah Malaheem and Omar and Amer Al-Bdour), there were three main tribes settled at Al-Jāyyah around the 1950s: Al-Bdour, Al-Ghunmien, and Al-Rawashdeh.

⁴ There is another small spring on the SW side of the castle hill, called Ain Mgames.

⁵ 'At the foot of the hill are two springs, surrounded by gardens and olive plantations.'

⁶ 'At its foot the ground is terraced out into gardens, and thickly planted with figs, now in full leaf.'

⁷ '*Nous avons à notre gauche le wady 'Iousor, qui court de l'est à l'ouest en arrosant de vastes champs de figuiers, de grenadiers et de vignes.*' According to the map of the movements of the exploration group, 'wady 'Iousor' is plausibly the wadi which Al-Unsuir spring flows in.

⁸ He describes Shawbak as a 'fine site' with an 'excellent water supply' and the area SW of the castle, near the Ain Šihān spring, as a 'rich agricultural region.'

⁹ In 1217, the properties of the monastery of Mount Sinai comprised houses, mills, vineyard, and olive trees in the Shawbak region ('*apud Montem regalem domos, molendina, vineas et oliveta, in Craco Montis regalis domos, vineas et oliveta*').

¹⁰ The Latin text is retrieved from <http://www.thelatinlibrary.com/williamtyre.html> (status

and 2, 145;¹¹ Dimashqī in Milwright 2008, 114; Walker 2011, 104). Moreover, the historian Ibn Šhaddād wrote that under the patronage of the Ayyubid sultan al-Mu'azzam ʿĪsa (died in 1227), the area was so green that it resembled gardens of Damascus, and in 1321 the geographer Abū al-Fidā noted many gardens that produced apricots, among others, which were exported to Egypt (Abū al-Fidā, 2/2, 25;¹² Le Strange 1890, 536; Faucherre 2004, 45, 47; Milwright 2008, 114-115; Walker 2011, 102¹³). According to 13th- and 14th-century written sources, Shawbak, together with Kerak, was also an important center of sugar industry, which implies intensive cultivation of sugar cane as well as abundance of water (Milwright 2006, 15; Walker 2011, 104-105),¹⁴ and a significant producer of carpets, which were presumably manufactured in and around the castle from wool or goat hair gathered from local flocks (Little 1984, 83-94; Milwright 2008, 114; Vannini *et al.* 2013, 373). Finally, the archaeological identification of a Mamluk soap factory inside the castle, which stopped operating in mid-15th century, suggests a luxury production linked to the well documented cultivation of olive trees and, presumably, alkali plants used for making soap by the hot process (Vannini *et al.* 2013, 375-377; Marcotulli and Pruno 2018; Pruno *et al.* 2020, 401-421).

In addition, almost the same sources give us an account of a settlement below the castle, although they are not always clear about its appearance and size. Latin sources, on the one hand, use more frequently the term 'village' or 'suburb.' Indeed, in the 12th century, William of Tyre mentioned a '*suburbium*' outside the castle, situated on the slope of the hill (William

as of Apr. 27th, 2020): '*est autem praedictus locus commoditates habens fecundi soli, frumenti, vini et olei copias uberes ministrantis*' (L. XI, c. XXVI).

¹¹ The Latin text is retrived from <http://www.thelatinlibrary.com/williamtyre.html> (status as of Apr. 27th, 2020): '*erat autem tota illa regio olivis consita pinguibus, ita ut instar nemorum condensorum, universam terrae superficiem obumbrarent*' (L. XVI, c. VI).

¹² '*Deux sources jaillissent du pied de sa citadelle, l'une à droite, l'autre à gauche, comme les deux yeux sur un visages, et elles donnent naissance à deux ruisseaux qui traversent la ville et arrosent les vergers. Ces vergers sont dans une vallée à l'ouest de la ville. Les fruits, abricols et autres, en sont excellents: on les exporte en Égypte.*'

¹³ Moreover, according to Walker 'the plains of Shawbak were one of the great wheat fields of Mamluk Jordan' (Walker 2011, 103).

¹⁴ Its sugar was highly valued in Europe and listed among the Eastern products sold in the markets of Florence. The Italian merchant Pegolotti reports *Cranco di Monreale* (Balducci Pegolotti 1936, 363-364), although some scholars argue that there is ambiguity in the toponym 'montreal' which, according to written sources, could be referred to both Shawbak and Kerak (Brown 1988, 11, 14-15; Faucherre 2004, 45).

of Tyre 1943, 2, 389;¹⁵ Prawer 1951, 1073-1076), and in 1217 the pilgrim Thietmar visiting Shawbak was hosted in the ‘*suburbana*’ by a Frankish widow, where Christians and Muslims lived (Thietmar of Merseburg 1857, 37).¹⁶ In the first half of 14th century, the traveler Ludholf of Sudheim wrote that under the Shawbak fortress there was a village, called ‘Sabab,’ where more than 6000 Christians lived; however, it is very likely that he did not get to Shawbak, so this number can be exaggerated (Ludolph of Sudheim 1851, 90; Vannini 2012, 156).¹⁷

On the other hand, in the Arab sources reported by scholars, throughout the Ayyubid and Mamluk periods, Shawbak is generally referred to also as a ‘town’ (*madīnah*), or more plausibly a castle-town composed of a stronghold and a settlement below (e.g. Walker 2011, 101-102, 137).¹⁸ For example,

¹⁵ During the siege of the castle by Ṣalāḥ al-Dīn’s army in 1171, William of Tyre wrote that ‘the village outside was situated on the slope of the hill, yet in a place so steep and high that it need fear neither assaults nor attacks by machines or bows.’ The Latin text is retrieved from <http://www.thelatinlibrary.com/williamtyre.html> (status as of Apr. 27th, 2020): ‘*eratque ei suburbium extra praesidium situm in declivo collis, in loco tamen adeo sublimi et arduo, ita ut neque assultus, neque arcuum vel machinarum formidarent ictus*’ (L. XX, c. XXIX). In view of this description, the village of Al-Jāyyah seems to be located on too gentle a slope. It is plausible that the *suburbium* could have been either the NW settlement on the Ṭūr Abū Rās hill, which was probably intensely inhabited also thanks to many natural cavities reused as houses, or the rock dwellings located halfway up the hill of the castle (Burri *et al.* 2011, 290-296).

¹⁶ ‘...*Scobach. In summitate istius montis est situm castrum peroptimum, tribus muris gradatim cinctum et tam firmum, quod numquam uidi firmitus. Et est Soldani de Babilonia. Suburbana eius inhabitant Sarraceni et Christiani. Ubi exceptus fui hospicio a quadam uidua Gallica...*’ A sizable Christian community in Shawbak is attested throughout the Mamluk period; it was composed mainly of mercantile class, specialized in a regional trade in roses, olives, and olive oil (e.g. Le Strange 1890, 536; Walker 2011, 96 and 104).

¹⁷ ‘*Sub hoc castro est villa nomine Sabab, in qua degunt plus quam sex millia Christianorum.*’ Anyway, at the time of his journey (1336-1341), he made a very peculiar description of the castle, perhaps reported by someone: the fortress’s function as a military citadel seems completely altered since wheat and vines are grown within two circle walls and people seem to live mostly in the outer settlement. It would be interesting to investigate if this ‘agricultural’ use of the stronghold is plausible and could be linked to the damages suffered by the 1302 earthquake (Walker 2011, 103), and possibly confirmed by the fact that the chronicler Umari found the castle without a military garrison in 1340 (Faucherre 2004, 47). This situation may have continued until restorations made under the second reign of Nāṣir Muhammad, 1299-1341 (Walker 2011, 103).

¹⁸ Indeed, in the Arab sources, especially for the Mamluk and early Ottoman periods, the line of demarcation between a village and a town was never clear. Archaeological and historical evidences suggest that the late Medieval towns of Jordan are a heterogeneous group of variously characterized castle-towns (Walker 2011, 133-145).

Abū al-Fidā wrote that Shawbak was a ‘small town’ and he distinguished in it a ‘fortress’ with two springs at its foot, and a ‘town,’ which the springs ran through to irrigate the fields (Abū al-Fidā, 2/2, 25;¹⁹ Le Strange 1890, 536; Faucherre 2004, 45²⁰).

Shawbak is also mentioned as a ‘town’ in the Ottoman tax registers until the late 15th century,²¹ when the direct Ottoman rule on the area collapsed (Walker 2011, 133-145).²²

3. Surveing Al-Jāyyah: objectives and methodologies

The archaeological investigations inside the castle have already confirmed the transformation of Shawbak from a Crusader fortress into a renewed, embellished town after the Ayyubid conquest, and it has always been assumed that the village could be an integral part of it (e.g. Vannini 2012; Nucciotti and Pruno 2016). A further step of this research, surveying Al-Jāyyah, aims to define how and when these changes from a Crusader suburb to an Ayyub and Mamluk town took place materially in the settlement below the castle.

The archaeological documentation of the village follows in general the Light Archaeology method, which all the mission activities are based on and that is applied in various contexts such as Shawbak, Petra, and Kerak (Vanni Desideri and Vannini 2016; Fragai 2019, Nucciotti and Vannini 2020). It is substantially a non-invasive investigating approach, developed by the Chair of Medieval Archaeology of the University of Florence, that integrates the methodologies of Building Archaeology with those of Landscape and Environmental Archaeology and that allows to formulate interpretative models of historical phenomena on a regional scale (Nucciotti and Vannini 2020). This investigation system is very useful to program targeted excavation tests, too.

¹⁹ ‘*Schaubak est une petite ville ... et dont la population est formée principalement de chrétiens... La citadelle, construite en pierres blanches, est située sur une haute colline blanche.*’

²⁰ He divides the ‘ville’ of Shawbak into the ‘citadelle’ and ‘son bourg’ at its foot.

²¹ See the Ottoman tax register no. 970 for 1538-1539 where Shawbak had 145 Muslim family heads, 16 Muslim bachelors, 2 Muslim imams and 11 Christians family heads (al-Bakhit and al-Sawariyyah 1989, 205-206) and the tax register no. 185 for 1596-1597 where Shawbak had 65 Muslim family heads and 5 Christians family heads (Hütteroth and Abdulfattah 1977, 173).

²² In this period, the Tawara tribe took possession of the Shawbak fortress and installed in it members of the Hillo and Sawalha tribes of Ma’an as custodians (Peake 1934, 193).

More specifically, the Al-Jāyyah village is being examined with the most updated methods of Building Archaeology, a well-established discipline that allows to recognize material traces that historical events left on the buildings and to document the chronological evolution of the construction techniques which they were built with.²³

Within this methodology, we started dividing the village (ID site: #30, SH-JA) into four topographical areas, separated by the modern road and two small wadis, called Al-Jāyyah and Al-Raghayia. The topographical, morphological, and environmental features of each area were described in a specific recording-sheet, called 'Topographical Unit' (TU), where we started to document architectural or housing complexes that were the sum of several buildings and were progressively numbered (AC recording-sheet) (Pl. 2: 4). At the current state of research, the AC descriptive level is suitable to record building typologies of vernacular houses that clearly belong to the modern era. However, for buildings with possible pre-existing elements or masonries, the archaeological analyses are carried out to a greater degree of detail, filling the 'Building' recording-sheet (B) and stratigraphically reading the walls (Pl. 2: 4). In this case, the masonry technical features are recorded according to the 'Masonry Stratigraphic Unit' recording-sheet (MSU).

From 2016 to 2019, twenty seven Architectural Complexes, which represent about the 70% of the entire village, were surveyed with this method.

4. The vernacular architecture in Al-Jāyyah

Although the main purpose is to deepen our knowledge of the supposed early and late Medieval phases of the village, this methodological approach allowed, at the first stage, to start an architectural catalogue of the so-called vernacular architecture (Khammash 1986; Kana'ana and McQuitty 1994; Alsubeh 2013; Twaissi *et al.* 2016; Labin and Aldeek 2017; Shqairat 2018),²⁴ because the oldest structures lie beneath or mixed with the newer

²³ The application of the principles of archaeological stratigraphy to the analysis of historical buildings, developed in the late 1970s, is probably the most influential theoretical contribution of the Italian Medievalist school to the international methodological debate on this topic (Nucciotti and Vannini 2020, 155). Building Archaeology has also achieved a prominent position in the protection and restoration of architectural heritage (Brogiolo and Cagnana 2012).

²⁴ The term 'vernacular architecture' refers to a built environment that is based upon local needs; defined by the availability of indigenous materials and reflects local traditions and cultural practices. 'I report an architecture that is the result of the overlapping of geography,

residential buildings. It is, however, an important cognitive process allowing to understand the evolution of the settlement in the long term (Kana'ana and McQuitty 1994, 127).²⁵

In Al-Jāyyah, we record the most common Jordan typology of rural house for sedentary farmers (*fellahin* house) according to scholars: a simple rectangular room on a single floor, with two areas divided by a transversal stone arch, called *riwaq* or *qantara*, that supports a flat roof made of wooden beams and mud, called *khashab*. The walls are typically not very thick (c. 50-80cm) and consist mainly of two stone vestments with a mud mortar and wedges infill. This house has usually a single door, always east-placed and parallel to the arch, small ventilation holes above it and, sometimes, a small window²⁶ (Pl. 3: 1-4). In general, the newer buildings are characterized by larger windows and very regular masonries with raw-squared blocks. In the steepest locations in the village, some buildings are partly carved in the bedrock or reuse natural cavities, while the façades are always built in masonry (e.g. AC1, 10, 25) (Pl. 3: 1).

With eleven Architectural Complexes recorded until now, the most common house typology in the village is the 'linear house,'²⁷ type A, that is a string of rooms with a common activity area in front, an open-air or walled courtyard, called *housh* (AC1-8, 15, 20, 21, 23) (Pl. 3: 7-8). Sometimes, a few rooms are placed at the back to form the second string. According

history, archaeology, anthropology, physics, etc. ... ingredients that are, except for physics, regional in their nature' (Khammash 1986, 3). For an overview of the studies on the topics of the rural house over the past forty years, see also Stagno 2012.

²⁵ We still have to study the use of space within and between buildings to reconstruct the link between the settlement and the life of their former inhabitants. The research of these topics has only just been outlined during the work for the Shawbak Tourist Masterplan that aims to investigate the link between the history of places and local identities in order to design better ways of sustainable and community development (the author presented the paper *Surveying the villages: a first systematic approach to the archaeological contextualization and the cultural tourism developing of the rural settlements in the Municipality of Shawbak* at the 14th International Conference on the History and Archaeology of Jordan, held in Florence in January 2019).

²⁶ In literature, the classification of Middle East houses is not uniform. Besides, this basic, rectangular element of the rural house is called sometimes 'single space/single room house' (Twaissi *et al.* 2016, 343), 'separate/core house' (Labin and Aldeek 2017, 16; Rjoub and Mahmoud 2012, 236), or 'basic/closed rectangular house' (Jäger 2012, 16-17).

²⁷ According to some scholars, these 'linear' houses predominate in rural communities of the Near East (Rjoub and Mahmoud 2012, 238, 240; Twaissi *et al.* 2016, 343; Labin and Aldeek 2017, 16).

to tradition, this is most often the result of an enlargement of families of the same clan, whose members gradually attached their houses to each other.

Less common in Al-Jāyyah is the 'courtyard house' typology (type B), characterized by rooms irregularly distributed around an inner and walled courtyard; it is mainly to be found in the upper part of the village (AC1, 10-12, 18, 19, 22, 25) (Pl. 3: 5-6). In the opinion of some scholars, this type may indicate a high social status of the owner and be a clear expression of his financial capacity (Rjoub and Mahmoud 2012, 240; Twaissi *et al.* 2016, 344; Labin and Aldeek 2017, 16).

Overall, the analysis of the stratigraphic sequences between buildings confirms that the housing complexes are first made up of one small edifice with two single rooms which are subsequently expanded by adding other ones to meet the needs of the families.

The investigations are still in course, however, it is very likely that the present village is quite recent. Indeed, in a 1939 shot from the Royal Air Force, the Shawbak castle appears inhabited, with many houses inside the walls, but without buildings on the surrounding hills, where grass covers debris (Pl. 8: 1). Only few houses seem to be used on the Ṭūr Abū Rās slope.²⁸ At this point, we should recall that travelers in the 19th and early 20th centuries described the region as inhabited by many people who seemed to live both in the castle and in its surroundings, mostly in tents, though, as many of the nearby villages were in ruin (e.g. Burckardt 1822, 417-418;²⁹ Irby and

²⁸ The photo does not cover the entire area subjected to our research, but it certainly gives an idea of the appearance of the wadi East of Shawbak in 1939. The shot, taken as part of an archaeological survey conducted by Sir Marc Aurel Stein, is held by The British Academy and it has been retrieved from <https://www.flickr.com/photos/apame/sets/72157652009016911/> (status as of Apr. 27th, 2020). There is an older photo, taken by C.A. Hornstein during his trip to Jordan in September 1895, that shows the valley of Shawbak with his terraces and gardens and without houses (from the public Flickr Archive of the 'Palestine Exploration Fund').

²⁹ '...to the East of the castle is an encampment of Bedouin peasants, of the tribe of Hababene, who cultivate the ground' (417), so it seems unlikely that there were habitable houses there. And '...in the evening we took our final departure, crossing an uneven plain, covered with flints and the ruins of several villages, and then descendent into the wadi Nedjed' (418).

Mangles 1844;³⁰ Seetzen 1854, 1, 418 and 3, 17;³¹ Mauss and Sauvaire 1874, 145³²).

5. The material witnesses of the Medieval settlement in Al-Jāyyah

Thanks to our knowledge of the Shawbak castle's stratigraphic chronotypologies of stone masonries and related building materials (Nucciotti 2007; Nucciotti and Pruno 2016), we are finding important material evidences that confirm what was reported in Medieval written sources that mention a significant settlement outside the fortress. Indeed, it is possible to make convincing comparisons between the materials and construction techniques of the castle and those we survey in Al-Jāyyah.

First, there is a large number of reused architectural elements, such as ashlar or lintels, set into the masonries of the village's houses, that exhibit stone-dressing styles similar to those catalogued through the 'Atlas of Stone-Dressings' of the castle and which are attributable to its different construction phases (Nucciotti 2007) (Pl. 4: 1).

In a small number of the Al-Jāyyah buildings (e.g. AC1, 19) we have found, for example, perfectly squared ashlar with chisel tool-marks on the edges and stone-axe smoothing of the outer faces that are perfectly similar to the catalogued stone-dressing style #10 (i.e. 'Surface' = 'S'). In the castle, this type is connected to (and coeval with) masonries made by specialized Latin/Crusader master masons in buildings established in the 12th century, such as the lower church (B1) and Hospitaller's chapel (B24) apses and the fortified gate B3 (Nucciotti 2007, 36-37; Vannini *et al.* 2013, 367; Nucciotti and Pruno 2016, 311-314) (Pl. 4: 2).

In a larger number of village's masonries, there are ashlar with surfaces flattened by a *gradine* (toothed chisel) with a dense pattern similar to S21 type (e.g. AC13); or ashlar with surfaces flattened by a small pick-axe (or pointed chisel) and toothed-chisel marks on the edges as S23 type (e.g. AC5); as well as ashlar with surfaces simply flattened by a pick-axe (or a pointed chisel) as S20 type (e.g. AC4). These dressing styles are

³⁰ 'It appeared that almost all this side of the castle-hill [NE side] which we ascended had once been covered with buildings' (115) and 'near the spring, there appeared the remains of a village' (116).

³¹ He never went to Shawbak, but relies on data provided by an informant: 'Schäubak is said to consist only a castle ... without other houses outside' (1, 418) and is 'a castle in which farmers live; outside the castle, there are no more houses' (3, 17).

³² The same observations: Mauss and Sauvaire told that they 'were surrounded by all the local men who had come from the town [Shawbak castle] and the neighboring camps'.

all connected to (and coeval with) masonries made by specialized master masons working in the castle under the Ayyubids. In particular, S23 type is used on the inner walls of the Ayyubid reception hall, B34 (datable for 1190-1212: Nucciotti 2007, 44-45; Vannini and Nucciotti 2012, 64-69; Nucciotti and Pruno 2016, 314); while S21 and S20 are linked to S1 type, attributable to the masters masons connected with Damascus and brought by al-Mu'azzam 'Īsa to restore the castle after the 1212 earthquake (Nucciotti 2007, 44-45; Nucciotti and Pruno 2016, 315) (Pl. 5: 1).

In the village, there are also reused ashlar with a *bugnato* dressing, bearing toothed-chisel marks on the edges, similar to S22 type (e.g. AC 19, B1), that belong in the castle to buildings of the Mamluk period, which are still under study, such as the gallery in the western bastion (B13) and a building near the upper church (B29) (Pl. 5: 2).

Moreover, in the masonries of some houses in the village, we found some reused architectural elements finely carved with decorative motifs, placed as lintels. Of particular interest from our point of view is a small lintel carved with a woven geometric motif (AC22, B1) that is still under study but seems to have affinities with a decorated block found in the heated room of Khirbat al-Dūsaq complex (Vigouroux *et al.* 2015, 198) (Pl. 6: 2-4).

Of course, reused architectural elements are only a clue because they may have been taken from the castle by modern inhabitants of the village at the time of building their houses.³³ But there is a second and more significant evidence, which is the presence (partly still under study) of some Medieval masonries or buildings still *in situ* in Al-Jāyyah (Pl. 4: 1).

In a heavily ruined architectural complex of the village (AC16) above the modern road (TU2), which includes rooms carved into the bed-rock, there is a residual wall with a small arrow-slit, built with roughly hewn limestone blocks arranged in horizontal rows, with thick beds of mortar regularized by small stone wedges (B1). The individual blocks do not show any careful surface dressing. This coarse technique is very similar to type 1, which characterizes masonries stratigraphically recognized as the work of specialized Latin/Crusader master masons in the castle, i.e. in the two churches B1 and B10 and some portions of the fortified gates B3 (Nucciotti 2007; Nucciotti and Pruno 2016, 311-314). Moreover, type 1 continues to be recorded in post-Crusader architectures, as in some portions of the aforementioned Ayyubid reception hall B34 (Pl. 6: 5-6). This allowed to

³³ For example, during the Vernacular Architecture Survey, a lot of reused Nabatean architectural fragments were documented in walls and arches of the village's houses of Al Qasr (Kana'ana and McQuitty 1994, 134).

recognize in this masonry technique a ‘little tradition’ of building of 12th-13th centuries in the Shawbak and Petra regions, a proof of the existence of a cultural/ethnic local community able to preserve such a tradition for a long time (Nucciotti and Pruno 2016, 311-314). Even though this masonry technique continues to be used, with some substantial variations and a gap between 1212 and the Mamluk epoch, until recent times in the village of Al-Jāyyah (Nucciotti and Pruno 2016, 314-315), the presence of the arrow-slit could confirm the Crusader-Ayyubid dating of B1 in AC16.

Furthermore, other wall portions in the village’s buildings show another coarse masonry technique, which is very similar to type 2 identified first in the castle and which is supposed to have been introduced by master masons working under al-Mu‘azzam ‘Īsa after 1212, e.g. in the fortified gate B3 and some buildings along the *via recta*, B15 and B23. Type 2 is characterized by roughly squared blocks with cutting margins and coarsely flattened surfaces (with the use of a tool similar to *marteau tetu*) organized in horizontal rows. In particular, there are fewer stone wedges and beds while joints are notably thinner than those of type 1 (Nucciotti 2007, 43-45; Nucciotti and Pruno 2016, 315). This coarse ware is recognizable, above all, on four or five rows of the eastern wall of a building located in the lower part of the village (TU1, AC6, B1) and may be on the eastern wall of a building located above the modern road (TU3, AC 7, B1) (Pl. 6: 7-8).

In addition, the surveys show that a lot of village’s houses are built on underground structures that probably belong to more ancient phases, such as AC 4, AC 5, and some arches located along the small Al-Jāyyah wadi, which still need to be investigated in detail (Pl. 6: 1).

Moreover, three other buildings are clearly relics of Medieval phases. The first is a ruined building, with three residual walls and approximately square plan (270×280m), located on the SE corner of a ‘courtyard house’ in the upper part of the village (TU3, AC19, B4). It has two lower rows of big ashlar in organogenic limestone (e.g. 97.5×54m) whose surfaces are dressed *a bugnato* (MSU 3), and two upper rows of similar elements (e.g. 157×56.5 m) dressed with a pointed chisel marks (MSU1) (Pl. 7: 3). These masonry techniques and stone-dressings are similar to the ones catalogued in the Mamluk bastions of the castle: dressing S4 type (northern bastion, B12); S18 type (southern bastion, B14), and S7 type (the so-called Mamluk palace, B17) (Pl. 7: 2). This building could also be related functionally to another one, located on the eastern slope of the castle-hill, which has similar building technique, dimensions, and both are facing the wadi al-Bustan, however, our research in this regard is still in course (Pl. 7: 4).

The second Medieval building is a big structure located near the Al-Raghayia wadi (AC26, B1) whose front-wall, built with an Ayyubid type 2 coarse masonry, is covered by a second wall of big ashlar of organogenic limestone dressed *a bugnato*, that is clearly recognizable as a Mamluk masonry technique thanks the aforementioned comparisons with the castle (Pl. 7: 1). The function of this building is not yet completely clear and is worth further investigation in the next archaeological campaigns, although it is possible that it is related to production purposes being so near to Al-Raghayia spring.³⁴

Finally, the third Medieval complex is actually a very significant evidence and was brought to light thanks to a sondage during the 2018 fall-campaign. It is a portion of a magnificent Islamic palace, characterized by a tripartite wall, with a high central niche flanked by two lower ones, facing a square courtyard with a polygonal fountain. The upper part of the wall was already identified during a survey in 2014 campaign (AC17, B1; Vannini and Nucciotti 2018) (Pl. 7: 5-7). Although studies on this building are still in course, the excavation campaigns being only suspended, it is clear that the presence of a building of this aesthetic value casts further light on the identity and importance of the Al-Jāyyah settlement.³⁵

6. Conclusion

First of all, the Light Archaeology investigations and targeted excavations led by the Italian Archaeological Mission confirm that Al-Jāyyah village is certainly an archaeological site of great interest, to be considered as part of the settlement formed with and around the castle, as mentioned by Medieval written sources (12th-15th century).

At the current state of research, there are still few material traces attributable to the *suburbium* (the village below) of the Crusader period, such as the 'type 1' coarse technique wall with the arrow-slit.³⁶ Material evidences are, however, more abundant for the following periods, when probably the whole area of the village, including Ṭūr Abū Rās slopes and the surrounding rock settlements, became part of the Ayyubid and Mamluk

³⁴ This building is still under study by our research team. Milwright suggested that it could be a mill for sugar cane, basing on 13th- and 14th-century written sources about sugar industry in Shawbak and Kerak (Milwright 2006, 15 and note 72).

³⁵ For more information, see also Vannini in this volume.

³⁶ It is very likely that the rock settlement on the sides of the castle hill was already part of the *suburbium* (see *supra*, note 15).

madīnah, or castle-town (Walker 2011; Vannini 2012; Nucciotti and Pruno 2016) (Pl. 8: 2). Many of these buildings were still visible as ruined structures in the above mentioned 1939 Royal Air Force photo: B4 in AC19; the ‘type 2’ coarse masonry walls in AC 6 and AC 4, and the Islamic palace excaated in 2018, AC17 (Pl. 8: 1).

We still have to detail the material development’s chronology of this settlement and define its topographical features from the Crusader to the Mamluk eras: e.g. commercial and industrial buildings, markets, private properties, etc. Moreover, it would be of great interest to confirm the time and reasons of the abandonment of the village, suggested by some written and iconographic sources, that could have occurred from the late Mamluk to the mid-Ottoman ages, also continuing the analyses of the aforementioned Islamic palace AC17 and its abandonment levels, which are still under study (Vannini and Nucciotti 2018).

The investigations have also resulted in commencing the work on a catalogue of the vernacular architecture of the village, which we can date at least to the half of the 20th century. However, we yet have to reconstruct the details of building sequences of the most recent phases, as in the Vernacular Architecture Survey (Kana‘ana and McQuitty 1994), to find out if the ‘courtyard houses’ were settled by *mellakin* families and if there was a strong connection between cadastral patterns and power relations, as recognized in Umm Quais (Daher 1999, 37-38).³⁷ Indeed, we are deeply convinced that understanding the physical and social aspects of the present village can also contribute to the overall interpretation of the site in the long term.

The third important task of the surveys is to create awareness of the vernacular cultural heritage of the ruralizing Al-Jāyyah. In fact, we have proven that the Medieval buildings are closely interconnected with the recent ones, which, sadly, are not protected at all because, contrary to several international conventions, Jordan’s existing laws do not protect any heritage buildings dating *post* 1700 AD (Al-Nammari 2003).

So, the further research must necessarily focus on the completion of cataloging the Architectural Complexes in Al-Jāyyah, intensifying the stratigraphic readings of the oldest buildings, completing the excavation of the Islamic palace AC17, and analyzing the evolution of landscapes

³⁷ It is also possible that *mellakin* families lived in the castle at the beginning of the 19th century, according to Burckhardt, who noted that ‘one hundred families of the arabs Mellahein’ lived ‘within the area of the castle’ while ‘to the East of the castle’ there was ‘an encampment of Bedouin peasants ... who cultivate[d] the ground’ (Burckhardt 1822, 416-417).

over time, together with an accurate reading of written sources. Only a multidisciplinary approach on solid stratigraphic bases will actually lead to a better understanding of the interconnected life of the village and the castle in the *longue durée*.

References

- Abū al-Fidā** = Guyard M. S. (ed.) 1883. *Géographie d'Aboulféda. Traduite de l'arabe en français et accompagnée de notes et d'éclaircissements par M. Reinaud (et M. Stanislas Guyard)*, vol. II, 2. Paris.
- Al-Bakhit M. A. and Al-Sawariyyah N. R. 1989.** *The Detailed Deft of Liwā Aljūn*. Amman.
- Al-Nammari F. 2003.** The preservation of vernacular architecture in Jordan: development chances lost. In *Managing conflict and conservation in historic cities: integrating conservation with tourism, development and politics*. 6th US/ICOMOS International Symposium, April 24-27, 2003. Annapolis MD.
- Alsubeh M. A. 2013.** Architectural and heritage elements and formation characteristics of traditional houses interfaces. *Arts and Design Studies* 12, 9-22.
- Balducci Pegolotti F. 1936.** *Practica della mercatura*. A. Evans (ed.). Cambridge MA.
- Bonacchi C. and Burtenshaw P. 2012.** Archaeology for Development: The need for holistic planning, case studies from Jordan. In *ICOMOS 17th General Assembly*, November 27- December 2, 2011, 540-541. Paris.
- Brogiolo G. P. and Cagnana A. 2012.** *Archeologia dell'architettura. Metodi e interpretazioni. (Metodi e temi dell'Archeologia Medievale 3)*. Florence.
- Brown R. 1988.** Report of the 1986 Excavation at Shobak, Department of Anthropology. State University of New York, New York (USA) and ACOR Amman, unpublished.
- Burckardt J. L. 1822.** *Travels in Syria and Holy Land*. London.
- Burri E., Ferrari A., Ragni P., Del Bon A., Mancini M., Albino G., Di Paolo P. and Meneghini M. 2011.** Indagini sugli ipogei artificiali nel Castello di Shawbak e nelle aree limitrofe (Giordania meridionale). *Temporis Signa. Archeologia della tarda antichità e del medioevo* 6, 283-318.

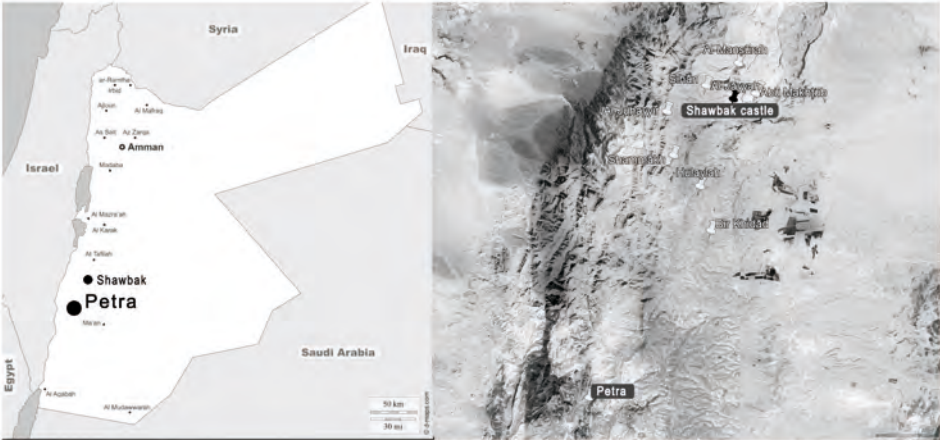
- Daher R. F. 1999.** Gentrification and the Politics of Power, Capital and Culture in an Emerging Jordanian Heritage Industry. *Traditional Dwellings and Settlements Review* 10/2, 33-46.
- Faucherre N. 2004.** La forteresse de Shawbak (Crac de Montréal). Une des premières forteresses franques sous son corset Mamelouk. In N. Faucherre, J. Mesqui and N. Prouteau (eds), *La fortification au temps des Croisades*, 43-66. Rennes.
- Fragai L. 2019.** New Research Perspectives on the Mamluk Qā'a at Kerak Castle: Building Archaeology and Historical Contextualization. *Journal of Islamic Archaeology* 6/2, 187-208. <https://doi.org/10.1558/jia.37337>.
- Glueck N. 1935.** Explorations in Eastern Palestine, I. *The Annual of the American Schools of Oriental Research* 14, 1-113. <https://doi.org/10.2307/3768481>.
- Hütteroth W. D. and Abdulfattah K. 1977.** *Historical Geography of Palestine, Transjordan and South Syria in the Late Sixteenth Century*. Erlangen.
- Irby C. L. and Mangles J. 1844.** *Travels in Egypt and Nubia, Syria, and the Holy Land; Including a Journey Round the Dead Sea, and through the Country East of the Jordan*. London.
- Jäger J. 2012.** Describing traditional architecture in rural areas, examples from Syria and Jordan. In J. Jäger and I. Helmedag (eds), *Stone and Architecture in the Mountainous Regions of Jordan and Syria*, 13-60. Amman, Damascus, Berlin.
- Kana'an R. and Mc Quitty A. 1994.** The architecture of al-Qasr on the Kerak Plateau: an essay in the chronology of vernacular architecture. *Palestine Exploration Quarterly* 126, 127-151. <https://doi.org/10.1179/peq.1994.126.2.127>.
- Khammash A. 1986.** *Notes on Village Architecture in Jordan*. Lafayette LA.
- Labin A. M. J. E. and Aldeek Z. A. O. 2017.** The design elements and building techniques at the traditional Jordanian dwellings. *International Review of Engineering and Computer Sciences* 2/3, 12-20.
- Le Strange G. 1890.** *Palestine Under the Moslems: A Description of Syria and the Holy Land from A.D. 650 to 1500*. London.
- Little D. P. 1986.** Data from the Haram Documents on rugs in late 14th century Jerusalem. In R. Pinner and W. B. Denny (eds), *Oriental Carpet and Textile Studies II, Carpets of the Mediterranean Countries 1400-1600*, 83-94. London.

- Ludolph of Sudheim 1851.** *De itinere Terrae Sanctae liber*. F. Deycks (ed.). Stuttgart.
- Marcotulli C. and Pruno E. 2018.** Teindre ou ne pas teindre. Là est le problème! Le cas du site de Shawbak (Jordanie). In S. Burri and M. Ourefelli (eds), *Artisanat et métiers en Méditerranée médiévale et moderne*, 187-202. Aix-Marseille.
- Mauss C. and Sauvaire H. 1874.** Voyage de Jérusalem à Kérak et Chaubak. In M. le duc de Luynes (ed.), *Voyages d'exploration à la Mer Morte, à Pétra et sur la rive gauche du Jourdain*, 2, 83-178. Paris.
- Milwright M. 2006.** Central and Southern Jordan in the Ayyubid period: Historical and archaeological perspectives. *Journal of the Royal Asiatic Society* 16, 1-27. <https://doi.org/10.1017/S1356186305005626>.
- Milwright M. 2008.** *The Fortress of the Raven: Karak in the Middle Islamic Period (1100-1650)*. (Islamic History and Civilization. Studies and Texts 72). Leiden. <https://doi.org/10.1163/ej.9789004165199.I-445>.
- Nucciotti M. 2007.** Analisi stratigrafiche degli elevati: primi risultati. In G. Vannini (ed.), *Archeologia dell'insediamento crociato-ayyubide in Transgiordania. Il progetto Shawbak*, 27-55. Florence.
- Nucciotti M. and Pruno E. 2016.** Great and Little Traditions in medieval Petra and Shawbak: contextualizing local building industry and pottery production in 12th-13th centuries. *Archeologia Medievale* 43, 309-320.
- Nucciotti M. and Vannini G. 2020.** Light archaeology and territorial analysis: experiences and perspectives of the Florentine medievalist school. *Archaeologia Polona* 50, 149-169.
- Peake F. G. 1934.** *A History of Trans-Jordan and Its Tribes*, 1. Amman.
- Praver J. 1951.** Colonization activities in the Latin Kingdom of Jerusalem. *Revue Belge de Philologie et d'Histoire* 29/4, 1063-1118. <https://doi.org/10.3406/rbph.1951.2115>.
- Pruno E., Ranieri R. and Marcotulli C. 2020.** The material culture in Shawbak between Crusaders, Ayyubids and Mamluks: the case-study of Hospitaller's Chapel. In J. B. Walker and A. Al Ghouz (eds), *Living with Nature and Things. Contribute to a New Social History of the Middle Islamic Periods*. Bonn. <https://doi.org/10.14220/9783737011037.401>.
- Rjoub A. and Mahmoud A. 2012.** The emergence of agro-pastoral villages in Jordan Hamamet al-Olimat village as a case study. *Journal of Human Ecology* 38/3, 231-243. <https://doi.org/10.1080/09709274.2012.11906492>.

- RRH** = Röhricht R. (ed.) 1893. *Regesta Regni Hierosolymitani (MXCVII-MCCXCI)*, Innsbruck.
- Seetzen U. J. 1854.** *Ulrich Jasper Seetzen's Reisen durch Syrien, Palästina, Phönicien, die Transjordan-Länder, Arabia Petraea und Unter-Aegypten.* Berlin.
- Segnini C. 2011.** Archeologia e sviluppo socio-economico territoriale. Prospettive di intervento e politiche di sostegno, comunitarie e regionali. In G. Vannini (ed.), *Archeologia Pubblica in Toscana. Un progetto e una proposta*, 69-78. Florence.
- Shqairat M. A. 2018.** Abandoning Shammakh: historical archaeology among the villages of Southern Jordan and its ethno-archaeological and modern economic potential. *Journal of Anthropology and Archaeology* 6/1, 1-14. <https://doi.org/10.15640/jaa.v6n1a1>.
- Stagno A. M. 2012.** Casa rurale e storia degli insediamenti. Un approccio geografico per l'archeologia dell'edilizia storica. In F. Redi and A. Forgione (eds), *Atti del VI Congresso Nazionale di Archeologia Medievale*, September 12-15, 2012, 23-27. Florence.
- Thietmar of Merseburg 1857.** *Peregrinatio*. J. C. M. Laurent (ed.). Hamburg.
- Twaissi S. A., Abuhaleh B., Abudanah F. and Al-Salameen A 2016.** The architectural aspects of the traditional villages in Petra region with some anthropological notes. *Mediterranean Journal of Social Sciences* 7/4, 336-352. <https://doi.org/10.5901/mjss.2016.v7n4p336>.
- Vanni Desideri A. and Vannini G. 2016.** Light archaeology and historical landscape. For the global history of the site of al-Wu'ayra (Petra) in Transjordan. In P. Kołodziejczyk and B. Kwiatkowska-Kopka (eds), *Landscape in the Past & Forgotten Landscapes*, 197-206. (*Cracow Landscape Monographs* 2). Krakow.
- Vannini G. 2012.** Il 'castello' di Shawbak e la Transgiordania meridionale: una frontiera del Mediterraneo medievale. In P. Peduto and A. M. Santoro (eds), *Archeologia dei castelli nell'Europa angioina (secoli XIII-XV)*. Atti del convegno internazionale, November 10-12, 2008, 145-157. (*Medioevo scavato* 5). Florence.
- Vannini G. and Nucciotti M. 2012.** Da Petra a Shawbak. Archeologia di una frontiera. La missione in Giordania dell'Università di Firenze. In S. Lusuardi Siena and G. Perassi (eds), *La Giordania che abbiamo attraversato*, 55-73. Milan.

- Vannini G. and Nucciotti M. 2018.** *Medieval Petra - Shawbak Project: archaeological excavations at Shawbak/Jaya 2018. Press Release.* Unpublished report for the Department of the Antiquities of Jordan.
- Vannini G., Marcotulli C. and Ruschi P. 2013.** Crusader, Ayyubid and early Mamluk Shawbak and the history of Medieval south Jordan: the archaeology and restoration of the Mamluk workshop. *Studies in the History and Archaeology of Jordan* 11, 359-380.
- Vigouroux E., Elter R., Pascual J-P. and March C. 2015.** Le complexe médiéval de Khirbat al-Dusaq. II Résultats de la première campagne de fouilles (2009). *Syria. Archeologie, art et histoire* 92, 189-209.
- Walker B. J. 2011.** *Jordan in the Late Middle Ages: Transformation of the Mamluk Frontier.* (Chicago Studies on the Middle East 8). Chicago.
- William of Tyre 1943.** *A History of Deeds Done beyond the Sea.* E. Atwater Babcock and A. C. Krey (eds). New York.

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Pl. 1: 1. The area of the investigations and, on the right, the villages included in the Shawbak Tourist Masterplan. Graphic by the author on cartographic base by Google Earth
Pl. 1: 2. Panoramic view of the Al-Jäyyah village from SE, photo by Anna Marx



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Pl. 2: 1. Environmental contextualization of the Al-Jāyyah village. Graphic by the author on cartographic base by Google Earth

Pl. 2: 2. General view of Shawbak castle from North (1897) showing cultivated field, Rudolf Ernst Brünnow & Alfred von Domaszewski Archive, Department of Art and Archaeology, Princeton University

Pl. 2: 3. Abandoned fields nowadays, photo by the author

Pl. 2: 4. An example of the methodology for recording topographical and archaeological data: TU (Topographical Unit), AC (Architectural Complex), and B (Building)



Pl. 3: 1. Examples of vernacular architecture in Al-Jāyyah: two old façades for rooms carved into the bedrock, with ventilation holes above the door (AC1), photo by the author

Pl. 3: 2. Examples of vernacular architecture in Al-Jāyyah: a newer façade with a small window (AC10), photo by the author

Pl. 3: 3. A typical interior with mud plasters and flat roof made of wooden beams and mud, called *khashab* (AC3), photo by the author

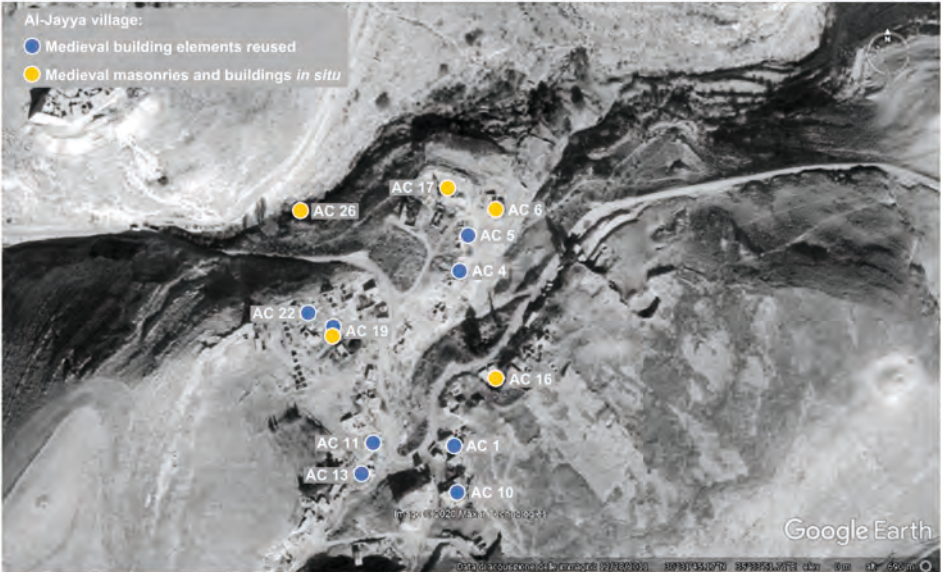
Pl. 3: 4. The transversal stone arch called *riwaq* or *qantara*, photo by the author

Pl. 3: 5. Example of ‘courtyard house’ in Al-Jāyyah: AC1, photo by the author

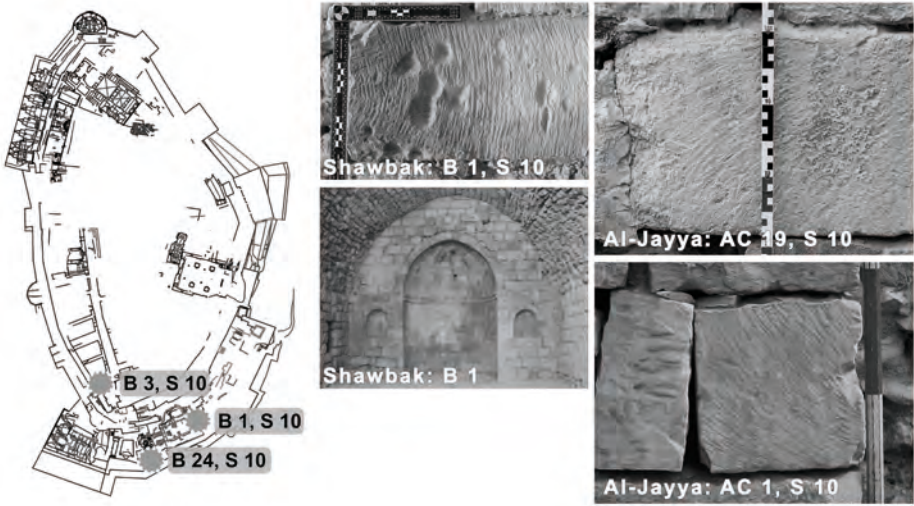
Pl. 3: 6. Example of ‘courtyard house’ in Al-Jāyyah: AC10, photo by the author

Pl. 3: 7. Example of ‘linear house’ in Al-Jāyyah: AC18, photo by the author

Pl. 3: 8. Examples of ‘linear houses’ in Al-Jāyyah, photo by the author

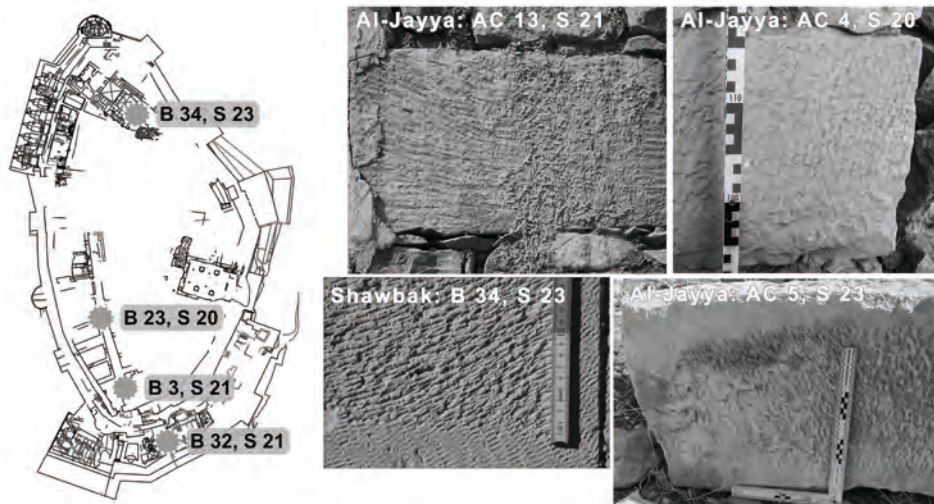


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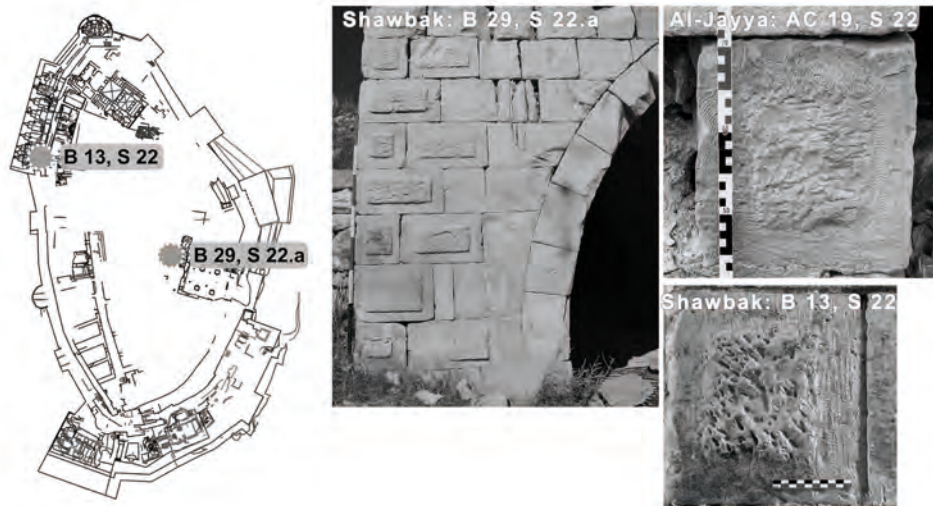


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Pl. 4: 1. Al-Jāyyah: Medieval reused architectural elements and Medieval buildings and masonries still *in situ*, graphic by the author on cartographic base by Google Earth
Pl. 4: 2. Shawbak castle and Al-Jāyyah village: examples of stone-dressings of the Crusader period (S = Surface), graphic and photos by the author



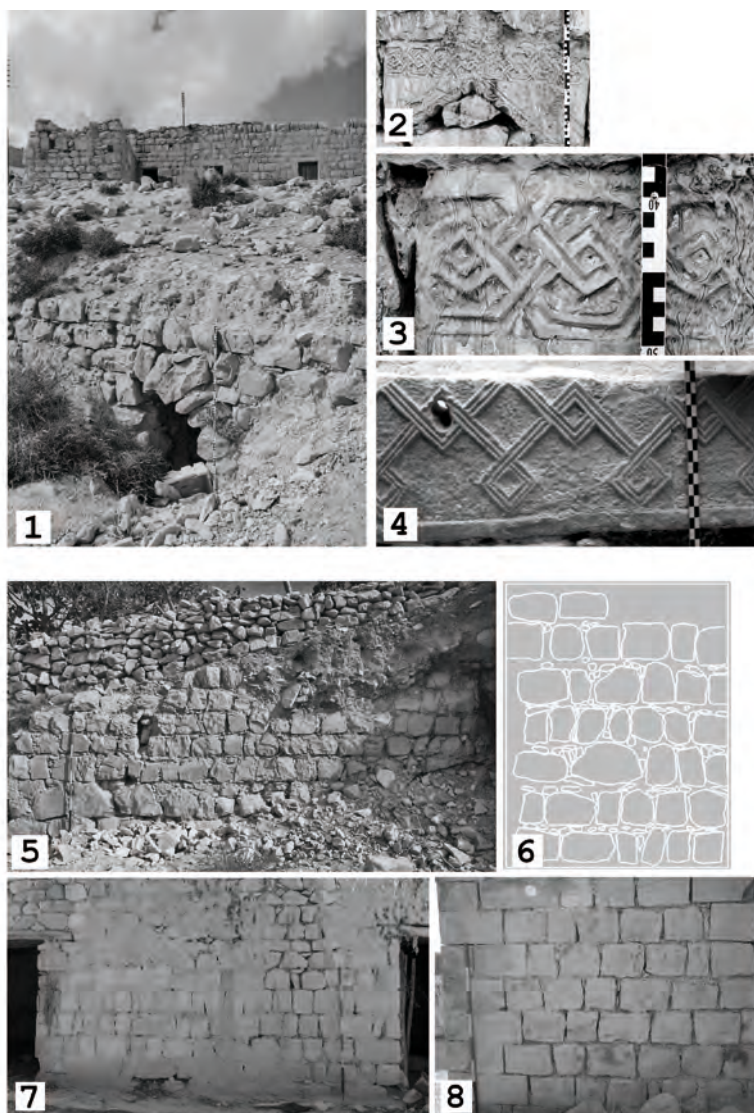
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Pl. 5: 1. Shawbak castle and Al-Jāyyah village: examples of stone-dressings of the Ayyubid period (S = Surface), graphic and photos by the author

Pl. 5: 2. Shawbak castle and Al-Jāyyah village: examples of stone-dressings of the Mamluk period (S = Surface), graphic and photos by the author



Pl. 6: 1. Some underground structures along the so-called Al-Jāyyah wadi, photo by the author

Pl. 6: 2. A reused architectural element in Al-Jāyyah, general view (AC22, B1), photo by the author

Pl. 6: 3. A reused architectural element, detail (AC22, B1), photo by the author

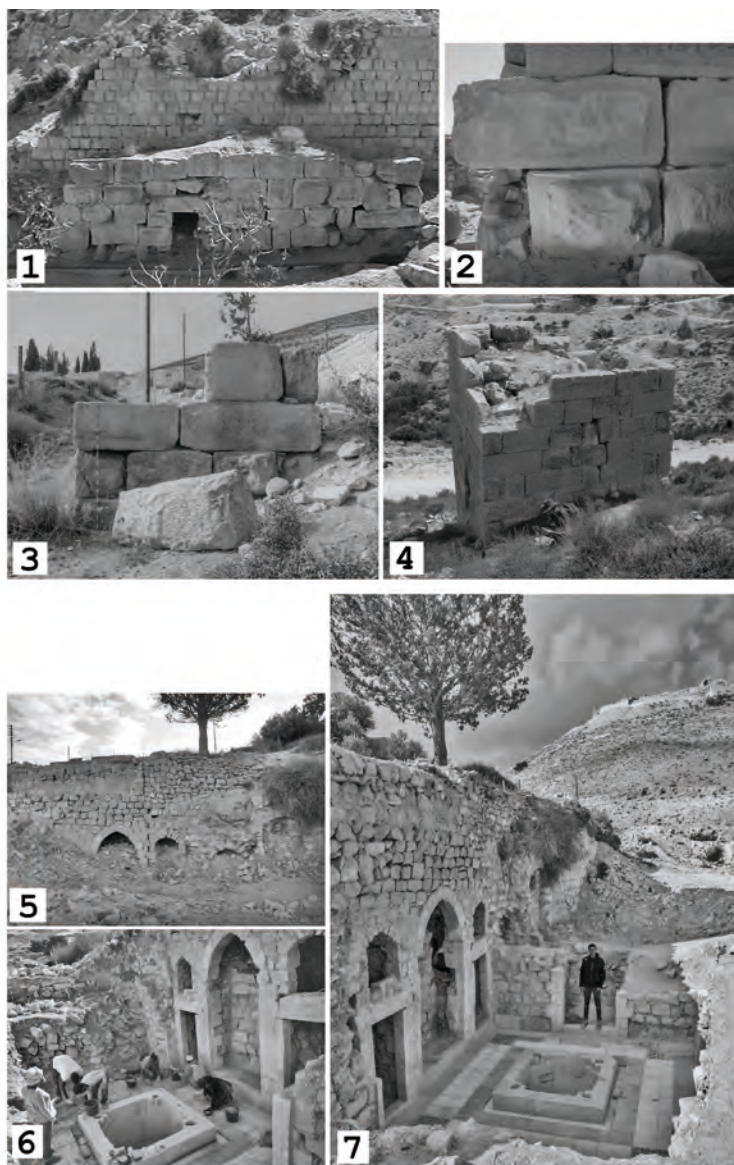
Pl. 6: 4. Decorative carved element from Khirbat al-Dūsaq complex from Vigouroux *et al.* 2015, 198

Pl. 6: 5. Al-Jāyyah village: Medieval masonry *in situ*, AC16, type 1 (Crusader-Ayyubid periods), photo by the author

Pl. 6: 6. Shawbak castle: type 1 masonry, drawing archives of the expedition

Pl. 6: 7. Al-Jāyyah village: Medieval masonry *in situ*, AC6, type 2 (Ayyubid period, *post* AD 1212), photo by the author

Pl. 6: 8. Shawbak castle: type 2 masonry on a building along the *via recta*, photo by Michele Nucciotti



Pl. 7: 1. Al-Jāyyah: building along the Al-Raghayia spring flow (AC26, B1) with masonries of the Ayyubid and Mamluk periods, photo archives of the expedition

Pl. 7: 2. Shawbak castle: masonry technique of the Mamluk period on the northern bastion (B12), photo archives of the expedition

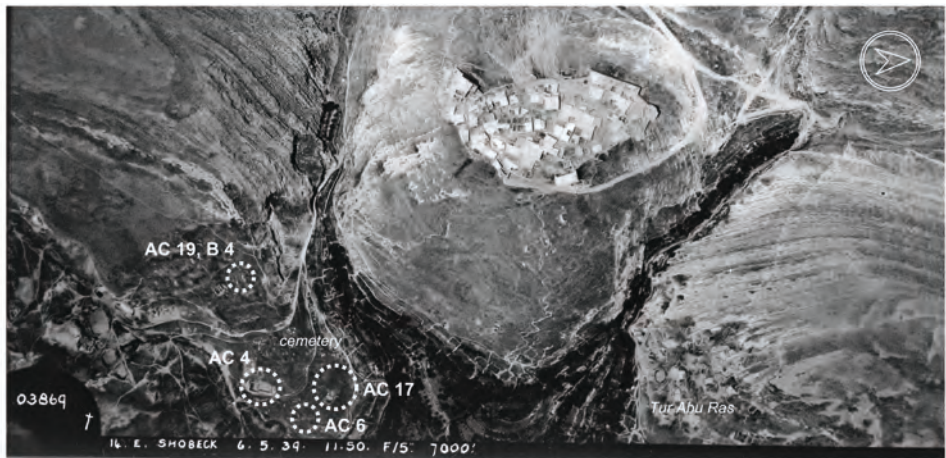
Pl. 7: 3. Al-Jāyyah: residual building (AC19, B4) with masonries of the Mamluk period, photo by the author

Pl. 7: 4. Shawbak castle hill: eastern tower with masonries of the Mamluk period, photo by the author

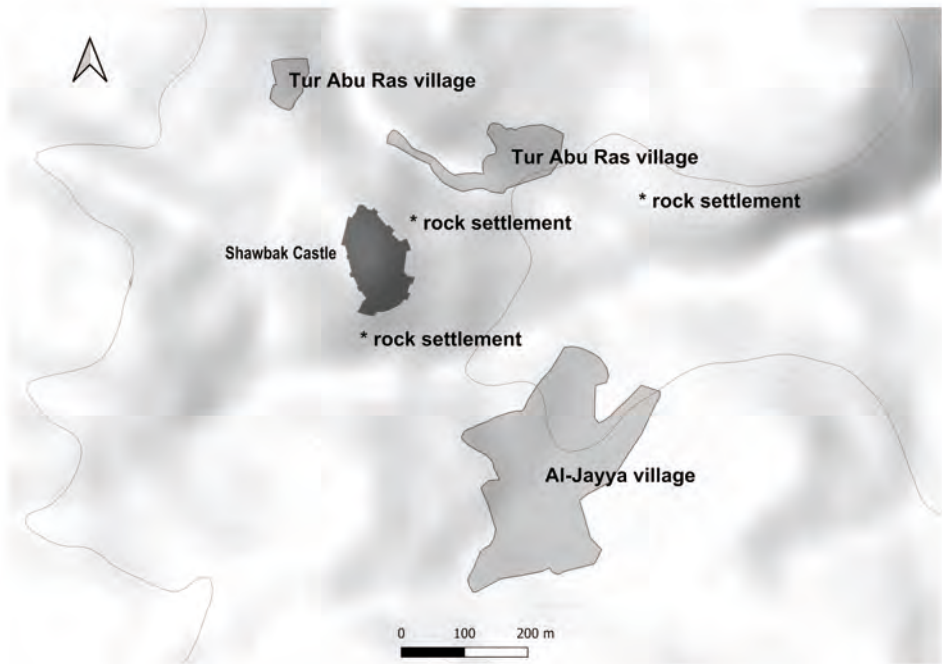
Pl. 7: 5 - Al-Jāyyah: the Islamic palace AC17 as surveyed in 2014 campaign, photo by Michele Nucciotti

Pl. 7: 6. Al-Jāyyah: the Islamic palace AC17 during the 2018 excavations, photo by the author

Pl. 7: 7. Al-Jāyyah: the Islamic palace AC17 at the end of the 2018 campaign, photo by the author



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Pl. 8: 1. 1939 aerial view by Royal Air Force of Shawbak where the Al-Jāyyah village appears almost completely ruined, but some residual building are recognizable as the remains of Medieval buildings surveyed in the 2016-2019 campaigns. Graphic by the author on photo n. BA-ASA-3-0588 from Aurel Stein collection courtesy of the British Academy

Pl. 8: 2. The deserted villages surrounding Shawbak nowadays: together with the rock settlement, along the slopes of the Shawbak and Ṭūr Abū Rās hills, they plausibly constituted the Medieval suburb of Shawbak. Author: Giacomo Ponticelli