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## **Islamic Faynān: The Settlement History of a Mining Region in Southern Jordan between the 7<sup>th</sup> and 19<sup>th</sup> Centuries AD**

### **Introduction**

The Faynān region is a copper-rich, semi-arid landscape in the lowlands of Wādī ‘Araba, *ca.* 30 km south of Wādī al-Ḥasā and *ca.* 130 km north of al-‘Aqaba. For the purposes of the present paper, the region is defined primarily as the area surrounding the Wādī Fīdān–Wādī Faynān–Wādī al-Ghuwayr drainage system in the south and the Wādī al-Ghuwayba–Wādī al-Jāriya system in the north. The major economic resource of the region is copper ore, primarily copper oxides contained in the Burj Dolomite Limestone Shale (BDS) and Umm ‘Ishrīn/Massive Brown Sandstone (MBS) formations (Rabb‘a 1994; Hauptmann 2007). Since the development of extractive copper metallurgy in the 4<sup>th</sup> millennium BC, these resources have been the *raison d’être* for most settlement in the region (*e.g.*, Levy *et al.* 2001; Hauptmann 2007). As this paper will show, however, this was not always the case, and the

Late Byzantine and Early Islamic period settlement represents an important exception to this trend. The primary goal of this paper is to present a summary of the results of excavations by the UC San Diego Edom Lowlands Regional Archaeology Project (ELRAP) in the Faynān region, focusing on those sites that provide insight into the Islamic period. While ELRAP has conducted excavations at dozens of sites in the region, focusing primarily on Iron Age copper metallurgy (*ca.* 1200–586 BC; Levy *et al.* 2014), this paper summarizes the results of excavations at four sites: the 1999 and 2000 field seasons at Khirbat Ḥamrat Ifdān, the 2004 field season at Wādī Fīdān 50a, and the 2011 and 2012 field seasons at Khirbat Faynān and Khirbat Nuqayb al-Usaymir (FIG. 1).

### **The Late Byzantine Period**

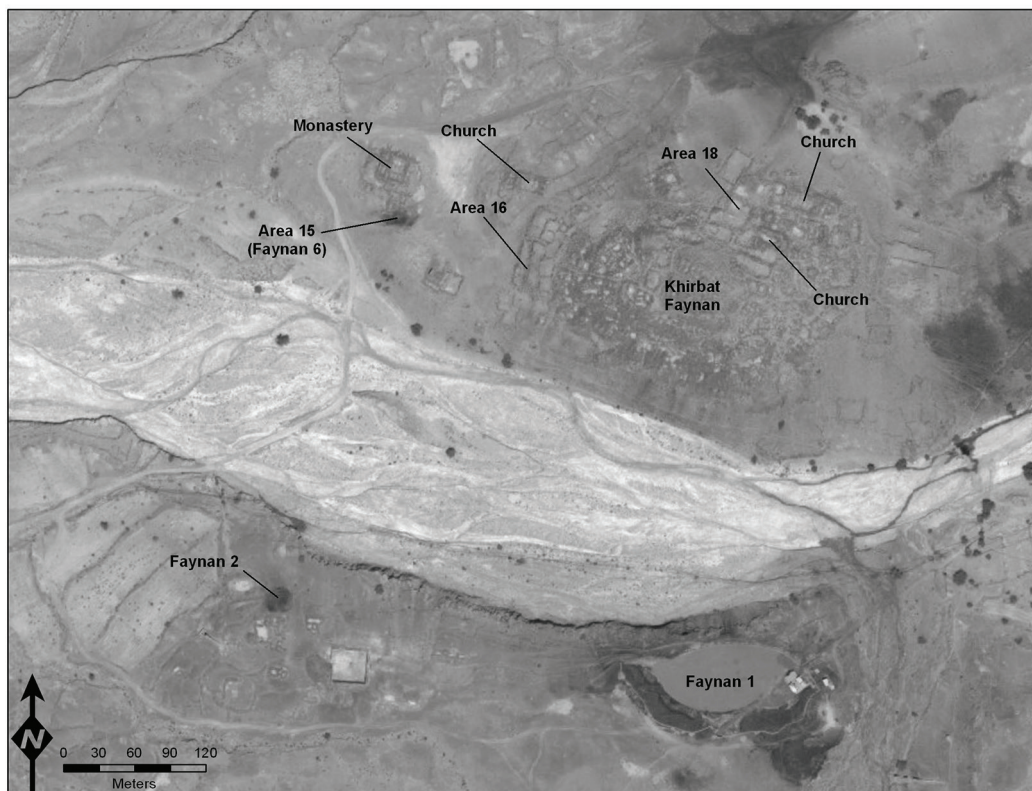
The Late Roman and Early Byzantine periods represent one of the peaks of



1. Map of the Faynān region showing the locations of the main sites discussed in the text (Base-map: Esri, DigitalGlobe, Earthstar Geographics, CNES/Airbus DS, GeoEye, USDA FSA, USGS, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; Map: IWNJ).

industrial activity in Faynān, with an estimated production of 2,500–7,000 tons of copper (Hauptmann 2007: 147). During this period, settlement was concentrated around Khirbat Faynān, the *metallum*, or imperial mine, then called Phaino (FIG. 2). This is also the only period for which we have written historical attestation of industrial activity in Faynān, primarily due to the concern of Byzantine authors like Eusebius of Caesarea with Christian martyrs who had been condemned to the mines (Knauf and Lenzen 1987: 83; Najjar and Levy 2011). The end of this production phase has been the subject of some debate. Researchers associated with the Deutsches

Bergbau-Museum (DBM) surveys of the region, such as Kind *et al.* (2005: 192), have tended to favor earlier dates, placing the end of copper production in the late 4<sup>th</sup> century AD. Researchers associated with the Council for British Research in the Levant’s (CBRL) Wādī Faynān Landscape Survey (WFLS) have tended to favor later dates, seeing continuity of production at least into the late 5<sup>th</sup> century, and potentially into the 6<sup>th</sup> or 7<sup>th</sup> (Mattingly *et al.* 2007: 333). This is a difficult question to answer, as dating the end of production relies to a large extent on absence of evidence. Currently, the safest inference can be drawn from the radiocarbon sequence from the DBM probe



2. Satellite photo of Khirbat Faynān with key features and ELRAP excavation areas labeled (Base-map: Esri, DigitalGlobe, Earthstar Geographics, CNES/Airbus DS, GeoEye, USDA FSA, USGS, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; Map: IWNJ).

of the Faynān 1 slag mound, the primary Roman and Byzantine slag mound adjacent to Khirbat Faynān. The latest date from this probe has a calibrated  $2\sigma$  range of 2<sup>nd</sup>–early 4<sup>th</sup> century AD (Hauptmann 2007: 89), and allowing for error from the “old-wood” effect (Hauptmann 2007: 155; Ben-Yosef *et al.* 2012: 63), this may indicate that smelting continued as late as the late 5<sup>th</sup> century. The site certainly continued to be settled even after copper production scaled down and came to an end, however.

Excavations in Area 16 Terrace 2 (preliminary report in Levy *et al.* 2012: 430–5), on the western side of the mound, revealed a Roman and Byzantine structure

occupied at least into the second half of the 6<sup>th</sup> century AD, as demonstrated by the presence of Late Roman D (LRD) Form 9A (Hayes 1972: 379–82) and other 6<sup>th</sup> century forms (FIG. 3). The collapse of this structure may have been the result of the Areopolis (al-Rabba) earthquake of *ca.* AD 597 (Zayadine 1971; Ambraseys 2009: 216; Rucker and Niemi 2010), although this identification is still tentative. The Area 8 “monastery,” *ca.* 130 m to the northwest, has been dated by a dedicatory inscription to AD 587/8 (Alt 1935: 65; Sartre 1993: 146), and residual late 6<sup>th</sup>–early 7<sup>th</sup> century sherds were found during excavation of the Middle Islamic period Area 15 slag mound,





3. Balloon photo of 2011 excavations in Khirbat Faynān Area 16, showing the location of each terrace (Photo: Craig Smitheram, UC San Diego Levantine and Cyber-Archaeology Laboratory; Map: IWNJ).



4. Balloon photo of the 2012 excavations in Khirbat Faynān Area 18, showing the location of key features (Photo: Matthew D. Howland, UCSD LCAL; Map: IWNJ).

built up against one of the monastery walls. Excavations in Area 18, on the northern side of the mound, exposed a cistern complex built in the 5<sup>th</sup>–6<sup>th</sup> century, based on the presence of an LRD sherd in the leveling fill below the earliest floor and a radiocarbon date from the fill above the floor (FIG. 4). Occupation of the complex continued into the Early Islamic period, although how long the cistern remained in use is unclear. The presence of burials in the cistern itself suggests a history similar to the Area K.II cistern at Dayr ‘Ayn ‘Abāṭā in Ghawr aṣ-Ṣāfi, which was in use as a cistern in the 5<sup>th</sup> and 6<sup>th</sup> centuries, but by the end of the 7<sup>th</sup> century had been repurposed for burials (Politis 2012: 122).

It is perhaps notable that each of these occupation areas at Khirbat Faynān is close to at least one of the site’s five churches—Area 16 is near Church 3, Area 8 contains Church 6, and Area 18 is close to Churches 1 and 2 (Mattingly *et al.* 2007: 513)—given the site’s increasing religious importance in the 5<sup>th</sup> and 6<sup>th</sup> centuries (Mattingly *et al.* 2007: 333). Indeed, the evidence seems to indicate that by the end of the 5<sup>th</sup> century, Faynān’s status as a site of martyrdom and, possibly, a destination for pilgrims replaced copper production as the primary rationale for continued settlement.

### The Early Islamic Period

By the beginning of the Early Islamic period, Faynān had essentially disappeared from historical sources. The last writer to mention it was George of Cyprus (1890: 54), who in the early 7<sup>th</sup> century listed Faynān as a place in the province of Arabia, though he says nothing else about it. We must, therefore, rely on archaeology for our understanding of settlement in the region.

The WFLS team reports a lack of Early Islamic period architecture in the vicinity of Khirbat Faynān and suggests that this indicates an economic shift from mining to pastoralism in the region (Newson *et*

*al.* 2007: 363). They are certainly correct that mining had largely ceased by the 7<sup>th</sup> century, and so far no evidence of Early Islamic copper production has been found in Faynān. Instead, during this period copper production seems to have been concentrated primarily in the hinterland of Ayla (al-‘Aqaba) in southern Wādī ‘Araba (Jones *et al.* 2017). Nonetheless, the results of the ELRAP excavations in Area 18 indicate that Khirbat Faynān itself was still occupied. Although the stratigraphy of this area remains uncertain due to unforeseen circumstances preventing the completion of work at the site, three basic phases of occupation could be reconstructed. The first, described above, was a Late Byzantine phase associated with the construction and initial use of the cistern complex. The second phase contained material dating primarily to the 6<sup>th</sup>–8<sup>th</sup> century, with the most interesting diagnostic forms including a mid-7<sup>th</sup> century (or later) Egyptian Red-Brown Ovoid Amphora (Watson 1995: 319; Taxel and Fantalkin 2011: 89) and an 8<sup>th</sup>–9<sup>th</sup> century schist bowl. It is not clear whether the cistern continued to be used for water storage during this period, although the fact that a counterweight was found in the room adjacent to the cistern in this phase suggests this as a possibility. The nature of occupation at the site during this period is also not entirely clear, but may represent continuity of the site’s religious importance into the Early Islamic period. Ruben and colleagues (1997: 439) suggest that the Area 8 monastery “was partly rebuilt during Islamic times, possibly as a khan,” which would not rule out a continuing function as a monastery. Examples of Late Byzantine “monastery hostels” have been found at Jabal an-Nabi Hārūn in Petra and other sites in the southern Levant (Whiting 2016). Excavation in Area 8 would be required to confirm this function and clarify the dating of this potential reconstruction, however. Indeed, further excavation across the site

is necessary before the extent and nature of the Early Islamic settlement can really be understood. Regardless of the exact nature of the 6<sup>th</sup>–8<sup>th</sup> century occupation phase, a substantial amount of collapse was found above this phase in Area 18, indicating destruction of the building probably at some point in the 8<sup>th</sup> century. We very tentatively suggest that this may be related to one of the major earthquakes of the mid-8<sup>th</sup> century, which also caused damage in Petra (Ambraseys 2009: 230–8; Bikai and Perry 2012: 96).

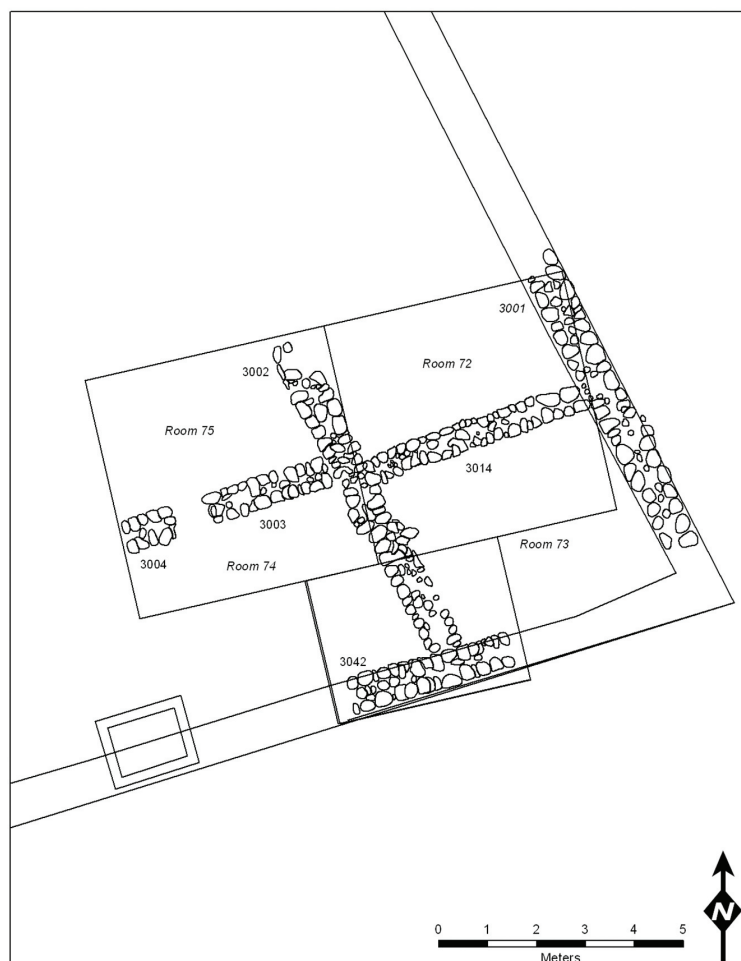
The last phase of occupation in Area 18, dated by ceramics to the late 8<sup>th</sup>–9<sup>th</sup> century, and probably continuing later, is of a rather different character. In this phase, the cistern had almost certainly gone out of use, and the excavations uncovered a thick layer of ash and charcoal associated with a concentration of marble finds, including several broken floor tiles and hundreds of white mosaic tesserae. This seems to indicate that, by the 9<sup>th</sup> century, at least one, and probably both, of the nearby churches had gone out of use, and Area 18 was being used primarily for lime burning. The practice of burning marble to produce lime is common in the region, as evidenced by the Early Islamic period limekilns at the ‘Ammān Citadel (Arce 2003) and 6<sup>th</sup> century lime production at the Petra Pool Complex (Bedal 2003: 80–2), among many other examples. Beyond this, little can be said about the final Early Islamic period occupation of Khirbat Faynān, or the period spanning the 9<sup>th</sup> through 13<sup>th</sup> centuries.

At Khirbat Ḥamrat Ifdān, *ca.* 10 km to the northwest, where Wādī Fidān narrows and cuts through Jabal Ḥamrat Ifdān, a slightly different picture emerges. The primary evidence comes from excavation of a probable farmhouse, Area L, in the southern portion of the site (FIG. 5). The earliest phase of this structure, Stratum L-IIB, can be dated on the basis of relatively limited ceramic evidence to the 6<sup>th</sup>–8<sup>th</sup>

century AD. Whether this represents the earliest date of the structure is unclear, but the building is similar to other residential structures of the period, *e.g.*, the Umayyad buildings in Ma‘ān (Genequand 2003: 29–31), although on a rather less impressive scale. Construction of the farmhouse may have involved rebuilding and expanding a Nabataean-Roman building, as residual 1<sup>st</sup>–2<sup>nd</sup> century AD sherds were found during the excavation and the central wall of the building predates the outer Stratum L-IIB walls, but no deposits of this period were found in the excavation area before reaching Iron Age and Early Bronze Age layers below. The mudbrick walls and thatched roof of Stratum L-IIB seem to have collapsed at some point in the 8<sup>th</sup> century—possibly in the same mid-8<sup>th</sup> century earthquake mentioned above as potentially bringing about the end of the second occupation in Khirbat Faynān Area 18—and were rebuilt shortly thereafter. The next phase of occupation, Stratum L-IIA, has been dated by a radiocarbon sample and ceramics, including Mahesh Ware (Whitcomb 1989), to the mid-8<sup>th</sup>–9<sup>th</sup> century.

In many other areas of the site, evidence of reuse of earlier structures or new, often ephemeral, features were found dating to the Early Islamic period, suggesting that Area L was the core of an active agricultural estate. This is supported by the recent publication of Arabic papyrus fragments found during excavations by the Barqā Landscape Project in the northern portions of the site, which may hint at administrative activities during this period (Friedman *et al.* 2017). Friedman and colleagues (2017: 286) also mention a possible open mosque with its *miḥrāb* oriented toward Jerusalem, rather than Mecca, but note that this feature had disappeared by the 1999 excavations of the site. The description of this structure bears a striking resemblance to a structure assigned to site-wide Stratum II, dating to the Early Bronze Age IV (Levy *et al.* 2002: 434 fig.





5. Map of the 2000 excavation in Khirbat Ḥamrat Ifdān Area L (Map: IWNJ).

5B). The ephemeral later phases in many of these areas were rather difficult to date, however, and the structure may in fact be a later one containing primarily residual Early Bronze Age artifacts. Of particular note also was a heavily-worn Umayyad post-reform *fals* dating to the 8<sup>th</sup> century, surface collected in Area D, which is at present the only 8<sup>th</sup> century coin that has been found in the Faynān region (cf. Kind *et al.* 2005: 188).

At the mouth of Wādī Fidān, ca. 2 km northwest of Khirbat Ḥamrat Ifdān, is Wādī Fidān 50a, a Roman watchtower or *castellum* and well. It is likely the site identified by

Glueck (1935: 20) as Rujm Ḥamrat Ifdān. The site was badly disturbed by bulldozing in the late 1970s, and ELRAP excavations in 2004 recovered mostly mixed material. Nonetheless, it is worth noting that the assemblage recovered from the *castellum* included sherds dating to the Early Islamic period, indicating that the Early Islamic occupation of Wādī Fidān was not limited to Khirbat Ḥamrat Ifdān. This is especially interesting when considering that the site is adjacent to Wādī Fidān 50, identified as a Roman/Byzantine caravanserai with an associated field system (Levy *et al.*

2001: 175 table 2). Wādī Fidān 50 was the largest site identified during the 1998 Wādī Fidān Survey, but has not been excavated or further investigated. The presence of Early Islamic ceramics at Wādī Fidān 50a, however, suggests the possibility of a third relatively large site in Faynān where occupation continued into the Early Islamic period.

Based on the evidence from ELRAP excavations described above, a picture of two different Early Islamic period settlement systems in Faynān can be pieced together. In the eastern part of the region, at Khirbat Faynān, Early Islamic settlement seems mostly to have been a continuation of the Late Byzantine settlement. The community was likely still a Christian one, although perhaps smaller than it had been in the 6<sup>th</sup> century. By the later 8<sup>th</sup> century, the site's churches had gone out of use, at least to judge from the evidence that their marble furnishings were being recycled for lime in Area 18. Whether this was the result of a mid-8<sup>th</sup> century earthquake is uncertain, and caution is essential in identifying earthquake destructions, particularly on the basis of limited excavation. The identification of destructions of roughly similar date at Khirbat Faynān and Khirbat Ḥamrat Ifdān may lend support to this explanation, though. Khirbat Faynān continued to be settled into the 9<sup>th</sup> century, but we do not yet know the extent and nature of this settlement. In the western part of the Faynān region, settlement followed a different pattern. In the Early Islamic period, a farmhouse was built at Khirbat Ḥamrat Ifdān. By the early to mid-8<sup>th</sup> century, the site's occupants were probably Muslims, to judge from the fact that they were keeping records in Arabic (Friedman *et al.* 2017). Considering the presence of Early Islamic period ceramics at Wādī Fidān 50a, other settlements likely existed in Wādī Fidān at this time, although further work is required to investigate this. Both the eastern and western settlements

seem to have been abandoned at some point in the 9<sup>th</sup> century, and evidence for settlement is very limited until the revival of copper mining activities in the early 13<sup>th</sup> century.

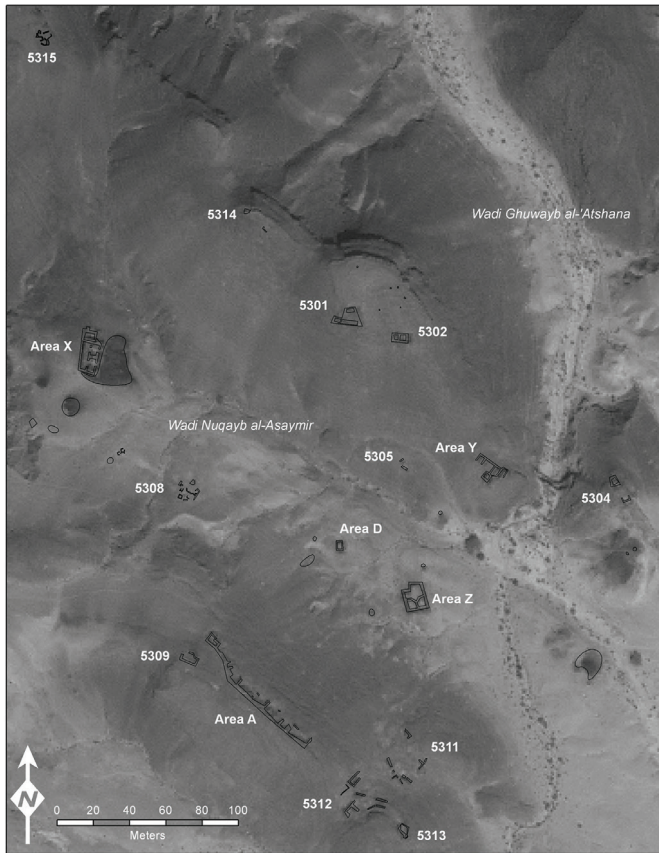
### The Middle Islamic Period

As in the Early Islamic period, Faynān is unfortunately mostly absent from Middle Islamic period written sources. The sole specific reference to the region is a formulaic account of the Exodus itinerary, drawn primarily from Jerome's *Letter 78*. Essentially the same account appears in a number of medieval pilgrimage guides, including those of "Fetellus" (1971: 20) and "Pseudo-Beda"/Anonymous Pilgrim VI (1894: 45), and asserts that the stations of Selmona and Fynon "are not found in the order of history." Again, we must rely on archaeology to piece together a picture of settlement in the region.

The most important site of this period in Faynān is Khirbat Nuqayb al-Usaymir, located just west of Wādī al-Ghuwayb al-Aṭshāna, *ca.* 1 km south of where it splits from the main channel of Wādī al-Ghuwayba, and also *ca.* 1 km southeast of the large Iron Age smelting center of Khirbat an-Nuḥās (Levy *et al.* 2014). During the 2011 and 2012 field seasons, ELRAP conducted excavations in five areas of the site: Area A, a likely residential structure on the site's southern hill with very shallow deposits; Area D, a small outbuilding containing a hearth; Area X, the primary smelting workshop (preliminary report in Levy *et al.* 2012: 426–30); Area Y, a structure of uncertain function on the site's northern hill with very shallow deposits; and Area Z, a public building with evidence of dining and food preparation, later repurposed as a refining or blacksmithing workshop (FIGS. 6–7).

Analysis of finds collected during the 2002 Wādī al-Ghuwayba Survey (Levy *et al.* 2003; Jones *et al.* 2012), as well as





ceramics (Hauptmann *et al.* 1985: 190, 192) and coins (Kind *et al.* 2005: 179 Table 1, 188) collected on DBM surveys of the site, had already indicated that the site was primarily occupied in the early 13<sup>th</sup> century AD, or the Ayyūbid period. Based on the evidence from the excavations, this is the only part of the Middle Islamic period during which the site was occupied. While some artifacts typical of the Early Islamic or earlier Middle Islamic period were found at the site (*e.g.*, a handful of glazed, wheel-made cooking pot sherds and the base of a schist cooking bowl) these seem to have been brought to the site in the 13<sup>th</sup> century, as no other evidence of earlier occupation was found. Like-

6. Map of Khirbat Nuqayb al-'Usaymir, with ELRAP excavation areas and survey features labeled (Image: IKONOS satellite imagery courtesy of GeoEye. GeoEye data is owned by GeoEye, Inc. All rights are reserved by GeoEye, Inc.; Map: IWNJ).



7. Balloon photo of Khirbat Nuqayb al-'Usaymir Area Z, with 2012 excavation area indicated by white polygon (Photo: Matthew D. Howland, UCSD LCAL; Map: IWNJ).

wise, the metallurgical occupation seems to have ended in the mid-13<sup>th</sup> century, as no material typical of the Mamlūk period was found.

To briefly summarize the excavations, the deposits in Areas A and Y were very shallow, and in both areas bedrock was reached at a depth of only 25–50cm. This is due to fairly severe erosion of these hill-side areas, mostly during seasonal rains (Howland *et al.* 2018). Although finds in these areas were limited, the excavations did produce some insight into the settlement history of the site, notably evidence for a fire in Area A either shortly before or sometime after it went out of use.

The site's main smelting workshop was excavated in Area X, and preliminary discussions of this excavation have appeared previously. In this area, excavations revealed a smelting furnace and two piles of charcoal, which allowed for a partial reconstruction of the *chaîne opératoire* of Middle Islamic copper production at the site (Levy *et al.* 2012: 426–30; Jones 2016). Finds from this area were also rather limited, however. The fact that the recovered artifacts were related primarily to the last smelting operation at the site led to the conclusion that the workshop had been regularly cleaned as part of the process of copper production, and debris discarded on the slag mound outside of the building's entrance, to the east.

The excavations in Area Z produced a wider range of artifacts. The ceramics included undecorated wheel-made wares, “early” hand-made wares, and typical Hand-Made Geometrically Painted Wares, all of which are rather difficult to date, but also stoneware wares belonging primarily to Mason's (2004: 98–100) Syrian Stoneware-bodied Groups 4 and 6, dating to the late 12<sup>th</sup> century and late 12<sup>th</sup>–early 13<sup>th</sup> century, respectively, as well as early 13<sup>th</sup> century slipper lamps with high tongue handles (Avisar and Stern 2005: 126–7). In addition to this, several Ayyūbid coins of

al-'Adil I were found in Area Z, dating to the second decade of the 13<sup>th</sup> century. Area Z was also the only excavation area at Khirbat Nuqayb al-'Usaymir that produced evidence for multiple phases of occupation. In the first phase, Stratum Z-2b, the building seems to have been used as a public dining and food preparation space, and a pit excavated in the northeastern corner of the building contained substantial amounts of charcoal, bone, and eggshell mixed with cooking and table wares. Major modifications to the building were undertaken at the beginning of Stratum Z-2a, the most significant of which involved blocking several of its entrances and narrowing the main entrance to build bins against the walls. The bin against the eastern wall was filled with charcoal, iron fragments, and blacksmithing cinders, and the bin against the southern wall contained a gray, ashy fill. This seems to indicate that the building was repurposed for refining or blacksmithing, or perhaps both. The small building in Area D seems to have been constructed in tandem with this modification as a replacement food preparation area. Excavations there uncovered a small staircase leading to a hearth.

While a specific foundation date for Khirbat Nuqayb al-'Usaymir is difficult to determine, it is reasonable to suggest that it was likely built during the period AD 1198–1218, when al-'Adil I's son, al-Mu'azzam 'Isa controlled al-Karak and ash-Shawbak, and invested particularly in ash-Shawbak, *ca.* 20 km southeast of Khirbat Nuqayb al-'Usaymir (Ghawanma 1982: 180–1; Brown 1988: 242). The site seems to have been abandoned at some point in the mid-13<sup>th</sup> century, perhaps coinciding with the transition to Mamlūk rule in the region in AD 1263. If the suggestion that the site was established primarily to provision the sugar industry with copper is correct (Jones *et al.* 2012), then this abandonment may relate to a changed political-economic situation in

which it was more efficient to import copper than to produce it in Faynān.

Copper smelting also took place at Khirbat Faynān in the early 13<sup>th</sup> century, though this activity does not seem to have involved substantial construction of new architecture. Evidence for this activity instead comes from two slag mounds, which DBM surveys identified as Faynān 2, near the Roman reservoir across the *wādī* from the main site, and Faynān 6, built up against the Area 8 monastery (Hauptmann 2007: 97, 103). In 2012, a small excavation was conducted in Faynān 6, or Area 15 in the ELRAP grid system. Although few datable artifacts were recovered, which is to be expected for a slag mound, a sequence of radiocarbon dates demonstrates that the chronology of production essentially matches that of Khirbat Nuqayb al-'Usaymir. This is particularly interesting, given that a DBM team collected five 14<sup>th</sup> century Mamlūk coins at Khirbat Faynān (Kind *et al.* 2005: 188). Some Middle Islamic period ceramics were found in the upper levels of the excavations in Areas 16 and 18, and may be evidence of limited settlement at the site in this period, but copper production does not seem to have been carried out here any later than at Khirbat Nuqayb al-'Usaymir.

### The Late Islamic Period

For the Late Islamic period, excavations lend support to the picture of seasonal use by nomadic pastoralists painted by most of the archaeological surveys of Faynān. At Khirbat Faynān, excavations produced little evidence for the Late Islamic period, and, at present, little can be said. At Khirbat Nuqayb al-'Usaymir, several buildings seem to have been modified in this period, notably Area Z. The unique quadrantal rooms in the southern portion of the building were formed by relatively shallow walls, built on a surface substantially higher than the Middle Islamic period surfaces. Unpainted hand-made wares, which made

up 65% of the ceramic assemblage from the 2002 survey (Jones *et al.* 2012: 82), made up only 27% of the excavated assemblage, suggesting perhaps that the survey ceramic assemblage contained a mixture of Middle Islamic material associated with copper production, and Late Islamic material—primarily unpainted hand-made pottery—associated with later pastoralist use of the site. The lack of Gaza Ware and chibouk (tobacco pipe) heads may, however, indicate a date primarily in the earlier part of this period, perhaps before the 17<sup>th</sup> century.

In contrast to this, excavations at Khirbat Ḥamrat Ifdān recovered a limited amount of later Late Islamic material, including Gaza Ware, indicating pastoralist use of the site probably in the 19<sup>th</sup> or early 20<sup>th</sup> century. This is roughly contemporary with Palmer's (1871: 456–8) account of passing through Wādī Fidān, in which he describes his rather strained interactions with the 'Amarīn, who live in the area today. Likewise, at Wādī Fidān 50a, the aforementioned bulldozer activity had, prior to the 2004 excavations, badly disturbed the grave of a woman who had been buried with a number of late 19<sup>th</sup> century tokens and imitations of Ottoman coins sewn to her garments.

### Conclusion

Although copper production was, in a long-term perspective, the main driver for settlement in the Faynān region, focusing on the Late Byzantine and Islamic periods reveals a pattern where this is instead exceptional. During the Late Byzantine and Early Islamic periods, settlement in the eastern portion of the region was in many ways related to the memory of copper production, in the sense that Khirbat Faynān's religious importance was certainly related to the martyrs sent to their deaths in the mines. Copper production, however, had by this point mostly ceased. Although the latest part of this period involved an industry of sorts, this was the production



of lime, rather than metal. In the western portion of the region, Early Islamic settlement was driven by agriculture, to judge from the apparent estate established at Khirbat Hamrat Ifdān. In this view spanning the 7<sup>th</sup> through 19<sup>th</sup> centuries, copper production appears as the exception, rather than the rule. Although this activity accounts for the most visible record of Middle Islamic period settlement in the region, particularly at Khirbat Nuqayb al-'Usaymir, the industry was active for perhaps six decades, at most. By the 14<sup>th</sup> century, the picture that emerges is one of seasonal use of the region by mobile pastoralists, a pattern that continued into the 19<sup>th</sup> and early 20<sup>th</sup> centuries.

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