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## Recent Research on Traditional Villages in the Petra Region, with Some Ethno-Archaeological Notes<sup>5</sup>

### Abstract

This paper presents recent results arising from the systematic recording and documentation of selected abandoned traditional villages in the Petra Region. The recording process included GIS mapping of the villages, creation of top plans illustration of individual domestic units, and descriptions of building techniques, building materials, walling, roofing systems, coating materials and other architectural elements. The data collected has implications for ethno-archaeology, including spatial organization and uses of space within individual settlements, settlement growth and abandonment and demographic archaeology. Preliminary results show that the ways in which people lived in these villages is indicated by spatial organization and uses of space. Moreover, results suggest that sedentarized nomadic societies tend to occupy larger room areas than agrarian rural communities.

### Introduction

There are many abandoned 19th and early-20th century villages in the vicinity of Petra in southern Jordan. These villages were mostly

inhabited until the mid-20th century. As a consequence of modern urban life and new livelihoods, these traditional villages were abandoned and the inhabitants either moved to other Jordanian towns and cities or built new cement houses nearby. Although most of these villages are completely abandoned, they are still very well preserved, but under threat from urban expansion due to population growth. Because there is no legal requirement to preserve the villages, or even to document them, many are demolished to make way for modern construction. Moreover, as many are less than 200 years old they are not considered archaeological sites to be preserved and in fact, are still considered private property, and so owners have the right to do whatever they wish with these villages. As a consequence these villages are under a constant but silent threat of demolition.

Given their state of preservation, we have a unique opportunity to document in detail architectural techniques, spatial organization, land-use and the socio-economic history of these villages. Importantly, much of the traditional fixtures and fittings used by the inhabitants of

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these villages are still *in situ* within the houses, which provides an opportunity to collect and record ethnographic material of the past century.

This project was conducted by a team from the department of Archaeology at Al-Hussein Bin Talal University in Ma'an and was funded by the Jordanian Scientific Research Fund.

### Project objectives

There were five objectives underpinning the project, these were:

- i) to fully document the architectural techniques and materials used in the construction of the villages;
- ii) to establish the reasons why these settlements were abandoned and to test our theory that it was primarily due to changes in the livelihoods of the villagers;
- iii) to collect good quality ethno-archaeological data that can be used in the interpretation of historical and archaeological sites, and in particular for studies on settlement growth and abandonment, changes in modes of production; carrying capacity; archaeodemography *etc.*,
- iv) to develop public awareness of the importance of these villages for conservation and preservation, and
- v) to ensure the protection of important Jordanian cultural heritage.

### Methodology

The main aim of the project was to fully document the villages and the method of documentation will be summarized as follows:

- i) locating villages on digitized aerial photographs and GIS maps;
- ii) sketching maps of the villages depicted on topographic maps;
- iii) creating a detailed top plan of each of the villages, showing house units, streets, external features, and topographic features;

- iv) creating a numbered sequence of house units;
- v) providing detailed recording of individual houses, including wall construction, roof construction, presence of arches/buttresses *etc.*, masonry techniques, wall coatings, construction materials and installations such as niches and hearths, and internal spatial organisation.

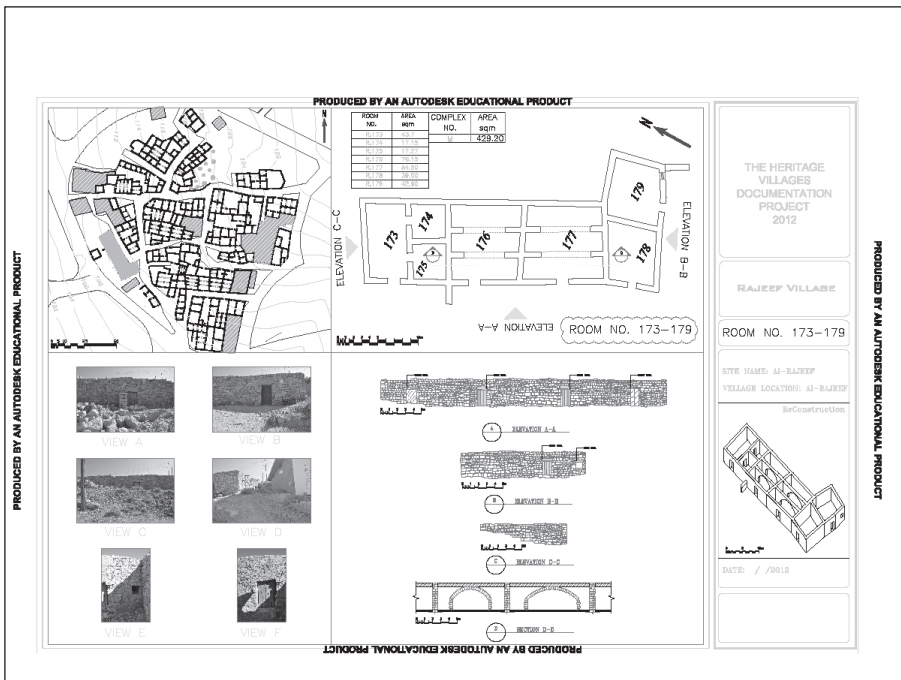
For the purpose of the project a recording system was developed. Information recorded included an illustration of the room or domestic unit, depicting its location on the village plan, an enlarged plan of each individual unit, a 3D reconstruction and representative photos (FIG. 1). The recording sheet also contains descriptive information about the unit including a room/unit serial number, measurements, wall description, construction technique, construction material, roofing system and material, wall coating material, flooring and other architectural features (openings, niches *etc.*). For descriptive purposes the walls of each individual room were given a discrete serial number between 1 and 4 beginning with the wall containing the door (numbered 1) then moving clockwise around the room (walls 2 to 4) (FIG. 2).

### Project outcome

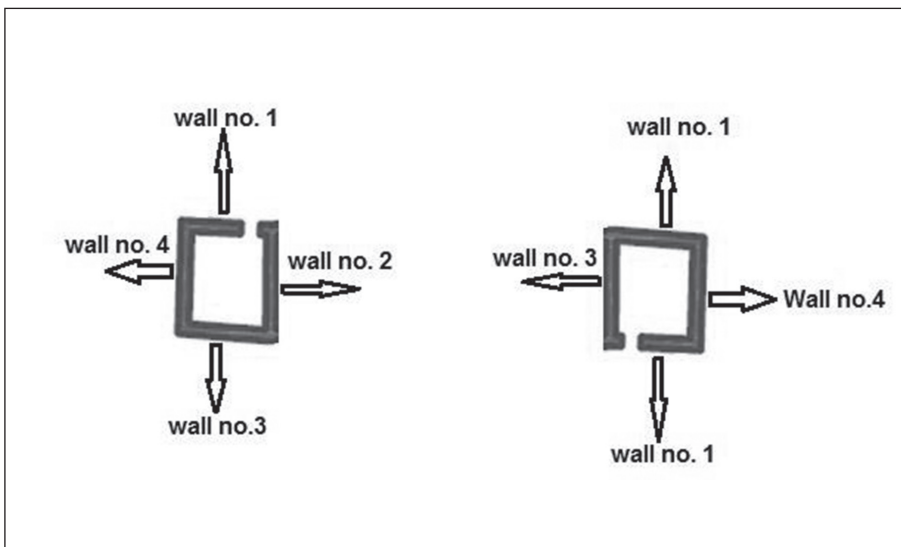
At the completion of the project (2011-2013) six villages had been fully documented; these were al-Ḥay Village (قرية الحي), Munayfah (قرية منيفة); Khirbat Banī 'Aṭā (خربة بني عطا); Rājif (قرية الراجف); Dilāghah (قرية دلاغة), and 'Amārīn Village (قرية العمارين التقليدية) (FIG. 3).

#### *The al-Ḥay Village*

This village is located approximately 6 km north of Petra and consists of 298 domestic units/rooms, with a total built area of 8109 sq. m, distributed in a huge area of approximately 373720 sq. m. This village grew gradually in an evolutionary model of settlement growth. The general space was divided on a tribal and familial clan basis. (FIG. 4).



1. Example of a recording sheet for Rajif village.



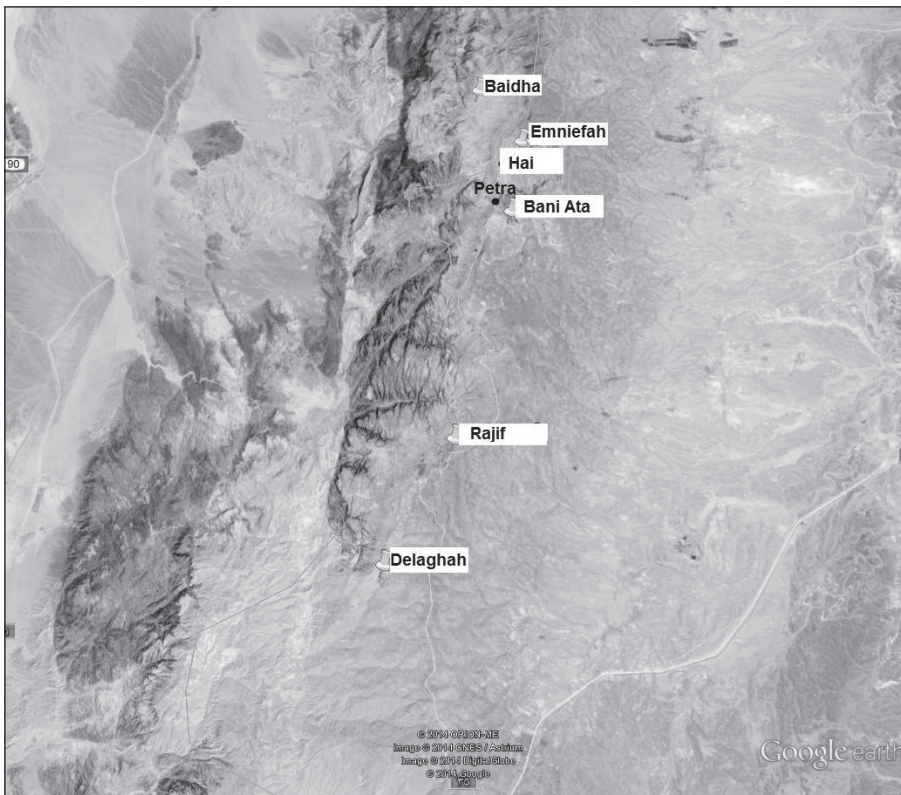
2. Illustrative example showing the numbering system for walls.

### *Munayfah Village*

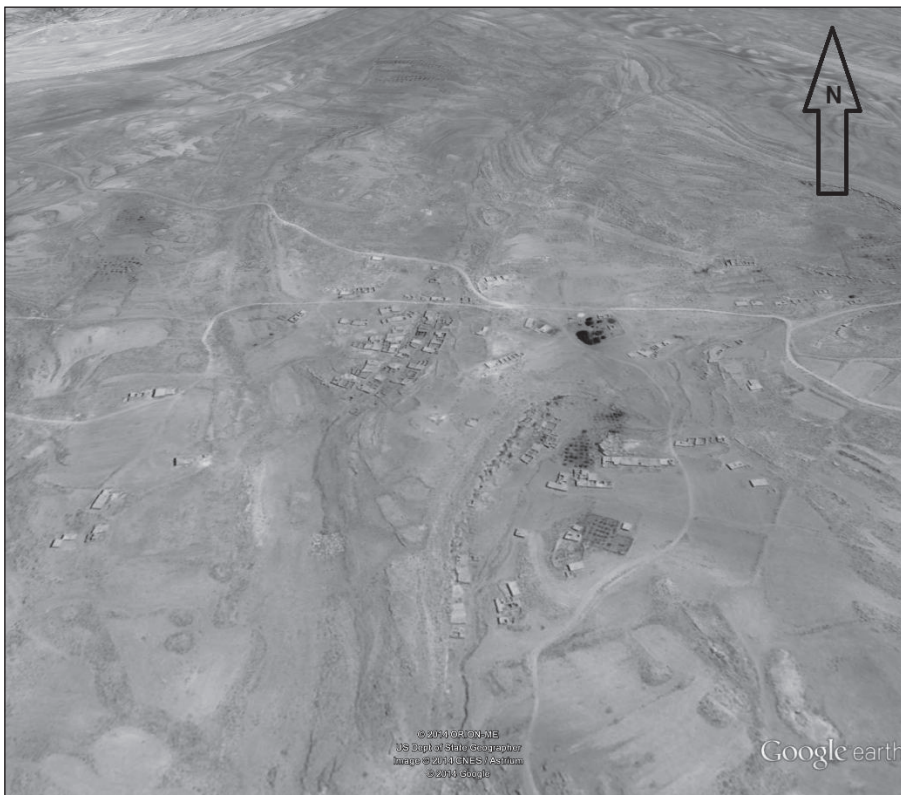
This village is located in a close proximity to al-Ḥay village and was established by a clan family from the Hasanat tribe who departed at once from al-Ḥay to Munayfah. This village was the most compacted among the six villages documented in the Petra region. The village accommodates 36 domestic units with a total built area of 948 sq. m. (FIG. 5). The compactness of the village is likely to be a result of the fact that it belonged to a single clan and that it served as one large house for the extended family.

### *Banī ‘Aṭā village*

This village is located in Wādī Mūsā and is known locally as Khirbat Raydān named after the Raydān spring. The remains of this village comprises 88 domestic units with a total built area of about 1750 sq. m., distributed in an area of about 37000 sq. m. The general layout of this village is compacted within narrow gorges. (FIG. 6). It is worth mentioning that the original village was much larger than the current documented one because in 1996 the western part of the village (about 40 %) was demolished to build a school.



3. Google Earth image of the villages documented in the project.



4. Google Earth image of al-Ḥay village

### *Rājif Village*

This village is located approximately 18 km south of Petra and is owned by the Rawajfeh and Sa'iedein tribes, both now sedentary but once

nomadic tribes. The village is the second largest in the region of Petra after al-Ḥay village. It is semi-intact and comprises 202 domestic units with a total built area of 7783 sq. m. (FIG. 7)



5. Google Earth image of Munayfah village



6. Google Earth image of Banī 'Aṭā village

distributed in area of 49000 sq. m.

*Dilāghah Village*

This village is inhabited by a clan of

agro-pastoral nomads of the Sa'iedein tribe. The village is the smallest of the villages documented. The well preserved traditional houses total 14 with a built area of 400 sq. m.



7. Google Earth image of Rājif village

occupying a considerable space, estimated at 41000 sq. m. (FIG. 8). The general layout of the domestic units indicate the spatial layout of the nomadic tent camp.

#### *al-Bayḍā* ('Amārīn) village

The 'Amārīn village at al-Bayḍā was inhabited by the semi-nomadic Amarin tribe who departed from the village to a newly established one approximately 600 m to the northwest. This relocation was brought about by the government under governmental policy for sedentarizing the nomadic tribes in Jordan. The traditional abandoned village is the second smallest in the Petra region comprising 16 domestic units with a total built area of about 341 sq. m. distributed over a large area of approximately 8000 sq. m. (FIG. 9). The general spatial layout of the village is very similar to Dilāghah and is reminiscent of the layout of a nomadic tent camp.

#### **Some Notes on the Traditional Villages of Petra Region**

The six villages documented in the Petra region shed some light on the architectural tradi-

tions of communities living in the area during the last century (the 20<sup>th</sup> century). All the villages are built entirely of stone masonry without any use of mud bricks, principally because they are built over the archaeological remains of settlements and re-used the building material in their own construction. The roofing technique is based mainly on juniper wooden beams, a fact that may have contributed to the deforestation of this species in the Petra region during the 20th century. The building materials are all local and there is no evidence of imported material. The houses are very simple without any ornamentation and architectural decoration. The houses are principally single roomed units, (FIGS 10-11). From an anthropological point of view three of the villages (al-Ḥay, Munayfah and Banī 'Aṭā) are related to rural agricultural-based communities, while the other three (Rajif, al-Bayḍā and Dilāghah) are related to sedentarized nomadic communities. However, when comparing the spatial layout and room size of these villages it appears that the rural communities tend to have occupied larger spaces, while sedentarized nomadic societies tended



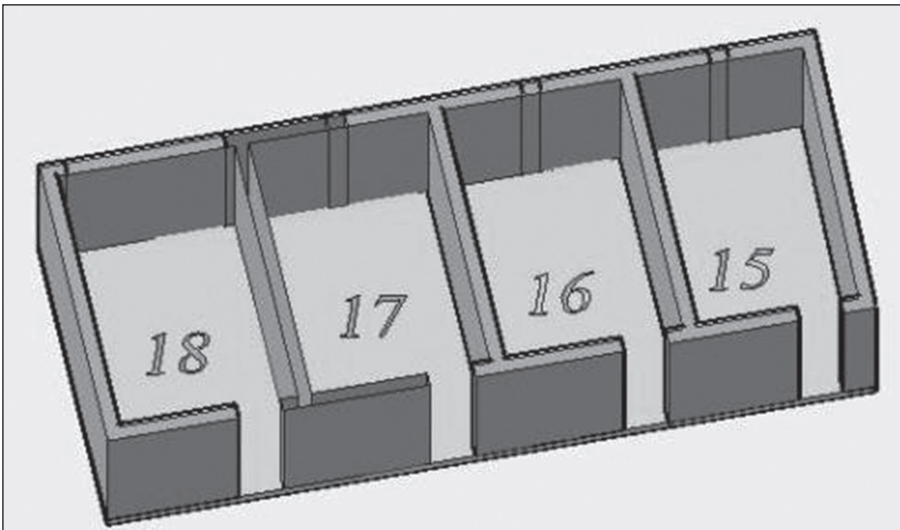
8. Google Earth image of Dilāghah village



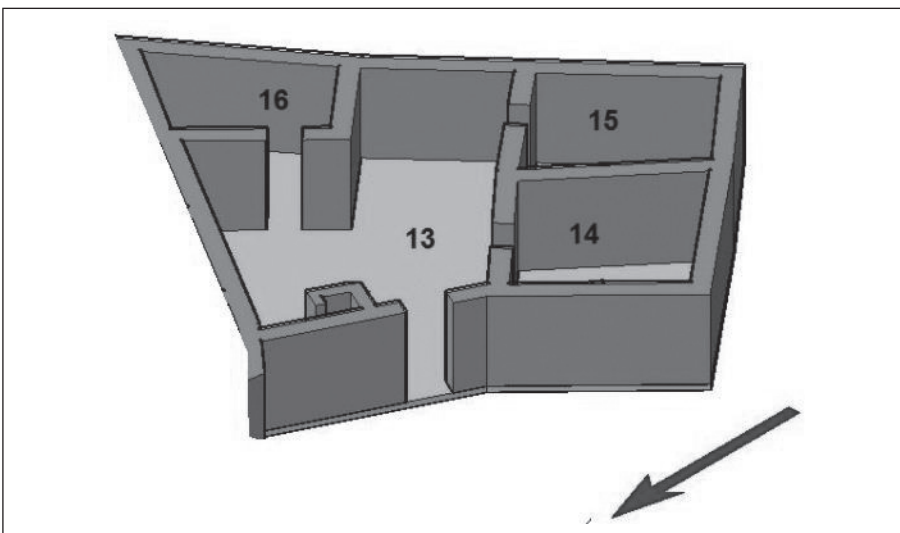
9. Google Earth image of al-Bayḍā village

to occupy larger room spaces (*i.e.*, the average room size in the villages of rural communities is estimated at 24.47 sq. m., while the average room size of the sedentarized nomadic societies estimated was 29.46 sq. m. Further study

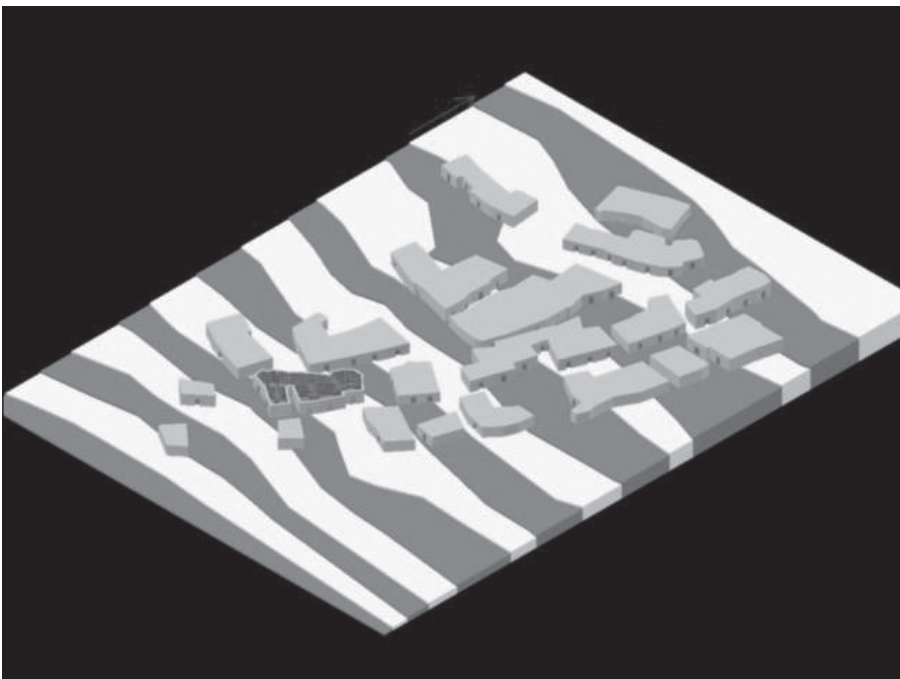
is required to understand the meaning of this phenomenon but it suggests that extended families, clans or tribes, chose to live together or adjacent to each other in familial groups, often comprising the whole village (FIG.12).



10. An example for the single room house from al-Ḥay village (Drawing: Bellal Abuhaleh)



11. An example for the courtyard house from Banī ‘Aṭā village (Drawing: Bellal Abuhaleh)



12. A 3D illustration of a family clan unit at al-Ḥay village (Drawing: Ahmad Hasanat)