

Nabataean Land-Use in the Petra Area Before the First Century AD

Introduction

Our understanding of rural settlement and land-use in the later Nabataean period has improved as a result of archaeological surveys in the surroundings of Petra. However, although the evidence points towards the existence of a settlement at Petra as early as the third century BC (Graf 2007; Mouton *et al.* 2008), so far only a few known rural settlement sites have been dated to the Hellenistic period. The purpose of this paper is to address this problem by discussing possible modes of land-use before the emergence of rural settlements in the light of archaeological and textual sources, and to consider the transformation of land-use practices that the sedentarization of at least part of the population brought about.

While most scholars today date the beginning of sedentary settlement and agriculture by the Nabataeans to the late second-early first century BC (e.g. Schmid 2001: 370-371; al-Salameen 2004: 134), earlier scholarship maintained that the Nabataeans only became sedentary and started practicing agriculture in significant numbers in the first century AD. This view was generally based on the belief that international trade through Petra had ceased by the beginning of the Common Era, or first century AD at the latest, and that the Nabataeans only resorted to agriculture as a supplement when their revenue from trade was lost (Bowersock 1996: 64-65; Negev 1986: 45-46; Knauf 1986: 80)¹. Some scholars have even suggested that sedentary settlement and agriculture in southern Jordan was introduced by other – sedentary – tribes from the north, or people from the Mediterranean sphere (Knauf 1986: 76). On the other hand, there are also scholars who propose that the sedentarization of the

Nabataeans took place much earlier, perhaps by the fourth century BC (Dijkstra 1995: 301-302).

Textual Sources

Textual sources concerning Nabataean land-use are few and far from unambiguous. The well-known account of the late fourth century BC historian Hieronymus of Cardia, cited by Diodorus Siculus in the first century BC, states that the Nabataeans were nomadic camel and sheep herders, forbidden to build houses or cultivate land on penalty of death (Diodorus 1954: 3-9; Bowersock 1996: 14-15; see also Schmid 2001: 367). As some scholars have pointed out (e.g. Graf 1990: 53), the prohibitions on agriculture and the construction of houses, as well as the Nabataeans' love of freedom, follow literary tradition for the description of nomads in antiquity. However, the lack of archaeological evidence for permanent settlements in areas where the Nabataeans are mentioned in historical sources of the fourth-third centuries BC supports the assumption that they mainly followed a mobile lifestyle.

On the other hand, according to the similarly well-known writings of Strabo, who probably described the situation as seen by his friend Athenodorus during a visit to Petra in the later first century BC, the residents of Petra owned luxurious houses and grew fruit trees in irrigated orchards (Strabo 16.4.26). Although many of the same arguments concerning Diodorus' description of the Nabataeans also apply to that of Strabo (e.g. Dijkstra 1995: 302), it seems clear that the Nabataeans whom Strabo describes were a settled people.

Historical evidence for land-ownership and land-use practices in the Nabataean realm is both rare and much later in date than the description of

¹ The archaeological evidence and recent re-examination of previous hypotheses support the view that Petra continued to be an

important center of trade until the third century AD (see Fiema 2003).

Strabo. It comes from the Babatha archive (Papyri Yadin) which dates to AD 94-132, i.e. the last decade of Nabataean rule and first decades after the Roman annexation of AD 106. The documents of the archive include two deeds of sale relating to a date grove during the reign of Rabbel II (AD 70/71-106), the last Nabataean king (Papyri Yadin 2 and 3; Yadin *et al.* 2002: 201-244; Yadin 1962: 238-241). These documents confirm that by the late first century AD, agricultural land in the Nabataean realm was considered private property, which could be bought and sold².

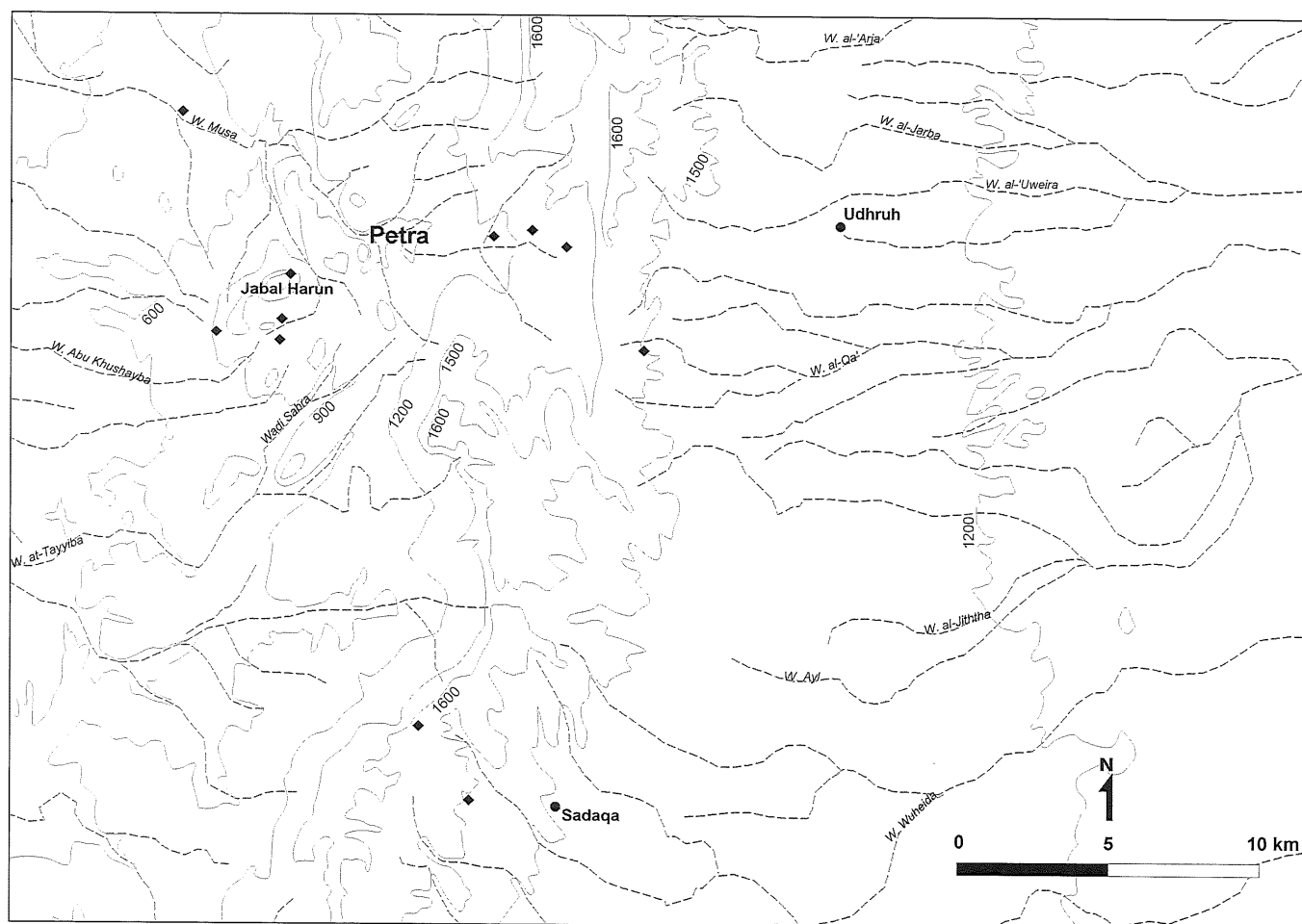
Archaeological Evidence

Although there are numerous agricultural installations in the surroundings of Petra, such as *wadi* barrages and terrace walls, wine presses and threshing

floors, there is little well-dated archaeological evidence for land-use or agriculture, and even less that might date to the last few centuries BC. Therefore, the only indications of early land-use are settlement sites in the Petra hinterland, which makes the evidence somewhat circumstantial.

Recent excavations have confirmed that there are archaeological indications for settlement in Petra as early as in the third century BC (Graf 2007; Mouton *et al.* 2008; see also Parr 2007: 278). The earliest evidence for activity in the Petra hinterland comes from a few sites located in the area of modern Wādī Mūsā and Jabal ash-Sharāh, which date to the second century BC ('Amr *et al.* 1998: 520-524, 529; Wenning 1986: 86).

Rural sites became more numerous in the first century BC (FIG. 1). An increase in settlement



1. Map of first century BC settlement sites in the Petra region (based on information from 'Amr *et al.* 1998; 'Amr and al-Momani 2001; Hart and Falkner 1985; Abudanh 2006; JADIS and the FJHP survey) (map P. Kouki).

² Hannah Cotton (1997) has discussed whether the land mentioned in the papyri should be considered private property or land leased from the Nabataean king; in the final publication of the docu-

ments, interpretation of the land as private property is preferred (Yadin *et al.* 2002: 228-229).

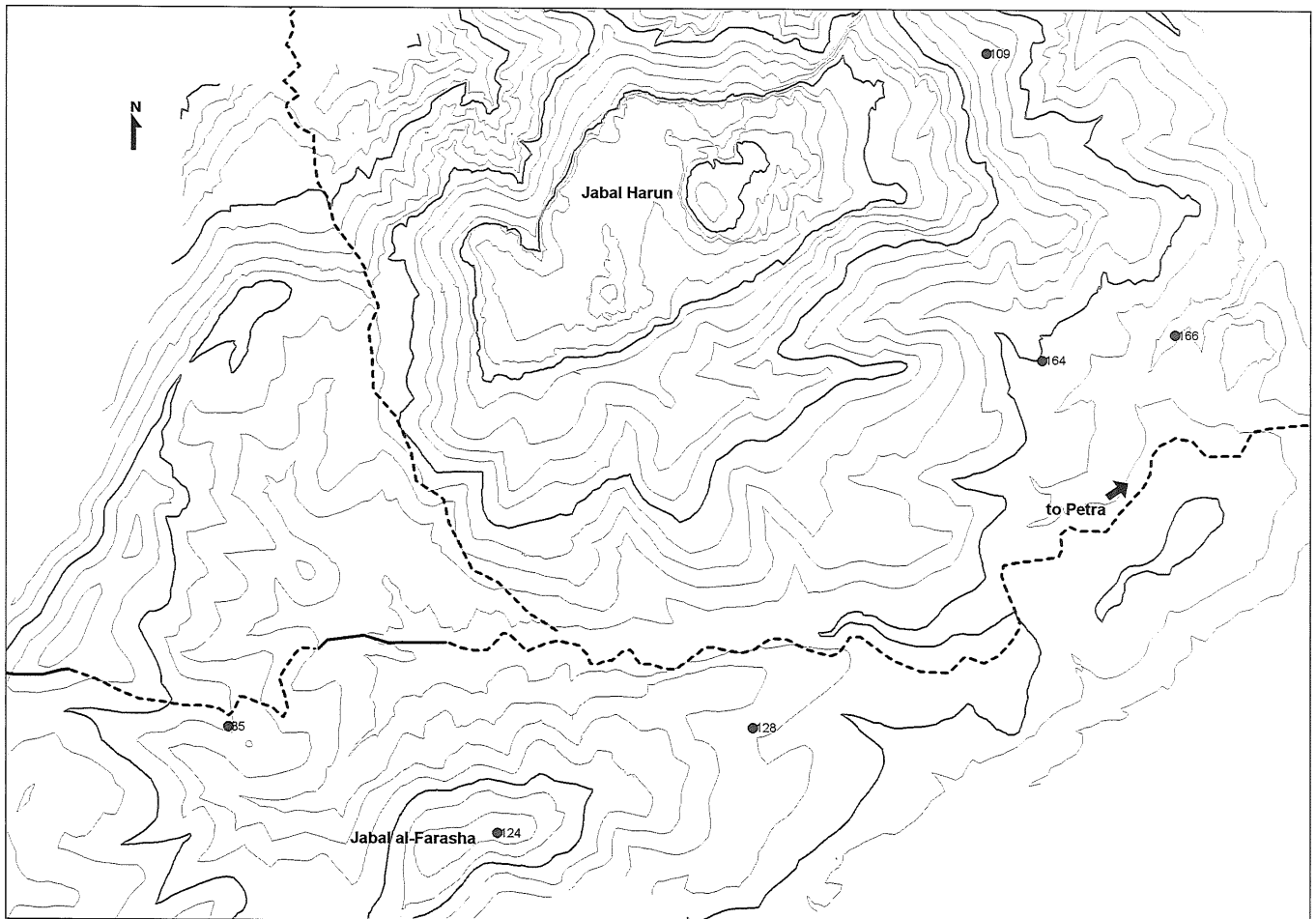
density appears to have taken place in the area of modern Wādī Mūsā; first century BC pottery has also been found at several small settlement sites on the fringes of Wādī ‘Arabah. Many of these early sites are located adjacent to caravan routes and might possibly have served as stopping places or road stations, rather than primarily as agricultural settlements. Thus, there are two sites with first century BC pottery on the caravan route running around the foot of Jabal Hārūn from Petra to Wādī ‘Arabah (FJHP sites 85 and ext075; FIG. 2).

There are also sites that seem to be primarily related to agricultural activities. One such site was found in the Finnish Jabal Hārūn Project survey area close to Jabal Farasha (FJHP site 128; FIGS. 1-2). It consists of a number of adjacent small buildings, which probably formed a farmstead or small hamlet (Frösén *et al.* 2003: 309-310). The surface pottery at the site was collected and a considerable proportion of the diagnostic sherds date to the first century BC. On the basis of the pottery, the site ap-

parently continued in use until the late first-early second century AD (pottery dated by Y. Gerber). Most of the collected pottery is plain ware, supporting the interpretation of the site as domestic.

Three small soundings were made at the site. They revealed that the buildings were partially subterranean, being cut into the bedrock (FIG. 3). The soundings also revealed some architectural details, such as a water channel (FIG. 4), but the pottery recovered from the soundings was exclusively of the first-early second century AD. However, the small area of the soundings does not rule out the possibility of earlier material also being present. Furthermore, if the site was continuously occupied from the first century BC, it might be expected that the pottery found inside the buildings would reflect the last period of use, with earlier discarded material being found outside.

South of site 128, on the ridge opposite, there is another – poorly preserved – site of similar date. This site may also have been a farmstead (FJHP



2. Sites yielding significant amounts of first century BC pottery in the FJHP survey area (map FJHP/ H.Junnilainen, P.Kouki).



3. Sounding 1 at FJHP site 128, revealing the lower part of a wall cut into bedrock (photo FJHP/ P. Kouki).



4. Sounding 2 at FJHP site 128: water channel cut into the floor of the room; no evidence of flooring was recovered (photo FJHP/ P. Kouki).

site ext134; FIG. 1), although this interpretation is tentative owing to its disturbed state. A number of Nabataean cisterns and ancient field systems were documented in the area between the Farasha ridge and Tulūl Muthaylijah. A third site with the remains of at least two small buildings, which yielded pottery from the first century BC, is located on the north-east slopes of Jabal Hārūn (FJHP site 109; FIGS. 1-2). There are remnants of terrace walls on the northern slopes of Jabal Hārūn, not far from the site, and at present there is a small irrigated garden by a spring in Wādī al-Waghīt below.

As can be seen from the above, there are a number of first century BC sites within just the Jabal Hārūn area, which is less than five km square. In light of this, it is quite possible that there are more early rural sites than currently thought in the surroundings of Petra, but the early plain ware pottery has not always been recognized in surveys. With more detailed surveys the number of early ru-

ral sites is likely to grow.

Is the early pottery found at these sites related to permanent settlement or just seasonal use of these locations before more permanent structures were established? The continuity of use and lack of excavation at these sites makes it difficult to determine the exact nature of this early presence. However, continuity of use and the fact that – at least later on – these same sites developed into farmsteads or even small hamlets suggests that they may have been locations for agricultural activities in their earlier stages as well.

Conclusion

As noted above, the prohibition against agriculture mentioned by Diodorus probably just reflects common literary descriptions of pastoral peoples and does not necessarily reflect reality. It seems probable that the Nabataeans originally practised agriculture alongside herding in much the same manner as *bedouin* in historical times (Simms and Russell 1996: 7.3-7.5; Levy 1992: 68-69). Land-use was extensive, perhaps with part of the family or sub-tribe camping by cultivated areas during the agricultural season. Crops were probably annuals such as cereals and legumes, which are easily transported or stored after the harvest and do not require year-round care. Among the *bedouin* of Petra, each extended family or kin group had the commonly recognized, ancestrally determined right to pasture and cultivate in certain areas. From such an ethnographic analogy, it can be suggested that the Nabataeans followed a similar system during the period when they were still mainly mobile traders and herders.

However, Strabo clearly writes of settled people who practiced agriculture, including viticulture. When and how did this transition happen? It can be argued that the acquisition of wealth through trade and contacts with sedentary peoples created a need for a permanent 'power base' and associated infrastructure. This development led to the establishment of the seat of the Nabataean king at Petra, which was already the political and religious centre of the tribe, resulting in the beginnings of sedentarization starting with the elite (e.g. Wenning 2007: 29-31).

In light of the archaeological data as currently known, it seems that sedentary settlement began a little later in the surroundings of Petra than within the city itself. Although a bias caused by the focus

of archaeological fieldwork cannot be completely ruled out, it seems that the earliest rural settlements were largely concentrated in the vicinity of Petra. This suggests that the emergence of farmsteads in the city's hinterland was related to the growth of the settled population of Petra itself. It can be postulated that the growth of the settled population of Petra called for the intensification of agricultural production to provide for the inhabitants of the settlement. This intensification of agriculture may have been accompanied by the introduction of new perennial crops (e.g. vines, fruit-bearing trees and olives), which called for long-term care, new cultivation techniques and more labour input. This, in turn, would have required that farmers stayed in one location on a more permanent basis to tend the plants. The early settlements might represent this transition. Some of them, such as those in the Wādī Mūsā area, were clearly settled year-round, while others may have been settled only for the duration of the agricultural season. It can further be suggested that increased investment in land and cultivation of plants such as olive and vine, which require years of tending before being productive, led to the transformation of ancestrally determined rights of land-use into land-ownership.

The central problem of the entire discussion of sedentary vs nomadic Nabataeans, beginning with the ancient authors, has been the tendency to see these two ways of life as mutually exclusive. Acknowledging that a variety of semi-nomadic or semi-sedentary adaptations were present in Nabataean society for much, if not all, of its history might be a more fruitful way of gaining an understanding of the history and archaeology of Nabataean land-use. To better understand the beginning and nature of Nabataean rural settlement and land-use, as well as changes over time, it will be necessary to excavate small rural sites. Through excavation, trends in rural architecture could be dated and the use of different sites interpreted. This task should be undertaken without further delay because these sites are in danger of being destroyed by development and/ or treasure hunting.

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