

From Edomite to Late Islamic: Settling Fluctuation on the Newly Surveyed Jabal aş-Şaffāḥa, North of Petra (Jordan)

Introduction

Jabal aş-Şaffāḥa, located ca. 15 km north of Petra is a Cretaceous massif of 8 km length and 1.5 km in width (FIG. 1). It extends in a northerly direction west of Jabal ash-Sharah to which it geologically belongs. Up to the nineties, the 'Amārin bedouins living there were not interested in visitors, at first in order to evade taxation, later to avoid the government's displeasure at their building houses from ancient spoils. Since 1994, after the 'Amarin had (been) moved into the newly installed Bayḍā Housing, the Jabal aş-Şaffāḥa area, archaeologically "*terra incognita*" up to then, was, between 1994 and 1997, explored and surveyed by groups of the Naturhistorische Gesellschaft Nürnberg (NHG) under the author's direction.¹ Surprisingly, the ruins of no less than nine settlements at elevations ranging from 1290 to 850 m asl were discovered by prospecting, a couple of them from a helicopter (FIGS. 2-4). Always visited in September-October, the plateau gently sloping toward the east and the steeper western mountainside, superficially did not look like land especially suited for agriculture and horticulture. The ridge toward the north appeared still more barren. However, terraces and field walls everywhere, walled pens for either goats or for gardens to keep goats out, scattered ruins of houses, a few tombs, cave cisterns and, of course, the nine settlements identified and dated during the surveys, additionally stands of *Juniperus phoenicea*, *Pistacia palaestina* and *atlantica* and even almond trees (grown wild?) displayed another picture. Like everywhere in the Greater Petra region, people here had to work hard in order to support themselves over 2000 years, though intermittently and fluctuational.

A) The Iron II (Edomite) Period

Without traces of a previous lithic period, the eastern

mountainside was first settled by Edomites of the Iron II period. Built of large ashlar, *Kutla II* displays massive walls, cave cisterns (FIG. 5) and 50 % Iron II sherds. To a lesser extent the typical Edomite pottery was also found in three other village- or estate-sized settlements indicating additional Edomite places or part-time occupation by a non-sedentary population. In the third case the place turned out to be an Iron II fortress with massive, almost "megalithic" walls, case-mates and an ingenious water collecting system. The fortress *Daraj III* (FIG. 6), as it was called, served to defend the naturally easiest access from the east. Due to the lack of chronological markers for the Edomite pottery, it can only be surmised that Edomites inhabited Jabal aş-Şaffāḥa around the seventh century BC.²

B) The Nabataean-Roman-Byzantine Period

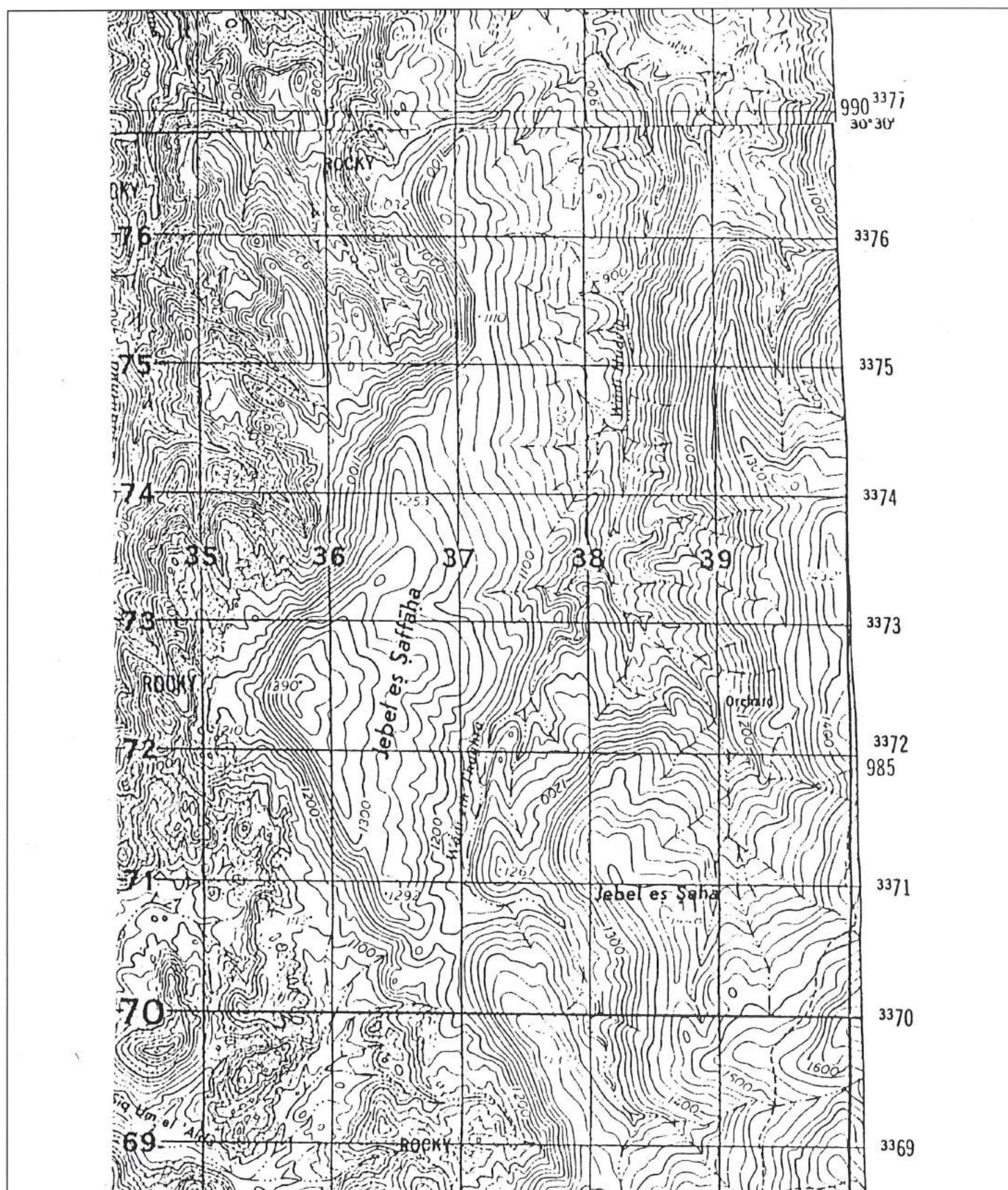
We do not know what happened on Jabal aş-Şaffāḥa during the centuries after the Edomites' exit. According to their unmistakable pottery, the next settlers were Nabataeans of the first/second centuries AD. They must have found the remnants of terraces left by the Edomites. At *Kutla H* they started an agricultural project of respectable dimensions. A system of terraces built every 5 to 15 m, even now more than 2 m high, contained cave cisterns (FIG. 7) catching surplus and run-off water near a settlement of ca. 40 x 45 m. The whole installation reveals planning and execution by specialists, unimaginable without an either political or financial authority initiating the project and profiting from it. For geological reasons, rock-cut conduits and cisterns as in the sandstone of the Petra area could not be used on Cretaceous aş-Şaffāḥa. The Nabataeans wisely emulated the Edomites by using natural caves for catching and storing water.

Due either to the lack of population pressure or be-

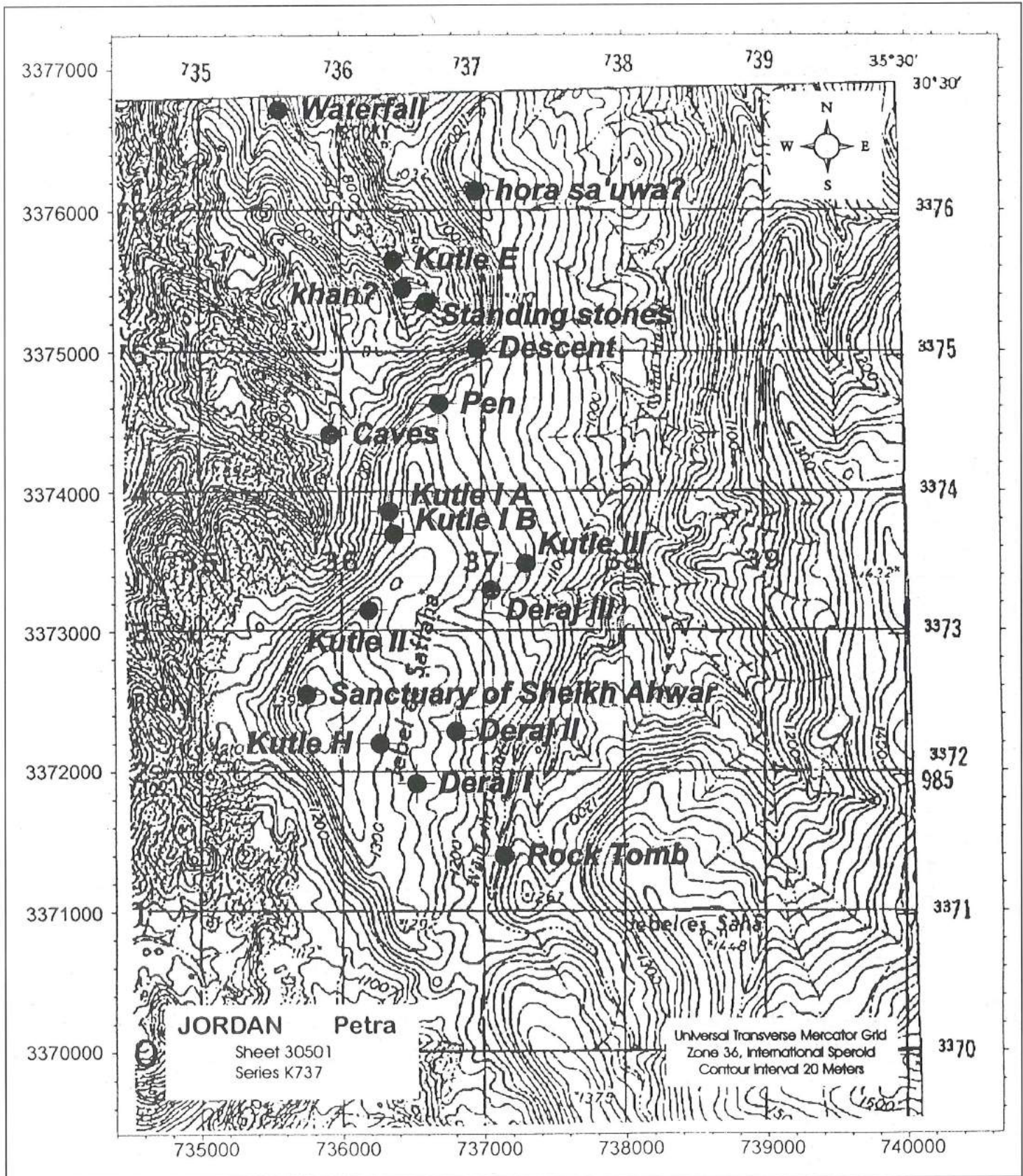
¹ The full report on the surveys of Jabal aş-Şaffāḥa will be published together with E. A. Knauf, U. Hübner and J. Hübl in *ADAJ*. The author has to thank Prof. Dr. W. Hütteroth (Univ. of Erlangen-Nürnberg) for reading the manuscript and for correcting small errors.

² About the Iron II (Edomite) pottery of the Greater Petra region cf.

Lindner and Farajat (1987: 175-185); Lindner, Farajat and Zeitler (1988: 75-99); Lindner Knauf and Zeitler (1990: 193-225); Lindner (1992: 143-166); Lindner (1996: 245-278); Zeitler (1992: 167-176); Lindner, Knauf, Zeitler, Hübl (1996: 137-166).



1. Jabal aş-Şaffāha massif (Jebel eş Şaffāha) 15 km north of Petra (Palestine 1 : 50 000).



2. Jabal as-Saffāha with the localisations of 9 settlements. In addition: Sanctuary of Shayk 'Ahwar, Rock Tomb, "standing stones", descent to Kutla E, waterfall and alleged "hora sa'uwa" (J. Hübl).



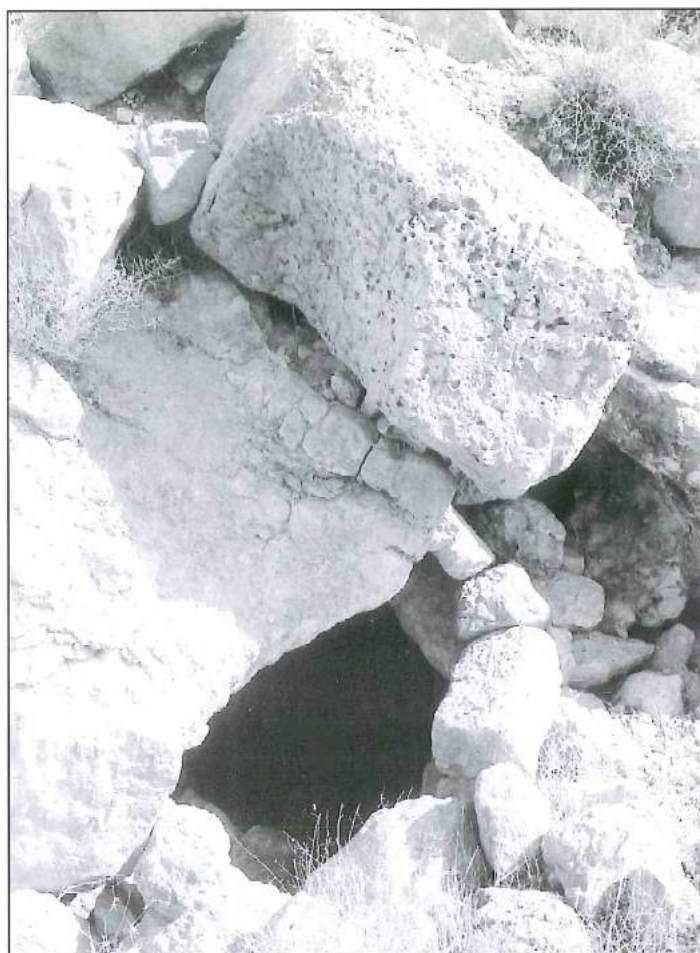
3. Jabal aş-Şaffāḥa.



4. Terraces on Jabal aş-Şaffāḥa.

cause Jabal aş-Şaffāḥa was far from highly frequented caravan routes, the Nabataean occupation started relatively late. The expansion of the agricultural realm of Petra may have been due to Rabb'el II who for several reasons had to modify the economic system of Nabataea, or to the new rulers of Palestine after 106 AD.

Almost in plain view from lower Kutla H and situated at the same wadi whose terraces and cave cisterns had supplied its inhabitants with water, another settlement, *Daraj I*, was founded around the third century AD, now definitely under Roman auspices. An outstanding, though not central, building there with three steps and a threshold was perhaps a *villa rustica*. The walls still standing to a height of 2.30 m today are of finely cut, regular and regularly laid limestone ashlar, a definite improvement on the masonry of Jabal aş-Şaffāḥa. Here, too, water was collected in cave cisterns and, for a shorter period, in basins formed by barrages within the wadi. Byzantine sherds indicate an occupation up to this period. There



5. Cave cisterns at Edomite Kutla II.



6. Surrounding area of Daraj III.

was also Iron II pottery, though without excavation no Edomite architecture can be attested.

Daraj II ca. 300 m to the north-east, originated later than Daraj I, but we do not know why it did not continue



7. Cave cistern at Kutla H.

into the Byzantine period as Daraj I did. Among 80 % Late Roman pottery sherds there was one *Terra Sigillata* rim which is due to further study. A considerable number of trees are profiting from the many terraces in the vicinity. The water supply was improved by a wadi running close to the settlement, barred with cross walls.

Kutla III seems to have been the latest foundation of the Nabataean-Roman period. Due to its location above cultivatable ground, which has been used as a pasture for a long time, the pottery is mostly crushed by goats and herdsmen (women). There were 40 % Iron II sherds but again without a trace of original or reused Edomite architecture. 40 % Byzantine sherds may indicate that *Kutla III* was reoccupied after a gap of more than 1000 years.

There was no single settlement on the western steep mountainside, but several "homesteads" on level places, partly with caves as habitats, cisterns or caches, and equipped with massive terrace walls. The surface pottery fitted to some Nabataean architectural traits, e.g. basins with conduits at rock walls and stone lintels inserted above doors. The area at 1030 m called "caves" on the map should definitely be surveyed again.

C) The Late Islamic Period

Nothing is known about the inhabitants on Jabal aş-Şaffāḥa, if there were any, after the end of the Byzantine empire. Apparently none of the former settlements was habitable anymore when around the twelfth century a Late Islamic population using a type of pottery which is being attributed to the Crusader-Ayyubid periods commenced to live on the mountain³. Directly by the rim of the western escarpment at 1200 m they built a village of 80 x 35 m. From the southern line of house walls erected

on a rocky embankment they overlooked (and controlled) a well ('Ayn Kutla) which, at least nowadays, is continuously filled to the same level from a hidden spring. How this precious water supply functioned in the 12th century is not known, but it might have been the same as today. House walls were higher than 2 meters. One of the houses measures 5.0 x 3.5 m on the inside. The gap between doubled walls was filled with rubble. Between the well and the walls, a khan may have accommodated visitors. Generally, *Kutla I* as well as another village nearby is in the Ayyubid-Mamluk style. The surface pottery attests to an occupation of the remote place from the 12th century to the Mamluk period, though without any explicitly geometrical design. As in all other Late Islamic villages flour was produced with millstones provided with a second (ex-centric) hole.

The latest discovery on Jabal aş-Şaffāḥa was, in 1997, another Late Islamic settlement called *Kutla E* which had been spotted with binoculars in the previous year. Climbing 350 m down from *Kutla I* on an old track to the northeast, the settlement was found in the widening of a wadi at 850 m. A cross wall had to hold back flash floods before houses could safely be built. The meaning of a double row of standing stones on the way down remained a riddle. A relatively prominent building at the beginning of the settlement may have been a khan. The houses have been entirely destroyed. Remnants of walls can hardly be made out. The stone material seems to be poor and badly worked, but better worked ashlar appeared in the depth of a robber-hole. 1500 m after the lower end of the housing area the wadi ends in a small swamp with corresponding plant life. Water from an underground brook runs down in the direction to Wādī 'Arabah. There was little surface pottery of the meanwhile well-known Late Islamic ware.

Fluctuation: Causes and Consequences

Edomites could subsist on Jabal aş-Şaffāḥa as in most parts of the Greater Petra region only on a combination of agriculture, horticulture and pastoralism, the latter also the "insurance" for dry seasons. Living on Jabal aş-Şaffāḥa was customary for pastoralists but required hard work from people who stayed on the spot in summer and winter. They had to possess or develop skills in building terraces and storing water and had to uphold traditions based on acquired experience and new teaching. The seemingly sudden appearance of agriculture, architecture and pottery surprises the surveyor as much as their sudden disappearance. The common use of similar pottery which could not all be similarly produced in every Edomite household or settlement but had to be bought or bartered,

³ As to the Late Islamic "village pottery" cf. e.g. Brown (1987: 267-308); Brown (1989: 625-631); Vanini and Desideri (1995: 509-540);

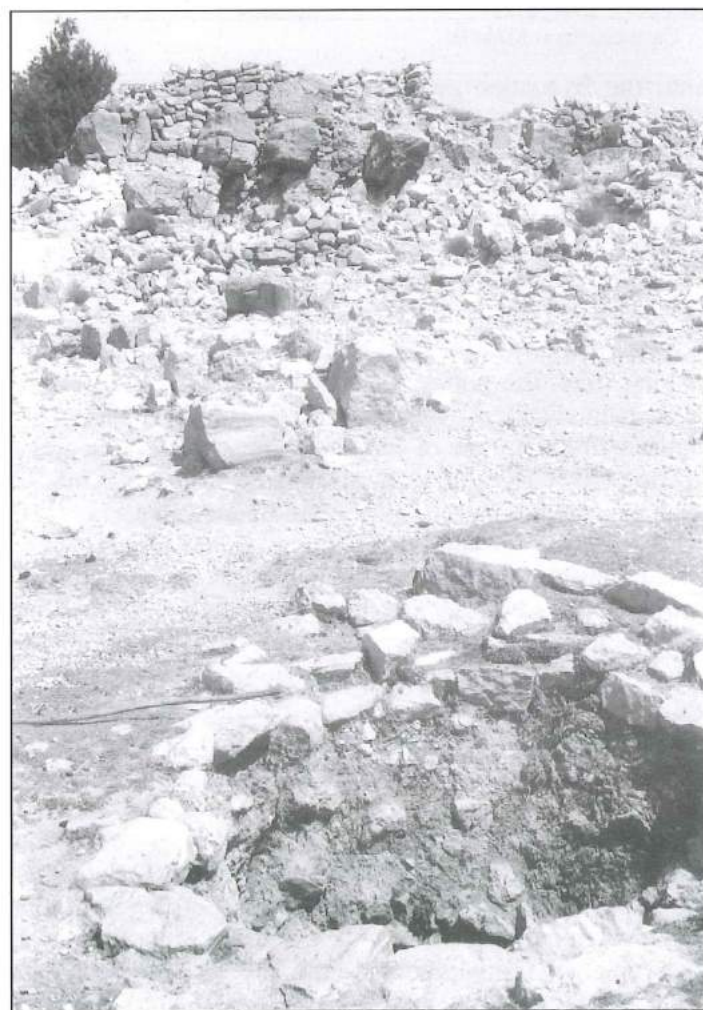
Lindner, Knauf and Zeitler (1996: 111-136).

attests to strong ties between Kutla II and other Edomite places. An example is the cooperation between strongholds "in the rocks" with agricultural "plateau settlements". The Edomite occupation of Jabal aş-Şaffāḥa reflects the increased demand for agricultural products and meat, mostly of goats, in and around the seventh century BC probably initiated by the Assyrian over-lords.⁴ If there was some kind of habitation during the gap between the seventh/sixth century BC and the first/second century AD, the tribes left no archaeologically utilizable items.

In contrast to the apparently consequent and continuous Edomite occupation, the settling in the Nabataean to Byzantine periods was highly discontinuous. Again, but this time not so surprisingly as some 700 years before, the first Nabataean-Roman settlement turns up as a project fully developed in all respects: terrace-based agriculture and horticulture, architecture, water-supply and pottery. Of course, one could freely draw from the potential of the floruit of Nabataea, though the experience acquired in the sandstone area was of little avail on the limestone plateau. The use of cave cisterns had been demonstrated by the Edomites, who surely had also built the first terraces there.⁵ It seems Kutla H prospered a long time, but there is no proof that it survived till the Byzantine Period. In Daraj I there was only pottery of the Roman-Byzantine periods. When it was founded, Daraj II was already a well-established settlement. Kutla III belongs entirely to the Byzantine period. According to its surface pottery it was reoccupied more than 1000 years after the last Edomite broke his pot. The Early Islamic period left no recognisable traces on Jabal aş-Şaffāḥa. The two Late Islamic settlements are surprising in their seemingly sudden appearance together with agriculture, architecture and pottery. These are found, however, around Petra in the Crusader-Ayyubid (Late Islamic) periods, when villages "hidden, remote and defensible" e.g. Anajil, Rwaysdah, Naq'a II and others, were rebuilt or reoccupied during the Crusader suzerainty.⁶

Together with deforestation, agricultural leaching of the soil and attacks from neighbouring tribes or from nomads coming out of the desert, the latter not to be attested during a prospecting survey, the people on Jabal aş-Şaffāḥa were clearly prone to suffer from catastrophies of all kinds. What the visitor can see with his own eyes is the devastation caused by earthquakes and flash floods in all settlements. Ten severe earthquakes which might have affected Jabal aş-Şaffāḥa are reported for the years 130-748 AD.⁷ Just to show the earthquake frequency in the

region from the eighth to the eighteenth century, al-Karak and ash-Shawbak were hit seven times, according to Russell seven times from the second century to 757 AD, including Petra the most. (Russell 1985: 37-59). More and more substantiated information about earthquakes in the Greater Petra region were recently collected by S.G. Schmid (1997: 413-420). Among the main causes of settling fluctuation, changes of the climate with continuous dry seasons have to be considered. The fifth century BC in the region was allegedly relatively humid, yet the following centuries were somewhat dryer. There was allegedly more rain in the first centuries of the Christian era, and less rain from the third to the sixth century with the seventh century even worse (Shehadeh 1985: 25-37).⁸ It is easy to see how an area like the aş-Şaffāḥa



8. Well below the house walls of Late Islamic Kutla I.

⁴ Cf. Lindner and Knauf (1997: 361- 364).

⁵ Christopherson, Guertin and Borstadt (1996: 27).

⁶ Lindner "Hidden, Remote and Defensible - Late Islamic Villages in the Petra Region" (in preparation).

⁷ Amiran (1950-51: 223-226; idem 1952: 48-65); Kallner-Amiran (1959: 225-748); Hammond (1965 225-748); Hammond (1975: 5-29;

idem 1980: 65-67); Ghawaneh (1985: 315; 1992: 53-60).

⁸ According to Burton MacDonald (this volume), colder and more humid conditions prevailed during the Nabataean to Early Islamic periods, as proven by studies on isotopes from wood, the occurrence of widespread silts and the level of the Dead Sea.

slopes, marginal by nature, suffered from even slight changes of the annual rainfall not to be foreseen by any means.

Dry periods were likely to be accompanied by epidemics, mostly bubonic plague. In Syria, again to show what might have happened in the aş-Şaffāḥa area between the seventh century BC and the twelfth century AD, plagues occurred from 1347 to 1491 every two or three years. Plagues of locusts were a terrible danger for crops, trees and gardens (Ghawanmeh 1985: 315).

Lastly, no settlement on Jabal aş-Şaffāḥa as in other remote places was viable without trade connections with the political and market centres of the area. Economic depressions affected life in the settlements as much as other catastrophies. The fate of Ṭawilān and Buṣayra was surely felt in Edomite Kutla II, and prosperity or crisis at Nabataean-Roman-Byzantine Petra influenced the slope of Jabal aş-Şaffāḥa. Whether things went well or badly at ash-Shawbak or al-Karak during the Late Islamic period might have meant life or death for the settlements on the mountainside. On the other hand living in villages "remote, hidden and defensive" was sometimes and for limited periods of advantage in turbulent times. In other words: Life on Jabal aş-Şaffāḥa can be seen as a mirror reflecting natural, political and economic changes of the surrounding area of north-west Arabia over nearly 2000 years. As the chronology of the settlements is only based on prospective surveys and surface pottery, it will be a future task to precisely connect the settling fluctuation on the mountainside with over-all changes and catastrophies in the region.

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9. Arable land around Kutle I.

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