CCIDENT & ORIENT

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The Institute 2002/2003: Some remarks on the current situation in the Middle East

Since the publication of our last Newsletter in November 2002 the overall political situation in the Middle East has become worse and, from my point of view, it will take a miracle to find a diplomatic solution to avert a war in Iraq. In some way the same seems to be true for getting the peace process back on track in Palestine. The cycle of violence is running out of control and the suffering of innocent people is growing continuously.

As I write these words, it is just possible that within a few days or weeks some of the most important archaeological sites in Iraq, belonging to Christian, Jewish and Muslim traditions could find themselves in the midst of a high-tech modern war. Remains from Sumerian, Akkadian, Babylonian, Assyrian and Islamic eras are under serious threat and many of the "masterpieces" that may be fortunate enough to survive a war, will appear on the international antiquities market. In any case – they are lost.



Fig. 1: Dr. Susanne Kerner reading pottery from Hujayrat al-Ghuzlan at the Institute

This sad state of affairs has its impact far beyond the political level and it affects the general atmosphere of relations between people and communities in the region. Nevertheless we all hope that, despite the anger and frustration, peace and mutual understanding between all parties will finally be achieved. Each one of us should try to contribute to this for the benefit of all of us who work and live in the region.



Fig. 2: Guests from Jerusalem: Provost Reyer and his wife having lunch at the Institute

Since November 2002, our Institute (DEI) has been involved in a variety of scientific activities. Amongst others, several articles giving the results of our first campaign in Tell Johfiyeh have been prepared for publication. Furthermore, negotiations concerning our second campaign were successfully brought to a close. Thanks to the financial and logistic support confirmed by the administrative board of our Institute (DEI) and the Institute of Archaeology and Anthropology (IAA), Yarmouk University Irbid, we are now able to start the preparations for another three week campaign in

late spring 2003. The main subject of this years research at Tell Johfiveh will be a deep sounding aiming at clarifying the stratigraphy and the pottery sequence. We are also planning to continue our work on the plateau of the site to gain more information about the architecture and general structure of the site.

Pottery reading and research on the Hujayrat al-Ghuzlan material (2002 season) was carried out in the Institute (DEI) by Dr. Susanne Kerner (German Archaeological Institute, Berlin) during late January and February 2003.

Among our guests (see "fellows in residence and visitors") during that time, who did find their way to Amman despite the current political situation, have been Prof. Dr. R. Eichmann (DAI, Berlin), Provost M. Rever and his wife (Jerusalem), B. Lucke (University of Cottbus), Prof. Dr. P.-K. Schuster (State Museum. Berlin), Prof. Dr. G. Schauerte (State Museum, Berlin) and Prof. Dr. B. Salie (Museum of the Ancient Near East. Berlin).

Assyria under Threat

By: Arnulf Hausleiter, CNI Copenhagen University (Denmark)

Through the construction of a new dam on the river Tigris, a core area of Mesopotamian civilisation, risks being inundated by the waters of the future reservoir. Among the sites threatened are the cities of Assur and Kar-Tukulti-Ninurta which are very significant for Assyrian cultural history. Numerous other sites are also located in the area. Some of them are being excavated by Iraqi archaeologists and are producing important results, but the majority so far remain unexplored. The same is true of the archaeological landscape of the future reservoir area. A look at the available archaeological and textual information underlines the great importance of this particular region for the history of Northern Mesopotamia and at the same time confirms that there are still many open questions.

In discussing the archaeological landscape of the Assyrian heartland in Northern Iraq, it has to be stated that not much is known about it. Regional investigations and the research activities of recent years have concentrated mainly on adjacent areas. In Syria there was the systematic exploration of the Khabur region, followed by numerous surveys elsewhere in the country. The areas next to the Balikh river and the Upper Syrian and Lower Turkish Euphrates were studied subsequently (Wilkinson 2000, 223). These surface reconnaissance operations were and are constantly accompanied by the exploration of archaeological sites by means of excavation. At present, the northern edge of Assyria is the object of salvage excavations (e.g. Matney et al. 2002) whereas in the southern periphery, in the Haditha area of Iraq, this had been the case some 20 years ago.

By contrast, the Assyrian heartland, a triangular-shaped region around the cities of Assur. Arba'il and Nineveh, was one of the areas of Mesopotamia in which the exploration of the Ancient Near East started in the mid 19th century AD. A.H. Layard, P.E. Botta, H. Rawlinson, H. Rassam, to mention only a few, concentrated all their efforts on investigations in the Assyrian cities of Nimrud, Nineveh and Khorsabad (Larsen 1996). Although the site of Assur had been rediscovered by J.C. Rich in 1821, systematic large scale excavations there did not start until 1903, that is 100 years ago (Koldewey 1903, 18). The aims of the mid 19th century investigations were certainly quite different from modern archaeological exploration. Research on a regional level and on settlement systems within a defined geographical area had not been applied yet. Later, during the 20th century, some smaller sites were excavated as well: Qasr Shemamuk/Kilizu, Tell Billa, Tell Rimah, Tell Tava and Balawat (Anastasio 1995). Several sites

in the Fatha region were also studied (Ibrahim 1972).

The idea of the regional research concept of an area can be recognised in the investigations of M. el-Amin and M.E.L. Mallowan in the Makhmur Plain, east of the Tigris river, during the late 1940's, even though only archaeological excavations of sites and not a systematic surface survey were carried out. Much earlier, in 1913/1914, W. Bachmann had visited some sites in the area but did not publish his notes (Dittmann 1995). El-Amin and Mallowan opened soundings on three sites (Tell Agrah, Tell Ibrahim Bavis/Eski Mahmur and Kaula Kandal) and site plans and selected pottery sherds were published (el-Amin and Mallowan 1949, 1950), Contrary to other regions investigated at a later stage, there was no imminent threat by the construction of a dam.

More recently, pre-Islamic settlements of the Jazira, with a special focus on the Parthian period, have been the object of a publication combining various survey data from the area west of the Tigris (Ibrahim 1986). The late 1980's saw another attempt towards a systematic approach of the exploration of the Makhmur Plain. Some 60 sites and several canals, supposedly of Middle Assyrian date, were identified (Dittmann 1995), adding information to the maps of the Atlas of ar-

chaeological sites in Iraq (DGA 1970). At about the same time, the North Jazira Project North-West of the river Tigris (Wilkinson and Tucker 1995) and the archaeological exploration of the Eski-Mosul area came to an end. This extremely productive period of archaeological investigations also saw new excavations at the sites of Nineveh. Nimrud and Assur. At the first two sites surface surveys were carried out, while the site of Assur was subject of a geophysical survey (Becker 1991). Unfortunately, these promising activities were interrupted by the 1991 war.

Iraqi archaeologists, however, resumed their activities as soon as conditions allowed and for the last few years the number of archaeological expeditions from foreign countries actively working in Iraq, such as Austria, France, Italy, Japan and Germany, has increased.

Subsequently in 2001 and 2002, two international conferences on Ancient Near Eastern Studies were organized in Baghdad that were attended by a large number of scholars and reported on by the national and international media. Most recently, two high quality volumes of the archaeological journal Sumer have been issued.

The site of Assur is certainly in the centre of public and scholarly interest when the Makhool dam is discussed. The Iraqi authorities are evaluating the construction of a retaining system in order to protect the site from flooding and infiltration from the reservoir. Furthermore, ongoing investigations by the Iraqi State Board of Antiquities and Heritage in the future reservoir area are looking at numerous sites and not only at remains from the Assyrian periods. It is known that there are attested archaeological traces from the prehistoric times up to the rise of Islam and thereafter. In addition. textual sources provide much relevant data on the historical topography of the region. However, although there is some general information it is hardly possible to write a comprehensive history of settlement in the area based on the data presently available.

Archaeological excavations, surveys and the application of remote sensing techniques will help to gather as much information as possible in order to rescue one of the core areas of Mesopotamia for future investigations into its palaeoenvironmental and human history through the millennia. Such investigations will shed a new light on the region itself and will also contribute to a better understanding of the relationship between this particular zone and adjacent regions, such as Babylonia, Syria, Anatolia and NW-Iran.

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The Polis of Kanatha: Hellenisation and Romanisation in Late First Century BC.

By: Klaus Stefan Freyberger, German Archaeological Institute (DAI), Rome (Italy)

Introduction

Location

The black basalt buildings and the charming, archaic sculptures of ancient Kanatha, which is identified with the present-day Druze village of Qanawat, still excite the interest of many travellers, artists and scholars. The site lays 7 km north-east of the district capital of Soueida, the ancient Dionysias-Soada, and 85 km south-east of Damascus. It stands on the north-western of the volcanic basalt massive of Diebel el-Arab at about 1200 m above sea level. Since ancient times the site has been a desirable place for settlement because of its rich water sources: there are numerous springs in the southern suburb of the city. A sophisticated canalization system, which ran from the south. west and eastern hills toward the north, brought the water to the valley, where it was stored. It was the water supply system that led to the name of the site. The ancient name Kanatha, of Aramaic origin, means canalization, as does the Arabic meaning of the present-day name, Qanawat



The history of ancient Kanatha during the Hellenistic period is largely unknown. Archaeologically, however, the site is understandable from the 1st century BC onwards. It had become part of the province of Syria, which was established by Pompey in the year 63 BC. Shortly thereafter. Kanatha was the only one of the numerous settlements of the Auranities, the present-day region of Djebel el-Arab, to receive the status of polis. It kept this status during the early imperial period. During the rule of Severan Caesars, in the 3rd century AD, the city flourished again as the seat of a bishop and in Byzantine times, Kanatha remained the leading city in the region until the 7th century AD.

Structure of ancient Kanatha

Like today's Qanawat, the ancient site stretched along a north-south slope, limited by the Wadi Qanawat to the west and by the slopes of Djebel el-Arab to the east.

The area of the ancient settlement, which lies on a high plateau, is of modest dimension. The whole city covers 160,000 sgm and is 730 m

long and 220 m wide. Its unusual shape, a long, narrow rectangle, was presumably due to the location of the ancient buildings on the slope alongside the Wadi, which provided a direct water supply to the settlement. Three main axes essentially determined the layout of the ancient streets. An east-west street. which still exists to-

day, divided Kanatha into two sec-

tors: the upper city with its sacred enclosures occupied the southern sector, while the northern sector was occupied by the lower city, which was primarily residential. Parallel to this main axis, there was a second street further to the south that ran straight from the ancient southwest gate to a monumental square in the upper city. A third street led from this square alongside the western slope of the Wadi towards the city centre in the north. Around the crossroads of the two main streets there were public baths and other secular community buildings, which were used for the entertainment and business of the city inhabitants. On the eastern slope of the Wadi, that is the other side of the city, there were two further buildings: a Nymphaeum connected by water canalization to a small Odeon hewn in the rocky slope 70 m further to the north.

Necropolises surrounded the city on all four sides, but there is a particularly large concentration of tombs on the north side. In the southern part of the city there are walls with the towers that formed the enclosure of the sanctuaries. They were not part of a city wall, nor indeed is there any evidence that the city ever had one.

History of the research

The monumental buildings, which still give the site today its individual character, have been a subject of scholarly study since the 19th century. The focus of this earlier research was primarily on the architecture of the principle ruins, but extensive studies on the development of the urbanism at the site were lacking. For this reason, a project was planned in 1997, between the Syrian Department of Antiquities and the German Archaeological In-

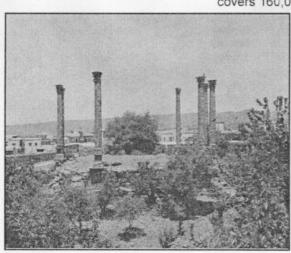


Fig. 1: Qanawat, "Peripteral Temple", view from south

stitute in Damascus. The aim of the project was to gain information about the urban organization and the way of life of the inhabitants of ancient Kanatha.

Our particular concern was the investigation of the site during the late Hellenistic and the early imperial period, which extends from the second half of the 1st century BC until the first half of the 1st century AD. There are very few archaeological findings from earlier times. Generally, the traditional buildings of the Hellenistic period in this region consist of great basalt boulders that are found in some tombs in Kanatha and in buildings on the acropolis in Mafali, which lies only 3 km to the northeast of Kanatha. Buildings that show local forms alongside typical Hellenistic-Roman elements, in the elaboration of the stones and the selection and execution of the ornaments, did not appear before the middle of the 1st century BC. Buildings in which the co-existence of local and foreign elements is evident are mainly of religious function (temples). The process of the inclusion of foreign models and their adaptation to local requirements and realities resulted in the creation of individually conceived structures and sculptures that illustrate a radical change of form against the background of traditional buildings of roughly hewn basalt stones. In light of this discovery it is appropriate to investigate the conditions and requirements of the period in which such luxury buildings were planned and executed. What kind of person would initiate and finance the construction of costly sanctuaries and other public edifices? What circumstances compelled the inhabitants of Kanatha to invest their city with an entirely new quality of architecture?

The Early Imperial Period

The sanctuary with the Peripteral Temple: Construction and structure.

The archaeological evidence can help to answer the questions above.

A particularly useful example is the sanctuary with the so-called 'Peripteral Temple', which lies just outside the ancient settlement. Its remains are well preserved since they lie in a garden area that has been largely spared from modern housing developments. The complex rises up on a high terrace overlooking the slopes of Diebel el-Arab to the east and with a view to the west over the plain of the Hauran. In this direction. the trapezoid form of the enclosure reduces to a spur, within which the temple stands on a high podium. The precinct walls are partially visible above the present day terrain.

The temple was encircled by columns and from the decoration it can be dated back to the first third of the 3rd century AD.

It seems, however, that the whole complex is in fact older. Evidence to support this theory lays in the preserved parts of the precinct and the 1st century BC Doric capitals belonging to the portal of the eastern pide of the precinct.

side of the precinct. Further evidence of an earlier phase came with another discovery during our excavation campaign in the spring of 2000. We found architectural elements in the stone walls of the neighbouring orchards that were evidently different from the corresponding elements of the temple of the 3rd century AD, be it on stylistic or dimensional grounds. Judging by their forms, the pieces found in the orchard walls are to be dated to the last third of the 1st century BC and are thus attributable to an earlier structure in this sanctuary.

Where was this building located within the area of the precinct? The preserved parts of the temple provide the answer. The fine masonry of the podium and the reliefs of heads with garlands on the steps designate the podium and substructure as a building from the early im-

perial period which can therefore be identified as part of the earlier structure. In the 3rd century the new building was erected on the almost intact podium of the earlier edifice.

The inscription from the frieze

Another part of the older building, a piece of the frieze made from two blocks, was found directly in front of the lowest step of the podium on the front side of the temple. The centre of this piece of frieze carries a Greek dedicatory inscription sculptured in high relief, flanked by two small, framed fields. Each of

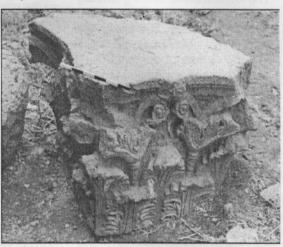


Fig. 2: Qanawat, "Peripteral Temple", Corinthian capital, late 1st century B.C.

these contains a large multi-foliate rosette which, in turn, contains the head of a lion. The style of the sculptures and the form of the inscription support a dating of the frieze to the late 1st century BC. According to the text a member of the council, whose name is Philippos son of Alexendros, his wife Naseathe and his son Alexendros erected the vestibule of the temple and dedicated it to the god of Rabbos.

The founders of the building were local dignitaries, the father of the family being a council member. This kind of office existed only in cities, never in villages, thus we can infer that Kanatha enjoyed the status of a *polis* (city) at the time of the engraving of the inscription. It is the

oldest epigraphic evidence known from southern Syria, and with the help of the archaeological context, it can be dated back to the late 1st century BC. The inscription designates a local divinity, the god of Rabbos, as the protecting patron of the temple. According to other dedicatory inscriptions from Kanatha, this Rabbos is identified with Theandros of Rabbos. The proper name in the genitive form, 'of Rabbos', means the name of a place or a region.

The process of the Hellenisation

The founder of the building formally demonstrates his leaning toward Hellenistic culture. The text of the inscription is not Aramaic but Greek and the names of the local founders, Philippos and Alexendros, recall the most important rulers of the Macedonian royal house. The designation as council member identifies the father of the family as an official of the polis. Whether the title was purely an honorific or whether he functioned as of a member of the city council, is, in this case, of secondary significance. Considerably more important is the fact that the local dignitaries identified themselves as members of a polis through the word, the writing and the image



Fig. 3: Qanawat, "Peripteral Temple", entablature, late 1st century B.C.

The political setting

What were the motives for the engaging in the process of Hellenisation in Kanatha during the second half of the 1st century BC? The answer, in my opinion, is to be found in the political setting of the time. As already mentioned above, Kanatha received the status of polis shortly after the founding of the Province of Syria in the year 63 BC. Presumably this event took place during the governorship of Aulus Gabinius in Syria between 55 and 53 BC. There are coins from Kanatha that bear the legend 'Gabina Canatha', dated to the middle imperial period. The indication of the year on these coins relate to the era of Pompey. The name, Gabina Canatha, was not only a designation of honour but also the official name of the city. The privilege of the status of polis had been a considerable honour for Kanatha, especially since almost no other towns in southern Svria enjoyed that status in the late Hellenistic period. The new political and social position of Kanatha, presumably also including economic prosperity, brought about a change to the sense of identity of the native community. They were quick to demonstrate their affiliation to the Greco-Roman

It was the new order of the Province of Syria, installed by Pompey, which initiated the process of Hellenisation in this region. The cities, which enjoyed the status of

polis at that time, profited from the designation and thus they embraced the new conditions in a positive way. This is reflected in the use of the Pompeian era that started in the year 63 BC. The process of Hellenisation spread out beyond the cities into the surrounding villages. This process is clearly demonstrated

by the monumental buildings of Kanatha and Sia, which motivated the inhabitants of the nearby villages to erect monumental buildings, temples in particular, of their own.

One such building was the temple of Soueida, whose architectural and

ornamented forms are closely comparable to those of the sacred building of Sia. The same holds true for the temples of Selaima and Mushennef, modelled on the monuments of Kanatha. Contrary to buildings in cities, monuments in villages were of modest dimensions. Nevertheless, they were elegant edifices. reflecting the ambition of their founders to valorise their villages with buildings of "urban" quality. Under the political influence of the fading Roman Republic, the local communities in the region developed a new sense of identity that was highlighted in the new monumental buildings and sculptures. They wanted to define themselves anew by enhancing the traditional appearance of their towns and cities by adopting the stylistic and technical standards of the Mediterranean world. This resulted in the flowering of a wealth of late Hellenistic forms in the 40's and 50's BC. The evidence for this is clearly visible in the buildings of the upper city of Kanatha.

Shortly after the establishment of the principate, the provinces were increasingly romanised. This process was also reflected in the design of monuments and sculptures. During this period there was a shift of stylistic influence that can be clearly seen when comparing the ornaments of the two buildings of the Peripteral Temple at Kanatha. Roman forms, which later on became a norm, replaced the Hellenistic ones.

The reasons that induced Rome to bestow the status of polis on Kanatha are not known. It might have been in the interest of Rome to bind the city militarily closer to the empire as a loyal partisan of Rome. The archers of Kanatha, who are known from inscriptions, were of great usefulness to the Roman army as well as to the city of Kanatha itself. Kanatha held an important strategic position in this area as a checkpoint on the northern border of the Nabataean kingdom and it controlled significant resources, especially since it was in a position to recruit auxiliary cohorts from its own people. It may also have been a checkpoint in the hinterland of the eastern Limes in this region. The city, as a large agricultural hub and a significant trading centre in the Hauran, controlled an extensive territory of 25 km in diameter, equalling those of Damascus, Samaria and Sebaste.

Whatever the reasons might have been, Kanatha and the surrounding region profited from the Roman new order that came with the foundation of the Province of Syria. The growing prosperity is manifested in the archaeological evidence.

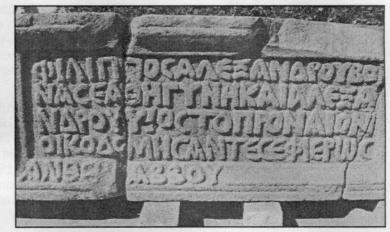


Fig. 4: Qanawat, "Peripteral Temple", frieze with Greek inscription, late 1st century B.C.

The Archaeology of North-Western Arabia: Recent Perspectives

By: Jean-Francois Salles, CNRS (Director of Research), IFPO (Institut Français du Proche-Orient), Department of Archaeology and Ancient History, Amman Branch (Jordan)

For more than 25 years French archaeologists, often in association with European colleagues, have been exploring and excavating the ancient past of the Arabian peninsula. A bibliography of these works would list hundreds of papers and publications, which is out of the scope of this note. However, the focus of the research has been, geographically speaking, concentrated on the margins of the peninsula; Yemen in the south and the Arabian Gulf from the Sultanate of Oman up to Kuwait in the east. There had never been any thorough investigation in the Kingdom of Saudi Arabia.

Things have changed recently and there is renewed interest in Arabia by French scholars, evidenced for instance in the recent translation and commentary of Charles M. Doughty's Travels in Arabia Deserta (Reverdy 2002). Also, more importance is being given now by some French archaeological institutions to a closer collaboration with the Department (Deputy Ministry) of Archaeology and Museums of Saudi Arabia and with the Department of Archaeology and Museology of the

King Saud University in Rivadh. Although a true friendship has long since been established with Saudi archaeologists, through meetings and conferences in Europe or in the Middle East, the starting point for the new policy was a French governmental mission to Riyadh in 1995. It included the director of the French Institute of Archaeology in the Near East (IFAPO), the director of the Maison de l'Orient Méditerranéen in Lyon, a delegate of the French Institute of Archaeology in Cairo (IFAO), the director of the Institute of Research on the Arab Aix-en-Provence World in (IREMAM) and an official of the Ministry of Universities. A few projects and short-term operations resulted from the meeting of this group with the Saudi authorities, as well as many reciprocal visits. The new generation of learned Saudi officials, professors and young archaeologists has recently accelerated the process of collaboration within the framework of an opening up of the kingdom.

Two scientific meetings were organized in Lyon in 1996 and 1998,

associating Saudi, European and American scholars: the focus of each of the seminars was the archaeology and ancient history of north-western Arabia, and some of the contributions were published as "dossiers" in the journal *Topoi*, ("Dossier" 1996, 1999). One century or so after the pioneering works

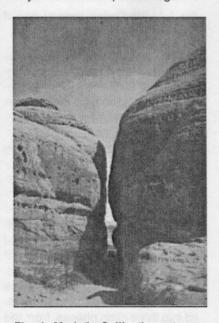


Fig. 1: Meda'in Salih: the entrance (siq) to the sacred place (Jebel Ithlib)

by Fathers Jaussen and Savignac (Sartre 1996) the objective was to assess, or at least try to assess, the past of the region in the historical period. New explorations by Western scholars took place in the Hijaz from the 1960's to the 1980's, while new surveys and excavations were carried out by the Saudi Department of Antiquities and regularly published in the journal Atlal and through Saudi publications (e.g. Abu Duruk 1986 and Nasif 1988). It might appear too early to attempt an historical and archaeological synthesis of all these recent data, dispersed as they are and often partial - many collections still remain unpublished, see for example the carnets Philby and the carnets Milik under study but new and rather valuable insights have been provided on al-'Ula, for example, and on the Lihyanite state.

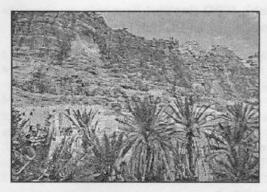


Fig. 2: Al-'Ula/Dedan, general view of the oasis

In 1999, a major French thesis was submitted on "Dédan et ses inscriptions. Recherches sur la lanque et la chronologie d'une oasis de l'Arabie du nord-ouest aux époques perse et hellénistique" (Dr. Saba Faris-Drappeau, University Aix en-Provence). Beyond a thorough linguistic and philological examination of the Dedanite and Lihyanite inscriptions from al-'Ula and its surroundings, the author proposed a completely new and rational classification of this large corpus of data which is usually referred to rather erratically; and also a precise chronology of the inscriptions divided into three main phases, from the 8th to the 3rd/2nd centuries BC. She

also provided a new understanding of the political, economic and social life of the inhabitants of the oasis. This work, which is almost ready for publication, will be a significant contribution to the history of the region.

Some other projects on al-'Ula are in preparation, in collaboration with Saudi archaeologists and historians, and also the Department of Archaeology of the King Saud University is ready to resume research on the site (Al Ansary, A.R.; Abu al Hassan 2001).

Since 1996, a joint venture associating French, Jordanian and Saudi scholars has been carrying out intensive exploration of the Wadi Rum area, under the direction of Dr. Saba Faris-Drappeau and Dr. Fawzi Zayadine. Initially an epigraphic programme, which brought to light

more than 3000 new inscriptions, the project has now been extended to a detailed archaeological and anthropological survey of the different Wadis that mark an important stage in the migration of the tribes between inner Arabia and southern Jordan. Remains from the Neolithic period, from the phase of the "Arab kingdoms" (Qedar, Tha-

mud, Petra), possibly a small Roman fort, as well as ruins of the Islamic period were uncovered and are being studied by a team, which will continue its programme in the coming years. Preliminary reports

were published in various journals (ADAJ, Topoi, etc.). One important aspect of the programme is the training of Jordanian and Saudi archaeologists in French laboratories of the CNRS (Lyon, Paris-Nanterre, Tours), especially in the building and managing of Geographical Information Systems (GIS).

In 1997, Prof. Jean-Marie Dentzer (assisted by J.-P. Braun, architect) was asked by UNESCO to evaluate the archaeological potential of Meda'in Salih, the major Nabataean site of north-western Arabia. A significant collection of data was gathered on this occasion: photographs of the most important monuments, cartographic and topographic surveys, descriptions and drawings of many facade-tombs and rock shrines. These valuable records were greatly added to in 2001 during the first official campaign of a French-Saudi programme in Meda'in Salih, then supervised by J.-M. Dentzer: the data collected will be the basis of an archaeological atlas of the site, similar in its methods and aims to the one in preparation for Petra. There was another campaign in December 2002 under the supervision of proiect's new director Dr. Laila Nehmé. The preliminary results of the season include a systematic survey, to be continued, of Jebel Ithlib (the sacred place of Meda'in Salih). which brought to light several new Nabataean inscriptions; an archaeological and geophysical survey of the city wall and of the residential area, the "urban centre" of the site according to the archaeologists, both still to be completed; and the discovery and mapping of a number of necropolises composed of hundreds of rectangular rockcut tombs near Jebel Ithlib (L. Nehmé, pers. comm.). Both the 2001 and 2002 seasons are being published in forthcoming issues of Atlal in close collaboration with Sau-



Fig. 3: Head of a statue found at Khereibeh/al-'Ula, 3rd cent. BC. (Jaussen & Savignac, 1914, pl. XXVIII)

di archaeologists (H. Abu Al-Hassan, D. Al-Tahli).

These are some of the new perspectives of further archaeological research in north-western Arabia and South Jordan. Together with the results obtained during the past 25 years in eastern Arabia and in the Gulf area — as well as in Yemen for the languages and scripts, the Dedanite script being closely related to the south Arabian ones — it will certainly help to give a more vivid and comprehensive vision of the Arabian peninsula as a rather homogeneous, socio-economic and cultural complex.

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Tall Hujayrat al-Ghuzlan 2002

By: Klaus Schmidt, Ricardo Eichmann, Bernd Müller-Neuhof, German Archaeological Institute (DAI), Berlin (Germany) and Lutfi Khalil, Jordan University, Amman (Jordan)

The prehistoric site of Tall Hujayrat al-Ghuzlan is located on the northern edge of the modern town of Agaba, in the middle of the Wadi al-Yitim fan, close to the contemporary site of Tall al-Magass. There are plans to develop this area into a residential district (Fig. 1). Tall Hujayrat al-Ghuzlan and Tall-Magass are the oldest known permanent settlements in the direct vicinity of Agaba, dating to the transitional period from the Late Chalcolithic to the Early Bronze Age (4th millennium BC). The sites were first mentioned by the German scholar F. Frank (1934, 245, plan 27), In 1985 archaeological research was initiated by Lutfi Khalil at Tall al-Magass, and in 1990 he started a small-scale excavation at Tall Hujavrat al-Ghuzlan (Khalil 1987, 1988, 1992, 1995). Since 1998 archaeological research at both sites has been conducted by the joint German-Jordanian ASEYM project, beginning with an

intensive archaeological survey of Tall Hujayrat al-Ghuzlan and followed by a small scale excavation in 2000 (Brückner et al. 2002; Eichmann, Khalil 1998, 1999; Khalil, Eichmann 1999, 2001). The site was inhabited at the time when systematic copper metallurgy first appeared in southern Jordan, between 3900 and 3500 BC, according to a series of calibrated C14 dates.

The goal of the 2002 season was to excavate a large area of c. 650 sqm in order to investigate the layout of a section of the settlement (Khalil, Eichmann, Schmidt in preparation; Müller-Neuhof et al.

in press). The exposed structural remains consist of mudbrick architec-



Fig. 1: Sites dating to the 1st half of the 4th millennium in Egypt and southern Levant

ture and the rest of stone walls (Fig. 2). Large parts of the buildings were destroyed by an earthquake and a fire, the rooms filled with debris from upper storeys (including pieces of wooden roofbeams) and artifacts. No floor level has been reached until now. In the next field season of 2003 the excavated area will be enlarged by approximately another 650 sgm, the rooms will be excavated down to floor level, the earthquake damage will be analysed and remains of channels and dams in the vicinity of the Tall will be investigated. The analysis of the small finds has been and will continue to be carried out by several specialists, for lithic artifact (Dr. Thomas Hikade), pottery (Dr. Susanne Kerner), metallurgical remains (Dr. Andreas Hauptmann), floral remains (Dr. Reinder Neef), faunal remains (Prof. Norbert Benecke) and C14 dating (Dr. Joachim Görsdorf).

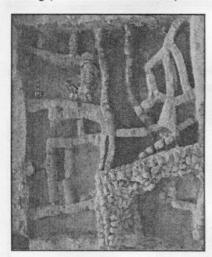


Fig. 2: Area D7 from the air

The architecture is characterized by a planned layout of several large buildings, mostly constructed with mudbrick walls. The northern part of the excavated area is characterized by a storage building, incorporating several smaller and larger compartments and built with at least two storeys. The pottery is generally of quite a coarse fabric, with chaff and mineral temper. Burnished wares are sparse, and polished or painted pottery is non-existent. Very rows of finger imprints is common.

Pottery shapes include plates, bowls and large jars, often with small handles or lugs. The rims are simple in profile. Few parallels for the pottery are known from Teleilat Ghassul or other sites of the central Jordanian Chalcolithic culture.

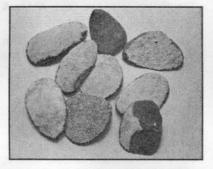


Fig. 3: Cortical flake tools

Large tabular flint implements with a cortical back are typical for the Chalcolithic and the Early Bronze Age in the Levant, although their function is yet unknown (Fig. 3). In Predynastic Egypt they are known only from Maadi, where they appear in great number and are regarded as an import from the East (Schmidt 1993). Sites with blanks for these fan scrapers are known in eastern Jordan (Deutsches Archäologisches Institut 2001, 684-685) and the Jafr basin (Quintero, Wilke, Rollefson 2002). The so-called twisted bladelets are common in both regions, however no bladelet cores have been found in Hujayrat al-Ghuzlan. The twisted bladelets discovered in Huiavrat were produced elsewhere in the southern Levant or perhaps in Egypt.

At Tall Hujayrat al-Ghuzlan ground stone artifacts such as mace heads, hammers and grinding stones are as common as stone vessels of different shapes. One dishlike fragment is decorated in geometric relief. Similar objects were noted in the ASYEM survey campaign 2000 in Wadi Yitim (site 244, Yitim A) and in Khirbet Rizqeh, which remains, until now, a unique ritual site in the desert east of Aqaba (Kirkbride 1969). At Rizqeh such vessels appear in great number. A fragment of an Egyptian basalt vessel was

found in the debris fill of building B at Tall Hujayrat al-Ghuzlan. Examples of similar vessels, so-called 'Libyan vases', made of basalt or other hard stone, are known, among others, from Maadi, a Predynastic settlement in Lower Egypt (Rizkana, Seeher 1988 pl. 107, 1; pl. XI, 11).

Pieces of copper ore and crucibles with traces of copper slag, as well as clay moulds, are important finds for identifying the settlement as a site involved in copper production (Fig. 4). Finds of copper artifacts have been quite rare so far, with only a few objects: an axe, some awls and a small copper ring found in 2002. Two types of clay moulds were found at Tall Hujayrat al-Ghuzlan, both are open moulds, one rectangular in shape, the other oval, Similarly shaped copper ingots with similar dimensions are known from Maadi (Rizkana, Seeher 1989 pl. 4, 9 -10). Future research, especially the analysis of copper objects found in Maadi and Hujayrat al-Ghuzlan, will help in proving whether these sites represent links in a chain that connects Near Eastern Chalcolithic cultures with the emerging Pharaonic civilization (Rizkana, Seeher 1989). The fragment of the above mentioned 'Libyan vase' is a hint of a reverse direction of trade with Egvpt.

Ornaments made of molluscs from the Red Sea were most pre-ferred in the southern Levant and in Egypt during this period and Tall Hujayrat al-Ghuzlan was a produc-tion site for these ornaments. It seems very probable therefore, that copper was

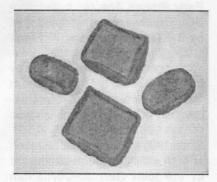


Fig. 4: Moulds for copper ingots

not the only valuable product made there, but bracelets from *Tridacna* and other shells, for example, as well. This is document-ed by various stages of the *chaîne opératoire* noted in the excavation material.

The largest part of the faunal remains (around 80 %) derives from domestic animals with sheep and goat being the dominant species. Domestic cattle were also identified. The presence of calf bones may indicate either that this species was actually raised in the area under investigation, or that young living animals were brought from other regions for slaughter at Tall Hujavrat al-Ghuzlan. The wild fauna is represented by onager, gazelle, ibex, deer and hare. Surprisingly, there were no remains of carnivores or fish. Molluscs were used only for ornaments, not for food.

Several flotation and drysieved soil samples were taken. Remains of tvpical desert plants were found, such as the bitter apple (Citrillus colocynthis), a cucumber-like plant. Hence, the climate and precipitation during the late Chalcolithic did not differ significantly from that of today (less than 50 mm). Most of the botanical remains preserved were carbonised but, due to the very low annual precipitation, some materials like the wood of tamarisk were preserved in an uncarbonised state as well. Cultivated plants are represented by barley, emmer, wheat and flax. Species of shrubs and trees include acacia, tamarisk, wild fig. Phoenician juniper and wild pistachio.

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Survival at Present-day Sabra

By: Manfred Lindner, Naturhistorische Gesellschaft Nürnberg (Germany)

The small oasis town of Sabra, some 6.5 km to the south-west of Petra, has been explored by the Naturhistorische Gesellschaft (NHG) Nürnberg since the 1960's. I finished my work there in 1990, there where I have spent many days and nights between steppe and desert, and I should like now to report on those events not usually published in scientific journals.

Early visitors like de Laborde. Brünnow, Forder, Kennedy, Horsfield and Glueck did not generally spend more than half a day at Sabra, and their accounts about what they had seen was correspondingly short, and not always what actually had been seen. As these daring men used to travel in summer, they suffered from the dry heat and sandstorms. Additionally, as late as the 1970's, the Bedouin of the Sabra region, mostly Sa'idiyin, were not especially friendly toward foreigners or even to Bedouin from other tribes. Later, the Department of Antiquities did not allow many people to do research at Sabra.

The early visitors already knew, or soon experienced, why they did not

want to stay long at Sabra. Similarly, later visitors were seriously endangered several times. This article reports on some accidents or near accidents during the years from 1978 to 1998.

Once a Liathne from Wadi Musa, who was contracted to work with us, came with a can of kerosene to Sabra. The danger from snakes is great here, he said, as he poured the stinking liquid around his tent. Fortunately, only on one occasion was a snake seen on the way up to the Early Bronze Age station Sabra N (Ras Dakhlallah) and it was killed instantly by the Bedouin. The thin snakes are feared by the Bedouin and were already feared by their ancient predecessors, as is clear from their petroglyphs.

When the Jordanian archaeologist Fawzi Zayadine jumped out of his tent at Sabra and shouted "Akrab, Akrab!", I sucked the tiny wound with my cracked lips, gave him a sedative, took one myself, and waited for my premature death whilst sleeping. The next morning, both the doctor and the archaeologist were unharmed. Apparently, Fawzi

Zayadine had not been stung but only pinched by the scorpion. We continued our excavation of a columned building between the spring and the temple without further mishap. We were friends already, since I had translated his dissertation on the rock architecture of Petra and had it included in my book about "Petra and the Kingdom of the Nabataeans".

An Austrian architect broke her wrist when she climbed down from the rock wall of Jebel el-Jathum. On a camel that had to be brought from Petra during the night, she was transported there the next day. With no other material available, the complicated fracture had to be put in a splint with an eagle's wing. Unfortunately, the injured lady refused to have her wrist treated, as strictly ordered, in the hospital in Amman, instead preferring to be treated by a Bedouin camel healer from Petra Consequently her wrist had later to be fractured anew in Austria.

One member of my group from the Naturhistorische Gesellschaft Nürnberg temporarily lost his eye sight due to a diabetic crisis at Sabra.

Donors to the Library



We would like to express our gratitude to the following institutions and persons who made donations to our library:

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Luckily, as a result of his speedy return to Petra, Amman and Germany, he was healed.

On another occasion, the only horse of the Bdul Bedouin Soliman, who accompanied us with his whole family to Sabra, needed to be treated. The family excursion threatened to destroy his horse and therefore

his only means of earning money in Petra. After eating an excess of green grass (unknown at Petra) the horse's belly had bloated enormously. The poor animal had, without a veterinary and without a troika forcefully to be kept in motion and to be fed laxatives all night long. while the women cried over the apparently threatening loss. The next morning, however, the horse's expected vulgar noises freed everybody from their sorrow.

There were no further mishaps at Sabra. We had learned our lesson and so avoided everything that could harm us (or the animals) during the following years at Sabra.

The Region of Gadara/Umm Qeis Project. The 2002 season: a test trench on Tell Zera'a

By: Karel Vriezen, Theological Faculty, University of Utrecht (Netherlands)

On Tell Zera'a, a conspicuous archaeological site located in the centre of the Wadi el-'Arab and 4.5 km south-west of Umm Qeis, there are traces of continuous habitation since the Bronze Age. As a focal point in the regional archaeology of the Gadara/Umm Qeis area, the tell and its surroundings were explored by a joint project. In autumn 2001 a large scale survey of the site was undertaken by a team from the Biblical Archaeological Institute, University of Wuppertal (Vieweger et al. 2002), followed by the excavation of a test trench carried out by a team from the Theological Faculty, University of Utrecht (Vriezen 2002).

In 2002 the work on the test trench was continued by a team from Ut-

Fig. 1: Part of the North and the East sections of the test trench

recht, from the 19th until the 31th of October. The trench was enlarged to 6.00 x 7.00 m, and was excavated to a depth of 4.72 m (that is, 22.54 m below sea level).

The trench is situated on the western edge of the top of the tell. On the surface three parallel walls are visible; in the excavation these appeared to contain ceramics from the Iron Age to the Early Islamic Period, but may have been constructed in more recent times. They are built as terrace walls. East of these and 0.3 m below the surface, an older terrace wall was found retaining soil with finds also dating from the Iron Age to the Early Islamic Period. The walls are built with field stones, except for some dressed

building stones in one of the latest of them.

In the enlargement of the trench excavated in 2002, the northern continuation of the loamy floor dating from the early Byzantine Period was found, together with the wall connected to it. Many tabun sherds were found on the floor.

Underneath the terrace walls and the Byzantine floor, there was an accu-

mulation of layers containing only Iron Age finds, the great majority dating from the Early Iron Age. This accumulation of soil covered three walls and their connecting floors belonging to a sequence of four Early Iron Age houses (Fig. 1). Connected to the upper and last wall, were two consecutive floors, 2 cm thick and grey in colour. The second wall is related to a 4 cm thick black floor. consisting mainly of ash. To the third and lowest wall, a 2 cm thick grey floor is related (Fig. 2) and, this wall is constructed on the lowest of the floors, again forming a 2 cm thick, light grey layer. Each of these walls is built of undressed stone blocks. with widths of between 0.65 m and 0.85 m. Each of the floors has ash pockets containing cooking pot sherds, indicating the existence of fire places and cooking activities.

The lowest floor covered a large pit, 3.20 m in diameter, filled with stone boulders and red-brown earth



Fig. 2: The lower Iron Age wall and connected floor

that cut into a thick layer of yellow loam. In and under this layer of loam, dark brown and bright yellow bricks were discerned that may be interpreted as tumble from mud brick walls. The structure of these brick walls could not yet be established; however one 0.90 m wide mud brick wall is visible in the south section of the trench (Fig. 3). Since finds from the Late Bronze Age increase in these lower levels,



Fig. 3: Mud brick wall in south section of the test trench

it would not be surprising if future excavations reveal these bricks to be of Late Bronze Age date.



Fig. 4: Chalice

At the end of this second campaign the following conclusions may be drawn (Fig. 4). In the test trench, under four terrace walls dating between Late Antique and modern times, there are the remains of two cultural periods: a floor of the Byzantine period and a sequence of four Early Iron Age houses. Underneath are the remains of mud brick walls, which may belong to the Late Bronze Age.

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The Abandonment of the Decapolis and the Question of Environmental Change – an Interdisciplinary Research Project

By: Bernhard Lucke, University of Cottbus (Germany)

The ruins of the Decapolis cities are famous and are important places for cultural tourism. They are well known because, not having been reused in later constructions, so many ancient buildings are preserv-

ed. This is due to the nearly complete abandonment of the Decapolis region for about 1000 years, which is remarkable because the area saw highly developed city life from the Early Bronze Age until the

10th century A. D. Although gaps in settlement activity had occurred, they were restricted to individual sites and were soon followed by resettlement, which makes the later total disappearance of city life guite curious.

The causes for this are not known, but environmental reasons may be implicated. Generalising, it can be said

that three theories exist: One believes political reasons to be responsible, whereas the two others see environmental changes to be the major causes for the population exodus. The first believes mismanagement to be the driving force, while the second postulates a medieval climatic change.

If there was a change of environment, this should be detectable in changes of land use patterns and in the soil. The combination of land use analysis and soil science provides much information about the environmental history. This approach is not new; it has been successful in the archaeology of Central Europe for the last 20 years. Although it was expected that certain adaptations to Mediterranean conditions would be needed, this ap-



Fig. 1: Abila: a general view

proach was considered transferable to the Decapolis region. A first attempt to do so was part of a Master's thesis, submitted in 2002 (Lucke 2002), focussing on the site of Abila. Abila was chosen because, so far, there has been only limited disturbance, while the settlement activity is quite well known (Fuller 1987, 1992) (Fig. 1).

This preliminary examination of the land use pattern and soils of the Decapolis city of Abila found that the soils on the agricultural plateau around the old city are too shallow to allow a direct transfer of methodology because, unlike in Central Europe, no buried soil surfaces are preserved that would allow a comparison of conditions. Furthermore, the old land use patterns could not be reconstructed. It seems that very little is known about the old land use, and the limited information

available so far (Geraty et al. 1989) was not applicable to Abila. Even the ploughing technique is not known. The long fields of Abila could point to the use of a heavy plough, which is also suggested by other findings (Kuhnen 1989), but the present information does not allow a conclusion as to how natural soil development would have changed through the land use (Fig. 2). Further research is necessary.

However, the soils derived from calcareous bedrock lend themselves to a pedogenetic argumentation. At present, the average depth of soil is around 60 cm, characterizing it as rendzina, whereas its red colour would normally suggest a terra rossa, which is about 1 m deep. The red colour, which emerges only after long and intensive weathering processes, is due to the clay mineral haematite. Therefore

terra rossas are considered as old soils, dating to the Tertiary or the Pluvials of the Ice Ages. It can be concluded that about 40 cm of soil have been lost since the fields came under cultivation, meaning that any traces of mismanagement devastating enough to have forced the abandonment of the site were no longer present. Additionally, natural reforestation was observed by Schuhmacher (1890), indicating that sufficient soil was present then to allow the growth of trees. This clearly speaks against Lowdermilks and Butzer's theory of bad land use (Lowdermilk 1944, Butzer 1978), as do newer historical investigations which found that the population consists of highly developed agriculturists (Watson 1981) (Fig. 3).

As far as the history of the Decapolis is known, political reasons for the abandonment of the whole region are not very probable. Abila was settled since the early Bronze Age and was quickly resettled when wars and earthquakes caused destruction. The final decline occurred when the Islamic empire was at its peak. Although a heavy earthquake and a series of plagues caused much destruction at the end of the Umayyad period, new cities were built in the Abbasid period, but were subsequently abandoned in the 10th century. Maybe the beginning of political unrest contributed to the abandonment, but it was not the first and worst unrest the region saw, and there were no earthquakes, wars or plagues when the cities became deserted. In contrast, the Mamluk period, characterised by unrest and corruption, saw the brief establishment of small towns in the ruins. These were deserted again soon after the Turkish conquest in the 16th century, even though the Turks tried to develop the region.

The shallowness of soils and the absence of permanent water-courses point to an agricultural system that was very vulnerable to droughts. Even today rainfall has a critical effect on the harvest. Although the results are only prelimi-



Fig. 2: The long fields of Abila, from the air

nary and nearly nothing is known about the ancient land use patterns and agricultural techniques, it seems that a variation in climate lasting about 100 years could have had sufficient impact to force the abandonment of the whole region.

In recent years, important progress has been made in climate research, but climate reconstruction is extremely difficult and the results are often contradictory. The most recent investigations found that short but intense droughts exactly match the time of abandonment. But coincidence alone does not prove causality.



Fig. 3: Abila: section showing shallowness of soils

A new research project has therefore been designed to investigate the impact of the proposed climatic changes. To achieve this it will be necessary to know more about the ancient land use and the genesis of soils in the area. It must not be forgotten that land use influences at least the local climate and can contribute greatly to the more or less devastating effects of a drought. This is also interesting with regard to present day development, because it is not known what will happen if a drought occurs again, whether it is caused by natural developments or the greenhouse ef-

Additionally, very little is known about the genesis of soils on calcareous rocks. Newer investigations

found that the red colour can develop under present climatic conditions, if the source rock has certain qualities. This point can be addressed by an examination of the source rock at Abila. Colour and texture differences in the area could indicate reforestation of some areas, while others were seemingly always used as fields. Furthermore, a soil has started to develop out of the debris in the ruins. This soil is grey, meaning that 1000 years of weathering have not been sufficient for the red colour to develop. On the other hand, a relic Bronze Age surface developed out of Early Bronze Age debris was red. This could mean that there was much more rain in the Bronze Age. And finally, the composition of mud bricks from Bronze Age was identical with that of the present agricultural surfaces. If this parallel can be proven for all mud brick remains, this implies that the Bronze Age agricultural conditions were similar to those of today.

To answer these questions satisfactorily, research in close cooperation with archaeologists, soil scientists, hydrologists, meteorologists and geologists is intended. Work will continue at the site of Abila, and also at another well-preserved Decapolis city and at Tell Zera'a, a more rural area, for comparison. For the future, it is hoped that the soil stratigraphy in excavations will be documented more regularly and soil samples are collected, because otherwise much information will be irrevocably lost. A stronger cooperation between archaeology and natural sciences could help to shed light on the environmental history and to predict future environmental scenarios and their impacts.

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Fellows in Residence and Visitors (November 2002 – February 2003)

- Mr. Bernhard Lucke, University of Cottbus (Germany)
- Provost Martin Reyer and wife, Jerusalem
- Dr. Susanne Kerner, Deutsches Archäologisches Institut (DAI), Berlin (Germany)
- Mrs. Christa Kuzbari, Deutsches Archäologisches Institut (DAI), Damaskus (Syria)
- Mrs. Barbara Nofal, Goethe Institute (GI), Damaskus (Syria)
- Mr. Holger Zahn, trainee at the German Technical Cooperation Office (GTZ), Amman (Jordan)
- Prof. Dr. Ricardo Eichmann, Deutsches Archäologisches Institut (DAI), Berlin (Germany)
- Mr. Bernd Müller-Neuhof, Deutsches Archäologisches Institut (DAI), Berlin (Germany)
- Dr. Arnulf Hausleiter, Copenhagen University, Copenhagen (Denmark)
- Dr. Konstantinos Politis, British Museum, London (Great Britain)
- Team members of the excavation in Tell Zera'a, conducted by Dr. Karel Vriezen, Utrecht University, (Netherlands)
- Dr. Hans-Dieter Bienert, Deutsche Forschungsgemeinschaft (DFG), Bonn (Germany)
- Prof. Dr. Günther Schauerte, State Museums, Berlin (Germany)
- Prof. Dr. Beate Salje, Museum of the Ancient Near East, Berlin (Germany)
- Prof. Dr. Peter-Klaus Schuster, State Museums, Berlin (Germany)
- Prof. Dr. Zeidan Kafafi, Yarmouk University, Irbid (Jordan)
- Dr. Mohammed Waheeb, Hashemite University, Zerqa (Jordan)
- Mrs. Elaine A. Myers, British School of Archaeology, Jerusalem

The Significance of Ba'ja for the Early Near Eastern Neolithic Research

By: Hans Georg K. Gebel, Free University of Berlin (Germany)

The Late Pre-Pottery Neolithic site of Ba'ja is known for its remote setting within the rugged sandstone formations north of Petra. (The site is designated as Ba'ja 1 in Gebel & Starck (1985) and Gebel (1986), and more recently as Ba'ia II (e.g. Bienert et al. (2002).) The immediate site area is called locally al-Mehmad. (For basic information on the site and its field research history see the references in Gebel & Hermansen (2001).) Until now, no other early sedentary community is known to

have chosen such a protected and hidden location, but we should expect more such settings, or sites having defensive structures in early Neolithic times. There has been much speculation as to why this choice was made. The hitherto unique evidence from southern Jordan clearly demands more than a pragmatic explanation. To mention just a few: environmental stress caused conflict between neighbouring late PPNB sites and as a result communities moved into more protected

settings; the wealth created by the production of luxury goods (the sandstone rings in the case of Ba'ja) required cutting oneself off from the outside world; or even, an unknown symbolic/psychological factor made the setting ritually attractive because it was only accessible through the "vagina-type of channel" of the *siq* (gorge).

Many of these ideas are problematic on their own, but the problem common to all such approaches is, that they are characterized by a single determinant cause. Our project today stresses that it was a combination of reasons that brought about the existence of Ba'ja in its remote location, all of which reflect significant elements and needs of early Near Eastern Neolithic complexity. Possibly this association of factors can be seen in a more pronounced way at Ba'ja than elsewhere. In this short contribution, I am only able to outline some of the more important considerations.



Fig. 1. Neolithic Ba'ja: A recent view of the site and its excavation areas

Throughout the western wing of the Fertile Crescent, and in many parts of the its east segment, the 9th and 8th millennia BC witnessed a series of regionally and temporarily diversified and confined complex developments that had not been seen before. These are often characterized by unmatched and even hypertrophic features elsewhere, but they share one common trend: dissolving heterarchical structures in its broadest terms. Many of the main ingredients of the processes of early sedentary life are to be seen in the archaeological evidence from Ba'ia: the formation of completely new types of spatial, ritual, and social territories and therefore new forms of identity; an interaction that was strongly promoted by competition and the rapid cognitive processes inherent in natural resources management, technological innovation. and the creation of new social and symbolic paradigms; patterns of differentiation at all levels of settled life that allowed for new economic adaptations and deficit management that would have previously been impossible.

Ba'ja flourished in an environmentally sensitive area soon after sedentary life arrived in the region half a millennium before, during the middle PPNB of the greater Petra area. Differing from the core areas of Near Eastern sedentary life, the potential reasons for the successful adaptation in the greater Petra area are visible because of the more disadvantageous environmental condi-

tions, so that any intensification of human activity would result in a more drastic change in the archaeological record. For example, the arrival of the so-called megasite phenomenon (to which Ba'ja belongs) (Gebel 2002b), which introduced new social and socio-economic patterns to the area, is clearly mirrored in the Beidha-to-Ba'ja transformations. While this line of

reasoning emphasizes that the narrow but diversified physiographic units of the greater Petra area make the region highly suitable for the study of environmental impact on the Neolithization processes, there are also other arguments more directly linked to the peculiarities of Ba'ja.

The problems associated with the development of early Neolithic territorialism are reflected at Ba'ja in a very condensed way. On one hand, the assumed migration of village populations from sites like Beidha into the naturally protected (but indefensible) setting of Ba'ja, illustrates the tendency for the creation of shielded environments at the end of the Pre-Pottery periods. (This pattern could occur much earlier in areas with a longer settlement history and a developing settlement pattern, e.g. in the Pre-Pottery Neolithic A Mediterranean/semiarid contact zones of Palestine.) Ba'ja exhibits physiographically what happened socially in the megasites such as es-Sifiya, 'Ain Jammam, Basta, 'Ain Ghazal, and others. Corporate organization

now shelters and governs the interests of the individual; kinship groups replace small families; an apparent differentiation in labour, subsistence, household and communal tasks, and in community governance which helps to strengthen these communities both socially and economically (Gebel 2002a,b). This development seems to have been the reaction to increasing conflicts between and within settlements during the late early Neolithic in the area. Fast-growing communities did not find the social answers to manage complexity and growth. Conflict may have been one of the reasons why these settlements collapsed by c. 6900 BC ("hiatus palestinien"). Ba'ia may prove to be a valuable resource in the area of Neolithic conflict studies

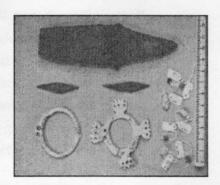


Fig. 2. Neolithic Ba'ja: Finds from a collective burial (2001 season)

On the other hand, the intrasite limitations of space at Ba'ja, surrounded by vertical rocks and deep gorges, also provide an excellent location for studying the human ethology of early Neolithic space. Unlike "open" settlements, the unmodifiable spatial restrictions at Ba'ia display spatial regulation in a much more obvious way. The "domestication" of vertical space (multi-storeyed houses), a social life steadily modifying ground plans, and symbolic behaviour supporting spatial interests are just some of this evidence at Ba'ia. The limited 1.2 - 1.5 hectare of dense housing areas on Ba'ia's intramontane basin offers the opportunity to excavate a late Pre-Pottery Neolithic site to a fuller extent and with a better understanding of its spatial framework than other sites. Resulting sound insights into the social structure of Ba'ja's population, which is currently estimated to have been around 600 inhabitants, can only have a regional and temporal relevance. However, these special conditions at Ba'ja allow for a more reliable analysis of early Neolithic social structure.

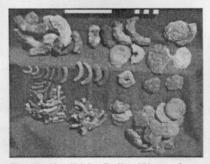


Fig. 3. Neolithic Ba'ja: Waste from sandstone ring workshops deposited in a rock cleft

A new and additional argument for Ba'ja's location comes from the *siq* bordering the southern edge of the site. Here are ideal conditions for collecting the run-off water that drains down from the vast eastern catchment area. Today, there is no spring nearby. Any potential springfed water source in an intact early

Neolithic soil and arboreal environment would have been located too far away and too difficult to reach for the daily needs of a community this size. If we overthrow the discretely used but unproven axiom that early Neolithic people did not build dams for water management and storage, and look at the favoured topographical and hydrological conditions below the settlement, we find a strong argument for the harvesting of rain water as contributing to the choice of settlement location The topic of water in Ba'ja may open another necessary discussion for a period that in other parts of the Near East (e.g. the Diezirah, northern Iraq) was followed by the first evidence of contour ditch irrigation.

Ba'ja's potential for further study into the process of Neolithization in the Near East is becoming clear, and it is finding its role in this research. It will help to contribute to a new understanding of Near Eastern Neolithization, which appears necessary after other recent exciting insights that were inconceivable before (e.g. the Göbekli interaction sphere, the Cyprus "colonization"). This short piece tried to emphasize a few new starting points for such discussion on behalf of Ba'ja.

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Excavations and Survey at Qal'at 'Unaiza, Jordan, May - June 2002

By: Andrew Petersen, Cardiff University/Center for British Research in the Levant, Amman (Jordan)

Qal'at 'Unaiza is located in southern Jordan, approximately midway between Wadi Hasa and Ma'an on the Desert Highway. The ruins of the fort stand a few hundred metres to the west of the road and are domi-nated by the volcanic outcrop of Ja-bal 'Unaiza ("little goat mountain") a kilometre further west.

I had always known there was something a bit odd about Qal'at

'Unaiza. When I first surveyed the site as part of my M.Phil thesis on Hajj forts it was the only fort that would not fit onto an A3 sheet when drawn at a scale of 1:100 (Petersen 1989, 2001). The building was notably bigger than the other forts and had a gateway that was set asymmetrically into the east face rather than in the centre. The other notable feature was a pile of ruins to the

west which I had assumed were somehow related to the Ottoman fort. I had these thoughts in mind many years later when I found the time and the funding to do more work on this fort as preparation for a monograph on the early Ottoman Hajj forts in Jordan. The other reason why I selected 'Unaiza for an intensive excavation and architectural survey was that, for a variety

of reasons, it appears to have been in use for a relatively short time (i.e. 1576 to circa 1830) and therefore would be of use in identifying a typical assemblage associated with the Ottoman Hajj.

As soon as we arrived at 'Unaiza it became apparent that much of the peculiarity of 'Unaiza was derived from the fact that it was built on the site of an earlier, probably Roman building. After we had carried out a series of trial trenches (A-E) and a detailed survey of the 16th century fort, it was clear that the Ottomans had not only built over an earlier building but that large parts of the standing fort originally formed part of the earlier building. Although this was a very interesting result, we recovered very little pottery or other finds from the trenches inside and immediately outside the fort. In response to this problem we decided to excavate a large ash tip to the north east of the fort which had large amounts of typically Ottoman material lying on the top (e.g. Tobacco pipe fragments, coffee cups etc). The excavation of a part of this mound, Trench F, provided a wide range of material (ceramics, textiles, metalwork, bone and glass) with no architecture suggesting that this was a refuse dump either for the fort, the Hajj caravan or both.

The results of this work are currently being analysed and a preliminary report will appear in Levant 35, 2003 with a final report forming part of the monograph on the Hajj forts.

In addition to the work on the 16th century Ottoman fort we also took an interest in the adjacent Hijaz railway station. The station was built sometime after 1904 when the railway reached as far as Ma'an and is still in use to service trains of the



Fig. 2: Qal'at 'Unaiza Trench B, looking east with earlier wall (Roman?) embedded in wall of 16th century Ottoman fortress

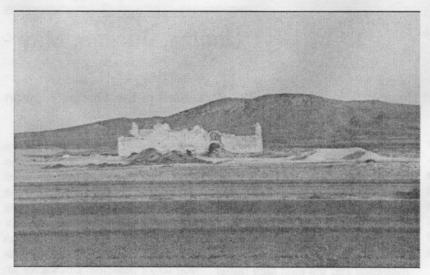


Fig. 1: Qal'at 'Unaiza from east, with Jabal Unaiza behind



Fig. 3: Ahmad Shurma standing next to gun slit inside 'Unaiza railway station fort

Jordan Potash Company. The station's importance was increased in 1916 when a branch line was built to Shaubak in order to exploit the woods in that area for use by the Hijaz railway. This line was closed a few years later and in 1924 the track was dismantled.

The present station is a complex of buildings comprising a station with signaling equipment, a fort, a large cistern and a repair shop. For our purposes the most interesting part of the complex was the railway fort which, in terms of function, has something in common with the 16th century Hajj fort. Like the earlier fort, it was built in a position overlooking a cistern guarding the water supply which is still the most valuable resource in this desert region.

The fort stands about three hundred metres from its 16th century predecessor and is a small rectangular structure (10 m x 15 m approx.) with a single entrance on the north side. The interior comprises a narrow rectangular courtyard flanked by two rooms (each approx. 8 m x 4 m) each of which has a number of splayed gun slits. A staircase in the courtyard leads up to the flat roof which is enclosed by a low parapet

(approx. 1 m high) also containing splayed gun slits.

Conclusion

This short field season produced a wealth of information which relates not only to the 16th century Haji fort but also to the evolution of the site through time. For the future it would be useful to find out the date and function of the earlier building. If, as seems likely, it is of Roman origin it would be interesting to examine its relationship with other structures of similar date in the same area, in particular the spectacular site of Dajanivva which stands seven kilometres to the north. This is a topic currently being investigated by George Findlater.

Acknowledgments

The team comprised Ahmad Shurma (Department of Antiquities Representative) and Pierre Brun (University College London). We are grateful for the support of the Barakat Trust (Oxford) and the Centre for British Research in the Levant (CBRL).

In Amman we were grateful for the support and assistance of the CBRL in particular Nadja Qaisi, who alerted us to the meaning of 'Unaiza, and Bill Finlayson for his hospitality.

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Ras Hamra: A Nabataean Sanctuary south of Petra

By: Ulrich Hübner, Institute of Biblical Archaeology, University of Kiel (Germany)

Ras Hamra is situated about 1 km south-southeast of Petra on the track through the Wadi ath-Thughra, which leads to Sabra and eventually onto Jabal Harun. Ras Hamra forms a small natural plateau, about 170 m long by 75 m wide at the most, its northern peak ending in an isolated, reddish rock 968 m above sea level; its Arabic name "Red Rock" comes from this conelike peak. From the plateau there is a good view over the surrounding mountains and Ras Sulaiman, which lies to the south just under 500 m away. To the north, the view extends past Petra, over al-Habis. Zibb Fira'un and az-Zantur to Umm Sahvun (Fig. 1).

The importance of Ras Hamra remained unrecognised for a long time, either because early descriptions were not based on personal visits, for example those of R. E. Brünnow and A. von Domaszewski, or were rather short and inaccurate, such as the description by G. Dal-

man. M. Lindner visited the site in October 1991, but did not publish any account of it. In September 2000 the author examined and surveyed the site in some detail (Hübner 2002) for the first time (Fig. 2).

In antiquity a 57.50 m x 57.50 m square arrangement was built on Ras Hamra. The slopes of the plateau were secured by strong supporting walls and water was stored in a cistern on the western slope.

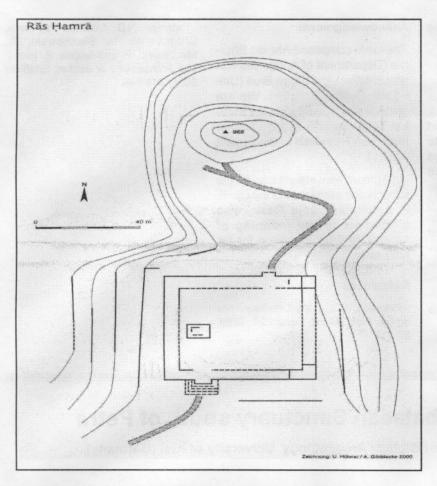
An entrance in the north, near the north-eastern corner and another in the south, near the south-western corner, lead into an open yard, which seems to have been mostly empty. Inside the square a one-storey peristyle hall, 5.20 m-5.50 m wide, ran along all

four sides. The order of the columns

is unknown. As far as can be seen from the surface remains, there were rooms at least in the north-eastern and the south-eastern corners. On the outside of the eastern and northern walls of the arrangement, and in the north gate, sand-stone tambours were used. These are reused parts of older buildings, and prove that there were renovations of the peristyle building, presumably under Roman rule.



Fig. 1: Ras Hamra from the south



Dating can only be based on the general structure of the site and its surface pottery because there are no inscriptions, statues or fragments of architectural ornaments. Based on these it seems that the site is unlikely to have been built before the middle of the 1st century BC or later than the 2nd century AD. The repairs of the peristyle indicate (re)usage in Roman times. Thus we can assume that it was built under Nabataean rule and later reused under Roman rule. To what extent the political changes in 106 AD affected the function of the building is unknown.

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Fig. 2: Map of Ras Hamra (U. Hübner / A. Göddecke 2001)

Although there is obviously only one building inside the peristyle hall, it was not situated in the centre, but was built on the axis near the western peristyle. This building is 7.70 m wide and 8.60 m long. The main façade with the entrance was on the narrow eastern edge. Based on the position and structure of the building, it may be presumed that it was a small temple, oriented to the west (Fig. 3). A more accurate identification of the type of the temple is not possible without excavation.

Merchants, visitors or pilgrims who came on the track to Petra from the 'Araba via Sabra, Abu Khusheiba or Naqb ar-Ruba'i or who wanted to leave Petra via the necropolis of ath-Thughra, for example towards the Jabal Harun, could stop on Ras Hamra to ask the god's blessings for his enterprise, while looking on or back to the city.



Fig. 3: The Temple of Ras Hamra from the northeast

The pottery found on the surface shows that the building was used mainly in Nabataean and Roman times, i.e. from about the middle of the 1st century BC until the beginning of the 2nd century AD and, with intervals, even into the 3rd / 4th century AD. A few sherds from Byzantine and Islamic times indicate only occasional visits to the place during these periods.

Working as a DAAD Lecturer at the University of Jordan in Amman

By: Martin Harfmann, University of Jordan, Amman (Jordan)

On September the 12th I arrived in Amman to start working as a DAAD lecturer for the University of Jordan. The DAAD lecturer in Jordan has three main duties:

- teaching German language and literature at the University of Jordan
- informing students and professors about scholarships the DAAD offers in Jordan
- providing Jordanians with general information about higher education in Germany

What is the DAAD?

DAAD stands for Deutscher Akademischer Austauschdienst, that is the "German Academic Exchange Service". In its capacity as a joint institution of Germany's higher education community, this organisation is responsible for promoting international academic co-operation, particularly by arranging the exchange of university members. In Jordan, the DAAD offers a variety of scholarships for students and scientists:

- research grants for doctoral candidates and young academics holding a Master's degree
- short-term scholarships for research stays for university academics and scientists as well as return invitations for former scholarship holders
- exchange programme for German and Jordan academics (only researchers from the University of Jordan and Yarmouk University are eligible)
- short-term scholarships for German language courses at Universities in Germany, lasting 3-4 weeks during the summer

As the deadline for the doctoral scholarships is at the end of Sep-

tember, I received a lot of applications for these grants in my first weeks here. Applications had to be checked and applicants had to be informed about the application requirements of this programme. Then the successful applicants were invited by the German Embassy to be interviewed by a commission in Amman. The commission is headed by the Cultural Attaché of the German Embassy and includes Jordanian professors and representatives of German institutions. It ranks the applicants, but the DAAD in Bonn makes the final decision as to who will receive support. Up to eight candidates will be sponsored.



Harfmann, M.: Working as a DAAD-Lecturer in the University of Jordan in Amman

In the middle of January I received applications for the short-term scholarships for German language courses. These scholarships are open to students who have completed at least two years of German language study and have a good knowledge of German. They are required to pass a DAAD test and an oral exam. I was responsible for their evaluation and advised the successful students on where to take their language courses. The language courses offered in Germany cover German language, literature, area and regional studies, engineering and science, plus a range of music and dance courses. This year there is support for up to 16 students.

Teaching at the University of Jordan

There are two lecturers, in addition to myself, in the German section, which is a part of the Department of Modern Languages. In every trimester I teach 12 hours weekly, that is 4 courses.

In the last trimester (Oct. 2002 to Feb. 2003) I gave courses on the following subjects; German for beginners, listening and conversation, advanced writing, and German language in media and tourism.

I enjoy teaching at the University of Jordan very much. This especially holds for German in media and tourism, which is offered to fourth year students. In this course the emphasis is on conveying background information on the media in Germany and Austria. It also focuses on German for special purposes, in this instance: German for travel guides. Students should be able

to give a lecture in German on a tourist site in Jordan. This practical focus motivates the students and enhances their prospects of using German successfully at work later.

The first months here in Jordan have been very exciting and I am looking forward to the coming years that I will spend here.

A New Palace in Qatna (Mishrifeh, Central Syria)

By: Marta Luciani, Italian Archaeological Mission at Tell Mishrifeh/Qatna, University of Udine (Italy)

It was not known until now that the urban centre of Qatna, like other Syro-Mesopotamian cities of the Bronze Age, featured more than one palace in the middle of the 2nd millennium BC.

Since the early 1920's, the pioneering work of lieutenant R. du Mesnil du Buisson of the *Armée du Levant* not only allowed the square, walled site of Mishrifeh, some 18 km north-east of Homs, to be identi-fied with the ancient capital of Qat-na, but also brought to light the huge building that served as the palace of its kings (Du Mesnil du Buisson 1935, 71-143).

Although providing us with much useful detailed information, investigations in the 1920's did not focus on intrasite exploration and contextualisation. Therefore, starting in 1999, the Italian Archaeological Mission at Tell Mishrifeh/Qatna (the Italian component of the joint Syrian-Italian-German excavation project at Mishrifeh/Qatna) set out to explore three different excavation areas (Al-Maqdissi et al. in press), in an effort to clarify the urban layout of the ancient city of Qatna as much as possible.

As most of the research in the 1920's and later had concentrated on the main, central mound (Colline centrale), I thought it important to differentiate and explore extensively an area in the lower northern town (Luciani in press) (Fig. 1). The location chosen (Operation K), half way between the Royal Palace and the Northern City Gate, looked rather promising for the investigation of residences or dwellings of the urban elite in Qatna. (The only previous research in the vicinity of Operation K were 13 small soundings carried out by G. Ploix de Rotrou [Du Mesnil du Buisson 1935, 168-171]. Their exact whereabouts have still

not been located. According to our re-evaluation of the *Sondage* 7, the walls, floors and pottery found there could belong to our Building 6. The importance of stratigraphically linking the old excavation to the new, lies both in the possibility of identifying the actual extension of Building 6 and – by comparing texts and finds – address the question of the administration and residents of this new palace.)

TELL MISHRIFE 2001
TOPOGRAPHIC MAP

AMERICAN

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TOPOGRAPHIC MAP

AMERICAN
TOPOGRAPHIC MAP

Fig. 1. Site plan of Tell Mishrifeh/ Qatna with excavation areas (A. Beinat, A. Marchesini, University of Udine)

The hypothesis put forward in 1999 began to be proved right during the second campaign (Luciani 2002) and can now be fully confirmed. Operation K proved to be the location of a single, rather large monumental residence (Building 6), a palace that, some 150 m north of the Roval Palace, may have served high officials or, more likely, members of the royal family. The findings are quite exceptional: besides a layout already covering over 1500 square meters and surely extending further, precious objects such as tens of bone and ivory inlays, bronzes jewels, alabaster vessels and imported Cypriot pottery along with an archive of cuneiform tablets have been unearthed

Most rooms are lavishly plastered with a thick, hard, lime lining, well smoothed on the surface. This plaster is painted red in a seccotechnique. Floors are consistently of a cement terrazzo, made of different layers and featuring little polychrome stones on the surface. Spe-

cial rooms, such as the one for foodstorage (possibly a "wine or beer cellar". i.e. Room H) do not feature this type of elegant floor and wall finishing. Rather, the floor is beaten mud while the plaster is not painted, is rougher and quite thick in order to achieve a good degree of thermal insulation. Adjacent to Room H. Room I is a well-pre-

served, plastered oven. Room M was probably a bathroom and Room C a small kitchen with an adjoining courtyard (Room B).

Although many of our interpretations must be considered preliminary, some observations on the structural layout and significance of this important building may be put forward.

Building 6 in Operation K is composed of at least 34 rooms. Surely this building had a long life, as proven by the presence of at least two different floors on top of the original terrazzo cement floor. Also walls and layout witnessed a number of significant building activities. Modifications and reconstructions of the palace are clearly visible. This

suggests a fairly long use for Building 6 with the need not only to repair, but also to change the disposition of rooms.

Fig. 2. Schematic plan of Building 6, Operation K (Field Surveyor: A. Savioli, Computer Graphics: A. Intilia)

Figure 2 is a preliminary, schematic plan that sums up the evidence of more than one phase of use. Less than 30 % of the rooms have been excavated, so that little may be said as to their specific functions. However, the different tracts are recognizable and a number of significant characteristics apparently seem to emerge, based on an analysis of Old and Middle Syrian palatial buildings carried out by P. Matthiae (1990 and 2002): (1) The palatial Building 6 is made of individual sectors not surrounding a court. and apparently with rooms at right angles to the exterior walls of the complex, (2) circulation is a continuous winding path where a sequence of longitudinal spaces are prevalent, and finally (3) the layout of the reception suite features a throne room preceded by a vestibule with an approach on a bent axis (Matthiae 2002, 193-194). These aspects seem to place our Building 6 in the tradition of Old Syrian palatial architecture.

One of the rooms has revealed an exceptional inventory, worthy of a closer look. Room R allowed us to confirm the multi-layered stratigraphy of the building. On its top-most floor epigraphic finds, ivories and bone inlays, seal impressions, bronzes (Fig. 3), jewels, an interred jar burial, local and imported pottery have been excavated.

Back in the 1920's, cuneiform texts had been discovered somewhere close to the area of Operation K (Du Mesnil du Buisson 1935, 169-71). They are few but significant in a number of different ways and offer a good spectrum of personal names, mostly Hurrian (Bottéro 1950, 113-118). One of the documents, being a forerunner of the astronomic

text Enuma Anu Enlil (Bottéro 1950, 111), most probably points to the presence of scribal activities.

The archive uncovered by us during the 2002 campaign in Room R, confirms the evidence of important administrative activities also occurring outside the main palace. According to J. Eidem, philologist of the Italian Mission, "Our tablets are administrative notes, which seem to pertain to the running of a large house-hold. Cereals and beer are items listed and these are distributed to various categories and individuals. Although study of the whole archive must precede firm conclusions, it would seem that it may relate not just to the household itself - which logically must be the building in which the tablets were found but also issues to perhaps visiting dignitaries and their retinues."

In the same room ivory and bone inlays were also found, similar in shape and – most important – in

provenance to the ones from Room 18 in the Alalah IV palace. A rapid search (courtesy of A. Intilia, currently preparing a study on this material) showed that there are similar inlays in a many sites, from Kamid el-Loz, Ugarit, Ras Ibn Hani to Uruk – even if the latter are mother-of-pearl – from Hattusa, where incised variants are known, to the core of the Mitanni empire at Tell Brak and Tell Feheriyeh.

A number of avenues for research arise from this material, from identification of the animal bone used and its trade patterns, to reconstruction of the artefact on which they were inlaid and mapping traces of work. But the most interesting question is whether in Room R of Building 6 we are dealing with a workshop as was the case in Ugarit (Barnett 1982, 31) or Ras Ibn Hani, or with 'ivory rooms' as parts of a treasury or "bank" of the royals who were dwell-ing in this palace, as has been pro-posed for Megiddo (Barnett 1982, 25).

The presence, in the same Room R, of a beautiful ivory face in low relief with inlaid gypsum eyes could point more to the latter than the former hypothesis. On the other hand, the nearby Room Y shows significant evidence of possibly having been part of a workshop.



Fig. 3. Selected finds from Building 6, Operation K (Photo: M. Cusin, University of Udine)

In seals and seal impressions from the early examples — which clearly belong to a very late MBA horizon to the more typically Mitanni productions, the Building 6 glyptic appears mostly elaborate in style and extremely varied in theme, though completely within local urban tradition.

A provisional date into the earlier part of the Late Bronze Age might be suggested for the main phases of use of Building 6 (15th century BC). It is, therefore, the more interesting because for the first time in a period poorly known archaeologically, the transition from the MBA to the LBA may finally be investigated on the basis of sound stratigraphic data and well preserved contexts.

Because of its excellent state of preservation (plastered walls standing up to 1.50 m, cemented floors, assemblages in situ) the palatial Building 6 promises to offer a unique chance to explore Late Bronze Age monumental architecture in Central Syria, hitherto virtually unknown.

Comparisons with the main palace, furthermore, will help better define the overall urban layout of the site when major building activities were undertaken by the urban elite

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at Qatna, in an age when the capital's political importance was, however, reduced to being but one of the 'small kingdoms' of Syro-Palestine.

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