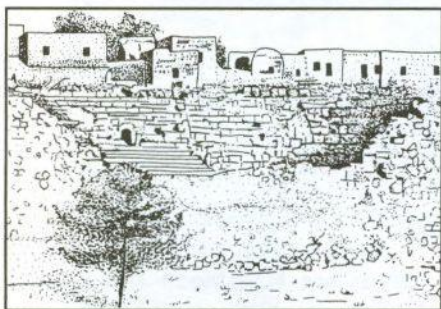


OCCIDENT & ORIENT

Newsletter of the German Protestant Institute of Archaeology in Amman



Vol. 1, No. 2 December 1996

CONTENTS

- Wadi Rum's Nabataean village 2
- Stone Age Hunters at Azraq Oasis 3
- 'Ain Ghazal's Neolithic "temples" 4
- Fellows in residence 5
- German team's work in the Petra region 6
- The Gods of the Nabataeans 8
- Water in the Jordan Valley 9
- Preparing to excavate Tell Johifiyeh 10
- The ACOR Madaba Project 11
- 20 years of work at Umm Qais 13
- The conservation profession 15
- CARCIP: The Second Phase 17
- Readers' Survey 20

• Published twice a year by the German Protestant Institute of Archaeology in Amman. P.O. Box 183, Amman 11118, Jordan.

• Tel. 842924, Fax 836924. E-mail: gpia@go.com.jo

• Editor: Hans-Dieter Bienert.

• Technical and editorial assistance: Al Kutba, Publishers, Amman, Jordan

• Newsletter logo above by Samir Shraydeh.

A Commitment to Strengthening German-Jordanian Cooperation, Promoting Protection of Sites

After the successful first edition of our Newsletter we now have the pleasure to present this second issue. It is our aim to publish this Newsletter twice a year. Within each issue we will inform you of the activities of the German Protestant Institute of Archaeology in Amman and recent developments in the archaeology of Jordan. We also intend to inform you about other events with German involvement, like development aid and assistance, and cultural and scientific cooperation. The past months

have seen a number of saddening events here in the Middle East, like the rising tensions between the U.S. and Iraq, the slowdown in the peace process between the Israelis and Palestinians, tension in Jerusalem related to archaeological and holy sites, and the "bread-riots" in southern Jordan. All these incidents led to a short-term decrease in the number of tourists visiting the region. The ever increasing number of tourists visiting archaeological sites over the longer run has forced institutions in Jordan to open up more and more sites and to develop a wider touristic infrastructure. This is a process that requires the greatest care and sensitivity, especially with regard to prehistoric and historic

sites. However, as archaeologists - whether we like it or not - we will have to be more involved in the future in the issue of conservation and presentation of sites we excavate. This will be in the interest of the sites them-



German scholars on Protestant Church of Germany scholarships visit Petra.

selves as well as the people who come to visit them. Archaeological monuments comprise the most precious heritage of the Hashemite Kingdom of Jordan, and all of us who work in this country should do our best to care for them, so that future generations will still have the pleasure to enjoy the beauty of Petra, Gadara, Jerash, and all the other sites in Jordan.

The German Institute tries to strengthen cooperation with Jordanian institutions (Department of Antiquities, Ministry of Tourism and Antiquities, universities, non-governmental organizations) and to assist visiting scholars in their work in this country. It would take up too much space here to mention all our activities. Nevertheless, I

(continued on page 20)

A New Project on the Nabataean Settlement of Wadi Rum

By: Laurent Tholbecq, Institut Français d'Archéologie du Proche-Orient, Amman (Jordan)

A new collaboration has been initiated this summer between the French Institute of Archaeology at Amman and two Canadian students: Barbara Reeves, Dennine Dudley (Victoria University) and Laurent Tholbecq (IFAPO) co-directed a general record of the most significant Nabataean settlement of Wadi Rum.

The Nabataean temple, discovered in 1932, had been partially excavated by Horsfield and Savignac in the early thirties, then by Kirkbride in 1959. (The reports have been published in *Revue Biblique*). The Department of Antiquities of Jordan started to clear several areas around the temple itself in 1964. Two French topographers and a Jordanian student from Yarmouk University have been members of our team. The Department of Antiquities was represented by Mohammed Mhamediyeh. Funding was provided by IFAPO and Canadian private sponsors.

The site lies on the eastern side of Jabal Rum and shows different features: on the north, on a hill limited by two wadis coming down from Jabal Rum, three complexes have been cleaned:

1) In the temple area, a square colonnaded podium with a central shrine shows its hexagonal pavement in the ante cella, and sandstone flagging elsewhere. Behind the cella, a hall and seven steps lead outside to the Western Complex. Several architectural fragments of the cella, the echinus of the columns of the ante cella and several boulders with plaster which shows incised geometric decoration have been recorded. Various structures are abutting the facade; among them is a rectangular podium which

was reached by three steps, and was probably a place where the betyls were exposed. Future work will hopefully provide evidence for the dating of the sanctuary and its history; the date of construction is still hypothetical.

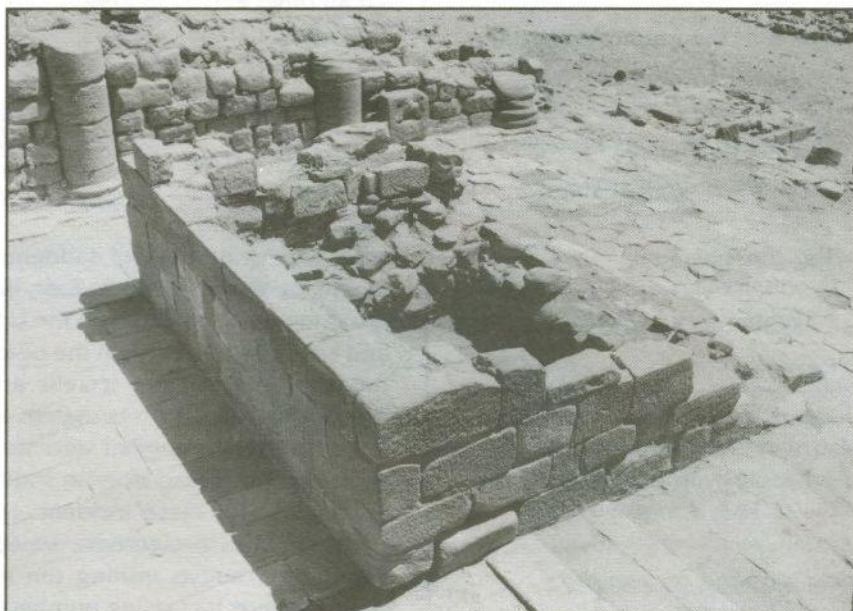
2) The Western Complex, built on the same grid as the temple, is organized around at least twenty rooms with their spring blocks in situ; its function, organisation and dating remain unknown. Nevertheless, a limited probe revealed several wall foundations under the visible complex, which date to the Nabataean period.

3) The Canadians focused their attention on the North-Eastern Com-

plage" for lack of stronger arguments, have been recorded. The surface sherds are Nabataean and Roman. Close to this "village", ancient tombs were mentioned by Savignac; today, these are partially covered by a modern cemetery.

The hydraulic system has been partially surveyed: springs fed the various complexes through canalisations and cisterns (the most famous being 'Ayn Shellaleh with its "rupestral" sanctuary). A new cistern has been discovered just south of the well-known pool, which has also been recorded.

This first campaign provided very promising evidence of the importance



The Nabataean temple at Wadi Rum

plex: this is a bath complex connected with a possible public or official building organized around two courtyards. Various rooms have been studied; for instance, a probe was opened in the caldarium, and revealed a building type attributed to the first century BC.

Further south, fifteen various structures (houses and large enclosures), which constitute what we call a "vil-

lage" of this settlement in Wadi Rum: there are now accurate top plans of the various complexes excavated in the sixties. The ceramic evidence added to new Thamudic inscriptions will bring us closer to an accurate chronology, and help us to understand the social and economic life of this important site on the commercial roads between Arabia and the Near East. ■

Documenting Tools of Old Stone Age Hunters in the Azraq Oasis

By: R. Low, D. Schnurrenberger, R. Watson, G. Rollefson and L. Quintero

During research work associated with paleoclimatic reconstruction for Jordan, a new Lower Paleolithic kill and butchering site in the marsh region of Azraq Shishan (South Azraq) was discovered in July 1996. The falling water table at one pool, called 'Ain Soda (soda is the feminine form of aswad, meaning black), exposed deposits of artifacts, including hundreds of large butchering implements and even more numerous flake tools, cores, and chipping debris. Intermingled with the chipped stone material were numerous fossil bones, many of which appeared to be from camels, possible onagers, wild boar, and even the molar of an unidentified elephant species.

Surface collection, aided by volunteers from the Madaba Plains Project, resulted in more than 500 artifacts. Detailed examination has shown that while the bulk of the artifacts date to the Late and Final Acheulian period of the Lower Paleolithic (ca. 250,000 years ago), there were also tools and cores distinctive of the Epipaleolithic period (probably Kebaran or Geometric Kebaran) and the PPNB Neolithic phase.

The artifacts and bones were revealed as a consequence of work by the Azraq Oasis Conservation Project (AOCP) to reclaim, restore, preserve, and maintain the delicate marsh habitat of this island of water and vegetation in the harsh eastern desert of Jordan. With the enthusiastic support of Dr. Ghaith Fariz, AOCP Director, a protracted and intensive research project at 'Ain Soda is now planned to learn more of how the vicinity changed over long periods of time and how human visitors made use of the locality from the most ancient periods down through the Early Islamic and modern eras.

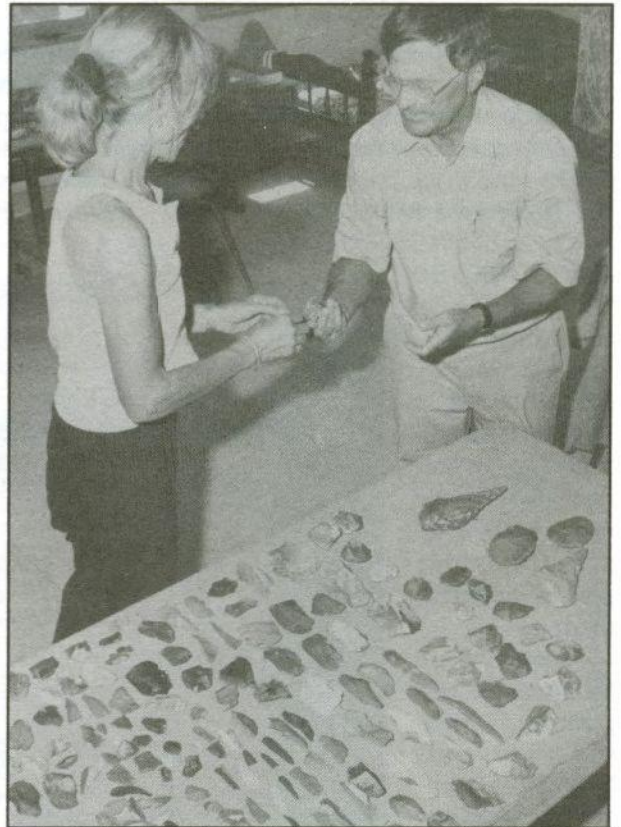
As part of this proposed long-term

research project, additional investigations were undertaken in mid-August 1996. Dr. Mohammed Waheeb (Department of Antiquities) concentrated on the Roman wall systems, while the remaining members of the team focused their efforts on the prehistoric periods, not only at 'Ain Soda, but at nearby 'Ain Qasiya as well.

New collections were made, and, including the earlier samples, more than 400 exquisite Acheulian butchering tools and 275 smaller flake tools were amassed, as well as numerous bags of animal bones. At 'Ain Qasiya, a Mousterian period of exploitation has been tentatively identified, and it appears that this spring/pool did not exist in earlier times.

The Acheulian artifacts are very telling: the open water was a major attraction for large animals, including proboscideans, rhino, cattle, buffalo, equids, boars, and camels. The enormous concentration of chipped stone meat cleavers is testimony to the lucrative harvest by hunters in the region. Later exploitation in the Epipaleolithic and Neolithic periods occurred when the pools had been replaced to a major degree by densely vegetated marshes, a change clearly indicated by the character of the sediments.

Finally, a visit to 'Ain el-Assad (Lion's Spring), just a couple of



G. Rollefson and L. Quintero examine stone artifacts from Azraq.

kilometers southwest of 'Ain Soda, showed the consequences of the dropping water table in the Azraq Basin. Filled with water during excavations in 1980 and 1981, 'Ain el-Assad today is a dry dust bowl, and several bulldozer trenches nearby show the desperate attempts to "chase" the falling water supply. But while the camel and sheep pastoralists can no longer use 'Ain el-Assad to water their herds and flocks, the dried sediments in the bulldozer cuts have shown where the earlier Paleolithic and Neolithic occupations occurred. In addition to the planned excavations at 'Ain Soda and 'Ain Qasiya, it would also be worthwhile to resume excavations at 'Ain el-Assad. ■

'Ain Ghazal Excavations (1996) unearth Neolithic "Temples"

By: Gary Rollefson, 'Ain Ghazal Research Institute (AGRI), Ober-Ramstadt (Germany) and Zeidan Kafafi, Institute of Archaeology and Anthropology, Yarmouk University (Jordan)

An eight-week season of excavations was conducted at 'Ain Ghazal during June-August 1996. Research concentrated on Yarmoukian (ca. 5,500-75,000 b.c.) layers in the Central Field; Late PPNB (6,500-6,000 b.c.) and PPNC (6,000-5,500 b.c.) deposits in the North Field; and mostly LPPNB levels in the East Field. Altogether, the season investigated more than 400 sqm of various parts of the settlement.

Work in the Yarmoukian deposits in the Central Field confirmed the practice of artificial terracing of the slopes. It was also made clear that architectural density during the Yarmoukian was very low, with a distance between houses routinely reaching 15-20 meters. Several outbuildings were excavated, two of which may have been "kitchens" and others that might have served as storage facilities.

The North Field efforts concentrated on exposing a building whose round wall and floor were only partly uncovered in 1995. Originally thought to be an apsidal building, it was revealed that the curved walls belonged to another circular shrine, a twin to the one excavated five meters to the north in 1993. Virtually identical in terms of its dimensions, the 1996 shrine differed from its counterpart in terms of the absence of subfloor channels lead-

ing to the central hole (fireplace); and the details of construction indicate it was of a slightly later date, but that it and the other building both belonged to the end of the LPPNB period.

It was in the East Field, across the



The PPNC "temple" recently discovered at 'Ain Ghazal.

Zarqa River from the main site, that the most dramatic results were obtained. In addition to normal domestic Late PPNB architecture, there were also two examples of buildings that could only have been used as temples.

Architectural techniques, including the use of dressed stones and oblique-angle corners, show that one of the temples is LPPNB in date. Located high up the slope near the center of the East Field, the building measures 4 m N-S and at least 5 m E-W, although the western part was destroyed by erosion. The structure appears to consist of a single room with a dirt floor; both features are very uncharacteristic of the LPPNB. In the

center is a N-S alignment of three standing stones (although the center stone had fallen down). At the southern end of the group was a floor-level platform enclosed by two long limestone blocks and some irregular lime-

stone slabs; between these stones was a 3-cm layer of clay that had been burned to the color and texture of fired pottery. In the floor between the standing stones and the eastern wall was a roughly square hearth (ca. 50 cm on a side) made of lime plaster and painted red, surrounded by seven small, flat limestone slabs. An integral component of the eastern wall was an orthostat

of brilliant white limestone that stood about 80 cm high and 40 cm thick; at the top of this large stone is a small knob that lends an anthropomorphic character to the object.

The second temple is situated about 100 m to the south and far down the hillside. The building once had two rooms, but the western one was mostly destroyed by erosion. The well-preserved eastern room is 6.5 m long (N-S) x 3.5 m wide (E-W); the eastern wall still stands about 1.8 m high. The floor of the east room is made of a yellowish clay obtained when the builders excavated a storage room outside the building; the clay was not used for the floor of the western room. Against the center of

the east wall is an altar (1.5 x 0.5 m) of thick limestone slabs that rests on three pairs of upright supports ca. 60 cm high. In front is a hearth of unpainted lime plaster surrounded by seven limestone slabs. The doorway in the western wall has a narrow screen wall to the south that leads into the western room for about 50 cm before making a right-angle turn towards the north, effectively blocking the view of the hearth and altar in the eastern "holy of holies" from the view of anyone outside. Based on the use of undressed, rounded stones, this temple probably dates to the early PPNC period.

The temples offer a startling new perspective of religion in the Neolithic Levant. Notably, neither temple indicates any association with the ancestor cult, which may have been going out of favor by the end of the 7th millennium. The numbers 3 and 7 may have had symbolic importance, but beyond this there is little evidence of what kinds of rituals may have been carried out in either temple. Future excavations may provide some firm clues. ■



The Late PPNB "temple" recently discovered at 'Ain Ghazal.

Fellows in Residence and Associated Fellows (June - December 1996)

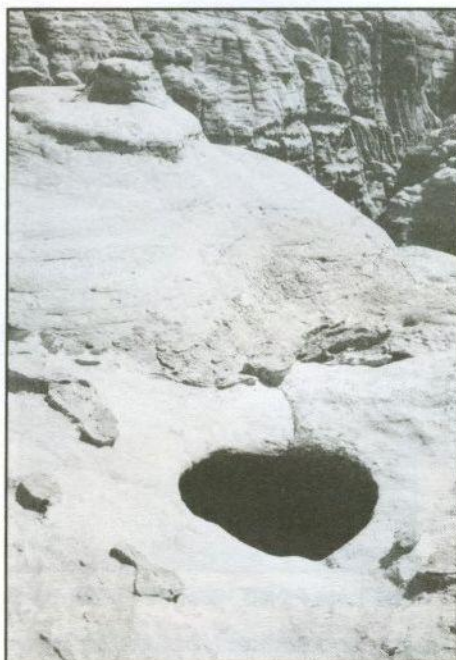
- Dr. Ute Wagner-Lux, Basel (Switzerland), Dr. Karel Vriezen, University of Utrecht (Netherlands) and Kien van Rijn van Alkemade, University of Leiden (Netherlands), "Research on finds from archaeological excavations in Umm Qais (Church and Church Terrace, parts of the Decumanus, southern Basilica)".
- Dr. Roland Lamprichs, University of Freiburg (Germany), "Excavations at Abu Snesleh: Preparation of Final Report".
- Dr. Friedrich von Heyl, Robert-Bosch Foundation (Germany). "Aqaba Area - Regional Development Perspectives and Foreign Investment Opportunities".
- Brigitta Meier, Robert-Bosch Foundation (Germany), "Water Management and Salinity Problems in the Jordan Valley".
- Najma Bachelani, University of Michigan (U.S.A.), "Mobilization and collective action: Jordan, 1989-present".
- Hans Georg Gebel, Free University of Berlin (Germany), "Planning and preparation for an excavation at an early Neolithic site in southern Jordan".
- Ellen von Zitzewitz, GTZ-Amman (Jordan), "Forest Policy and People's Participation in Jordan".
- Bernd Hops, Friedrich-Ebert Foundation, Amman (Jordan), "Development of Tourism in Jordan since 1980".
- Umm Qais excavation team from the German Archaeological Institute (DAI) Berlin/Cottbus Technical University Prof. Dr. Adolf Hoffmann (director), Claudia Bührig (acting director), Dr. Günther Schauerte (archaeologist), Thorsten Bunk (architect), Nadine Riedl (archaeologist), Isabelle Ruben (archaeologist), Wolfgang Thiel (archaeologist), Maren Lukas (architect), Hubert Liebel (architect), Michael Gerber (archaeologist), Barbara Gartzke (landscape architect), Michaela Konrad (archaeologist), Jochen von Sichardt (architect), Roland Wieczorek (photographer).
- Scholar holding a one year travel scholarship from the German Archaeological Institute (DAI): Dr. Ines Beilke-Vogt.

Petra proper and Greater Petra: The Archaeological Activities of Naturhistorische Gesellschaft Nürnberg (Germany)

By: Manfred Lindner, Naturhistorische Gesellschaft Nürnberg (Germany)

After five years of getting acquainted with every peak, nook and gorge of Petra, archaeological teams of Naturhistorische Gesellschaft Nürnberg (NHG) started their work in Petra proper in the 1970s with an excavation below the Urn Tomb and a clearing of Tomb 813 above the Outer Siq. The project was continued later by J. P. Zeitler and a team from NHG who simultaneously thoroughly researched the town architecture. Due to consistently excellent cooperation with the Department of Antiquities, the Directors General and the personal mentorship of Dr. Fawzi Zayadine, more sites were extensively explored, including Jebel ed-Deir where a temple, a tholos and an impressive water supply and flash flood management system were discovered.

Sabra, seldom visited and virtually unknown before, was a major project of NHG in the Greater Petra region. Under the author's direction an ingenious conduit from a barrage 100 m above the wadi and a catchwater regulation system running from Jebel el-Jathum to the theatre (and the latter itself) were plotted for the first time. J. P. Zeitler sounded the temple, which had not been examined since Léon de Laborde mentioned it. In addition, the author's team together with Austrian friends, directed by E. Gunsam, surveyed the ancient pathways and roads from Petra to Sabra and further on toward the west with the important settlement of Abu Khusheiba and the mining district of Mukheifer and Umm el-Amed. In the course of



A "high place" and piriform cistern at the Iron Age stronghold of Jabal el-Qseir (M. Lindner).



Early Bronze Age storage jar at es-Sadeh (M. Lindner).

these explorations, a Chalcolithic-Early Bronze Age site was identified by sounding high above the barrage of Sabra.

In order to learn more about the land beyond the perimeter of Petra proper, and encouraged by the Department, the valley of es-Sadeh, 15 km south of Petra, was explored. The earliest occupants left chipped lithics of the Pre-Pottery Neolithic B (PPNB); later, Early Bronze Age settlers lived in 25 houses on a slope above the wadi. Then a large Iron II (Edomite) mountain stronghold, with storage and dwelling facilities on a nearly inaccessible mountain spur, was discovered and sounded. The Nabataeans, it seems, did not need any defense works. Instead, they built a technically impressive conduit with two aqueduct arches to supply the population of an important part of Greater Petra.

The Edomites had been encountered before on the highest peak of the Ba'ja range, 10 km north of Petra. Ba'ja III was, in fact, an "eagle's nest". Somewhat further down, and easier to reach, a large PPNB settlement (Ba'ja II) was, after its discovery, examined and published by Gebel. Opposite the Ba'ja range, on the saddle between two mountain tops of Jebel Fidre, a Chalcolithic-Early Bronze station with typical pottery was another surprise. Further north, the Jebel Suffahah region, practically unknown before, was surveyed several times in 1994/95. There, three originally Edomite villages on a mountainside jutting out of the plateau were seen during a helicopter flight and subsequently reached on foot. Chalcolithic-Early Bronze sites, Nabataean-Roman farming and dwell-

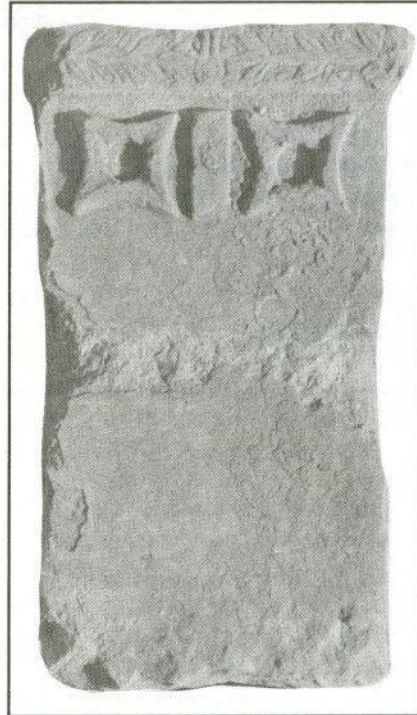
ing places, and Late Islamic reoccupations were noticed. Again on a spur of the plateau, an Edomite fortress was identified.

Not far from Taiyiba, on a massive sandstone mountain called Jabal el-Qseir, standing as a block in front of the plateau, but not belonging to it, a walled Edomite (Iron Age II) stronghold with cisterns, dwelling places and a supposed "high place" was carefully examined, sounded and documented.

In the short campaigns at Khirbet Mu'allaq on the road between Wadi Musa and Taiyiba, part of a Late Islamic village on top of an Edomite fortress was excavated. The location on the shoulder of Jebel esh-Shera is reminiscent of the close cooperation between the settlement on the "plateau" and the mountain strongholds in the "rocks". The latter had to exchange their goats, the only possible product, for grain from the plateau. By the combined effort of the Austrian and German groups, the Nabataean "Pond Temple" in the depth of Wadi Musa, 400 m down from Ras Slaysil, was explored. The examination of the "Unique Sanctuary of Ras Slaysil" was part of the project.

Speaking of sanctuaries, there was the description of the Eagle Niche and its significance; then the rediscovery of the goddess Atargatis panel in the

Siyagh gorge of Petra which had been, unknown to the author, rediscovered before by Fawzi Zayadine. An intimate sanctuary and, not far from it, a group of el-Uzza betyls were identified in the



Al-Uzza Isis stela found at ez-Zantur in Petra (M. Lindner)

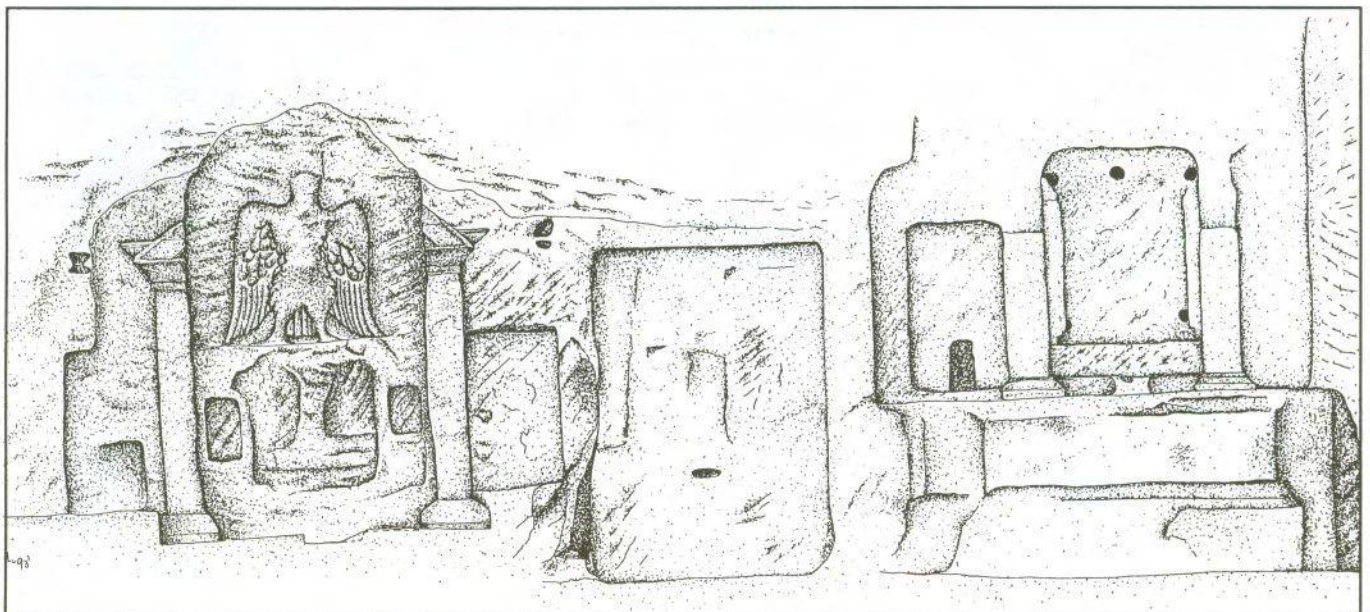
maze of hills of Jabal el-Khubtha. Where Dalman admittedly was not agile enough to gain a foothold, a friend's helping hand opened the way

to a cosy sanctuary within the rock wall of Jabal el-Khubtha. Another find, a stone slab with an al-Uzza idol and an Isis emblem, documented changes in the divine world of the Nabataeans at Petra.

Jabal el-Khubtha was called the "mountain of treachery and deceit" by Robinson, no doubt due to its utterly confusing and tiring landscape. It was almost on top of it that Edomites left their ceramic remnants, before the Nabataeans installed steps, staircases and sanctuaries on the mountain which was definitely sacred and not frightening to them.

The results of the surveys were published in several books and in ADAJ, SHAJ, BB, Syria; JMitt NHG, The Near East in Antiquity, etc. Reports on the most recent campaigns are either in preparation or in print.

The author owes a debt of gratitude to the Directors-General who, since 1970, invariably allowed and furthered the archaeological activities of NHG. Among the members of the NHG teams partaking in the later surveys and publications E. Gunsam, I. Künne, E. Schreyer, A. Schmid, Prof. E. A. Knauf, Dr. Ing. Johannes Hübl and, last but not least, Dakhilallah Qublan of Petra have to be named and thanked. ■



The Eagle Niche complex (U. Schmidt)

The Gods of the Nabataeans: A New Research Project

By: Helmut Merklein and Robert Wenning, University of Bonn (Germany)

The authors' research on Nabataean religious monuments aims to contribute to a better understanding of Nabataean deities and religion. A first survey of the monuments from Damascus and the Hauran down to Aqaba was carried out in fall 1995. A second survey is planned for 1997.

The project is generously supported by the German Research Association (DFG), and has been supported by the Minister of Tourism and Antiquities, the Director General of the Department of Antiquities (Jordan), Dr. Ghazi Bisheh, the Assistant Director, Dr. Fawzi Zayadine, the Director General of Antiquities and Museums (Syria), Dr. Sultan Muhesen, the deputy director, Dr. Mohammed Kadour, the Director of the German Archaeological Institute at Damascus, Dr. Klaus S. Freyberger, and various directors of institutes, museums, and expeditions in Jordan and Syria. The trip was sponsored by Biblische Reisen Stuttgart, Royal Jordanian, Near East Tourist Agency (Amman), and Adonis Travel (Damascus). M.-J. Roche kindly put her dissertation at our disposal. We express our thanks to all of them.

Representations of deities and their contextual setting are the central subjects to be studied in the project. The typological approach of the representations is helpful for classification, but often the function of a monument can be determined much better by an analysis of the surrounding area, particularly as applies to the idols at Petra.

It seems possible to determine various functions of the idols as indicated by different forms. Considering that mountains and gorges can be assigned to a particular deity, the type of idols, multiple idols in one niche, or the variety of frames are understood as reflecting several aspects of the deity. Idols are not limited to Dushara and al-Uzza only.

Guided by G. Dalman's "Petra" we followed the niches and "sanctuaries" carefully described by him, investigated many of them anew, took measurements, drawings, and pictures, took account of the setting, and added some valuable observations. Because many of these monuments have never been photographed, illustrated or described in full, we intend to provide new documentation, at least for the Petra niches with idols.

While temples are studied at length, open sanctuaries and cultic ensembles deserve more attention. The sanctuary of Isis at the Wadi Siyyagh in Petra is being further investigated by us. It is possible to correct the reading of the inscriptions, to clarify the type of the Isis, to describe the cultic ensemble and its context, and to show the old access route to the sanctuary. Other complexes so far studied are the sanctuary of Isis in the Wadi Wag-it and the so-called chapel of Obodas at en-Nmeir. Various plans of Nabataean temples in Syria and Jordan published by Brünnow -v. Domaszenwski and Butler some 80-90 years ago are misleading, as shown by J.-M. Dentzer for the temple of Dushara. We produced a new plan of the western temple at Dhat Ras, among others.

The decoration of the temples raises the question of the function of anthro-

pomorphic figures. Of course, these sculptures are related to the temple deity, but rather than being representations of the deity itself they mostly indicate the blessing of the deity (like the so-called Dolphin Goddess at Khirbet et-Tannur).

Anthropomorphic representations of deities are common since the Augustean period, with a break as a result of the *renovatio* under Rabbel II. Not before the era of the *Provincia Arabia* (106 AD) are gods of the Greek world completely equated with deities venerated by the Nabataeans.

Besides some articles, which are in press or in preparation for publication, we hope to make available the documentation for related monuments and a major publication covering the various aspects of Nabataean religion (and society) in about 1998.

References

H. MERKLEIN, Dushara-Idol in den Heiligtümern vom Bab es-Siq and von el-Medras, in: Fs. H. DONNER, Wiesbaden 1995, 109-120.

R. WENNING - H. MERKLEIN, Die Götter in der Welt der Nabatäer, in: T. WEBER - R. WENNING (Eds.), Petra. Felsstadt in arabischer Tradition und griechischer Norm. Sondernummer Antike Welt, Mainz 1996 (in press).

R. WENNING, Bemerkungen zur Gesellschaft und Religion der Nabatäer, in: R. ALBERTZ (Ed.), Religion und Sozialstrukturen in den Kulturen des antiken Vorderen Orients. AOAT, Kevelaer 1997 (in press).

H. MERKLEIN - R. WENNING, Ein Verehrungsplatz der Isis in Petra neu untersucht. ZDPV/ADAJ (in prep.). ■

Is it Possible to Manage Future Agriculture in the Jordan Valley by Utilizing Saline Water?

By: Brigitta Meier, Frankfurt/Main (Germany)

Since the late 1980s, the water situation in Jordan has been getting more and more severe. An ever-increasing population is being provided with drinking water often supplied from old and defective water services.

The conventional water resources (ground- and surface-water) are extremely limited. Ground-water aquifers are over-pumped, ground-water levels are declining, and the water quality in general is deteriorating. Water suitable for drinking has to be supplied in future to the increasing population of the areas concerned. Consequently, irrigation agriculture will be required to make use of brackish water, or use treated sewage water.

Is it possible and economically useful to use brackish water in irrigation agriculture in the Jordan Valley without harming the soil and the ground-water aquifers? Nobody knows the answer to this problem. To date, only a very limited number of countries have research experience in this field.

Israel happens to be one of those countries, and has been conducting research on the possibilities for saline water use in agriculture over the past 20 years at several research departments of Ben Gurion University of the Negev in Beer Sheva. Obtaining results, however, is a very slow process due to the numerous variables that have to be taken into account (soils, climate, quality of irrigation water, irrigation system, crop variety, cropping pattern, etc.).

With a scholarship from the Robert Bosch Foundation (Stuttgart, Germany) I have been working on this problem since last summer, and in the process I visited several research stations as part of my work. My first visit was to the Hebrew University in Jerusalem, where I participated in a class called: Water in the Middle East: a key to peace?

The next stage of my work involved a five-month internship with the German Agency for Technical Coopera-

tion (GTZ), split between two months at the headquarters in Germany, and three months in a Technical Cooperation Project within the Ministry of Water and Irrigation in Amman. During that time, I was a guest at the German Protestant Institute of Archaeology in Amman (January to March 1996); I very much enjoyed my stay there, and also learned about archaeology too.

My final visit involved six weeks of research at the Ramat Negev Field-station, 35 km southwest of Beer Sheva. Following this I returned to Amman, and then travelled back to Germany.

Through August 1996, I will be seeking a solution to the problem outlined above and at the beginning of September I am requested to present my results in accordance with the requirements of the Robert Bosch Foundation Graduate Program for International Affairs. ■

Tell Johifiyeh: An Iron Age Site in Northern Jordan - Preparation of an Archaeological Investigation

By: Roland Lamprichs, University of Freiburg (Germany)

Location and description of the site:

Tell Johifiyeh is situated some 7.5 km southwest of Irbid, at the northern fringe of the modern village Johifiyeh. The ancient tell measures about 86 m at the base and some 37x35 m at its summit. Its height is approximately 8 m. The state of preservation is good. Surface structures and surface finds indicate that the site probably contains a small fortified farm or some kind of "fortress" founded and used mainly during the Iron Age. Only a few potsherds dating to the Umayyad era indicate a later occupation of the site.

Significance of investigation:

Our knowledge of the Iron Age (c. 1200 - 586 BC) in the northern parts of Jordan is still very scanty. Reliable written sources are not available and very few relevant excavations have taken place until now. None of the so called fortified farms or "fortresses" has been excavated in an area defined by the Jordan Valley in the west, the Zerqa River in the south and the Yarmouk River in the north. Nothing is known about their exact dating, material culture, structure, function or relationships to one



Tell Johifiyeh, viewed from the southeast.

another. Only new archaeological investigations like the one planned at Tell Johifiyeh could fill this gap in information. The recent destruction of some of the neighbouring sites shows that it is necessary to excavate the site soon.

Aims of investigation:

The excavations planned at Tell Johifiyeh shall increase our knowledge of the Iron Age in northern Jordan. The expected results will give us at least some general ideas about the material culture in this area. Furthermore the excavation most probably will provide us with an Iron Age pottery sequence for this region for the first time. An insight into an early system of communication and security in Jordan is also possible.

The aims in general are: to uncover a representative sample of the site; studying and analyzing the artifacts and other finds; recon-

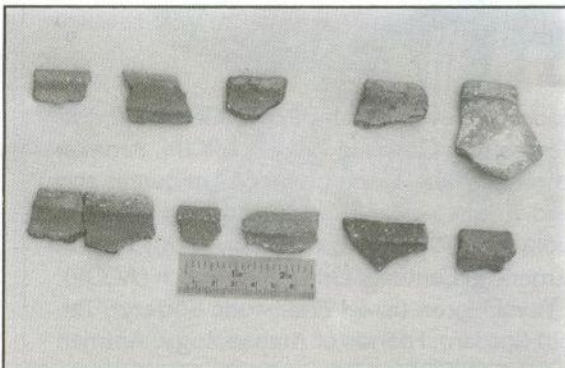
struction of an Iron Age "fortress" in the northern part of Jordan; recovering basic information about the Iron Age.

Project organization:

The project is planned as a cooperative effort between Dr. Ziad al-Ahmad from Yarmouk University (Irbid) and Dr. Roland Lamprichs from Freiburg University (Germany). The duration of the project will be three years, including full seasons in the field. Provided that sufficient funds are available, the first season will start in 1997.

Acknowledgements:

Logistical help during my stay in Jordan was given to me by Prof. Dr. Zeidan Kafafi, Institute of Archaeology and Anthropology, Yarmouk University, Irbid, and Dr. H.-D. Bienert, German Protestant Institute of Archaeology in Amman. Thank you to both of them! ■



Surface pottery collected at Tell Johifiyeh.

The ACOR Madaba Project

By: Timothy Harrison and Patricia Bikai, ACOR (Jordan)

Many of the mosaics of Jordan, precious documents of antiquity, have been uncovered over the last century. Many have also been lost in that time. There has been an equivalent loss of Jordan's heritage in traditional architecture. The purpose of this project has been to assess the cultural heritage of Madaba, so that those who are concerned with its preservation will have easy access to basic information for use in planning. The project was funded by the United States Agency for International Development (USAID).

The mosaic discoveries of the past century, while rightfully earning Madaba the title "city of mosaics," have also raised concerns for their preservation. Although individual mosaic pavements have received special attention from time to time, most notably the restoration of the map mosaic in 1965 by specialists from Germany, until recently there has been no systematic effort to preserve these priceless treasures of the town's rich architectural heritage. The need for preservation became even more acute during the extensive clearing operations of the 1970s and 1980s and, in 1991, finally led to the creation of a program, funded by the Government of Italy and the Canada Fund, to train skilled local mosaic conservators. It was largely as a result of this impetus that a joint project was conceived between the Ministry of Tourism of Jordan and the American Center of Oriental Research (ACOR), funded by grants from the United States Agency for International Development (USAID).

The major purpose of the project was the creation of an archaeological park in the heart of downtown Madaba, near the Church of St. George (Church of the Map), in order to revitalize downtown Madaba by expanding the touristic attractions of the town and creating much-needed

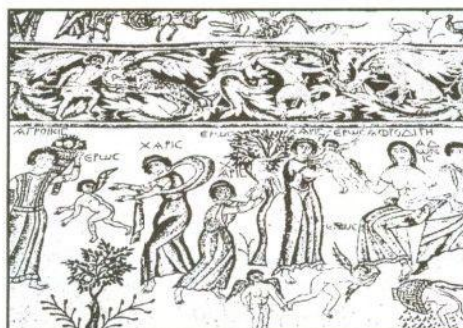
jobs in the community. The Church of the Virgin, Hippolytus Hall, and Church of the Prophet Elias are within the boundaries of this park as are the preserved section of the Roman street, the Sunna' Church, the Church of al-Khadir (Church of the Martyrs) and a large residential or ceremonial complex, the so-called Burnt Palace. Close to the park are the famous Mosaic Map and the Church of the Apostles. As part of the project, shelters designed by Ammar Khammash were constructed over the mosaics of the Hippolytus Hall, the Church of the Virgin, and the Church of the Apostles, in order to protect the mosaics and make them accessible to tourists. Additionally, the Ministry of Tourism and Antiquities of Jordan purchased several buildings which have been renovated by Ammar Khammash as part of this project for use as a park headquarters, a shop for the Madaba Society, and housing for staff involved in the archaeological park project.

In 1993, ACOR undertook a baseline study of the historic areas of Madaba; this included both an archaeological survey of the town, including ceramic analysis, and a survey of its vernacular architecture. As

part of this, a survey of the archaeological and architectural remains of the urban core of ancient Madaba was conducted in March and April 1993 by Timothy Harrison of ACOR. The purpose of the survey was to document the existing pre-modern architectural and archaeological remains of the town, and to gain some sense of the occupational history of ancient Madaba. The survey was conducted to compile data on the cultural and historical resources of the town with a view to creating an archive which would facilitate future research and development efforts in Madaba. A systematic collection of surface sherds was designed to provide a broad outline of shifts in the town's settlement size and history.

Before entering the field, a study was made of 19th century travellers' accounts, photographs taken prior to the onset of modern development, aerial photographs, and previous archaeological research. This helped identify topographic features, established the limits of pre-modern settlement, and ensured that the parameters of the survey universe incorporated all of the ancient site. The study also served as a valuable introduction to the long and involved history of archaeological exploration in Madaba, a crucial source of information in our attempt to record the archaeological remains of the town.

A topographic relief map of the survey area (approximately 40 hectares or 400,000 square meters) was then overlaid with a grid system set at 50 meter intervals, creating a simple but effective recording system. Architecturally, the survey identified over 130 partially or completely intact pre-modern buildings, as well as numerous segments of protruding walls, cisterns, caves, and fragments of columns, capitals, carved lintels, and other reused worked stone pieces.



Subsequently, a brief history of Madaba was compiled, and the occupational history as revealed by the surface sherd collection was analyzed. Information was compiled on Madaba's antiquities by Branwen Denton and Michele Piccirillo, and further studies were made of the vernacular architecture that was identified in the survey. Branwen Denton developed the catalogue and Beatrice St. Laurent wrote the introduction. Simultaneously, a map was created

which presents the cultural resources of Madaba in relation to the modern town.

Madaba: Cultural Heritage presents these studies with the intent of assisting responsible individuals and organizations in the creation of a development plan for the town aimed at preserving its unique character. Although it is far less costly to renovate an old building than to build a new one, beautiful late Ottoman houses

are rapidly falling victim to modern construction without any attempt being made to rescue them or even to document them for posterity. One of the goals of this project was to identify, photographically document and study these structures, placing the information in a computerized data base and on a digitized base map which can be used by planners.

The survey showed that there are areas of Madaba which should be protected, particularly the cluster of remains from antiquity and buildings dating to its early modern history which are in the region of the Madaba Archaeological Park. The preservation of what remains of the birkeh should be one of the most important components of any urban planning in Madaba.

The acropolis is now known to have remains dating back to the Early Bronze Age. It appears to have been occupied for much of the last five millennia but is now nearly covered with construction. Parts of it, including the area of the Byzantine cathedral, should be protected.

Clusters of remains of various periods in Madaba have been identified that, if preserved, would provide both the town's residents and visitors from elsewhere with a visible cross-section of the town's history. ■

MADABA

Cultural Heritage



Twenty Years in Umm Qais (ancient Gadara)

By: Ute Wagner-Lux (Basel, Switzerland) and Karel J.H. Vriezen (Utrecht University, Netherlands).

After a first season of excavations in 1965, the German Protestant Institute for the Archaeology of the Holy Land commenced the archaeological project in Umm Qais with a large scale survey of the site in 1974. This added considerably to data previously known, by mapping an area of 1600 x 450 m and by documenting the remains of buildings, city walls and streets dating mainly from the Roman and Byzantine periods.

Between 1976 and 1980 a series of five excavation campaigns followed, including restorations conducted by the architect

Oberregierungsbaurat Ernst Krueger. A sixth campaign by this team was conducted in 1992 and a seventh is scheduled for 1997. The work focused on the large terrace (95 x 32 m) situated between the Upper and the Lower City. In the central part of the terrace a centralised church with a square outline and a narthex attached to its west side was uncovered. The church hall in the interior is octagonally planned. In the northern part of the terrace a colonnaded courtyard is entered from the city's main street, the Decumanus Maximus, by means of three entrances. This

church and the courtyard made up the Byzantine building phase of the terrace (6th century). South of the centralised church a three-aisled basilical church built in the Omayyad period (7th century) was partially excavated. Underneath these building remains in various places on the terrace, a pavement of large rectangular limestone slabs was reached that belonged to the Roman Period.

To the west a line of nineteen or twenty rooms covered with barrel vaults is built against the terrace's retaining wall. These rooms align a large pavement (possibly a by-



Central and northern part of the terrace before starting the 1992 excavations. The black basalt columns belong to the centralised church, the white limestone columns belong to the courtyard (Looking north).



Central part of the terrace after opening the first squares in 1976 (looking west).

street, a *cardo*) extending from the *Decumanus Maximus* to the area in front of the West theatre bounding the terrace on the south. The northern part of the pavement was excavated, exposing the junction with the *Decumanus Maximus* and the area in front of the first three vaulted rooms.

From the architectural survey of the area conducted in 1992 and 1993 by Nicole Mulder (Leiden University, Netherlands) and Robert Guinée (Technical University Delft, Netherlands) it may be inferred that the urban quarter of the terrace, the line of vaulted rooms and the West theatre ap-

parently were planned in one concept. The vaulted rooms and the terrace were built as one ensemble, and their construction is dated to the Roman period, tentatively at the end of the first or in the second century A.D. Towards the west the team excavated part of the *Decumanus Maximus* in the central area of the Lower City and dug test trenches in the Hippodrome area.

In the years 1989, 1994-1996 study seasons were organised in the institute in Amman to prepare the excavation results for final publication. Since 1995 Kien van Rijn van Alkemade (Leiden University) has joined the team for the

study of the ceramic finds.

The excavations were financed by the German Protestant Institute and by the Deutsche Forschungsgemeinschaft. The architectural survey and the study of the finds have been made possible by the cooperation of the German Protestant Institute, by funds from the Theological Faculty of Utrecht University, and by private donations.

During recent years other teams were also active in Umm Qais: teams from the German Protestant Institute, from the Theological Faculty of Copenhagen University, from the German Archaeological Institute in Berlin, and from the Liebieghaus in Frankfurt/M.

Publications:

U. LUX, Der Mosaikfußboden eines spätantiken Bades in Umm Qes, in: *Zeitschrift des Deutschen Palästina-Vereins* 82 (1966), 64-70.

U. WAGNER-LUX, E. W. KRUEGER, T. VRIEZEN-van der FLIER und K. J. H. VRIEZEN, Bericht über die Oberflächenforschung in Gadara (Umm Qes) in Jordanien im Jahre 1974, in: *Annual of the Department of Antiquities of Jordan (A.D.A.J.)* 23 (1979), 31-39.

U. Wagner-Lux and K. J. H. Vriezen, A preliminary report on the excavations at Gadara (Umm Qes) in Jordan from 1976 to 1979, in: *A.D.A.J.* 24 (1980), 157-161.

U. WAGNER-LUX and K. J. H. VRIEZEN, Preliminary Report of the Excavations in Gadara (Umm Qes) in Jordan 1980, in: *A.D.A.J.* 27 (1984), 87-90.

U. WAGNER-LUX, K. J. H. VRIEZEN, F. van den BOSCH, N. F. MULDER and R. GUINEE, Preliminary report on the excavations and architectural survey in Gadara (Umm Qeis) in Jordan, Area I (1992), in: *A.D.A.J.* 37 (1993), 385-395. ■



Central part of the terrace at the beginning of the second season of excavations, 1977 (looking south-east).

Breaking Ground For Professional Conservation

By: Friedrich Zink, Expert Conservator CIM Integrated Expert Program, Institute of Archaeology and Anthropology (IAA), Yarmouk University (Irbid/Jordan)

The following thoughts and remarks on the status of conservation and restoration of national heritage in Jordan are meant to draw attention to conditions and circumstances which require immediate attention in order to avoid detrimental effects.

Jordan is currently undergoing fast development in technological and industrial terms, and also has to accommodate an increasing number of tourists. In this context, tourism means first and foremost cultural tourism, and hence focuses on archaeological sites. An increasing number of foreign teams, groups, and development agencies are involved in excavations of archaeological sites and their subsequent touristic development. Yet, international sponsors and donors are mainly concentrating on prestigious sites and projects like Jerash, Madaba and Petra. Sustainability of projects and measures is not always assured, and short- and long-term impacts are not always studied and considered in advance.

In 1986/87, ICOMOS, ICCROM, and UNESCO had jointly produced a "code of ethics" and a "definition of the profession" of the conservator/restorer, yet, neither have been applied in practice so far. Though Jordan is a member of all these organizations, so far it has neither applied the "code of ethics" nor protected the conservation/restoration profession by law, which are essential for safeguarding Jordan's national heritage. Hence, the professional occupation

of conservators and restorers in Jordan - like in many other countries - is neither well defined nor protected by law. As a result, anybody who presently claims to be a conservator/restorer, even without proper training or study of the subject, can and does carry out conservation and restoration work. Craftsmen, artists and architects who are performing conservation tasks with no, or only limited, knowledge and scientific background in conservation science thus are endangering objects, sites and monuments above and beyond the natural course of decay. Another major problem with which Jordan has to cope is that foreign teams are often excavating without the presence of a conservator/restorer; only in rare cases is part of the excavation budget reserved for post-excavation site protection and/or object and site conservation. Conservation and restoration works are then mainly executed by untrained and unqualified excavation personnel.

Decision-makers concerned with the protection of national heritage and archaeologists have to accept that not only excavating, studying, and publishing should be the aims of excavations, but also the protection and safeguarding of sites and objects. Unfortunately, it is not always recognized and conceptualized that conservation science constitutes a complementary science to archaeology and anthropology, and that both, in fact, should be perceived as two sides of the same coin.

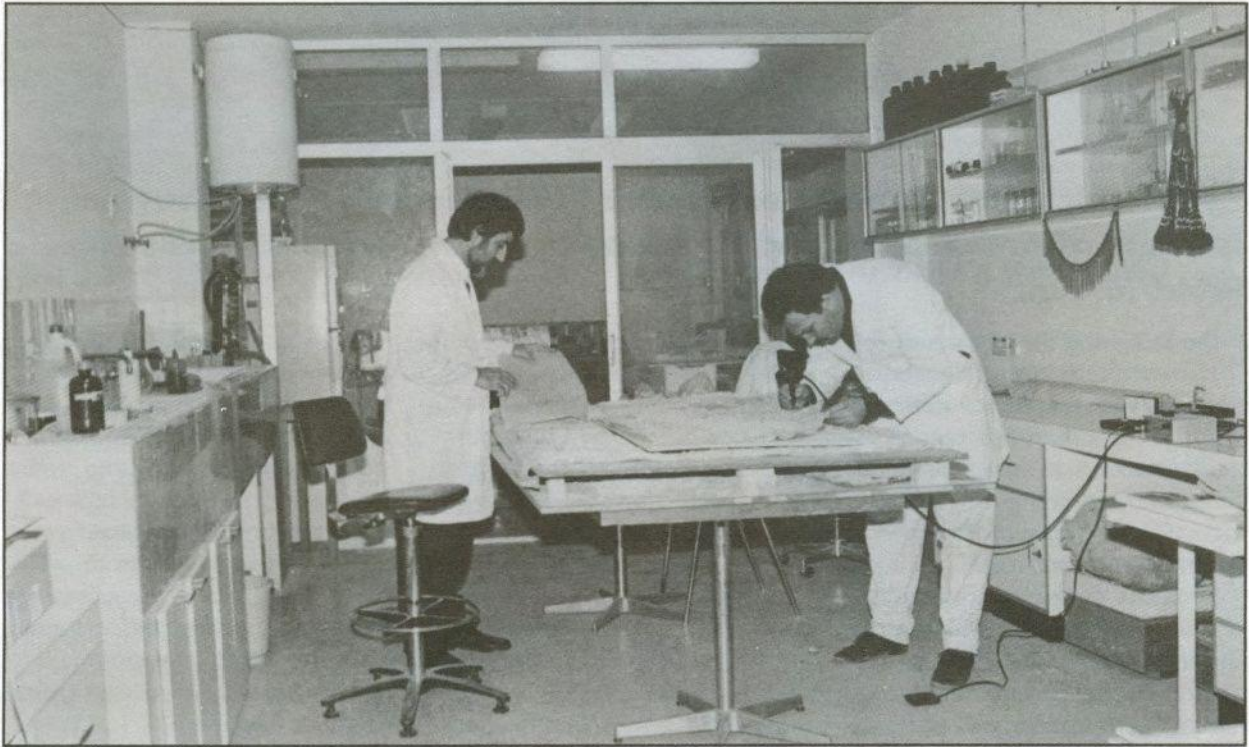
Object endangering activities are not only limited to excavations; they continue in museums which are supposedly protecting and safeguarding objects, and which are mostly, planned and built without consulting conservators/restorers and museologists in the planning phase. Since museums are mainly run by untrained personnel, no professional care and monitoring of climatic and object conditions are executed.

The time is ripe for Jordan to take major decisions for the safeguarding of its national heritage. Presently, Jordan has only a core of trained and qualified conservation/restoration professionals at its disposal, namely:

- one conservation scientist (Ph.D. in conservation science);
- one museologist (M.A., focus on museum pedagogics) who is abroad for the next couple of years to complete a Ph.D. program in museology;
- one laboratory technician in archaeometry (M.Sc. in Geology/Mineralogy);
- two conservators/restorers for practical application of conservation science to archaeological material;
- one foreign expert conservator who is employed at Yarmouk University and mainly financed by the German government.

Five out of the six professionals are working at Yarmouk University, while one is working on a part-time basis at ACOR.

Realizing the need for trained personnel in the field of conservation



Working to conserve mosaic panels in Jordan: skilled and important work.

and restoration, the Institute of Archaeology and Anthropology (IAA) at Yarmouk University by the mid- 1980s had requested foreign assistance in order to establish a Conservation Laboratory, as well as to train staff. This request was filed in 1989 with the Center for International Migration and Development (CIM), based in Frankfurt a.M./Germany.

Founded in 1980, one of CIM's main aims is to assist developing countries in recruiting skilled personnel in order to train local counterparts.

Among the three major programs of CIM - which are all funded by the Federal Ministry for Economic Cooperation and Development (BMZ) - is the so-called Integrated Experts Program. Within this program, experts are recruited for a limited period of time (maximum six continuous years) in order to fill a local gap in experienced staff. The major task of an integrated

expert is to train local counterparts and finally get him/herself replaced by these counterparts.

Integration of the expert in the local legal and socio-cultural system constitutes a feature of this program; thus, integrated experts are subject to the host country's labour laws and are employed by a local institution - be it the government itself, a governmental or semi-governmental agency, or even a local private enterprise. Integrated experts are only sent on request from the concerned country itself.

The Conservation Laboratory Project at Yarmouk University constitutes such an integrated project. This project started in 1992, attached to the Museum of Jordanian Heritage, an integral part of the Institute of Archaeology and Anthropology. The Conservation Laboratory constitutes a separate, independent unit, together with the Archaeometry Laboratory, the

Petra Stone Conservation Laboratory, and the Photographic, Survey, and Drawing Unit. The Conservation Laboratory is now fully operating, a Jordanian counterpart has been trained and is undergoing upgrading, the facilities of the laboratory have been extended, and the necessary equipment and materials for the restoration and conservation of artifacts are at hand.

One major task of the Conservation Laboratory is related to the different excavation activities of the Institute; this includes training students who are participating in excavations in how to excavate artifacts without damaging evidence, how to rescue an artifact (field rescue), and how to transport an artifact safely to the Conservation Laboratory. The Conservation Laboratory is responsible for the restoration and conservation of excavated objects, and for monitoring museum conditions such as climate, humidity, and light in order to deal with any change which

could damage the objects on display. The Conservation Laboratory deals with archaeological and ethnographical material ranging from stone, wood and glass to paper, leather, cotton and silk, which all require specific treatments.

The creation of the new Laboratory Section must be considered as a step in the improvement of the general scientific conservation and restoration situation in Jordan. It provides urgently needed services, as well as study and training possibilities for future professionals from Jordan and the entire region. Courses for archaeology students cover a range of topics, such as "Ancient Technology", "Applied Science", "Metallurgy", "Conservation/Restoration", and "Applied Museology". This curriculum will be

further expanded, so that in the near future a complete M.A. study program in "Conservation, Applied Science, and Museology" can be offered. A study and training program for conservators/restorers and museum personnel is envisaged which can and should be carried out on three levels, as an academic M.A. program, a Diploma (or B.A.?) with a practical focus, or as an upgrading and training program for personnel already on the job.

This is intended to provide qualified local personnel who in future will be responsible for the different sites and museums in Jordan, and thus for the safeguarding of the cultural heritage.

The services of the Conservation Section are accessible to the stu-

dents of the IAA, and also to any person who is professionally engaged in conservation and restoration works.

UNESCO declared 1988 to 1997 to be the World's Decade for Cultural Development. The Laboratory Section, with the Integrated Expert Project at Yarmouk University, should be understood as a contribution to UNESCO's declaration, since only a country which safeguards its cultural heritage will be able to keep its cultural identity.

Efforts will have to continue far beyond the Decade, for as long as cultural heritage exists there will be a need to protect and safeguard it. ■

CARCIP: The Second Phase

By: Helge H. Fischer (Project Director/CARCIP)

The establishment of a new conservation and restoration center in Petra, supported through an ambitious German Technical Assistance project, is now going into its second phase.

The first phase of the "Jordanian-German Project for the Establishment of a Conservation and Restoration Center in Petra (CARCIP)" is about to be completed. This phase, designated as the "build-up" phase, had three aims: to train personnel, to deliver and install most of the required equipment, and to assess the current situation and environment in order to adapt the project to a more com-

prehensive understanding of the situation at hand.

Against this background, the Jordanian and German partners alike feel that this first phase has been a full success. Training has been adapted to the specific needs and priorities of Jordanian colleagues through dialogue and subsequent adjustment, and through such fine-tuning more could be achieved than originally anticipated. Not only do the skilled architects now master highly specialized on-line surveying techniques, but they are also fully in command of a dedicated CAD-planning and designing technique which enables them to draw, modify and archive theme maps and plans that are needed

as the base for the upcoming conservation and restoration campaigns.

The beauty of such computer aided design methods is that drawings can be modified, changed or adapted to any possible need without every time having to redraw the whole map from scratch. Scales, line thickness, color selections, legends, units of measurement and much more can be changed literally at the tip of a finger.

However, there is much more to planning and documenting than data processing: any data acquisition requires a thorough understanding of the subject under investigation, and months must be

spent in the field in order to learn about the object under investigation and to physically record the data.

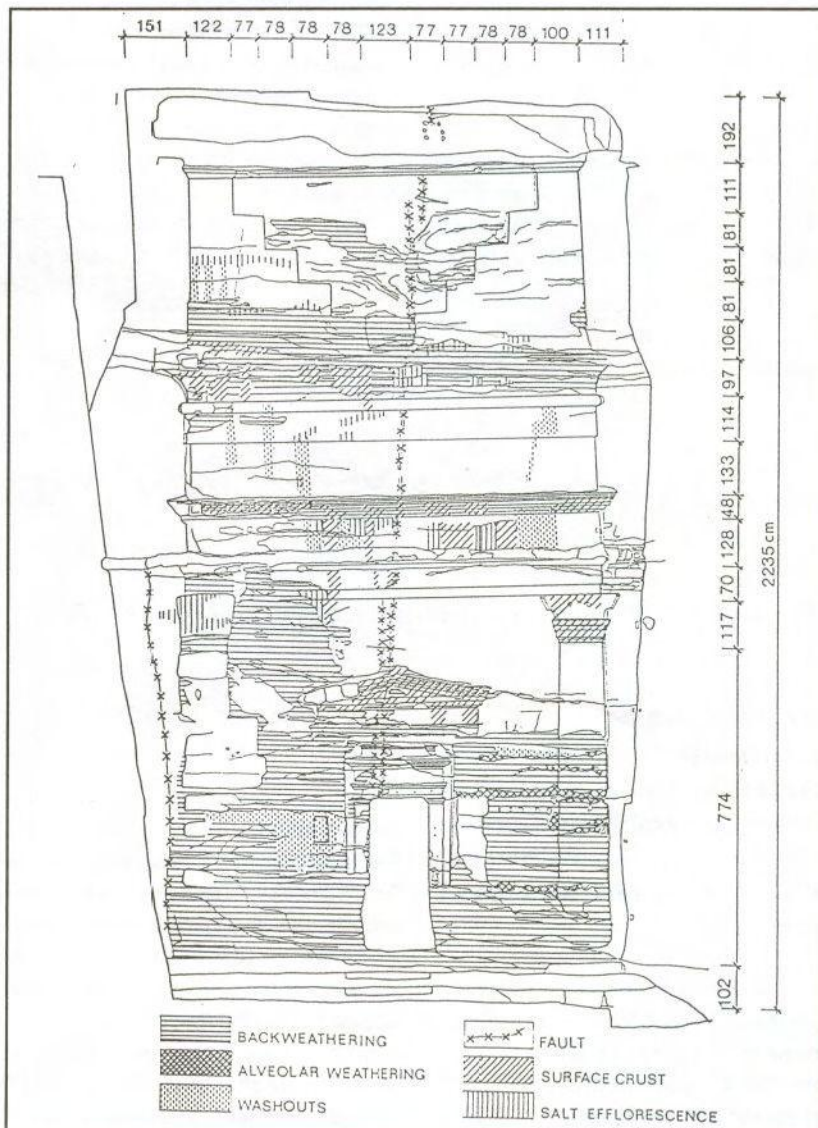
Though not yet entirely completed, the research and testing techniques to assess and quantify rock-properties, a must before any attempt to conserve or restore a stone monument, have also been successfully implemented. In order to avoid duplication of efforts and to make best use of existing resources in the country, these procedures have been very skillfully adapted to the task at hand at Yarmouk University: not only have they made adjustments to cover this new area of specialization through revision of curricula and changes in laboratory facilities - they have, in addition to the inputs given by the project, expanded and invested from their own resources to meet the challenges of being involved in the research required to execute the preservation tasks on stone monuments. It is particularly such indigenous initiatives that the project likes to see and even more readily supports.

There are other initiatives also, such as the idea to enhance cooperation between institutions working in Petra through better exchange of information, and gathering and enhancement of available data, from whatever source, for the benefit of all. For this purpose the National Technical Committee was created as an advisory body; it now convenes under the auspices of the Petra National Trust whenever the need arises and those involved are willing to present their data, which, unfortunately, is not always the case. Additionally the information gathering and pooling, and subsequent processing of information to address the needs of specific clients, is under way at the Hashemite University, where a sophisticated array of work stations, computers and information systems supply

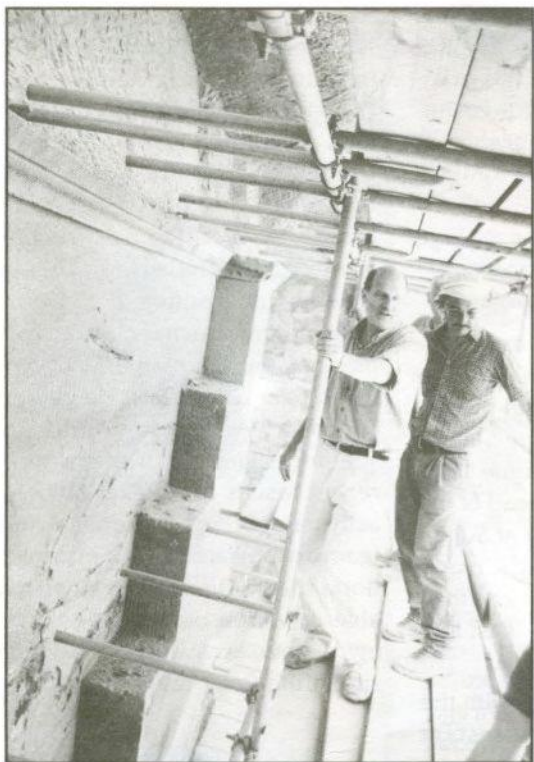
potential customers with any information logged on any Petra-related issues. The project gave some hard- and software assistance to this entity, but so far has drawn from its expertise more than expanded it.

One of the priorities of German technical development assistance to the Hashemite Kingdom of Jordan is the strengthening and upgrading of local institutions, an effort that is also often referred to as

"institution building". Within this framework, GTZ - through German Government funds - is assisting the Jordanian Government in finding a more permanent solution to address the conservation and restoration needs of the rapidly decaying monuments in Petra. After all, it is this very cultural resource that attracts travellers from all over the world and is the back bone of the rapidly growing tourism sector in the country.



Example of the techniques being developed and employed in the preparatory stages of the project. This simplified picture illustrates just two of the aspects of the skills acquired during the first phase of the project: the results of a detailed 3-dimensional survey of tomb 825, employing a laser fitted total station working online with a hooked up notebook, the recently completed damage assessment, and the processing of data and image by means of CAD-programs. (Compiled by Zaki Aslan and May Shaer; graphics and adaption for printing by May Shaer/CARCIP).



Dr. Fischer explaining to visiting scholars a Petra facade at close quarters.

In line with very specific German development policies, the project wants to help the country to take a big step towards freeing the Kingdom from the recurrent need to have to draw again and again on external help and advice for the preservation of its own cultural heritage, through the development of special skills, techniques and a level of judgment that enables the Jordanian people to take full responsibility for the preservation of their monuments by themselves. It is not within the scope of German technical co-operation with Jordan to restore some of its stone monuments according to the state of the art, but rather to show the Jordanian people how to do it and then to let them do it on their own. This is much more time consuming, complicated and sometimes even difficult to accept by the beneficiaries, but - as we see it - this is one of the strongest pillars of a structure of sustainable development.

The establishment of CARCIP is fully on track. In addition to the

training courses, seminars and individual learning sessions executed, and the technology and expertise transferred, the bulk of the equipment needed to do the job has been selected, shipped and installed - most of it in Petra but also at all other locations directly involved in the project. With this, the foundations for the execution of the conservation and restoration of the facades of Petra have been laid.

Now lying ahead is the realization of the plans so meticulously elaborated, and to apply the practical skills and techniques acquired for the benefit of the monuments.

This is the aim of the second phase of the project. No doubt this will also be a learning process, because there is another important dimension in the conservation and restoration of monuments: experience. Not that this was totally lacking but there is a whole array of new procedures and approaches that will have to be tested in the field and then applied in the actual restoration of the monuments. Some are relatively easy, others are more complex. The approach is to proceed from the simple to the complex tasks, from the more easy restoration tasks to the more difficult ones. Thus experience is being generated, and also the self-confidence to find and implement solutions to tackle more difficult tasks, and to make decisions that will not always please everyone but that are dictated by the practical constraints and only fully understood by those shouldering the responsibility for their implementation.

There is more to the second three-year phase of the project: to

develop a more efficient, more dedicated and more independent structural set-up for the Center. Two major steps have already been taken in this direction. First of all securing funds for the construction of CARCIP's own building. This is one of the lessons learned during execution of the first phase: the task at hand is so complex that efforts must be concentrated in one place, and thus it was decided that the new center should have its own building. It is here, where all the conservation and restoration activities from planning, recording, practical execution to documentation and archivation will be concentrated, that the knowledge and experience gained will be kept, and disseminated. And it will be from here where new generations of specialists in this field will emerge. This center may one day form the nucleus for a national conservation and restoration center for monuments and sites, with significance not only for the country but for the entire region, where expertise in conservation issues is sparse.

The second step taken towards a more efficient structural set-up also stems from a lesson learned from the past: there is a consensus of opinion that a new structural set-up, i. e. organizational and administrative, has to be designed in order to free the Center from current constraints and bottle-necks related to governmental procedures and civil service regulations.

Thus, the second phase of the project, designated the "execution phase", will essentially comprise: a step-by-step execution of actual conservation and restoration measures, from simple to more complex tasks, the construction of a dedicated building near Petra, and the implementation of a new structural set-up for the Center with its own sources of funding and a large measure of independence. ■

(continued from page 1)

would like to point out a few of them. In August a group of six theologians who received scholarships from the Protestant Church of Germany (EKD) to travel in the Holy Land spent - as part of their scholarships - two weeks in Jordan. On their study trip they visited archaeological sites and learned about the prehistory and history of this region. It was a very successful stay, thanks also to the assistance and help of the Department of Antiquities, Dr. Fischer from the Jordanian-German Project for the Establishment of a Conservation and Restoration Center in Petra, and our American, British and French colleagues.

In July, the president of the German Parliament (Bundestag), Prof. Dr. Rita Süßmuth, accompanied by a delegation of members of Parliament, government officials and journalists, visited Jordan. Upon the invitation of H. E. Dr. Saleh Irsheidat, Minister of Tour-

ism and Antiquities, she visited Petra. We had the honour to guide her through the "Rose City". On this occasion she also visited the Jordanian-German Project for the Establishment of a Conservation and Restoration Center in Petra, where she was informed about the development of the project by Mr. Zaki Aslan, one of the specialists working in this project.

We also had the pleasure to organize a lecture in cooperation with the Friends of Archaeology, under the patronage of the embassy of the Sultanate of Oman, for our colleague Prof. Dr. Moawiyah M. Ibrahim (Head of the Department of Archaeology at Sultan Qaboos University in Muscat, Oman). He spoke to an audience of more than sixty people about "Oman - Past and Present".

In September we organized, with the Council of the German Protestant Church in Amman, an evening and a

lecture ("Cult and Religion in the early Neolithic of the Middle East") at our institute. Also in September we led a Friends of Archaeology group of more than a hundred people on a trip to Umm Qais and Khirbet ez-Zeraqon. In Umm Qais the group was welcomed by Prof. Dr. Adolf Hoffmann from Cottbus University/German Archaeological Institute. Prof. Hoffmann is heading the archaeological excavations of the German Archaeological Institute at Umm Qais. He guided the Friends of Archaeology through the site and shared with them the most recent results of his excavations. The activities of Prof. Hoffmann and his team are affiliated to our institute. We hope that in the next year we will be able to widen our activities by starting a new excavation at a Neolithic site in the Petra region. ■

Donors to the library



German Embassy, Amman (Jordan); German Foundation for International Development, Bonn (Germany); Jordanian-German Project for the Establishment of a Conservation & Restoration Center in Petra (CARCIP), Amman (Jordan); Dr. Donny G. Youkhanna, Assistant Director General for Technical Affairs, Department of Antiquities and Heritage, Baghdad (Iraq); Goethe-Institute, Amman (Jordan); Konrad-Adenauer-Foundation, Amman (Jordan); Center d'Études et de Recherches sur le Moyen-Orient Contemporain (CERMOC), Amman (Jordan); Institut Français d'Archéologie du Proche-Orient (IFAPO), Amman (Jordan); American Center of Oriental Research (ACOR), Amman (Jordan); Friedrich-Ebert Foundation, Amman (Jordan); Dr. Yuval Goren (Israel Prehistoric Society); The Institute of Archaeology and Anthropology, Yarmouk University, Irbid (Jordan); Friends of Archaeology, Amman (Jordan). ■