

Advisory Board

Ofer Bar-Yosef
Harvard University

Jacques et Marie-Claire Cauvin
Institut Préhistoire Orientale, Jalès

Frank Hole
Yale University

Marie-Louise Inizan
C.N.R.S., Paris

Peder Mortensen
Det Danske Institut i Damaskus

Hans J. Nissen
Freie Universität Berlin

Mehmet Ozdoğan
University of Istanbul

Table of Contents

Editorial

Contribution

Doss F. Powell & Jay Gervasoni: A Brief Note on the
Projectile Points from Ghwair I, Jordan

Field Reports

Donald O. Henry, Carlos Cordova, Joseph E. Beaver, J. Joel
White & Heather Ann Brauer: Investigation of the Early
Neolithic Site of Ain Abu Nekheileh (J701), 1999 Season

Adamantios Sampson & Janusz Kozlowski: The Cave Of
Cyclope in the Northern Aegean: A Specialized
Fishing Shelter of the Mesolithic and Neolithic Periods.

Makoto Arimura: The Lithic Industry of the Final Pottery Neolithic:
New Evidence from Tell Ain el-Kerkh, Northwest Syria.

Zeidan Kafafi, Isabella Caneva & Gaetano Palumbo: The Neolithic
Site of es-Sayyeh: Preliminary Report on the 1999 Season.

Klaus Schmidt: Boars, Ducks, and Foxes – the Urfa-Project 99.

Avraham Ronen, Shulamit Milstein & Modi Lamdan: The Spatial
Organization of the PPNB Site Nahal Reuel, Israel.

Hans-Dieter Bienert, Dieter Vieweger & Katrin Bastert:
The Late Neolithic Site of Esh-Shallaf, Northern Jordan.

Hans Georg K. Gebel & Bo Dahl Hermansen: Ba'ja Neolithic
Project 1999: Short Report on Architectural Findings

Announcements

New Dissertation

Upcoming Conferences

Editorial Board

Hans Georg K. Gebel
Gary O. Rollefson

temporary address until May 15th, 2000:

NEO-LITHICS

c/o Gary O. Rollefson

Department of Anthropology

Whitman College

Walla Walla, WA 99362, USA

Email: rollefgo@whitman.edu

after 15th of May, 2000: gorikr@t-online.de

Orders

ex oriente e.V.

attn. Klaus Traulsen

c/o Free University of Berlin

Hüttenweg 7, 14195 Berlin, Germany

Fax 0049 30 8382106 or 7959937

Email: ktraulsen@compuserve.com

Published and distributed by ex oriente, Berlin

ISSN 1434-6990

NEO-LITHICS 3/99

A Newsletter of

Southwest Asian Lithics Research

Acknowledgements: We would like to specially thank all of our staff members of the 1998 and 1999 seasons. We also extend our gratitude to Dr. Wajih Karasneh, Inspector of Irbid, who help us very much in organizing the logistics of the excavation. Many thanks to Dr. Ghazi Bisheh, then the Director General of the Department of Antiquities of Jordan, for granting the permission to excavate at esh-Shallaf. Further, we also thank Mrs. Lina Khreis and Mrs. Asma Sibdeh, our local representatives of the Department of Antiquities, for their help and support. All of them made the archaeological fieldwork a success. Last but not least, we express our gratitude to Prof. Mittmann, who discovered esh-Shallaf and inspired the excavation, and to Dr. Jens Kamleh for allowing us access to his yet unpublished research on esh-Shallaf.

Bibliography

- Bastert K., Bienert H.-D. and Vieweger D.
1999 Late Neolithic Esh-Shallaf 1999: Second campaign of excavations. *Occident & Orient* 4(1-2): 50-51.
- Bienert H.-D. and Vieweger D.
1998 Esh-Shallaf – a Pottery Neolithic Site in Wadi Shellale. *Occident & Orient* 3 (2): 13-14.
- n.d. a Esh-Shallaf. *American Journal of Archaeology* 1999 (in press).
- n.d. b Archaeological Excavations at the Late Neolithic Site of esh-Shallaf: A Preliminary Report on the 1998 Season. *Annual of the Department of Antiquities of Jordan* 43 (in press).

Ba'ja Neolithic Project 1999 : Short Report on Architectural Findings

by Hans Georg K. Gebel¹ and Bo Dahl Hermansen²
¹Institut für Vorderasiatische Altertumskunde,
Free University of Berlin;

²Carsten Niebuhr Institute, Copenhagen University

A second season of large-scale excavations was carried out in April-May 1999 for 5 weeks at Neolithic Ba'ja, southern Jordan, in cooperation and with the support of the Department of Antiquities, Amman. Under the directorship of Hans Georg K. Gebel, assisted by Bo Dahl Hermansen as deputy director, a team from Germany, Denmark and Finland explored more 200 m² of Late PPNB architecture of this remote Neolithic village in the rugged sandstone mountains north of Petra. The project continues under the sole auspices of *ex oriente* at *Free University of Berlin* (for the previous season *cf.* Neo-Lithics 3/97), and maintains a collaboration with the *Carsten Niebuhr- Institute at Copenhagen University*¹.

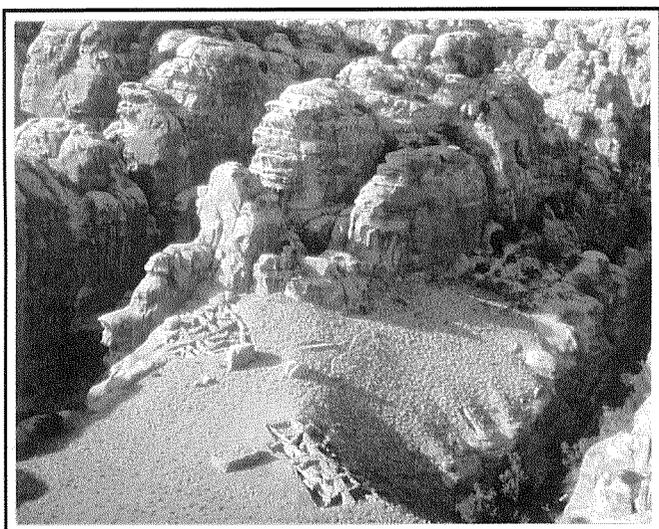


Fig. 1. Neolithic Ba'ja: bird's eye view of the central parts of the settlement, with excavation Areas C (edge) and D (summit area).
<photo by B. Borowski>

Ba'ja increasingly provokes discussion among Neolithic prehistorians about its unique setting (Fig. 1): it is the only early village found in such a protected setting difficult to access. Ba'ja continues to fuel arguments that already by the 7th millennium B.C. territorial conflicts might have caused raids in sensitive environments like those Early Holocene Greater Petra, and such conflicts affected settlement pattern organization and the choice of site location. Competition for restricted habitats, even those degraded by human impact in this period of dense population, is our explanation for the dramatic location of the site. But we certainly do not expect that Ba'ja is "unique": we anticipate more LPPNB villages like Ba'ja in the rugged Greater Petra area, and we will start this coming April to search for them.

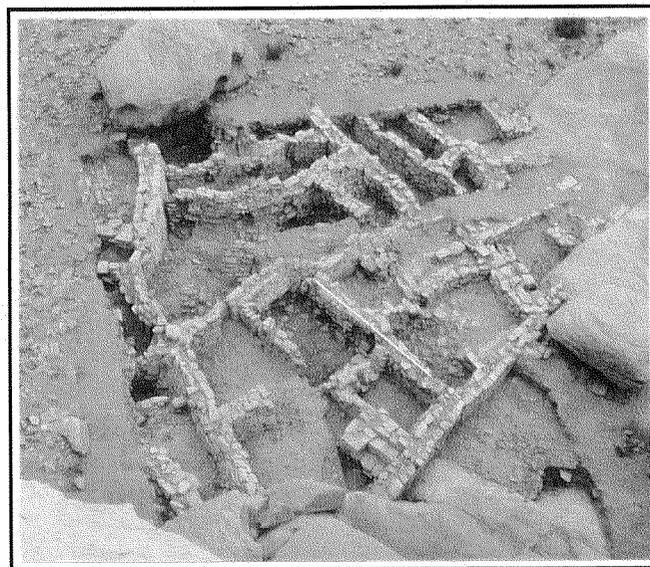


Fig. 2. Neolithic Ba'ja: bird's eye view of Area D.
<photo by B. Borowski>

Ba'ja also is a production centre for a widespread prestige good that was traded along the Rift Valley some 9000 years ago: sandstone rings are represented by broken finished products as well as by their production waste and as stored pre-forms. As in the flint industry, a division of labour can be seen in the production stages.

Angela von den Driesch (Munich) reports from the animal bone analysis that hunting for fur is in evidence (leopard, foxes, hyrax).

General Features of the Architecture

The groundplan of the settlement so far implies an "egalitarian" social structure: multi-roomed "courtyard" houses densely neighbour each other in a pueblo-type manner (Fig. 4), without evidence of special buildings within the 400m² excavated so far. Access to most rooms was probably by ladders through openings in the ceilings and roofs, for only rarely were rooms connected by doors and windows.

Outer walls were shared and appear to have had no doorways. The general house plan is organized around a large irregularly shaped central room or courtyard, which would have been the only room suitable for most household activities. (In two-storied houses this central space could have been roofed in the basement and open in the second floor). However, this space was surrounded on three or four sides by smaller rooms that could hardly have served any other function than storage (in the basements). The plans we have mostly represent the basements or cellars, whereas many social and productive/processing activities would have taken place on the second floor. There is some evidence that the plan of the second floor partly followed that of the ground floor. Some rooms within houses, both on the ground floor and the first floor, were connected by shallow doorways and other kinds of openings. In the case reported below (*cf.* 3), doorways at the ground floor and first floor were connected by a built staircase: otherwise houses are expected to have functioned with a system of ladders connecting storeys.

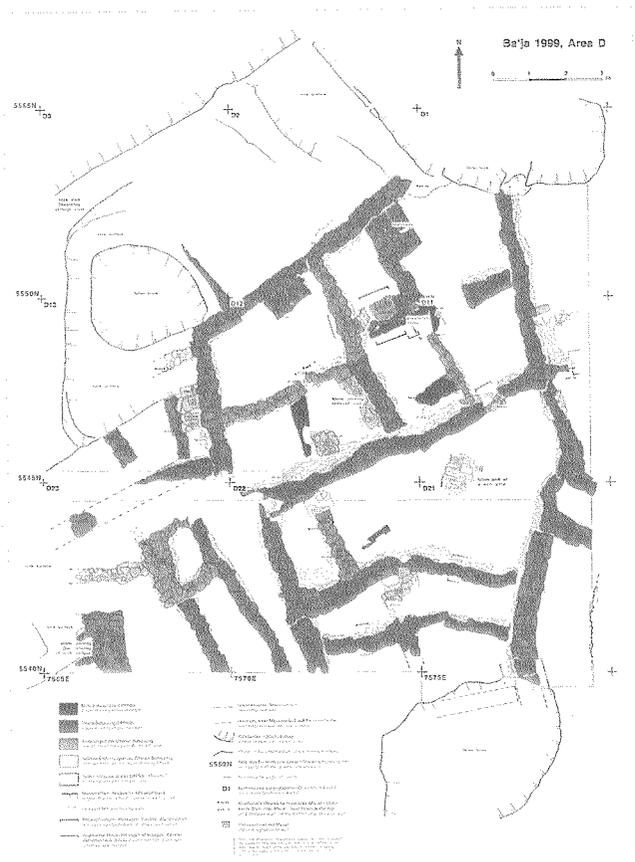


Fig. 3. Groundplans excavated in Area D in 1999. <field record by B. Borowski, archaeological interpretation: H.G.K. Gebel and B. Borowski>

All evidence so far allows us to expect extended families living in the houses. One of us (HGKG) calculates that 50-60 families lived in Ba'ja (provided that only half of the Ba'ja slopes were occupied by densely built houses, 0.6-0.7ha). Depending on child mortality, the proportion of family members herding outside, etc., this would result in some 400-500 people living in Ba'ja.

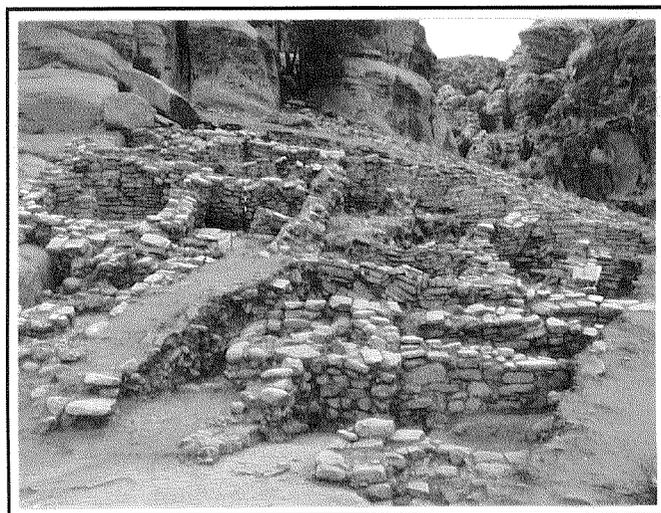


Fig. 4. Neolithic Ba'ja: terraced housing in Area D from the west. <photo by H.G.K. Gebel>

Special Results of Architecture

1) On the summit of the site, excavation (Figs. 2-4) in the newly opened Area D (220m²) exposed the basement of a building of more than 80m²; staircases in one of the northern rooms led to a second floor or onto the roof. A large room or courtyard of some 6 x 2.5-4.5m was situated in the lower part of the building that seems to have rested on two levels. Rooms surrounded this large room/courtyard on three sides. One of them contained the *in situ* remains of a workshop and/or storeroom of a sandstone ring manufacturer (mainly the raw disks). West of this building and

partly founded on bedrock, parts of a neighbouring building were exposed. The outer walls of the building run downslope and are shared by the neighbour's property. Like Area C (Gebel *et al.* 1997), we did not find evidence for open spaces or lanes, and only domestic architecture with no evidence of special buildings was encountered. All communication, traffic and domestic and manufacturing activities must have taken place via the (terraced) roofs. A huge sandstone block (25-30 tons) at the southern edge of Area D fell on and sank into the ruin.

2) The architecture of Area D (Figs. 2-4) is more spacious than the groundplans in Area C (Gebel *et al.* 1997), and it shows different principles of spatial order. The major walls, including the outer walls of the building(s), run downslope, thus providing better stability than walls that follow contour lines (cf. the terrace walls in Area C). Probably the inhabitants experienced during their occupation of the steep slopes of Ba'ja that walls running perpendicular to the contour lines remained stable longer, and that the (anyhow instable) room walls set between them allowed for more flexible groundplans. Area D has a main or original building phase with two events of groundplan changes or repairs that did not occur throughout the building. Below the main phase an earlier building appears, most likely having a different groundplan and that deliberately was cut to create a new building level.

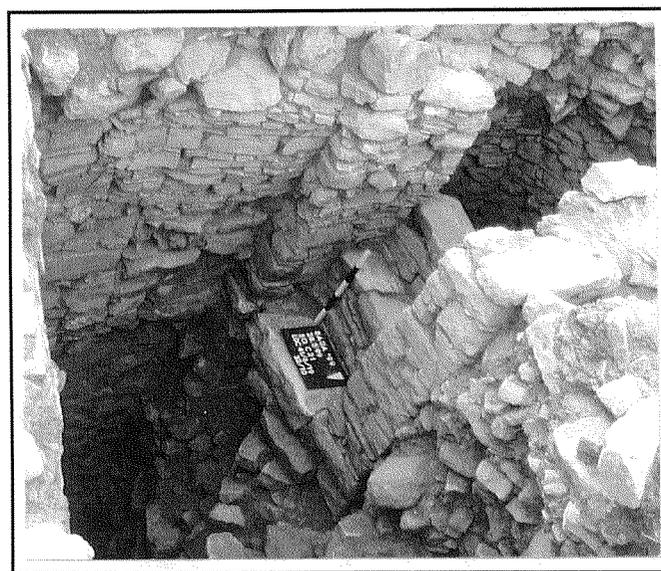


Fig. 5. Neolithic Ba'ja: stairwell in Area C with walls preserved up to 4.16m. <photo by H.G.K. Gebel>

3) Continued excavations in Square C20(-21) exposed part of a stairwell (Figs. 5-6). The walls associated with this room reach a height of 4.16m. The preserved remains include an earlier Phase I and a later Phase II. One wall (Wall 13) was founded directly on the soft virgin soil. A stone layer served as a platform for the foundation of neighbouring Wall 6; the lowest area framed by the two walls was covered by a red-stained plaster-floor (Locus 45). Only the lower courses of the walls were connected by bridging-stones, and from the 9th course Wall 13 leans on Wall 6. A considerable quantity of fragments of red painted plaster have been found in the collapse material, suggesting that the exposed face of the walls was originally coated by a ca. 2-3 cm thick layer of coarse plaster-bedding with a ca. 2-5 mm thick layer of fine red stained plaster. Thus, it may be suggested that the stairwell to which the walls belong possessed red painted walls.

After an unknown interval of abandonment of this part of the building, the walls were leveled and reused as a foundation for the later Phase II. Again, only the lower parts of the wall were connected by bridging stones. Ca 1.80 m above floor level Wall 6 becomes narrower, leaving a shelf which is interpreted as support for the beams of an upper floor. A buttress (Locus 21), leaning on Wall 6, is also understood as a support for beams. Additionally, a staircase (Locus 41) occupied the space between this buttress and Wall 19. This staircase was founded at floor level and preserved three steps high. However, spaces in Wall 6 and Wall 19 indicate that additional steps must have been included in the

original construction. The staircase originally connected the doorway on the ground floor with the one on the first floor. The three preserved steps of the staircase seem to be supported on a series of three parallel risers, each one stone wide and supporting only the front part of the step. The space south of the staircase contained what may be the collapsed remains of two additional steps. There is evidence (supports in the walls) that these two additional steps in the original scheme were supported by a wooden construction.

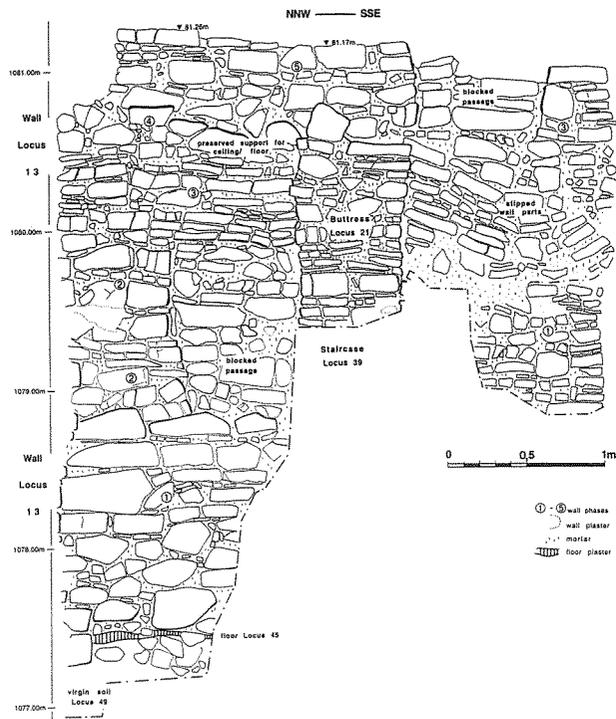


Fig. 6. Eastern wall in the stairwell of C20.
<field record by B. Dahl Hermansen and J. Baumgarten,
archaeological interpretation: B. Dahl Hermansen>

4) First results from the *Wilhelm Dyckerhoff Institut für Baustofftechnologie* (Wiesbaden) on plaster materials (floor and wall plaster) show more varied mixtures and technologies than expected. The analysis programme on plaster samples deserves intensive care, since we deal here with a high potential for insights into craft specialization and thus into social information.

Other Major Results of the Season

1) For the first time we can report a Neolithic staircase outside the housing areas: a rock cleft that leads onto the settlement from one of the rare spots from which the site is accessible from the *siq* (gorge) below was furnished with stone steps. These stairs lead to a wide, flat part of the gorge's bank that limits the site in the south. On the way up, it also led to a source of (banked) sandstone of the type that was used in the construction of the LPPNB houses.

2) The topographic situation of the above mentioned *siq*'s bank, the existence of a 90° change of direction of the *siq* that damped the energy of waters flushing down the gorge, and the subsequent narrowness (1.5m) of the gorge created an ideal situation for storing water by building a dam. (About 150-180m³ of water could have been stored if the barrage wall was only 1m high). A similar topographic situation is attested further up the gorge, and the possibility of Neolithic water storage through the use of 1-2 dams in this otherwise arid area is a distinct possibility.

3) We continued the programme of test units that followed specific questions related to the site's periphery, its internal spatial organization and its control and defensibility, and a considerable amount of data were collected. It became clear this season that Ba'ja is indeed in a protected setting, but it is also difficult to defend since any aggressor could have easily blocked the inhabitants from access to water and from escaping either up or down the gorge.

4) Large amounts of debris from a sandstone ring workshop were thrown down the above-mentioned staircase cleft in Neolithic times, after it went out of use. Together with the workshop found in D12, we now have evidence for a more complex *chaîne opératoire* in the sandstone ring production than previously discussed (Gebel *et al.* 1997: Pl. 7). The published tree analysis has been confirmed, but the working stages appear much more diversified and show almost "individualised" features, including failure management.

5) We found four finished but unused celts (and one that was unfinished) built into a house wall in Area D. Their sizes are among the largest ever found in the southern Levant. This finding leads to the question of possible magic practices using walls as depots. At Basta we found similar evidence, where unused manos (as well as a human infant!) were included in the construction of walls. Since we normally do not remove walls in archaeological excavations, such evidence appears only when preserved tops of ruined walls are exposed.

Next Season

During our next season in coming April/ May we plan to concentrate on the following questions:

- Excavation of the lower stratigraphy in Area D: Will we find evidence for the earliest settlement history in this upslope situation that differs from the latest occupation?
- Will we find in Area D the burials suggested by the human remains and ornaments found in a sediment trap in the gorge below?
- More exposure of architecture: Will the structures give evidence for buildings that served other than domestic functions?
- Soundings in Area B ("The Saddle"): Will we find here the expected communal space of the settlement?
- How were the extreme parts of the Ba'ja slopes used? Can we identify more traces of architecture that slid down the slopes?
- Investigations of the southern gorge's topography: can we find evidence to test our hypothesis on water storage by damming the gorge?
- Can we locate a "second" Ba'ja in the Petra area? .

Acknowledgements: We thank Ghazi Bisheh, former Director General of the Department of Antiquities for his generous support of the excavation, as well as Muhammad Ismael al-Salameen, the government representative, for his good, efficient, and trusting collaboration during the field work. We also express our thanks for the considerable assistance we received from Zeidoun al-Muheisen (Petra Regional Council), Suleiman Farajat and Muhammad Shobaki (Dept. of Antiquities, Petra-Section), Helge Fischer (German Association for Technical Cooperation, Petra), Sheikh Ibrahim al-Amareen (Beidha), Mukhtar Eid Stejjan Salim al-Amareen (Beidha), Wendy Botham and Eid Nawafleh (Petra Moon Tourism Services, Petra), Zeidan Kafafi (Yarmouk University, Irbid), and Hamzeh Mahasneh (Mu'tah University, Kerak).

Warm gratitude is extended to the participants of the 1999 team who shared the severe working and living conditions: Jürgen Baumgarten, Lisa Hove Beard, Boris Borowski, Hans Jerg Erlenmeyer, Vicki Glar, Pernille Bangsgaard Jensen, Mirrka Mikontytär Junnonen, Kathrin Julia Sachsenberg, Klaus Traulsen, Peter Brödlau, John Deußing, and Henrik Jansson.

The project was financed by *ex oriente* with support from: the Carsten Niebuhr Institute, Copenhagen University; Dyckerhoff Zement GmbH, Wiesbaden; Heidelberger Zement AG, Heidelberg; Beton Marketing Ost, Berlin; Ernst-Reuter-Gesellschaft der Förderer und Freunde der Freien Universität Berlin; Renate Hölken-Brödlau, Höxter; Manfred Lindner, Nürnberg; Wolfgang Kapp, Grenzach-Wyhlen; and Klaus Niepelt, Berlin. Material support was received from: Agfa Deutschland, Ilford Imaging GmbH, FujiFilm, Hamzeh Mahasneh, Hans J. Nissen, Helge Fischer, Hartmut Kühne, and Ute Franke-Vogt.

We welcomed as visitors on the dig: Karin Bartl, Charlott Hoffmann Jensen, Lea Kalszan Rehhoff, Bernd Müller-Neuhoff, Ingolf Thuesen, Gary O. Rollefson, Muhammad Shobaki, and the team and directors of the Utah University project digging near al-Bedul Housing.

We acknowledge with deep appreciation and sincerity the warmth of the hospitality and friendship of our workmen from the al-Amareen, al-Bedul, and al-Seyi'idin for their great efforts in the excavation. Respectfully, we dedicate our work to the Jordanian people and their heritage.

Note 1: The Carsten Niebuhr-Institute now has established -in cooperation with the Department of Antiquities, Amman- a new excavation at Shaqarat Mazyad [directed by Ingolf Thuesen, field directors: Lea Rehloff Kaliszan & Charlott Hoffmann Jensen, Bo Dahl Hermansen (survey)], a small Middle PPNB settlement found by D. Kirkbride (Gebel 1988) endangered by road building some 4 km north of Ba'ja, where the remains of round houses and rich layers of organic material were uncovered August 1999.

References

- Gebel H.G.K.
1988 Late Epipalaeolithic- Aceramic Neolithic sites in the Petra-Area. In: A.N. Garrard & H.G. Gebel (eds.), *The Prehistory of Jordan. The State of Research in 1986*. British Archaeological Reports-International Series 396.1: 67-100. Oxford, B.A.R.
- 1998 Die Petra-Region im 7. Jt. v. Chr.. Betrachtungen zu Ausbildung und Auflösung einer frühneolithischen Siedlungskammer. In: U. Hübner, E.A. Knauf und R. Wenning, *Nach Petra und ins Königreich der Nabatäer. Notizen von Reisegeführten. Für Manfred Lindner zum 80. Geburtstag*. Bonner Biblische Beiträge 118: 1-8.
- Gebel H.G.K. and Bienert H.-D. mit Beiträgen von Krämer T., Müller-Neuhof B., Neef R., Timm J., and Wright K.I.
1997 Ba'ja Hidden in the Petra Mountains. Preliminary results of the 1997 investigations. In: H.G.K. Gebel, Z. Kafafi & G.O. Rollefson (eds.), *The Prehistory of Jordan, II. Perspectives from 1997*. Studies in Early Near Eastern Production, Subsistence, and Environment 4: 221-262. Berlin, ex oriente.

Notes and News

Note on the Department of Mediterranean Studies in Rhodes

Adamantios Sampson (Dept. of Mediterranean Studies, Rhodes)

The Department of Mediterranean Studies was founded in Rhodes in 1997 and began its function in the academic year 1999-2000, when it received its first 150 students. The principal purpose of the Department is to promote and co-ordinate comparative and national studies on the society, politics and history of the Mediterranean countries. Particular attention is given to the study of

a) the ancient civilizations through the sciences of archaeology and archaeometry; b) the structure, development and interchange of the languages, especially in the south-eastern part of the Mediterranean (Greek, Arabic, Turkish and Hebrew); and c) the modern economic, social and technological development of the Mediterranean countries, the relations among them and with Greece and the other countries of the European Community. The department develops special institutional links with universities and institutions in Greece and other Mediterranean countries.

It is to the Department of Mediterranean Studies that the recently established Archaeological Sciences Institute of the Aegean of Alexandria (A.S.I.A.A.) belongs. The official presence of ASIAA in Alexandria will be that of a scientific mission. The aims of the ASIAA will be the following: a) to undertake joint archaeological excavation and surface survey activities with appropriate authorities in Egypt and the large Arab world in the Middle East; b) to apply archaeological sciences (new methods of dating, analysis of finds, archaeoastronomy etc); c) to undertake ethnoarchaeological research in the Greek area and seek of ways and means of communication and interaction of peoples; d) the organization, coordination and realization of post-graduate studies in collaboration with universities in Middle East and Europe; e) the organization of seminars on educational and research character, as well as the occasional realization of symposia and international conferences in the above themes.

Announcements

The Cyprus American Archaeological Research Institute (CAARI) has established a new page on its web site. This page will list exhibits of Cypriot artifacts, lectures on Cypriot archaeology and conferences with sessions or papers devoted to Cypriot archaeology. Any knowledge of exhibits, lectures or conferences related to Cypriot archaeology would be welcome. Please send any information to ddetr@aol.com.

The URL of the CAARI site is: <http://www.caari.org>

The URL of the new page is

:<http://www.caari.org/conferences.html>

from: David Detrich, CAARI web editor

Upcoming Conferences

Magic Practices in the Near Eastern Neolithic

a Mini-Symposium organized by Hans Georg K. Gebel & Charlott Hoffmann Jensen

in the framework of the

2nd International Congress on the Archaeology of the Ancient Near East (Copenhagen, 23-27 May, 2000)

Addresses of the Mini-Symposium:

Charlott Hoffmann Jensen, Carsten Niebuhr- Institute, University of Copenhagen, Snorresgade 17-19, DK- 2300 Copenhagen
tel. +45 35 32 89 08, fax +45 35 32 89 26, email: charlott@hum.ku.dk

Hans Georg K. Gebel, Institut für Vorderasiatische Altertumskunde, Free University of Berlin, Hüttenweg 7, D-14197 Berlin
tel. +49 30 83856747 or 7959937, fax +49 30 7959937, email: hggebel@zedat.fu-berlin.de

Address of the *2nd International Congress on the Archaeology of the Ancient Near East* (Copenhagen, 23-27 May, 2000):

ZICAANE, Carsten Niebuhr- Institute, University of Copenhagen, Snorresgade 17-19, DK- 2300 Copenhagen, fax +45 35 32 89 26, email: Zicaane@coco.ihl.ku.dk

ex oriente assists publications and projects in early Near and Middle Eastern technological and subsistence research in their sociocultural and palaeoenvironmental contexts.

The **Studies in Early Near Eastern Production, Subsistence, and Environment (SENEPSE)** are a new series devoted to monograph publications on the palaeoeconomy of the prehistoric Near and Middle East (technologies, production and subsistence modes, palaeoenvironmental studies, human palaeoecology). The series promotes interdisciplinary approaches, especially with earth and palaeoenvironmental sciences as well as ethnological contributions to the understanding of early man phenomena. General editors of the *Studies* are Hans Georg K. Gebel and Reinder Neef. From Volume 5 onwards SENEPSE is a refereed series.

Enquiries on / applications for an **Associated Membership** in *ex oriente* can be made to the address below.

ex oriente e.V.

Institut für Vorderasiatische Altertumskunde, Freie Universität Berlin
Hüttenweg 7, D- 14195 Berlin

Tel. x49 30 838-6747 or 7959937 - Fax x49 30 838-2106 or 7959937

Email: ktraulsen@compuserve.com - hggebel@zedat.fu-berlin.de

homepage: <http://vereine.freepage.de/ex-oriente/>

Postbank Berlin, *ex oriente e.V.*, Acc. No. 767959-106 (Bank Code 10010010)

