

**GADARA OF THE DECAPOLIS
PRELIMINARY REPORT ON THE
1990 SEASON AT UMM QEIS***

by
Thomas Weber

1990 was the fourth year of excavation since field work was resumed by the German Protestant Institute for Archaeology, Amman, at Umm Qeis in 1986.¹ Due to the prevailing political destabilization of the region, only two German teams worked at the site. The Galleries of Ancient Sculpture of the City of Frankfurt/Main sent an expedition, headed by P.C. Bol, in order to finalize work at the so-called *nymphaeum* in March 1990. In July, the author conducted a brief survey on behalf of the German Protestant Institute for Archaeology, Amman, aimed at investigating the city's water supply through Qanawat al-Fir'aun.² The excavation season directed by A. Hoffmann, German Archaeological Institute, Berlin, was cancel-

led due to the Gulf conflict in the late summer of 1990.

In February 1990, the skeletal remains found in the tombs of the Byzantine crypt of the *hypogaeum*³ underwent anthropological analysis by W. Henke and D. Butz of Mayence University, Germany. After this, all human bones were reburied in tomb 12 of the *hypogaeum* entrance.

Again, the Ministry of Foreign Affairs of the Federal Republic of Germany provided financial funds in order to complete the restoration of the Ottoman mansion of Beit ar-Rusan, which was opened as a regional museum on November 7th, 1990. In close cooperation with the German Protestant Institute for Archaeology, Amman, the project

* As in previous years, all German Institutions enjoyed many benefits by cooperating with the Jordanian Department of Antiquities and the people of Umm Qeis. As always, the projects were generously promoted by Dr. Ghazi Bisheh, former Director General of the Department. Again H.E. the former German Ambassador to Jordan, Dr. Herwig Bartels, was an indefatigable patron of the Jordanian-German Umm Qeis activities. Specially for the research on the Qanawat, the author owes thanks to the Jordanian Water Authority for making data concerning spring-flows in the area of Umm Qeis and the region of Beni Kenane available to us.

The field work of the two projects was assisted by the Inspector of Antiquities, Mr. Omar Reshaidat. The following personnel joined the mission of the Liebieghaus Frankfurt/M in March 1990: F.-J. Reidel, G. Schneider, S. Vry and S. Wolf. On behalf of the German Protestant Institute for Archaeology, Amman, the following individuals participated in the survey of 1990: G. Beggerich, A. Berlejung, K. daCosta, E. Dobberahn, C. Frevel, V. Hoefelmann, M. Konstantinou and F.-J. Reidel.

In the meantime, the author completed his term of duty as director of the German Protestant Institute of Archaeology, Amman, thus passing the responsibility of administration and scientific planning of the Umm Qeis projects on to his successors. To all of the above and to the people of Umm Qeis he extends his gratitude for their hospitable cooperation in the project. He would also like to give sincere thanks to Helga Seeden

(American University of Beirut) and Kate daCosta (Sydney University) for editing the English text of this report. Unless otherwise credited, the photographs were done by the author. In the footnotes of this article, the following abbreviations are used:

'Gadara 1986-88': P.C. Bol, A. Hoffmann, T. Weber, O. Dussart, P.W. Herz, S. Kerner, L.A. Maxwell and K. Rielly, 'Gadara in der Dekapolis. Deutsche Ausgrabungen bei Umm Qeis in Nordjordanien 1986 bis 1988. Vorbericht', *Archäol. Anzeiger* (1990), p. 193ff.

'Gadara 1989': T. Weber, A. Hoffmann, B. Mershen and K.A. daCosta, 'Gadara of the Decapolis. Preliminary Report on the 1989 Season at Umm Qeis', *ADAJ* 34 (1990), p. 321ff.

'Gadara, Guide': T. Weber and R.G. Khouri, *Umm Qeis - Gadara of the Decapolis. A brief Guide to the Antiquities*. Amman, 1989.

1. Cf. T. Weber, 'Gadara of the Decapolis. A Summary of the 1988 Season at Umm Qeis', *ADAJ* 32 (1988), p. 349ff.; *idem*, 'Gadara of the Decapolis. A Summary of the 1986 and 1987 Seasons at Umm Qeis', *ADAJ* 33 (1987), p. 531ff.
2. *EncIsI¹ II* (London 1925), col. 773f. s.v. Qanaṭir Fir'awn.
3. Cf. *ADAJ* 1988 *loc. cit.*, p. 349ff.

was run, as previously, under the supervision of the Jordanian architect Ammar Kham-mash.

The So-called "Nymphaeum" or Street Monument of Gadara

In spring, the Liebieghaus expedition (Frankfurt am Main) undertook excavations under the directorship of P. C. Bol in order to obtain further evidence for the ancient purpose to the building formerly called the "nymphaeum".⁴ This interpretation had to be discarded since no sufficient installation for water supply or sewage was uncovered in the environs of the monument. A piping system under the basalt pavement of the *decumanus maximus* had already been found in 1989,⁵ but it does not provide any distributor for supplying the monument. On a sand layer in a sondage opposite the building, a marble torso of a Satyr (Pl. III,3) was uncovered. Evidence from this trench proved that the building did not mark a street junction. Another test was dug at the northern colonnade of the street, to the west of the monument. Here two column bases, standing on square piers, shafts and a Corinthian capital came to light. Further clearance was executed in the area of the broad staircase east of the building.

The original purpose of the building still remains enigmatic. There is a similar monument with a platform for a two-storeyed

building with columns, staircases and niches standing opposite an important road junction in Scythopolis/Beisan.⁶ Also in this case the interpretation is not certain. The excavators of the Beisan monument consider it mainly decorative in nature, i.e. to emphasize and to embellish the city centre.⁷

The Urban Water-Supply System of Qanawat al-Fir'aun

Between July 28th and 31st, 1990 a brief survey of the city's water-supply system was conducted in the ancient settlement area of Gadara and the wider environs of Umm Qeis, Beni Kenane district (Fig. 1). The investigation had three main targets: 1) The clearance and documentation of a characteristic stretch of the underground rock-cut tunnel already known from surveys in previous seasons;⁸ 2) recording and mapping new portions of the channel between Gadara of the Decapolis and Wadi ash-Shellaleh, with the aim of reconciling the contradicting standpoints of C. Schumacher and K. Steuernagel concerning the extent of the aqueduct,⁹ and 3) to provide new evidence for the technical and political organisation of the water supply between Decapolis Gadara, Abila, Capitolias and allied cities of Southern Syria.¹⁰

The evidence in the surveyed area testifies to sophisticated water-supply installations. These controlled the waterflow, fed by

4. *Gadara 1986-88*, p. 193ff.

5. *Gadara 1986-88*, p. 203 Fig. 7. A similar stone pipe is the "upper aqueduct north of Bethlehem", cf. A. Mazar in: *Die Wasserversorgung antiker Städte*, Geschichte der Wasserversorgung II., ed. Frontinus Gesellschaft e.V. (1987), p. 187f. Fig. 6.

6. Cf. G. Foerster and Y. Tsafir, 'The Bet Shean Project', *Excavations and Surveys in Israel* 6 (1987/88), p. 7ff. esp. p. 9 Fig. 6.11, Fig. 7 No. 8.26, Fig. 12. 30 (I extend thanks to F.-J. Reidel and K. daCosta for drawing my attention to the Scythopolis monument, Amman, March 1990).

7. *Ibid.* p. 30.

8. *Gadara 1989*, p. 324.

9. G. Schumacher, *The Jaulan*. London 1888, p. 203 with Fig. 97; C. Steuernagel, 'Der 'Adschlun', *ZDPV* 49 (1926), p. 113f.; G. Rindfleisch, 'Die Landschaft Hauran in Römischer Zeit und in der

Gegenwart', *ZDPV* 21 (1898), p. 14f. *Qanawat al-Fir'aun* is shown on map Pl.1, *ibid.* p. 62 opp.

10. It has been suggested by S. T. Parker, 'The Decapolis Reviewed', *Journal of Bibl. Lit.* 94 (1975), p. 437ff.; B. Isaac, 'The Decapolis in Syria - A Neglected Inscription', *ZPE* 44 (1981), p. 437ff., that the term "Decapolis" applies more to the determination of a geographical rather than a political unit. A supraregional water-system in the dimensions of *Qanawat al-Fir'aun*, on the other hand, does not only require a well developed municipal administration, but also interurban treaties for permanent maintenance. Concerning the legal aspects of water-supply for Roman cities see W. Eck, *Die Wasserversorgung im römischen Reich: Soziopolitische Bedingungen, Recht und Administration*, in: *Die Wasserversorgung antiker Städte* Vol. 2, ed. Frontinus-Gesellschaft e.V. Mainz 1987, p. 51ff.

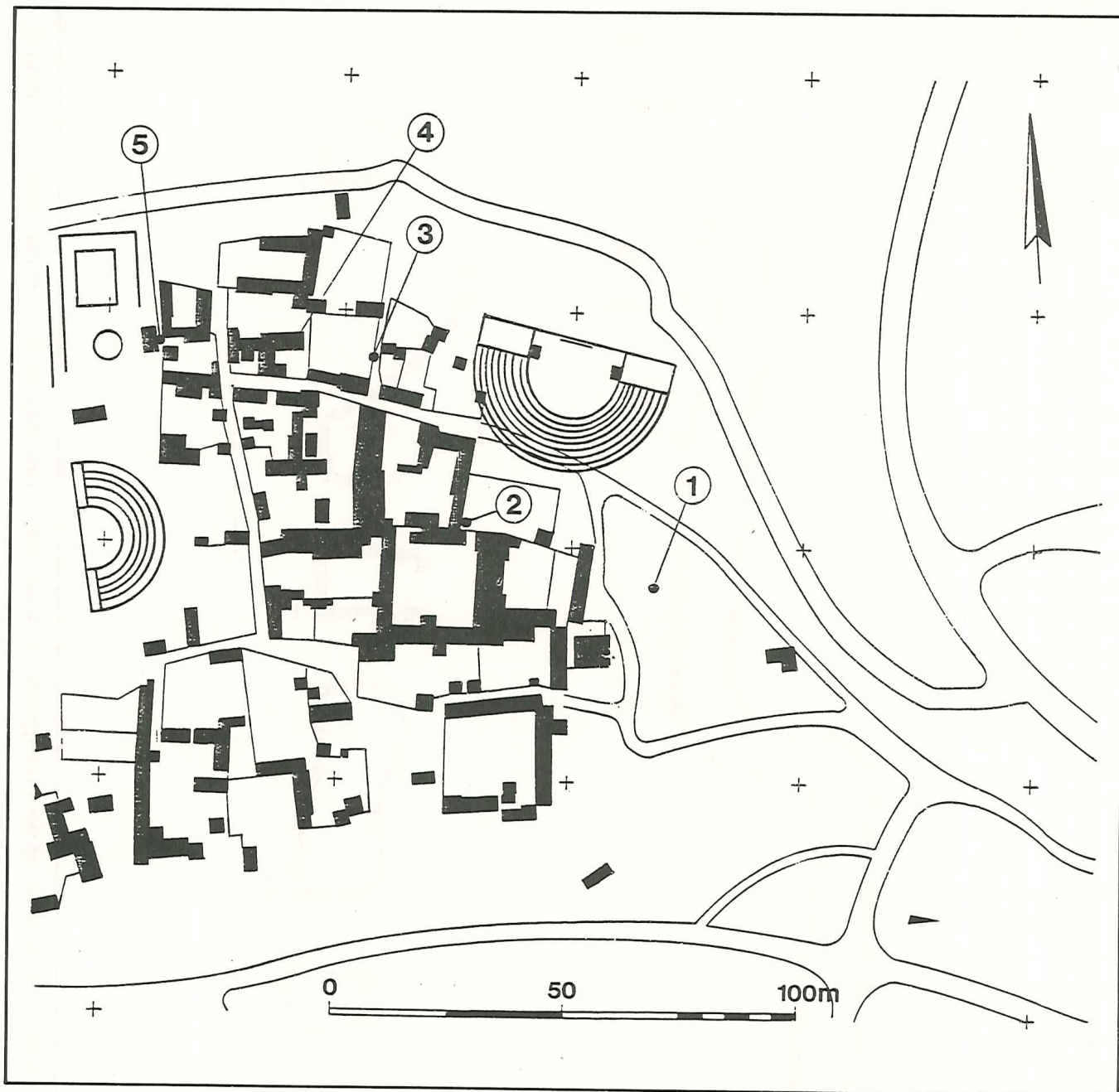


Fig. 1. Umm Qeis - Gadara of the Decapolis. Map of the Acropolis hill indicating the entrances (*putei*) to *Qanawat al-Fir'aun*: 1. *puteus* on the eastern Acropolis slope; 2. *puteus* at the southeastern facade of Beit Melkawi (Archaeological station); 3. *puteus* under the eastern courtyard wall of a Late Ottoman compound; 4. *puteus* in the house of Abu Jabal, close to the former girls school (Resthouse); 5. *puteus* in the southern room of the former office of the Department of Antiquities.

perennial springs of the area, either for urban needs or drainage for agricultural irrigation as well. Altogether 25 plots with traces, in differing states of preservation, have been recorded between the eastern slope of the Gadarene acropolis hill ("*al-Melab*" or "*Djedara Umm Qeis*" in the local dialect) and Wadi ash-Shellaleh. The main line consists of a rock-cut water tunnel running

approximately alongside the natural watershed of the northern 'Ajlun range. Its shape is trapezoidal (Fig. 2; Pl. I,1), square to rectangular (Pl. II,1), rounded or peach-shaped in section (Pl. II,2), with an average height of ca. 2.50 m, and a maximum width of ca. 1.40 m. The central branch of the tunnel in its major portions preserves no special fittings such as plaster or drainage pipes to direct the

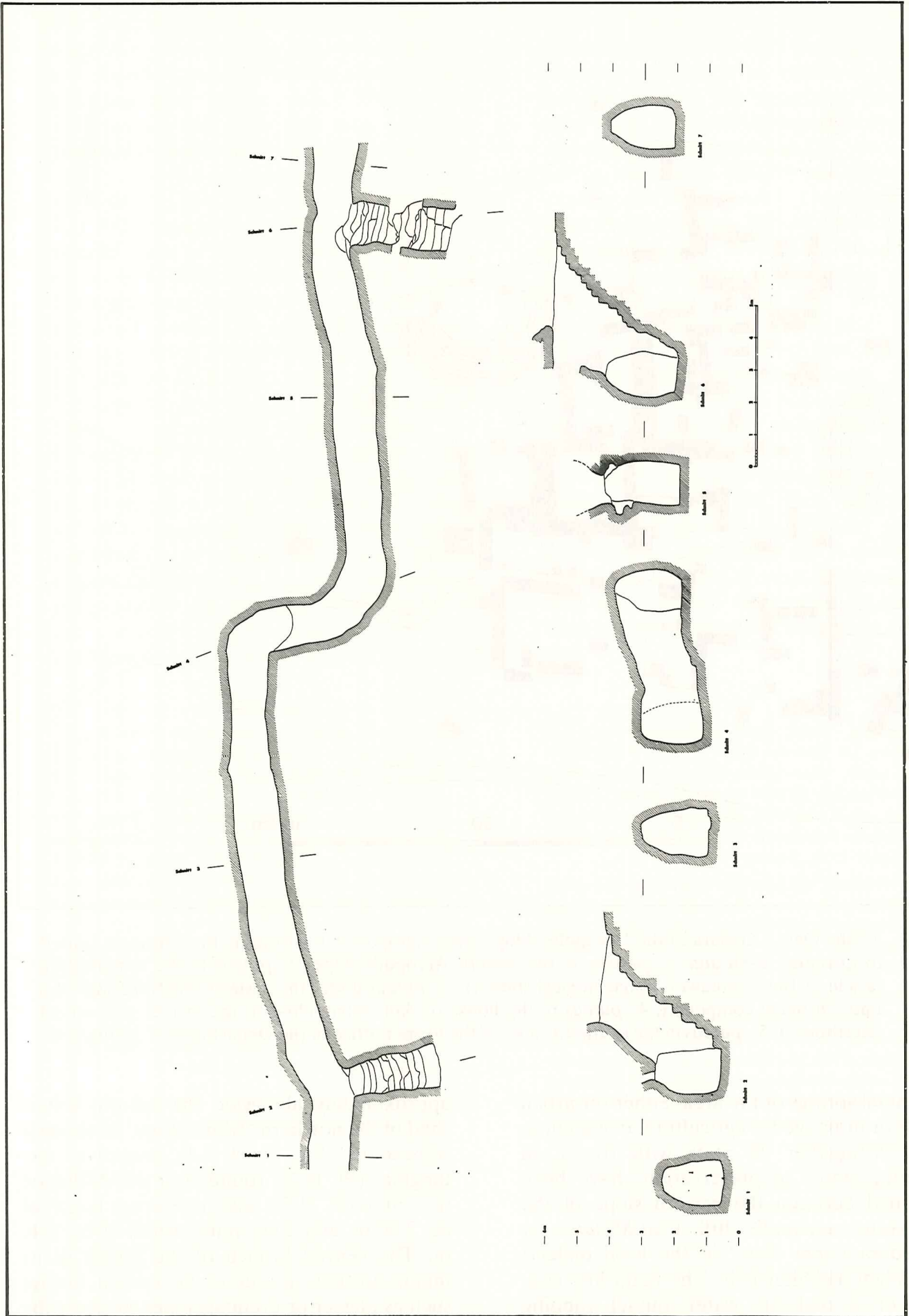


Fig. 2. Qanawat al-Fir'aun, Findspot 17: Ground plan and sections of the underground rock-cut tunnel (drawing by K. DaCosta and F.-J. Reidel).

water. The geology of the area,¹¹ with its comparatively soft lime or chalk rock formations and abundant natural caves, provides favourable conditions for an interregional water-tunnel construction. This was attributed to the Ghassanide Gebele II by the Persian historian Hamza al-Isfahani in the tenth century AD,¹² but it is rather questionable if one should rely on this information. There can be little doubt, due to analogous *Qanawat* in Syria, Iran and Oman,¹³ that the underground aqueduct at Umm Qeis dates far back in antiquity, most likely at least to the Roman imperial era.¹⁴ Aqueducts of this type are considered as an achievement of Roman organisation and hydraulic engineering. A detachment (*vexillatio*) of the VI Legion Ferrata, for instance, executed the works of a comparable tunnel at Caesarea Marittima by order of Hadrian, as firmly stated by building inscriptions.¹⁵ Basing on the evidence of the underground unplastered water tunnel of Acre-Ptolemais, one might take even an earlier date for the Umm Qeis aqueduct in account, perhaps in the Hellenistic period.¹⁶

On the other hand, construction work and repairs of such water-tunnels in Abila of the Decapolis are well attested by inscriptions and graffiti dating to the fifth and sixth centuries AD; and thus they indicate that aqueducts of this kind were still functioning during the Byzantine period.¹⁷

Apart from various underground diversions, some lines of surface channels (Pl. II,3) probably branch off from the main channel for field irrigation. These chiselled drains are often associated with ancient quarrying activities. In the environs of Gadara, Capitolias and Abila, many traces of ancient terraces indicate the extent and high standard of Roman-Byzantine agricultural cultivation.¹⁸

Previously, only one distributor (*castellum*) was known, at the site of al-Qabu.¹⁹ It was not possible to retrieve conclusive evidence, if and how such irrigation drains merge into the main *Qanawat al-Fir'aun* system. Due to this uncertainty, it can be said preliminarily, that the *Qanawat* itself basically served for the supply of the urban population. Such a system was, of course, supplemented by rain water, stored in wells and

11. F. Noetling, 'Meine Reise im Ostjordanlande und in Syrien im Sommer 1885', *ZDPV* 9 (1886), p. 159f.; *idem*, 'Geologische Skizze der Umgebung von el-Hammi', *ZDPV* 10 (1887), p. 66, 83f.; in general cf. F. Bender, *Geologie von Jordanien. Beiträge zur Regionalen Geologie der Erde*. Berlin - Stuttgart 1968, *passim*.
12. J.G. Wetzstein, *Reisebericht über Hauran und die Trachonen nebst einem Anhang über die Sabäischen Denkmäler in Ostsyrien*. Berlin 1860, p. 123f.; F. Rosenbaum, article: *Hamza al-Isfahani*, *Enclisl* new ed. III. Leiden - London 1979, p. 156.
13. E. Beazley and M. Harverson, *Living with the Desert. Working Buildings of the Iranian Plateau*. Warminster 1982, p. 34ff.; P.M. Costa and T.J. Wilkinson, 'The Hinterland of Sohar. Archaeological Surveys and Excavations within the Region on an Omani Seafaring City', *Journal of Oman Studies* 9 (1987), p. 38f. (reference kindly submitted by Dr. G. Bisheh, Amman July 1990); I. Koberi, 'Les Qanats en Syrie', in: *Techniques et pratiques hydro-agricoles traditionnelles en domaine irrigué. Approche pluridisciplinaire des modes de culture avant la motorisation en Syrie*. Actes du Colloque de Damas 27 juin - 1 juillet 1987, ed. B. Geyer, *Bibl. Archéol. Hist.* CXXXVI, Paris 1990, II, p. 321ff.; *Qanawat Romani of Taibe Oasis*, ed. I. Koberi, Report of the Tokyo University Scientific

Mission for the Comparative Study of the Foggara Oasis in the Arid Zone of the Old Continent Vol. I, Tokyo 1980, *passim*; H.E. Thompson and B. de Vries, 'A Water Tunnel at Muqibleh', *ADAJ* 17 (1972), p. 89f.; G. Garbrecht and J. Peleg, 'Die Wasserleitungen geschichtlicher Wüstenfestungen am Jordantal', *Antike Welt* 20/2 (1989), p. 20ff.; J. P. Dufourg, 'Premières notes sur les problèmes de l'eau au Djebel ed-Druz', *Revue Géographique de Lyon* 30 (1955), p. 235.

14. For the chronology of water tunnels see K. Grewe, 'Zur Geschichte des Wasserleitungstunnels', *Antike Welt* 17 (1986), Sondernummer p. 65ff.
15. Cf. K.G. Holum and R.L. Hohlfelder (eds), *King Herod's Dream - Caesarea on the Sea*. New York - London 1988, p. 127f. Figs. 84-85.
16. R. Frankel, 'The Hellenistic Aqueduct of Acre-Ptolemais', *Atiqot English Series* 17 (1985), p. 134ff.
17. Cf. M. Fuller, *Abila Reports*, ed. M. Fuller. Florissant Valley, Ms. 1986, p. 46ff.
18. Cf. C.H.J. De Geus, 'The Importance of Archaeological Research into the Palestinian Terraces with an Excursus on the Hebrew Word GTB', *PEQ* 111 (1979), p. 65ff.
19. Cf. *supra* note 9.

cisterns.

Gadara, modern Umm Qeis, today has three perennial springs: 1) 'Ain Maquq, which flows at the northern slope of the fertile triangular Umm Qeis plateau;²⁰ 2) 'Ain Umm Qeis,²¹ located south of the acropolis hill at an altitude of 220 m above sea level at the drop off towards Wadi al-'Arab; 3) 'Ain al-Assal²² lying on the same altitude but at a distance of about 3 kms east of the former source. All these local springs flow from a much lower level than the *Qanawat*. Also the altitudes of the ancient settlement area oscillate between 340 and 379 metres above sea level.²³ This means that these local springs cannot be regarded as contributors to the main aqueduct of the city. Today, as probably in antiquity, they are in use mainly for agricultural irrigation. The urban drinking water was probably guaranteed by 'Ain at-Turab at the head of Wadi Samar, at a distance of 13 kms east of Umm Qeis and at an altitude of 470 m above sea level.²⁴

During the survey the ancient water tunnel was made accessible at the eastern slope of the acropolis hill, about 40 m south-east of the cavea of the northern theatre (Fig. 1). Clearance work revealed one narrow manhole (*puteus*) via a steeply-stepped staircase cut in the white and reddish conglomerate chalk (Pl. I,2). The location of this *puteus* was vaguely rumoured by the local inhabitants of the village, but filled with

modern debris. About 100 m west of it another *puteus* was found and cleaned at the eastern facade of Beit ar-Rusan (Fig. 1:2). Some finds were collected, among them a fragment of a marble slab with part of a Hellenistic inscription (Pl. IV,3). Two more *putei* were found in the Late Ottoman village between Beit ar-Rusan and the former girls' school (Fig. 1:3,4). Under the acropolis hill, the underground water tunnel is well preserved over a distance of several hundred metres (Pl. I,1). Its course meanders irregularly, but has a permanent inclination from east to west. It follows this direction in general, slightly shifting towards the north-west.

According to oral informants, *Qanawat al-Fir'aun* ends at Umm Qeis. Where this end-point should be sought in the ancient urban topography still remains obscure. The rock-cut tunnel finds its end at the artificial basilica terrace (Fig. 1:5) at the western slope of the acropolis hill.²⁵ At the present stage of investigation, no further evidence of the water distribution to the lower town has been yielded. The existence of a distributor (*castellum*) or a water reservoir has to be concluded at this topographical spot, since a pressure pipeline, made from basalt blocs, has been found under the pavement of the *decumanus maximus* in the vicinity of the so-called *nymphaeum*.²⁶ It needs further investigations if the large square pool, to the west beyond

20. S. Mittmann, *Beiträge zur Siedlungs- und Territorialgeschichte des nördlichen Ostjordanlandes*. Abhandlungen des Deutschen Palästina-Vereins (Wiesbaden 1970), p. 25f.

21. For the location see G. Schumacher, *Northern 'Ajlun - within the Decapolis*. London 1890, p. 84f.; N. Glueck, *Explorations in Eastern Palestine*, IV. *AASOR* 25-28 (1951), p. 142. Springflow in cubic metres per hour, average value 3.819. Usage today: irrigation. Quality: TDS = 544 ppm on 28/4/1987; NO₃ = 22.3 ppm on 28/4/1987 (according to the Jordan Water Authority, Anshasy Spring).

22. Cf. Schumacher, *op. cit.* p. 85; Glueck, *op. cit.* p. 143f. Springflow in cubic metres per hour, average value 6.385. Usage today: irrigation. Quality: TDS = 384 ppm on 14/4/1987; NO₃ = 9.39 ppm on 14/4/1987 (according to the Jordan Water Authority, Anshasy Spring).

23. The absolute altitudes for Umm Qeis were kindly

provided by the Department of Modern Applications at the Lands and Survey Department, Amman, where I extend my gratitude to Mr. Y.S. Kawar. For a description of the hypsometer points see *Gadara 1986-88*, p. 196.

24. Schumacher *op. cit.* p. 84. Springflow in cubic metre per hour, average value 12.990. Usage: mainly for irrigation and drinking water. Quality TDS = 282 ppm on 22/10/1989; NO₃ = 20.6 ppm on 22/10/1989. The source of the spring is an old cave, the outlet of which was developed onto a cement reservoir from which irrigation canals were built.

25. For the location see: *Gadara, Guide* p. 18f. No. 12; Bol, Hoffmann and Weber, *op. cit.*, p. 196 folding map Fig. 2, No. 12; T. Weber, 'Gadara of the Decapolis. A Preliminary Report of the 1989 Season at Umm Qeis, *Ricerca Archeologica in Giordania IX*', *LA* 39 (1989), Pl. 76, Fig. 1 No. 12; *Gadara 1989*, p. 322 Fig. 1 No. 12.

26. *Gadara 1986-88*, p. 203 Fig. 7.

the monumental arch, was one of the final merging points of the city's aqueducts. This huge cistern was still visible towards the end of the past century.²⁷ Today only the name of this place, *al-birkeh* ("=cistern"),²⁸ and a flat depression in the fields recall the vanished structure. This topographical situation coincides well to Gerasa, where the pools of "*birketein*" are located beyond the northern and northwestern city gates.

From the interior of the tunnel one recognizes the stairs of the manholes, which were only relatively recently blocked by stone slabs and garbage. Sometimes the tunnel is connected to wells. Some of these had been converted to septic tanks for the Late Ottoman dwellings. Some subsidiary tunnels branch off the main channel, some of them blocked in the lower half by rough stone masonry reinforced by dark grey concrete. The walls show small holes at irregular intervals, which were supposed to hold oil lamps. Sometimes deposits of soot can be observed around these small niches. The tunnel was illuminated by these lamps for the engineering pioneers, who dug the aqueduct, and later for city-servants, responsible for clearance and maintenance, probably under supervision of an urban magistrate (*curator acquarum*).²⁹

Another stretch of the same *Qanawat* east of the modern village of Umm Qeis was excavated (Fig. 2). The sedimentation consisted of three to five layers of soil deposits. There is, until now, no evidence for an interior capture of the waterflow, even though many fragments of ribbed terracotta pipes have been collected from the debris fill of the tunnel in the area of the acropolis hill.

At a distance of a few hundred metres from the excavation, a distributor or *castellum* (Pl. II,2) was recorded at the site of

al-Qabu.³⁰ In the local Arabic toponymy the name "*qabu*" = "underground vault"³¹ points to a wide-spread channel system, which basically supplied fields on the northern rift of the watershed. A number of external cisterns had been connected to this system. A junction of the *castellum* of al-Qabu to *Qanawat al-Fir'aun* seems very likely, but could not be proved at the present stage of investigation. In contrast to the main branch of the *Qanawat*, all channels show two layers of smooth greyish plaster on the bottom, walls and ceilings.

Due to the dimensions and state of preservation, this tunnel displays one of the most remarkable ancient hydrotechnical monuments of Jordan, though other wide-spread channel systems are known at *Bilad al-Sham* and the Arabian peninsula.³²

The Restoration of the Ottoman Village and the Museum of Umm Qeis

After a period of four years of sponsorship, the involvement of the Foreign Ministry of the Federal Republic of Germany in the salvage of the Ottoman village of Umm Qeis resulted in the completion of the mansion of Beit ar-Rusan as the future museum of Gadara. The architectural setting had to be slightly altered in order to adjust the building to the needs of a regional museum frequented by Jordanian visitors and international tourists. The southern courtyard was paved in the traditional manner by using old limestone or basalt slabs.

A flight of former stables in the western part of the dwelling were converted into a long crossvaulted exhibition hall for ancient sculpture (Pl. III,1). The Department of Antiquities supplemented this collection by other figural marbles from previous excava-

27. Cf. H.B. Tristram, *The Land of Israel: A Journal of Travels in Palestine*. London 1882, p. 449.

28. Schumacher, *op. cit.*, p. 74.

29. For comparable lamp niches see Frankel, *loc. cit.* (as note 16), p. 135; For the maintenance: Sextus Julius Frontinus, *Wasser für Rom. Die Wasserversorgung durch Aquädukte*. Ed. M. Hainzmann.

Zürich - Munich 1979, p. 50ff.

30. Schumacher, *op. cit.* (*supra* note 21), p. 94f.; Glueck, *op. cit.* (as note 21), p. 143ff.; K.D. Politis, 'El-Kabu one hundred years after Schumacher's survey', *PEQ* (forthcoming).

31. Cf. A. Socin, 'Liste arabischer Ortsappellative', *ZDPV* 4 (1881), p. 4 s.v. Kabu.

32. Cf. *supra* note 13.

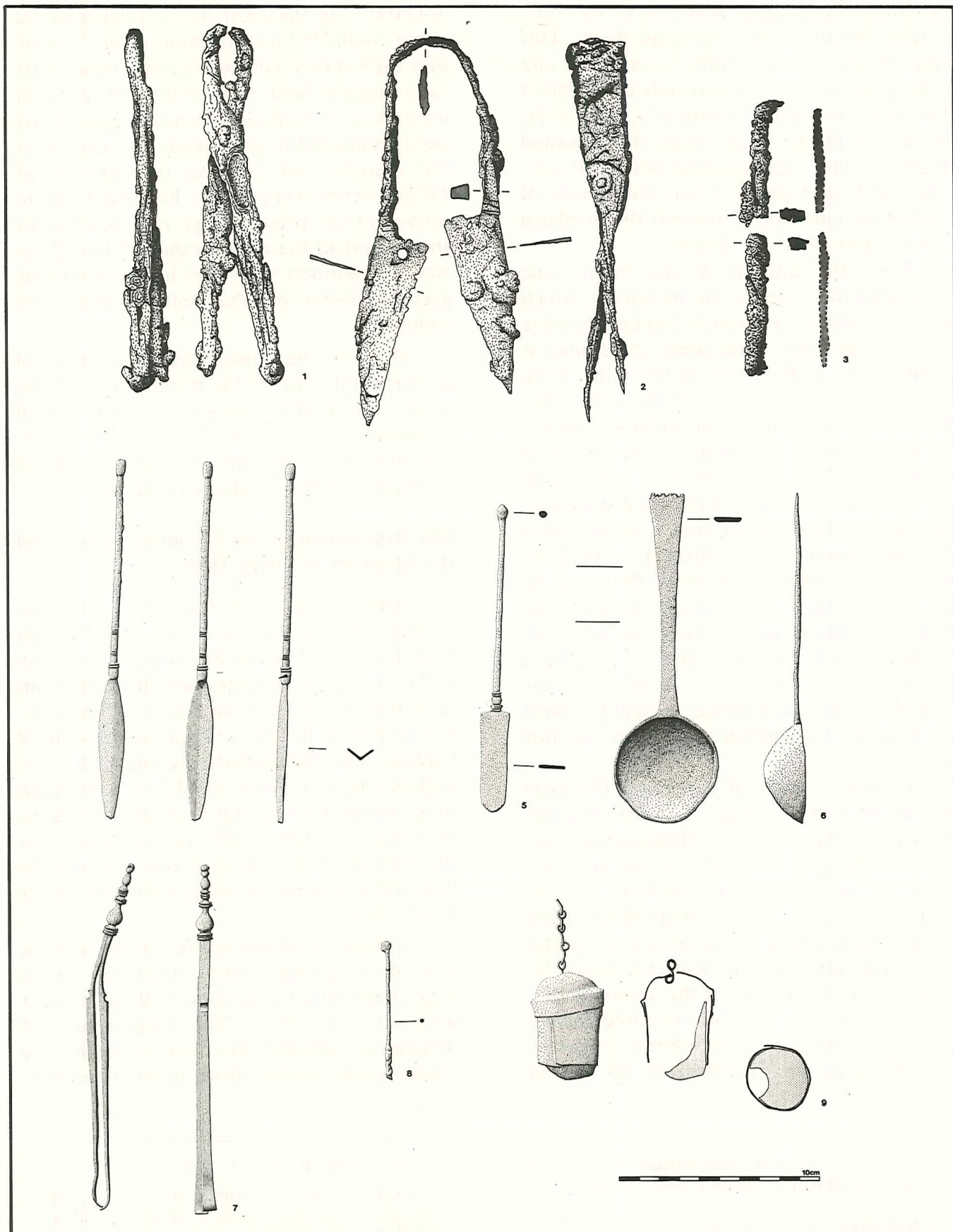


Fig. 3. Umm Qeis/Gadara: Selection of medical instruments from the *hypogeum*, Byzantine crypt, tomb 17 (drawings by the author and F.-J. Reidel). 1. Forceps; 2. scissors; 3. iron-tool (*cauterium*?); 4. spoon spatula; 5. spatula; 6. spoon; 7. tweezers; 8. probe; 9. capsula on chain with charcoal.

tions at Umm Qeis, formerly stored at the museums of Amman and Irbid. Among these, the fragmented marble statuette of Harpokrates of the so-called *Erbach*-type (Pl. III,2),³³ found in a late antique fill of a water-pool in the baths of Heracleides, a torso of the Satyr with the pig-skin (Pl. III,3)³⁴ together with a figurine of the enthroned Olympian Zeus (Pl. III,4) from the terrace beyond the northern theatre³⁵ preserve significant examples of fine Roman sculpture copying Greek prototypes of the Classical and Hellenistic periods.

With the assistance of M. Piccirillo, the Department of Antiquities initiated a campaign of salvage for the mosaics in the baths of Heracleides.³⁶ These were seriously endangered by overgrowing unchecked vegetation. In June, the better preserved parts were removed and restored in the workshops of the Custodia Franciscana della Terra Santa on Mount Nebo. The six mosaic pannels are now on display at the southern wall of the Beit ar-Rusan courtyard. The compound gains excellent facilities as a large open air *lapidarium*. Pieces of basalt and marble sculpture have already been moved to the museum during the past months.³⁷

Various objects, excavated or collected as surface finds during the past five years, underwent restoration and conservation, generously supported in part by the Australian team working at the site of Pella in the Decapolis, Ṭabaqat Faḥl. Among these, a pair of bronze chains with large bells³⁸ (Pl. IV,1) found in tomb 12 of the Byzantine crypt of the Roman western *hypogeum*, are now on display together with surgical instruments from tomb 17 (Fig. 3)³⁹ and other finds of the early Christian cemetery. Other items of minor art include pottery, glass, ivory and metal objects, such as the fragment showing the bust of Neptune/Poseidon in a framed medallion, probably part of a Roman lead sarcophagus (Pl. IV,2).⁴⁰

Under the patronage of Her Majesty Queen Noor al-Hussein, the Umm Qeis museum was officially opened by the then Minister of Tourism Mr. Abdul-Karim Kabariti, and the then German Ambassador to Jordan, Dr. Herwig Bartels, on November 7th, 1990.

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33. For the *Erbach*-Type cf. K. Fittschen, *Katalog der Antiken Skulpturen in Schloss Erbach*. Archäologische Forschungen III, Berlin 1977, p. 11ff. Nr. 2 Pls. 2-3; For the identification as Harpokrates see C. Vorster, *Griechische Kinderstatuen*, Bonn 1983, p. 187f. note 639; cf. A. Schmidt-Colinet, *Archäol. Anz.* 1985, p. 122 with note 16, p. 126f. No. 5 Fig. 5.

34. For this type cf. P.C. Bol, *Bildwerke aus Stein und Stuck von archaischer Zeit bis zur Spätantike*. Antike Bildwerke I. Wissenschaftliche Kataloge Liebieghaus Frankfurt/M., Melsungen 1983, p. 186ff.

35. *Gadara, Guide*, p. 36 (top right); *Gadara 1986-88*, p. 258 Fig. 39; for the enthroned Zeus/Jupiter cf. F. Liegle, *Der Zeus des Phidias* (1957); B.H. Krause, *Iuppiter Optimus Maximus Saturnus*, 5. Trierer Winkelmannsprogramm 1983 (1984).

36. U. Lux, 'Umm Qeis (Gadara), Chronique Archéologique', *RB* 73 (1966), p. 581f.; *idem*, 'Der Mosaikfußboden eines spätantiken Bades in umm qes', *ZDPV* 82 (1966), p. 64ff.; M. Piccirillo,

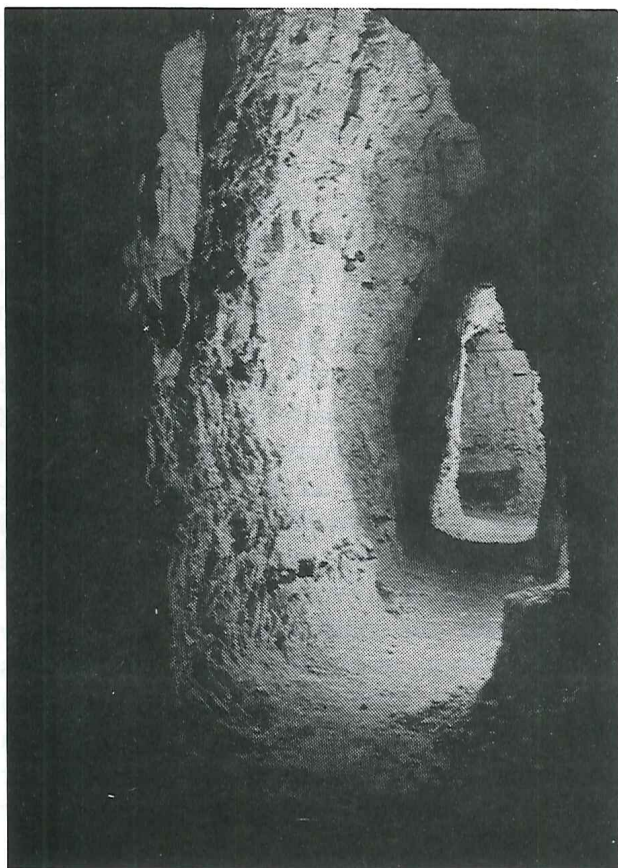
Chiese e Mosaici della Giordania Settentrionale, Studium Biblicum Franciscanum, Coll. Minor 30, Jerusalem 1981, p. 29ff; *Byzantinische Mosaiken aus Jordanien*, exhib. catalogue, ed. H. Buschhausen, Wien 1986, p. 111; *Gadara, Guide*, p. 29.

37. *Gadara 1989*, p. 331 Pl. VI, 1-2.

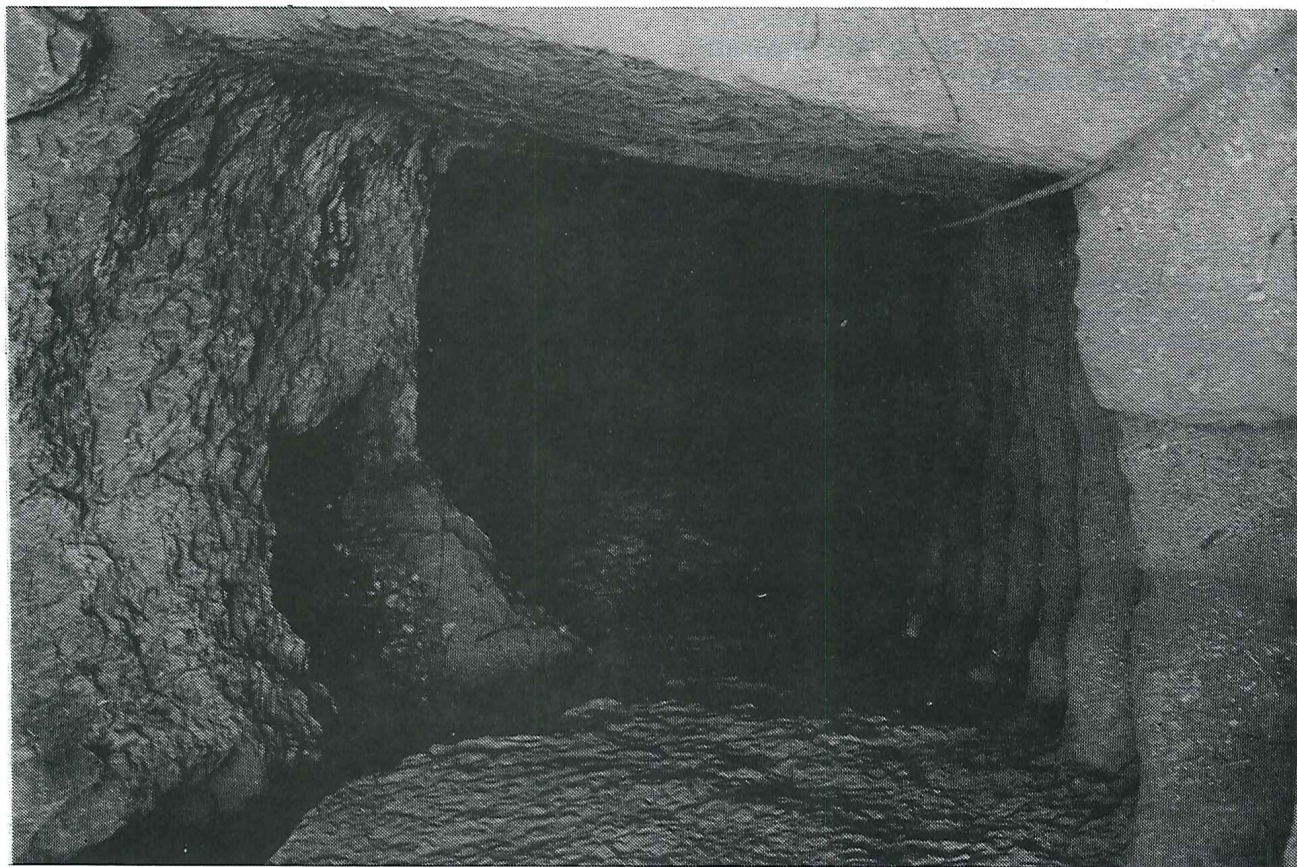
38. T. Weber, Glockenkettens aus einem frühchristlichen Grab zu Gadara in der Dekapolis, *Jahrbuch der Österreichischen Byzantinistik* 42, 1992 (forthcoming).

39. T. Weber and E. Künzl, 'Das spätantike Grab eines Zahnarztes zu Gadara in der Dekapolis', *Damaszener Mitteilungen* 5 (1990); cf. *Ancient Jordan - an Archaeological Newsletter*, ed. Department of Antiquities and al-Kutba, Publishers 2 (June 1990) 7.

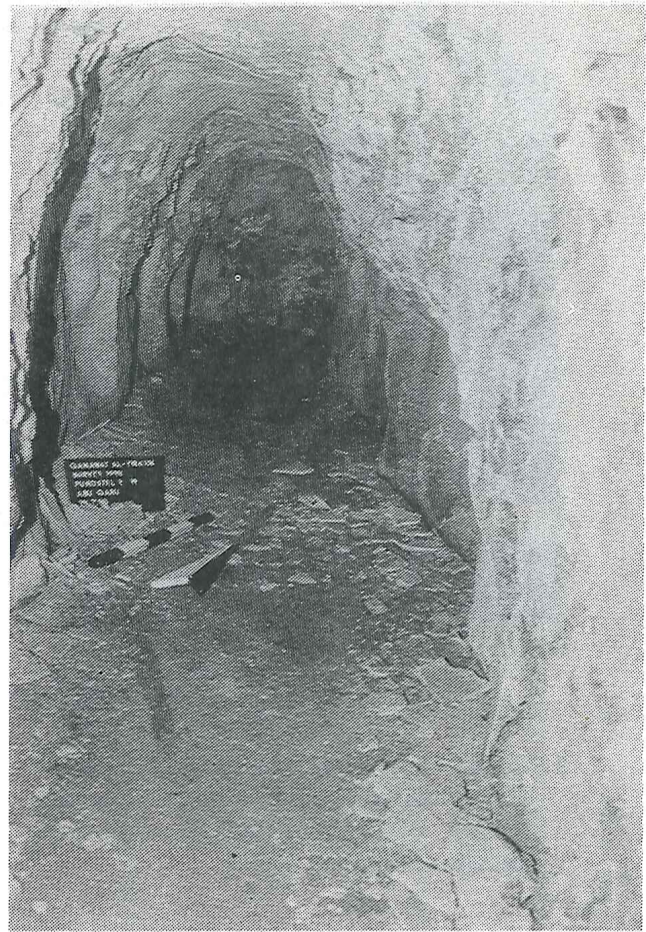
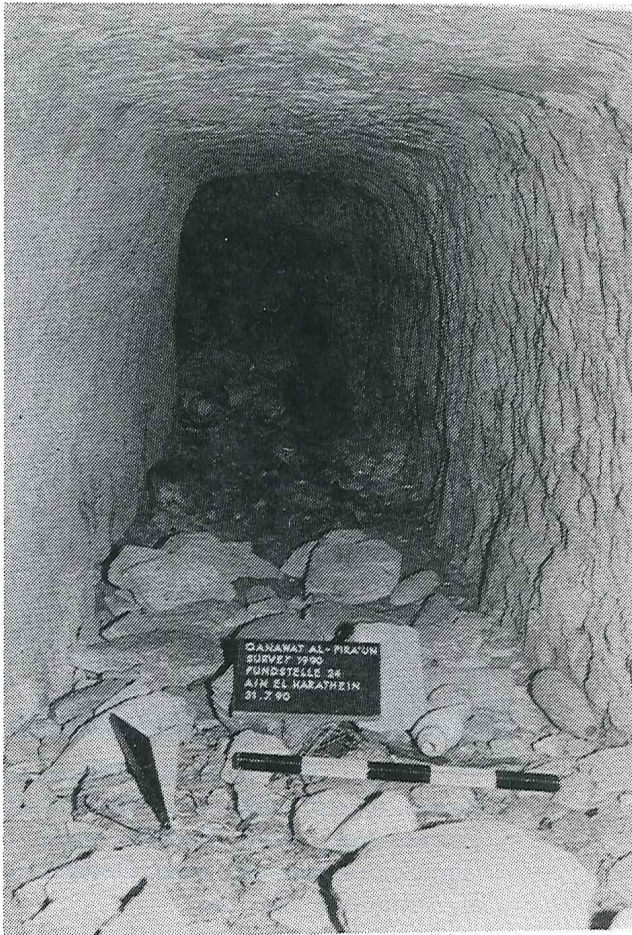
40. Cf. R. Mouterde, 'Divinités et symboles sur des sarcophages de plomb', *Mélanges St. Joseph Beyrouth* 21 (1937), p. 203ff.; G. Koch and H. Sichtermann, *Römische Sarkophage*, *Handbuch der Archäologie*, Munich 1982, p. 570f.



1. Umm Qeis/Gadara: Qanawat al-Fir'aun, Findspot 1: rock-cut water tunnel under the acropolis hill.



2. Umm Qeis/Gadara: Qanawat al-Fir'aun, Findspot 1: manhole (*puteus*) with rock-cut stairs in the Late Ottoman village of Umm Qeis.



1. 'Ain al-Ḥarathain, Findspot 24: rock cut tunnel, rectangular in section. (Photo Chr. Frevel).

2. Al-Qabu, Findspot 19: rock-cut tunnel. (Photo Chr. Frevel).



3. Umm Qeis/Gadara: Qanawat al-Fir'aun, surface drainage for field irrigation at Findspot 3. (Photo Chr. Frevel).



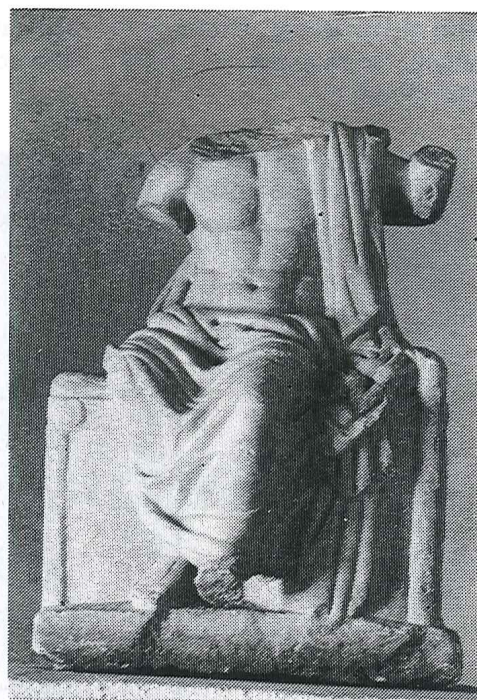
1. Umm Qeis, Beit ar-Rusan (Museum): Cross-vaulted exhibition hall for the collection of Roman marble sculpture, situation October 1990.



2. Umm Qeis, Beit ar-Rusan (Museum): Roman marble statuette of the *Erbach-Hermes*-type, from Gadara, baths of Heracleides (formerly Irbid, Department of Antiquities No. 363).



3. Umm Qeis, Beit ar-Rusan (Museum): Marble torso of the Satyr with the pig-skin, from Gadara, found in 1990 on the street opposite the so-called *nympheum*.



4. Umm Qeis, Beit ar-Rusan (Museum): Marble statuette of enthroned Zeus, from Gadara, found at the artificial terrace beyond the northern theatre.



1. Umm Qeis, Beit ar-Rusan (Museum), Reg.-Nr. XVII.I.3 - N.1: Chain with bronze bells (*tintinabulum*) from the *hypogeum*, Byzantine Crypt tomb 12, restored. (Photo S. Lapedjian).



2. Umm Qeis, Beit ar-Rusan (Museum), Reg.-Nr. I.I.14, from Gadara: Lead fragment showing the bust of Neptune/Poseidon, from the lid of a sarcophagus (?).



3. Umm Qeis, Beit ar-Rusan (Museum), Reg.-Nr. XXXVIII. T.1: From a plaster lining of *Qanawat al-Fir'aun*.