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**Schedia, Alexandria's harbour on the Canopic Nile.
Interim report on a German mission at Kom el Gizah / Beheira (2003-2005).**

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Abstract

Shortly after the foundation of Alexandria, the new metropolis was connected by an artificial channel with the Canopic Nile. At the point where the canal met the Canopic Nile a new town, Schedia, was founded. In its important river harbour all goods coming from Upper Egypt had to be transferred to smaller vessels. Schedia seems to have been a flourishing Greek-dominated polis throughout Ptolemaic and Roman times and was inhabited until the early Byzantine period. In spite of its importance the site is still nearly unknown. Following rescue excavations of the Egyptian Antiquities Service between 1981 and 1992 and thanks to the friendly authorization of the Supreme Council of Antiquities the Institute of Classical Archaeology of the University of Goettingen has been conducting since 2003 an interdisciplinary project consisting of a topographical survey, large scale geophysical prospections, geological investigations, selective stratigraphical excavations and a comprehensive study of the finds.¹

Location and Identification

The foundation of Alexandria by Alexander the Great in 331 BC in an exposed position on a narrow strip of land in front of an extensive lagoon was possible only because of the creation at the same time of a c. 30 km long canal that joined the city with the formerly westernmost arm of the Nile, the so-called Canopic branch (Fig. 1).² This canal, which was mentioned many times by ancient authors, constituted the main route for supplying Alexandria with goods from the Nile valley and also brought fresh water to the metropolis, which had no springs. At the turning-off point of this vitally important artificial waterway was located according to Strabo (17, 1, 16) the town of Schedia. Some 500 years later Procopius writes (Aed. 6, 1) that the turning-off point was at Chaireou, a place that is indicated on the Madaba map, which also goes back to the 6th century and can be identified with the modern El-Karyun. Evidently both indications have the same settlement in mind, which perhaps consisted of two places that had grown together, for which Schedia was the original and Chaireou the Byzantine name. Already in the 19th century it was proposed to identify Schedia/Chaireou in the extensive mounds of ruins of Kom-el-Gizah and Kom-el-Nashwah in

¹ This project is being carried out by the Institute for Classical Archaeology of the University Goettingen in cooperation with the Archaeological Prospection Service of the University of Southampton. Further support came from the American Academy in Rome, the German Archaeological Institute, the Department of Geodesy at the University of Stuttgart, the Geology Department of Mansoura University and the Centre d'Études Alexandrines. The Fritz Thyssen Foundation provided the funding of the first season. Since 2004 the project has been funded by the German Research Foundation. We would like to thank the Director General of the Egyptian Antiquities Service, Dr. Zahi Hawass, as well as the director of the Antiquities Service in the Delta, Dr. Mohamed Abd el-Maqsoud, for the permission to work at Schedia. For help and support we thank the head of the Antiquities Service for the Department of Beheira, Fawzi el Choulani.

² The geographical coordinates of the main fixed point at Kom el-Hamam are in the WGS84 datum: N 31°08'19.2874"; E 30°11'19.2686"; the plane coordinates in the KILO system are: 537 464.14; 936 499.33; the height is 6.50 m above sea level. For Schedia see in general: RE II A 2 (1921) 401 ss. s.v. Schedia (Zwicke) and RE I 1 (1897) 2030 s.v. Χαριέου (Sethe).

the immediate vicinity of El-Karyun; inscriptions found there with the name of Schedia confirmed the identification.³

Strabo, who calls Schedia a colony of Alexandria (*κατοικία πόλεως*) and thereby underlines the close connection with the capital, says that Schedia was the station for the praefect's Nile boats, which apparently undertook their annual inspection tours of Egypt from here. It was also a customs station for all goods that were transported up and downstream on the Nile. For this purpose a pontoon bridge was installed (*σχεδία*), which gave its name to the place. From Procopius (Aed. 6,1,2), who calls the place a *πόλις*, we learn that the canal was not suitable for the Nile boats with deeper drafts: so that all cargos, including Egyptian grain, had to be transhipped at Schedia/Chaireou on to shallower canal boats for the continuation of the trip to Alexandria. In fact, the canal must have gained importance in Roman/late Roman times, as not only the supply of the provincial capital but also the grain deliveries of vital importance for Rome and Constantinople sent out from the Alexandrian harbours had to pass through it. Numerous inscriptions attest that the control and maintenance of the canal was the direct responsibility of the praefectus.⁴ For Schedia itself these sources suggest the existence of ample harbour and storage installations with the personnel and administrative infrastructure that belonged to them.

The inscriptions found in the area of Schedia provide further evidence of the character of the place.⁵ Thus, cults of Zeus Soter and Athena Polias are attested along with a ship and military station already in the late 4th century BC. About 115 BC the garrison station at Schedia dedicated a Kleopatreion. These cults, as well as early Ptolemaic grave inscriptions with Greek names, appear to indicate a strongly Hellenized population in the city founded *ex novo*. However, there was a Jewish colony as early as the time of Ptolemaios III Euergetes (246-221 BC) with one of the oldest known synagogues attested by an inscription – evidence of early multiculturalism in this harbor. In the imperial period Schedia calls itself a polis in inscriptions and apparently has its own magistrate (*archon*). Various honorary statues and bases for private citizens and emperors found in the area of Kom el Gizah suggest that there must have been appropriate public spaces in which to display them. At the same time they show that the mechanisms of donations and conferment of honors usual in the urban context of the imperial period were at work here too. They are an indication of the formation of a prosperous citizenry with an understanding of itself as inhabitants of Schedia. In Roman times Christianity seems to have established itself early under Alexandrian influence. Schedia received its own episcopal see.

All the sources indicate not only the especially important economic and strategic role of Schedia in connection with Alexandrian trade but also that it was already early an autonomous regional center with an urban character. At the same time the sources give reason to believe that the population had a stronger Graeco-Roman stamp than for example the towns of the Fayum, which could make the comparison interesting.

But irrespective of its obvious importance the site, as well as the Nile branch, is still virtually unknown. The river and the canal have now vanished from the landscape. Schedia itself was still a prominent hill at the beginning of the 20th century with a length of about 2.5 km and a width of 1.5 km (Fig. 2). Intensive seabed extraction and the increasing encroachment on the ancient settlement site by the villages of Kom el Giza, Kom el Hamam and Kom el Nashwah have, however, made the topography so unclear in the meantime that the place is hardly to be noticed in the landscape. Only in a few places are the flat remains of the hill and single structures to be recognized. The greatest height in the territory of Kom el Hamam is occupied by the present cemetery.

³ Vgl. D. G. Botti, Studio sul III° nomo dell'Egitt o inferiore, Bulletin de la Société d'Archéologique d'Alexandrie, 4, 1902, 48 sowie A. Bernand, Alexandrie la Grande (1966) 45 ff.; id. idem, Le delta égyptien d'après les textes grecs I (1970) 329 ff.

⁴ Cfr. A. Bernand, Alexandrie la Grande (1966) 45 ff.; id. idem, Le delta égyptien d'après les textes grecs I (1970) 329 ff.

⁵ For a compilation of the inscriptions cfr. A. Bernand, Le delta égyptien d'après les textes grecs I (1970) 381 ff. and Botti, *op. cit.*, 41 ff.

Research history

Aside from the first vague attempts to localize Schedia on the part of the travelers to Egypt in the 18th century, it was the Napoleonic expedition of 1798-1802 that first concerned itself with Schedia and the Alexandrian canal. In this connection the place near El-Karyun is shown on the first accurate map as one of largest tells in the Nile delta.⁶ A participant in the expedition, Jean Michel Le Père, was the first to propose the concrete localization of the beginning of the canal at El-Karyun and the identification of the group of mounds of El-Nashwa and Kom el Giza as Schedia.⁷ Le Père reports that a noticeable depression of ca. 100 x 250 m could be seen in the terrain in the area of the mounds and considered that it was most probably a large harbor basin. Afterwards, Schedia was often visited by travelers to Egypt because of its proximity to Alexandria.⁸ However, only few descriptions have come down to us. The most complete is from J. Gardiner Wilkinson, who reports in 1843 that numerous stone and brick ruins were to be seen by the mounds between El-Karyun and El-Nashwa, among which was a stone building preserved to the height of 5 m measuring 70 x 10 m, which looked like navalia to him because of its many parallel chambers. The localization of Schedia and the Alexandrian canal receives a first extensive discussion in the work by Mahmoud Bey el Falaki on Alexandria that appeared in 1872.⁹ Afterwards there begin to be the earliest reports of Ptolemaic-Roman finds in the area of Schedia, mostly chance finds by farmers or people engaged in quarrying sebakh.¹⁰ These objects, which include a series of marble statues and bases, numerous honorary and funerary inscriptions and a Nilometer, finished in part in private collections but mostly in the museums of Cairo and Alexandria. But it was only in the 1980ies that the first regular archaeological work was done at the site, when the Egyptian Antiquities Service under the direction of Ahmed Abd el Fatah carried out some rescue excavations because of the growing threat to the ancient site through modern construction (see Fig. 9).¹¹ Several areas of varying size were investigated on the eastern edge of Kom el Giza and at Kom el Hamam, which means in the eastern part of the ancient settlement. Numerous building structures of the late Hellenistic, Roman and Byzantine periods were uncovered. A surprising high number of Hellenistic objects were also found, especially numerous coins. The areas uncovered were restored and protected by the Egyptian Antiquities Service.

Aims of the project

In Schedia the possibility exists of investigating one of the most important Ptolemaic-Roman trade centers in Egypt as well as a significant regional centre with all the long-term development processes from the early Ptolemaic period until its abandonment in Byzantine times. Furthermore, because of its close connection with Alexandria, it should mirror in some way developments in the metropolis itself. Therefore, the goals of the project are multiple: First of all, we would like get a better idea of the ancient landscape of this area, which means that we have to trace the Canopic Nile and the beginning of the Canal to Alexandria. Secondly, we would like to investigate the city itself as completely as possible, to learn more about its extension, its urbanistic structure and its changing character through the centuries.

⁶ E.F. Jomard – P. Jacotin (Hrsg.), *Carte Topographique De L'Égypte Et De Plusieurs Parties Des Pays Limitrophes* (1818/25), M 1: 100 000, Blatt Nr. 37.

⁷ Cfr. A. Bernand, *Le delta égyptien d'après les textes grecs I* (1970) 422.

⁸ For the following cfr. Bernand, *ibid.* 423 ff.

⁹ Mahmoud Bey, *Mémoires sur l'antique Alexandrie* (1872) 69 ff.

¹⁰ Botti, *op. cit.*, 41 ff. ; A. Bernand, *Le delta égyptien d'après les textes grecs I* (1970).

¹¹ A. Abd el Fattah - Abdel Latif el Wakeel, *Brief report on excavations carried on at Kom el Giza during the season 1989*, *Annales du Service des Antiquités de l'Égypte*, 76, 2000-2001, 9 ff.; A. Abd el Fattah - D. Kassab Tezgör, *Quelques nouveaux moules alexandrins à Kom Giza*, in: A. Abd el-Fattah - P. Gallo (ed.), *Aegyptiaca Alexandrina. Monuments pharaoniques découverts récemment à Alexandrie*, *Alexandrina* 1, 1998, 65 ff.; A. Abd el Fattah, *Recent discoveries in Alexandria and the Chora*, in: J.Y. Empereur (ed.), *Commerce et artisanat* (1998) 47 ff.

Finally, our interest will focus on economic questions, which means mainly intensive work on the finds, such as a statistical analysis of the coins, pottery, stone products, animal bones etc. To reach this goal we are working on several different tasks at the same time: a topographical survey in order to create the first reliable map of the area, a large scale geophysical and geological survey to reveal the Canopic Nile and the urban structure of the city, the documentation and re-examination of the old excavations and finally the execution of small-scale stratigraphic excavations on selected buildings and points of urbanistic interest (for example, streets), which serve to verify the findings of the geophysical survey but most of all to obtain a chronological dimension.

Topographical survey (R. Rosenbauer)

The field work done at Schedia in 2004 not only consisted of excavation work and geomagnetic prospection, but also concentrated on geodetic measurements.¹² In order to integrate the results of the excavations, the results of the geomagnetic investigations, and the outcomes of future archaeological prospections (by means of aerial photographs and drilling) into a unified CAD- or GIS system, it was necessary to establish a raster of fixed points for the whole site of investigation. To this end, in addition to the 10 fixed points already identified in 2003, 75 fixed points were permanently marked and tacheometrically determined. On the basis of the data a network adjustment was carried out. Furthermore, the positions of buildings suitable as remote targets were established tacheometrically. To achieve an exact integration into the Egyptian system of height above sea level, water level marks in the surroundings of the ancient settlement were measured and transferred into the net of benchmarks via geometrical levelling. After the introduction of the net, relevant points of the newly established fixed point system and of the points already marked in 2003 were measured using a real time GPS (Leica GPS 530) to determine the parameters of transformation for the implementation into the Egypt Blue-Belt-1907 system. As a result, subsequent cadastral survey measurements could be executed by real time GPS, which resulted in a substantial saving of time in comparison to the tacheometric recording conducted in 2003. The cadastral survey of the modern surroundings of ancient Schedia was indispensable for several reasons. With regard to the planning of the geomagnetic prospection and the stratigraphic sondages a detailed knowledge of the modern topography (especially of the canals, streets and field borders) is of great importance. Furthermore, it is possible to draw conclusions about the ancient landscape from its current shape. This holds good for the relief of the terrain, which reveals areas of settlement as well as the course of the Canopic Nile in ancient times. To a certain degree also the course of today's streets and field boundaries can disclose characteristics of the ancient topography. The landscape in the area of the ancient settlement Schedia has undergone severe changes caused by an extensive removal of soil over the last decades.¹³ Therefore all maps and cadastral maps available were included into the CAD system.¹⁴ The geodetic work will be continued in the following campaign of 2005. The emphasis will be on the expansion of the fixed point system to the peripheral areas of the ancient settlement a completion of the cadastral mapping, and on the revision and densification of the digital terrain model.

Geophysical Survey (K. Strutt)

¹² The topographical survey was carried out by Gerd Herbst, Anton Herbst, Mildred Knebel and Ralph Rosenbauer.

¹³ For example an area south of Kom el Nashwa of 500 m length and 80 m width has been removed almost completely to supply material for the production of bricks in a factory nearby.

¹⁴ All in all six cadastral maps on a scale of 1:2500 (dating from different years), a map on a scale of 1:25000, and a map on a scale of 1:25000 were implemented in the form of raster images. In addition, a map from 1866 was added to the background, which provided interesting evidence about the course of the Canopic Nile and the ancient canal.

Since 2003 two seasons of geophysical survey were conducted at the site by the University of Southampton, to assess the archaeological remains of the area surrounding the Schedia excavations (Fig. 3). The surveys were carried out using magnetometry. Prior knowledge of the sediment and archaeological deposits at the site suggested that use of a magnetometer would be most successful in recording the remains of sub-surface archaeological structures. Archaeological features such as brick walls, hearths, kilns and disturbed building material are clearly represented in the results of magnetometry,¹⁵ together with more ephemeral changes in soil.¹⁶

For the geophysical survey, grids of 30 x 30 m were set out using a total station. Magnetometer survey was undertaken using a Geoscan Research FM36 Fluxgate Gradiometer. In most cases readings were taken on 1m traverses, every 0.5 m in every 30 m by 30 m grid, although for the main kom site at Kom el Giza readings were taken on 0.5 m traverses at 0.25 m intervals. The decision was made to use an automatic encoder trigger, allowing relatively rapid and efficient survey over the large open areas around the excavations. Survey data were processed using Geoplot 3.0 software. The post-survey processing of data was necessary to remove any effects produced by changes in the earth's magnetic field during the course of the survey and to minimise any interference in the data from surface scatters of modern ferrous material and ceramics. The data were despiked to remove any large peaks or 'spikes' from the data produced by material on the surface of the field. A mean traverse function was then applied to average out any changes in the data produced by the drift in the earth's magnetic field. Filters were subsequently applied to smooth out any high frequency, small disturbances in the data. Finally 0.5m values were interpolated from the existing readings to improve the spatial resolution of the results across the traverse lines, mainly for aesthetic reasons. The final images of the geophysics results were derived from Geoplot 3 as bitmaps. These were then geo-referenced back into an Autocad map of the modern topography.

One of the main results is that it was possible to trace the western edge of the ancient Canopic Nile at several points (Fig. 4). It runs about 250 meters eastwards and parallel to the modern Kanubiye canal. The magnetometrical results show clearly that it was flanked on its western edge by a street and a dense row of buildings. With a depth of 40 meters, these buildings follow the curve of the river and do not correspond to a strictly orthogonal plan. Some of them show typical features of horrea, with long parallel rooms. Others seem to have a more complex structure with a broad variety of rooms, maybe also of different phases. One may even be identifiable as a possible temple platform. Behind this first row of buildings occurs a quieter zone of a width of about 25 meters, possibly demarcating a broad road-way running parallel to the river. Tests to find the opposite, eastern edge of the Nile have not revealed a clear picture yet.

A second aim was to trace the ancient canal which once connected Alexandria with Schedia and the Canopic Nile. Based on several old maps, which show a long and broad depression between Kom el Nashwa and Kom el Sherif a series of geophysical tests was executed in this area, which seem to prove the existence of a broad harbour basin between Kom el Nashwa and Kom el Sherif, which narrows to the west and east. This question, however, has to be followed up in the next seasons.

Concerning the question of the extension of the city, it is now quite clear that the ancient city of Schedia once occupied the whole edge of the river between the southern part of Kom el Giza up to the height of Kom el Nashwa, which means a distance of more than 2.5 kilometers. The westward extension of the settlement could not be established yet.

Two kiman around Kom el Giza were also surveyed as part of the 2004 season. The first of these, situated across the canal from the village, located a number of large structures aligned with the course of the modern canal, including large wall footings and a potential large

¹⁵ I. Scollar, A. Tabbagh, A. Hesse and I. Herzog, *Archaeological Prospecting and Remote Sensing* (1990).

¹⁶ A. Clark, *Seeing Beneath the Soil: Prospecting Methods in Archaeology* (2nd Edition, 1996); C. Gaffney, J. Gater and S. Ovendon, *The Use of Geophysical Survey Techniques in Archaeological Evaluations*. Institute of Field Archaeologists Paper 6, 2002.

building measuring 80m across. The second kom, situated 0.5 km to the north-west, elicited a poorer response to the magnetometry, with only one or two badly truncated structures and a possible canal edge showing clearly. It was evident from the surface that this zone had been completely erased, in some areas down to the level of the water table. A number of transects were also surveyed further to the west and north, in an effort to locate the line of a canal that supposedly ran from the west to the Canopic Nile. Although some smaller anomalies were located in the results, including some linear features alongside a broad hollow in the modern topography, no definite canal edge was found in the results. The results of the first two geophysical survey seasons at Schedia were successful in locating and mapping a number of structures associated with the ancient settlement. These results are however preliminary, and as more work is carried out in future seasons, the gaps in the survey will be filled, and the end result will provide a clearer picture as to the layout of the ancient site. Furthermore, in 2005 a series of deep drillings and sedimentary analyses has been carried out in collaboration with the Geology Department of the University of Mansoura, which will give further evidence of the course of the Canopic Nile and the canal.

Documentation and supplementary examinations of the old excavations

Concerning the field archaeological activities, one important aim was to understand better the excavations of the Egyptian Antiquities Authorities, done in the Eighties and early Nineties (see Fig. 9). Therefore, in a first step these areas were cleaned and all architectural remains were drawn and photographed systematically. Furthermore all structures were surveyed with a tachymeter and included into the AutoCAD-based plan. In a second step some stratigraphic trenches have been carried through to learn more about the dating and function of single structures.

After this examination the following picture appears. In the western most area of the old excavations, which means closest to the former city centre (Area 3), baths are found, in the form of two large round baths with sitting tubs of a Hellenistic type as part of a larger complex, perhaps a gymnasium (Fig. 5). Apart from the typology, technical aspects, coin finds and a very low foundation level seem to confirm a relatively early dating, probably in the late Hellenistic period. In its immediate vicinity, still in area 3, the rests of a huge foundation has been partially exposed. Its dimensions seem to indicate that they belonged to big public building, maybe a temple. Again all findings in this area, including the coins, are indicating a late Hellenistic dating.

While these two structures of area 3 seem to be in a certain sense public buildings, the two areas farther to the east, 1 and 2, show a completely different picture (Fig. 6). In both areas the earliest traces of use were numerous constructions that are possibly to be interpreted as funerary monuments that date on typological grounds to the Roman period (Fig. 7).

Unfortunately most of them were already too damaged to offer a clear picture. Nevertheless, one structure in sector 1 seems to confirm this interpretation. It once consisted of a stepped pyramidal structure of ashlar blocks which have mostly been robbed in later phases. The core of the construction consisted of a cube of burnt bricks. Around and particularly underneath these bricks a stratum containing ashes, bones and ceramics have been found. Most of the bones belonged to animals of different types, like at least four jaws of goats or sheeps as well as a strange cat-like animal, strangely enough without head. They do not show signs of burning. However a certain portion of bones concentrated in one area have been burnt and are in a very fragmentary status of conservation. We still have to analyze them but it seems likely that they belong to a human cremation, while the unburnt animal bones could be connected to some funeral rites. According to a Hadrianic coin found within the ash layers this structure is probably to be dated to the 2nd century AD.

The excavations carried out here are therefore in a suburban cemetery. At a somewhat later time an isolated villa suburbana was built apparently in the midst of the sparse graves of Area 1. This villa of the middle imperial period was organised around a central atrium-like courtyard and was furnished with rich mosaic and opus sectile floors. It was in use for a long

time and often rebuilt and renovated. In late antiquity the building was abandoned, and over its ruins and the neighbouring graves as well as in most of the other areas excavated up to now, numerous basins were installed, in some cases with furnaces nearby. Undoubtedly, these were production units that were used intensively and were repaired repeatedly. Most of the basins consist of a massive nucleus of fired brick and were lined on the inside with impermeable plaster. Outside most of them were surrounded by mud-brick walls, the impressions of which are recognizable in part on the preserved basins. The typology of the basins is not uniform, so that they may have served various purposes. Some have the characteristic arrangement for wine production with a higher platform for treading and a lower catchment basin accompanied by further basins for the fermentation (Fig. 8). Others are isolated and appear to have served other productive processes that cannot be identified at present. Aside from their function, the basins testify to an intensive agricultural use of the territory in late antiquity.

New excavations

Alongside the investigation of the old excavations new archeological examinations were carried out at Kom el Hamam, Kom el Giza and other points of the ancient city (Fig. 9). Of particular interest is an unusual building at Kom el Hamam. It is a large structure measuring 65 x 40 m, which emerges in part from the hill of Kom el Hamam. Three stratigraphic sondages (Areas 5, 6 and 9) were carried out down to the foundations of the building. They showed that it is to be dated in the late 1st or early 2nd century AD and that it was erected over earlier buildings, which were demolished for the purpose (Fig. 10-12). The excavations showed that the building in its original shape was erected in an interesting building technique: the supporting structure consisted of 10 x 8 rows of massive brick pillars with cores of *opus caementicium*, which bore massive cross vaults of *caementicium*, collapsed fragments of which were found. It represents one of the largest fired-brick buildings in Egypt outside Alexandria. The technical details clearly show the direct knowledge of Roman buildings of that period in central Italy. However, two features indicate that the responsible architect was not really familiar with this building technique: contrary to the Roman prototypes all pillars were constructed without foundations, instead of which already in the original phase of the building huge mud brick pylons were added on the outside in order to absorb the pressure of the vaults. Furthermore, mud brick walls running in a north-south direction were constructed between the pillars, which means that the building was separated into a series of nine parallel naves each ca. 5 m wide, 40 m long and 5.5 m high. All these naves opened on the south side through huge doors, which could be closed by leaves. The floor consisted of a simple mud brick pavement. In the middle of the naves long low benches (ca. 0.25 m high, 1.50 m wide) made of mud bricks seem to have been installed. Unfortunately no specific finds were found that could give an indication of the original function of the building; obviously it was completely emptied before the changes of the second phase. However, judging by the typology of the building, it most probably formed a large storage facility.¹⁷

Later the building underwent several different phases of use and renovation. Only a short time after its erection, additional mud brick walls were added during the late 2nd and 3rd century AD in order to create simple apartments. These habitations show two main phases of use. In one of the sectors several rooms were examined, some of them containing cooking installations. They revealed a huge amount of pottery, mainly amphorae as well as coarse and cooking wares, mostly of local production (Fig. 13). In the 4th century AD these habitations were abandoned and levelled in order to install a granary. On a level ca. 1 m above the pavements of the prior habitations a special brick floor was constructed supported by some dozens of small parallel vaulted chambers - a typical Roman system for keeping grain dry. This grain storage facility was in use until the 5th century AD, when it was

¹⁷ An astonishing similar, however much older building with the same typological features, can be seen at the Ramesseum, the temple precinct of Ramses II at Thebes.

destroyed by fire. On the ruins of the completely destroyed building a simple settlement of a rural character was installed, with extensive reuse of old materials. The pottery indicates a date for this last phase in the 5th to 7th century AD.

Immediately south of this huge building remains of a huge enclosure wall were uncovered (Area 9; Fig. 14). In a distance of ca. 4.5 m this wall runs parallel to the southern front of the above-mentioned storage building leaving the space for a small thoroughfare. The wall has impressive dimensions: with a thickness of about 2 m its foundations consist of four layers of huge ashlar blocks with a total height of 1.70 m, while the elevation was completely built of mud bricks. In the investigated area the wall shows no entrance or other walls diverging from it for a length of about 10 m. Moreover, the dimensions as well as the massive construction technique indicate that the wall must originally have reached an impressive height. Therefore, it seems probable that the wall actually formed a high enclosure belonging to a building south of it, maybe a temple or some other kind of public building. However, the geophysical prospections carried through in this area have not revealed any specific features and two sondages started in 2005 show massive post-antique interventions going on in this area, maybe due to stone robbery. Further excavations have to clarify if at least foundations of this building remained. The stratigraphic evidence in area 9 shows that the probable enclosure wall was constructed shortly after the huge storage building, probably still in the late 1st or early 2nd century AD.

Apart from the excavations on the remaining parts of the ancient kom, which all show a well preserved stratification from the Ptolemaic to the Byzantine period, some trial trenches (areas 11-13) were executed in areas where the ancient kom once existed but is now reduced to the level of the surrounding farm land. These sondages were carried out on the basis of the geophysical evidence, which clearly shows the border of the Canopic Nile and some adjacent buildings. Unfortunately, the excavations in these areas proved that the building structures revealed by the magnetometry survey consist only of trenches of robbed-out walls. Obviously during the intensive seabak quarrying in the first half of the 20th century even the earliest levels of use were reached and all ancient mud brick walls were robbed out together with their stone foundations. Indeed, many houses of the modern villages in the area employ re-used ashlar blocks. The structures evidenced by the geophysical prospections therefore seem to be only the negatives of ancient buildings, which must be attributed because of their deep level to the earliest phases of the city. Finally a trench executed at the ancient border of the Canopic Nile (area 12) is of particular interest. Over a length of about 13 meters its stratigraphy documents a very regular process of silting up of the river consisting of a long alternating sequence of sand layers caused by floods and mud brick debris flushed from the settlement into the river maybe due to heavy winter rain. The most recent phase of silting up excavated within the limits of the trench delivered Byzantine pottery and coins.

Preliminary conclusions

If one attempts to regard the results obtained so far in connection with those of the older excavations, the present state of knowledge allows the following working hypothesis on the development of Schedia to be postulated. After a Hellenistic phase attested by isolated finds going back to the 3rd century BCE, which is still to be clarified, the place appears to expand greatly in the course of the late Hellenistic and Roman imperial period. In this connection luxurious residences for a prosperous upper class penetrate the periphery previously used only for burials. At the same time large production or storage facilities arise, apparently as a consequence of massive investments, on the south side of the city away from the river. On one hand, they attest to the economic attractiveness of Schedia in the imperial period, and, on the other, they suggest that the more favourable zones near the river were already completely built up. That the brick-pillar building investigated here was transformed for residential purposes contrary to its original destination can be considered a further indication of population pressure and of an increasing process of urbanization. In late antiquity this tendency appears to reverse, although the new transformation of the building into a large granary points to the still uninterrupted importance of the city as a supply base. In the late

Roman/Byzantine period the part of the settlement excavated seems to lose a large part of its urban character with the abandonment of the older buildings and to undergo a strong process of ruralization. It changes into a centre for agricultural production that possibly still has regional importance in supplying Alexandria but appears to a large extent to lose its role as an emporium, perhaps because of the overall decrease in trade. This hypothesis, which for now can take only the Roman settlement of Schedia into account, needs to be checked by further investigation and especially to be complemented by a greater consideration of the Ptolemaic phases.

Examination of the pottery (A. Martin)

The pottery of the seasons 2003-2005 could only partially be classified until now. Work has concentrated on one sondage in particular (Area 5). A quick examination of the material from the other sondages suggests that it is representative.

To judge by the results of statistical analysis from it, Schedia presents pottery assemblages that are within the norm for Mediterranean coastal sites with good trade connections both in the mid imperial period and late antiquity: that is, with percentages of amphorae well over 50%. Standard fine wares are, however, rather scarce compared to other Mediterranean sites.

There is an interesting contrast between the two periods: the earlier contexts contain very little imported material but the later ones regularly have a considerable amount of imports, coming mainly from the Levant and Asia Minor. If this result is confirmed by further study of contexts at Schedia and by comparison elsewhere, it could be that Egypt in the imperial period received little in return for its exports, while the situation was of more normal exchange in late antiquity.

Numismatic evidence (H.-Chr. Noeske)

All the coins of the 2003-2005 seasons, altogether about 800 pieces, have been cleaned, preserved and analysed. The chronological spectrum ranges from the early Ptolemaic period to the beginning of the 7th century AD. Because of the accurate stratigraphic excavation it will be possible at the end of the project to acquire statistically reliable data about their time of circulation as well as on the relative percentage of the coin assemblages in different periods in Lower Egypt. Schedia plays an important role here because of its vicinity to the metropolis Alexandria and its location on the Canopic Nile. It is already possible to observe significant differences concerning the origins of the Roman coins in comparison to other sites in the delta region (e.g. Pelusium) or Upper Egypt. It is also worth mentioning that the continuing circulation of coins ends at Schedia under Phocas (602-610 AD), which might indicate that it was not the Islamic conquest in 641/42 AD but already the Sassanid occupation of Egypt under Chosroes II (618-628 AD) that brought about a massive decline of the city, after which it continued to live only in a very reduced way. This hypothesis is sustained by the complete absence of early Islamic imitations of the Alexandrian Dodekanummia as well as of the reformed Fulus after Abd al-Malik. Together with the coin finds of the earlier excavations of the Egyptian Antiquities Authority, which revealed also very rare Ptolemaic gold and silver coinages, and in comparison to other finds in the vicinity of the site (Kafr ed-Dawwar, Damanhur, Naukratis) the evidence of Schedia will in the future deliver important new insights in the regional history and the economical development of Lower Egypt during the Ptolemaic to Byzantine periods.

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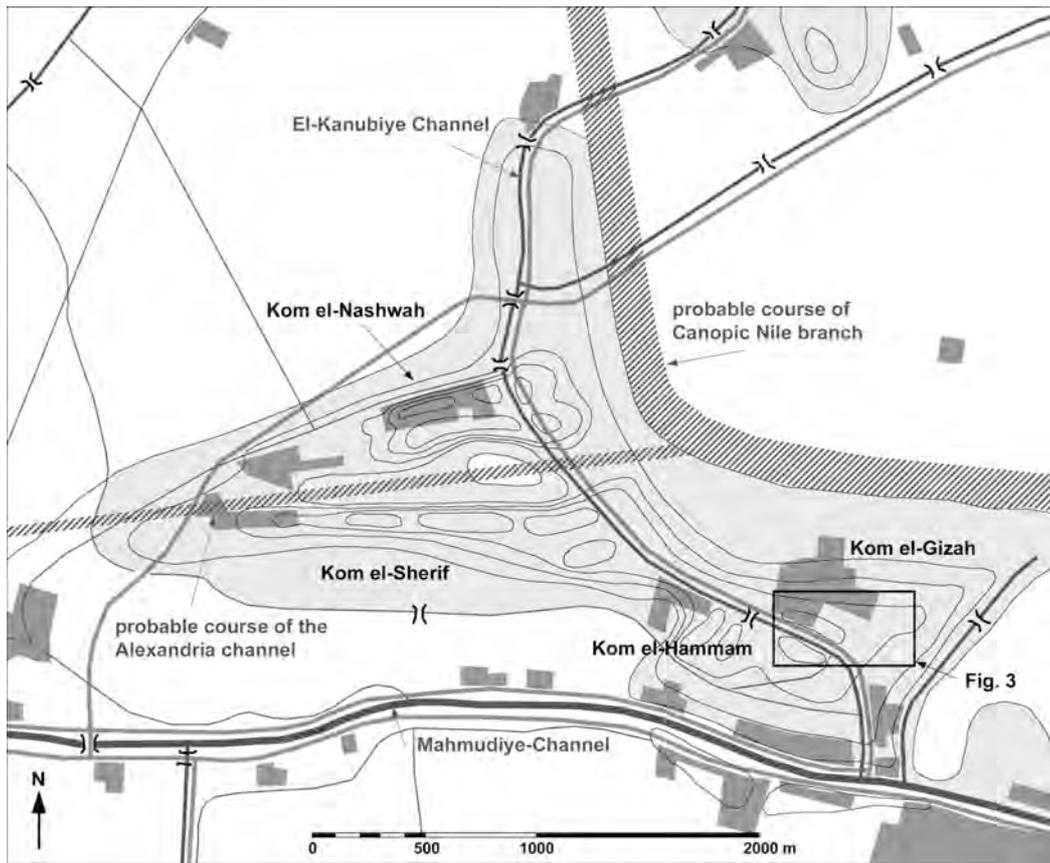


Fig. 1



Fig. 2

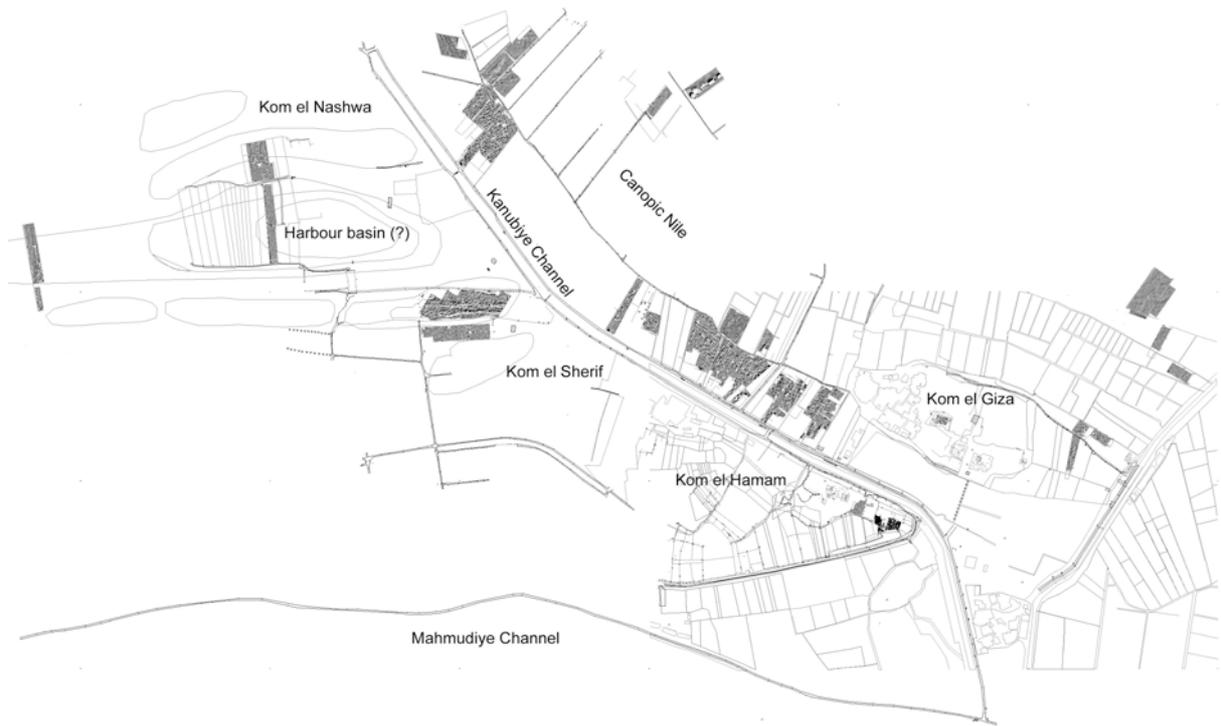


Fig. 3

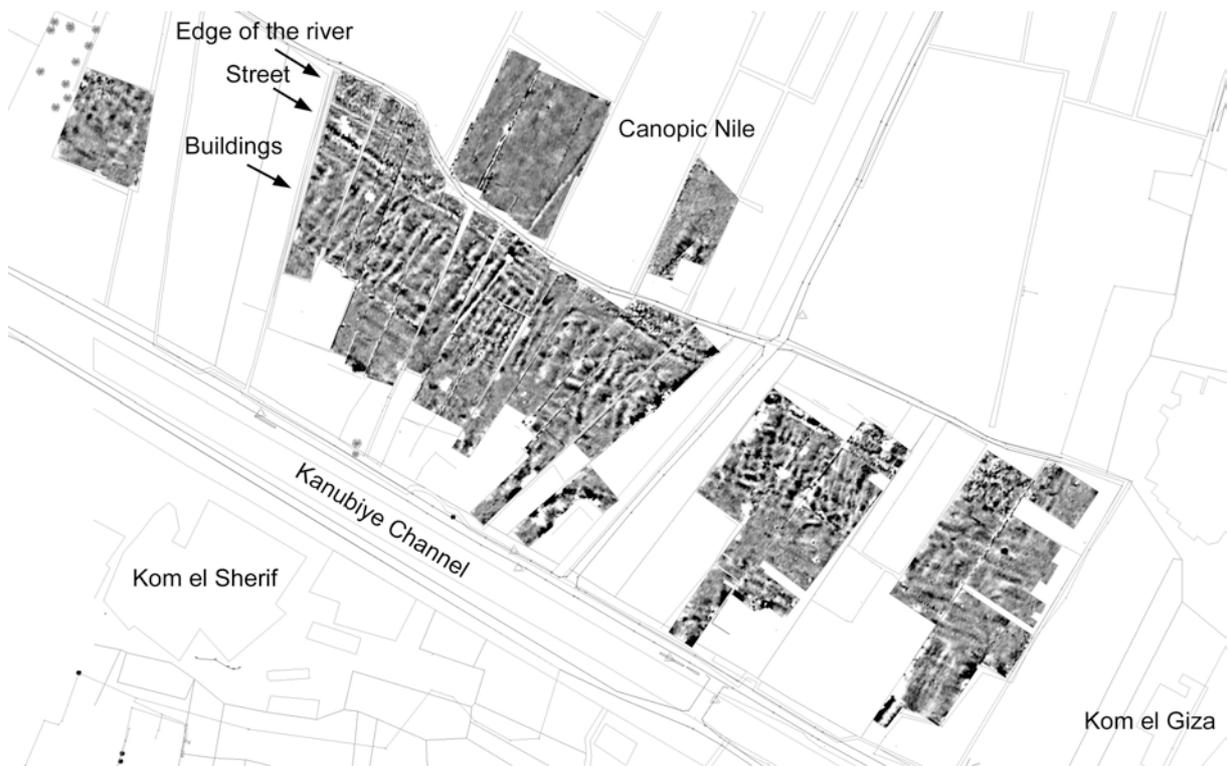


Fig. 4

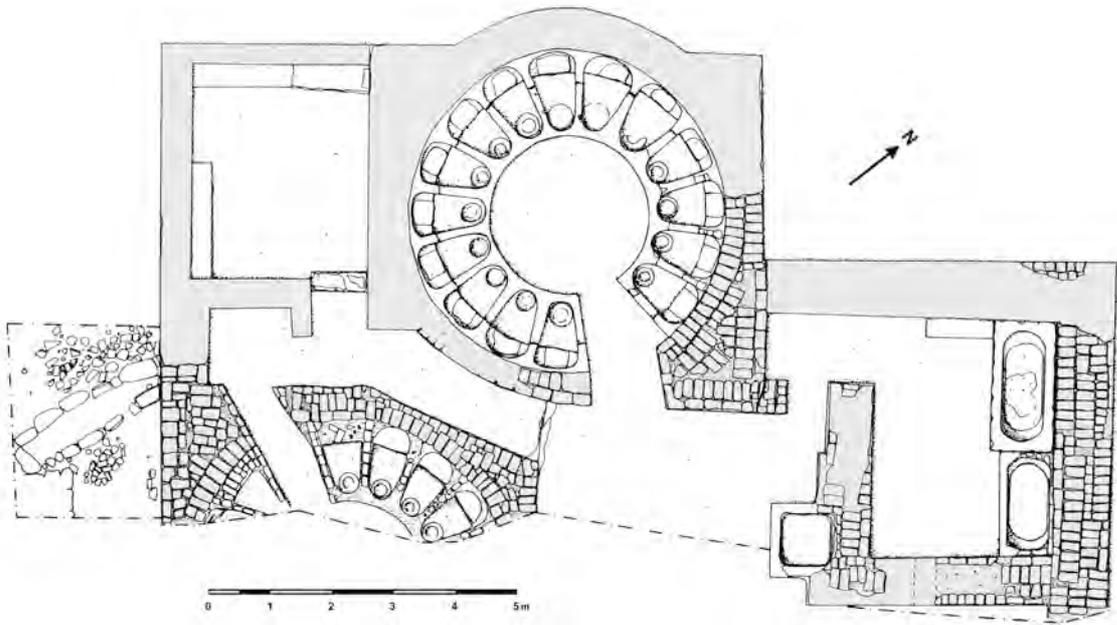


Fig. 5

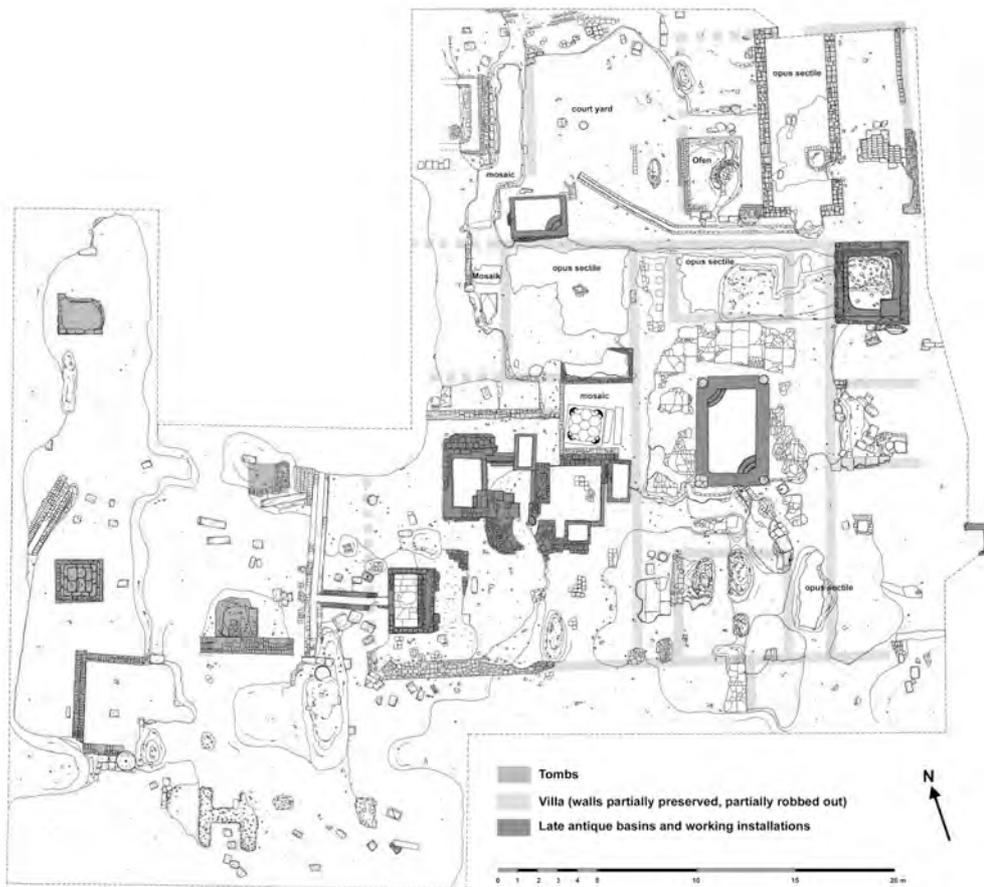


Fig. 6



Fig. 7

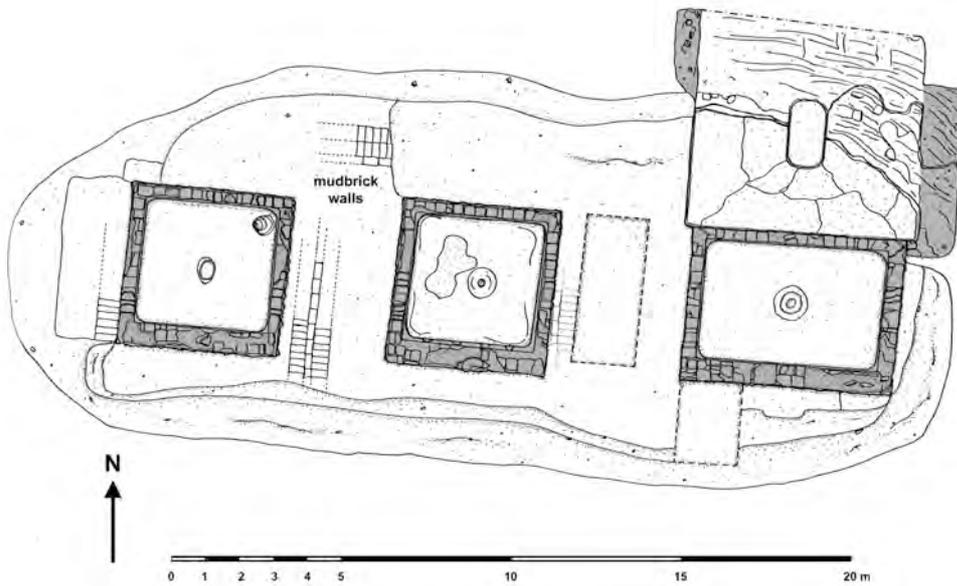


Fig. 8

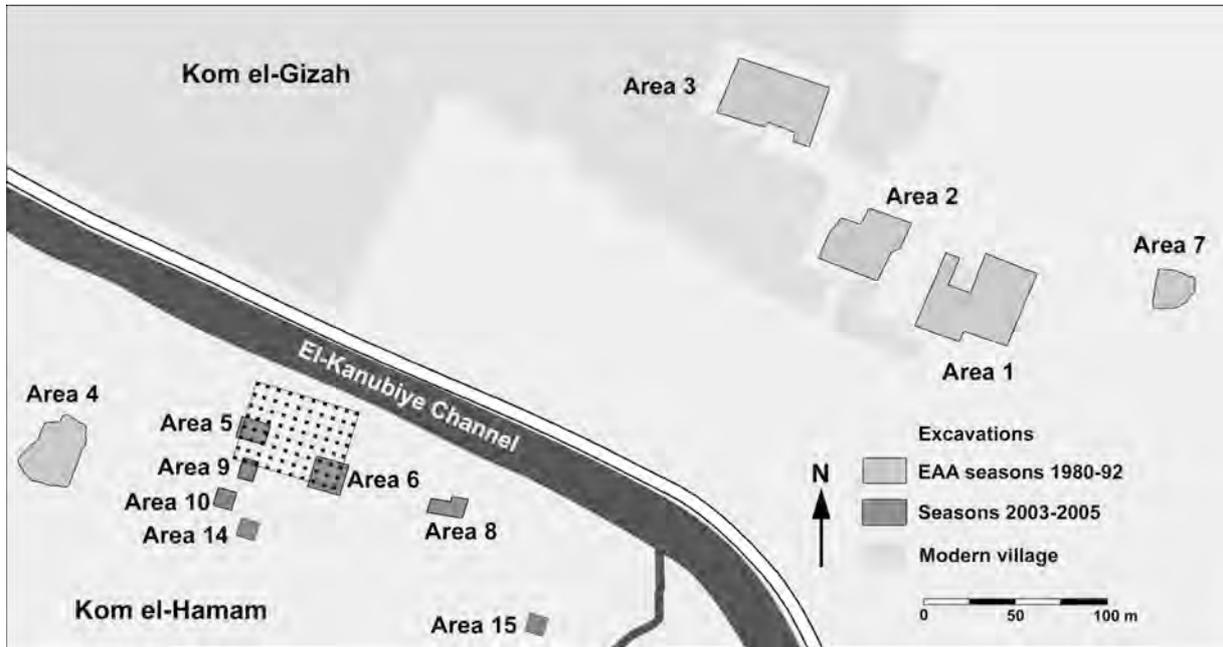


Fig. 9



Fig. 10

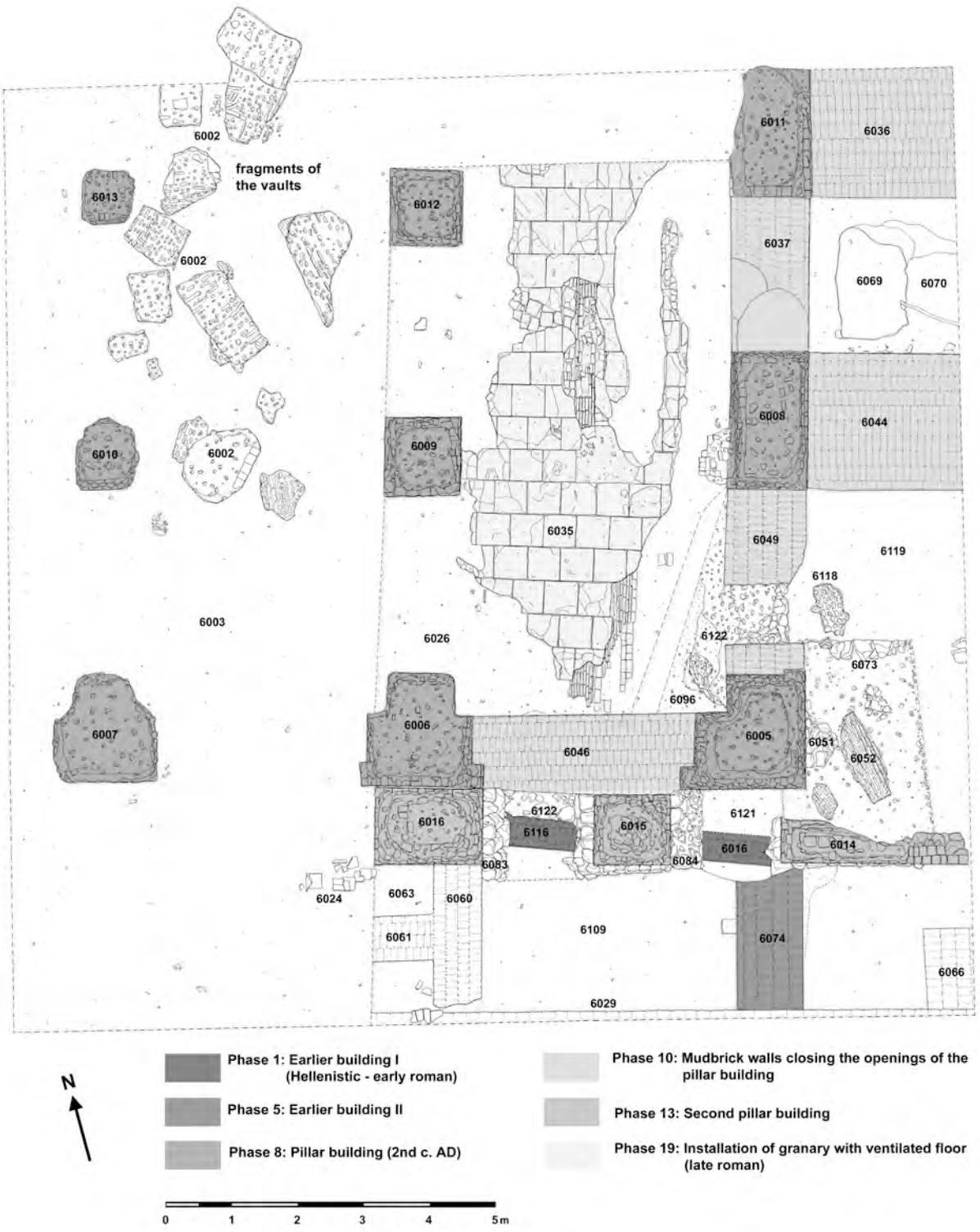


Fig. 11

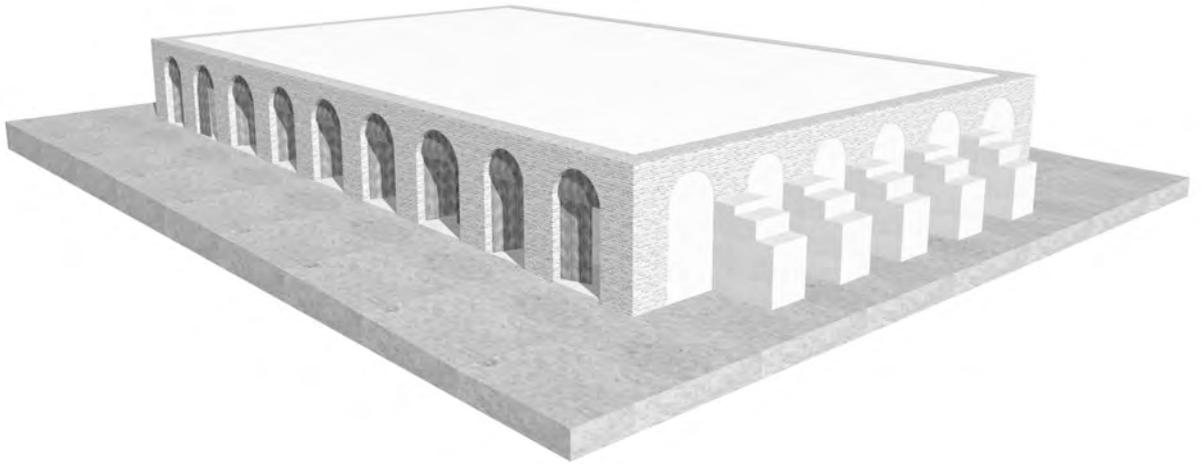


Fig. 12



Fig. 13

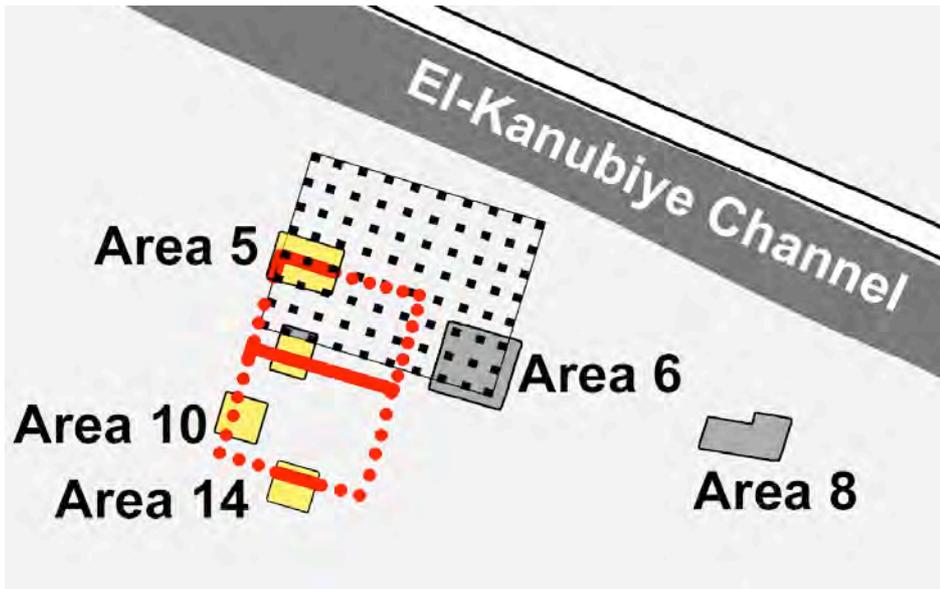


Fig. 14