



# **EL-HEYZ PROJECT**

**Baharia Oasis**

**CZECH INSTITUTE OF EGYPTOLOGY, CHARLES UNIVERSITY, PRAGUE**



**6. 3. - 31. 3. 2004, 2nd season**

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**In accordance with the permission granted by the Permanent Committee of the Supreme Council of the Antiquities, Egypt, the Czech Institute of Egyptology, Charles University, Prague, was granted a permission to carry out an archaeological survey and trial excavations in the area of El-Heyz in the southern part of the Baharia oasis.**

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# **Report on the survey and trial excavations of the Czech Institute of Egyptology, carried in the area of El-Hayez, Baharia oasis (2nd season, 6.3. – 31. 3. 2004)**

## **1.0 Introduction**

In 2003 the Czech Institute of Egyptology launched a survey of the El-Hayz area situated in the southernmost part of the Baharia oasis. Nowadays, this area is only sporadically inhabited, and its history is largely unknown. The first scientific investigations into the history of the area were carried out by Ahmed Fakhry (1974, pp. 110-124). Prehistoric research was previously realised only by F. Hassan (1979). More recently, there were archaeological activities carried out by the Bawiti Inspectorate of Antiquities at sites of El-Riz and Ayin el-Khabata during the last decade of the 20th century. Undoubtedly the peak of scientific popularity focused on Baharia several years ago, due to the unprecedented discoveries of Zahi Hawass made at the Valley of the Golden Mummies (Hawass, 2001).

The first stage of the current project has been designed for a period of three years (2003 – 2005). Its primary objective is to provide an overall archaeological map which presents the principal sites, along with a description of their potential, character and stage of preservation, structure, and their relationship to the monuments within the ancient landscape.

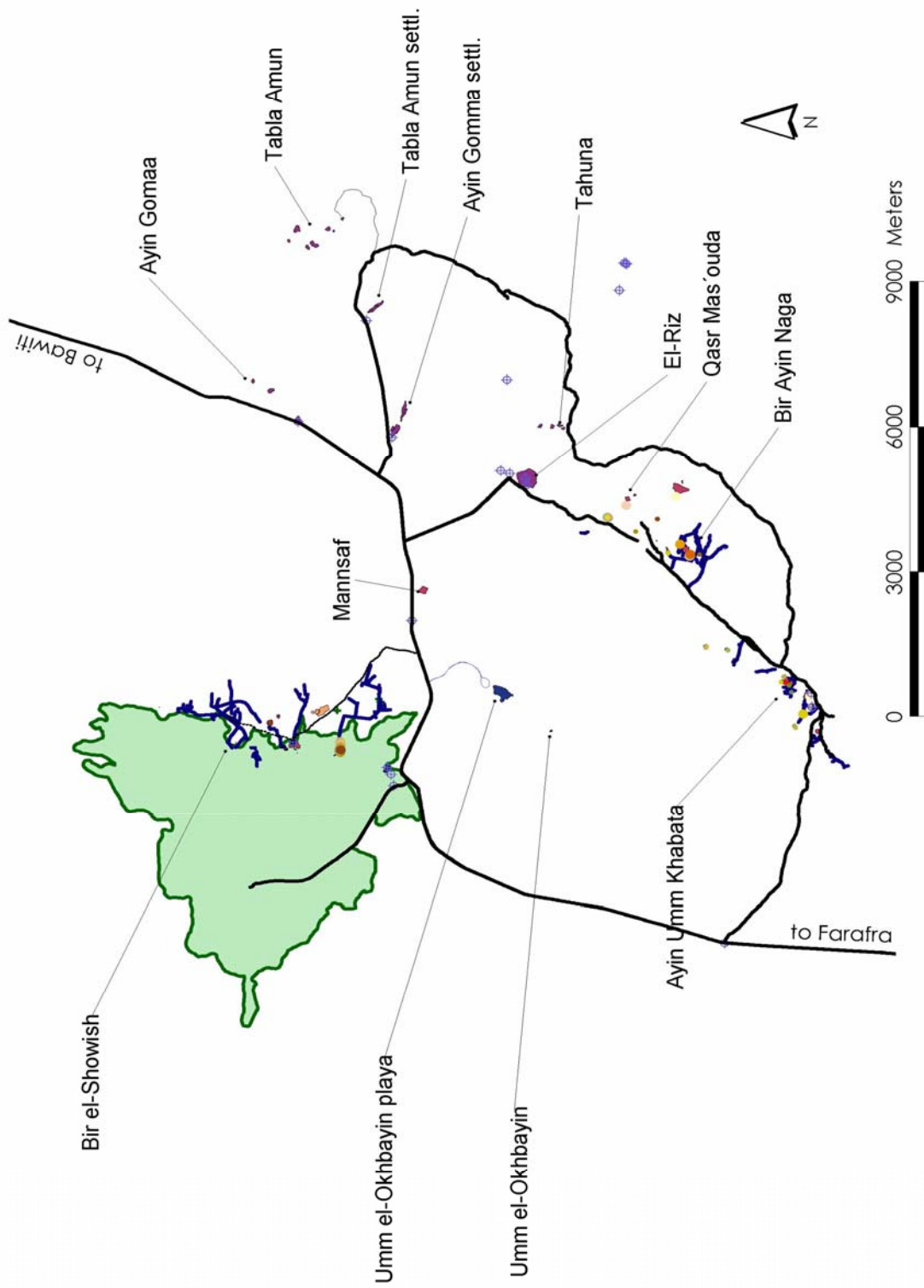
## **2.0 Methods used**

The prehistoric and historic survey was conducted systematically in the areas of Bir el-Showish, Umm el-Okhbain, Gard el-Sheikh, Ayin el-Ezza, Mannsaf, Ayin el-Khabata, Qasr Mas'ouda, Tabla Amun and El-Riz. Additional orientation surveys focused on Gebel Mitteli Radwan, Pyramids area (site with two hills in a shape of pyramids), and the marginal escarpments. The *playas* received special attention as favourable areas for prehistoric settlement and the lithic outcrops as sources for the tool production.

During the mapping of the area the following maps were utilized during the survey

- Map Egypt 1:500 000 Sheet 4, Baharia Oasis,
- Map Egypt 1: 250 000, Sheet 4-D, Baharia Oasis,
- General Geological Map 1: 2 000 000.

Already at the very beginning of the project it became clear that the current maps are unsuitable for the intended detailed archaeological work and the ensuing analysis. Therefore, in addition to archaeological objects, additional features were mapped during the survey when



Map 1: The area of El-Hayz with principal sites examined during the survey

As far as the archaeological objects are concerned, settlements, cemeteries, significant tombs and surrounding irrigation networks were mapped (in our case mainly old fields, gardens and watering systems – so-called *manawars*).

The tracing of monuments visible on the surface was carried out during the walking surveys. All discernible monuments were located with help of GPS GeoExplorer 3 Trimble receiver.<sup>1</sup> The databases established in this way were processed by GPS Pathfinder Office 2.7 software. In the next step, the data were imported into GIS software bundle ArcGis 8.2. This software enabled the combination of the graphic, attributes and photographic databases and the production of the topographic layout.

During the 2004 season the surveying activities were accompanied by trial excavations carried out at three sites: Bir el-Showish, Ayin el-Khabata and El-Riz. The main objectives of the 2004 season were as follows:

- to complete the survey map of the examined area,
- to carry out trial excavations in order to detail selected structures,
- to date individual sites as precisely as possible (using sherds lying on the surface of the desert),
- to analyse human remains found during the trial excavations.

### **3.0 Recorded archaeological history of the area of El-Hayez: An overview**

#### *3.1 Prehistory*

#### **DOPLNI A UPRAVI JIRKA SVOBODA**

As a result of the sedimentary conditions, the geomorphology of the Bahariya landscape is structured into the levels of the escarpments and table mountains, slopes and pediments, terraces, and the basal plain. All types of landscape were test-surveyed and the following types of sites and artifact distribution were recorded:

1. isolated artifacts,
2. random artifact accumulations,
3. settlements,
4. workshops.

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<sup>1</sup> The data have not yet been differentially corrected for the area of Egypt.

Location of workshops is always related to the rich lithic outcrops of the area, whether it is the cherts weathered from the Cretaceous limestone coverage of the escarpment or the quartzite outcrops forming the caps of certain table mountains (more than 200 m a.s.l.). The settlements, on the other hand, are concentrated around the playa deposits on the basal plain (120-140 m a.s.l.). Occupation of the terraces and pediments is generally scarce, but some isolated artifacts and random accumulations are dispersed in all types of landscape.

Based on preliminary evaluation of the collected material, and on comparison with the results from the previously surveyed oases (Kharga, Dakhla), the following chronological and cultural framework may be suggested:

### *1. The Acheulian*

Four bifaces of the Acheulian type were collected in the area of Bir el-Showish and Gebel el-Showish. Two are „archaic“ and more eolised, whereas the other two, finer and more fresh, suggest a more evolved Acheulian stage, thus possibly covering a longer time-span of occupation (500 – 100 ky). Some of the associated debitage is probably related to this stage.

### *2. Undifferentiated Middle Paleolithic*

This stage is most widely dispersed across the surveyed landscape. Several specialised lithic workshops, with a high density of Levallois flakes and cores, were recorded at the quartzite outcrops on top of Gebel el Showish. Isolated artifacts and random accumulations were encountered in almost all surveyed areas, starting at the chert outcrops on Gebel Gharbi in the south, over Bir el-Showish to the Pyramids area and the Gebel Mitteli Radwan ridge in the north. Besides the typically Levallois nature of cores and flakes and the associated bifacial technique, however, the laterally retouched artifacts are almost absent and, as a result, it is difficult to classify this horizon more precisely.

### *3. Terminal Middle Paleolithic*

At some of the basal plain sites, especially around the playas, we encountered rather small-dimensional Levallois and blade industries. Given the fact that some of these sites are of settlement character, as at Ayin Umm el-Okhbain, Mannsaf, and Ayin Khabata, we also recorded more retouched tools such as bifacial leafpoints, burins, sidescrapers, and borers. This typological structure, together with the smaller size of cores and flakes and an increased amount of blades, would place this horizon somewhere around the Middle-to-Upper Paleolithic transition, on the level of the „Khargan“ or Aterian technocomplexes (50 – 30 ky).

#### 4. *The Epipaleolithic/Neolithic*

As opposed to the widely dispersed earlier industries, the sites of this horizon are smaller, more concentrated, and spatially restricted. A specialised workshop for blade and microblade production was recorded at the Cretaceous chert outcrops on top of the Gebel Gharbi, whereas settlement sites were found at Ayin Umm el-Okhbain (Figs. 1-2), Mannsaf, Bir Ayin Naga and the Pyramid *playa*. Typologically, the Umm el-Okhbain site provided two elongated microlithic triangles, backed blades and bilaterally retouched blades, whereas the Bir Ayin Naga assemblage included a tanged point, a backed point, and a bilaterally retouched blade, suggesting, roughly, the period between 13 – 7 ky bp (Table 1). At the both sites, we also recorded the planigraphy and spatial distribution of the artifacts.

#### 5. *Lithic production during the historic times*

As the last stage in the lithic production, we have also documented an intensive production of heavy picks of quartzite and chert, associated with historic occupation and *manawar* constructions at Bir el-Showish and Ayin el-Khabata.

### 3.2 *Historic period*

As a result of the 2003 - 2004 surveys, larger settlements and what appears to be estates were identified in Bir el-Showish, Ayin el-Khabata and Qasr Mas'ouda. They probably date mainly to the Roman period when the occupation of the oasis perhaps reached its demographic peak. This conclusion is substantiated not only by the individual areas of settlement but also by the size of the underground irrigation systems and adjacent fields.

#### *Ayin el-Khabata*

The settlement in Ayin el-Khabata seems to have had a relatively restricted size. In the central part of the settlement were identified the remnants of a larger house with a wine press. From the house only the crown of the extant walls was summarily surveyed. On the other hand, the remnants of the wine press were examined in detail. The press consists of one square shaped basin the side walls of which were originally built of large flat lumps of local limestone and covered with lime mortar. The juice from the pressed wine grapes flew into two containers, one on the southern and the second on the eastern side of the basin. The container on the eastern side consisted of three parts: at the bottom there was a large rounded cylindrical vessel of burnt clay whereas the upper part of the container was formed by two square-shaped

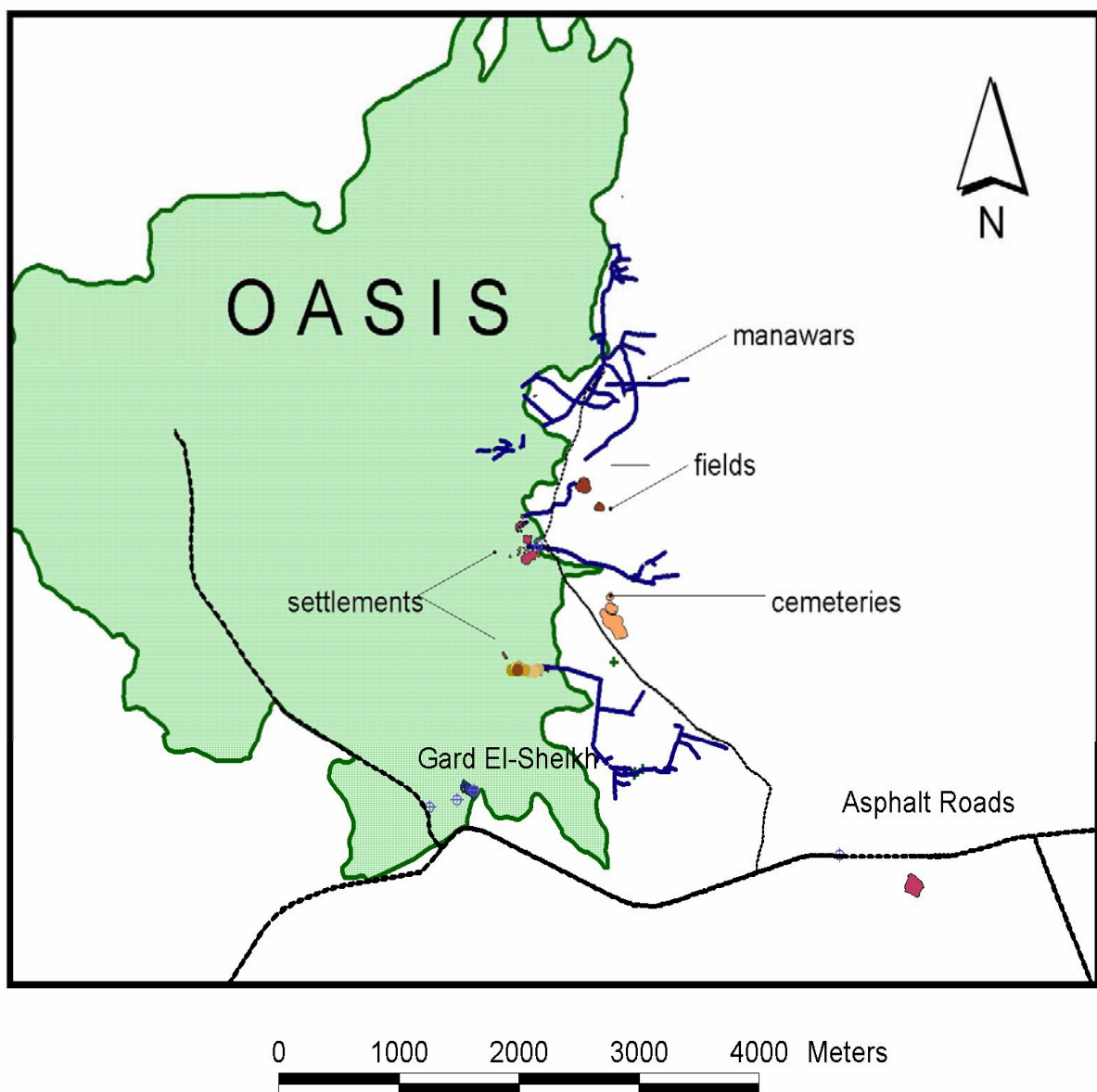
frames made of burnt clay, too. The container on the southern side also had a cylindrical vessel of burnt clay in its lowest part. The upper part of it, however, were formed by burnt brick masonry plastered with lime mortar.

As in previous cases, only the crown of the extant walls was disclosed. Apparently, the central room in the house has the walls covered with saw.

### *Bir el-Showish (Map 2)*

This site is situated near the contemporaneous village of Gharbia. The largely deserted area consists of three core settlements. These settlements are indicated only by scattered posherds

*Map 2: Schematic plan of the principal archaeological features at Bir el-Showish*





and inconspicuous house walls remains on the surface. In some cases pottery kilns could also be traced. The settlement is surrounded on the east by a complicated network of *manawars*, a system of regularly spaced wells connected by underground tunnels designed to collect water from large areas of the slightly sloping plain. Fields lay close to the terminals of the irrigation systems. In the case of Bir el-Showish also some parts of the original field extensions could be located. The examined area shows that the settlements covered an area of at least 8 ha and the *manawars* network was some 20 kms long and collected water from an area of about 700 ha.

The eastern plain with several hillocks was used as a cemetery. It seems that the hillocks were reserved for rock-cut tombs of the elite of the settlement whereas simple pit graves were situated in the lower plain. It may be estimated that there are no less than several hundreds of burials in the area, most of them robbed in the past.

### **Cult installations**

Western slope of one of these hills was selected for a trial excavation in 2004. During the course of cleaning, two smaller courtyards and one looted corridor tomb (Tomb 1, Fig. 1) were documented. Both features form a single burial-cultic installation dating to the Roman period (must probably to 2-3rd centuries A.D.).

Court one was entered from the northwestern corner by an 80 cm wide entrance. The court measures approximately 300 x 320 cm in ground plan and its walls are preserved to a height of about 80 cm. The walls were built of mudbrick except for the rear wall cut in the hill and covered with mud plaster. The west wall contained two niches and a small oven. In the passageway into the second court there was 55 cm wide and 30 cm deep niche.

In the south-east end of the court was a 55 cm wide passageway into the second court (500 x 240 cm in ground plan), which was built in identical way. In its rear wall were embedded three rock-cut niches. The eastern wall preserved one more niche which corresponded with a shaft opening of Tomb 1 situated about 3 m to the east. The eastern wall accommodated two more cavities which may be interpreted as purification basin and an oven, respectively.

Both courts were filled with clean wind blown sand devoid of any artefacts except for some sherds.



*Fig. 1: Tomb 1: detail of the burials inside the corridor tomb*

### **Tomb 1**

About 3 m to the east of the Court 2 was discovered opening of a 2 m deep shaft leading into a corridor tomb dated to the Roman period. To the north of the shaft opening was found a Roman oil lamp. The bottom of the shaft assumes a rectangular shape 140 x 80 cm in ground plan. In its north wall is a 240 cm long and 75 cm wide corridor leading into a corridor shaped tomb. The first part of the corridor is 260 cm long and 160 cm wide, after that the corridor bends towards the north-east and continues for another 440 cm. The whole space was filled with human bones, remnants of disintegrated burials (Excav. No. 2/BS/2004). In the 20 – 50 cms thick floor fill were found several items, remains of the original burial equipment. The items were as follows: three different pottery vessels (Excav. Nos. 3-5/BS/2004), one calcite miniature cup (6/BS/2004) and a small fayance pendant of Bes (7/BS/2004). Lying on the surface were some limestone hammers used for digging manawars.

## **Manawars**

Trial excavations were carried out in two better preserved manawar shafts. These shafts were 7 – 8 m deep and measured 130 x 55 cm in ground plan. It seems that the whole network of the underground channels has been sanded up and the future investigation would require a serious investment of time and means.

## **Settlement**

In the north-eastern part of the oasis of Bir Showish, large mudbrick structures were revealed. The structures seem to have once covered an area of about 20 ha. The remnants of the settlement form a sort of two low hillocks. Some of the mudbrick walls are visible on the desert surface. The area of the settlement is covered with potsherds and fragments of different types of glass, alabaster, coroded copper, etc.

In the aforesaid area two trial diggings were carried out. In one sondage, covering an area of 40 x 40 m, was revealed a complex of rooms built of mud brick (Fig. 3). The rooms, from which only the crowns of walls were unearthed, have different size. Some of them were

*Fig. 2: Bir el-Showish, House 2*



obviously open, without ceilings, the others have vaulted roofs. As shown by the clearing of one of the rooms, the height of the extant walls amounts up to 2.5 m. The rooms are of rectangular plan oriented either in the north-south or east-west direction. The examined room was filled with drift sand except for the remnants of the broken vault lying on the floor. The walls of the room were plastered with clay mortar and covered with a thin layer of stucco and painted red. In the southern and northern walls of the room were niches. In the room no objects were discovered.

The second trial digging was carried out in the southern part of the settlement. The digging led to the discovery of a pottery kiln, or, more precisely, two kilns adjacent to each other. The kilns, built of burnt bricks, had a typical conical shape and represent typical examples of the so-called two-chambered vertical kilns. Both of them were surmounted by a vaulted superstructure of which today only the tinely remnants survive. Apparently, both kilns fell in disuse already in the antiquity as indicated by the fire chambers sealed by clay. Adjacent to one of the kilns lay a broken large vessel, obviously a water container.

Another settlement was revealed in the site number 2 near the cottage of the gardien. From the settlement, which seems to extend to the west and north, only the crowns of one house and a pottery kiln were unearthed. The pottery kiln seems to have had a different plan than the kiln in the Site No. 1. A more detailed examination of the kiln in the site No. 2 is planned for the next season.



*Fig. 4: El-Riz with its dominant, the fortress*

### *El Riz*

This is by far the largest settlement in the El-Hayez oasis (Fig. 5). It covers an area of cca. 10 ha, and once it had undoubtedly formed a real centre of the whole area. The site is dominated by a Roman fortress, once briefly explored by A. Fakhri. Not far from the fortress lies an early Christian church. Near the fortress can also be seen the remnants of orchards (two obviously very old *nabq* trees).

The site has recently (about 10 years ago) been partly excavated by the local Inspectorate of Antiquities at Bawiti. During these excavations were revealed the remnants of a palace (of the commander of the fortress?) and a wine cellar. In the surroundings of El-Riz extend large cemeteries which have also been partly excavated by the aforesaid Inspectorate from Bawitti..

### *Mapping of Riz in 2004*

In the season of 2004, the mapping of manawars continued in the area about 1 km south of the fortress of Riz. In the area two systems of manawars were identified. The manawar situated closer to the fortress seems to have conducted the water to the fields and gardens in the close vicinity of the fortress. The second manawar lying south of the previous one represents a large and complex system consisting of many branches. In the upper part of this manawar, there is a series of large rounded structures built of tafla. It seems that these structures were once vaulted, dome-shaped superstructures of perhaps larger shafts giving access to the underground galleries of the manawar.

About one km south of the fortress of Riz were revealed the remnants of a large tomb which seems to date from late Roman times. From the tomb, only a portion of the superstructure, built of mudbrick was revealed. The superstructure seems to have been formed by a vault resting on a rectangular base. The examination of the tomb is planned to be continued in the next season.

## **4.0 Conclusions**

The most important results of the first stage of the archaeological survey of the El-Hayez oasis may be summarized as follows:

1. the prehistoric survey has clearly shown that there is an important palaeolithic history of the oasis beginning with the Acheulien (500 – 100 ky). Among the most significant results let us mention the epipaleolithic/neolithic sites (11-7 ky) connected with the three *playas* examined so far.

2. so far there were noted no pharaonic monuments in the area even though some toponyms would indicate otherwise (Tabla Amun, Tahuna),
3. the peak of the popularity of the area was very likely attained during the Roman period when the data indicate that the occupation in this area was most dense; there was an elaborate system of settlements and irrigation network that required a systematic deployment of a large workforce;
4. All the aforesaid sites had their own, local cemeteries. These were set up mostly on the slopes of the nearby hillocks. The two prevalent types of tombs in these cemeteries are:
  - a) undecorated rock-cut tombs with burial niches for the burials of the individual members of the family; these are in prominent locations and usually contain a large number of burials,
  - b) simple pits occupying lower locations on the hill slopes.

During the survey some of the Palaeolithic/Neolithic sites were sampled, and all the collected artifacts and human bone finds are deposited at the Inspectorate of Antiquities in Bawitti and in the local Museum of Antiquities.

The primary goal for the 2005 season will be to conclude the archaeological survey of the Qasr Mas'ouda and El-Riz areas. In the next season, the survey is intended to be combined with some further trial diggings in order to clarify the stratigraphy, dating, and character of some of the monuments (*manawars*, etc.).

*Literature:*

- Fakhry, A., 1974: The Oases of Egypt. Volume 2. Bahriyah and Farafra Oases, Cairo.
- Hassan, F.A. 1979: Archaeological explorations at Baharia Oasis and the West Delta, Egypt. *Current Anthropology* 22, p. 806.
- Hawass, Z., The Valley of the Golden Mummies, Cairo 2001.
- Vivian, C., The Western Desert of Egypt, Cairo 2000.