Faras, Jebel Moya and Old Dongola – importance of photography for documenting archaeological works

Adrianna Zawadzka
Faculty of Philology and History, Jan Dlugosz University in Czestochowa,
4/8 Jerzego Waszyngtona Str., 42-200 Czestochowa, Poland
E-mail address: aduchna@op.pl

ABSTRACT
This paper deals with the archaeological discoveries in ancient Nubia. Polish researchers played a considerable role in them with Kazimierz Michałowski (1901-1981) as their leader. The text presents the most important achievements of our scientists, that were made in Faras and Old Dongola. In each of these sites photography was used for detailed documentation of findings. The importance of aerial photography should be particularly emphasized. It was applied for the first time in the Sudan during the excavations at Jebel Moya, at the beginning of the 20th century. In the 80s and 90s of the last century, Polish archaeologists creatively developed this technique in Old Dongola.

Keywords: Kazimierz Michałowski, Faras, Jebel Moya, Old Dongola, aerial photography, photography

1. INTRODUCTION
The present article focuses on archaeological excavations at Faras, Jebel Moya and Old Dongola, that were important centers located at territory of ancient Nubia. The history of these places will is shortly here presented, as well as discoveries and the role of photography while documenting the exploratory achievements of the scientists.

The history of aerial photography reviewed may be of particular interest for the reader. This method of bird’s eye view documentation and simultaneously a tool for scientific work, was also used by Polish archaeologists, particularly in Old Dongola.

(Received 02 February 2019; Accepted 18 February 2019; Date of Publication 19 February 2019)
2. TRADITIONAL PHOTOGRAPHIC DOCUMENTATION OF EXCAVATIONS, ON THE EXAMPLE OF FARAS

2.1. Faras – a history of the discovery

Faras [1-7] (called Pachoras in the Middle Ages) is a city situated in northern Sudan, to the north of the second Nile cataract, near Wadi Halfa, right on the border with Egypt. Nowadays, Faras is flooded with waters of the artificial Lake Nasser.

Faras was a capital city of the province Akin of the Kingdom of Meroe, i.e. from the second half of the third century BC, until the fall of this state in the middle of the fourth century AD. Then, it was capital city of Kingdom of Nobadia, a Christian state which came into being in the mid-sixth century. After unification with neighbour Makuria in the 7th century, Faras became a provincial capital in the north of the Makurian Kingdom, but still was an important center in which in the 7th century a bishopric was established and lasted until the 14th century, the time when, population of this African region was converted to Islam. Few centuries later the Arabs erected there a defensive structure – a citadel – right over the ruins of the former Christian city of Pachoras. There was a small settlement inside it. In 1960s, the residents of this village were displaced, because there were excavations planned in this area, in order to safeguard as much as possible of historical local heritage ahead of the completion of the High Dam at Aswan and the subsequent submerging of northern Nubia by waters of the artificial lake. Faras eventually was flooded in the summer of 1964, but earlier Polish archeologists come to this site.

In February 1961, in response to the appeal of UNESCO to save the monuments of Nubia, excavation in Faras started under the leadership of Kazimierz Michałowski (1901-1981) [8-10], [Picture 3, 4]. The purpose was checking what can be found of remains of this ancient city. It should be noted, that the region of Faras was inhabited since the ancient Egyptian times. A pharaonic fortress was situated there as also a temple of Pharaoh Tutankhamen [11-13]. Even a fragment of his granite statue was found depicted him as standing between the Egyptian god Amon and goddess Mut. Faras was also a place where the cult of goddess Hathor flourished but most notably god Horus was venerated.

Michałowski’s team focused on the exploration of so-called Great Kom, that was an artificial hill on the top of which the aforementioned Arab citadel stood. Stone blocks with hieroglyphic inscriptions some with king’s cartouches of Tuthmosis III and Ramses II, were scattered around it, what could suggest that temple ruins from the time of these pharaohs, were situated nearby. They could have served the Arab builders as foundations of the citadel.

The reality was completely different, because during the work any ruins of the Egyptian temple were found. Instead, fragments of mud-brick walls, stone decorative elements and potsherds from the Meroitic period were uncovered on the slopes of the Kom. Then, on the eastern hill side, two small annexes made of mud brick were found, attached to the wall of a large building. It occurred, that these were commemorative chapels with interiors adorned with mural paintings. One represented the Archangel Michael, the other the Virgin and Child. Bishops’ epitaphs were also inserted into the opposite wall at the foot of which the entrance to their common grave was discovered. Then it appeared that the larger edifice which was in the upper part build of the fired brick but in the lower – of the dressed re-used pharaonic sandstone blocks, also originated from the Christian period.

In November, 1961, after removing the layers from the Arab period, it occurred that the edifice is a large cathedral church from the 8th century. It was e.g. attested by the presence of a
semicircular apse with a stepped tribune (*synthronon*) for the clergy, and a baptismal basin in one of sacristies. [Picture 1]

Church walls preserved to the height of some 4-5 meters were decorated with paintings depicting the usual themes in Christian iconography: Christ, the Holy Virgin, apostles, holy warriors, and other saints but also effigies of Nubian Church dignitaries and Kings so far unknown, appearing the extremely valuable historical records [Pictures 2, 5-8]. Explorers faced with a tough task.

They had to prepare not only a documentation of the spectacular discovery in a short time, but genuinely save the paintings, literally take down from the walls over 150 works of art not counting the recording numerous artefacts and decorative elements from the 7th-14th century. Examination and documentation of objects neighboring the cathedral was also required, i.e. the buildings located on the northern and on the southern side of the Kom.

### 2. 2. Photographic documentation

One of basic documentation forms for Faras findings was photography. As a result, it was possible to immortalize the architectural objects, namely all things that remained from the monumental Christian buildings and its elements. These were cornices, friezes, grilles, decorated blocks, doorposts and lintels of entrances or windows.

Subsequent stages of exploration and people at work were also photographed, thanks to which nowadays non-existent buildings and objects got new revival.

The inscriptions of a different kind have also been documented by means of photography. When deciphered, they provide important historical information. Even the documentation of undecorated stone blocks had also played a role, showing the difference in stonecutting or dressing between those from the Pharaonic, Meroitic and Christian periods.

One of the most important forms of archiving concerns the wall paintings. Their documentation features not only where every picture was located but also what was their state of preservation before any conservatory works were undertaken. It shows as well the progress in every stage of restauration process done in the museum laboratory. Thanks to the discoveries in Faras we have a record of unique works in global scale, which effected with exhibiting all the saved Faras paintings in the galleries of the National Museums in Warsaw and in Khartoum.

Documenting the process itself of taking down the paintings, originally located on three superimposed layers of plaster in the Cathedral, was also important to the same extent, and shows the work which required a great skill and appropriate procedures, so as not to damage the paintings. Transport also compelled archaeologists to a huge logistic effort. It was a big undertaking, that was also documented.

Photographs of discovered burial sites and the preserved human remains were also made. The same was done with the discovered artefacts of which ceramics (including potsherds) dominate, because as a mass product it appears the most common finding. Obviously, other monuments were also documented, as well as the process itself of hard physical daily work on excavations, visits of special guests coming to the archaeological expedition and a whole panorama of the explored site.

It is difficult to imagine conducting any excavation campaign without various photographic recordings made at the site.
3. AERIAL PHOTOGRAPHY ON THE EXAMPLE OF JEBEL MOYA AND OLD DONGOLA

3.1. The beginnings of aerial photography - Jebel Moya

Walter Jackson Williams-Freeman (1895-1972) stated that “in order to become an archaeologist, you should be a bird” [8]. This sentence is well founded, because you can see more from a further perspective. This is the place where the aerial photography was born, and James Wallace Black (1825-1896) is considered as its father, who during a balloon flight in 1860 photographed Boston from a height of over 600 meters and dubbed it: "Boston seen from the perspective of an eagle or a wild goose". Further, we should mention Nadar [7] (1820-1910), who took a photo of Paris in 1858 from a balloon gondola tethered close to the Triumphal Arch. In case of scientific photography, the first discovery of archaeological site from a bird's eye view was probably a Roman villa in Vilbel, Hesse (Germany)[8]. Whereas, the pioneers of the so-called aerial archaeology, regarded as a branch of archaeology, Guy Osbert Crawford (1886-1957) and Henry Wellcome (1853-1936) [10] are considered. In 1913-14, they experimented with kites in the Sudan (i.e. in the area of ancient Nubia) in Jebel Moya [9] [Picture 9-11, 15] – about 30 km east of Sennar. They constructed a peculiar kite [Picture 16], on which they mounted a box with a self-acting box camera and took photos from a height of several meters. As a result, they discovered Neolithic burials, more than 3,000 graves [10]. In 1923, during a solemn meeting of the Royal Geographical Society in London, the said G.O. Crawford gave a speech on "Air Reconnaissance and Archaeology". This event was recognized as the birth of aerial archaeology.

Kazimierz Michałowski wrote about the aerial photography in such a way: “By all means, aerial photography gave the greatest feedback to the archaeology. It was already used before the World War II with application of tethered balloons, when photographing the excavated terrain. However, aerial photography developed for military purposes during the war was beneficial also for archaeology. It is to say, that at the end of the 1940s the first chair of aerial photography for archaeological purposes was established at the University of London. Thanks to the photos taken from planes and then from helicopters, it was possible to read the outlines and plans of entire ancient cities covered with desert sand, on the northern coasts of Africa. In Italy, several hundred unknown Etruscan tombs were discovered, having circular outlines that could be seen on the photos of fields or meadows. Similar case occurred in other European countries”.

It should be noted, that also in Poland in the interwar period, in 1935-37, at territory of fortified settlement from the late Bronze Age and early Iron Age in Biskupin, the excavation work were documented from the bird’s eye view. For this purpose special balloons with photo cameras furnished with glass plates were used.

As was mentioned above, the aerial photography documenting the results of archaeological works was used in Jebel Moya [12]. Photographs were taken with means of kites, which were built by H. Wellcome and G.O.S Crawford, referred above.

Aerial documentation at Jebel Moya completed ground-based documentation. Photographs taken with means of a kite documented, among others, machines used during the works and progress in excavations.

Aerial photography in the early twentieth century was an innovative idea. As a result, a new method of documenting objects was created, which proved to be very helpful especially in choosing a site before the excavations begun.
3. 2. Aerial photography in Old Dongola

Archaeologists returned to photography by means of a kite in 1986, thanks to efforts and experiments of Bogdan Żurawski who used them again in the Sudan during the Polish archaeological excavations in Old Dongola [13] [Picture 12-14]. The generated photographic documentation made on the spot was published, i.e. in his publication: *Aero-photographical atlas of Old Dongola and Letti Basin. A personal narrative*. Dongola itself was a capital city of the Kingdom of Makuria, and after its unification with Nobadia – United Kingdom of Nubia, that roughly coincided with the territory of the present Republic of Sudan. The city experienced the period of the great development between the sixth and the thirteenth century AD. Christianity was the official religion of the Kingdom in that period. The medieval complex of Old Dongola buildings was located on the right bank of the Nile, halfway between its third and fourth cataract. Dongola was erected on the edge of stony Nubian Desert, with Old Town on an elevated plateau. It is currently abandoned, and its inhabitants have moved north and south and to the west bank of the Nile.

City population depended on the fertile depression area of Letti Basin, which stretched north alongside the river course. In the Middle Ages, when water level rose, the area was flooded. Nowadays, Letti is irrigated artificially by pumps and a system of channels.

The original center of Old Dongola (the so-called *Kom A*) is currently under excavation. This archaeological site dates back to the period before the sixth century AD. It is surrounded by giant fortifications defending the city until the 14th century. Whereas, medieval texts suggest that Dongola was surrounded by seven rings of walls, only one has been found so far. It seems that the medieval Arab chroniclers and geographers, when writing about the city, have in mind its heptagonal sides.

Byzantine missionaries in the second half of the sixth century baptized the royal court of Dongola. At that times, apparently on the order of the ruler, two large churches were erected at the foot of the fortified upper city. These edifices were excavated by Polish archaeological mission in the 1960s and 1970s and later, until the end of this century, other 13 church buildings were found in the area if not to count the monastic site on *Kom H*, a pottery manufacture area. 

Of a great importance appears to be a 9th century building with the King’s Audience Hall on the upper store, converted into a mosque in AD 1317. As the oldest preserved mosque in the Sudan it was through centuries a place of Islamic pilgrimage. Near the mosque a large Moslem cemetery arose. Several famous Dongolese sheikhs from the 17th to the 19th century were buried under high conical-shaped burial monuments called *qubbas*. The cemetery was one of sites better documented by mean of aerial kite photography in 1994. But the beginnings of using of this method in Old Dongola were done some years earlier when the area south of the Mosque was examined. On a plateau there extended an abandoned village which flourished between the 17th and 19th century. Individual houses of the complex even though deserted and ruined, have nevertheless some owners. They do not willing any works or architectural measurements taken over property belonging to them, however, they do not oppose to photographs of their houses taken from the air. In this way the Mission obtained the documentary material for elaborating the detailed architectural plan of the whole settlement.

During the excavation seasons in the 90s, aerial photographs were made with the ordinary Yashica 108 MP camera mounted on a four-armed aluminum frame attached to a rope 10 metre long and a kite made of dacron (synthetic polyester) tarpaulin and epoxy pipes. A heavy winch made of cast iron with a 90-metre-long nylon rope was usually attached to a stand in Landrover
trunk. This camera with servo, radio receiver and antenna was mounted on an aluminum frame with four legs, in order to protect the lens from breaking in case of an accident. In the event of broken rope, the kite served as a type of parachute for camera module. This aerial vehicle was called "Emmental I" (similarly to the Swiss cheese) because of many drilled holes in the frame, making it lighter in this way.

It should be noted, that Polish archaeologists could always count on the help of Dongola residents. Sometimes, as a result of unexpected back wind, pulling down the kite without their support was impossible.

One of the first works of documenting a single architectural object by mean of aerial photography undertook Žurawski in el-Ghaddar village on the outskirts of Old Dongola, where a number of columns made of sandstone, and positioned in line was observed while photographing the area from above. It appeared to be a part of a church interior when uncovered from the sand. This was the only church in Nubia which was paved with mosaics of pebbles, and probably the oldest church in the region of Dongola. It was built according to the construction tradition from the previous historical period (post-Meroitic).

Two rock graves are located 50 m north of this church. Now, after the excavations in 1970, they are filled with sand, and their view is marked by rectangular sandy patches, which are not easily visible in this rocky terrain. Searching for other tombs of this type was possible only using bird’s eye view photographic method.

Specific mounds were also discovered in Dongola, thanks to the aerial photography. They look like volcanic craters from above. This is the result of destructed burial chambers or the effects of robbers plundering the grave mounds. Establishing of the whole extent of cemetery and drawing its plan was possible solely thanks to computer composition of nine aerial photographs made at low height.

Currently, aerial photography is used on a mass scale. There are drones, planes – access to everything is much easier than few decades ago, when only cameras could have been used. Some things however not changed and still remain of basic importance – a need for the appropriate funding for work at archaeological sites and the proper permits to conduct the excavations.

4. CONCLUSION

The content of the article presented above referred to the history of archaeological discoveries in Faras, which were made by Poles under the leadership of Kazimierz Michałowski. It was the place, where i.e. photography documenting the effects of excavations was extensively used. The history and role of aerial photography in archaeological works, on the examples of Jebel Moya and Old Dongola, has also been presented. The latter is the site excavated by Polish Expedition for over 50 years and except of uncovering of many important monuments and artefacts, contributed much to the development of aerial photography.

References


Verhoeven, Geert JJ. Providing an archaeological bird's eye view—an overall picture of groundbased means to execute low altitude aerial photography (LAAP) in Archaeology. *Archaeological Prospection* 16.4 (2009) 233-249


PLATES

Picture 1. Cathedral Faras, 1961, a photo from the documentation resource Institute of Mediterranean and Oriental Cultures Polish Academy of Sciences, author: Tadeusz Biniowski.
Picture 2. *Taking off the painting*, 1961, a photo from the documentation resource Institute of Mediterranean and Oriental Cultures Polish Academy of Sciences, author: Tadeusz Biniowski.
Picture 3. Kazimierz Michałowski, 1961, a photo from the documentation resource Institute of Mediterranean and Oriental Cultures Polish Academy of Sciences, author: Tadeusz Biniowski.
Picture 4. Kazimierz Michałowski, 1962, a photo from the documentation resource Institute of Mediterranean and Oriental Cultures Polish Academy of Sciences, author: Tadeusz Biniowski.
Picture 5. *Reading inscriptions*, 1962, a photo from the documentation resource Institute of Mediterranean and Oriental Cultures Polish Academy of Sciences, author: Tadeusz Biniowski.
Picture 6. Transport painting, 1962, a photo from the documentation resource Institute of Mediterranean and Oriental Cultures Polish Academy of Sciences, author: Tadeusz Biniowski.
Picture 7. Cathedral Faras, 1964, a photo from the documentation resource Institute of Mediterranean and Oriental Cultures Polish Academy of Sciences, author: Andrzej Dziewanowski.
Picture 8. Cathedral Faras, 1964, a photo from the documentation resource Institute of Mediterranean and Oriental Cultures Polish Academy of Sciences, author: Andrzej Dziewanowski.

Picture 11. View towards the northern part of the concession, no date, photo from: Stefan Jakobielski, Piotr O. Scholz, Dongola-Studien 35 Jahre polnischer Forschungen im Centrum des makuritischen Reiches, ZASPAN, Warszawa 2001, pl. II, author: Bogdan Żurawski


Picture 16. Another kind of kite, suspended on the line, together with the camera, no date, photo from: The wellcome excavations in the Sudan Jebel Moya (plater) volume II, Oxford University Press, London New York Toronto, 1949, pl. XVI.