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EL-HAMRA: A MEDIEVAL URBAN SETTLEMENT IN THE WESTERN DESERT OF THE SUDAN NILE – EL-GA'AB DEPRESSION EXCAVATION 2015

OVERVIEW OF EL-GA'AB DEPRESSION ARCHAEOLOGY

Recent discoveries from the Middle Nile region and Dongola Reach have increased our understanding of medieval archaeological sites distributed along the Sudanese Nile (Fig. 1). Towns, villages, churches and fortifications have been well documented in different areas beyond the Fourth Cataract, Dongola and the Third Cataract up to the Egyptian borders (Drzewiecki 2016). As well as some single buildings such as small ruins of settlements, structures of fortifications and large extensions of necropolis have also been recorded away from the Nile, in areas like Bayuda Desert (Paner and Pudło 2010; Karberg and Lohwasser 2018: 104–105).

The abovementioned account indicates the wide distribution of medieval settlements along the Nile as well some knowledge of as single buildings in the desert areas. That was the reason to conduct a survey and excavation of medieval sites at El-Ga'ab depression in the desert to the west of Nile in this region.

The Western Desert of the Nile is marked as the land of paleo-lake and Oasis landscape (Wendorf and Schild 1998), where archaeological finds presented indications of the dialogue between the desert and the Nile from prehistoric times up to the medieval period (Jesse 2000). One of the main such areas west of the Nile is El-Ga'ab depression, which is a rather shallow basin to the south of the Third Cataract (Tahir 2012a). The area of El-Ga'ab is a c.123km long and 2-8 km wide (Tahir 2012b). The geomorphology of the depression consists of small oasis, flat hills

and high sand dunes that covered the banks of the depression.

The first records on El-Ga'ab's archaeological potential come from preliminary reports pointing to the western desert and the basin as the main likely centres of the ancient settlements (Garstin 1897; Turner 1884; Barbour 1961). These reports are primarily descriptions of medieval antiquities in the area (Vantini 1987), but some stone artifacts were collected from the surface by G.Y. Karkanies according to Arkell on the right bank of the depression (Arkell 1949). Also, the area has been mentioned as an area likely to have been occupied by Stone Age groups between the Nile and the western desert (Wendorf and Schild 1998).

Since 2007, the University of Khartoum has carried out comprehensive fieldwork in the area of the depression. Many archaeological sites have been documented (Tahir 2013), while aspects of the environment, geology and geomorphology of the area have also been studied extensively (Madani et al 2015).

The data documented by the project was manifold and studied with different approaches. The earliest materials collected from the surface provide evidence for a new zone of both Paleolithic and Neolithic occupation in this areas west of the Nile (Tahir and Nassr 2015). Medieval traces are also common from the survey and excavation. The El-Hamra area seems the main centre in the medieval (Christian) period, evident from the presence there of a church (Said and Tahir 2016).

This paper attempts to shed further light on the urban Christian settlements describing the excavation of the residential remains at El-Hamra site, an important addition to the medieval archaeological map in the Sudan. Finding remains of such permanent settlements about 60 km away from the Nile indicates a large occupation in the desert during medieval (Christian) times west of the Nile. Further-

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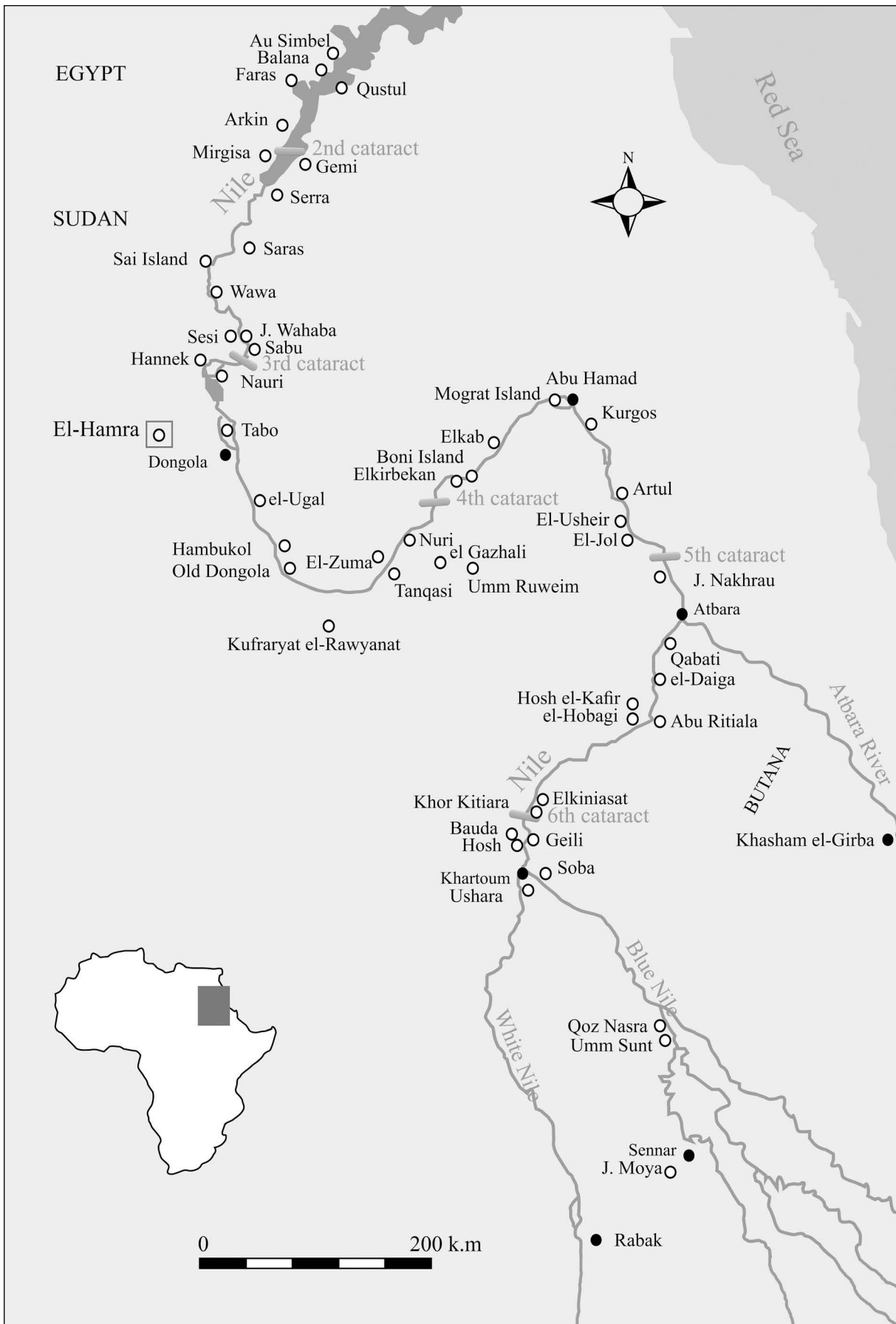


Fig. 1: Main Medieval archaeological sites along the Nile and El-Hamra location (Modified Nassr 2020).



Fig. 2: General view of site ruins (Photo Nassr 2015).

more, these results further show the role of El-Ga'ab depression area as a focus of urban settlement far from the Nile during medieval times.

EL-HAMRA SITE SETTING AND METHODOLOGY

The site of El-Hamra is located on the bank of El-Ga'ab depression (Paleo-lake), lying on Holocene sediment buried by moving sand dunes and exposed in some parts where our target remains have been recognized. The landscape of the site consists of sand dunes and dry oasis deposits. Sediment traces and shallow oasis sections were identified in some deeper parts of the depression. A series of archaeological ruins located on high mounds in the southern part of the site covered an area of c.25 hectares. Archaeological features seem to be widely distributed along the banks of the depression, but after one day surveying the site was identified on the highest of the archaeological mound, where the wind exposed it and the sand was moved by erosion. We set our strategies to follow and target the high areas and document the archaeological features overlooking the depression bank. After continuous exploration of the site area, more than seven distinct ruined structures were recognized. The surface of the ruins was covered by spreads of pottery sherds, stones and exposed building remains (Fig. 2).

The excavation team employed systematic ground survey on two of these ruins (EH-4-010, EH-4-08) where concentrations of ceramics were noted on the surface of some buildings. The ruins were selected by the spreads of site debris and artifact accumulations on the surface. The topography of the site indicates the presence of the remains of a large settlement which covered the southern part of the depression during Christian times, with the character of a small urban settlement.

Our idea was to locate dwelling remains and to use excavations to give further insight into the site chronology. Finding this important site is a significant contribution to the archaeology of the depression, as well as to increasing knowledge of medieval culture far from the Nile as well as lifestyle in this desert region.

EXCAVATION OF DOMESTIC RUINS EH-4-010

Ruins EH-2-010 located on the bank of the depression consist of ceramic concentrations on the surface and extensive areas of collapsed buildings remains. Our excavation was carried out in a space of 36 x 36 m after surface cleaning. Pottery sherds collected from the surface were related to the medieval (Christian) period, and other finds included parts of upper and lower grinding stones. The upper level of the exca-

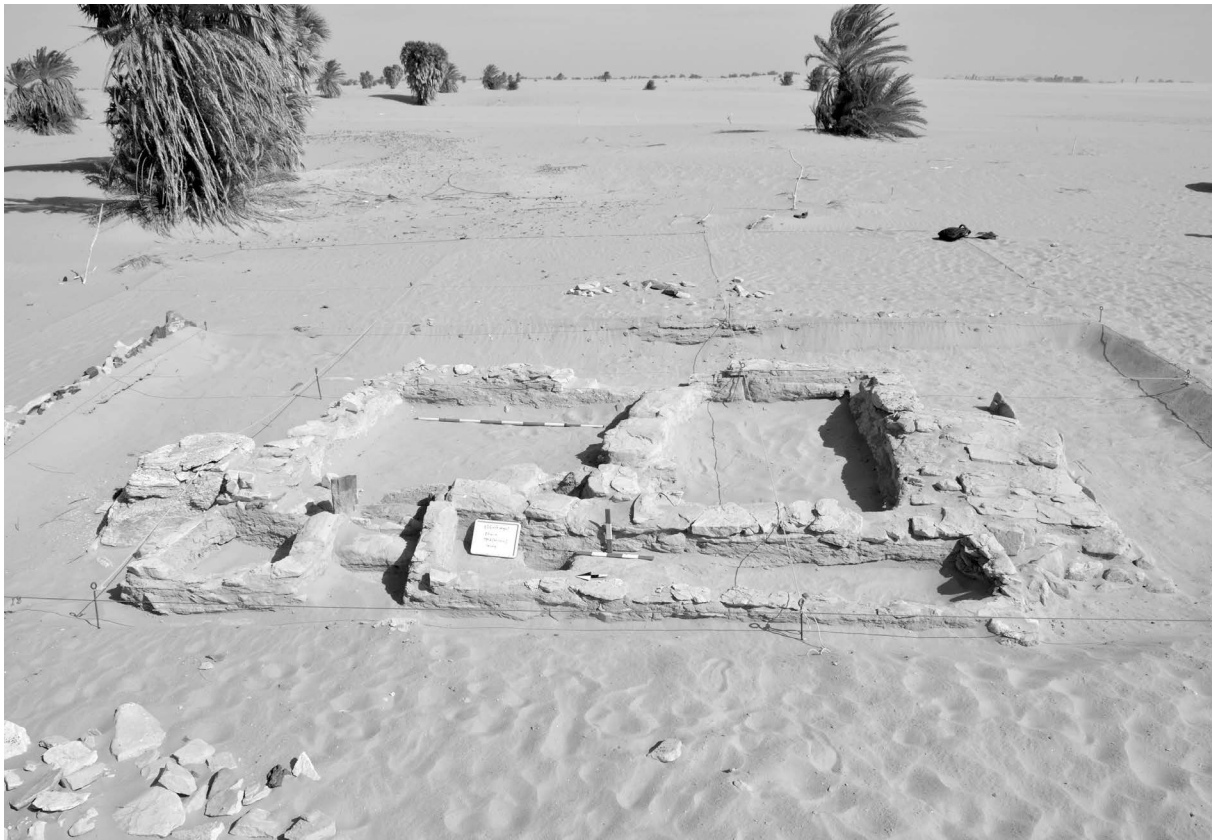


Fig. 3: View of building EH-4-010 excavation from the west (Photo Nassr 2015).

vation show dark sediments with artifact and ashes covered by recent yellow sand 7 cm in depth.

The excavation followed the extent of the building traces, which was generally covered by moving sand c.40cm in depth. This context included fragments of Christian pottery, charcoal and fireplaces. The foundations of the building structure consisted of soft sandstones, clay mortar, fire bricks and stone blocks supporting the building materials. An obvious building complex contained two big rooms in the east, many rectangular basins in the west, with a large supporting wall in the northern and southern sides. Fireplaces and a small basin were found in the western side of the rooms. The archaeological materials excavated from the rooms consist of dark clay, ashes, charcoal, pottery fragments, bones, and a ceramic spindle whorl.

The supporting building is made from large stones, and extended vertically in size (length 120 cm, width 90 cm and high 60 cm), with plaster of a red color. There are some lines of vertical stones; which seemed to be a water channel which led to the water basins in the western side of the building.

In the middle of the building, there are two small rooms. One of them is in the northern part (c. 3.3m x 3.1m) and it is built from white stones with mortar, and in the eastern side it shows a lower building level

like a door. The second room is built from stone and mud clay with some supporting structures, whose walls were of different thicknesses (2.70m x 3.05m). Two small supporting buildings were identified from the huge heaps of collapsed stone and mud bricks. The foundation of northern room is 45 x 55 cm, and that of the southern one made from mud bricks is 45 x 35 cm.

In the western side of the rooms, there was a complex of basin structures of different sizes made from sandstones and covered by white plaster with hard foundation ground in the bottom from compact clay and traces of water. The biggest one located in the west part of the building, extended from south to north in a rectangular shape (300 x 88 cm). This is connected via a small low channel (68 x 40 cm). On the other hand, these basin passageways extend to the south in large basin-shaped room with a big corridor as a water channel parallel to the rooms. Moreover, there are small basins inside the northern room and close to large fire places. One of them is closed by a wide stone block and all of them are connected via a channel system in different levels. The fireplaces and water basin systems suggests a special function of this building for making hot water, perhaps for some form of local industry, or perhaps some function linked to the church, which located nearby (Fig. 3).



Fig. 4: Building EH-4-08 excavation structure (Photo Nassr 2015).

The church was discovered a few meters away from this building (Tahir 2010; Said and Tahir 2016). Its close proximity may suggest that these supplementary buildings belonged to the church, in some way concerning the social daily life of the church.

The general structure of the building consists of two large rooms, with two large walls in the south and north as support buildings. Three main basins were found beside several small objects. The basins are built from sandstone, plaster and compact clay ground. This surprising building design also shows a functional house attached to the church. The artifacts collected from the excavation contain fragments of Christian vessels with different decorations, and contain a cross stamp. This indicates that there were many aspects of social life led in different places of the area. These artifacts are similar to those which were found in the church.

EXCAVATION OF DWELLING RUINS EH-4-008

To the east of ruin EH-4-010 a small heap of building debris was found, with scattered pottery fragments. Our excavation started with the documentation of surface collections. A dwelling building complex was identified which consisted of four large rooms and an

extra wall beside the rooms. Two big rooms (Room 1 and Room 2) are located in the western part, and two small rooms (Room 3 and Room 4) were located in the eastern part of the complex (See Fig. 4).

The building materials are sandstone supported by compact clay mortar and some bricks (size 34 x 18 cm). The context inside the buildings and underneath the collapsed walls show high extensive dwelling remains of a Christian domestic house.

Excavation revealed very large walls with some supporting pillars and a huge quantity of pottery concentrations, ashes, charcoal and occupation remains. Some stones indicate that the collapsed wall remains mixed with hard soil from the surface to a depth of 20 cm. The upper levels provided late Christian occupation remains.

In the western part of the rooms, there was a thin wall extending from the north to the south. A huge amount of pot sherds, some bones and fireplaces were found in different parts of the rooms. One of the small rooms looks like a storage room. Some stones were built vertically, surrounding fireplaces, which could safely be assumed to provide protection for the fires against the wind. In some cases, the context of fireplaces is mixed with hard soil and some fragments of mud bricks, which may be the remains of a collapsed roof. Excavation of 20 cm in the rooms

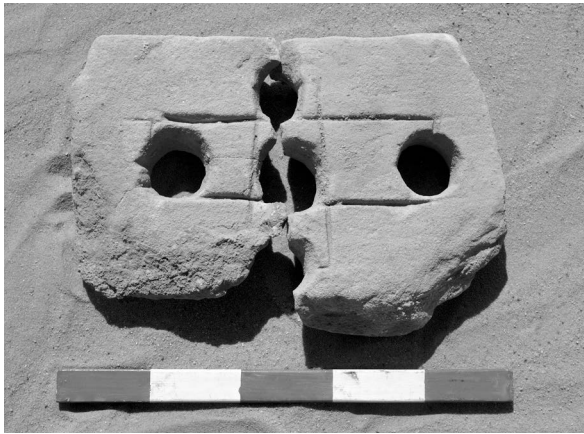


Fig. 5: Sandstone with holes and incised lines from Room 1 (Photo Nassr 2015).

revealed fragments of two big wheel made jars, with fine surfaces.

Excavation of Room 1 showed a large room with very rich materials and high concentration of domestic debris. In the south-eastern corner a fragment of a sandstone block with a hole and incised decoration, of uncertain use, perhaps used for lighting purposes (Fig. 5).

Most of the pottery vessels found in depths from 30–40 cm were abutting the wall. In the middle of the room, there was a concentration of vessels recorded close to a large stone identified as *mastaba* and a

fireplace. This also contained five large amphorae with, long necks and curved handle. In the middle of these vessels there were two large ceramic storage jars (*Qussayba*) and a small black bowl for keeping charcoal close to a fireplace. To the east of this concentration, there are two big red jars and a high density of cooking remains in the fireplace from charcoal, fauna and flora and ashes in the corner between the large flat stone *mastaba* and the wall. In the western side of the room cluster of fine ware found, included small bowls, two of them fine treatment with cross stamp decoration and open mouth and other two small black bowls. There are complex jar fragments in narrow position mixed with fireplace fragments and small charcoal vessels. The context among that entire pottery vase is the dwelling remains (Fig. 6).

The storage containers from terracotta was the characteristic feature of both rooms' content, which indicate the storage tradition of the people who occupied the site, and which also indicates permanent settlement. The distribution of vessels and hearths attest that Room 1 and 2 within a house have been used for the preparation and storage of food (Fig. 7). This also shows the relationship of the population in this area with the prevalent Sudanese traditions in northern riverine Sudan (Drzewiecki 2016).

The large fire place built from stone mixed with fragments of palm tree charcoal affected by the roof



Fig. 6: Concentration of pottery jars in the middle of Room 1 (Photo Nassr 2015).



Fig. 7: Dwelling remains from cooking and storage jars distribution in the building (Photo Nassr 2015).



Fig. 8: Excavation of Room 2 context (Photo Nassr 2015).



Fig. 9: Fine red jars and cooking places in situ of Room 2 (Photo Nassr 2015).

collapse and a large stone (147 cm x 103 cm) indicate the flat foundation of the room. There is no clear indication of the door position in the room; except in the west-northern corner there is a lower area, which might be a door. The context is generally disturbed by the roof collapse which is also recognized from the remains of palm tree wood, branches and hard clay covering the furniture of the rooms.

Our excavations revealed a similar case in Room 2 with a large scatter of domestic remains with stone walls in rectangular shape, with a narrow corridor to the west and the another door in the east. The deposits in this room contained large fragments of charcoal (possibly palm charcoals) and remains of a fireplace mixed with pottery sherds. Many pottery vessels are still in complete shape, jars of different shapes and some basin and bowls were found *in situ* (Fig. 8).

There are 11 complete vessels found in this room, including: big fine red jars, small white bowls, storage jars (*Qussayba*) in the middle of the room. There are also small fine black ware bowls and fine bowls with color decorations in the southern part of the room. There are bowls of red color and fine treatment surface, and fragments of a black jar, a grinder stone and fire places in the western part. There are some vessels below the depth 40 cm. A large black cooking griddle (*Raika*) and small red basins are also found in the east/north corner. This *Raika* is built on the top of a compassed stone *in situ* and abutting the wall around the room corner as a kitchen place. Around this, there are fireplaces mixed with upper and lower grinder stones, some vessels of fine ware, and large stone as a door in a good condition. Furthermore, some stones are built vertically as fireplaces which show a long period of occupation of the room (Fig. 9).

Most of the materials found in the rooms were preserved and provided traces of daily life. The pottery vessels are good examples of medieval pottery production evident from the fine surface treatment, decoration of painting (birds and crosses) and jars of different shapes, vases, disc, basins, storage jars and bowls (Fig. 10, Colour fig. 1). There are plant remains found inside many storage jars, and six types of main subsistence crops identified in the area during that time: wheat, barley, chickpea, common bean, date, and dom palm

(Madani et al 2015:145). The finds also indicate that some places were used as a kitchen and storage place inside the residential rooms.

The level outside the living rooms shows the extension of the dwelling debris. The content of these extra buildings also show a huge complexity of an urban Christian settlement. The main walls extending to the east were preserved with some lower level buildings as a collapsed part of the wall. The eastern part of this house shows other two small rooms (Room 3 and Room 4), whereas excavations revealed some fine bowl extensions, stones and dwelling remains.

Some incomplete shapes of stone were found in different parts of the rooms, some of them are formed as human figurines from stone. Moreover, the excavation revealed two skeletons in Room 4 in depth 30 cm (Fig. 11). The first skeleton was laid extended on the back, with the face looking upwards, the head to the east and the feet to the west. The skeleton had disturbances which may be caused by the collapse of the roof, and is not well preserved. Inspection of the teeth and skull show that the skull belongs to an adult female. The second skeleton is laid in the south/west corner of Room 4, also found in a bad preservation, the legs were lost and the arm was placed in an elongated position parallel the body. The head was to the west and the face to the south, but seems likely to be a Christian burial. The significance of these skeletons indicates that this building was used in a later period as a burial place. That means some later occupation in the site caused disturbances to some earlier dwelling layers and the strata had been mixed.

The discovery of stratified other finds like beads, smoke pots, human figurines from stone, lamp and ornament in the domestic rooms has substantially



Fig. 10: Different types of jars and decoration variations (Photo Nassr 2015).



Fig. 11: Two Human skeletons in the building (Photo Nassr 2015).



complemented the pottery corpus, which all are deriving presumably from primary contexts of Late Christian households.

CONCLUSION AND REMARKS

Although there has no clear evidence of an official presence of El-Hamra site, the stone building structure and domestic remains context indicate an ordinary peasant village grown in the desert during the time El-Ga'ab Paleo-lake was active. The distribution of settlement ruins in the large quart yard of the site and their context also indicate the development of a domestic settlement in classical medieval era into an urban settlement far from the Nile.

The building designs could be identified from the foundation, where the upper part of the building collapsed and mixed with the roof remains. Dwelling room structures, the precise door orientations, the thick walls made from stone and passageways outside the rooms – all of these are the features of traditional houses of the medieval era in northern Sudan. These features were identified in Old Dongola as late Christian occupation (Żurawski, 2006). House context from ceramic, fauna and flora remains, and dwelling layers were probably constructed in the middle Christian times on the bank of the depression above Aeolian sand.

The ceramic sherds and jars contain different pottery production qualities. Christian fine ware of small bowls and the large amphora (namely Egyptian amphora) made our comparatives to Christian sites developed in mid 8th to late 9th century (Żurawski, 2006; Said and Tahir 2016). On the other hand examples of cooking pots, basins, *Raika*, *Qussayba*, *may ralate* to Late Christian Nubian styles of ceramics. In addition, the decoration of the pottery included different relief elements from geometric bands, impression of two or three different stamps and paintings of birds and different cross stamps have also been identified as Late Christian traditions in the Sudan (Adams 1986).

The pottery characteristics were compared with those of medieval archaeological sites excavated at the Nile. The presence of different sizes of amphora vessels are typical to fragmentary and semi-completed amphora excavated recently at Old Dongola. These are classified as local amphora and dated back to 6th–7th centuries (Danys 2015). The most similar traits between El-Hamra and Old Dongola amphora are the fine surface, an elongated body, flared necks, handles, the shape of the rims and painted monograms. Decorations represented on red and white

bowls, basin and the small jars contained many similar elements of Nubian ceramic industries, such as elaborate cross design, zoomorphic center designs, frieze center and centerpiece elements, radial designs and different types of stamp (Adams 1986).

Evidence of food preparation and textile processing, such as spindle whorls, ceramic lamps, different kinds of jars, storage vessels, beads and crops can be assigned to the domestic sphere testifying the presence of permanent residence. However there are no indications of official activities such as administrative offices, but there is evidence of different building designs around the church which may be the first sign of a forgotten urban settlement buried by sand in the desert for a long time. This can be compared to what Al-Idrisi and Ibn Al-Wardi mentioned about a Christian town in the desert to the west of the Nile called *Nuwaba*. They described a small crowded town with urban living style in the desert of El-Ga'ab (Vantini 1987).

It is noteworthy that all the ceramics were not produced in the site, which is the evidence of the site's contact with population centres on the Nile. Also other small finds like stone tools, ornaments and ceramic show civil use of an urban settlement. The site is also significant as an example a permanent settlement in this desert oasis, with many examples of domestic remains, which is important to the general understanding of the people's culture and lifestyle. The stratified settlement materials, with different amounts of artifacts, are very interesting to understanding the people's culture in the desert. At the same time, more accurate dating is needed to reconstruct the site's chronology, and extensive archaeological survey supported by GIS and remote sensing are necessary to discover the other buried parts of the site.

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ZUSAMMENFASSUNG

Es wird allgemein angenommen, dass der Nil seit prähistorischen Zeiten eine große Rolle bei der Entwicklung und Ausbreitung der alten sudanesischen Zivilisationen gespielt hat. Die größten Siedlungsplätze befinden sich jedoch oft in der Nähe der Nilufer, nur einige wenige von ihnen wurden in der Wüste nachgewiesen. Auch die Archäologie des Mittelalters ist von den wichtigsten Stätten der nubischen Königreiche am Nil bekannt, und es gab nur wenige Siedlungen in der Wüste. Die laufenden Forschungen des Projekts *El-Ga'ab-Depressions* dokumentierten jedoch viele Spuren von christlichen Stätten außerhalb des Nilbeckens. Eine der wichtigsten dort erfassten Stätten ist der christliche Ruinenkomplex El-Hamra. Anfang 2015 wurde eine Ausgrabung durchgeführt, bei der zwei Höfe mit Überresten einer christlichen Siedlung, bestehend aus Häusern, Taufbecken und einigen Mauern, freigelegt wurden. Große Mengen keramischer Gefäße und Funde aus Wohnkontexten wurden ebenfalls dokumentiert. Der vorliegende Beitrag versucht, die Ergebnisse der Ausgrabungen im Rahmen der mittelalterlichen Archäologie im Sudan darzustellen und die christlichen Altertümerstätten vorzustellen, die in der westlichen Wüste der El-Ga'ab-Senke weit entfernt vom Nil liegen und von bewegten Sanddünen begraben wurden.