Archaeological investigations within the fortified enclosure at Banganarti have brought to light more than 40 mud sealings so far. The majority were found during the first excavation campaign in March 2001, as a deposit under the foundations of the corner tower and in the walled space close to it. Others were discovered inside the Upper Church during the following two seasons, in 2002 and 2003. Except for a few examples that have disintegrated, the mud sealings from Banganarti were well-preserved with clear sizes, shapes and negative profiles. All were hand-formed from Nile mud and left unfired.

The mud sealings from Banganarti fall into two main types, called 'cones' and 'stoppers' for the purposes of this report. This distinction and terminology was introduced by Jacke Phillips, who examined and described the mud sealings from nearby Hambukol. 3)

Stoppers (Fig. 1d-g) have flat bottoms, and were placed inside the vessel neck without overlapping the vessel rim. Most of the 24 stoppers found at Banganarti are 5-6 cm high. The shortest is 4 cm high and the tallest is 8.5 cm. Their maximum dimensions range from 12 to 21 cm and are usually identical with their corresponding vessel rim dimensions measured from the negative profile.

Cones, of which 13 examples were found, are conical in shape, with only their lower part being inserted inside the vessel neck. They range in height from 6 to 19 cm. Cone diameters are less varied, ranging from about 11 cm to 19 cm, with 12-13 cm as the most common diameter. They can be divided into two groups, based on their relation to the outer rim of

1) While hardly spectacular as finds, mud sealings can be useful in studies of pottery, transportation and trade. Unfortunately, for lack of a classification similar to Adams' monumental typology of medieval pottery, dealing with this category of finds is hardly an easy matter. Even if published, the relevant discussion is perfunctory at best. Indeed, not only have they not been described as an object type, they do not even have an agreed name – they have been called 'jar sealings', 'mud jar sealings', 'mud seals', 'mud stoppers', 'pyramidal mud sealings', 'buchons', and 'mud sealings'. For a fuller discussion of the state of research, see the present author's unpublished MA thesis, written under the guidance of Prof. Dr. W. Godlewski (Warsaw University), on mud sealings from Egypt and Sudan dating from the 4th through 14th century AD.

2) Most sealings were made of Nile mud, but sealings made of plaster are also mentioned by M. Egloff, Kellia. La Poterie copte. Quatre siècles d'artisanat et d'échanges en Basse-Egypte. Recherches suisses d'archéologie copte, vol. 3 (Geneva 1977), 180, and by C.L. Woolley, D. Randall-MacIver, Karanog: The Romano-Nubian Cemetery (Philadelphia 1910), 79-80. A vessel sealed with white putty or with a baked-clay stopper was found in Firka (L.P. Kirwan, The Oxford University Excavations at Firka (London 1939), 7, 10).

Fig. 1. Examples of mud sealings from Banganarti
(Drawing A. Jaklewicz)
the vessel. The first (Fig. 1a) includes all mud sealings with their bottom placed inside the vessel neck and conical top not overlapping the outer rim. The second group (Fig. 1b-c) includes also conical mud sealings with neck and rim partly or totally 'covered' with mud. Amongst all the mud sealings from Banganarti, 11 examples belong to the first group and only two represent the second.

Both stoppers and cones are richly 'decorated'. Although the term 'decoration' is heavily used by scholars when describing mud sealing surface patterns, the function of these designs was not merely decorative. The seal impressions (floral or geometrical motifs, inscriptions, monograms) may have been characteristic signs of locations where the vessel had been filled and closed.4)

The mud sealing surfaces from Banganarti, apart from five plain examples, demonstrate three different ways of marking. In four cases, narrow lines can be seen on the surface (Fig. 1d). They are either incised or scratched and form no regular shape with the exception of one fragment that may belong to a mud sealing with seal impressions and lines in a star-like pattern. Seven mud sealings boast seal impressions as well as incised lines. Most of the seal imprints are round, without designs. Only two are different, one due to a square-shape and the second due to a different design.

As more fragments than complete mud sealings survive, we cannot be certain of the exact shape and number of stamps in any single case. Two complete mud sealings have incised lines forming a star-like pattern, one also having five round stamps (one in the middle and four on the edges of the mud sealing) and the other having only one stamp at its center (Fig. 1e).

The last group featuring solely stamped mud sealings is the most abundant (Fig. 1f-g). These may be round, oval, square or of more elaborate shape, and may be single or multiple.

It is difficult to identify the rules governing the stamping of mud sealings, but some commonalities can be observed in the preserved material. Cones were stamped only once at the top (Fig. 1b) or several times just above the rim of the vessel (Fig. 1a). If cones have more than one stamp, these are usually all of the same size, shape and design. The only exception has one round and one flower-like seal imprint. All complete 'stoppers' of this group have more than one seal impression. All the stamps on a single stopper were made using a single seal, with two exceptions where two different impressions can be seen.

Seal impression designs are not very varied. Most are flat, differing only in shape (oval, round, square, rectangular) or size. One design is more interesting, consisting of Greek letters forming a cross-like shape (Fig. 1c). The pattern is repeated on five stoppers belonging to the same vessel type.

Color is often mentioned when discussing the decoration and markings of mud sealings. The most common observation concerns the use of red paint over

4) Whether the designs on the stamps are signs once identifying the manufacturer, seller or recipient of the jar, or indicating some quality or quantity control, traders or customers, is still a moot point, cf. D.A. Welsby, C.M. Daniels, Soba: Archaeological Research at a Medieval Capital on the Blue Nile. British Institute in Eastern Africa Monograph Series 12 (London 1991), 151. Elsewhere, they have been referred to as 'vinters marks' (H.E. Winlock, W.E. Crum, The Monastery of Epiphanius at Thebes (New York 1926), 79), or as indicating 'the place where the amphorae were filled and then stoppered or the name of the sender' (P. Ballet, “Ceramics, Coptic” in: The Coptic Encyclopedia, vol. II, ed. Aziz S. Atiya (New York 1991), 499).
the entire visible surface of the mud sealing, including the impressions. In a few cases, the impressions alone were painted red, whether intentionally or as a factor of preservation is hard to tell. Use of white paint is far less frequent. Three white mud sealings with red-painted impressions were recovered from Banganarti.

The purpose of painting the surface is unclear. It may have had apotropaic function or was used perhaps as a decorative element. Protection of the surface is also a possibility, the stamping being used for identification purposes.

All the features described above refer to the top surfaces or upper parts of mud sealings. Their lower parts inside the vessel neck also bear some interesting impressions. These so-called 'preliminary stoppers' were placed inside the vessel neck before actually closing the vessel with the mud sealing itself. At Banganarti, potsherds were the 'preliminary stoppers' used. One example has a potsherd still adhering, whilst another 22 are suggested by the remaining negative profiles.

One well-preserved impression shows that the potsherd used was from a ribbed amphora. Several mud sealings have no imprint or are too fragmentary to be identified for certain. The 'preliminary stopper' on three mud sealings is quite different, apparently being made of straw instead.

As none of the Banganarti examples were found attached to their associated vessel, we should look to parallels and associated pottery for dating suggestions. The second phase of the 'Upper Church', and its surrounding fortifications are set in the 12th century AD. Most of the mud sealings were found under the foundations of the corner tower of the fortification, so providing a terminus ante quem in the 12th century for this large group.

Mud sealings paralleling most closely the finds from Banganarti were found at Hambukol. Although a date for the mud sealings as such was not provided, the pottery from 'House One' in which the vast majority were found is dated to the Post Classic Christian and Late Christian periods.


6) White paint on the seal impressions is known from Karanog (Woolley & Randall-Maclver, op. cit., 79), Firka (Kirwan, op. cit., 21), Thebes (Winlock & Crum, op. cit., 80); white paint was used on the entire mud sealing surface in a few cases at Old Dongola (personal observation).


8) 'Preliminary stoppers' made of straw were also used at Kellia (Egloff, op. cit., 180). Wads of vine leaves have been recognized by their impressions at Old Dongola (personal observation), vine leaves or palm fibers at Thebes (Winlock & Crum, op. cit., 79). A stone was used in one case at Old Dongola and in another at Hambukol (J. Phillips, personal communication), and a wadded cloth at Hambukol (Phillips, op. cit., 230).

9) For similarities of shape, size and types of decoration, cf. Phillips, op. cit., 232, Fig. 2, 234, Fig. 3.