

**A rural Settlement at Sangkha
under Sarpang Dzongkhag in Southern Bhutan
Results of the Training Excavation 2011**

Christian Bader

Excavation Report

Sangkha Ruin
Sangkha Chiwog
Gakiling Gewog
Sarpang Dzongkhag

Map No. Bhutan 1: 50'00 No. 78J-1

Coordinate: N 26°54' 18" E 90° 14' 19"

Altitude: 946 m above sea level, GPS determined, accuracy 3 m

Date of the excavation: 17. October to 12. November 2011

New site.

Date of the advice of the discovery: **.

Name of discoverer: Pemba Sherpa, Landowner; Pema Wangda,
Cultural Officer, Sarpang.

Bibliography about the site: none

Rescue excavation. Extent approx. 150 m².

Settlement

Samples: Charcoal for radio carbon and dendrochronology dating

Age determination: 19. Century, according to finds

Responsible: Christian Bader, Sangay Kinga, Karma Tenzin

Content

1 Introduction

- 1.1 Motive for the archaeological survey
- 1.2 Geographical location and topography of the site

2 Technical procedure

3 Finds

- 3.1 Stratigraphy
- 3.2 Foundation pos. 57 of a former house wall (pos. 55)
- 3.3 Partition wall pos. 3/6/7
- 3.4 Partition walls pos. 26/27
- 3.5 Filling pos. 4 and the burnt layer pos. 5
- 3.6 Clay floor pos. 54 and base stones pos. 33
- 3.7 Terrace supporting wall pos. 21 and backfilling pos. 20
- 3.8 Sectors 5 and Y

4 Finds

- 4.1 Ceramics
- 4.2 Glass
- 4.3 Non-ferrous metal
- 4.4 Coins
- 4.5 Iron

5 Samples

6 Summary

7 Bibliography

8 Catalogues

- 8.1 Find Catalogue 2010
- 8.2 Find Catalogue 2011

9 Table of Finds

1 Introduction

1.1 Motive for the archaeological survey

For the purpose of the annual religious ceremonies, the villagers of the (scattered) rural settlement Sangkha (former: Ratepani) started to build a *Lhakhang* (temple) on the property of Pemba Sherpa's family in the spring of 2010. During the excavation of the masonry pits for the foundation walls of the planned building (including its loam construction), they came across an older wall and artefacts made of iron, non-ferrous metals and ceramics¹. Pema Wangda, the Cultural Officer from Sarpang, reported the find to the Division for Conservation of Heritage Sites under Department of Culture, whereupon a halt to construction was imposed which led to a rescue excavation. The archaeological investigation of the Sangkha Ruin site was carried out as a training excavation together with 14 participants from Bhutan in autumn 2011 between October 17 and November 12 (see above: Draft Report on the Rescue Excavation Training Programme).

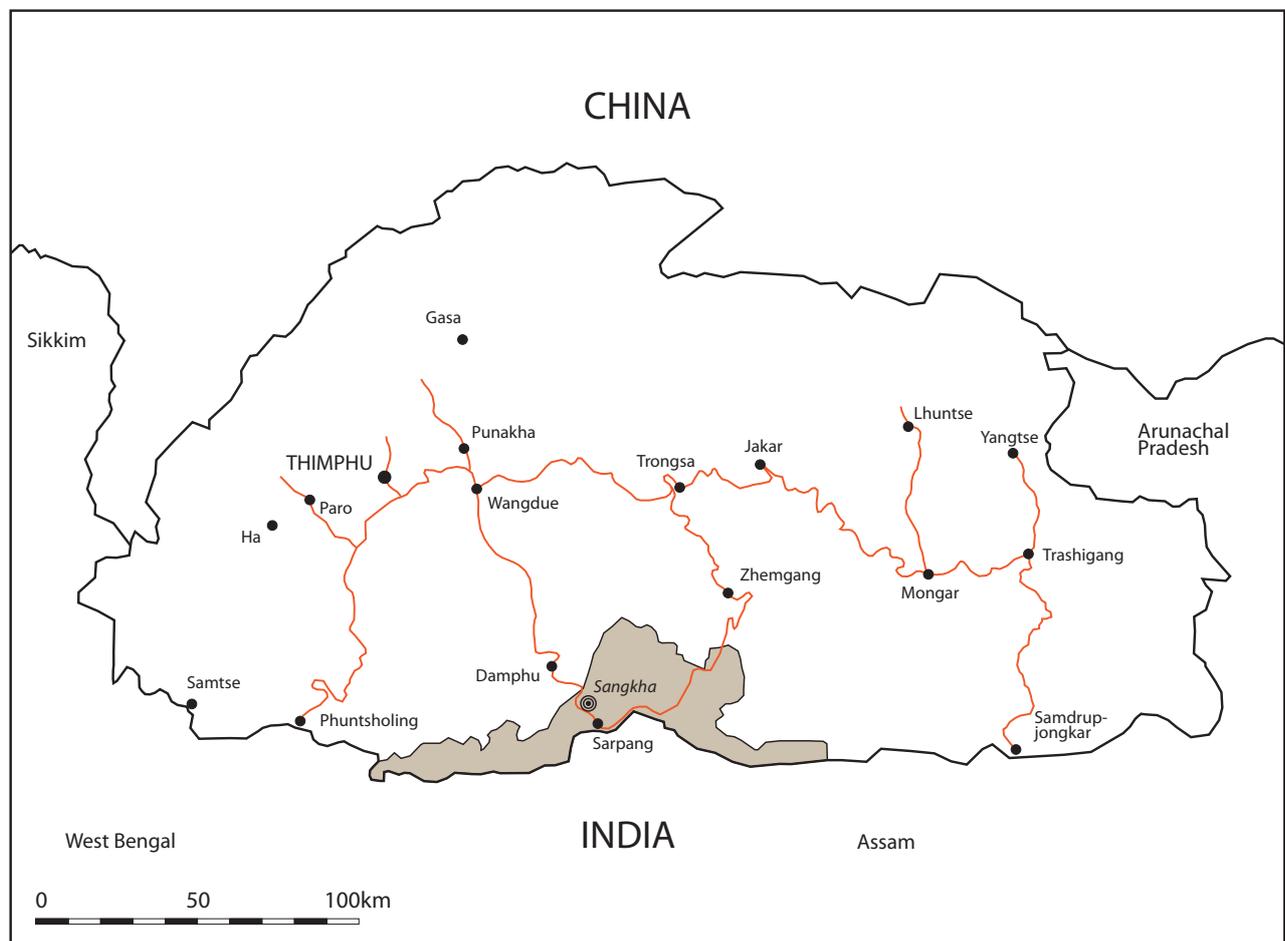
1.2 Geographical location and topography of the site

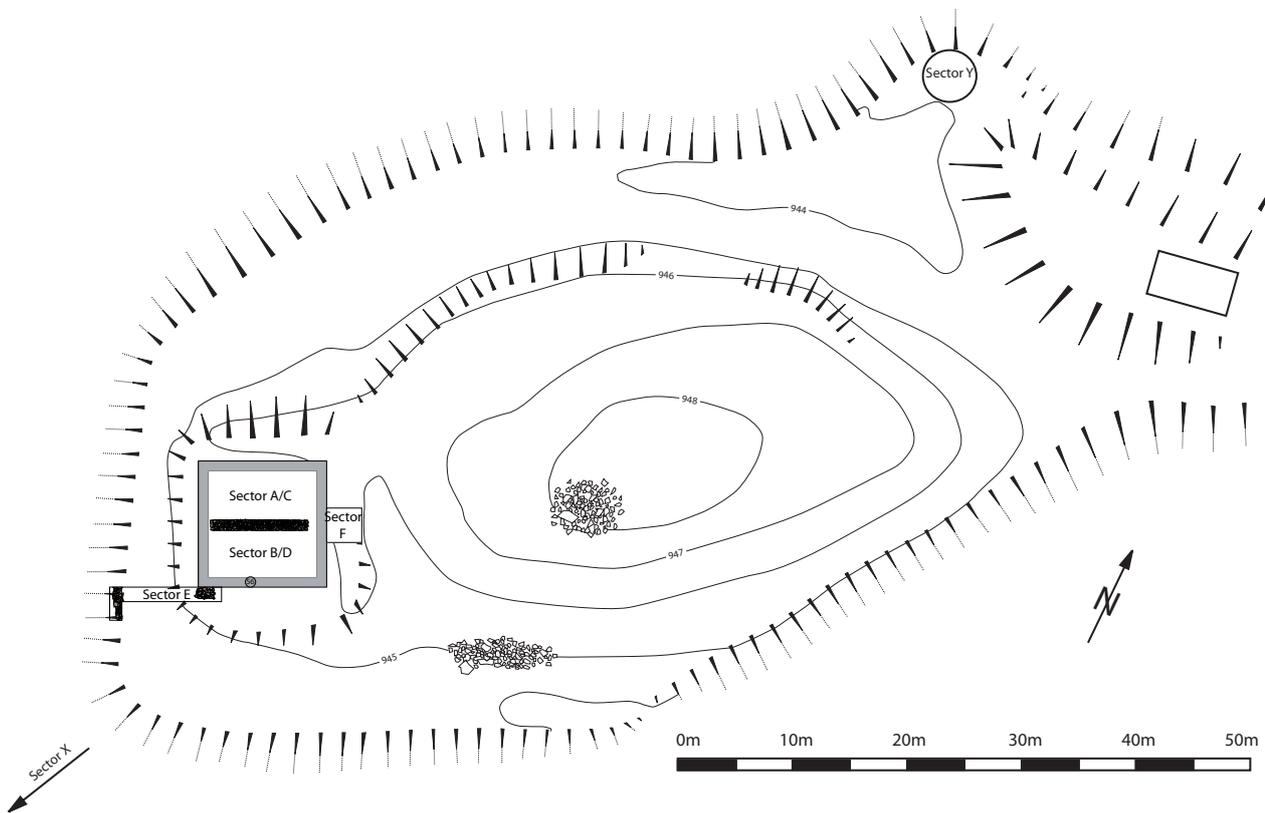
The Sangkha Ruin site – located northwest of Sarpang in the same named Dzongkhag – is close to the mule track from Sarpang to Tsirang, about a two hour walk from Sarpang (fig. 1). Prior to the construction of the Sarpang-Tsirang highway in the seventies, the path was the only connection between the two places.

The site itself lies on a spur oriented towards the southwest of the first hill of Bhutan rising from the Indian plain. By nature already developed as a slightly slanting plateau, the site underwent a further levelling due to artificial terracing work which resulted in a highly suitable area for settlement purposes (fig. 2).

¹ cf. Find Catalogue 2010

Fig. 1 Sangkha Ruin. The situation of Sangkha in Sarpang Dzongkhag.





2 Technical procedure

During the excavation of the foundation trenches for the nearly square foundation walls of the new Lhakhang featuring a width of 90 cm and sides measuring 11×10.9 m, four profiles had already emerged on the sides of the survey area before the archaeological excavation began. First of all, they had to be cleaned and documented. The profiles, in particular the north-eastern one, provided first indications of the finds to be expected (fig. 4 and 5). Especially the partition wall pos. 3/6/7 and the burnt layer pos. 5 were already able to be observed here. The survey area was divided into four sectors A, B, C and D and excavated in a crosswise manner so that another longitudinal profile and cross-section profile were formed (fig. 5).

To the southwest of the excavation area bordered by the new temple wall, a section Sector E was led over the edge of the terrace in order to clarify the structure of the soil layers and the construction of the terracing (fig. 5). At the northern end of the section, the remains of the original wall pos. 55 were observed. We hoped to be able to document a further part of the wall in the section Sector F to the northeast of the main survey area (fig. 2). Unfortunately, all the stones here had already been removed and integrated into the new temple foundation (pos. 56).

In all sectors, the removal of the terrain took place in a stratigraphic manner. Whenever possible, the exposure was carried out right down to the natural ground pos. 22. Due to static reasons, only the backfill area pos. 20 of the terrace supporting wall was not excavated down to the natural substratum.

3 Finds

The finds that were examined from the Sangkha Ruin are essentially the remains of a rural house. The discovery of the settlement was surprising and it is particularly remarkable given the fact that not even the oldest villagers – among them an 85 year old man – knew about it. The start of construction of the new Lhakhang revealed that people must have lived in this location in former times.

Fig. 2 Sangkha Ruin. Topographic map of the site with the foundation wall pos. 56 of the new temple (gray) and the excavated sectors A–F.

Fig. 3 Sangkha Ruin. Excavation sectors A–D with the foundation wall pos. 56 of the new temple.

Fig. 4 Sangkha Ruin. The East-Profile.



3.1 Stratigraphy

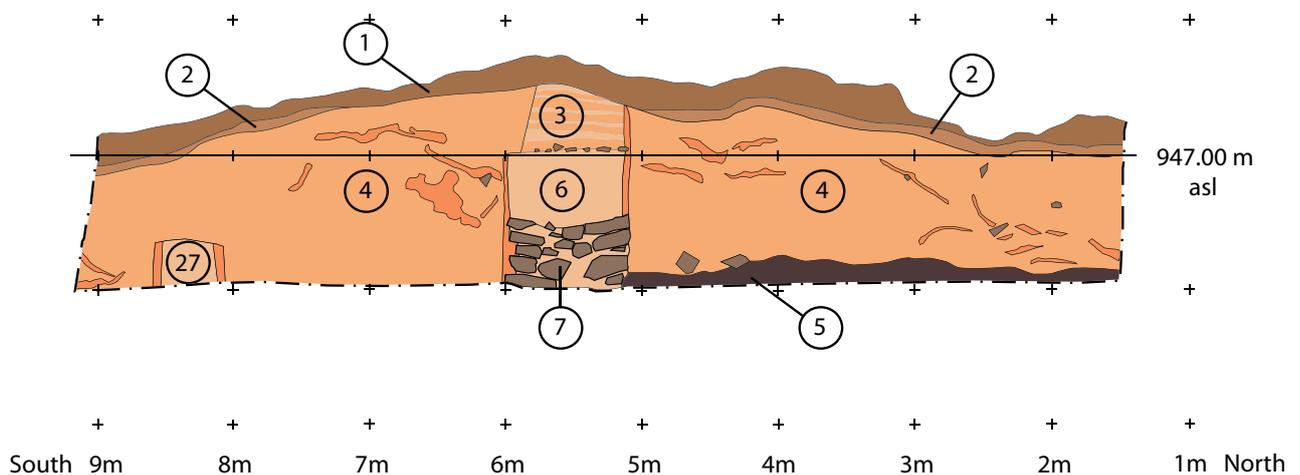
The natural structure of the soil layers in the area of the Sangkha terrace is exceptionally simple: on top of the geological substratum (C horizon), a so-called «lesser Himalayan rock», lies a sandy and loamy residual soil (B horizon) which is merely covered by the surface humus (A horizon)².

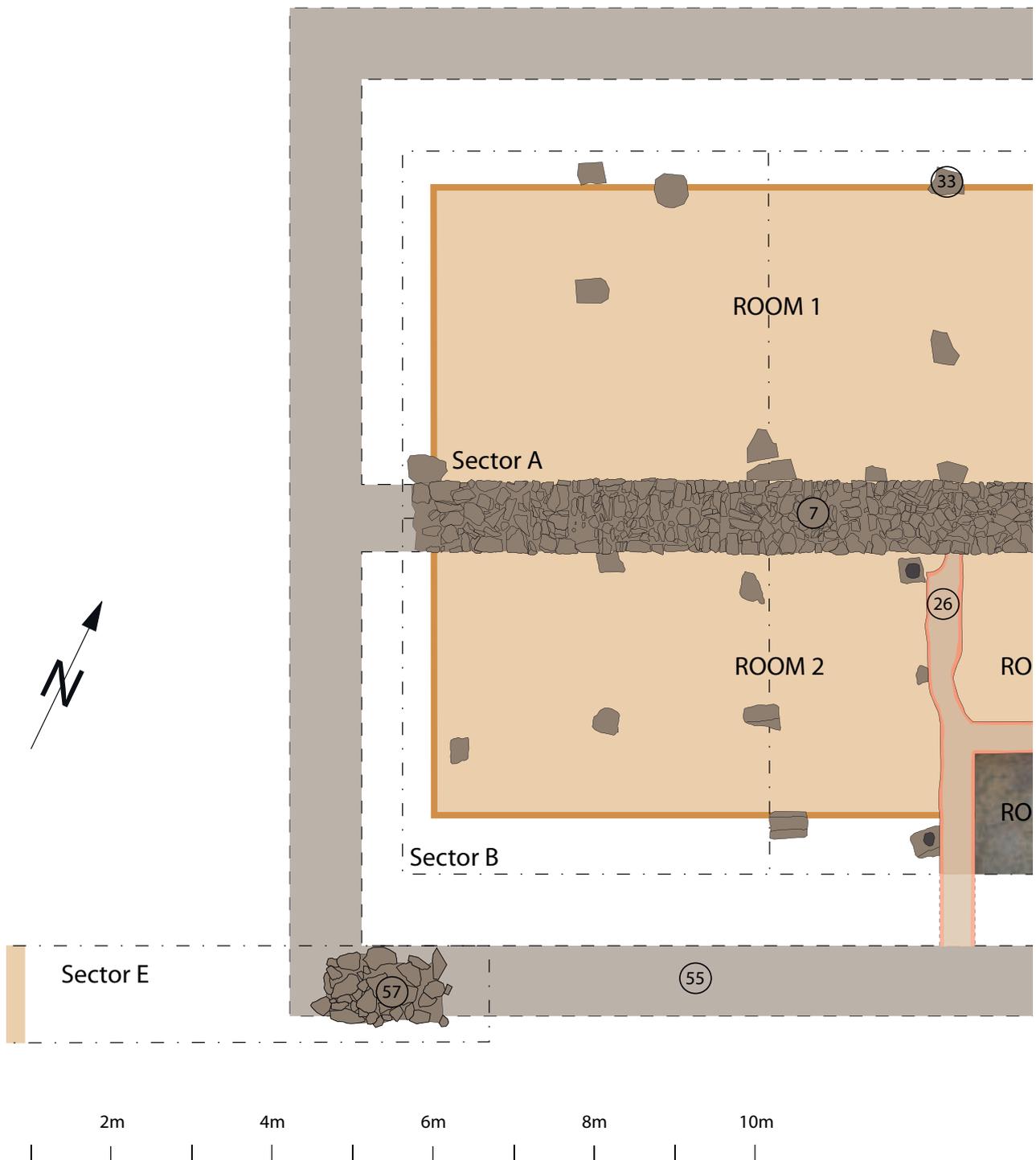
In the near vicinity of the site, i.e. the archaeologically examined house ground plan, the layer sequence is slightly more complex: the foundation walls of the building (pos. 5), the partition walls (pos. 3/6/7, pos. 26 and 27) and the floor made of clay pos. 53 all stand directly on the natural substratum pos. 22. Then follows an up to 20 cm thick burnt layer pos. 5 consisting of charcoal, charred beams and boards as well as burned clay which stems from the destruction of the building. The remains of the burnt construction timber and several parts of the clay wall collapsed during the fire disaster. This destruction layer is covered by a mighty mass pos. 4 consisting of material from the collapsed clay walls. On top of this lies humus pos. 2 which in places was covered by a thin layer of clay in connection with the excavation activities for the temple walls. In recent times, the top layer was formed by humus pos. 1 (fig. 4).

3.2 Foundation pos. 57 of a former house wall (pos. 55)

At the eastern end of the section of Sector E, a single layer rockfill with rectangular dimensions consisting of raw rock fragments was documented (Report Karma Tenzin, page 13, fig. below and fig. 5). The stones without binding agents were put in a flat foundation pit embedded in the natural substratum pos. 22. This lowest layer of the 90 cm wide foundation was observed across a length of 1.4 m.

² Determination of the geological substratum according to A. Gannser, Geology of the Bhutan Himalaya, Basel 1983.





According to the landowner and co-builder of the new Lhakang foundation, Mr. Pemba Sherpa, these are the final remains of a house wall made of rammed earth which, analogous to the documented partition wall pos. 3/6/7, had a masonry foundation of approx. 60cm height above a dry rockfill. Before the construction of the Lhakang began, the house wall was complete within its entire side dimensions of approx. 12 × 12 m. Because the new Lhakang should have new dimensions, the builders decided to remove the existing walls and use the stone material for the new construction. Unfortunately, the demolition of the existing remains of the walls had been carried out so thoroughly that no traces of the former house wall pos. 55 could be verified, except for one place that was documented in the section *Sector E*.

Fig. 5 Sangkha Ruin. Features. Foundation pos. 57 of the house wall pos. 55. Partition wall pos. 7. Partitions walls pos. 26/27. Mud floor pos. 54. Foundation stones pos. 33 for wooden poles. Retaining terrass wall pos. 21 with filling pos. 20.

Fig. 6 Sangkha Ruin. Wall pos. 7, south elevation. Draft: Sonam Tenzin.

Fig. 7 Sangkha Ruin. Wall pos. 7, top view. Foto: Karma Tenzin.

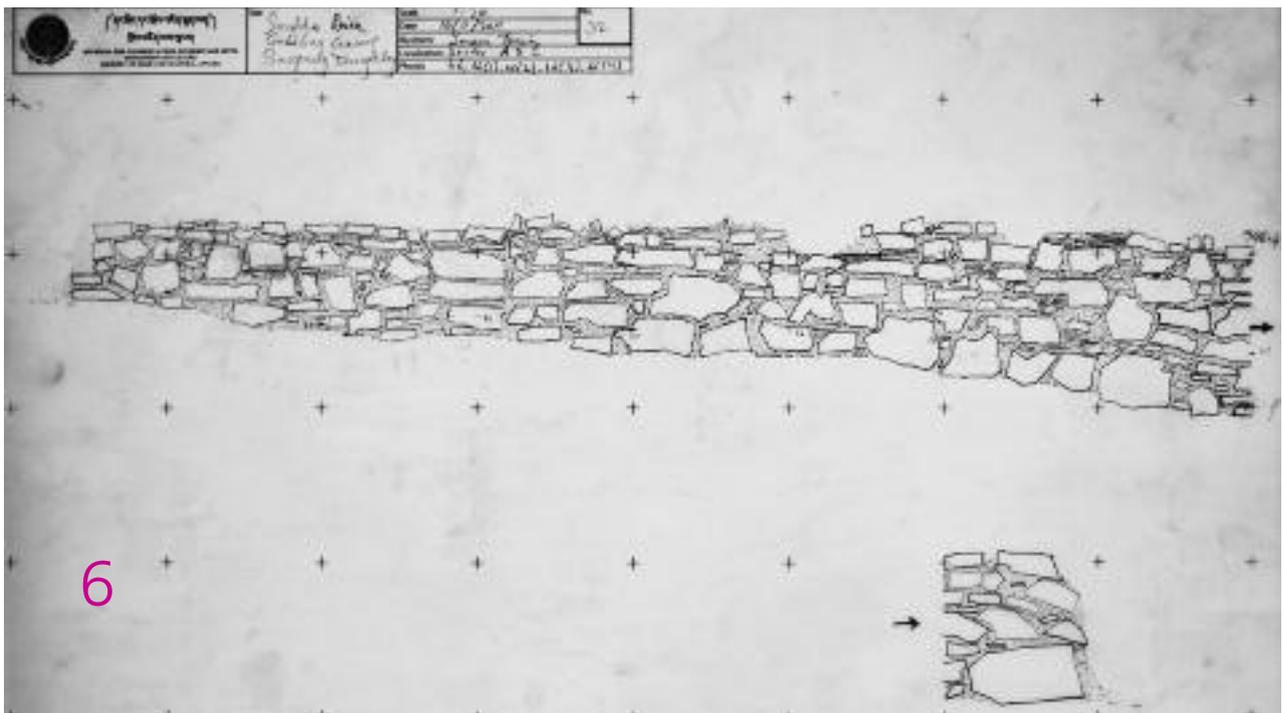
³ More information about rammed earth technology, cf.: <http://de.wikipedia.org/wiki/Stammpflehm>.



3.3 Partition wall pos. 3/6/7

After cleaning the northeastern and southwestern profiles, a wall had become visible which divided the house foundation into a north and south half (fig. 4). This was a rammed earth wall pos. 3/6 on a stone foundation wall pos. 7. The walled foundation (pos. 7) consisted of hardly or not at all processed rock fragments from the surroundings (fig. 5–7). A certain selection with regard to shape and size was recognisable; they were mostly cuboid shaped resp. plate-like, flat stones. The stone material was processed as a solid masonry wall with yellow clay as a binding agent. The stones set in the masonry shell alternately as binding agents and stretchers gave some indication of irregular layers. In the southern masonry shell, individual stones overlapped by one and a half to two layers in order to level out any irregularities, while in the northern masonry shell, any irregularities were rectified by small, plate-like stones (fig. 6). A large proportion of the stones in the masonry shell showed red discoloration and heat cracks which proves the destruction of the house due to a fire disaster. The thickness of the foundation wall (pos. 7) was 90 cm. It followed the natural course of the terrain which dropped slightly toward the west – five to six stones led to its maximum height of 95 cm. It can be assumed that this foundation wall (pos. 7) – analogous to the foundation pos. 57 of the former house wall pos. 55 – also had a dry layer of stones. This could not be examined due to the fact that the wall pos. 7 had to be preserved.

A rammed earth wall (pos. 3/6) rose above the foundation (pos. 7) which, in parts, was still up to 1 m high. Its outer membrane was burned red on both sides well down to 2 cm – a further indication of the destruction of the house due to fire (fig. 4). The rammed earth technology is a proven construction method in all parts of the world ever since prehistoric times; due to its outstanding material properties, it has once again become popular in modern construction work. Analogous to concrete construction, rammed earth is achieved by pouring 10 to 15 cm thick layers of fine moist clay into a formwork, and then compacted either by manual or machine ramming. Because clay does not require any setting time, stripping can be done immediately after the wall has been completed which accelerates the drying process. Rammed earth walls hardly have any drying cracks and are characterised by a high load carrying capacity. With regard to the indoor climate, its good quality of heat storage should be emphasised.³



It is also worth pointing out that there is no doorway in the partition wall pos. 3/6/7 between the northern (sectors A/C) and southern building halves (sectors B/D). Apparently, both parts of the house were accessible from the outside via separate doors – an observation which led us to consider the excavated rooms more as storage and stock rooms rather than living space. Therefore, it seems to be a type of house which is often found in the region, encompassing an «economics» part on the ground floor and a residential part on the upper floor.

3.4 Partition walls pos. 26/27

While sector A/C represented one single large room 1 (inside area: 5×11 m), the southern half of the building was partitioned: the western room 2 (inside area: 5×7 m) was detached toward the east by a rammed earth wall pos. 26. A perpendicular clay wall pos. 27 formed two rooms: room 3 (2×2.5 m) resp. room 4 (2.5×2.5 m). The partition walls pos. 26/27 were also rammed earth walls, but without a stone foundation. Incidentally, it was constructed the same way as the partition wall pos. 3/6. They were 45–50 cm thick and approx. 35 cm high (fig. 8). The outer sides were burnt and coloured red in different places due to heat impact. Here, it was easy to remove the filling material pos. 4 (cf. below) from the vertical clay wall, hence allowing for the original wall surface to be exposed.

Fig. 8 Sangkha Ruin. Rammed mud wall pos. 26/27 in sector D.



3.5 Filling pos. 4 and the burnt layer pos. 5

Two destruction layers, one on top of the other, were observed in the entire interior of the house: the upper mass pos. 4, up to 90 cm thick, consisted exclusively of clay. It was material from the various different collapsed rammed earth walls. Individual strips of red burnt clay originated from former wall surfaces (fig. 4). A few small finds were found in this clay mass.

We discovered the lowest layer directly on the floor – a burnt layer pos. 5, mostly 10–20 cm, in places even up to 30 cm thick. The matrix of this material consisted of charcoal resp. charred boards, beams and posts in different charring stages. Red burnt clay was found between the layers. During the fire, it was obvious that the construction timber of the roof, the wooden partition walls and small parts of the rammed earth wall had collapsed at first onto the wooden floor of the upper floor, and then all together onto the ground floor. At the same time, utility objects that could not be salvaged by the fleeing residents were buried in the debris. The vast majority of all the finds stems from this burnt layer pos. 5 (cf. below, 4. Finds). Several charcoal samples were extracted for wood species identification and scientific age determination (cf. below, 5. Samples).

Fig. 9 Sangkha Ruin. Trampled mud floor in sector D.

Fig. 10 Sangkha Ruin. Foundation stones pos. 33 in sector C. In the background rammed mud wall pos. 26.

3.6 Clay floor pos. 54 and base stones pos. 33

In the entire house sector, an attic in the form of a floor made of rammed clay was observed which rested directly upon the natural ground pos. 22. It was hard to define this clay attic pos. 54 over vast areas. Occasionally, it dissolved due to moisture and was then combined with the burnt layer pos. 5 on top. The floor in room 4 – the one to the east (fig. 9), formed by the rammed earth walls pos. 26/27 – was in an exceptionally good condition. Here, it had retained its original rigidity as well as the compression of its surface due to being permanently tread upon, which is why it was easy to remove from the burnt layer above pos. 5 in many places.



In the two large rooms 1 and 2, carefully selected, but raw stones in flat and cuboid shapes (fig. 10) were found on the clay attic pos. 54 in regular spaces ranging from 1.5 to 2 m. They served as foundations for wooden posts which supported the beam construction of the upper floor. In room 2, the northeastern (sample no. 5) and the southeastern posts were preserved in situ as charred stumps on their base stones.



3.7 Terrace supporting wall pos. 21 and backfilling pos. 20

The section in sector E was primarily created to examine the terrace supporting wall pos. 21. It was able to be documented over a length of approx. 3 m. It was a 90–100 cm thick solid masonry wall that had been built without using binding agents. The gaps



Fig. 11 Sangkha Ruin. Retaining terrass wall pos. 21 from the west.

between the stones had gradually been filled up with humus that had been washed in. The completely raw and randomly collected rock fragments from the vicinity were primarily used as stretchers in the masonry shell on the valley side; stone layers are only visible to some extent (fig. 11). The size of the stones used varies a lot; a boulder measuring 55 × 90 cm in the area of the base of the wall is certainly in a natural in situ position. The terrace supporting wall pos. 21 was backfilled with loose quarrystones in different shapes and sizes. Again, humus that had been washed in, filled the gaps between the stones. In this respect, the terrace supporting wall pos. 21 and the backfilling pos. 20 were indeed very similar. They only differed in that the stones of the wall pos. 21 were placed in a conscious manner, while the stones in the backfilling pos. 20 were dumped in a more random fashion.

Fig. 12 Sangkha Ruin. Features of sectors 5 and Y.

3.8 Sectors 5 and Y

Approx. 30 m south of the new temple, at the foot of the Sangkha Ruin terrace, a wall completely overgrown by a tree was documented in sector 5 (fig. 2 and 12). The sword cat. 18 originates from this structure. Another wall overgrown by a tree lies at the north-eastern end of the plateau in sector Y. Here, the gun barrel cat. 19 was found in the wall ruins. Both finds were not examined any further⁴.

⁴ According to information given by the landowner, it is highly probable that they are *abgegangene Chorten* (??).



Fig. 13 Sangkha Ruin. Chart of features and according find complexes.

Fig. 14 Thimphu, Nordzyn Lam, handcraft shop. A very recent ceramic pot made by a potter from Trongsa dzongkhag.

4 Finds

With regard to the finds, a distinction must be made between those objects found in 2010 during the construction of the new temple foundations and those found during the rescue excavation in 2011. The objects are insecurely stratified – according to the statement given by the builders, they originate from the «black layer», i.e. the burnt layer pos. 5 or its upper edge. Further, the vast majority of the well stratified finds from the 2011 excavation stem from this layer (fig. 13). The only exceptions are a pot rim and a sickle (cat. 31 and 49). Due to the fact that only two objects do not originate from the burnt layer pos. 5, the finds are split into the years they were found and presented in a typological order.

Pos. No.	Description	Find Complex No.
2	Ancient loomy layer	1, 5
3	Part of rammed mud wall	3
!	Layer of collapsed mud wall	6, 7, 9,
5	Burnt, black destruction layer	2, 4, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21
18	Ancient walking layer above natural ground Pos. 22	20
29	Edge of burnt material in Pos. 5	*

4.1 Ceramics

Regarding the ceramics, a distinction must be made between glazed chinaware that is explicitly seen as dinnerware, and unglazed pottery that is used as functional ceramics for cooking or for storing liquids and food, but that was also used for eating purposes.

Unglazed pottery. The unglazed pottery comprises bulbous pots with round sagging bottoms as well as small bowls and dishes. Here, only rims are illustrated because no larger fragments were discovered. The pots depict rim shapes also common in Central Europe in a medieval context. A typological development of the rims cannot be postulated by means of the Sangkha find because there is only one find layer, namely the destruction layer pos. 5. Furthermore, it appears that the unglazed pottery are timeless vessel types that are manufactured in Lhuentse Dzongkhag and Trongsa Dzongkhag to the present day (fig. 14). In an archaeological context, parallels stem from the investigation of the Drapham Dzong, a monastery in Bumthang dzongkhag, from the 16th and 17th centuries. The pot rim cat. 20 and, under circumstances, cat. 21 compare quite well with type A from Drapham Dzong⁵. Wheels with a cylindrical neck cat. 28–34 correspond with the type B found there⁶. As Barbara and Eberhard Fischer were able to show during their field studies in Bumthang dzongkhag, the unglazed earthen pots were probably used for cooking on the one hand, and on the other hand – in a significant number of cases – also for distilling purposes and for storing Arag, a local alcoholic beverage⁷. During their research, they also observed wooden containers that bear a striking similarity to the ceramic pots⁸. There are no such wooden containers in the Sangkha collection at all. Were they burned? Or did they never exist? Today's inventory belonging to the host family lacks both wooden vessels as well as ceramic tableware. These materials were replaced here by plastic and aluminium.

The specimens cat. 35–40 portray a total of nine rims from small bowls or dishes with exaggerated (projecting?) and thickened rims. The only formally similar specimen

⁵ Meyer 2009, 49; Meyer 2010, 54, A1–A6.

⁶ Meyer 2010, 54f., B1–B3, B5.

⁷ Fischer 2009, 53ff.

⁸ Fischer 2009, 54



from Drapham Dzong does however feature a non-thickened rim⁹. We do not know of any comparison examples regarding the three dishes with thickened rims cat. 41–43 – neither in an archaeological nor in an ethnological context.

The bottle mouth cat. 44 does however have two parallels among the inventoried containers provided by B. and E. Fischer¹⁰. With regard to the object cat. 45, we spontaneously thought of the nipple of a Buddha statue rather than a vessel lid, due to the fact that the specimen was obviously not made on a potter's wheel and does also not have a handle (fig. 15). An interview with two plastic artists did however lead in a different direction (fig. 16). Because the object is burnt, it can be a fragment of a statue that is never burnt. There is no doubt about the function of the butterlamp cat. 46. Such ceramic lamp shades are still manufactured and used in Bhutan. The use of object cat. 1 remains uncertain. Could it possibly be a chillum pipe for smoking tobacco?



Fig. 15 Sangkha Ruin. Ceramic objekt Kat. 45.

Fig. 16 Sangkha Ruin. An artist investigating the ceramic object Kat. 45.



Chinaware. The tableware comprises flat or deep bowls and plates. They are not porcelain, but rather white glazed ceramics painted mostly blue or red. The three fragments cat. 2–4 are flat bowls decorated on the outside in blue or red. Cat. 5 is a deep bowl with a circumferential flower pattern in blue, red and green on the outside and a red blossom on the bottom of the vessel's interior. The plates in cat. 6 depict the same design in red, like the bowl cat. 4. A find that deserves special attention is the ink bottle cat. 47. This is also chinaware – the vessel was originally glazed white. When in use, ink diffused through the porous structure of the clay and was deposited underneath the glaze as a dark gray discoloration. On the inside of the ink bottle there was a piece of lead which could not fit in the vessel mouth due to its size. The metal must have reached the inside of the container and solidified later on.

4.2 Glass

Among the finds from 2010, there is a drop-shaped object made of light green glass cat. 9; its use still remains entirely unclear.

Furthermore, fragments of three glass bottles of a similar type were found. A few fragments of two bottles were also found in 2010, however it was impossible to reconstruct any profiles. The bottle cat. 48 that was found during the excavation in sec-

⁹ Meyer 2010, 54, D1.

¹⁰ Fischer 2009, fig. 5 and fig. 12.

Fig. 17 Sangkha Ruin. Copper coin from the East India Company. A similar coin was found at Sangkha site (Kat. 55). Source: <http://kulraj-the-numismatist.blogspot.com>.

tor C was almost completely reassembled. The three bottles from Sangkha Ruin originate from the earliest industry products. They were not machine-made, but blown in a mould. The impact from the metal mould is clearly visible on the shoulder of the bottle cat. 48. From a manufacturing point of view, the bottle dates back to the mid 19th century¹¹.

4.3 Non-ferrous metal

There are six objects made of non-ferrous metal. During the construction work in 2010, the two small bowls of sheet bronze cat. 15 and cat. 16 were found. Their function was probably cultic and may well have served to hold holy water. The plate or bowl cat. 51 made of fine sheet tin measured 32 cm in diameter and may have been used as a platter. We do not know what the corrugated bronze ring cat. 52 was used for. It was originally round and had a diameter of 2.5 cm. The bell cat. 53 of sheet copper is probably called a horse bell. On the inside is the metal ball that made the bell ring. Similar bells are still in use today. Of the fragmented button cat. 54 belonging to a garment, only the backside with its fastening eye still remains. The obverse is missing.

4.4 Coins

In the find collection of Sangkha Ruin there are three copper coins. Cat. 17 is a self-minted half rupee from Bhutan. Until 1789, all money used in Bhutan originated from the mints in Cooch Behar. Afterwards, the mintage came to a halt due to the political pressure of the East India Company, because of the fact that society in the whole of India wanted to enforce a uniform monetary system. From then on, Bhutan had to mint its own coins – using embossing stamps from Cooch Behar that were bagged during a military invasion in 1772¹². For the time being, only silver half rupee coins were minted in Bhutan; from 1840 onward, they were then replaced by copper coins. The copper half rupee remained the only coin minted in Bhutan until around 1900¹³. Under the first King Ugyen Wangchuk, the coinage system was standardised, and in 1928 – under King Jigme Wangchuk – a new and modern currency was then introduced. The obverse of the half rupee is not easy to read because the embossing stamp was cut to fit the diameter of the whole rupee. Regarding the smaller half rupee, only the central parts of the obverse and reverse were minted. Our specimen cat. 17 shows the final syllable of a king's name «ndra» on the obverse. On the reverse, the middle line depicts the following: (shi) «va cha ra» (na)¹⁴. This is a humble dedication to the god Shiva: «for the tax that is the honey of the lotus foot of the noble Shiva».

The coin cat. 55 originates from the same period as cat. 17. Its obverse depicts two lions as shield-bearers facing each other. The centre of the reverse depicts the nominal value «ONE QUARTER ANNA», the year «1835» is inscribed below and at the top, the issuing authority «EAST INDIA COMPANY» is written circumferentially. Figure 17 displays a comparative piece from collection stocks. The coin cat. 56 is strongly worn out, hence a mint is hardly visible. It still however appears to be a «Quarter Anna».



¹¹ <http://de.wikipedia.org/wiki/Glas#Hohlglas>

¹² Bronny 2010, 12.

¹³ Bronny 2010, 15f.

¹⁴ Friendly message from Klaus Bronny, Essen.

While the reverse is utterly illegible, it seems that the bodies of the two lions and the shield are almost recognisable on the obverse. The uniform «Anna» copper coins of the East India Company were minted in very high quantities between 1835 and 1858. There were more than a billion «Quarter Anna» coins¹⁵.

4.5 Iron

The iron objects belong to the category of weapons, tools and structural components. The arrowhead cat. 10 was most probably used for hunting. It features a tang and a lancet-shaped blade, similar to the one found on the Drapham Dzong¹⁶. There, another type with a nozzle was also observed¹⁷. The three knives cat. 11, cat. 12 and cat. 49 must have had completely different functions owing to their shapes. The sickle cat. 50 is the only tool that indicates an agricultural activity of the inhabitants of the region in former times. The door or window shutter handle cat. 13 as well as the door chain mount cat. 14 all belong to the structural components. Forge slag, like cat. 57, points to iron processing. However, the pure existence of slag does not prove any forge activity at the site. Evidently, forge slags are still kept at home in the form of apotropaic objects¹⁸.

5 Samples

Various wood resp. charcoal samples from different charring stages were taken from the burnt layer pos. 5: the samples no. 3–5, three posts with a diameter of up to 10 cm, were taken to the Dendro Laboratory of the RNR-RC in Jakar, Bumthang, for wood species determination resp. dendrochronological age determination¹⁹. Due to the fact that our samples are subtropical hardwoods, and, until now, only reference curves of conifers from the Bumthang region exist, no age determination of these samples can be expected. Due to a relatively good layer dating of the destruction layer pos. 5 with the aid of the associated finds, the Sangkha samples will nevertheless help to establish a reference curve for hardwoods from the south of Bhutan.

The samples no. 6–9 are for C14 or radiocarbon dating, whereby sample no. 6 – a small and thin charred bamboo stick – and sample no. 9 – a bovid – have the best chance of success due to their low individual age. Nevertheless, it must be noted that radiocarbon datings can automatically exhibit a relatively large deviation of up to several centuries; therefore, they are more suitable for dating prehistoric sites. With regard to recent times, they do not generally provide any relevant results whatsoever. For this reason, the samples were not handed in for evaluation after consulting the project's scientific advisors Prof Dr Ph. Della Casa and Dr A. Mäder.

¹⁵ Friendly message from Klaus Bronny, Essen.

¹⁶ Meyer 2011, 241, cat. 10.

¹⁷ Meyer 2010, 54, F1.

¹⁸ Friendly message from Dr E. Fischer based on information given by M'am Nagtsho Dorji.

¹⁹ Renewable Natural Resources Research Center, Department of Research and Development, Ministry of Agriculture.

6 Summary

The composite village named Sangkha village is a dispersed settlement of single farms under Gakiling Gewog and Sarpang Dzongkhag. Each farmstead comprises at least two houses, in particular a residential house and a kitchen house. Further shacks or animal shelters in various numbers round off the picture of a single farm. The examination of the Sangkha Ruin was initiated by the construction of a temple. During the excavation of the foundation trenches, the workers came across finds (cf. Find Catalogue 2010). The rescue excavation carried out by 15 people gave evidence of a residential house with sides measuring 12 m; it was built using the rammed earth technology which is widespread in Bhutan. No traces of a kitchen house were found, but the existence of such a building can imperatively be assumed. Likewise, shelters for cattle and horses may well have left their traces in the ground. The excavated building is probably a type of house featuring storage and stock rooms on the ground floor and a living space with a recreation room and sleeping chambers on the upper floor.

The house was destroyed by a fire. Above the floor, a mighty destruction layer consisting of flammable material was found. With the exception of a few stray finds, all of the finds originated from this destruction layer. The finds, in particular the glass bottles and the copper coins, date the destruction of the building back to the late 19th century. A building date could not be determined. The spectrum of finds points to a household of high quality standards. Especially the Chinese tableware would not be expected in a rural context. The same applies to the ink bottle (cat. 47), which proves that someone here was able to read and write. It was most probably the household of a local authority member. This assumption is supported by the preferred location of the farmstead: on one hand, the spur setting enabled a fantastic panoramic view and ensured that the estate was visible from a great distance. On the other hand, the site lies immediately next to the footpath from Sarpang to Damphu, the only transit route to Tsirang before the opening of the Bhutanese highway in the early seventies.

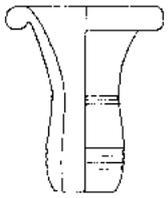
7 Bibliography

- BRONNY, K., 2010: *Faszination Himalaya. Von Ladakh bis Bhutan – Geld und Handel am Dach der Welt. Das Fenster in Kreissparkasse Köln. Theme 174, Cologne 2010.*
- FISCHER, B. u. E., 2009: *Clay pots in Bumthang dzongkhag (Central Bhutan). Annual report of the Swiss-Liechtenstein Foundation for Archaeological Research Abroad 2008, pp. 53–58.*
- MEYER, W., 2009: *Bhutan-Swiss Archaeology Project Drapham Dzong 08. Results of the first excavation campaign (autumn 2008). Annual report of the Swiss-Liechtenstein Foundation for Archaeological Research Abroad 2008, pp. 31–52.*
- MEYER, W., 2010: *Bhutan-Swiss archaeological excavation project 2008–2010. Drapham Dzong, Bhutan. Report 2009. Annual report of the Swiss-Liechtenstein Foundation for Archaeological Research Abroad 2009, pp. 25–60.*
- MEYER, W., 2011: *Bhutan-Swiss archaeological project 2008–2010. Drapham Dzong, Bhutan 2010. Excavation results from stage 3 (autumn 2010). Annual report of the Swiss-Liechtenstein Foundation for Archaeological Research Abroad 2010, pp. 229–244.*

8 Catalogue

8.1 Find Catalogue 2010

- 1 Clay pipe, brownish, gray, soft fired. Sector ABCD. FC 2010.9
- 2 Rim of chinese ceramic plate with blue and white color pattern. FC 2011.4.1
- 3 Rim of chinese ceramic plate with red and white color. FC 2011.4.7
- 4 Rim of Chinese ceramic plate and design with red and white color pattern. FC 2011.4.3
- 5 Fragment of Chinese ceramic cup with green, blue, red and white color pattern. FC 2011.4.2
- 6 Rim of Chinese ceramic plate light red and with red and white color. FC 2011.4.4
- 7 Rim of chinese ceramic plate designed with blue and color flower patterns. FC 2011.4.6
- 8 Rim of Chinese ceramic plate designed with blue and white color flower patterns. FC 2011.4.5
- 9 Glass object, Sector ABC. FC 2010.8



1



2



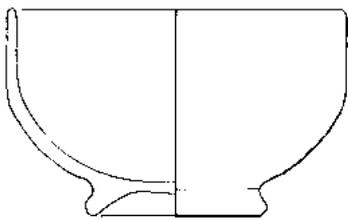
3



4



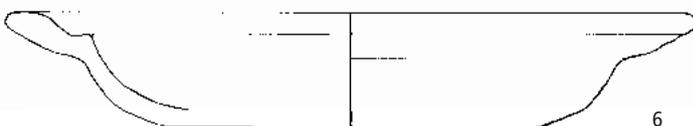
8



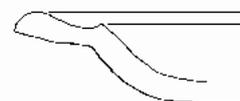
5



9

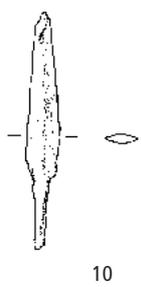


6

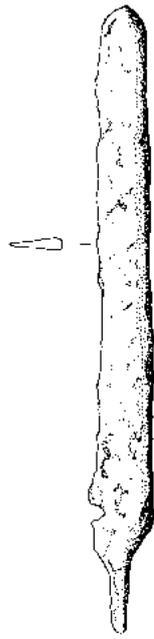


7

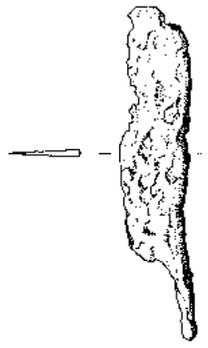
- 10 Arrowhead, iron, Sector ABCD. FC 2010.2
- 11 Knife, iron, Sector ABCD. FC 2010.3
- 12 Knife, iron, Sector ABCD. FC 2010.4
- 13 Door handle, iron, Sector ABCD. FC 2010.5
- 14 Door chain, iron, Sector ABCD. FC 2010.6
- 15 Copper coin, Sector ABCD. FC 2010.7
- 16 Bronze bowl, Sector ABCD. FC 2010.10
- 17 Bronze bowl, Sector ABCD. FC 2010.11
- 18 Sword/Sabre, iron, Sector X, FC 2010.1
- 19 Gun barrel, iron, Sector Y, FC 2010.12



10



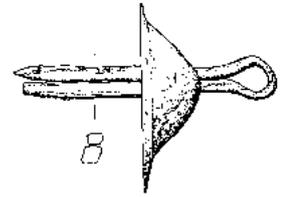
11



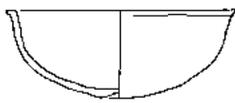
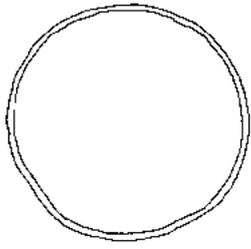
12



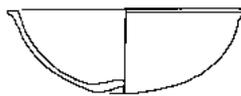
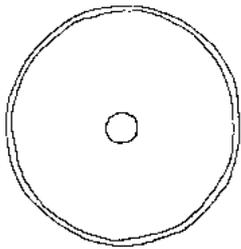
13



14



15



16



17



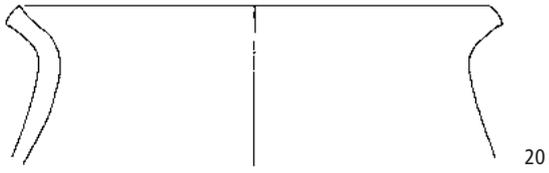
18



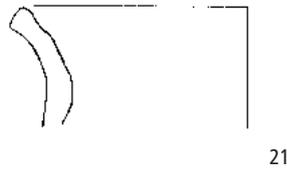
19

8.2 Find Catalogue 2011

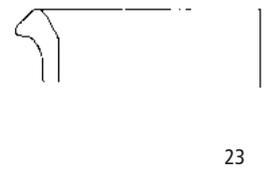
- 20 Rim of ceramic pot, brown, gray, hard fired, little micaceous temper, ornamented with wavy lines on the shoulder. FC 2011.15.2
- 21 Rim of ceramic pot black, hard fired, micaceous temper. inside and outside lines from the work on a potter's wheel. FC 2011.14.11
- 22 Rim of ceramic pot, brown, hard fired, little micaceous temper, inside and outside lines from the work on a potter's wheel. FC 2011.14.5
- 23 Rim of ceramic pot, gray, hard fired, little micaceous temper, inside and outside lines from the work on a potter's wheel. FC 2011.14.15
- 24 Rim of ceramic pot, brown, hard fired, little micaceous temper, inside and outside lines from the work on a potter's wheel. FC 2011.14.13
- 25 Rim of ceramic pot, orange, hard fired, little micaceous temper, inside and outside lines from the work on a potter's wheel. FC 2011.14.16
- 26 Rim of ceramic pot, brown, hard fired, little micaceous temper, inside and outside lines from the work on a potter's wheel. FC 2011.15.1
- 27 Rim of ceramic pot, brown, hard fired, little micaceous temper, inside and outside lines from the work on a potter's wheel. FC 2011.14.6
- 28 Rim of ceramic pot, orange, hard fired, little micaceous temper, inside and outside lines from the work on a potter's wheel. FC 2011.14.3
- 29 Rim of ceramic pot, orange, hard fired, little micaceous temper, inside and outside lines from the work on a potter's wheel. FC 2011.14.10
- 30 Rim of ceramic pot, brown, hard fired, little micaceous temper, inside and outside lines from the work on a potter's wheel. FC 2011.14.8
- 31 Rim of ceramic pot, black, hard fired, little micaceous temper, inside and outside lines from the work on a potter's wheel. FC 2011.6.1
- 32 Rim of ceramic pot, bright loam colour, hard fired little micaceous temper. FC 2011.14.12
- 33 Rim of ceramic pot, bright loam colour, hard fired. FC 2011.15.3
- 34 Rim of ceramic pot, brown, hard fired, little micaceous temper. FC 2011.16.1
- 35 Rim of ceramic bowl, black, hard fired, little micaceous temper, inside and outside lines from the work on a potter's wheel. FC 2011.14.2
- 36 Rim of ceramic bowl, brown, hard fired, little micaceous temper, inside and outside lines from the work on a potter's wheel. FC 2011.17.1
- 37 Rim of ceramic bowl, brown, hard fired, little micaceous temper. FC 2011.14.9
- 38 Rim of ceramic bowl, brown, hard fired, little micaceous temper. FC 2011.14.14
- 39 Rim of ceramic bowl, brown, hard fired, little micaceous temper. FC 2011.14.4
- 40 Rim of ceramic bowl, light brown, hard fired, little micaceous temper. FC 2011.14.7
- 41 Rim of ceramic bowl, bright loam colour, hard fired little micaceous temper, inside and outside lines from the work on a potter's wheel. FC 2011.14.1
- 42 Rim of ceramic bowl, loam colour, hard fired, little micaceous temper, inside and outside lines from the work on a potter's wheel. FC 2011.10.1
- 43 Rim of ceramic bowl, light brown, hard fired, little micaceous temper, inside and outside lines from the work on a potter's wheel. FC 2011.14.17



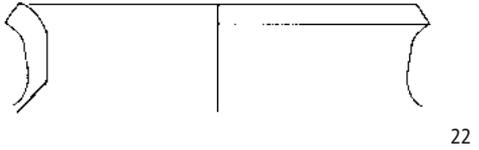
20



21



23



22



24



25



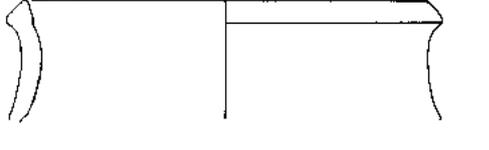
26



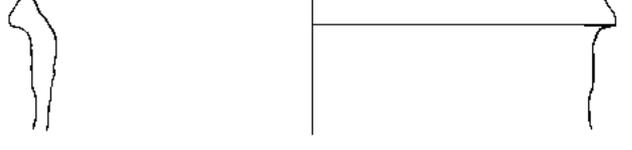
27



29



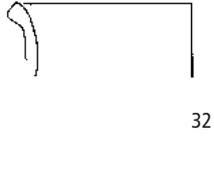
28



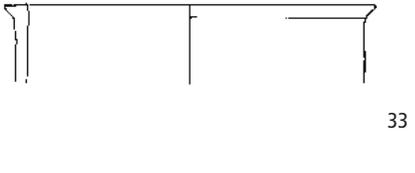
30



31



32



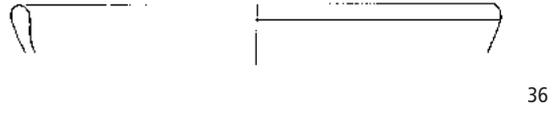
33



34



35



36



37



38



39



40



41

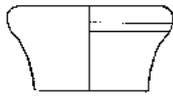


42

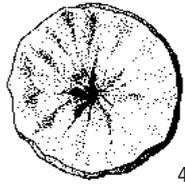


43

- 44 Mouth of ceramic bottle, gray, hard fired in some portion.
FC 2011.19.1
- 45 Cap of ceramic pot. FC 2011.15.4
- 46 Fragment of butter lamp, brownish color, hard fired.
FC 2011.15.5
- 47 Chinese ceramic ink bottle. FC 2011.15.6
- 48 Bottle made of green glass. FC 2011.17.2
- 49 Fragmented iron knife. FC 2011.21.1
- 50 Sickle made of iron. FC 2011.5.1
- 51 Rim of bronze plate. FC 2011.15.7
- 52 Elliptical bronze ring. FC 2011.18.1
- 53 Fragmented copper bell. FC 2011.18.2
- 54 Fragmented copper button. 2011.13.1
- 55 Copper coin. One Quarter Anna, 1835 East India Company.
2011.12.1
- 56 Copper coin. One Quarter Anna (?) 2011.19.1
- 57 Iron slags. FC 2011.3.1; 19.2



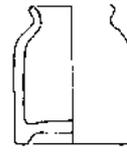
44



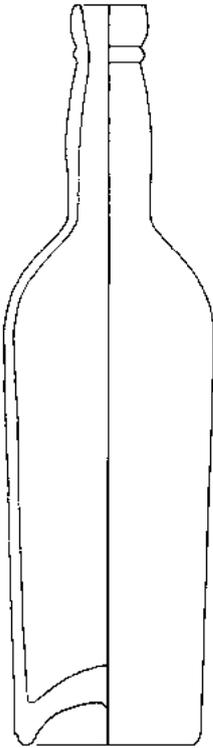
45



46



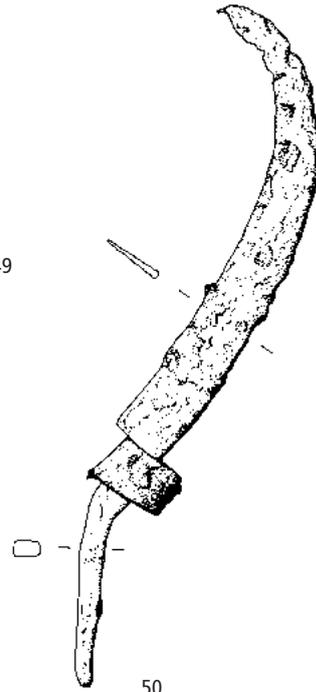
47



48



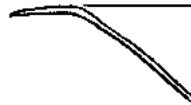
49



50



52



51



53



54



55



56



57

