



The Pharaonic town on Sai Island and its role in the urban landscape of New Kingdom Kush

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Introduction

The region of so-called Upper Nubia (Kush), in particular the area between the Second and the Third Cataracts, is rich in archaeological remains and monuments datable to the New Kingdom. These Upper Nubian monuments are mostly stone temples like the impressive temple of Soleb; however, these temples originally were integrated into settlements and fortified towns which are at present not fully explored. Consequently, our understanding of the urban landscape of New Kingdom Kush is still limited. Various types of records including rock inscriptions and stelae testify that the Egyptian involvement in Nubia was intensive during this period.¹

Sai Island, as one of the most important New Kingdom sites in Upper Nubia, is the focus of the European Research Council project AcrossBorders. The site can be understood as a prime example for settlement policy of New Kingdom Egypt in Upper Nubia. The project aims to provide new insights on the lifestyle and the living conditions in New Kingdom Nubia thanks to new fieldwork and multi-layered research on Sai Island. The main hypothesis that has to be tested is whether the settlement on Sai Island can be considered as an Egyptian microcosm despite its location outside Egypt and its specific topographical, environmental and cultural situation. In order to do so, a detailed comparison of two major settlement sites of the 18th Dynasty located in Egypt proper is being undertaken: AcrossBorders explores the material culture and architectural remains from Abydos and Elephantine to provide direct comparisons for Sai.

Since 2013, AcrossBorders has conducted fieldwork in the New Kingdom fortified town of Sai. New excavation areas within the town were opened and added important knowledge concerning the general layout of the town, its evolution and changing character. Together with resumed work in the pyramid cemetery SAC5, new archaeological evidence for reconstructing the establishment of Pharaonic administration in Upper Nubia was discovered. Based on the fresh data from AcrossBorders' excavations, this paper presents the current state of knowledge regarding the evolution of the Pharaonic town on Sai Island and its role in the urban landscape of New Kingdom Kush.

1. Sai Island and the Egyptian “re-conquest” of Upper Nubia

At Sai Island, Egyptian *Šꜣ.t*,² a large community of Kerma Nubians is attested from the *Kerma Ancien* to *Classique* periods.³ With its prominent location just south of the Batn el-Hagar, the island was probably the stronghold of the Kerma kingdom in the north (Geus 1996, 1166; Davies 2005, 51; Budka 2015a, 56). At the beginning of the New Kingdom, several Nubian campaigns are attested by king Ahmose Nebpehtyra (Morris 2005, 70-71).⁴ That Sai was one of the key sites for the Egyptians (Davies 2005, 51; see also Török 2009, 183), is supported by evidence from the island referring to Ahmose, principally a sandstone statue of the king (see Gabolde 2011-2012, 118-120). A function of Sai as a “bridgehead into Kush proper and a secure launching pad for further campaigns” (Davies 2005, 51) is very likely.⁵

A number of texts, including royal stelae at Tombos and Kurgus, refer to activities by Thutmose I in Upper Nubia.⁶ The location of fortresses (*mmn.w*) of the king, mentioned in a stela set up by his son Thutmose II at Aswan,⁷ is disputed. There are no corresponding archaeological remains at Tombos (cf. Budka 2005, 113; Valbelle 2006, 45) nor at Jebel Barkal and the finds on Sai are not straightforward in this respect (see below).⁸ New finds at Dokki Gel indicate that one of these Egyptian fortresses might have been in close proximity to the Nubian capital Kerma.⁹

Recent archaeological work at major early New Kingdom sites in Upper Nubia (Sai Island, Sesebi, Tombos, Dokki Gel) illustrates that by the time of Thutmose I the Egyptian presence in the area is greater than previously thought (cf. Morkot 2013, 947; Valbelle 2014, 107). In the region of the Third Cataract, Egyptian influence remained unstable and a Nubian rebellion is attested during the reign of Thutmose II.¹⁰ During the reign of Hatshepsut, new Pharaonic building activity at Dokki Gel and other sites is attested.¹¹ The Egyptian conquest of Upper Nubia came to an end with the final victory of Thutmose III against the kingdom of Kerma – the realm of Egyptian domination now reached as far as to the area of the Fourth Cataract and Kurgus (Smith

² For the toponym *Šꜣ.t* see Devauchelle and Doyen 2009, 33-37.

³ Attested by huge Kerma tumuli graves on the island, see Gratiën 1986, *passim*.

⁴ For Ahmose's activities in Nubia, see most recently Davies 2014, 9-10.

⁵ Vercoutter 1973, 7-38; see also Török 2009, 158-159; Morkot 2013, 913.

⁶ Davies 1998, 26-29; 2001, 47-50; Budka 2005, 108-109; Valbelle 2014, 107.

⁷ Valbelle 2006, 44-45; Török 2009, 161 with note 32; see also Gabolde 2011-2012, 136 with note 77.

⁸ As proposed by Gabolde 2011-2012, 135-137. See also Budka 2015a, 70; 2015b, 68.

⁹ Valbelle 2006, 49; 2012, 447-464; 2014, 107. See also Gabolde 2011-2012, 135-136.

¹⁰ Bonnet 2012, 71; Zibelius-Chen 2013, 138 with references; Valbelle 2014, 107.

¹¹ Valbelle 2006, 45-50 with further references and fig. 9 (map of Nubian sites with activities by Hatshepsut).

¹ See, for example, Fisher 2012, 25-33; Müller 2013, *passim*; Zibelius-Chen 2013.

1995, fig. 6.1; Török 2009, 165; Zibelius-Chen 2013, 138). A change of power hierarchies and an increased Egyptian presence after the defeat of the Kerma kingdom can be traced archaeologically at Sai.

2. AcrossBorders and settlement archaeology in Kush

The rural occupation and smaller villages of Kush are difficult to trace (see Edwards 2012, 66-74), but the better-understood New Kingdom settlements all fall into the category of so-called Nubian temple towns. Following Kemp, these are newly built fortified towns with an enclosure wall and a prominent temple within the settlement area (cf. Kemp 1972; Morris 2005, 5; Graves 2011, 63). The last few years have seen an increase in archaeological fieldwork at these sites. Excavations at Amara West (see, e.g., Spencer 2010; 2014a; 2014b), Sesebi (Spence and Rose 2009; Spence *et al.* 2011) and on Sai Island (Devauchelle and Doyen 2009; Doyen 2014; Budka 2011) have been resumed after long periods of neglect.

The ongoing archaeological fieldwork in Upper Nubia has much potential for a better understanding of settlement patterns in the region. Eventually, it should be possible to assess the diachronic and regional development of the settlements in the area as well as the local properties of the individual sites at a synchronic level (cf. Budka 2015a, 58-59). There is still no common understanding regarding the social interconnections and power hierarchies of Egyptians and Nubians in the Egyptian towns in Upper Nubia. Entanglement, mixture and acculturation with important impact by indigenous elements are the phenomena currently thought to be most relevant. These new approaches to the social stratification of the sites contrast with the terms of separation and Egyptocentric views of earlier archaeologists.¹²

Modern technical advances have become highly relevant for settlement archaeology in Nubia; at most sites the environmental settings are being explored.¹³ Various aspects of archaeometry are conducted by the missions working in the field. Especially geoarchaeological and interdisciplinary applications like soil sampling, micromorphology and isotope analysis are common and the analysis of the material culture is undertaken from a multi-perspective level, including various scientific analyses (e.g. iNAA) and different approaches.¹⁴

With this current status of Nubian settlement archaeology in mind, AcrossBorders follows the classical approach for the investigation of settlements developed by Herbert Jankuhn (1977, 75-76, fig. 24). The topographical, environmental and cultural situation of Sai and its occupants during the New Kingdom are the key questions.

1. The environmental conditions/the setting on Sai Island. The first task is to investigate the landscape of the island in

New Kingdom times in order to understand the location of the Pharaonic town. Of prime interest are the course of the Nile and the ancient shape of the sandstone cliff towards the east of the site.

2. The internal structure of town. Following on from the above, the focus is on the size and shape of the Pharaonic town. Aspects of its social organisation will be addressed as will be the microhistories of individual building units. In order to do so, stratigraphic investigations and new excavations within the town are necessary.

3. The outer settlement structure. To understand Sai in the macrocosm of New Kingdom Egypt and Kush, the integration of the site in regional settlement patterns, its rural hinterland and its facilities plus cemeteries will be explored. Of special interest is the development over time and potential differences between the 18th Dynasty and the Ramesside era.

In respect to AcrossBorders' major aim to reconstruct 'standards of living' on Sai to allow comparison with Abydos and Elephantine, a special focus is placed on the material culture and here on the question of the lifestyle. Whether objects refer to the cultural identities of their users or reflect more complicated processes will be investigated.

2.1 The location and environment of the Pharaonic town on Sai

The fortified Pharaonic town was built on the eastern bank of the large island of Sai in the New Kingdom. The geology of Sai comprises several types of metamorphic Precambrian rocks and Nubian sandstone, largely covered by thin layers of comparably much younger Nile sediments (cf. Geus 1996, 1170-1171, fig. 5; Draganits 2014, 20). Flat terraced surfaces dominate the entire island and only the Nubian sandstone of Jebel Adu rises as an inselberg, located c. 1.7km south of the Pharaonic town (Geus 1996, 1170; van Peer *et al.* 2003; Draganits 2014, 20-21).

Little is known about the eastern part of the New Kingdom town and it was usually assumed that the eastern wall had collapsed into the Nile.¹⁵ Recent fieldwork and geological surveys of the sandstone cliff have allowed a modification of this assessment. According to Erich Draganits, from the geoarchaeological point of view severe erosion in this part of the island is unlikely. This is mainly based on the observation of the low incision rate of the Nile (Draganits 2014, 22). Additional arguments are the existence of a broad Nile terrace east of the Pharaonic site and the presence of Nubian sandstone without indications for slope failure below the town.¹⁶ The state of preservation of the 18th Dynasty remains close to the river is very poor, but the eastern town wall probably ran along the cliff. A maximum width of 120m east-west for the town can be assumed and will be investigated by means of future excavations (Figure 1) (cf. Budka 2015a, 60).

¹² Cf. Morkot 2013, 936-937; van Pelt 2013; Smith 2014; Smith and Buzon 2014; Spencer 2014a.

¹³ See Spence and Rose 2009, 43-45; Spencer *et al.* 2012. Cf. Edwards 2012, 67.

¹⁴ See below and cf. Spencer 2014b, 482; Spataro *et al.* 2014.

¹⁵ Geus 2004, 115, fig. 89 (based on the reconstruction by Azim 1975, 94, pl. II).

¹⁶ AcrossBorders' geoarchaeological research was conducted by Erich Draganits in 2014 and by Sayantani Neogi in 2015.

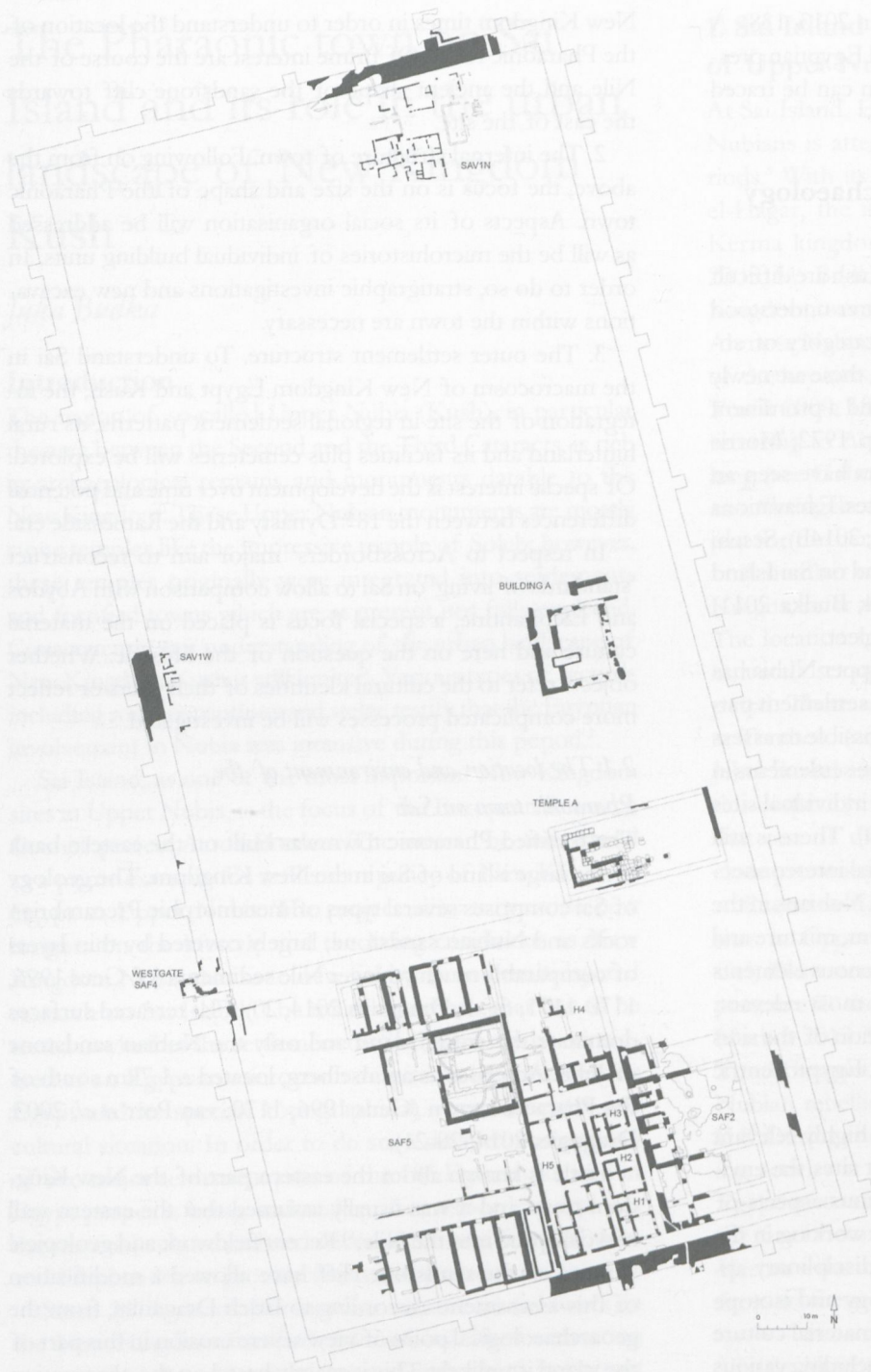


Figure 1. Plan of Sai Island, including results from AcrossBorders' fieldwork. The proposed reconstruction of the eastern town wall is based on the geoarchaeological survey – scale 1:1500 (Ingrid Adenstedt 2014 © AcrossBorders).

In order to ascertain whether there was a harbour or not during the Pharaonic occupation, a thorough coring in transects was undertaken in the riverine alluvial platform adjacent to the town in 2015. This survey did not reveal the presence of any potential harbour. The nature of the soil and the adjacent cliff, however, suggest that there was perhaps a simple landing ground, sheltered by the steep sandstone cliff. Soil block samples have been collected to provide further investigation of this hypothesis.

At present, it seems as if the New Kingdom town of Sai was founded at the perfect place on the island from a strategic perspective. Its location was not chosen because of the potential of adjacent cultivation and agricultural lands, but rather with a view to controlling river traffic and to facilitate the landing and loading of ships.

2.2 The Pharaonic town – inner structure and domestic space

Almost two thirds of the New Kingdom fortified town are still unexcavated and a detailed assessment of the entire town's evolution is, therefore, not possible (Figure 1) (see Budka and Doyen 2012-2013, 181-182). Its southern part with a temple and a residential quarter was investigated by a French Mission in the 1950s and 1970s. The area around Temple A was also excavated in the 1970s. From 2008-2012, fieldwork was conducted by the Sai Island Archaeological Mission of Lille 3 along the northern enclosure wall, at a site named SAV1 North, unearthing remains dating back to the early 18th Dynasty.¹⁷

In the southern part of the town different quarters of one period, the mid-18th Dynasty, were identified: the so-called governor's residence (SAF2) with a large columned hall (15.3 x 16.2m) and mud-brick paving in the east; a central domestic quarter H comprising a cluster of five houses; and a western quarter (SAF5), consisting of several rectangular storage rooms and circular silos (Azim 1975, 98, pl. 4; Doyen 2009, col. pl. 9). Parallels for such a layout can be found at other New Kingdom temple towns, especially at Buhen, Amara West and Sesebi (Kemp 1972, 651-653; cf. also Morris 2005, 195-197). As a common feature domestic space is quite limited, but much room is occupied by storage facilities and magazines.

The small sandstone temple of Sai, Temple A, with a width of c. 10m, finds close parallels on other Egyptian sites in Nubia.¹⁸ Several building phases under the reign of Thutmose III are attested by foundation deposits (Azim and Carlotti 2011, 39, 45) and a building inscription (S. 1) by viceroy Nehy.¹⁹

¹⁷ Doyen 2009; 2014; Budka and Doyen 2012-2013, 168-171.

¹⁸ For a comparison with Kumma and Semna see Azim and Carlotti 2011-2012, 44, pl. xvi.

¹⁹ See Vercoutter 1956, 74-75, doc. 13; Geus 2004, 115; Valbelle 2006, 45; Azim and Carlotti 2011-2012, 46, note 84 and, most recently with

The starting point for AcrossBorders' new fieldwork within the Pharaonic town was the lack of understanding contextual aspects of the site: most importantly, its microhistory – the evolution of specific structures on a very detailed level – is still unclear. The character and density of occupation are open questions as is the general layout and internal structure of the town. Refined dating of archaeological remains commenced in 2011 with the study of the ceramics, but more stratified contexts were needed to closely assess the development of the town (see Budka 2011, 23-33).

SAV1 East

Aiming to achieve a more complete understanding of the layout of the 18th Dynasty occupation at Sai, a new excavation area was opened in 2013 (SAV1 East), 30-50m north of Temple A at the eastern edge of the town (Plate 1). The



Plate 1. Top view of SAV1 East, March 2015
(photo: Martin Fera © AcrossBorders).

new squares are located where the outline of an orthogonal building was visible on the geophysical survey map from 2011.²⁰ The structure is aligned with Temple A and the main north-south road, following the orientation of the buildings in the southern part of the town (SAV1) and suggesting a 18th Dynasty date (Budka 2013, 80-81).

In the northern area of SAV1 East regular outlines filled with sand were revealed just below the surface. These are the negative outlines visible as anomalies on the magnetometer survey map. The Pharaonic building material, once forming the walls, has been removed almost completely, destruction

important new readings, Davies 2014, 7-8.

²⁰ The magnetometer survey was conducted by Sophie Hay and Nicolas Crabb, British School at Rome and the University of Southampton; I would like to thank Didier Devauchelle for permission to use these data.

events that can be dated to Medieval and Ottoman times. Excavations in 2013 and 2014 confirmed the orthogonal outline, alignment and date of a large structure labelled Building A of the mid-18th Dynasty.²¹ Work focused in 2015 on the western side and the south-western corner of this building (Squares 3 and 4) as well as two adjacent southern structures (Square 4 and 4a) (Plate 2).

The upper levels of Squares 3 and 4 are dominated by a destruction layer with mud-brick fragments, charcoal, pottery and worked stones. This layer was up to 400-500mm thick and yielded abundant stone tools, lots of ceramics and other materials. The material is of a mixed character and the latest finds date to the Ottoman Period. However, a large percentage of the ceramics from this destruction layer date to the 18th Dynasty and it, therefore, seems to sit directly on top of the Pharaonic remains.

A total of 13 new features were documented in 2015 in SAV1 East – these comprise sections of walls and pavements of Building A (features 45-49), remains of an earlier occupation (features 50-56) and a dry-stone terracing wall (feature 57). Although the state of preservation is rather poor, a sequence of the walls and floors could be established. The southern wall of Building A was traced as going further to the west. Interestingly, earlier remains were discovered below this part of the mud-brick wall. These early occupation remains, consisting of mud floors and half-brick-thick walls, extend towards the south – they follow the natural slope and are set against the gravel deposit. Thanks to (1) the relationship with the well-dated walls of Building A, (2) the pottery and (3) the comparison with both our excavation in 2013 in the eastern part of SAV1 East and Azim's excavation around Temple A, a dating for this occupation phase to the early 18th Dynasty can be proposed (cf. Budka 2015a, 61-62).

Building A

Building A is built on terraces with the lowest part in the east and much higher levels in the west. The entrance rooms, of which only scarce traces have survived, were situated in the west, giving access from the main north-south street NS 1. The key element of Building A is a large central courtyard (12.4 x 16.2m) flanked by a lateral room or corridor towards the east and north. Although the state of preservation is very fragmentary, the outline of Building A is similar to SAF2, the governor's residence (Budka 2013, 85, fig. 12; 2014, 31).

Ceramics from the foundation trench of one of the walls of Building A allow a dating for the building into the 18th Dynasty, probably not earlier than Thutmose III and with several building phases (Budka 2013, 84). Building A at SAV1 East, therefore, belongs to the major remodelling of Sai during the reign of Thutmose III. It is contemporaneous with Temple A and the structures in the southern part of the town including SAF2.

²¹ See in more detail Budka 2013; 2014; 2015a, 62-63.

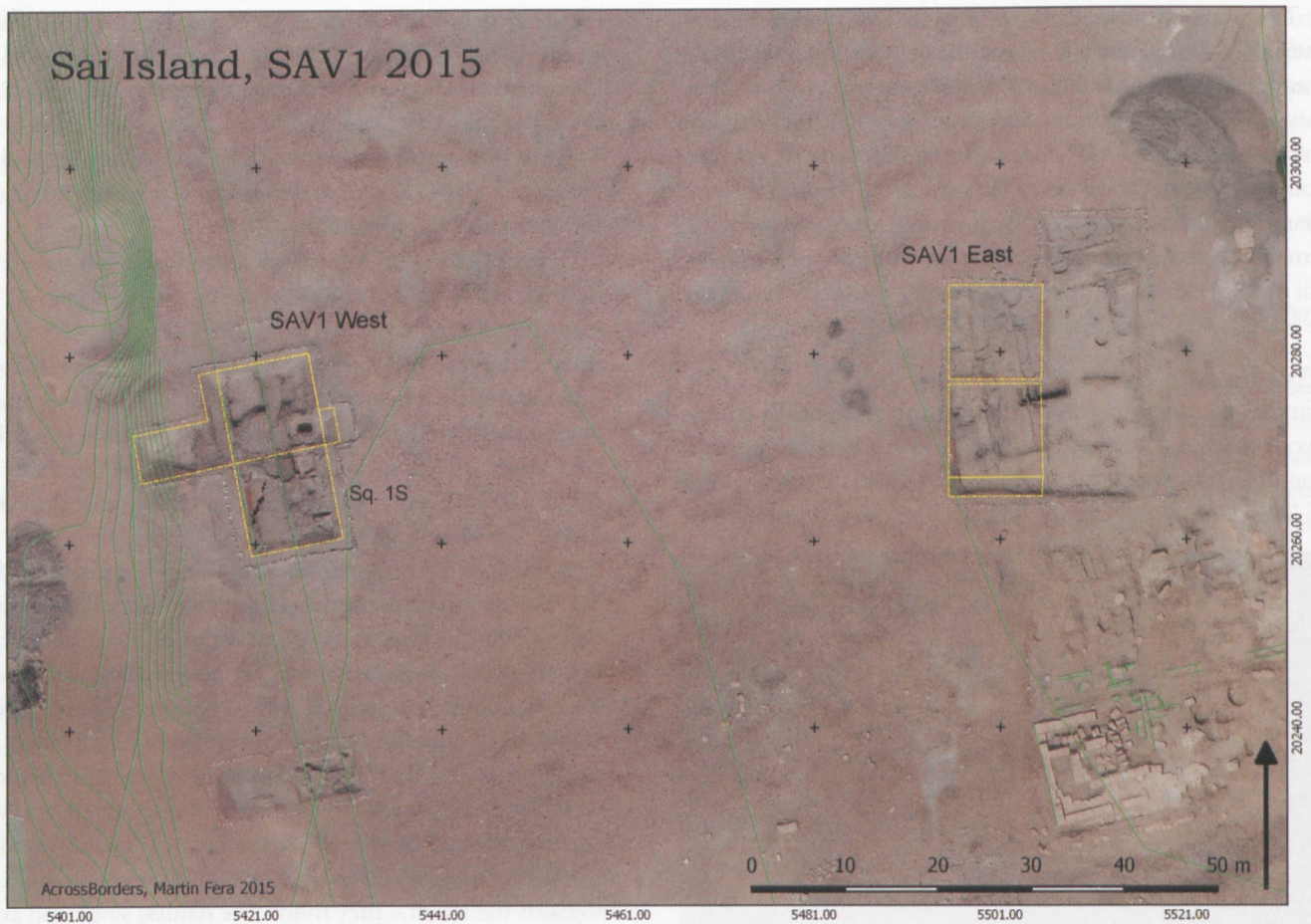


Plate 2. Location of the AcrossBorders excavation trenches. Status 2015 (Map by Martin Fera © AcrossBorders).

Feature 15

The most interesting find in SAV1 East is a subterranean room, feature 15, located in the central courtyard of Building A (Plate 3). Partly excavated in 2013 and 2014, it was completely exposed in 2015 (5.6 x 2.2 x 1.2m). Dug into the natural gravel deposit, feature 15 represents a New Kingdom storage installation of rectangular shape, with a vaulted roof now missing. Its inner part is lined with red bricks and red bricks also form the pavement of the structure (see Budka 2015a, 62). Due to a number of ashy deposits, large amounts



Plate 3. Feature 15 in SAV1 East (photo: Julia Budka © AcrossBorders).

of charcoal, hundreds of dom-palm fruits and abundant animal bones with traces of burning, feature 15 might also have been used as a kitchen and a room for food preparation.²² More than 80 almost intact vessels (with an approximate minimum number of 150 more vessels) were found within it (Plate 4). The main pottery types are plates and dishes, beakers, storage jars, *zir* vessels and pot stands, thus supporting



Plate 4. Pottery vessels set on the pavement of feature 15 (photo: Julia Budka © AcrossBorders).

²² An interpretation as a bakery, proposed on the basis of finds of numerous bread moulds around feature 15 (Budka 2015a, 63), was not supported by the excavation of the inner filling of the structure.

a connection with food serving. The most significant finds, however, in feature 15 was a large set of seal impressions: more than 200 remains of scarab seals on clay sealings were documented. The sealings comprise a large number of royal names (Amenhotep I, Hatshepsut and Thutmose III), a seal of the viceroy Nehy and various floral decorations in a style typical for the Second Intermediate Period.

It is important to stress new evidence for Hatshepsut from SAV1 East: a minimum of 20 clay seals from the lower filling of feature 15 can be attributed to her (Plate 5). Previously, there was no secure testimony of Hatshepsut on the island – a seated statue (Khartoum 443) of a ‘god’s wife’ was interpreted controversially as Ahmose Nefertari, Hatshepsut or Merytamen.²³ Together with the evidence from Dokki Gel/Kerma, the new finds from SAV1 East indicate an Egyptian presence and administrative activities in Nubia immediately after the Kerma revolt under Thutmose II during the era of Hatshepsut.



Plate 5. Example of a clay sealing of Hatshepsut from feature 15 (SAV1E 2322). This type is attested ten times (photo: Kenneth Griffin © AcrossBorders).

Thanks to a stratigraphic sequence, several phases of use can be reconstructed for feature 15 (Table 1). Most importantly, a section of wall 44, the western boundary wall of the courtyard of Building A, is set into feature 15, thus definitely later in date and sitting on top of the lowermost deposit of feature 15. Feature 15 was, therefore, already in place before one of the main walls of the courtyard of Building A, wall 44, was built. Based on the seal impressions and the ceramics, feature 15 was originally set up not later than in the reign of Hatshepsut, remaining in use as subterranean room/magazine until Thutmose III. Changes happened in the later phase of the

Table 1. Building phases of feature 15 in SAV1 East.

Building phase	Description	Date
Phase A	Construction of cellar with red bricks	Early 18 th Dynasty (Ahmose to Thutmose I)
Phase B	Use as storage place/magazine	Hatshepsut, early-mid Thutmose III
Phase C	Integration into Building A (wall 44 inserted)	late Thutmose III/ Amenhotep II
Phase D	Re-filling of feature 15/ abandonment	Amenhotep II to Amenhotep III

reigns of Thutmose III and maybe even that of Amenhotep II: Building A was extended and wall 44 was set into feature 15. A collapse of the section of wall 44 in feature 15 must have happened a bit later, presumably during or shortly after the time of Amenhotep III. Most importantly, these phases of use of feature 15 mirror the building phases of Temple A and its surroundings (cf. Azim and Carlotti 2011–2012, 39–46).

All in all, feature 15 contributes to the understanding of the function of Building A. With the newly discovered large number of seal impressions, presumably used to seal boxes containing diverse material (and/or the door of feature 15 itself?), a domestic character of the large building can be excluded. Building A was rather related to the storage and distribution of products and thus possibly had a close connection with the temple. The early phase of Feature 15 reflects discoveries in the southern part of SAV1 East and around Temple A: prior to the construction of the main structures in this part of the town, Temple A and Building A, the area was used for storage facilities of which feature 15 is so far the only larger structure. This might be directly related to the assumed landing place below the eastern side of the town and is relevant for understanding the nature of the Egyptian presence in Upper Nubia in the first half of the 18th Dynasty (see below).

SAV1 West

Searching for the town enclosure, its date, structure and stratigraphic position, a new site, SAV1 West, was opened in line with the western town gate in 2014 (Plate 2; cf. Budka 2015a, 63–65). Two trenches were laid out, Square 1 (10 x 10m) and Square 2 (5 x 15m). A western (Square 1W, 5 x 10m) and north-western extension (Square 1NW, 2 x 5m) were subsequently added to Square 1 because of the discovery of brickwork at the edge of the trench. In 2015, a new southern extension to Square 1 was opened – Square 1S (10 x 10m). Both the New Kingdom town enclosure and the contemporaneous remains on the inner side of this wall were investigated in SAV1 West (Plate 6).



Plate 6. Top view of SAV1 West, March 2015 (photo: Martin Fera © AcrossBorders).

²³ See Valbelle 2006, 48 with fn. 48; Gabolde 2011–2012, 125–127, fig. 11.



Despite much ancient destruction and disturbance, the complete thickness of the town wall (feature 100) is visible (4.3-4.5m) in Square 1 and Square 1S. The foundation level has been reached in the northern part (Square 1). The alignment of the enclosure wall follows exactly the plan as assumed by previous surveying of French colleagues (see Azim 1975, 94, pl. II, 120-122).

Towards the east of the enclosure wall, thus within the New Kingdom town, large amounts of sandy backfilling of pits and collapsed mud bricks have been removed. Below, remains of several mud-brick buildings were found. In 2015, work focused in Square 1 on the eastern half and *in situ* New Kingdom structures. A total of seven features (features 110-116) were documented (Figure 2). In the south-eastern corner, while cleaning the bottom part of a large sandy pit, a nicely preserved rectangular cellar with a vaulted ceiling was found (feature 115). Several ceramic vessels were found on its base indicating a dating to the mid to maximum late 18th Dynasty.

Feature 111 is the surviving part of a small building along the ‘wall street’ in the northern part of Square 1. It has several building phases, the earliest could be dated to the mid-18th Dynasty. Because of substantial deposits of ash and charcoal,

feature 111 can be interpreted as an oven room.²⁴

The remains of 18th Dynasty structures along the enclosure wall in SAV1 West are very similar to findings in SAV1 North (see Budka and Doyen 2012-2013, 171-177). Both areas within the Pharaonic town are markedly different from SAV1 and SAV1 East – there are no large structures of a possible administrative function and no substantial magazines but rather simple domestic buildings of small dimensions with oven installations, cellars and storage bins.

For the stratigraphy of SAV1 West, it was highly interesting to find stratigraphical units containing mostly early Rameside sherds – these layers were directly on top of the features tentatively assigned to the late 18th Dynasty (especially feature 113). All in all, several floor levels, re-building phases and new sections of walling testify that this area was in use for a considerable time span during the New Kingdom, from Thutmose III until Seti I/Ramesses II.

To conclude, the most significant results from two field seasons in SAV1 West are:

1. The position of the western town wall is now confirmed and its date is Thutmoseid.
2. No evidence for early 18th Dynasty activity at SAV1 West was found – this contrasts with the excavation results from SAV1 North and SAV1 East.
3. The New Kingdom *in situ*-structures within the town show several phases and span from the mid-18th Dynasty to the early 19th Dynasty. In size, building technique and stratigraphic sequence they closely resemble the remains of levels 3 and 2 in SAV1 North.

2.3 The inhabitants of Sai Island

One of the main goals of the project is to improve our understanding of the population on the island and to explore the nature of the coexistence of Egyptians and Nubians. Recent studies of the biological identities of people buried at other Nubian sites, e.g. at Tombos and Amara West, have shown a complex social diversity during the New Kingdom (see Buzon 2008; Binder and Spencer 2014), corresponding to findings based on the assessment of the material culture (cf. Smith 2002; Budka 2015a, 68-69).

The mortuary evidence from Sai is in this respect of prime importance and a detailed comparison between the material found in the New Kingdom town and in the Pharaonic cemeteries on Sai Island holds much potential. Taking into account earlier work and publications (Minault-Gout and Thill 2012), AcrossBorders’ current focus lies on new material unearthed during fresh excavations from mortuary contexts.

SAC5 as a representative cemetery of Pharaonic Sai

In 2015, AcrossBorders resumed work in the large New Kingdom cemetery SAC5. This pyramid cemetery, discovered

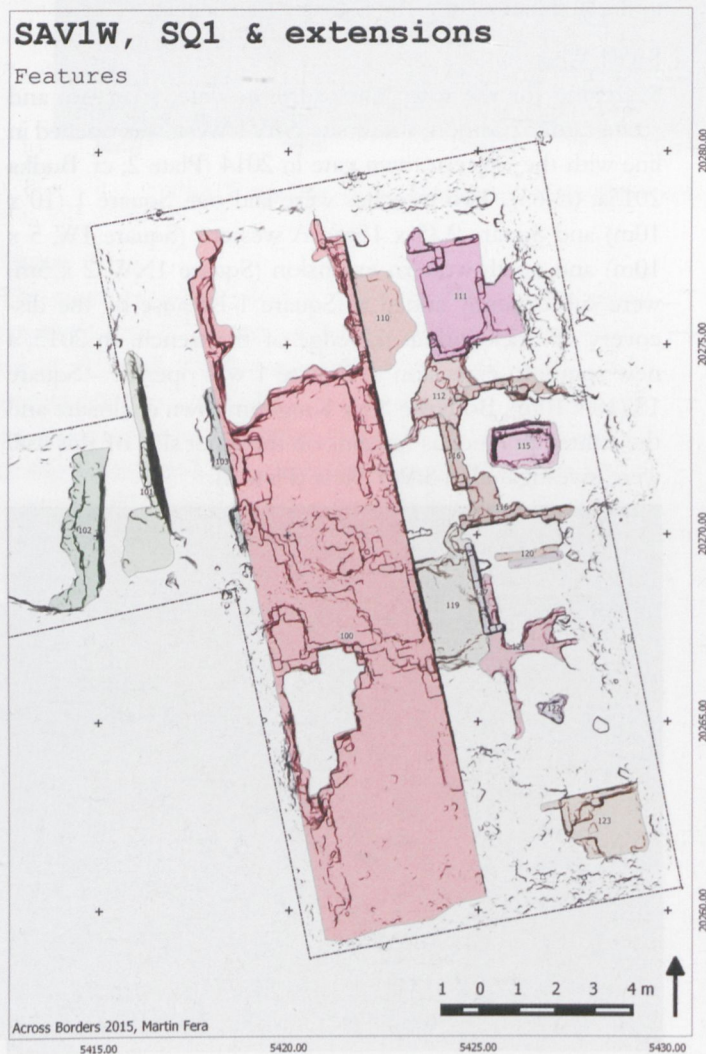


Figure 2. Map of SAV1 West with recorded features – scale 1:200 (Martin Fera 2015 © AcrossBorders).

²⁴ For a definition of an oven room (*‘Ofenraum’*) see von Pilgrim 1996, 209-211.

in the season 1972-73 by the French mission, is probably the most important Egyptian cemetery on the island. It lies approximately 800m south of the Pharaonic town and was partly excavated and recently published as a substantial monograph in two volumes (Minault-Gout and Thill 2012). Similar to other Egyptian sites in Nubia like Aniba, Amara West and Tombos, Pharaonic style tombs had been built at SAC5. This cemetery was in use for a long period of time, covering the New Kingdom as well as the Pre-Napatan and Napatan Periods (cf. Thill 2007). Its rock-cut tombs with mud-brick chapels and mostly pyramidal superstructures find close parallels at Aniba, Soleb and Amara West but also in Egypt, e.g. in the Theban necropolis.

Two excavation areas were opened in 2015 (Figure 3). Area 1 is located in the south and the aim was to check anomalies visible on the geophysical survey map. A complete surface cleaning of this area was conducted and test excavations proved to be interesting. It is now evident that this large sector set between two small outcrops in the southern part of SAC5 was probably completely devoid of tombs. No burial monuments were located, but rather various topographical

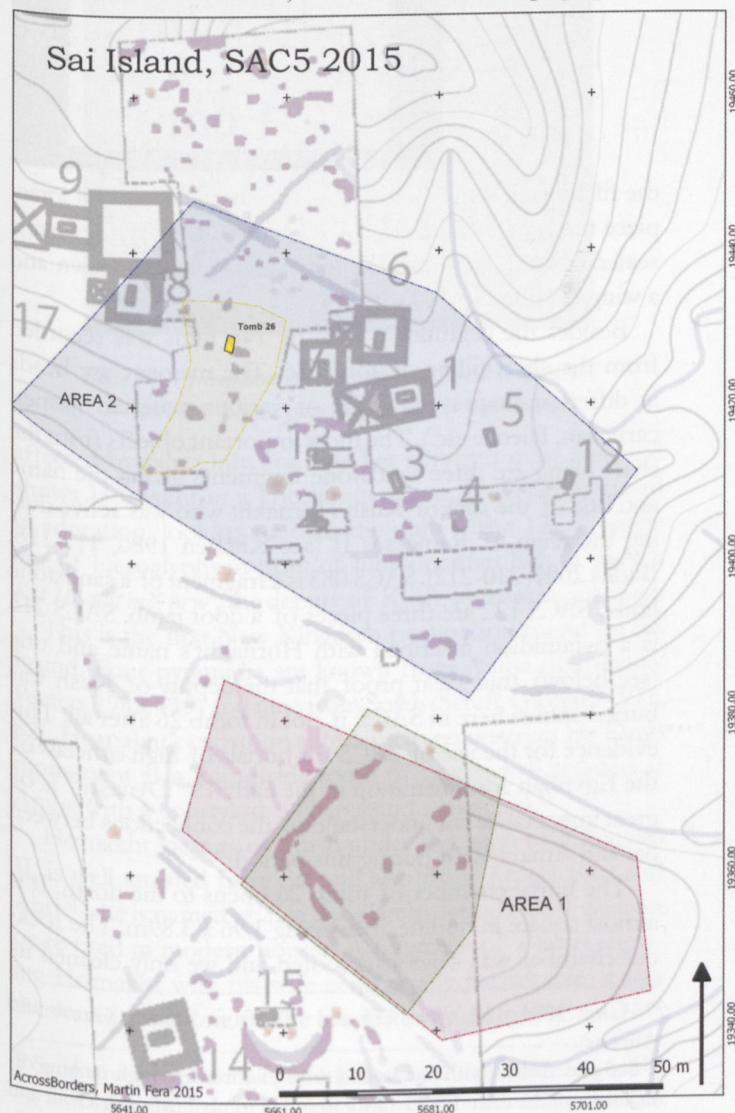


Figure 3. Working areas of SAC5 with location of tomb 26 – scale 1:1000 (Martin Fera 2015 © AcrossBorders).

features which were recorded by the geophysics in 2011. This fresh information will allow some new insights into the evolution and size of the New Kingdom cemetery SAC5.

Area 2 is located north of Area 1, immediately adjacent to various 18th Dynasty monuments; 13 tombs were excavated here by the French mission. The surface material collected in 2015 covers all the periods attested for the use of SAC5 as a burial site: mid to late 18th Dynasty, Ramesside, Pre-Napatan and Napatan. Within a depression dug into the bedrock a new shaft tomb, christened tomb 26, with very scarce remains of a superstructure (possibly a chapel, maybe also a pyramid) was located between tombs 8 and 7 (Figure 3; see Minault-Gout and Thill 2012, vol. 2, pls 6-8). The rectangular shaft is aligned north-south and measures *c.* 2.6 x 1.8m with a depth of more than 5.2m. A set of eight foot-holes was noted on each of the lateral walls towards the south (eastern and western shaft facing).

Removing upper levels of windblown sand and faint traces of several flood levels, a level with a number of stone fragments was reached at a depth of 2.5m, together with many fragments of pottery vessels and a large quantity of bone.

The most dominant feature was a schist slab (1.3 x 0.76 x 0.1m) set against the north-western corner, extending along the west wall of the shaft (Plate 7). Obviously it was one of the original roofing slabs of the shaft during the New Kingdom, but had fallen into the shaft at a later stage. The ceramics from the debris layer suggest as a date for this incident some time after the 25th Dynasty – possibly during the last phase of plundering before the shaft was left open for some time.

The filling material of the shaft just above the base

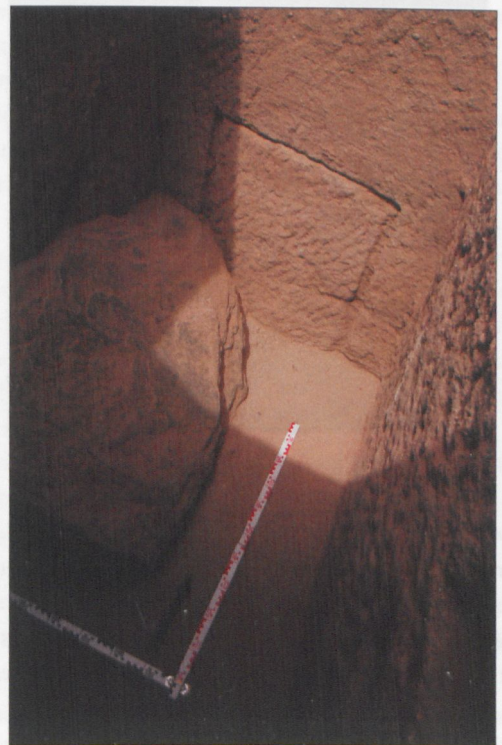


Plate 7. Schist slab in shaft of tomb 26 (photo: Julia Budka. © AcrossBorders).



was highly interesting: a number of complete vessels were found and several worked stones (pieces of architecture). Three complete, decorated Marl clay pilgrim flasks²⁵ were assembled (Plate 8), associated with other pottery vessels (especially storage vessels) and one complete stone vessel (Plate 9). Since these remains were clustered along the eastern wall of the shaft and in the south-eastern corner, the most likely explanation is that remains of a burial were removed from

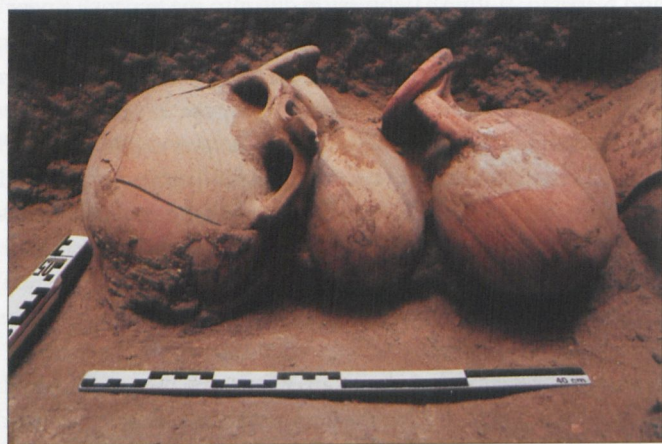


Plate 8: Marl clay pilgrim flasks from the base of the shaft of tomb 26 (photo: Julia Budka © AcrossBorders).



Plate 9. Stone vessel SAC5 212 from tomb 26 (photo: Kenneth Griffin © AcrossBorders).

the chamber and left in the shaft during one of the phases of reuse (or possibly plundering?).

One find from the burial chamber strengthens the assumption that the remains on the shaft bottom were origi-

²⁵ The fabric is a Marl A4 variant. Marl clay pilgrim flasks are common in SAC5, see Minault-Gout and Thill 2012, vol. 1, 354. A close parallel for the ones from tomb 26 is T5 18 from the nearby tomb 5 (Minault-Gout and Thill 2012, vol. 2, 61, pl. 57, 163, pl. 157).

nally deposited in the chamber. A small rim fragment of the almost complete stone vessel SAC5 212 (Plate 9) found on the base of the shaft was discovered in the debris just inside the burial chamber. The vessel can be paralleled at several sites in Egypt²⁶ dating from the late 18th Dynasty to Rameside times. SAC5 212 once belonged to one of the original burials within tomb 26.

Both the inscribed stones discovered in the shaft and the ceramics from the base indicate a Ramesside burial. This is also supported by the scarab SAC5 121 (Plate 10) found in

Plate 10. Scarab SAC5 121 from tomb 26 (photo: Kenneth Griffin © AcrossBorders).



the filling just above the base of the shaft. This small intact piece made of steatite (17 x 8 x 13mm) has on the reverse a seated Maat, a recumbent sphinx with a double-crown and a winged cobra.

Besides the ceramics, a total of 146 finds was recorded from the shaft filling of tomb 26. The majority are beads in different shapes and made of various materials (jasper, carnelian, faience etc.). The most important objects from the shaft filling are three sandstone fragments giving the name and title of the *jdmm* of Kush Hornakht who was active during the reign of Ramesses II (see Kitchen 1980, 117-118; Budka 2001, 210-212). SAC5 083 is a fragment of a sandstone lintel, SAC5 122 are three pieces of a door jamb. SAC5 215 is a pyramidion inscribed with Hornakht's name and title (see below), thus clear proof that the deputy of Kush was buried somewhere in SAC5, if not in tomb 26 after all. This evidence for the use of SAC5 for burials of high officials of the Egyptian administration in the early 19th Dynasty²⁷ is of great importance for understanding the connections between Sai and Amara West during this period.²⁸

The burial chamber of tomb 26 opens to the north. It is almost square in outline, measuring 3.96 x 3.89m. The rock-cut chamber was obviously looted and we only cleaned its

²⁶ Aston 1994, 152, types 178 and 179 (from Riqqeh, Gurob and Abydos).

²⁷ See also shabtis with names and titles of three less high ranking officials from the early 19th Dynasty found in tomb 2 (Minault-Gout and Thill 2012, vol. 1, 414).

²⁸ Cf. Budka 2015a, 67-68 for some remarks on the relations between Sai and Amara West in the early Ramesside period.

uppermost debris before the complete subterranean system of tomb 26 was backfilled for future excavation in 2016. A further assessment of tomb 26, its phases of use and possible owners must, therefore, await the forthcoming season.

Hornakht, deputy of Kush

The surface of the pyramidion SAC5 215 found at the bottom of the shaft of tomb 26 (Plate 11) is unfortunately badly



Plate 11. Pyramidion of Hornakht as found in the shaft of tomb 26 (photo: Julia Budka © AcrossBorders).

affected by salt. Only one side has survived quite well and shows Hornakht in a kneeling position, both hands raised in adoration, looking towards the right (Plate 12). A single line of hieroglyphs in front of him identifies him as *'jndw n K3š Hr-nḥt m3ꜥ ḥrw'*, the deputy of Kush, Hornakht, justified.

This is the first New Kingdom pyramidion found on Sai Island. Four pyramidia are known from Aniba (Rammant-Peeters 1983, 119) and nine from Soleb (Schiff Giorgini 1971, 82). Hornakht's capstone allows us to reconstruct his tomb monument as a Ramesside tomb of a type well attested at Aniba with a courtyard, a chapel and a pyramid.²⁹

Hornakht, deputy of Kush under the reign of Ramesses II, is well attested from Sai and also from Amara East and Abri³⁰ – he is named on five door jambs found out of context or re-used in modern houses. A fragment of a lintel showing Hornakht with his wife is especially remarkable; it was recovered from one of the modern villages on Sai in 2003

²⁹ Superstructure type 3 of Minault-Gout and Thill 2012, vol. 1, 8-9, fig. 2. A good example in SAC5 is tomb 20 (Minault-Gout and Thill 2012, vol. 1, 97-105).

³⁰ Fouquet 1975, 133-137; Kitchen 1980, 117-118; Budka 2001, 210-212; Müller 2013, 454-457.



Plate 12. Detail of pyramidion with representation of Hornakht (photo: Julia Budka © AcrossBorders).

(Geus 2011–2012, 170, fig. 21). These blocks did not allow for a precise reconstruction of the origins of the worked stones: Given the function of Amara West as residence for the *jndw n K3š* from Seti I onwards, a provenience from Amara seemed likely. With the finds from tomb 26 in SAC5, it is now definitely clear that Hornakht was present on Sai – and was buried there in the early 19th Dynasty. The fresh information indicates that the blocks found on Sai (three door jambs – Fouquet 1975, 135-137, doc. 8, 9 and 10; and one lintel – Geus 2011-2012, 170, fig. 21) were not brought from Amara West. Without a proper provenance, the types of door jambs and lintels do not allow for a precise attribution to a domestic or funerary building.³¹ However, based on the discoveries in tomb 26, I would like to propose that one pair of door jambs once belonged to the residence of Hornakht in the town;³² another pair of jambs (naming also his father) plus the lintel showing the official with his wife probably derives from his funerary chapel which functioned as a family monument.

Hornakht's career was quite unusual – as son of the *jndw* Hataia, he probably received some training in Egypt as a royal messenger before himself assuming the title of *jndw n K3š* (Müller 2013, 201). It is likely that Hornakht was born in Nubia and he probably belonged to a native community on Sai. Completely Egyptianized by the early Ramesside period,

³¹ See Budka 2001, 7-10 for difficulties contextualising inscribed door jambs and lintels found out of context.

³² One of the jambs was discovered by Vercoutter in the Ottoman fortress (Fouquet 1975, 136-137, doc. 10), thus close to the 18th Dynasty governor's residence, SAF2.



this family was on top of the local hierarchy and held the most important offices within the Egyptian administration. With more data from his burial in SAC5, we will eventually be able to address the complex situation of the population of New Kingdom Sai with a representative case study.

Another reference to the highest officials of the Egyptian administration of Kush comes from tomb 3 in SAC5. This tomb monument is located a little to the east of tomb 26 and yielded a faience plaque with the name of the viceroy of Kush, Ramsesnakht (20th Dynasty) (Minault-Gout and Thill 2012, vol. 1, 35, T3 Ca87). Scattered evidence like this allows at present only speculation about the importance of Sai at the end of the New Kingdom.

2.4 Daily life in Pharaonic Sai – a preliminary assessment

To investigate aspects of social practice within the community on Sai from a multifaceted perspective, a micromorphological sampling programme was implemented in 2015.³³ Formation processes of various cultural depositional sequences in all areas of excavation were examined and will hopefully give new information of how daily life activities contributed to the creation and use of space in the town.

Pottery, small finds, tools and various types of equipment are currently being analysed in detail and in relation to their associated finds, architecture and past human actions. The functional, economic and social significance of these finds will be assessed as best as possible and the question of Nubian versus Egyptian lifestyle is being discussed.³⁴ Objects of Egyptian type dominate the material assemblage at Sai, reflecting observations made at other Egyptian Nubian towns (see, e.g., Millard 1979; Smith 2003, 101).

The ceramic data from the New Kingdom town is analysed with a focus on the comparison to the pottery corpora from Elephantine and South Abydos (cf. Budka 2011, 26-31). In this pottery analysis, a particular focus is laid on differences and similarities between local products and imported pieces, including the very significant appearance of hybrid types – e.g. Egyptian types made of Nubian fabrics or with Nubian surface treatment (cf. Smith 2002; see also Budka 2015a, 68). Recent works have stressed that ‘hybridization and entanglement have a temporal dimension’ (Spencer 2014a, 57; see also Smith 2014, 3) and a diachronic approach to the Egyptian-Nubian relations on Sai is necessary. For now, the amount of Nubian vessels seems to decrease a little after Thutmose times, possibly reflecting a stronger degree of Egyptianization than in the early 18th Dynasty.

The archaeological interpretation and ceramic typology of AcrossBorders are complemented by petrographic analyses and provenience studies by iNAA (cf. Carrano *et al.* 2009; Spartaro *et al.* 2014). Preliminary results by iNAA, conducted by Johannes Sterba and Giulia d’Ercole, revealed sub-groups for the Nile clay fabrics which correspond to (a) locally made Nubian style vessels, (b) locally made Egyptian style vessels

and (c) imported Egyptian style vessels (cf. Budka 2015a, 69). The latter finds close macroscopic and petrographic parallels at Elephantine. Eventually it might, therefore, be possible to identify the exact production place for the Egyptian imports found on Sai Island.³⁵

Botanical and faunal remains offer rich information regarding the environmental conditions and aspects of diet in New Kingdom Sai. Botanical samples were taken in 2015, the analysis is currently in progress. A small selection of faunal remains has already been studied within the framework of AcrossBorders. The animal bones from area SAV1 North were analysed in 2014 (Saliari and Budka, *forth.*). Animal bones from recent excavations at SAV1 East and SAV1 West will be studied in the near future. Domesticated mammal species dominate the assemblage from SAV1 North and include cattle, sheep/goat, as well as pig. They might show a diachronic development within the levels datable to the 18th Dynasty. It seems that the number of cattle remains increased during Thutmose times, possibly reflecting changes in the character of the site and its new important administrative function. The presence of pigs in the earliest level 5 at SAV1 North, the foundation phase of Pharaonic Sai in the reign of Ahmose Nebpehtyra or Amenhotep I (cf. Budka 2011; 2015a, 62), indicates an import of these animals into Nubia from Egypt. In New Kingdom Egypt, pigs are the most numerous species killed for meat (cf. Ikram 1995, 29-33), whereas they are almost non-existent in the Nubian cultures and the Kerma kingdom. The import of live animals in the early 18th Dynasty seems to correspond to the contemporaneous import of Egyptian cooking pots, storage vessels, dishes and jars.

2.5 Summary of AcrossBorders’ research on Sai

To conclude, AcrossBorders’ field seasons resulted in very important new insights, fresh sampling strategies and diverse observations about the landscape and the harbour situation. Most importantly, excavations in the town and cemetery added information about the evolution of Sai Island in Pharaonic times and especially its development from the early 18th Dynasty to the Ramesside era. Burials from this period associated with the town are primarily located in the pyramid cemetery SAC5.

The four most important results are as follows:

The features unearthed in the southern part of SAV1 East pre-date Building A and probably belong to the early 18th Dynasty. These southern remains mirror the discoveries in 2013 and are the northern extensions of the area excavated by Michel Azim around Temple A, but cannot be dated to the Kerma period. They are comparable in character and in date to levels 5 and 4 in SAV1 North (Budka and Doyen 2012-2013, 171-175).

Building A at SAV1 East provides a close parallel to the so-called residence SAF2 in the southern part of the Pharaonic town, probably also in regard to its function. For the first time, large groups of seal impressions were discovered, allowing the

³³ Sampling in the field was carried out by Miranda Sempé.

³⁴ Cf. Smith 2002. See already Budka 2015a, 68-69.

³⁵ Cf. already Budka 2011, 31.

reconstruction of patterns of the Egyptian administration in Upper Nubia. The recent finds illustrate the importance of Sai as an administrative centre during the time of Hatshepsut and Thutmose III. For the understanding of the internal structure of the town, it is important that the remains at SAV1 East allow a reconstruction of the orthogonal layout known from the southern part of the town as extending further towards the north, beyond Temple A.

The earliest phase of occupation within the town enclosure at SAV1 West is contemporaneous with the building of the town wall and dates to the mid-18th Dynasty. There is clear negative evidence for an early 18th Dynasty presence in this area of the site. The stratigraphy of this sector is, therefore, markedly different from SAV1 East and SAV1 North. This indicates an enlargement of the site towards the west in Thutmoside times.

Tomb 26 illustrates that more New Kingdom tombs remain to be excavated in the southern part of cemetery SAC5. The finds in tomb 26 testify to elite burials during the 19th Dynasty. This is of great importance for understanding the relationship between Sai and Amara West in this era and might be of historical significance for Upper Nubia in general.

3. Sai Island in its macrocosm, New Kingdom Kush

The new information from Sai seems to be highly relevant for understanding distinct phases of the Egyptian occupation in Upper Nubia. Evidence from Sai suggests that the Egyptian sites were largely depending on Egypt in the early 18th Dynasty – the region was centrally administered and supplies were brought from Egypt (cf. the evidence from the ceramics and the animal bones mentioned above). Only during the reigns of Hatshepsut and Thutmose III is there increasing evidence for a more independent state of the temple towns in Nubia, nicely reflected by the new system of administration with the *jdwn n K3š*.

Sai Island was the administrative center of Upper Nubia (Kush) during the Thutmoside Period and the predecessor of Soleb and Amara West.³⁶ Founded in a strategic position on the east bank of the island, the New Kingdom town functioned from the beginning as a control point and landing place for ships. Besides the importance of seizing Sai which was the northern stronghold of the Kerma state empire, the Egyptians seem to have preferred the site also because of the natural resources of the area. Egypt's strong interest in gold and sandstone is well known and both materials are available in the region of Sai. Nubian gold was among the main Egyptian economic interests during a long time span (cf. Müller 2013, 74-79; see also Klemm and Klemm 2013, 569-570.).

Reconstructing life on Pharaonic Sai has made considerable progress in the last few years and there is new informa-

tion for the complex evolution of the Pharaonic town thanks to our application of diverse methods and extended fieldwork in both the town and the cemetery. The following three main phases are proposed for the development of the town:

Phase A. In the early 18th Dynasty, Sai was probably not much more than a simple landing place, a bridgehead and supply base for the Egyptians during the reigns of Ahmose, Amenhotep I and Thutmose I. This is supported by new archaeological evidence from SAV1 East and around Temple A. Scattered proof of Egyptian presence comes from the reign of Hatshepsut. The size and internal structure of the town at this early stage remains unclear – there is no sign of an enclosure wall.

Phase B. The walled settlement was established during the time of Thutmose III and became an important administrative centre with an Amun-Re temple, a governor's residence and an administrative building (Building A). The dating of the foundation of the town wall is now confirmed thanks to recent work in SAV1 West. The enlargement of the site goes hand in hand with an increasing complexity with varied lifestyles amongst the inhabitants, suggesting a complex social stratification. Sai Island was now the administrative headquarter of Upper Nubia and continued to flourish until the reign of Amenhotep III.

Phase C. New finds from both the town site and cemetery SAC5 stress the importance of Sai during the 19th Dynasty. The island was still used by high officials including the *jdwn n K3š* as burial place. These new data add to our knowledge of events in early Ramesside times in Upper Nubia and illustrate that our present understanding is far from complete.

These phases based on the archaeological and textual evidence from Sai Island are of relevance in a broader context and will also allow a better understanding of the relations of Upper Nubia with Egypt. The AcrossBorders project is ongoing and will hopefully provide more data for reconstructing additional aspects of the urban landscape of Kush in the near future.

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³⁶ See Minault-Gout and Thill 2012, vol. 1, 415, fn. 27; Budka 2013; 2014, 36; 2015a, 57; 2015b, 74-81.



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Bibliography

- Aston, B. G. 1994. *Ancient Egyptian stone vessels: materials and forms*. SAGA 5. Heidelberg.
- Azim, M. 1975. 'Quatre campagnes de fouilles sur la Forteresse de Saï, 1970-1973. 1^{ère} partie: l'installation pharaonique', *Cahiers de Recherches de l'Institut de Papyrologie et d'Égyptologie de Lille* 3, 91-125.
- Azim, M. and J.-F. Carloti 2011-2012. 'Le temple à de l'île de Saï et ses abords', *Cahiers de Recherches de l'Institut de Papyrologie et d'Égyptologie de Lille* 29, 11-63.
- Binder, M. and N. Spencer 2014. 'The Bioarchaeology of Amara West in Nubia: Investigating the Impacts of Political, Cultural and Environmental Change on Health and Diet', in A. Fletcher, D. Antoine and J. D. Hill (eds), *Regarding the Dead: Human Remains in the British Museum*, British Museum Research Publication 197. London, 123-136.
- Bonnet, C. 2012. 'Les grands monuments égyptiens et nubiens du début de la XVIII^e dynastie sur le site de Doukki Gel (Kerma)', *Bulletin de l'Institut français d'archéologie Orientale* 112, 57-75.
- Budka, J. 2001. *Der König an der Haustür. Die Rolle des ägyptischen Herrschers an dekorierten Türwänden von Beamten im Neuen Reich*. Beiträge zur Ägyptologie 19. Vienna.
- Budka, J. 2005. 'The Third Cataract – its historical and political importance according to royal and private graffiti at Tombos', in A. Amenta, M. M. Luiselli and M. N. Sordi (eds), *L'Acqua nell'antico Egitto. Vita, rigenerazione, incantesimo, medicamento*. Rome, 107-115.
- Budka, J. 2011. 'The early New Kingdom at Sai Island: Preliminary results based on the pottery analysis (4th Season 2010)', *Sudan & Nubia* 15, 23-33.
- Budka, J. 2013. 'Die 18. Dynastie auf Sai Island (Nordsudan) – neue Puzzesteine als Ergebnisse der Feldkampagne 2013', *Sokar* 26, 78-87.
- Budka, J. 2014. 'Neues zur Tempelstadt der 18. Dynastie auf Sai Island (Nordsudan) – Ergebnisse der Feldkampagne 2014', *Sokar* 28, 28-37.
- Budka, J. 2015a. 'The New Kingdom in Nubia: New results from current excavations on Sai Island', *Egitto e Vicino Oriente* 37 [2014], 55-87.
- Budka, J. 2015b. 'The Egyptian "Re-conquest of Nubia" in the New Kingdom – Some Thoughts on the Legitimization of Pharaonic Power in the South', in F. Coppens, J. Janák and H. Vymazalová (eds), *Royal versus Divine Authority. Acquisition, Legitimization and Renewal of Power, 7th Symposium on Egyptian Royal Ideology, Prague, June 26-28, 2013*, Königstum, Staat und Gesellschaft früher Hochkulturen 4,4, Wiesbaden, 63-82.
- Budka, J. and F. Doyen 2012-2013. 'Living in New Kingdom towns in Upper Nubia – New evidence from recent excavations on Sai Island', *Egypt & the Levant* 22/23, 167-208.
- Buzon, M. R. 2008. 'A bioarchaeological perspective on Egyptian colonialism in the New Kingdom', *Journal of Egyptian Archaeology* 94, 165-182.
- Carrano, J., J. F. Ferguson, G. H. Girty and S. T. Smith 2008. 'A Chemical Analysis of Ancient Nubian- and Egyptian-Style Ceramics: Evaluating the Substance of Style', *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 64, 35-61.
- Davies, W. V. 1998. 'New fieldwork at Kurgus. The Pharaonic inscriptions', *Sudan & Nubia* 2, 26-30.
- Davies, W. V. 2001. 'Kurgus 2000: The Egyptian Inscriptions', *Sudan & Nubia* 5, 46-50.
- Davies, W. V. 2005. 'Egypt and Nubia. Conflict with the Kingdom of Kush', in C. H. Roehrig (ed.), *Hatshepsut: From Queen to Pharaoh*. New York, 49-56.
- Davies, W. V. 2014. 'From Halfa to Kareima: F. W. Green in Sudan', *Sudan & Nubia* 18, 2-19.
- Devauchelle, D. and F. Doyen 2009. 'Retour à l'Île de Saï (Soudan, 2006-2009)', *Bulletin de la Société française d'Égyptologie* 175, 29-49.
- Doyen, F. 2009. 'The New Kingdom Town on Sai Island (Northern Sudan)', *Sudan & Nubia* 13, 2009, 17-20.
- Doyen, F. 2014. 'Sai Island New Kingdom Town (Northern Sudan): 3rd and 4th Seasons (2009-2010)', in J. R. Anderson and D. A. Welsby (eds), *The Fourth Cataract and Beyond. Proceedings of the 12th International Conference for Nubian Studies*. British Museum Publications on Egypt and Sudan 1. Leuven – Paris – Walpole, MA, 367-375.
- Draganits, E. 2014. 'Geoarchaeological investigations on Sai Island, in J. Budka, R. Kalasek, I. Adenstedt, G. d'Ercole, K. Saliari and E. Draganits, *AcrossBorders – Fieldwork 2014 on Sai Island*, 20-22 <http://acrossborders.oaew.ac.at/wp-content/uploads/2014/03/AcrossBorders-Fieldwork-Report-2014.pdf>.
- Edwards, D. N. 2012. 'The Third-Second Millennia BC Kerma and New Kingdom Settlement', in A. Osman and D. N. Edwards (eds), *Archaeology of a Nubian frontier. Survey on the Nile Third Cataract, Sudan*. Leicester, 59-87.
- Fisher, M. M. 2012. 'The History of Nubia', in M. M. Fisher, P. Lacovara, S. Ikram and S. D'Auria (eds), *Ancient Nubia. African Kingdoms on the Nile*. Cairo, 10-44.
- Fouquet, A. 1975. 'Deux hauts fonctionnaires des Nouvel Empire en Haute-Nubie', *Cahiers de Recherches de l'Institut de Papyrologie et d'Égyptologie de Lille* 3, 127-140.
- Gabolde, L. 2011-2012. 'Réexamen des jalons de la présence de la XVIII^e dynastie naissante à Saï', *Cahiers de Recherches de l'Institut de Papyrologie et d'Égyptologie de Lille* 29, 115-137.
- Geus, F. 1996. 'Les nouvelles fouilles de l'île de Saï', *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres* 140, N. 4, 1165-1195.
- Geus, F. 2004. 'Saï', in D. A. Welsby and J. R. Anderson (eds), *Sudan Ancient Treasures. An Exhibition of Recent Discoveries from the Sudan National Museum*. London, 114-116.
- Geus, F. 2011-2012. 'Saï 2003-2004', *Cahiers de Recherches de l'Institut de Papyrologie et d'Égyptologie de Lille* 29, 151-172.
- Gratien, B. 1986. *Saï I. La nécropole Kerma*. Paris.
- Graves, C. 2011. *Egyptian imperialism in Nubia c. 2009 - 1191 BC*. MPhil thesis, University of Birmingham.
- Ikram, S. 1995. *Choice cuts: Meat production in Ancient Egypt*. Orientalia Lovaniensia Analecta 69. Leuven.
- Jankuhn, H. 1977. *Einführung in die Siedlungsarchäologie*. Berlin, New York.
- Kemp, B. J. 1972. 'Fortified towns in Nubia', in P. J. Ucko, R. Tringham and G. W. Dimbleby (eds), *Man, Settlement and Urbanism*. London, 651-656.
- Kitchen, K.A. 1980. *Ramesseid Inscriptions. Historical and Biographical*. Vol. III. Oxford.
- Klemm, R. and D. Klemm 2013. *Gold and Gold Mining in Ancient Egypt and Nubia. Geoarchaeology of the Ancient Gold Mining sites in the Egyptian and Sudanese Eastern Deserts*. Heidelberg; New York; Dordrecht; London.
- Millard, A. 1979. 'Part III. The finds', in W. B. Emery, H. S. Smith and A. Millard, *The Fortress of Buben. The Archaeological Report*. Egypt Exploration Fund, Excavation Memoir 49. London, 109-188.
- Minault-Gout, A. and F. Thill 2012. *Saï II. Le cimetière des tombes hypogées du Nouvel Empire (SAC5)*. Fouilles de l'Institut français d'archéologie orientale du Caire 69. Cairo.
- Morkot, R. 2013. 'From conquered to conqueror: the organization of Nubia in the New Kingdom and the Kushite administration of Egypt', in J. C. Moreno García (ed.), *The Administration of Egypt*. Handbuch der Orientalistik 104. Leiden, 911-963.
- Morris, E. F. 2005. *The Architecture of Imperialism. Military bases and the*

- evolution of foreign policy in Egypt's New Kingdom. *Probleme der Ägyptologie* 22. Leiden – Boston.
- Müller, I. 2013. *Die Verwaltung Nubiens im Neuen Reich*. Meroitica 18. Wiesbaden.
- van Peer, P., R. Fullagar, S. Stokes, R. M. Bailey, J. Moeyersons, F. Steenhoudt, A. Geerts, T. Vanderbeken, M. De Dapper and F. Geus 2003. 'The Early to Middle Stone Age Transition and the Emergence of Modern Human Behaviour at site 8-B-11, Sai Island, Sudan', *Journal of Human Evolution* 45, 187-193.
- van Pelt, W. P. 2013. 'Revising Egypto-Nubian relations in New Kingdom Lower Nubia: From Egyptianization to cultural entanglement', *Cambridge Archaeological Journal* 23, 523-550.
- von Pilgrim, C. 1996. *Elephantine XV/III. Untersuchungen in der Stadt des Mittleren Reiches und der Zweiten Zwischenzeit*. Archäologische Veröffentlichungen 92. Mainz.
- Rammant-Peeters, A. 1983. *Les pyramidions égyptiens du Nouvel Empire*. Orientalia Lovaniensia Analecta 11. Leuven.
- Saliari, K. and J. Budka forth. 'Faunal remains from the New Kingdom town of Sai Island (Northern Sudan): preliminary report and future perspectives', *British Museum Studies in Ancient Egypt and Sudan*.
- Schiff Giorgini, M. 1971. *Soleb II. Les nécropoles*. Firenze.
- Smith, S. T. 1995. *Askut in Nubia. The Economics and Ideology of Egyptian Imperialism in the Second Millennium B.C.* London and New York.
- Smith, S. T. 2002. 'Pots and politics: Ceramics from Askut and Egyptian colonialism during the Middle through New Kingdoms', in C. A. Redmount and C. A. Keller (eds), *Egyptian Pottery, Proceedings of the 1990 Pottery Symposium at the University of California*. University of California Publications in Egyptian Archaeology 8. Berkeley, 43-79.
- Smith, S. T. 2003. *Wretched Kush. Ethnic Identities and Boundaries in Egypt's Nubian Empire*. London; New York.
- Smith, S. T. 2014. 'Editorial essay: Nubia, coming out of the shadow of Egypt', *Journal of Ancient Egyptian Interconnections* 6:1, 1-4.
- Smith, S. T. and M. Buzon 2014. 'Colonial entanglements: "Egyptianization" in Egypt's Nubian Empire and the Nubian Dynasty', in J. R. Anderson and D. A. Welsby (eds), *The Fourth Cataract and Beyond. Proceedings of the 12th International Conference for Nubian Studies*. British Museum Publications on Egypt and Sudan 1. Leuven – Paris – Walpole, MA, 431-442.
- Spataro, M., M. Millet and N. Spencer 2014. 'The New Kingdom Settlement of Amara West (Nubia, Sudan): mineralogical and chemical investigation of the ceramics', *Archaeological and Anthropological Sciences*, DOI 10.1007/s12520-014-0199-y.
- Spence, K. and P. J. Rose 2009. 'Fieldwork at Sesebi, 2009', *Sudan & Nubia* 13, 38-46.
- Spence, K., P. J. Rose, R. Bradshaw, P. Collet, A. Hassan, J. MacGinnis, A. Masson and W. P. van Pelt 2011. 'Sesebi 2011', *Sudan & Nubia* 15, 34-39.
- Spencer, N. 2010. 'Nubian Architecture in an Egyptian town?', *Sudan & Nubia* 14, 15-24.
- Spencer, N. 2014a. 'Creating and re-shaping Egypt in Kush: Responses at Amara West', *Journal of Ancient Egyptian Interconnections* 6:1, 42-61.
- Spencer, N. 2014b. 'Amara West: House and Neighbourhood in Egyptian Nubia', in M. Müller (ed.), *Household studies in complex societies: (micro) archaeological and textual approaches*. Oriental Institute Seminars 10. Chicago, 169-209.
- Spencer, N., M. Macklin and J. Woodward 2012. 'Re-assessing the Abandonment of Amara West: The Impact of a Changing Nile?', *Sudan & Nubia* 16, 37-47.
- Thill, F. 2007. 'Les réoccupations « (pré)napatéenes » dans le cimetière égyptien 8B5/SAC5 de Saï', in B. Gratien (ed.), *Mélanges offerts à Francis Geus, Cahiers de Recherches de l'Institut de Papyrologie et d'Égyptologie de Lille* 26, 353-369.
- Török, L. 2009. *Between Two Worlds: The Frontier Region between Ancient Nubia and Egypt 3700 BC - 500 AD*. Probleme der Ägyptologie 29. Leiden.
- Valbelle, D. 2006. 'Hatchepsut en Nubie', *Bulletin de la Société française d'Égyptologie* 167, 33-50.
- Valbelle, D. 2012. 'Comment les Égyptiens du début de la XVIII^e dynastie désignaient les Kouchites et leurs alliés', *Bulletin de l'Institut français d'archéologie Orientale* 112, 447-464.
- Valbelle, D. 2014. 'International relations between Kerma and Egypt', in J. R. Anderson and D. A. Welsby (eds), *The Fourth Cataract and Beyond. Proceedings of the 12th International Conference for Nubian Studies*. British Museum Publications on Egypt and Sudan 1. Leuven – Paris – Walpole, MA, 103-109.
- Vercoutter, J. 1956. 'New Egyptian Texts from the Sudan', *Kush* 4, 66-82.
- Vercoutter, J. 1973. 'La XVIII^e dynastie à Saï et en Haute-Nubie', *Cahiers de Recherches de l'Institut de Papyrologie et d'Égyptologie de Lille* 1, 7-38.
- Zibelius-Chen, K. 2013. 'Nubien wird ägyptische Kolonie', in S. Wenig and K. Zibelius-Chen (eds), *Die Kulturen Nubiens – ein afrikanisches Vermächtnis*. Dettelbach, 135-155.