

# MEROITIC BEADWORK: AN OVERVIEW BASED ON FINDS FROM SAI IN ANCIENT NUBIA

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**Abstract:** The paper provides a preliminary overview of beads and pendants found on Sai Island at two Meroitic cemeteries, 8-B-5.A and 8-B-52.B. In the Meroitic period, strings of beads and pendants were an easily discerned motif in royal and private iconography, as well as in the arts and crafts, pottery included. The Sai bead and pendant assemblage is characterized by a variety of materials, techniques, and shapes that contribute significantly to a comparative study of Meroitic bead collections. Alongside objects already identified at other sites, richly imbued with visible Egyptian and Greek influences, the Sai assemblage contributes some new bead types. Moreover, the originally strung objects and their fragments confirm known bead patterns used over a long time between the 1st and 4th centuries AD, the date of the Sai necropolises. Finally, a comparison with other sites enables the tracing of some regional differences in Meroitic beadwork.

**Keywords:** Nubia, beadwork, Sai, Meroitic

Rich bead and pendant adornments are one of the most characteristic features of ancient Nubian cultures, and the Meroitic is no exception. They were found associated with the royal, ritual and private spheres. The stela of Nastasen (335–315 BC), the last king buried at Napata, in the necropolis at Nuri (Nu 15), shows the king offering a necklace and pectoral to the Theban Amon and to the Napatan Amun (Wildung 1997: Pl. 265). Later on, a similar scene from the stela of the Meroitic King Amenakhabale (first half of 1st century AD) presents him offering a three-strand necklace to Amun and Mut (Baud 2010: Pl. 223).

A cord necklace with three ram's head pendant amulets and a long string of large beads with a central amulet can be observed on a king's statue found on the island of Argo (e.g., Wildung 1997: Cat. 270, about 200 BC). A broad collar of beads, pendants and amulets lies in many rows over the shoulders and breasts of queens and kings, as depicted on reliefs from the Lion Temple at Naga (Wildung 1997: 326, Fig. 44). Along with a string of large globular beads, a collar like this belongs to the most characteristic royal and divine adornments of the Meroitic period. The royal reliefs from the 1st century AD in Naga, Meroe, and Musawwarat es-Sufra

are characterized by long strings of large globular beads and a central amulet (e.g., Török 2011: Pls 81, 82, 87, 155, 156, 159). The same motif is repeated on the neck of a god in the gold jewelry found in the Tomb of Queen Amishakheto. Above an enameled shield (*aegis*) in the form of a broad collar, a god's head is portrayed wearing an amuletic gold necklace of large granules (Priebe 1992: Figs 39c, 47; Andrews 1991: 168–169, 199). A similar necklace appears on the necks of Mut (Priebe 1992: Fig. 34; Wildung 1997: Pl. 333) and Sebiemeker (Priebe 1992: Fig. 41; Wildung 1997: Pl. 334), and Apademak (Wenig 1978: Fig. 74, Cat. 164; Priebe 1992: Fig. 9; Wildung 1997: Pl. 335). Representations of similar necklaces are shown hanging beneath the heads of *criocephalus* gods and goddesses (Priebe 1992: Figs 9, 29, 30, 32; Wildung 1997: Pls 328, 329, 331 and 332). Elaborate necklaces are depicted on the funerary Ba-statue of a prince or a viceroy as found at Karanog (Woolley and Randall-MacIver 1910: Pl. 1; Török 1997: 492). A bronze bust found in el-Hassa, ascribed to a Meroitic queen and dated to the end of the 1st century AD, depicts a short necklace of large beads (Baud 2010: Pl. 308). A string of elongated beads is easily discernible on the queen's neck in a scene that decorates a bronze bowl from Karanog grave 187 (Woolley and Randall-MacIver 1910: Pl. 27).

While strings of large globular beads with a central amulet belong to the royal and divine sphere, a broad collar of small beads, pendants and amulets is said to have been worn also by non-royals (Wildung 1997: Cat. 365). Two broad collars were reconstructed from individual elements found with the treasure of Amanishakheto

(Wildung 1997: Cat. 365, 366). Still, the elements find easy parallels with bead and pendant types from Meroitic non-royal burials. Simple strings of beads, pendants and amulets were an important part of the private sphere in Nubia. Meroitic funerary stelae depicted men, women and children wearing rich bead adornments (Woolley and Randall-MacIver 1910: Pls 11–13; Spaer 2001). On one such stela, the necks and arms of a girl are decorated with bead necklaces, bracelets and a possible circlet (Woolley and Randall-MacIver 1910: Pl. 13:7079. G.146). A clay figure of a doll from Karanog is adorned with a painting of a large red, green and black bead necklace (Woolley and Randall-MacIver 1910: 245, Pl. 109: 7466. G.286). Last but not least, the motif of a string of beads, pendants and amulets is found painted around the necks and on the shoulders of Meroitic clay vessels (Williams 1991/I: 37, 40; Török 2011: 248). The association between pottery decoration and beadwork design, whether painted or real, can be traced back to Middle Nubian culture and it was continued into the post-Meroitic period (Then-Obluska 2014; 2016).

One of the most splendid examples of Meroitic personal adornment, apart from the artifacts from royal tombs at Meroe, was found on Sai Island (Vercoutter 1979: 225–229). Among other things, a spectacular item in the form of a bracelet with silver plaques depicting the head of the God Amun (*criocephalus*) was unearthed at the 8-B-5.SN/SAS 2 cemetery (Vercoutter 1979: Fig. 11a). A similar bracelet but made of gold is known from the Tomb of Aryesbokhe in Meroe (second half of 2nd century AD) (Dunham 1957: Pl. LXI, N; Baud 2010: Pl. 186; Boston, Museum of Fine Arts, Inv. No. 24.534). This parallel

suggests the elite character of the 8-B-5. SN/SAS2 necropolis. Other Meroitic cemeteries on Saï Island, 8-B-5.A and 8-B-52.B, are situated just a few meters away from 8-B-5. SN/SAS2.

Between 1996 and 2010, more than 3400 beads were unearthed at the sites 8-B-5.A and 8-B-52.B. It is this particular beadwork collection which is described in this paper.<sup>1</sup> From 1993 to 2005 the excavations of the Université de Lille 3 and the Section Française de La Direction des Antiquités du Soudan (SFDAS) at 8-B-5.A and 8-B-52.B were operated under the direction of Francis Geus (1995; 1998; 2002; 2006), later passing to Didier Devauchelle (e.g., Doyen and

Devauchelle 2012), and currently Vincent Francigny (e.g., 2009; 2010; 2014). Cemetery 8-B-5.A with graves of the most influential people, the Saï elite, was established around the 1st century AD. Its use terminated at an estimated beginning of the 4th century AD. Dates for Meroitic Saï have already been verified through ceramic studies (David 2010).

Most of the presented bead material was found scattered in heavily plundered graves. A broad variety of bead, pendant and amulet types was registered, including some objects or their fragments still strung in the original order of individual beads and pendants. This has given insight into actual Meroitic beadwork patterns.

## BEAD AND PENDANT TYPOLOGY

The present analysis pertains to the bead material found in graves with burials of children and adults, and on the ground surface in cemeteries 8-B-5.A (I) and 8-B-52.B (II). The selection of materials used to produce beads includes organic materials (e.g., mollusk shells, ostrich eggshells), minerals (e.g., carnelian, quartz, agate), metals (e.g., gold foil, silver) and vitreous materials (e.g., faience, glass).

### MOLLUSK SHELL

A small river mollusk shell [Fig. 1:1] seems to have an accidental perforation and it was rather not intended to be strung. Nevertheless, thousands of Nile mollusk shells have been recorded from Meroitic burial context at Sedeinga (Then-Obłuska 2015a).

Gastropoda *Nassarius gibbosulus* is the only pierced marine mollusk shell recorded. It is a species of Mediterranean provenance and it has a perforation hole cut into the body whorl [Fig. 1:2].

### OSTRICH EGGSHELL

Ostrich eggshell beads constitute about 18% of the Saï bead assemblage. Cream-colored ostrich eggshell beads have a typical, slightly pitted surface easily attributed to worked pieces [Fig. 1:3]. They bear traces of drilling tools and may be proof of the production of ostrich eggshell beads at the site. They were usually cut and burnished in the form of disks or short cylinders of various sizes, the shape determined by the nature of the eggshell fragments.

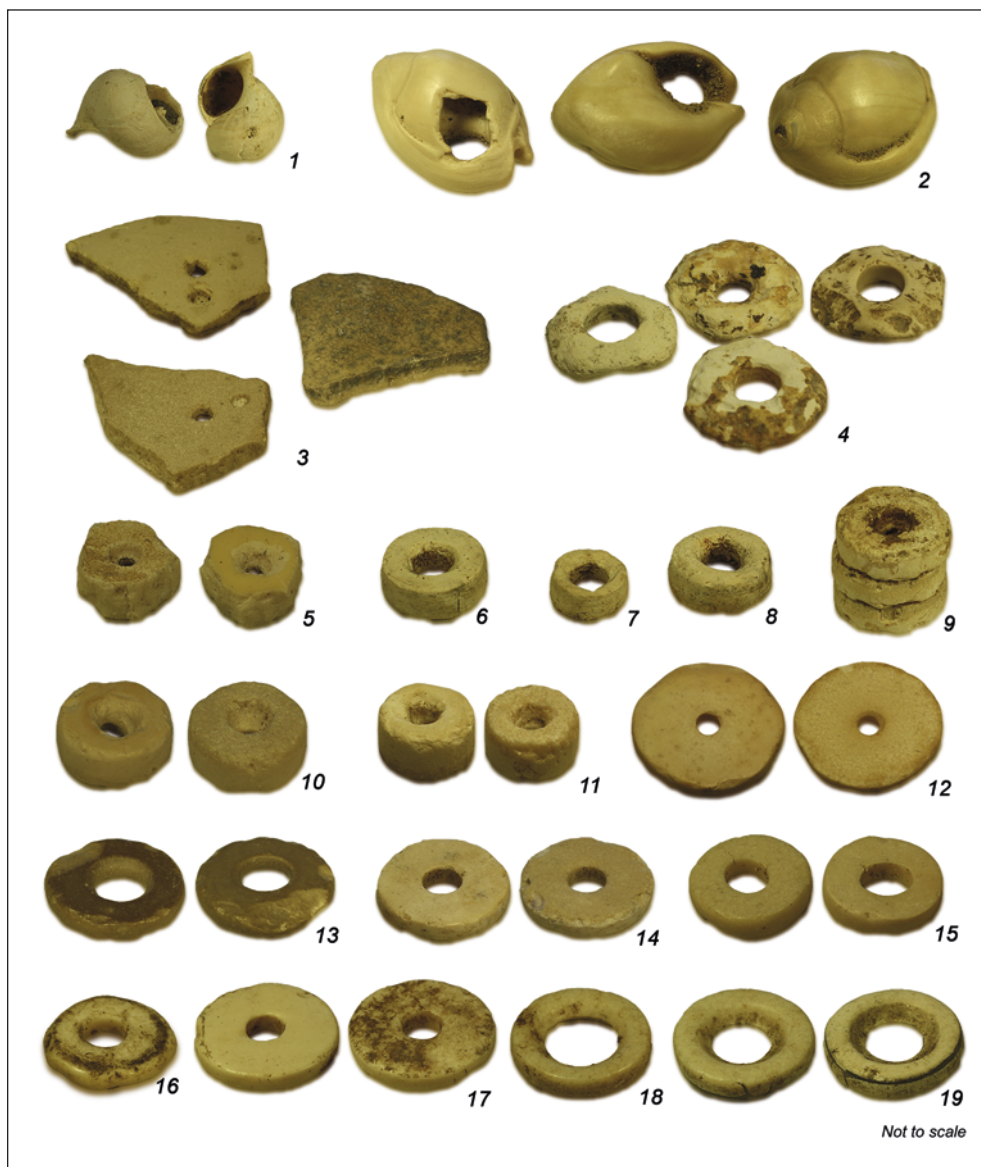
<sup>1</sup> The presented collection comes from the French Unit in the Sudan National Museum in Khartoum. Objects in the care of the SNM are not included in this report as they were not available for study at the time of the author's research in Khartoum.

Fig. 1. Mollusk shell and ostrich eggshell beads

Key: I: 8-B-5.A, II: 8-B-52.B; dimensions (in mm): diameter / thickness / hole diameter [beads]  
and width / thickness / height / hole diameter [pendants]

- 1 – II.T08/1, 4.6 / 6 / 0.7–1.6
- 2 – I.T005/3, 13 x 12
- 3 – I.Surface/1, 8.7 / 2.1 / 1.3
- 4 – I.T008/2/14, 6 / 1.6 / 2
- 5 – I.T011/7, 5 / 2.2 / 1.1
- 6–8 – I.T025/1, 4.1 / 1.8 / 1.2
- 9 – [22] No data
- 10 – I.Te006/1, 4.2 / 1.9 / 1.2
- 11 – I.T008/2/5, 3.6 / 2.0 / 0.9
- 12 – I.T009/4/1, 14 / 1.6 / 2
- 13 – I.T002/3, 8.7 / 1.6 / 3.1
- 14 – I.T004/11, 8 / 1.4 / 1.9
- 15 – I.T005/6, 5.7 / 1.3 / 1.9
- 16 – I.Te025/3, 7.1 / 1.4 / 1.9
- 17 – I.T004/9, 7.9 / 1.5 / 1.6
- 18 – I.T004/1, 7 / 1.5 / 3.7
- 19 – I.T004/8, 6.9 / 1.6 / 2.8



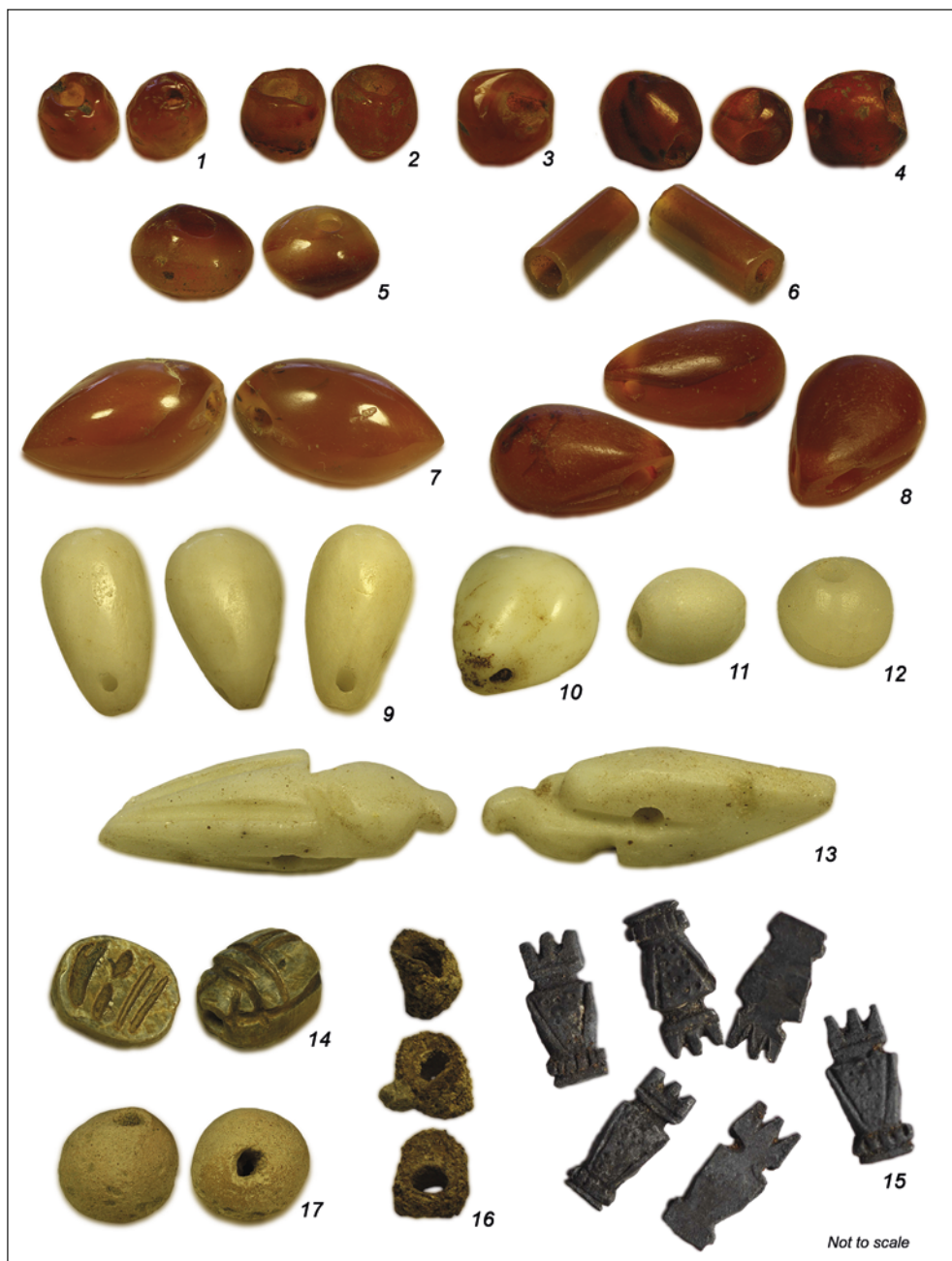


*Fig. 1. Mollusk shell and ostrich eggshell beads*

Fig. 2. *Stone, clay and metal beads*

*Key: I: 8-B-5.A, II: 8-B-52.B; dimensions (in mm): diameter / thickness / hole diameter [beads] and width / thickness / height / hole diameter [pendants]*

- 1 – I.T006/77, 4.4 / 3.8 / 0.7–1.3
- 2 – I.T023/12, 3.4 / 2.9 / 3
- 3 – I.T006/110, 4.3 / 4.3 / 1.2
- 4 – I.T006/94, 4.1–3.2 / 2.5–4.5 / 0.7–1.4
- 5 – I.T006/27, 4.6 / 2.9 / 0.7–1.2
- 6 – II.T034/7, 4.30 / 10.09 / 1.6–2.6
- 7 – II.T10/3, 10.2 x 8.6 / 16.17 / 1.45–2.65
- 8 – I.T006/164, 13 x 6.9 / 18.6 / 1.4–2.6
- 9 – I.Trench n3/3/5, 10.7 x 9.3 / 17.7 / 1.2–1.8
- 10 – I.T006/17, 13.8 / 12.2 / 16.2 / 1.9–3.5
- 11 – I.Trench n3/3/6, 4.5 / 5.6 / 1.1
- 12 – II.T08/31, 4.7 / 5.3 / 1.3–1.5
- 13 – I.T008/9/2, 5.9 / 7.4 / 20.7 / ?
- 14 – II.T10/2, 8.56 x 6.1 / 11 / 2
- 15 – I.T025/11, 3.7 x 1.5 x 8.5 / 1.4 x 0.7
- 16 – I.T006/185, 2.6–3.4 / 2.2–2.3 / 1
- 17 – I.A4/1, 22.2 / 20.1 / 4.2 x 4.7



*Fig. 2. Stone, clay and metal beads*

Disks of larger size, approximately 6 to 15 mm in diameter, have a regular worked shape [Fig. 1:12, 14–17]. Single specimens were found in Meroitic tombs T004, T005, T009, Te025 at 8-B-5.A. Irregular discs [Fig. 1:4, 13] were left unpolished. Beads approximately 3.5 mm in diameter or less took on the shape of short cylinders [Figs 1:11; 9:5, 2, 11, 13]. They tend to be found in larger quantities.

### MINERALS

About 5% of the Saï bead assemblage was made from different minerals. Almost all the stone objects were perforated according to ancient Egyptian and Nubian traditions. They were drilled from one end with a tapered drill imparting a conical shape on the perforation. Traces of a saw are often discernible in the shape of a groove next to the larger hole opening. Small, irregularly shaped globular carnelian beads, but with perfectly polished surfaces, measure about 3 mm in diameter [Figs 2:1–4; 9:1.4; 11:1]. They were a characteristic element of Meroitic strung objects (Then-Obluska 2015a: Fig. 10, T211 d3/b). Small globular chalcedony beads [Fig. 2:11, 12], carnelian short bicone beads [Fig. 2:5] and long cylinder beads [Fig. 2:6] represent different bead types. The lattermost kind has been encountered at many Meroitic sites, including Sedeinga (Then-Obluska 2015a and references therein).

Teardrop-shaped pendants are among the most characteristic features of the Meroitic assemblages. They differ in shape and size. Flattened carnelian pendants with a rounded base and a truncated part next to the perforation [Fig. 2:8] are known from many Meroitic sites (e.g., Griffith 1924: Pl. LXX, No. 2, tomb 2462, Pl. LXIII, No. 10, tomb 829, 1st century

BC–1st century AD, Pl. LXII, No. 11, tomb 2342, 1st–2nd century AD; Pellicer Catalán 1963: Fig. 23, Type 45). Other carnelian teardrops have pointed base and top [Fig. 2:7]. Large white chalcedony teardrops have an almost globular base [Figs 2:10; 9:1.3]. The smaller globular stone teardrops were white, red and black [Fig. 10:1.3, 5, 7]. Similar specimens were documented in a Meroitic Ballaña grave from the second half of the 2nd century AD (Williams 1991/II: Pl. 78a, Phase III) and at Karanog (Penn Museum, Inv. 92-10-6, Karanog). Elongated teardrop pendants have a rounded base [Fig. 2:9]. They appeared in Nubia in contexts dated to about the second half of the 2nd century AD and later (Vercoutter 1979: Fig. 9a; Baud 2010: Pl. 183, Saï, Phase IIIB or later; Williams 1991/II: Pl. 78b, Ballaña, Phase III; Williams 1991/I: 133; 1991/II: 203–204, Ballaña, Phase early IV; OIME24341, Dorginarti, personal observation).

An exceptional amulet in the form of a white calcite uraeus figure [Fig. 2:13] was perforated through a narrow longitudinal projection in the back. Similarly shaped amulets made of silver and carnelian were observed in Meroe assemblages (Dunham 1963: 228–229, Fig. 159:3, W 120 [55–65?], 163, Fig. 118e, W 125 [55–65?]).

### GLAZED STEATITE

A steatite scarab from T10 at 8-B-52.B was most probably once a glazed object [Fig. 2:14].

### METAL

Six silver cast plaques in the shape of a simplified figure of Bes with three feather headdresses were found in T025 at 8-B-5.A [Fig. 2:15]. A similar but copper-alloy plaque in the form of a Bes amulet was

found at the 4th/5th-century AD site of Bir Umm Fawakhir in the Eastern Desert in Egypt (Meyer 2014: Pl. 34a).

A few broken and eroded metal rings found on Sai were most probably chain links [Fig. 2:16]. They came from the tomb of the highest bead variety, that is, T006 at 8-B-5.A.

### CLAY

A pink clay bead is the only specimen from this category [Fig. 2:17]. Clay handmade beads were found on early Roman Elephantine, in 1st and 2nd century AD contexts (Rodziewicz 2005: 35), and in early Roman Berenike (Then-Obluska 2015b: Fig. 3:12). An extraordinary collection consisting of Nile mollusk shells and clay beads was found at Sedeinga (Then-Obluska 2015a).

### FAIENCE/GLAZED COMPOSITION

Perforated faience objects constitute the largest group in the Sai bead collection, about 53%. The beads can be divided into two groups, plain and decorated.

#### Undecorated faience

Some of the faience beads are regular disks or have a short cylindrical shape [Fig. 3:1–10]. Some of the long cylinders have been preserved with traces of triple [Fig. 3:13,14] or multiple segmenting [Fig. 3:15,16]. The smaller short cylinders, green, blue and yellow in color [Figs 10:1.4, 3.1,3.4; 11:2.1,4], differ from the short standard beads with constricted ends and slightly rounded sides [Figs 3:18–21; 9:5.1,7–8; 10:2]. A few larger beads are long and tubular in shape [Fig. 3:22, 24,25].

Many of the small short and standard beads were fired while lying on a surface

[Fig. 3:26], which resulted in one end being flattened and the other smooth and rounded. They resemble glass as their fine cores were most probably lost during firing. However, contrary to the glass beads, they were shaped probably while cold and subsequently fired.

Some larger oblates of white core and glaze [Fig. 4:1–3] bear small rough unglazed traces at the point where they were attached during the glazing process. The broken part of a large blue glazed spherical bead reveals an extremely fine white glassy core [Fig. 4:5,6].

Regular and flattened cylindrical beads [Fig. 3:28–33] were made of vitreous material. The production technique has yet to be determined in their case.

#### Decorated faience

The same type of faience blue and green glazed **granulated** beads [Fig. 4:7] from T023 at 8-B-5.A was also found in Meroitic Ballaña (Williams 1991/I: 231, Fig. 44j, Phase II B; Dunham 1963: 355, Fig. P, Type Ik) and Masmās (Almagro Basch 1965: 130, Fig. 138.1, Phase III). Interestingly, they can be traced as far as Sirkap, Pakistan (Beck 1941: Pl. 12:object 211, 212, 1st century AD). Other recorded forms include a scarab [Fig. 4:9], ram [Fig. 4:10] and a simplified ram's head with solar disc [Fig. 4:8]. The ram's head can be compared to one from Nag Shayeg (Pellicer Catalán 1963: 96, Fig. 23, Type 51) and another one from Qustul (OIM E20833A, personal observation; Williams 1991/I: 117, 49h; 1991/II: 45).

A pendant in the form of an *ankh* cross above a crescent [Fig. 4:13] was also found in Nag Shayeg (Pellicer Catalán 1963: 96, Fig. 23, Type 58) and on the surface in Sedeinga (Rilly and Francigny

Fig. 3. *Short to long cylinder faience beads*

Key: I: 8-B-5.A, II: 8-B-52.B; dimensions (in mm): diameter / thickness / hole diameter [beads]  
and width / thickness / height / hole diameter [pendants]

- 1 – I.T006/114, 6.4 / 1.8 / 2.8
- 2 – I.T003/5b/1, 5.8 / 2.3 / 2.4
- 3 – I.T003/5b/2, 4.3 / 1.3 / 1.7
- 4 – I.T005/4, 4.2 / 1.9 / 1.5
- 5 – I.T010/1, 8.1 / 2.8 / 3.2
- 6 – I.T006/19, 4.7 / 1.5 / 1.3
- 7 – I.T004/2, 5.1 / 1.2 / 2
- 8 – I.T011/4, 4.3 / 1.5 / 2.5
- 9–10 – I.T011/5, 4.4 / 1.6 / 2.3
- 11 – I.T006/68, 5.8–6.8 / 5.9 / 0.7
- 12 – I.A10/2, 3.4 / 2 / 1.2
- 13 – I.A7/5, 5.9 / 6.3 / 1.7
- 14 – I.A7/1, 4.4 / 6.4 / 1.8
- 15 – I.Cleaning B2/7, 4.9 / 8.2 / 1.3
- 16 – II.T11(33), 4.4 / 13.2 / 1.4
- 17 – II.T7(32), 5.2 / 10.2 / 2.6
- 18 – I.T005/1, 5.2 / 5.2 / 1.2
- 19 – I.T008/2, 4.7 / 4.1 / 1.7
- 20 – I.T006/22, 3.4 / 1.8 / 1
- 21 – I.Te027/1, 5.3 / 3 / 1.4 x 1.8
- 22 – I.T022/2, 4.9 / 5.8 / 2.1
- 23 – I.T022/3, 4.1 / 6.5 / 1.5
- 24 – II.T5(16/7), 6.4 / 7 / 1.8
- 25 – I.T005/5, 5.2 / 6.3 / 1.7
- 26 – I.T008/2/16, 2.7 / 2 / 1.1
- 27 – II.T32/1, 13.6 / 2.2 / 2.5
- 28 – I.T004/4, 2.6 / 9.5 / 0.7
- 29 – I.Trench n2/3/7, 4.4 / 11.8 / 2
- 30 – I.T011/2, 3.1 / 7.7 / 0.8
- 31 – II.T1/4, 3.5 / 2.7 / 2
- 32 – I.T006/30, 3.5 / 4.3 / 0.8
- 33 – I.Te002/2, 2.5 x 3.1 / 5.4 / 0.7 x 1.5





Fig. 3. Short to long cylinder faience beads



Fig. 4. Globular and decorated faience beads and pendants

Key: I: 8-B-5.A, II: 8-B-52.B; dimensions (in mm): diameter / thickness / hole diameter [beads]  
and width / thickness / height / hole diameter [pendants]

- 1 – I.T006/173, 7 / 5.2, 6 / 0.7
- 2 – I.T006/111, 6.4, 7.1 / 5.7, 5.2 / 0.9
- 3 – I.T006/45, 6.6 / 5.7 / 1
- 4 – I.Trench A6/5, 6.4 / 5.5 / 1.6 x 2.2
- 5 – I.T006/10, 9.1 / 7.8 / 1
- 6 – I.Te040/6, 13.6, 13.9 / 10.9, 11.4 / 2
- 7 – I.T023/1, 7.4–8.4 / 6.2–7.2 / 1.2–1.6
- 8 – I.Te036/2, 10.3 x 7 / 19.4 / 2.3
- 9 – II.T36/1, 8.5 x 7.4 / 13.8 / 2
- 10 – II.T36/2, 6.9 / 11.5 / 13.4 / 1 x 2
- 11 – T006/153, 5.6 x 5.6 / 7.6 / 1.5
- 12 – I.Te003/1, 5.4 / 18.5
- 13 – II.T7(24), 8.8 / 3.6 / 13.2



Fig. 4. Globular and decorated faience beads and pendants

2010: Pl. XXIV; Then-Obluska 2015a: Fig. 13.S001). Later, a similar shape was repeated in silver pendants which were found in a robbers' passage in one of the tombs in Ballaña (Emery and Kirwan 1938/I: 83, 216; 1938/II: Pl. 48 D, B-4-27).<sup>2</sup>

A dark green glazed crocodile [Fig. 4:11] from T307 and an amulet depicting a seated Isis nursing Horus [Fig. 4:12] from T317 at 8-B-5.A are both of higher quality than the above mentioned faience objects. Apart from numerous examples of such amulets from the Napatan period, some crocodile amulets were noted from Meroitic contexts (Dunham 1963: Fig. 133,g; Almagro Basch 1965: 195, Fig. 226.3,5).

### GLASS

Glass beads constituted about 23% of the Meroitic Saï assemblage. They represented many diverse techniques of production and decoration. Most of the Saï glass beads were made from drawn and segmented tubes. Some were wound or folded, others were rod-pierced.

#### Drawn beads

Monochrome glass beads were made from drawn glass tubes, segmented into single- or multiple-segment beads. For example, translucent dark blue glass tubes were left segmented into multiple beads [Fig. 5:19–21]. Drawn beads were either opaque or translucent, the former in red, orange, white, yellow and black, the latter in dark blue, green and dark green. Oblates and globular beads come in three general sizes: tiny, 1.8 mm in diameter [Figs 5:5; 9:2.3], small [Figs 5:1–4; 9:1.1, 2.2, 3,

4.2, 6–8; 10:1.6, 3.5, 3.8, 4.4–4.7, 4.11; 11:1.2–1.3, 2.2] and large [Fig. 5:26–31]. Large orange beads, about 6 mm to 8 mm in diameter [Fig. 5:26–29], had already been encountered at the Sedeinga site. A fragment from Saï [Fig. 5:26] reveals the shape of its perforation profile. It is narrow cylindrical at the ends and broader in the center. This could be the result of segmenting a drawn glass tube with a rod placed inside against a ribbed mold of sharp edges.

Long tubular beads were either small [Fig. 5:24] or large [Figs 5:22,23; 10:3.2,3.6]. Small pear-shaped forms were also encountered [Fig. 5:32].

Of special interest were green beads with very thin yellow internal layer, which could attest to earlier mandrel work or to a layer in a compound bead [Fig. 5:7,8]. A long green bead with a whitish internal layer is another example of a similar compound bead [Fig. 5:25]. The use of translucent colors, mainly blues and greens, over opaque white is well known in ancient beads (Spaer 2001: 142).

Red-over-colorless glass beads are among the most recognizable types among drawn compound beads in the Meroitic period. Red-coated colorless tubes were segmented into small single- [Figs 7:1; 9:9.1; 10:1.2; 11:2.3] and double-segment beads [Fig. 6:2] or single larger ones [Fig. 10:4.9]. There is sometimes a characteristic orange layer between the internal and external layers. This type was recorded in the Meroitic Dorginarti grave (OIM 24366, personal observation), in Ballaña, in a context dated to about the 2nd century AD (Williams 1991/I: 145, OIM 22925 B, personal observation),

<sup>2</sup> An *ankh* over a crescent was impressed on a mud stopper from the same period, sealing an amphora from Noubadian Qustul (Emery and Kirwan 1938/II: Pl. 115-28).

and in Sedeinga (Then-Obluska 2015a: Fig. 13.S041/I).

Metal-in-glass beads constitute 27.3% of this glass bead group (counting tubes and not segments). Although most beads came from tomb T006 at 8-B-5.A, gold-in-glass beads were found at all the cemeteries. Drawn beads, both single [Fig. 7:3–11] and multiple segmented [Fig. 7:12–15], were recorded. Beads from Te037 in the same cemetery have the shape of long barrels and cylinders [Fig. 10:3.9].

A single example has collars at both ends [Fig. 7:17]. Some beads were flattened into a single [Figs 9:9.2; 10:3.7] and double tabular shape [Fig. 7:16]. Both tabular and collared forms of gold-in-glass beads were found in Qustul and Ballaña, in graves usually dated to the second half of the 2nd century AD (Williams 1991/I: 133, Phase IIIB).

Other gold-in-glass beads were of larger size [Figs 7:5, 18–20; 9:10].

Silver-in-glass tubes were found segmented into single beads [Fig. 7:21–26] and double beads [Fig. 7:28–29]. The former could be piriform [Fig. 7:27] or shaped into long cylinders [Fig. 9:12].

### Mandrel-wound and mandrel-formed beads

Wound-glass globular beads, an opaque black [Fig. 6:1], blue [Fig. 6:2], and barrel green [Fig. 6:3], as well as short opaque yellow cylinders [Fig. 6:8] were encountered among the rod-formed monochrome objects. Some were marvered into dark blue and light blue bicones [Fig. 6:4–5]. Glass strips were coiled into beads. They were a dark blue that looked black [Fig. 6:9–10]. Another form was a red, blue or green elongated bicone [Fig. 6:21–23]. A long square dark

blue bicone was found in tomb T008 at 8-B-5.A, together with other Meroitic bead types [Fig. 6:24]. A translucent dark blue bead with a ribbed upper part (V-33) was initially folded and then shaped in a mold [Fig. 5:33].

Polychrome beads are in the minority in the Sai glass bead assemblage. A wound opaque white oblate bead is decorated with two applied blue dots [Fig. 8:2], another type of ‘eye bead’, originated from the same tomb T008 at 8-B-5.A. Such beads were also noted in the Ballaña grave from the second half of the 1st century AD (OIM E32083). They are less commonly found than white beads with three dots (Woolley and Randall-MacIver 1910: Pl. 40: 7843, 7906, Karanog; Then-Obluska 2015b: Fig. 5:15, early Roman Berenike; Arveiller-Dulong and Nenna 2011: 160, Cat. 205.23, Kertch, antique Panticapee, 1st century BC–1st century AD).

A green-yellow ‘date bead’ [Fig. 8:1], of a type very popular in Egypt, is usually dated to the period between the 2nd and 5th centuries AD (Arveiller-Dulong and Nenna 2011: 176, references 48–56; Lankton 2003). The Sai example was picked up as a surface find at cemetery 8-B-5.A. In Qustul, finely-finished specimens were found in a grave dated to the end of the 1st century AD (OIM E20792A, personal observation; Williams 1991/II: 52–53, Phase IIB). Another example was found in Alexandria in a context dated to the 2nd–3rd century AD (Kucharczyk 2011: Fig. 8:9).

Some specimens of rod-formed and faceted blue cornerless cubes (cornerless cuboids) [Fig. 6:18–20] came from tombs Te034 and Te040 at cemetery 8-B-5.A. In Ballaña, the first examples of such glass cubes appeared in graves dated to about

Fig. 5. Drawn, molded and drilled monochrome glass beads

Key: I: 8-B-5.A, II: 8-B-52.B; dimensions (in mm): diameter / thickness / hole diameter [beads]  
and width / thickness / height / hole diameter [pendants]

- 1 – I.T006/98, 3.3 / 2.8 / 1.2
- 2 – I.T009/6/7, 3.5 / 2.5 / 1.2
- 3 – I.Te033/1, 5.7 / 4.1 / 1.2
- 4 – I.T006/131, 4.6 / 4.1 / 0.7–1.4
- 5 – I.T006/26, 1.8 / 1.5 / 0.5
- 6 – I.T006/174, 4.5 / 3.9 / 1.7
- 7 – I.T006/71, 3.3 / 2 / 1.3
- 8 – I.T006/23, 3.2 / 2.1 / 0.8
- 9 – I.T023/9, 3.7 / 2.6 / 1.1
- 10 – I.T006/74, 3.7 / 2.8 / 1.3
- 11 – I.T008/2/11, 3.1 / 2.2 / 0.8
- 12 – I.Trench 1110-230, 5.7 / 4.6 / 1.8
- 13 – II.T15/1, 8.6 / 7.4 / 1.8
- 14 – II.(15), 3.5 / 2.7 / 1.3
- 15 – I.T006/24, 3.5 / 3.3 / 0.7
- 16 – I.T008/2/3, 6.8 / 5.6 / 1.9
- 17 – I.T009/6/6, 5.1 / 4.4 / 1.5
- 18 – I.T006/58, 4 / 3.2 / 1
- 19 – I.T006/115, 4.4–5 / 3.8–8.4 / 0.8–0.9
- 20 – I.T006/44, 3.5 / 5.2 / 1
- 21 – I.T023/11, 3.1 / 5.6 / 1.3
- 22 – II.T08/29, 3.6 / 7 / 2
- 23 – I.T009/6, 5.2 / 6.5 / 2.2
- 24 – I.Te034/6, 2.4–3.3 / 5.5 / 1.3
- 25 – I.T006/142, 3.7 / 2.5 / 1.2
- 26 – I.T006/128, 6, 7 / 6, 5.5 / 1.9
- 27 – I.T008/2/6, 6.8–7.7 / 5.3–7.7 / 1.5–2.3
- 28 – I.T006/106, 8.1 / 7.1 / 1.9
- 29 – I.T006/129, 6.6 / 7.6 / 2
- 30 – I.T006/154, 8 / 7.7 / 1.7
- 31 – I.T023/2, 5.7 / 5 / 1.9
- 32 – I.Trench n2/3/3, 5.3 / 6.2 / 1
- 33 – I.Te003/2, 6.8 x 8.1 x 4.3 / 2.7 x 1.3
- 34 – I.T008/8/1, 9.4 / 4.4 / 12.5 / 1.5



Fig. 5. Drawn, molded and drilled monochrome glass beads



Fig. 6. *Mandrel-wound and mandrel-formed monochrome glass beads*

*Key: I: 8-B-5.A, II: 8-B-52.B; dimensions (in mm): diameter / thickness / hole diameter [beads] and width / thickness / height / hole diameter [pendants]*

- 1 – Dec./1, 8.4 / 6.3 / 1.8 x 2.5
- 2 – I.Te002/1, 11.2 / 10.4 / 2.3–3.7
- 3 – I.T022/1, 7.1 / 6.7 / 1.5
- 4 – I.T005/8, 7.2 / 4.5 / 1.9–2.4
- 5 – I.Te026/3, 5.2 / 2.9 / 1.5
- 6 – I.Te027/2, 8 / 4.5 / 2.6
- 7 – I.T011/6, 7.5 / 13.5 / 2
- 8 – I.A5, 8.8 / 3.3 / 2.4
- 9 – I.Te029/2, 7.8 / 8.7 / 1.6
- 10 – I.Te035/1, 7.2 / 6.1 / 3
- 11 – I.Trench n2/3/1, 4.7 / 6.6 / 0.8–1.5
- 12 – I.Trench n3/3/8, 6.6 x 3.6 / 8.5 / 1–1.3
- 13 – I.Te034/4, 8.6 / 14.4
- 14 – I.Trench n2/3/8, 5.4 x 5.1 / 5.1 / 1.1–1.6
- 15 – I.Te010/1, 3.8 / 5.6 / 1.4–2.3
- 16 – I.Trench n2/3/4, 6.2 x 6.7 / 7.6 / 0.9–1.4
- 17 – I.T008/2/24, 3.3 / 1.9 / 5.3 / 1.4
- 18 – I.Trench n3/3/4, 2.8 / 3.7 / 1.2
- 19 – I.Te040/4, 3.4 x 3.6 / 4.8 / 1
- 20 – I.Te034/5, 8 / 7.7 / 3.6
- 21 – I.T025/7, 4.7 / 10.1 / 1.6
- 22 – I.T025/5, 3.7 / 11.5 / 0.8
- 23 – I.T025/6, 4.0 / 10.3 / 1.1
- 24 – I.T008/2/26, 4.7 x 4.5 / 11.4 / 1.2–1.6
- 25–26 – I.T006/175, 7.8–8.5 / 6.8–7.5 / 1.6–2.7
- 27 – I.T008/2, 6.3 / 5.6 / 1.2–1.6
- 28–29 – I.T008/2/1, 7.7, 8.3 / 6.2, 7.8 / 1.8–2.1, 1.5–2.4
- 30 – I.T008/2/22, 4.9–7.5 / 5.9–7 / 2.2 / 1.1–1.3



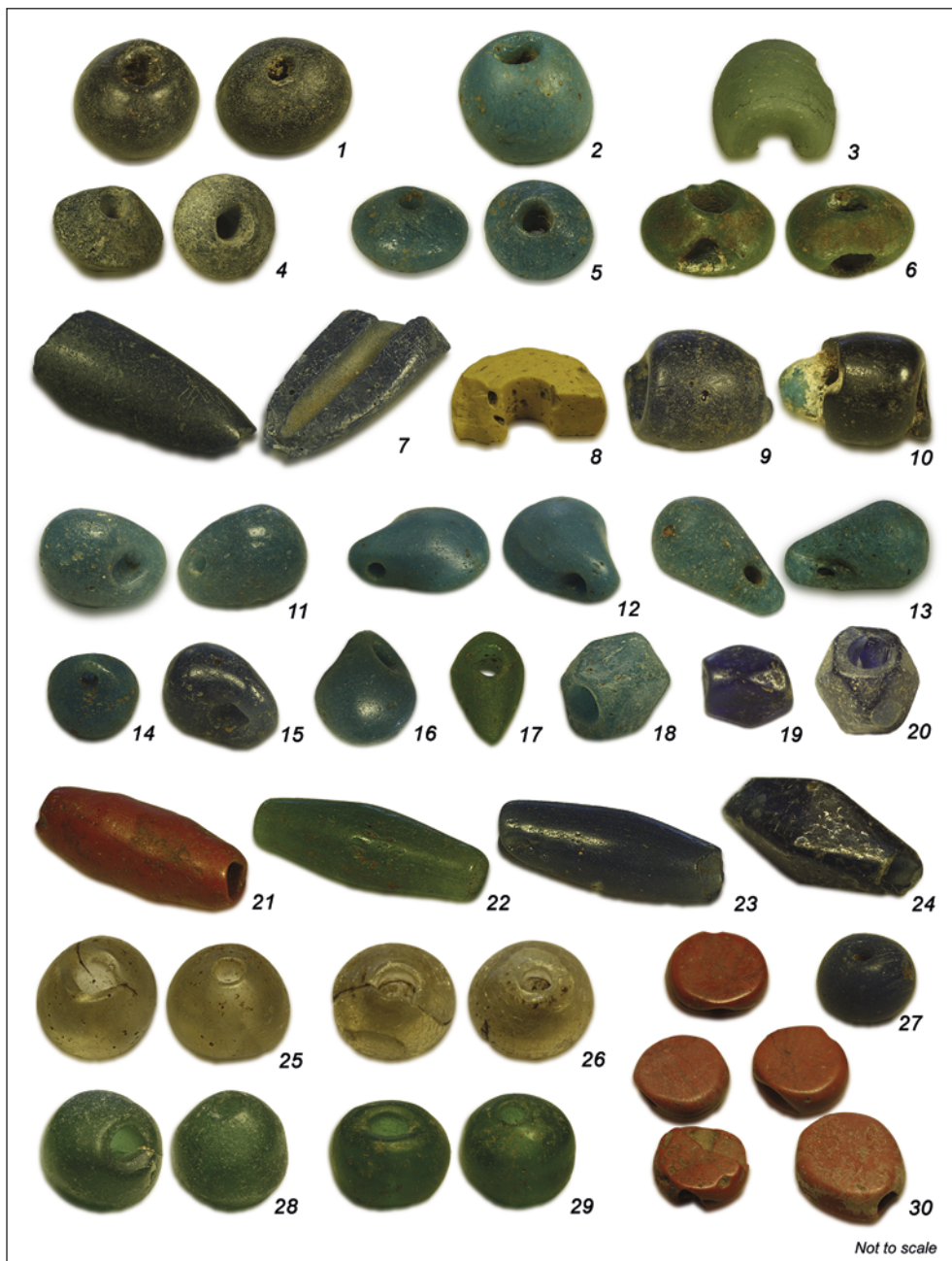


Fig. 6. Mandrel-wound and mandrel-formed monochrome glass beads

Fig. 7. Compound glass and metal-in-glass beads

Key: I: 8-B-5.A, II: 8-B-52.B; dimensions (in mm): diameter / thickness / hole diameter [beads]  
and width / thickness / height / hole diameter [pendants]

- 1 – I.T006/101, 4.4 / 4.8 / 1.3
- 2 – I.T009/6/7, 4.1 / 6.4 / 1.6
- 3 – I.T006/55, 4.1 / 2.8 / 1
- 4 – I.006/61, 3.6 / 2.9 / 1
- 5 – I.T023/3, 7 / 5.4 / 1.1
- 6 – I.T006/176, 3.3 / 2.9 / 0.9
- 7 – I.T006/169, 4.2 / 3 / 0.8
- 8 – I.T006/13, 5.1 / 4.5 / 1.3
- 9–11 – I.T006/38, 5.3 / 4.4 / 1
- 12 – I.T006/33, 4.5 / 7.1 / 1.2
- 13 – I.T006/177, 3.9 / 7 / 1
- 14 – I.T006/93, 4.5 / 7.4 / 1.2
- 15 – I.T006/149, 3.8 / 3.5 / 0.7
- 16 – I.T008/2/23, 4.7 / 8.6 / 1.2
- 17 – II.T34/6, 3.4 / 6.5 / 1.3
- 18 – I.Te004/1, 6.8 / 6.2 / 1.2
- 19 – II.T11(40), 7.1 / 7.1 / 1.6
- 20 – I.T004/10, 10.7 / 8.2 / 1.8
- 21 – I.T006/31, 4.1 / 4.2 / 1.2
- 22 – I.T004/5, 3.9 / 3.8 / 1.2
- 23 – I.T006/34, 2.6 / 2.5 / 0.6
- 24 – I.A12/3, 6.2 / 4.2 / 2.4
- 25 – I.T009/1, 4.6 / 4.1 / 0.8
- 26 – I.Te013/1, 7 / 5.6 / 1
- 27 – I.TTe040/3, 4.8 / 6 / 1.3
- 28 – I.T006/104, 4.3 / 7.5 / 1.3
- 29 – I.T006/32, 4.1 / 8.2 / 1.2

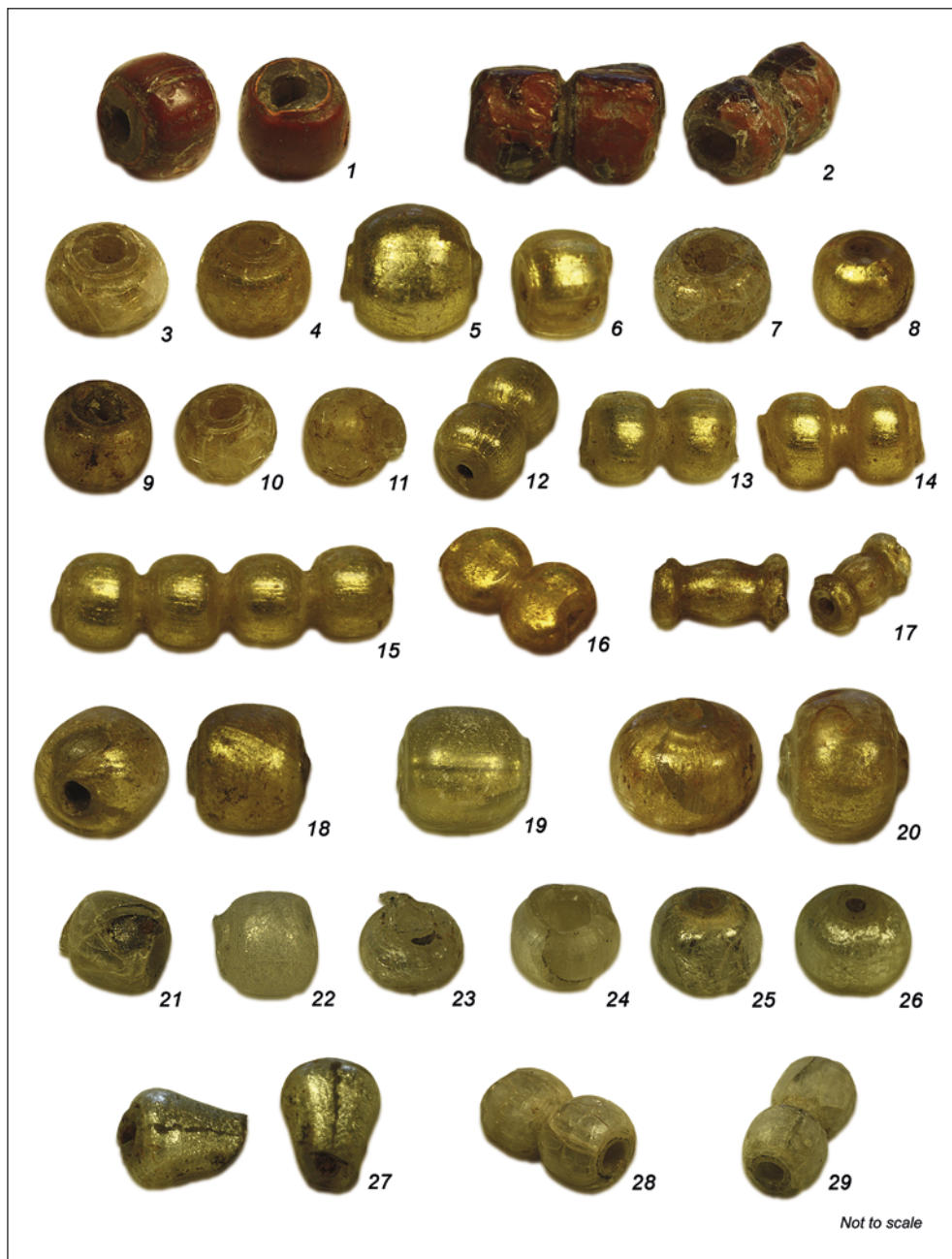
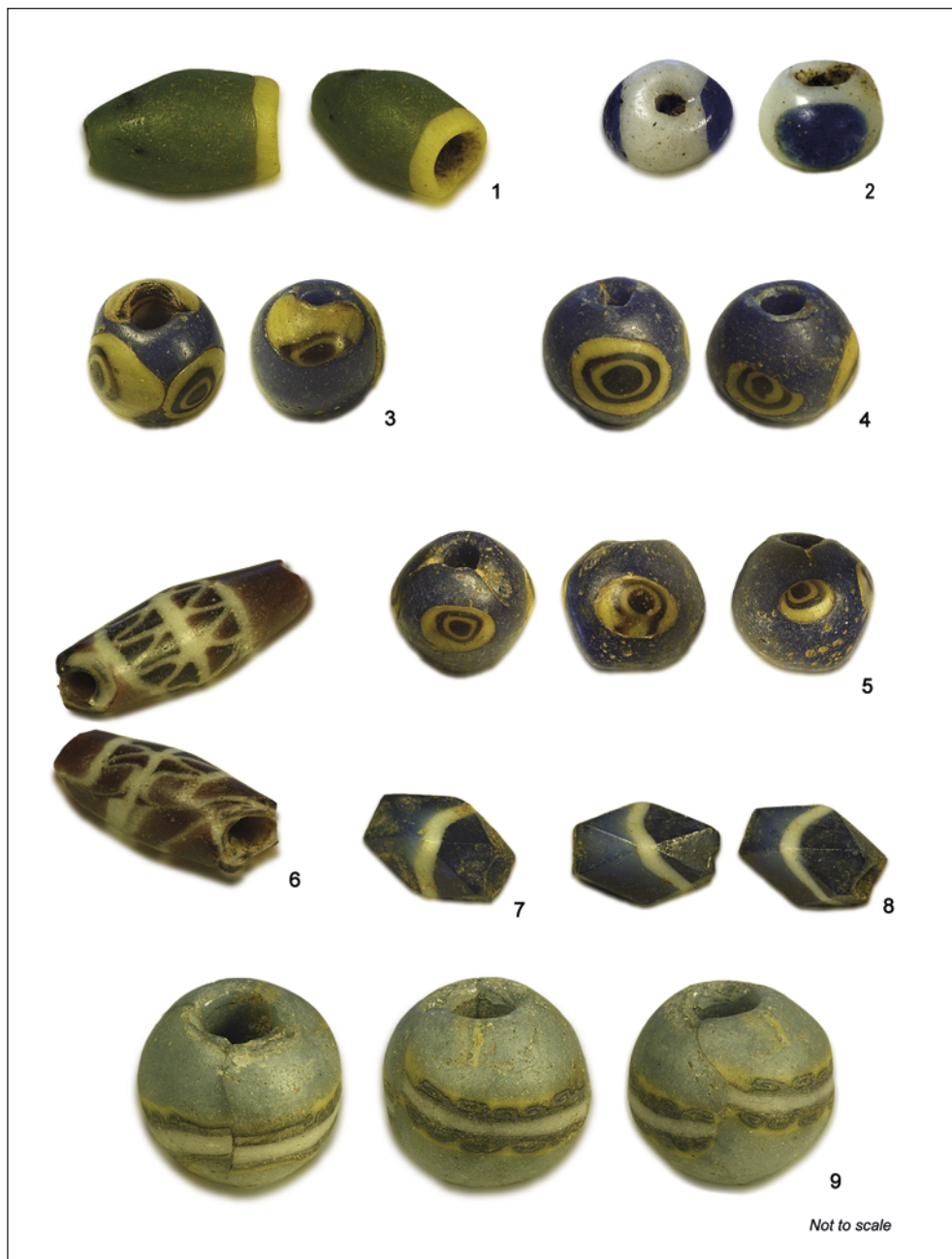


Fig. 7. Compound glass and metal-in-glass beads

Fig. 8. *Mandrel-wound and mandrel-formed polychrome glass beads*

*Key: I: 8-B-5.A, II: 8-B-52.B; dimensions (in mm): diameter / thickness / hole diameter [beads]  
and width / thickness / height / hole diameter [pendants]*

- 1 – I.S017, 5.5 / 9 / 1.3–2.4
- 2 – I.T006/12, 4.1–4.8 / 3.1 / 1
- 3 – I.T006/15, 7.4 / 7.2 / 2.3
- 4 – I.T006/179, 9.2 / 8.2 / 1.8–2.6
- 5 – I.T006/66, 8.5 / 7.5 / 2.2–2.4
- 6 – I.A7/4, 7.2, 6.5 / 21.7, 15.3 / 1.9–2.7
- 7 – II.T34/2, 2.2 x 2.4 / 4.7 / 0.8
- 8 – II.T34/5, 2.6 x 2.6 / 4.7 / 1.2
- 9 – I.T012/1, 14.8 / 13.3 / 4.4–5.8



*Fig. 8. Mandrel-wound and mandrel-formed polychrome glass beads*

the second half of the 2nd century AD (Williams 1991/I: 129; 1991/II: 173, Phase IIIB). They were also common at that time in Karanog (Woolley and Randall-MacIver 1910: Pl. 40:8010, 7837, 7868, 7826B, 7766) and Masmis (Almagro Basch 1965: Fig. 124, 2; 226.1, Phase III). In Meroe, they were found in graves dated to phase 55–65 (2nd century AD) (Dunham 1963: W 110, W 120, W 179). In Nubia, they continued to be in use into the post-Meroitic period, and one Sai example [Fig. 6:20] was found together with a rod-pierced glass teardrop, which tended to be found in post-Meroitic Nubian assemblages.

Faceted cornerless cuboids (see above) of translucent dark blue body with white central band were discovered [Fig. 8:7–8] in tomb T34 at cemetery 8-B-52.B. Parallels are known from Ballaña starting from the second half of the 2nd century AD (Williams 1991/I: 137–138, Phase IIIB, OIM 22665; OIM 22753, personal observation). They were called ‘sandwich’ beads and recognized in graves of the Samad culture in Oman. They are typical of the Satavahana period in India (3rd/2nd century BC until the beginning of the 3rd century AD) and they have also been seen on Sri Lankan sites (Hannibal-Deraniyagala 2001: 224 and references therein). Contrary to the Sri Lankan ones, the white interlayers of Omani beads are heavily enriched with SnO<sub>2</sub> (Schüssler, Rösch, and Hock 2001: 241–242). There is no doubt therefore that ‘sandwich’ beads were made using diverse types of glass.

A purple and white mosaic strip was folded into an elongated bead [Fig. 8:6]. This bead has been dated in the literature to the 2nd/3rd century AD (Alekseeva 1978: Pl. 29:8).

One bead was composed of three mosaic glass slices that were joined around a mandrel. The slices were blue with a white central band that was bordered by a black rolled-pad pattern on a yellow background [Fig. 8:9]. Such a blue bead with a patterned white stripe between a double black/purple and yellow rolled pad has been found so far in Nubia at Gabati, but in a 7th-century AD context (Edwards 1998: 129, 234, Fig. 11, Cat. 2716). However, rolled-pad mosaic plaques and beads are considered to be of Egyptian production and dated from the 1st century BC to the 1st century AD (Then-Obluska 2015a: 39 and references therein). Recently, a bead made using rolled-pad pattern slices was recorded from Sedeinga. However, the technique of its manufacture differs from that of the Sai specimen (Then-Obluska 2015a: Fig. 2.c2).

### Rod-pierced beads and pendants

In the case of large beads, the glass was often rod-pierced and folded around the mandrel, often resulting in a double seam next to the single hole opening. These include globular transparent [Fig. 6:25–26], blue [Fig. 6:27], and translucent green beads [Fig. 6:28–29].

Thirteen opaque red rod-pierced forms were flattened into tabular beads [Fig. 6:30]. They were found in T306/2 at 8-B-5.A. Red and blue examples come from Karanog (Woolley and Randall-MacIver 1910: Pl. 40:7825 = Penn Museum, Inv. E7925), blue and turquoise ones were found at Sedeinga (Arveiller-Dulong and Nenna 2011: Cat. 213).

Many blue glass teardrop pendants were rod-pierced [Fig. 6:11–16]. Flattened opaque blue pendants [Fig. 6:12] are known from Ballaña (Williams 1991/II:



229, Phase late IIIB) and Karanog (Woolley and Randall-MacIver 1910: Pl. 40:7826A), while a tiny green flattened drop bead with pointed base [*Fig. 6:17*] was discovered in Meroe (Dunham 1963: Figure T, lh.). However, the large translucent blue teardrop pendant found on Saï, about 15 mm in length [*Fig. 6:13*], is similar to post-Meroitic specimens known from Lower Nubia (Then-Obluska forthcoming).

One of two types of ‘eye beads’ comes in the form of rod-pierced and folded glass

canes. The dark blue body is decorated with three applied yellow and brown mosaic cane sections [*Fig. 8:3–5*]. All eight of such objects were found in Tomb T006 at 8-B-5.A. So far they lack any close parallels.

A fragment of translucent purple glass plaque might have been used as a pendant [*Fig. 5:34*]. A hole was drilled through the point where saw marks crisscrossed in the center. They could have been an element of the original cut decoration or they simply facilitated the setting of the drill.

## MEROITIC BEAD ORDER

Only three tiny silver wire links are present in the rich Meroitic bead repertoire from Saï [*Fig. 2:16*]. The links might have once formed a chain. It might have had beads attached to it or a pendant.

Some beads and pendants have been preserved threaded on original string fragments [*Figs 9, 10*].<sup>3</sup> The following original patterns in bead arrangements could be discerned. The first composition consists of larger pendants alternated with a few tiny ones. This group includes stone teardrop pendants alternated with two or three small beads made of gold-in-glass, glass, carnelian, or faience [*Fig. 9:1*] (e.g., Baud 2010: Pl. 183, Khartoum, SNM 28779; Williams 1991/II: Pl. 77i,j; Pl. 78a,b for similar patterns). Also larger globular glass beads were found alternating with a few tiny beads [*Fig. 10:4*] (Williams 1991/II: Pl. 77g, large globular beads in dark or light blue glass).

The second general order includes beads of a similar tiny size. In this case,

beads of one or two materials might be strung together. Although not preserved originally strung at Saï, tiny carnelian beads were found together with white and blue glass beads [*Fig. 11:1.1–3*]. Elsewhere, tiny carnelians were alternated with gold-in-glass beads. At Saï, carnelian beads were probably imitated by red over colorless glass beads [*Fig. 9:9*].

At Saï, most of the small gold-in-glass beads were associated with a few beads made of glass and faience [*Fig. 10:3*]. A similar arrangement was observed for 1st-century AD Lower Nubia (Williams 1991/II: Pl. 77d,f.; 79a, Phase late IIB).

A short string with a single or a few threaded beads can form a child's bracelet. Judging from its size, about 7 cm in length, this is the case of a string with a silver-in-glass bead [*Fig. 9:12*]. Although it has not been preserved originally threaded from Saï, a long cylinder carnelian bead [*Fig. 2:6*] was found elsewhere as a part of a child's bracelet (Then-Obluska 2015a: 33).

<sup>3</sup> Found undisturbed in Tomb 1 in 1978, the necklaces and bracelets from this burial are an excellent example of Meroitic bead arrangements (Vercoutter 1979: 225–229, Figs 9a,b, 10a–c, 11a–c; Baud 2010: Pls 183, 184).



Fig. 9. Preserved fragments of strung bead compositions

Key: I: 8-B-5.A, II: 8-B-52.B; dimensions (in mm): diameter / thickness / hole diameter [beads]  
and width / thickness / height / hole diameter [pendants]

- 1A.1 – I.T006/81, 3.6 / 3 / ?
- 1A.2 – I.T006/82, 3.3 / 3.2 / 0.9
- 1A.3 – I.T006/83, 12.2 x 14 / 16.7 / 1.7
- 1A.4 – I.T006/80, 3.3 / 3.5 / ?
- 1B.1 – I.T006/84, 2.9 / 2.3 / 1
- 1B.2 – I.T006/85, 2.5–3.4 / 1.9, 3.4 / 1
- 1B.3 – I.T006/87, 11.9 x 14.4 / 17 / 1.5–2.4
- 1B.4 – I.T006/86, 3.7 / 3.6 / 1
- 2.1 – I.T006/124, 3.4 / 1.6 / 1
- 2.2 – I.T006/125, 3 / 2.3 / 1
- 2.3 – I.T006/123, 1.8 / 1.5 / 0.5
- 3 – I.T006/137, 3.2 / 2.4 / 1.1
- 4.1 – I.T009/6/11, 3.4 / 3.1 / 0.7
- 4.2 – I.T009/6/12, 3.8 / 2.8 / 1
- 5.1 – I.Te034/1, 3.6 / 2.7 / 1.3
- 5.2 – I.Te034/2, 3.5 / 2 / 1
- 6 – I.Te033/3, 2 / 1.4 / 0.9
- 7 – I.Cleaning B2/5, 2.5 / 1.4 / 0.9
- 8 – I.A12/5, 6.7 / 0.8 / 1.5
- 9.1 – I.Te042/3, 3 / 2.4 / 1.5
- 9.2 – I.Te042/2, 5 x 2.1 / 6.5 / 1.1
- 10 – I.A9/1, 14.4 / 12.4 / 2.7
- 11 – I.T008/2/4, 3.6 / 1.9 / 1
- 12 – I.A3, 3 / 5.1 / 1
- 13 – I.Te029/3, 2.8 / 0.9 / 1.3



Fig. 9. Preserved fragments of strung bead compositions

Fig. 10. *Preserved fragments of originally strung objects and modern restrung ones*  
 Key: I: 8-B-5.A, II: 8-B-52.B; dimensions (in mm): diameter / thickness / hole diameter  
 [beads] and width / thickness / height / hole diameter [pendants]

- 1.1 – II.T10/7, 2.2–3.3 / 1.6 / 1.4
- 1.2 – II.T10/11, 2.8 / 1.9 / 0.7
- 1.3 – II.T10/4, 6.51 x 6.25 / 6.91 / 1.78–2.2
- 1.4 – II.T10/7, 2.9 / 2 / 1.1
- 1.5 – II.T10/5, 6.5 x 6.2 / 6.9 / 1.8–2.2
- 1.6 – II.T10/10, 2.8 / 1.9 / 0.7
- 1.7 – II.T10/6, 6.5 x 6.2 / 6.9 / 1.8–2.2
- 1.8 – II.T10/9, 2.8 / 1.9 / 0.7
- 2 – I.Te028/1, 2.2 / 1.4 / 0.7
- 3.1 – I.Te037/6, 3.2 / 1.8 / 1.7
- 3.2 – I.Te037/8, 3.9 / 4.6 / 1
- 3.3 – I.Te037/7, 2.4 / 5.4 / 0.8
- 3.4 – I.Te037/6, 3.2 / 1.8 / 1.7
- 3.5 – I.Te037/5, 3.1 / 2.4 / 1
- 3.6 – I.Te037/9, 3.9 / 6.3 / 0.9
- 3.7 – I.Te037/2, 2.3 x 4.3 / 3.5 / 1.2
- 3.8 – I.Te037/4, 2.2 / 2.1 / 1
- 3.9 – I.Te037/1, 2.4–4.1 / 5.5–8.4 / 0.8
- 3.10 – I.Te037/3, 3.2 / 1.7 / 1.7
- 4.1 – I.S1415/1, 5.36 / 4.84 / 1.9
- 4.2 – I.S1415/2, 4.24 / 4.05 / 1.3
- 4.3 – I.S1415/3, 2.4 / 1.3 / 0.8
- 4.4 – I.S1415/4, 2.46 / 1.8 / 0.7
- 4.5 – I.S1415/5, 2.46 / 1.8 / 0.7
- 4.6 – I.S1415/6, 2.7 / 2 / 0.9
- 4.7 – I.S1415/7, 2.6 / 2 / 0.8
- 4.8 – I.S1415/8, 3 / 2.4 / 1
- 4.9 – I.S1415/9, 5.4 / 4.1 / 1.4
- 4.10 – I.S1415/10, 6.2 / 5.7 / 1.5
- 4.11 – I.S1415/11, 3.3 / 2.76 / 1.1



Fig. 10. Preserved fragments of originally strung objects and modern restrung ones

Small short faience beads were found strung together [Fig. 10:2] or linked with ostrich eggshell short cylinders [Fig. 9:5]. Uniform fragments of strings of ostrich eggshell beads [Fig. 9:13] or red glass

cylinders [Fig. 9:6] are other possible compositions. A few objects consisting of ostrich eggshells or ostrich eggshells linked with faience beads were recorded in Lower Nubia (Williams 1991/II: Pl. 78a,b).

Fig. 11. *Modern strung objects*

Key: I: 8-B-5.A, II: 8-B-52.B; dimensions (in mm): diameter / thickness / hole diameter [beads] and width / thickness / height / hole diameter [pendants]:

1.1 – I.T006/88, 3.6 / 4 / 0.9–1.2

1.2 – I.T006/90, 3.6 / 3 / 1

1.3 – I.T006/89, 4 / 3.2 / 0.8

2.1 – II.T36/7

2.2 – II.T36/8

2.3 – II.T36/6

2.4 – II.T36/9



## DISCUSSION AND CONCLUSIONS

Bead adornments constitute a motif repeated in the Meroitic royal, divine and private spheres. It can be observed in royal and private iconography, gold jewelry, clay figures, and especially in painted pottery. Since both Saï necropolises (8-B-5.A and

8-B-52.B) were heavily plundered, the elite character of the tomb owners, known already from another Saï necropolis (8-B-5.SN/SAS2), can be observed in the preserved bead types only to a limited extent.

Nevertheless, the variety of materials, techniques and shapes reflects the multifarious influences in Meroitic beadwork. The Saï collection features a wide range of Egypt-inspired amulets that were made of faience (e.g., *ankh* cross over a crescent, ram, scarab, Horus suckling Isis, crocodile, ram's head with a sun disk), calcite (uraeus) and glazed steatite (scarab). Moreover, the Bes metal plaque amulets, although similar in shape to one found in late Roman Bir Umm Fawakhir, in their size and technique of manufacture are more similar to small metal objects known from tombs in Meroe. The single pendant of mollusk marine shell was made of the Mediterranean *Nassarius gibbosulus* species. Among the stone beads, tiny globular carnelian beads dominate over various types of teardrop pendants made of white and black quartz and carnelian. Glass objects are represented mostly by monochrome oblates, some tabular, and a few faceted beads, as well as decorated ones, i.e., additionally shaped gold-in-glass beads, a few mosaic eye beads, a single example of an Egyptian 'date bead' and a mosaic glass bead with a Greek scroll (rolled-pad) pattern.

The most characteristic order, which can be observed thanks to the preserved

fragments of original stringing, consists of a few tiny beads alternated with a larger one or with a pendant. The simplicity of the order and the quality of the intentionally chosen materials is a decidedly typical characteristic feature of the indigenous elegant Meroitic bead style. Compositions of several small gold-in-glass beads accompanied by a few colorful ones, whether made of carnelian, faience or glass, followed most certainly the Meroitic fashion. A single threaded bead, metal-in-glass or long carnelian cylinder, adorned children's wrists. Tiny ostrich eggshell beads were found strung together or combined with faience ones. The same faience beads were found threaded together on string fragments.

A comparison, in very general terms, of the percentage share of bead material at some Meroitic sites (Vila 1982; Williams 1991; Then-Obluska 2014; Edwards 1998) indicates a difference between Lower Nubian cemeteries and the burial sites to the south [Fig. 12]. In the 1st to 3rd centuries AD, glass beads were already a cheap and easily available ornament in Egypt and they dominated bead assemblages in Lower Nubia. By contrast, the percentage share of glass at Saï is much smaller. The same applies to the share of

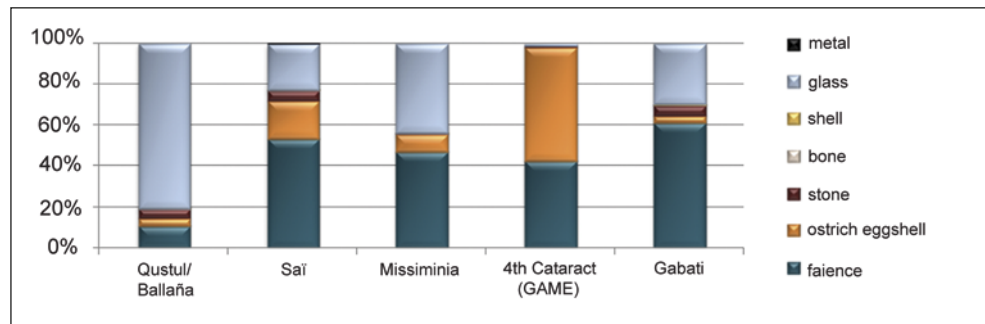


Fig. 12. Percentage share of bead material at selected Nubian sites

ostrich eggshells. Whereas ostrich eggshell beads feature in Napatan assemblages in Nubia, only a few examples of ostrich eggshell bead objects have been preserved in other Meroitic graves in Lower Nubia to the north and in royal tombs in Meroe to the south. Therefore, the presence of ostrich eggshell at Saï during this period would indicate its special value in the region. Taking into consideration its desert provenance and its symbolism in ancient Egypt and Nubia (Scalf 2012: 131–132), the ostrich eggshell seems to have been perforated for more than merely ornamental function. Whereas ostrich eggshell beads in the form of disks were present solely as isolated items at Saï, the smaller-sized short cylinders were found in much larger quantities. However, their occurrence, at least in one case, might

have been the result of chronological change rather than of regional difference. In grave Te034 at cemetery 8-B-5.A, short cylinder ostrich eggshell beads were strung together or combined with faience beads. Additionally, a large rod-pierced teardrop glass pendant, usually associated with post-Meroitic fashion, was found in the grave.

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