# Christianising a Nubian landscape: a chronology of Post-Meroitic goblets from the Dal Cataract

Tsubasa Sakamoto

## Introduction

On the 1st December 1934, after completing work in the royal cemeteries of Qustul and Ballana, Laurence Kirwan travelled further south to undertake another archaeological mission. Aimed at investigating the ancient remains of Firka, he stayed there for two months and excavated three cemeteries. These are referred to with the letters A, B, and C, the last one being the Christian necropolis. The first two date to the Post-Meroitic ('X-Group') period and contained several intact graves. While the burials in Cemetery B proved to be modest in size and quality, those in Cemetery A were found with a considerable number of objects and sacrificed animals, suggesting the distinguished status of the deceased. Based on these findings, Kirwan (1939, 35) concluded that Cemetery A was earlier than Cemetery B and could be dated between the 5th and the middle of the 6th century AD.

Although the relative chronology established by Kirwan found favour with contemporary scholars (Arkell 1940, 363), his proposed chronological attribution was revised shortly afterwards by Friedlich Wilhelm von Bissing (1938, 22; 1939a, 351; 1939b, 578-579; 1941, 11-14) who demonstrated that the objects in Cemetery A have parallels in the Mediterranean region of the late 4th century AD. One such example is the bronze dove-lamp unearthed in Tomb A.12 (Wenig 1978, 315, No. 277; cf. Arkell 1950). Despite these splendid discoveries, however, little attention has been paid to artefacts other than the imported objects (Török 1988, 189-194). An exception is the study by Jean Siguoirt, who carefully examined Post-Meroitic goblets[1] from the cemeteries at Firka, Sai, and Missminia in order to establish a comparative chronology between the cemeteries. In a recent article derived from his MA thesis (Siguoirt 2011-2012, 248; for the summary of the thesis see Siguoirt 2006-2007), he classified the goblets into three principal forms and posited on the basis of distributional patterns that they represent a morphological evolution within the Post-Meroitic period.

The aim of the present paper is to place the above-described morphological evolution on a firmer basis by re-examining the goblets of Sai and Missiminia, and to provide a chronological framework of the Dal Cataract region by correlating these results with those at Firka. Despite the notorious difficulty of dating Post-Meroitic materials, a discussion will also be given of the wider implications of this study for the process of Christianisation.

## Analysis

### Previous Scholarship

The morphological evolution of the Post-Meroitic goblets was first noted by Kirwan (1939, 33, pl. xxv); he classified the goblets from Firka into two main types according to their forms: short-stemmed (Type 20) or long-stemmed (Type 21). The former appears only in Cemetery A while the latter is restricted to Cemetery B. Based on this fact, Kirwan hypothesised that the goblets acquired a more slender body towards the end of the post-Meroitic period. Another important contribution is from Bruce Trigger (1967, 33-34), who noted that short-stemmed and long-stemmed goblets have a clear division between the lower (Level III) and upper strata (Level II) at Arminna West. Although this site is significantly downstream from Firka, that similar phenomena have been observed in different geographic locations strongly suggests that this evolution of style occurred on a regional basis (see also Millet 1963, 159; Williams 1991, 48). It is against this backdrop that Siguoirt undertook his detailed study. The main body of his data was obtained between 1955 and 1979 when the University of Lille III intermittently excavated 35 Post-Meroitic graves on Sai Island. This expedition resulted in the discovery of 102 completed or semi-completed pottery goblets, which Siguoirt classified into eight types (Figure 1).

These types are divided into two major categories, B1-4 and B5-8, which differ in terms of the presence/absence of an everted rim. This very unusual feature is of interest in itself because it may be related to the alleged morphological evolution. The scarcity of the examples with an everted rim (4 of 102) does not permit an examination of such a

[1] In general, see Adams 1986, Group N.II, ware R1, Style N.IIA.

| Type | Form | Description |
|---|---|---|
| B1 | Squat | 'trapu, carène inexistante, partie inférieure de la panse convexe' |
| B2 | Classic | 'classique, carène quasi inexistante, ni élancé, ni trapu' |
| B3 | Classic | 'classique, carénée, pied plus ou moins annulaire' |
| B4 | Elongated | 'élancé, carène haute, et partie inférieure de la panse concave' |
| B5 | Rimmed | 'à lèvre débordante, trapu, et carène inexistante' |
| B6 | Rimmed | 'à lèvre débordante, élancé, et carène inexistante' |
| B7 | Rimmed | 'à lèvre débordante, ni élancé, ni trapu, et carène inexistante' |
| B8 | Rimmed | 'à lèvre débordante, élancé, et carène inexistante' |

Figure 1. Classification of Post-Meroitic goblets of Sai (after Siguoirt 2001, 29)

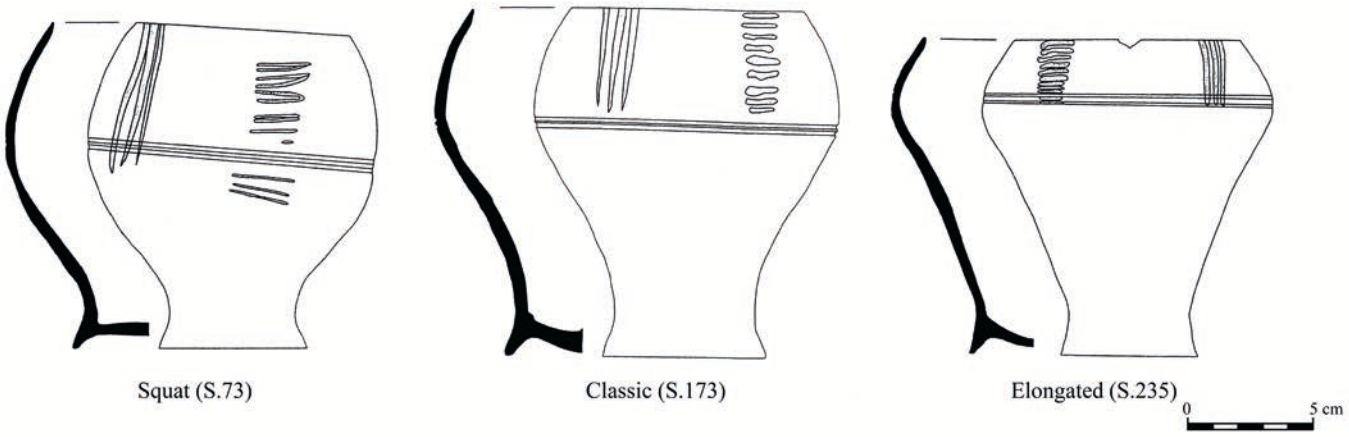


Figure 2. Morphological variations of the Post-Meroitic goblets of Sai (after Siguoirt 2001, pls. ia.4, vi.1, vii.4).

possibility, however, and it is for this reason that the latter category must be excluded from the present analysis. In contrast, Types B1-4 are attested in sufficient numbers (98 of 102). Siguoirt divided them into three principal forms (Figure 2) to assess their distribution in the cemeteries (Figure 3).[2]

Figure 3 shows that the squat and elongated goblets coexist in very few graves.[3] This distribution leaves little doubt that sector SKP,[4] which lacks the squat goblets and in which a large number of the elongated ones are concentrated, is chronologically different, perhaps representing a later phase (Siguoirt 2011-2012, 248). Although a similar conclusion holds true for Cemetery B of Firka (Figure 4), the site does not possess classic goblets. The absence of a transitional form would suggest a significant chronological gap between Cemeteries A and B.

**Morphological Evolution of the Goblets**

These initial indices, or distributional patterns in the cemeteries, support a chronologically-distinct morphological evolution of the goblets. The key question, however, is whether or not the aforementioned evolution – from squat to elongated forms – can be attested in the goblets themselves. Without this, some scepticism would remain, circumventing the construction of an accurate chronology. To this end, we now turn to a detailed look at Sai and Missiminia where a considerable number of Post-Meroitic goblets have been documented.

Let us start with Sai Island. Its approximately one hundred examples have been examined by Siguoirt, who, as we have seen, established three principal forms: squat, classic, and elongated. Since slender-body goblets are supposed to have come chronologically later, such an evolution must be reflected more or less continuously in their stylistic variations. It was with this consideration that Siguoirt (2001, 33) calculated the ratio of body diameter to height,

[2] The total number of goblets in this table differs slightly from that mentioned above. The reason is not clear; it may well be due to errors in counting out examples.
[3] A single exception is a grave(?) in the sector GRX. Neither location nor structure of the burial is known, however.
[4] Sector SKP is located on the south-eastern part of Sai island. The excavation here has revealed seven huge mounds containing individuals placed in an extended position (Gratien and Olive 1981, 149-159).

| Sector/Grave | Squat (B1) | Classic (B2–3) | Elongated (B4) |
|---|---|---|---|
| ?/Mound 1 | | 3 | |
| ?/Mound 2 | 1 | 2 | |
| CX1/T1 | 1 | | |
| CX1/T2 | 5 | 1 | |
| CX1/T2b | | | 2 |
| CX1/T2d | 1 | | |
| CX1/T3a | 2 | | |
| CX1/T3h | 1 | | |
| CX1/T5 | | 6 | |
| CX2/T2 | 2 | 19 | |
| CX2/T2c | | 8 | |
| CX2/T2d | 2 | | |
| CX2/T3 | 9 | | |
| SAP1/T1 | | 1 | 1 |
| SKP2/T3 | | | 4 |
| SKP3/T1 | | 1 | |
| SKP3/T3 | | 4 | 3 |
| GRX/? | 2 | 3 | 1 |
| ? | | 1 | 1 |
| Total: 87 | 26 | 49 | 12 |

Figure 3. Distribution of Post-Meroitic goblets from Sai (after Siguoirt 2001, table 3).

| Sector/Grave | Squat (Type 20) | Classic | Elongated (Type 21) |
|---|---|---|---|
| Cemetery A/A.1 | 2 | | |
| Cemetery A/A.4 | 2 | | |
| Cemetery A/A.8 | 5 | | |
| Cemetery A/A.11 | 12 | | |
| Cemetery A/A.12 | | | |
| Cemetery A/A.14 | 2 | | |
| Cemetery B/B.1 | | | 2 |
| Cemetery B/B.2 | | | 7 |
| Cemetery B/B.3 | | | 3 |
| Cemetery B/B.4 | | | 4 |
| Total: 39 | 23 | 0 | 16 |

Figure 4. Distribution of Post-Meroitic goblets from Firka (after Siguoirt 2001, table 1).

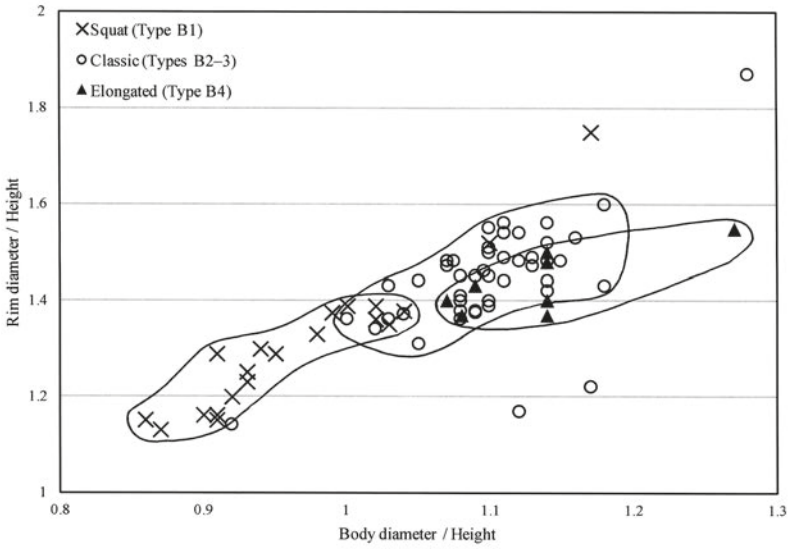


Figure 5. Scatter-plot of the Post-Meroitic goblets of Sai (author's illustration). For data used in this scatter-plot, see Appendix 1.

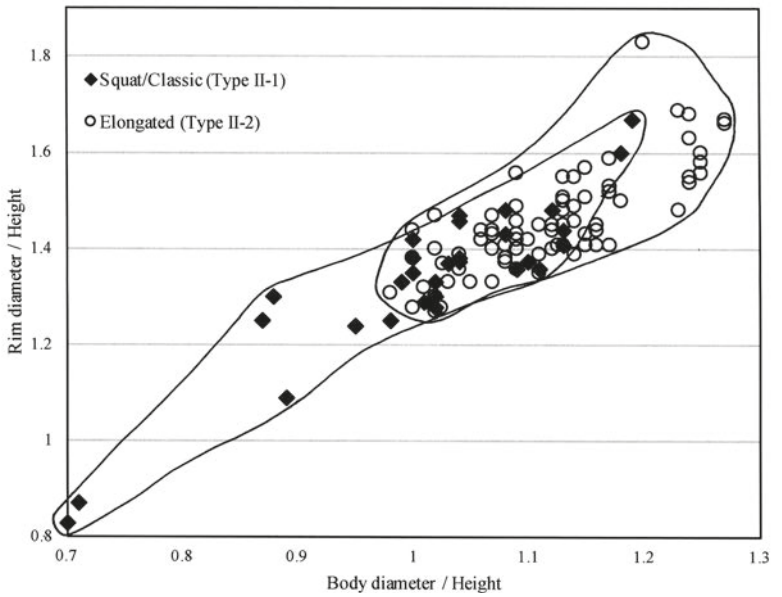


Figure 6. Scatter-plot of the Post-Meroitic goblets of Missiminia (author's illustration). For data used in this scatter-plot, see Appendix 2.

determining the exact proportions of each goblet. In order to render his insight both valid and sound, a new analysis using another ratio – that of rim diameter to height – was undertaken by the author and resulted in Figure 5.

The figure shows a scatter plot from 75 goblets for which precise measurements are available. Following the classification by Siguoirt, the forms of the goblets are indicated by three different symbols: cross, circle, and black triangle. These symbols have their particular distribution areas (delimited by the curved lines). They overlap with each other, which confirms the transition between the three types of goblets.

Turning to Missiminia, where systematic excavations were carried out by André Vila in the early 1970s, its Post-Meroitic cemetery consists of 251 graves. It yielded a variety of funerary objects, including, amongst others, iron weapons and bronze vessels. Vila (1984, 159) attributed the goblets to his Type II with the definition of three sub-types: II-1, II-2, and II-3, the last of which concerns eight examples with an everted rim. For the same reason mentioned in connection with Siguoirt's study, the present analysis will focus only on the first two types (32 and 84 samples, respectively). Types II-1 and II-2 are defined as follows: 'Carène médiane ou basse; la partie inf[érieure] est généralement convexe', 'Carène haute; la partie inf[érieure] est concave'.[5] Despite the classification, however, Vila never referred to a morphological evolution of the goblets. In order to understand these vessels, the same analysis as that conducted for Sai Island was carried out on 113 measurable examples (Figure 6).

This scatter plot shows two groups of goblets. The fact that their distributional areas overlap each other cannot be a simple coincidence because the same phenomenon has been observed at Sai Island.[6] It is therefore probable, indeed, that the goblets developed morphologically from short-stemmed to long-stemmed and that they offer a sound foundation for the chronology of the Post-Meroitic period. What follows is a discussion of the manner in which this result contributes to our understanding of the history of the Dal Cataract area.

## Discussion

### Missiminia

Among the Post-Meroitic cemeteries discussed above, Missiminia provides a good starting point as a significant number of graves were excavated, with detailed documentation. Importantly, some of them were found almost intact and contained dozens of artefacts inside the brick-vaulted axial chamber (Vila 1984, Type B IV-A1). Reserved for

[5] Vila's Types II-1 and II-2 correspond to Siguoirt's squat/classic and elongated forms, respectively, as established by Siguoirt (2001, 32).
[6] It is worth noting that the same observation was made for the goblets of Qasr Ibrim and Meinarti by Pamela Rose (1992, 188).

higher-ranking individuals, this type (seven examples) has to be contrasted with the others in the same cemetery: pit graves (32 examples) and lateral-niche graves (206 examples) (Vila 1984, Types B I-III). For several reasons, these two types can be seen as representing lower classes. First, their burial chambers are very simple with no brick construction.[7] Second, the fact that the largest preserved tumuli[8] are related to the brick-vaulted graves seems to indicate the prevalence of this type over others.

An important observation in this regard is that the brick-vaulted graves are situated in the northern part of the cemetery (Vila 1984, fig. 221). When combined with Siguoirt's (2011-2012, fig. 18) study, this tendency becomes significant since the goblets of the later elongated form concentrate in the same sector. Therefore, there can be little doubt that the Post-Meroitic cemetery of Missiminia was first founded at the southern extremity, and then gradually developed towards the north. Vila's (1984, 181) proposed site chronology, falling between AD 400 and 600, appears to be supported by radiocarbon analysis performed on pieces of skull collected from a grave (Vila 1982, 192). The results indicate a date of 1570 ± 90 BP, which, when calibrated, yields the range of cal. AD 399-578 (68.2% probability) and cal. AD 322-650 (92.8% probability) (Figure 7).[9] This fact alone might not necessarily justify Vila's conclusion. Yet the broad overlap between the two ranges would seem to suggest that the cemetery was used over a long period of time, perhaps developing in two stages (Vila 1985, 152-153). These would be an early manifestation of a lower-class local community in the southern sector, followed by a period of political centralisation with the inception of the burial of local elites with brick-vaulted graves in the northern part of the cemetery.

At an undetermined date, probably during the early 5th century AD (see below), the local elites of Missiminia seem to have interacted with Christianity. These encounters seem likely because of the pottery decorated with the sign of the cross, most of which come from the brick-vaulted graves (Vila 1984, figs. 20.1, 20.4-5, 55.4, 67.8). Several of the deceased were discovered in an extended position with the hands folded across the pelvis. The new religion was, however, far from accepted by lower-class members as they were almost exclusively buried in contracted positions. While the changing attitude towards Christianity is difficult to trace in the archaeological record (Edwards 2001,

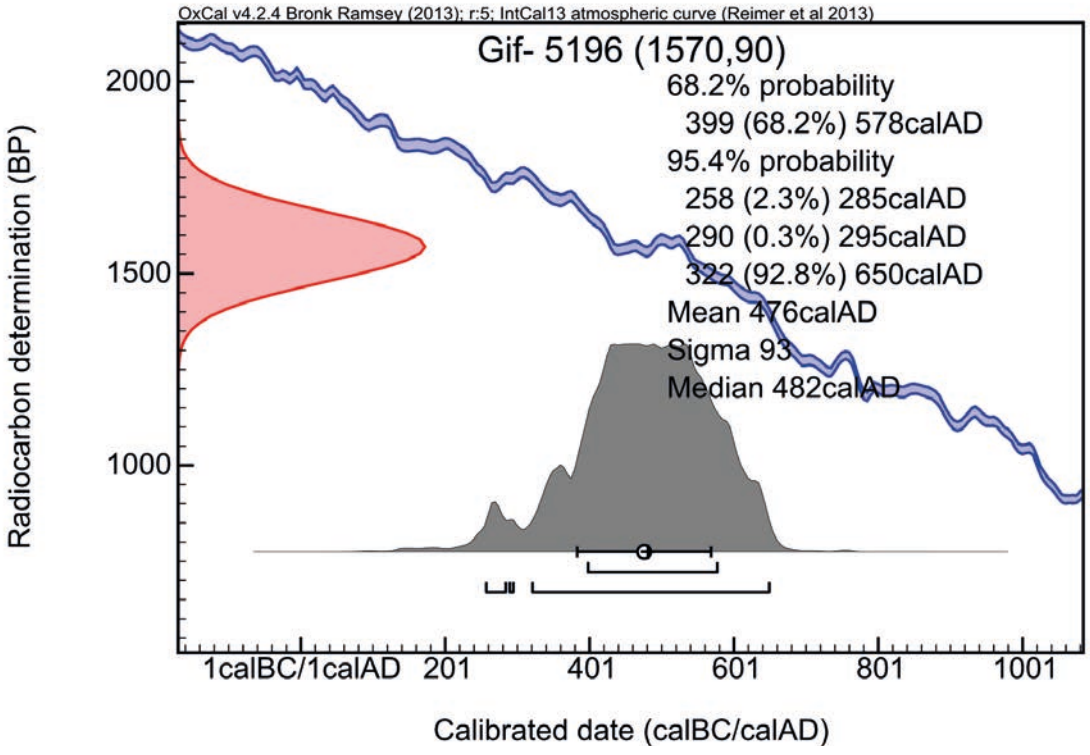


Figure 7. Gif-5196, radiocarbon dating of the Post-Meroitic cemetery of Missiminia (courtesy of Laboratoire des Sciences du Climat et de l'Environnement, CNRS).

[7] Although the lateral-niche of Tomb 83 proved to have been enlarged to receive more offerings, this remains the only exception (Vila 1984, 41-43).
[8] These tumuli and their diameters are: Tombs 16 (13m), 33 (17m), 37 (13.5m), 78 (15m), 80 (18m).
[9] Gif-5196. I am grateful to Michael Fontugne for generously supplying me with the calibrated radiocarbon date. This result, published here for the first time, would seem to contradict Török's (1988, 188) art-historical dating.

95; 2014a, 420-422), one element might perhaps be recognised in the funerary bed. All of the five funerary beds were discovered in the southern part of the cemetery (Vila 1984, 179), which would lead to the supposition that they are associated with the practice of a relatively earlier period and were abandoned by succeeding generations. Nevertheless, it is important to note that the tradition of bed burials appears to coincide with the move of the royal necropolis from Qustul to Ballana (Török 1988, 110; Welsby 2002, 47),[10] an event currently dated to the beginning of the 5th century AD (Török 1988, 221; 2009, 520). If this dating is correct, then the Post-Meroitic cemetery of Missimina would not date back to the 4th century AD, before the move. All in all, as Vila has argued, the cemetery can reasonably be ascribed to AD 400-600.

**Sesebi**

Contemporary grave mounds have also been excavated at Sesebi, of which Tumulus 201 contained a large amount of offerings such as 61 ceramic vessels, two glass containers and an iron spear-head inside the burial chamber (Edwards 1994, 163-172). As pointed out by David Edwards, there is a close parallel at Missiminia, more precisely with Tomb 33 (Vila 1984, 25-30). With other parallels at Firka, especially with Tombs B1 and B2, a combination of the foregoing observations would indicate that these graves are of a broadly similar date in the sixth century AD when Christianity began to dominate the religious landscape of the Middle Nile region (Edwards 1994, 176-177). It is tempting to suppose regular contact between Sesebi and the sites of the Dal Cataract, but the evidence has been so minuscule that no specific interpretation can be advanced here (cf. Edwards 2011, 133-134, 139-140; 2014b, 174).[11]

The encounter with Christianity at Sesebi is indeed difficult to assess. In the absence of materials of apparently Christian origin, the only clue is that Tumulus 101 seems to be associated with a dozen nearby mastaba graves. The latter contained extended bodies with almost no grave goods, indicating their adoption of Christian burial rites. A remarkable discovery is an altar-like mud-brick platform measuring 500x 500mm, which had been placed beneath the tumulus a small distance from the burial chamber (Edwards 1994, 173, pl. xxxix.2). According to Bogdan Żurawski's (2012, 297, 300) observation, such an act is an episode of the 'exteriorisation of the *post-mortem* offerings' and can be taken to indicate 'Christian teaching that stresses the need for a commemorative cult to be performed outside the grave instead of offerings to the dead within the graves'. If his interpretation is correct, Tumulus 101 may date to the transitional phase between the Post-Meroitic and Christian periods.

Furthermore, some comparisons can be made in terms of grave construction at Sesebi. A particularly interesting feature is a layer of schist pebbles on the outer surface of the mounds. Like bed burials, this is one of the characteristics of Ballana, which is not attested at Qustul (Emery and Kirwan 1938, I 26). Though we are far from being able to explain the reason behind the move of the Nobadian royal necropolis, it seems at least probable that the mound builders of Sesebi adopted similar funerary beliefs as those of the Ballana rulers. In any case, the complete absence at Qustul of the pebble-surfaced mounds must be understood in terms of chronology. It would not be irrelevant from this point of view that the same feature is also attested at Sai Island and Firka. As for the former, it exists only in sector SKP of the later phase of the Post-Meroitic period (Gratien and Olive 1981, 149-155). One would therefore expect to see a similar dating at Firka where several mounds are covered by a layer of small green boulders (Kirwan 1939, xii). The description of the excavator is ambiguous as to this point, and it would be erroneous to assume a later date on account of its presence.

**Sai Island**

Christian influence at Sesebi is, at best, only indirectly reflected in the archaeological record. In contrast, it is remarkable that a 'Maltese-shaped' cross was found in the Post-Meroitic cemeteries of Sai Island (Siguoirt 2001, fiche no. 181, Inv. Sai 456). The discovery was made in 1969 in Tumulus 3 in sector CX1. According to the most recent account (Siguoirt 2011-2012, 222), this tumulus measures almost 30m in diameter and consists of a mud-brick vaulted chamber in a simple pit. No skeleton remained. The funerary offerings include a small amulet representing a seated

[10] It must be noted, however, that bronze fittings probably from a bier were found in Qu 2 (Emery and Kirwan 1938, I 381, No. 866; for beds in private burials see Williams 1991, 75).

[11] It is nevertheless interesting to note that no goblet with a splash pattern (Adams 1986, 293, Element HK 8-1, 8-2) was found at Sesebi. The contrast with the sites further north around the Dal Cataract where several examples have so far been reported (Siguoirt 2001, 34; 2011-2012, fig. 8; Maystre 1996, pl. XLIII) may potentially be due to the limited extent of the trade networks controlled by local chieftains at Sesebi.

baboon and a ceramic jar containing the bones of a human foetus. In view of the modest nature of the materials, the dating of the burial is difficult, and the interpretation must be made with great caution. However, it can hardly be a mere coincidence that this tumulus corresponds with the largest Post-Meroitic mound excavated at Sai Island. Moreover, the second and third largest mounds (CX1/T1 and T2) are also located in the same sector. There is little doubt therefore that this sector, which dates to the earlier phase – on the basis of its goblets (Figure 3) – represents the burial ground of important persons (perhaps local chieftains) and that the Maltese cross belonged to them. Here again, like in Missiminia, Christian objects are closely associated with the higher-ranking graves and indicate, however superficially, adoption strategies of the new religion by the local elites.

If the huge tumuli, reaching a diameter of up to 30m, characterise the earlier phase of the Post-Meroitic period at Sai Island, it rarely holds true for sector SKP of the later phase. The excavation here of seven mounds has revealed that they are less imposing in size, measuring between 5 and 16.85m. This is probably partly due to erosion. At the same time, however, it may be that such a decline reflects the progress of Christianisation in which changing burial customs made the size of the superstructure less important. It is perhaps from this perspective that the situation of Missiminia, where most of the preserved tumuli do not exceed 10m in diameter, can be better explored and understood. To confirm such a hypothesis would nevertheless require further comparison with the contemporary cemeteries at Firka.

**Firka**

As indicated by the absence of a transitional form of goblet, Cemeteries A and B of Firka differ significantly in their chronological positions and cannot be considered as directly associated with each other. Among these, Cemetery A is older. Given the extraordinary size of the grave structures, it is probably the burial ground of the local chieftains. The most prominent person was buried in Tomb A.11 in which four sacrificed animals (two camels, a horse, and a cow) and more than 80 objects, including bronze and silver ornaments, were discovered (Kirwan 1939, 3-7; Lenoble 1994, 107). One of the two burial chambers (Room II) had been plundered, with no skeletal evidence; the other (Room I) remained intact and contained five adult bodies. While Török (1988, 189), who meticulously examined the grave inventory, identified Room II as having contained the main burial, this seems rather unlikely because the cow was sacrificed across the entrance to Room I, suggesting its prime importance. What seems to be remnants of a canopied funerary bed and iron spears in the same chamber also favour this interpretation (Kirwan 1935, 194; 1939, 5-6, Nos. 15, 33-38). That such materials unmistakably played a part in the royal funerary rites can be verified at Ballana where the deceased kings – those buried in Tombs Ba 80, 95, 114, and 118 – lay on a wooden bier with, significantly, spears standing upright at its foot (e.g., Emery and Kirwan 1938, I 25, 126, 222; II pl. 26.d).

The testimony of such a custom at Firka, which is quite unparalleled in Nubia, strongly points towards the following two arguments: first, Tomb A.11 and the above-mentioned four Ballana mounds can be ascribed to a similar chronological horizon; second, it seems justifiable to cast doubt on the chronology outlined by Török (1988, 109-114, 145-147, 149-153), according to which Tombs Ba 95, 114, and 118 came considerably later than Ba 80.[12] Regarding Tomb A.11, neither Kirwan nor Bissing gives unambiguous testimony as to exactly when it was constructed, except to suggest that the funerary equipment of Tombs A.12 and A.14 may date to the late 4$^{th}$ or early 5$^{th}$ century AD (Bissing 1939a, 351; 1941, 12, 14). In comparison with this necropolis, I would argue that all of the above royal mounds date to the early phase of the Post-Meroitic period (Sakamoto 2018).

The local chieftain buried at Firka may have been assisted by colleagues, who could be interred in Tombs A.12 and A.14. While the graves remained mostly intact, with several iron spears, no trace of wooden beds was found inside the burial chambers. This appears to suggest a slightly different status for the deceased. With the exception of pottery graffiti bearing religious monograms (Kirwan 1939, pl. xvii), however, there is little archaeological evidence of contact at this early stage between the local elites and Christian culture.[13]

[12] The possibility that the four Ballana mounds have a similar chronological range is also supported by the fact that they bear a striking similarity to one another in their layout and location. Moreover, the burial of royal wives with their husbands occurs only in Tombs Ba 80, 95, 114 (for further discussion see Trigger 1969; 1989, 544; Dann 2009, 52).

[13] It may be noted that a 'Maltese-shaped' cross was found in a reused context of a Meroitic grave at Sibee, a few hundred metres to the north of Firka (Vila 1976a, 34-35). But we know next to nothing about its relation with the Post-Meroitic mounds.

Towards the late Post-Meroitic period, Cemetery B emerged several hundred metres away. With its southern half closely connected with the adjoining Christian necropolis (Cemetery C), it seems certain that Cemetery B dates to the transitional phase between the Post-Meroitic and Christian periods. What remains obscure, then, is the reason behind the reoccupation of the once abandoned site of Firka. The fact that Cemetery B was not constructed near the earlier princely mounds is important because it would suggest a weakening link between this Christianising community and the distant past. It is therefore unfortunate that no trace of settlements remained, with the exception of a rectangular mud-brick house located on the high ground to the east of Cemetery C (Kirwan 1939, 19-21). Measuring approximately 7x12.5m, it contained objects such as sherds, a pottery lamp, and a mud sealing stamped with a cross-like symbol. Fragments of painted lime plaster were also found within the area of the walls, suggesting that the house may once have been decorated with religious scenes. Beyond this minor observation, however, little can be inferred from such a small building, particularly as interesting parallels at Sai are far from understood (Siguoirt 2011-2012, fig. 12).

**Christianisation of Dal Cataract: an archaeological perspective**

Finally, an attempt will be made to present some historical pointers as to how this remote region strategically negotiated the introduction of Christianity during the 5th and 6th centuries AD. Interestingly, with regard to the size of the goblets, the examples from Sai and Missiminia average between 110-140mm in height. That the same concept applies to the goblets of Sesebi would suggest that a relatively homogeneous material culture was shared in the area south of the Dal Cataract (Edwards 1994, 177; Obłuski 2014, 177).[14] The situation is somewhat different in the north; shorter goblets start to increase at Firka and become predominant in the sites further downstream (Bates and Dunham 1927, pls lxi, lxx-lxxii; Kirwan 1939, pl. xxv, Types 20a-d; Presedo Velo *et al.* 1970, figs 1, 16, 25; Donner 1998, pls. 155-156, 164). The significance of this may be minimal, however, since with the exception of kilns at Debeira East and perhaps Qasr Ibrim (Adams 2004, 112-117; 2013, 82), no single manufacturing site for such goblets has so far been identified. Nevertheless, it is worth considering whether these shorter goblets may have been characteristically northern products, as they are found in considerable numbers at sites such as Kalabsha and Wadi Qitna (Strouhal 1984, 103-110). The goblets in this region average between 60-90mm in height and have a number of pronounced ribs around the outer surface.[15] Given the striking absence of these goblets in the area south of the Dal Cataract, it would not be unreasonable to suggest that this distinction owes something to geography – a scenario all the more likely with the observation that Akasha, some 30km downstream from Firka, is often considered the political boundary between Nobadia and Makuria (Monneret de Villard 1938, 136; Kirwan 1939, 34; Jakobielski 1987, 231). Yet what is surely more remarkable is that, as Trigger (1967, 61-62) has noted, none of the elongated goblets are present in the royal cemeteries of Qustul and Ballana, i.e., in the necropolises that continued to exist between AD 380 and 500 (Török 1988, 154; 2009, 520). This would mean that the elongated goblets appeared in the 6th century AD or perhaps somewhat earlier – an observation further supported by the fact that the parallels found in Level II at Arminna West and Cemetery B at Firka are ascribed to the late 5th and early 6th century AD (Kirwan 1939, 34-35; Trigger 1967, 34). The question then arises as to the timing of the appearance of the squat goblets at these sites. In this regard, we have already seen that the squat goblets at Firka are confined to Cemetery A datable to the late 4th and early 5th century AD. Although no specific period has been advanced for the squat goblets at Arminna West, that they are confined to Level III would clearly suggest an earlier date than the late 5th century AD. It would thus seem, albeit in an indirect manner, that the squat and elongated goblets encompass, respectively, the late 4th/early 5th and the late 5th/early 6th century AD. Under this scenario, the classic goblets probably span the entire 5th century AD.

The important conclusion drawn from the above observations is that, as recently argued (Dijkstra 2008, 294, 298, 302), the new religion seemed to have reached Nubia well before the arrival of Byzantine missionaries in the middle of the 6th century AD. Sector CX1 of Sai Island contains not only a cross but also a number of squat goblets, suggesting

[14] See also several dozen Post-Meroitic goblets of Amara (Conde Berdós 1995, 104-107). This does not, of course, preclude the existence of shorter goblets in the Dal Cataract region. Such examples are, however, far less common (e.g., Vila 1978, fig. 24.c).

[15] These ribs may be intended to ensure a better grip on the vessel (Williams 1991, 40). With regard to the function of goblets themselves, many of those discovered in the royal cemeteries of Qustul and Ballana were found to contain date-stones and the bones of birds and animals (Emery and Kirwan 1938, I 394), suggesting their function primarily as a bowl rather than a drinking cup. That the goblets have been used to hold solid material rather than liquid may be further supported by their porous and less dense properties which immediately absorb water (Lister 1967, 15).

substantial interaction with Christianity as early as the beginning of the 5th century AD. As for Missiminia, a somewhat later date is probable because the goblets discovered in Tombs 33 and 119, i.e., graves containing pottery decorated with the sign of the cross, correspond only with the classic and elongated forms (Siguoirt 2001, 59). Even later is Firka Cemetery B, given the complete absence of the classic form.

That these three sites interacted with Christianity in different chronological contexts is at least interesting as it would indicate the changing pattern of religious impact in Nubia. One possible explanation for this pattern would be that Christianity gradually expanded its influence, first into the local community of Sai Island and then into that of Missiminia and Firka Cemetery B. With regard to Sai, we have already suggested that the new religion was adopted by the local elites in sector CX1 and gradually penetrated into sector SKP of the later phase. A similar scenario might well be proposed in relation to Missiminia. In addition to pottery decorated with the sign of the cross, most of which come from the northern part of the cemetery, a cruciform design was found tattooed on the skin of a male mummy buried in a grave in the southern sector (Vila 1984, fig. 164.2). As goblets of the earlier squat form are concentrated in the same sector, it is tempting to suggest that Christianity spread to Missiminia at a relatively early date in the 5th century AD and that the tattooed individual, buried according to the native mortuary custom (lying on a funerary bed in a contracted position), was among the first of the local elite to adopt the new religion. In the absence of unequivocal evidence of his social status (for a demographic assessment see Strouhal 1987), however, such a conclusion needs critical scrutiny before it can be accepted.

The exact process of the Christianisation of Firka Cemetery B is more difficult to understand as it raises the question as to why Cemetery A – which was the main regional centre during the late 4th and early 5th century AD – was abandoned and why its local chieftains did not survive to witness the spread of Christianity. While a significant chronological gap between the two cemeteries seems likely, this does not necessarily indicate destruction by the Nobadian ruler Silko (cf. Monneret de Villard 1940, 70), who, according to a triumphal inscription found at Kalabsha, ravaged the country upstream of his kingdom during the first half of the 5th century AD (Eide *et al*. 1998, 1152; Burstein 2006, 448-449). However, if this reading is correct, then the inscription might instead explain the shift of the main regional centre to Sai and Missiminia, where the interaction with Christianity is clearly visible in the archaeological record.

Finally, another implication of this study is its potential contribution to the history of the Kingdom of Makuria. What is particularly interesting in this respect is the so-called tunnel graves (Mahmoud el-Tayeb 2011), which are a type of grave common in the Dongola Reach with possible parallels at Kosha East and Gammai. In Kosha East, Tomb 3-P-1/1 was provided with a tunnel that connected the burial chamber and the pit dug at the edge of the mound (Vila 1976b, 74-76). We have reason to suppose that this grave dates to an earlier phase of the Post-Meroitic period, as all four goblets are the earlier squat form. The same holds true for the goblets from the tunnel graves at Gammai (Bates and Dunham 1927), suggesting a date between the late 4th and early 5th century AD if the ceramic chronology discussed above is taken into consideration. The situation is somewhat different in the Dongola Reach. Here the tunnel graves have been ascribed to the Early Makuria Phase II between the mid-5th and mid-6th century AD (Mahmoud el-Tayeb 2012, 70-73), i.e., approximately one century later than those in the north. It remains to be determined whether this chronological gap is due to different funerary traditions and to what extent they shared a common background. The material culture of the Dal Cataract would therefore warrant scrutiny in this light in order to be linked much more directly with local and wider history. Despite the difficulties inherent in such an endeavour, which as yet suffers from the ambiguous dating of Post-Meroitic materials, the expectation is that the present study will contribute to an understanding of this relatively short, but important period, in the shifting cultural and religious landscape.

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## Appendix

The data listed below represents all of the Post-Meroitic goblets used in the scatter-plot analyses. The measurements are given in mm.

| Type | Object | Height | Body | Rim | | Type | Object | Height | Body | Rim |
|---|---|---|---|---|---|---|---|---|---|---|
| B1 | S.73 | 123-128 | 114 | 82 | | B2 | S.163 | 111-112 | 121 | 97 |
| B1 | S.129 | 140 | 120 | 80 | | B2 | S.171 | 136-145 | 110 | 75 |
| B1 | S.158 | 126 | 138 | 110 | | B2 | S.173 | 138 | 122 | 94 |
| B1 | S.159 | 121-123 | 132 | 102 | | B2 | S.174 | 120 | 102 | 84 |
| B1 | S.161 | 118 | 131 | 102 | | B2 | S.176 | 124-126 | 110 | 80 |
| B1 | S.164 | 111-115 | 131 | 98 | | B2 | S.177 | 130 | 116 | 88 |
| B1 | S.166 | 115-117 | 127 | 90 | | B2 | S.178 | 125-127 | 118 | 85 |
| B1 | S.167 | 121 | 130 | 97 | | B2 | S.491 | 122-123 | 118 | 89 |
| B1 | S.179 | 132 | 133 | 96 | | B2 | S.492 | 135 | 118 | 89 |
| B1 | S.180 | 124 | 131 | 96 | | B2 | S.493 | 120 | 119 | 88 |
| B1 | S.213 | 100-102 | 117 | 89 | | B2 | S.494 | 124 | 120 | 87 |
| B1 | S.234 | 111 | 110 | 80 | | B2 | S.495 | 126-129 | 118 | 92 |
| B1 | S.237 | 125-127 | 134 | 97 | | B2 | S.1227 | 119 | 109 | 86 |
| B1 | S.238 | 121-122 | 119 | 89 | | B2 | S.1228 | 130-133 | 116 | 88 |
| B1 | S.452 | 119 | 128 | 97 | | B2 | ? | 133 | 123 | 98 |
| B1 | S.453 | 132 | 130 | 95 | | B2 | ? | 135-137 | 119 | 92 |
| B1 | S.454 | 132-135 | 136 | 10 | | B2 | ? | 136 | 121 | 116 |
| B1 | S.455 | 123 | 120 | 91 | | B2 | ? | 132 | 113 | 108 |
| B1 | GRX.1 | 123-126 | 120 | 90 | | B2 | ? | 137 | 125 | 94 |
| B1 | GRX.9 | 133 | 146 | 115 | | B2 | ? | 130-133 | 117 | 85 |
| B2 | S.67 | 129 | 126 | 96 | | B2 | GRX.11 | 125 | 110 | 88 |
| B2 | S.68 | 130-133 | 118 | 91 | | B2 | GRX.13 | 122 | 119 | 90 |
| B2 | S.102 | 123 | 112 | 82 | | B3 | S.69 | 114 | 109 | 87 |
| B2 | S.127 | 122-129 | 114 | 90 | | B3 | S.72 | 118 | 102 | 77 |
| B2 | S.130 | 139 | 129 | 96 | | B3 | S.128 | 131 | 116 | 88 |
| B2 | S.133 | 132-135 | 124 | 94 | | B3 | S.142 | 132 | 120 | 85 |
| B2 | S.134 | 129 | 113 | 87 | | B3 | S.148 | 130-133 | 120 | 88 |
| B2 | S.135 | 127 | 121 | 88 | | B3 | S.490 | 120 | 110 | 83 |
| B2 | S.137 | 125 | 117 | 85 | | B3 | ? | 110 | 101 | 80 |
| B2 | S.138 | 129 | 120 | 87 | | B4 | S.45 | 119-121 | 105 | 80 |
| B2 | S.139 | 131-132 | 118 | 87 | | B4 | S.235 | 127 | 117 | 89 |
| B2 | S.140 | 130-132 | 118 | 85 | | B4 | S.236 | 105 | 98 | 75 |
| B2 | S.141 | 128-132 | 114 | 90 | | B4 | S.1420 | 133 | 117 | 95 |
| B2 | S.144 | 134-136 | 123 | 93 | | B4 | S.1421 | 126-128 | 111 | 93 |
| B2 | S.145 | 125 | 114 | 89 | | B4 | ? | 129-132 | 120 | 95 |
| B2 | S.146 | 133-135 | 114 | 84 | | B4 | ? | 127 | 111 | 86 |
| B2 | S.147 | 133 | 120 | 85 | | B4 | GRX.2 | 116 | 91 | 75 |

Appendix 1. Goblets from Sai Island.

| Type | Object | Height | Body | Rim | | Type | Object | Height | Body | Rim |
|---|---|---|---|---|---|---|---|---|---|---|
| II-1A | 6/2 | 135 | 130 | 92 | | II-2A | 119/6 | 125 | 110 | 90 |
| II-1A | 118/4 | 120 | 110 | 88 | | II-2A | 119/8 | 122 | 118 | 92 |
| II-1A | 139/4 | 118 | 115 | 86 | | II-2A | 128/1 | 115 | 115 | 80 |
| II-1A | 139/7 | 150 | 127 | 94 | | II-2A | 132/1 | 130 | 116 | 90 |
| II-1A | 145/5 | 129 | 120 | 90 | | II-2A | 132/4 | 118 | 120 | 90 |
| II-1A | 145/6 | 120 | 108 | 88 | | II-2A | 158/bis | 112 | 100 | 80 |
| II-1A | 145/7 | 120 | 118 | 94 | | II-2A | 159/1 | 128 | 116 | 90 |
| II-1A | 160/4 | 130 | 130 | 96 | | II-2B | 122/1 | 118 | 110 | 84 |
| II-1A | 177/3 | 150 | 126 | 90 | | II-2B | 183/1 | 116 | 116 | 84 |
| II-1A | 198/1 | 110 | 100 | 80 | | II-2C | 33/25 | 124 | 110 | 80 |
| II-1A | 212/1 | 115 | 132 | 92 | | II-2C | 33/29 | 115 | 108 | 80 |
| II-1A | 214/1 | 130 | 148 | 100 | | II-2C | 58/2 | 126 | 118 | 88 |
| II-1A | 233/2 | 110 | 155 | 126 | | II-2C | 60/6 | 126 | 110 | 88 |
| II-1A | 240/3 | 140 | 134 | 96 | | II-2C | 61/5 | 130 | 120 | 92 |
| II-1A | 240/4 | 135 | 130 | 98 | | II-2C | 78/2 | 125 | 120 | 90 |
| II-1A | 376/1 | 96 | 138 | 116 | | II-2C | 78/3 | 130 | 115 | 86 |
| II-1A | 477/3 | 116 | 115 | 90 | | II-2C | 80/2 | 132 | 112 | 88 |
| II-1B | 118/3 | 118 | 105 | 80 | | II-2C | 80/4 | 145 | 116 | 92 |
| II-1B | 139/8 | 110 | 106 | 80 | | II-2C | 83/5 | 128 | 114 | 88 |
| II-1B | 165/4 | 122 | 120 | 92 | | II-2C | 119/9 | 120 | 110 | 84 |
| II-1B | 165/5 | 125 | 125 | 88 | | II-2C | 131/5 | 126 | 116 | 90 |
| II-1B | 173/1 | 138 | 140 | 104 | | II-2C | 131/6 | 123 | 120 | 90 |
| II-1C | 6/1 | 135 | 120 | 96 | | II-2C | 132/3 | 128 | 110 | 88 |
| II-1D | 119/4 | 125 | 127 | 100 | | II-2D | 15/14 | 140 | 110 | 84 |
| II-1D | 160/5 | 130 | 120 | 88 | | II-2D | 15/17 | 124 | 100 | 74 |
| II-1D | 169/2 | 130 | 128 | 100 | | II-2D | 15/18 | 125 | 100 | 80 |
| II-1D | 177/1 | 124 | 130 | 100 | | II-2D | 16/3 | 115 | 115 | 90 |
| II-1D | 177/2 | 138 | 138 | 100 | | II-2D | 16/4 | 125 | 118 | 88 |
| II-1D | 254/1 | 100 | 112 | 92 | | II-2D | 16/5 | 128 | 115 | 88 |
| II-1D | 477/4 | 130 | 115 | 90 | | II-2D | 16/7 | 125 | 100 | 78 |
| II-2A | 15/15 | 118 | 95 | 76 | | II-2D | 33/9 | 120 | 105 | 82 |
| II-2A | 15/16 | 127 | 110 | 90 | | II-2D | 33/10 | 126 | 102 | 82 |

Appendix 2. Goblets from Missiminia.

| Type | Object | Height | Body | Rim | | Type | Object | Height | Body | Rim |
|---|---|---|---|---|---|---|---|---|---|---|
| II-2A | 15/19 | 110 | 94 | 78 | | II-2D | 33/13 | 120 | 110 | 82 |
| II-2A | 16/2 | 130 | 115 | 84 | | II-2D | 33/19 | 135 | 115 | 88 |
| II-2A | 33/1 | 120 | 106 | 80 | | II-2D | 33/20 | 118 | 110 | 82 |
| II-2A | 33/6 | 120 | 118 | 86 | | II-2D | 33/21 | 125 | 115 | 80 |
| II-2A | 33/26 | 135 | 126 | 92 | | II-2D | 33/23 | 135 | 110 | 80 |
| II-2A | 33/27 | 118 | 105 | 82 | | II-2D | 33/24 | 133 | 105 | 80 |
| II-2A | 33/28 | 122 | 108 | 84 | | II-2D | 33/30 | 116 | 102 | 78 |
| II-2A | 58/1 | 125 | 120 | 90 | | II-2D | 33/31 | 130 | 112 | 90 |
| II-2A | 60/2 | 130 | 106 | 88 | | II-2D | 78/7 | 120 | 115 | 88 |
| II-2A | 60/3 | 130 | 114 | 84 | | II-2D | 78/8 | 135 | 122 | 100 |
| II-2A | 60/7 | 122 | 110 | 88 | | II-2D | 80/6 | 130 | 115 | 88 |
| II-2A | 61/1 | 135 | 132 | 92 | | II-2D | 80/7 | 135 | 120 | 96 |
| II-2A | 61/2 | 125 | 115 | 88 | | II-2D | 83/2 | 130 | 105 | 80 |
| II-2A | 78/6 | 132 | 110 | 72 | | II-2D | 83/4 | 120 | 115 | 88 |
| II-2A | 78/11 | 130 | 115 | 92 | | II-2D | 96/2 | 124 | 115 | 90 |
| II-2A | 80/1 | 116 | 115 | 88 | | II-2D | 96/3 | 128 | 110 | 86 |
| II-2A | 80/3 | 140 | 120 | 88 | | II-2D | 100/1 | 115 | 100 | 76 |
| II-2A | 83/3 | 112 | 110 | 88 | | II-2D | 119/5 | 128 | 125 | 100 |
| II-2A | 93/2 | 130 | 115 | 84 | | II-2D | 119/7 | 122 | 120 | 96 |
| II-2A | 93/3 | 140 | 120 | 92 | | II-2D | 125/2 | 120 | 110 | 88 |
| II-2A | 93/4 | 120 | 110 | 84 | | II-2D | 131/3 | 132 | 122 | 96 |
| II-2A | 96/1 | 138 | 120 | 88 | | II-2D | 131/4 | 130 | 124 | 98 |
| II-2A | 97/2 | 135 | 116 | 96 | | II-2D | 146/2 | 122 | 114 | 92 |
| II-2A | 97/3 | 125 | 120 | 92 | | II-2D | 148/2 | 124 | 110 | 84 |
| II-2A | 118/1 | 130 | 128 | 100 | | | | | | |

Appendix 2 (cont.). Goblets from Missiminia.