SUDAN & NUBIA

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Front cover. Block 1000.0049 from Naga (photograph courtesy Karla Kroper). Above. Pottery jar with decoration of sorghum heads from BMC 60, Berber (photograph courtesy Mahmoud Suliman Bashir).

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Chronology, correspondence analysis, and Lower Nubia in the 3rd century BC: a reassessment of the Meroitic cemetery at Faras

Henry Cosmo Bishop-Wright



Figure 1. Map of Kush showing sites discussed in this paper. Reproduced with permission of the Sudan Archaeological Research Society.

Introduction

This paper is based on a reassessment of Francis Llewellyn Griffith's excavation of the Meroitic cemetery at Faras (Lower Nubia), and was first presented at the annual colloquium of the Sudan Archaeological Research Society on Saturday 13 May 2023. Its purpose is twofold: to outline the methodology and results of a new chronological scheme for Meroitic Faras, and to discuss the implications of this chronology on Lower Nubia in the 3^{rd} century BC. It commences with an introduction to the site and a review of past understandings of Lower Nubian chronology, with particular focus on the traditional model of 'abandonment and resettlement' (Adams 1976; cf. Williams 1985; Török 1987). Following this, a new chronology of the cemetery is presented and the use of correspondence analysis to complete a seriation of its pottery is outlined. The final section then addresses the implications of this chronology on the understanding of Lower Nubia in the 3rd century BC. The hypothesis that the earliest burials at Faras are indicative of an independent cultural group affiliated with neither the Meroitic south nor the Ptolemaic north is offered, and parallels with the Meroitic cemeteries at Qustul (Williams 1991)

and Amir Abdallah (Fernández 1983; 1984) are suggested. Thus, this paper acts as a primer for further discussion of Faras in the Meroitic period and hopes to reinvigorate broader debate on the status, culture, and political affiliation of Lower Nubia's population in the second half of the 1st millennium BC.

This reassessment of Meroitic Faras draws upon the author's doctoral work and was facilitated by study of Griffith's unpublished field records, now archived in the Oxford Griffith Institute (Bishop-Wright 2021; 2022; forthcoming a-c). It is not the first attempt to retrospectively review the site based on archived records. Indeed, several instructive papers focussing on pottery from the cemetery or the dissemination of its artefacts in museum collections have been published (Török 1987; Francigny 2007; McCann 2012; Kilroe 2021; Kilroe and Spataro forthcoming). However, unlike these studies, the author adopted a holistic approach that did not privilege any single class of evidence and facilitated more general conclusions concerning the chronology of the cemetery and the wider role of Faras as a mediator of exchange between Meroitic Kush and Ptolemaic-Roman Egypt. This paper focuses on the chronological aspects of the project.

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Faras in Lower Nubia

The site of Faras (Meroitic 'Phrse'; Greek 'Pachoras') was located on the west bank of the Nile 50km north of Wadi Halfa, in the region between the First and Second Cataracts commonly known as Lower Nubia (Figure 1).¹ It lay along a fertile stretch of land bordered by a band of sandhills giving way to a shallow valley and a rocky escarpment marking the desert edge. This valley was all that remained of a palaeochannel that may once have been the primary course of the Nile and probably continued, at least as a seasonal *wadi*, into the 1st millennium BC (Griffith 1921, 2). Thus, for part of the year, the area would have existed as a fertile island, and it is likely owing to this that it was so rich in archaeology (Mileham 1910, 22; Trigger 1965, 152-153).

The earliest western travellers to visit Faras and publish observations on its antiquities were Charles Irby and James Mangles (1845, 5-6) who passed through in 1817 and found the remains of a 'large Nubian city', temple fragments with Egyptian hieroglyphs, and a collection of 'Greek and Roman ornaments'. The existence of substantial ruins was then corroborated by the German-born architect Franz Gau (1822, opposite 58) who published a drawing of the site that showed a large, fortified citadel. In the following years, Frédéric Cailliaud (1826, 318) and Gardner Wilkinson (1843, 331) also visited, the former noting 'hypogée et des momies'; the latter, many sculptural fragments littering the ground. Then, in 1843,



Figure 2. The Christian citadel at Faras, photographed *c.* 1910. Reproduced with permission of the Griffith Institute, University of Oxford.

¹ For 'Faras' and its etymology, see Griffith 1925b.

Lepsius (*Denkmäler* V, 181-182) recorded four Coptic churches, and sculpted blocks bearing the cartouches of Thutmose III, Amenhotep II and Ramesses II. Already by the mid-19th century, and long prior to any formal excavation, it was therefore apparent that Faras had a deep history of occupation that spanned at least the New Kingdom (*c*. 1550–1069BC) and Christian periods (6th century AD+). Its long antiquity was finally confirmed in 1908 by Geoffrey Mileham (1910) who, accompanied by David Randall-MacIver, surveyed the area under the auspices of the Eckley B. Coxe Junior Expedition to Nubia. In addition to completing limited excavation of two churches, Mileham (1910, 25-26) located a large Meroitic cemetery to the north of the Christian citadel (Figure 2). Tasked with conducting a technical study of early-Christian structures, Mileham had little time for such remains and made no further investigation. The cemetery did, however, attract the interest of Randall-MacIver who recommended it as a serious object of study to the Oxford Egyptologist Francis Llewellyn Griffith.

Arriving in 1910, Griffith then completed two astonishingly productive seasons at Faras, during which he excavated the cemetery and uncovered 2220 Meroitic graves: to date, the largest known mortuary site of the Meroitic period (*c.* 300BC–AD350). In addition, he excavated two earlier cemeteries corresponding to Reisner's A-Group (4th millennium BC) and C-Group (3rd–2nd millennium BC), a 12th dynasty fort and several New Kingdom temples, including one built by the 18th dynasty pharaoh Tutankhamun that was later chosen as the site of the Meroitic cemetery (Figure 3; Reisner 1910, 5; Griffith 1921; Morkot 2023, 205). Also of Meroitic date was a structure dubbed the 'Western Palace' that may have been the residence of a local governor or, more likely, a storage magazine (Griffith 1926, 29; cf. Adams 2000, 36; Vincentelli 2003, 84). Finally, there was the walled citadel that functioned as the centre of Christian occupation and



Figure 3. View over the ruined temple of Tutankhamun at Faras Meroitic Cemetery. Reproduced with permission of the Griffith Institute, University of Oxford.

probably obscured the primary Meroitic habitation site which, despite the later efforts of a Polish team during the UNESCO campaign, was never investigated (Griffith 1926, 54-93; 1927, 57-97; Michałowski 1962; 1965; Godlewski 2020). Following the construction of the High Dam at Aswan and subsequent filling of Lake Nasser, the entire site was irrevocably lost to archaeology. Meroitic settlement at Faras is, therefore, practically unknown and understanding of the site in this period rests on the cemetery.

Unfortunately, Griffith's excavation was never fully published and its potential for academic study has been attenuated by the summary quality of its preliminary reports (Griffith 1924; 1925a). One issue with these reports is that Griffith did not present sufficient data for his conclusions to be tested and this has encouraged the perpetuation of ideas, particularly chronological, that may have been revised had a final publication been produced. This is particularly problematic as Griffith's original chronology incorporated flawed assumptions concerning the abandonment and resettlement of Lower Nubia that originated in the early 20th century work of George Reisner and Cecil Firth. These assumptions were then perpetuated throughout the 20th century, retarding the academic understanding of Lower Nubia in the Meroitic period.

Lower Nubian chronology and the Meroitic period

The chronological problems have their inception in the first Archaeological Survey of Nubia (1907-1912) which, after four seasons' work, failed to identify any material that could be assigned to the period 900–300BC (Reisner 1910, 342; Firth 1927, 29). In publishing the results, Firth (1915, 21) sought to explain this gap by proposing that, throughout the 2^{nd} millennium BC, the levels of the Nile had consistently fallen causing the Lower Nubian floodplain to contract. Consequently, the territory could no longer support an agrarian population and transitioned into a 'deserted frontier state' that was only resettled some seven centuries later when a new form of irrigation technology – the so-called Persian Wheel (*saqia*) – was introduced from Ptolemaic Egypt (Firth 1915, 21; 1927, 29).²

A falling Nile was thought to have had a particularly egregious impact on Lower Nubia as the river valley in this region was typically narrow and, in most areas, already suffered a limited floodplain (Trigger 1965, 12-14; Heidorn 2023, 2-4). The idea of 'hydraulic crisis' was, however, merely a hypothesis constructed to explain a perceived archaeological gap and lacked supporting evidence. Nevertheless, it was swiftly absorbed into scholarship and subsequently became the basis of Griffith's (1924, 117-118) influential chronology of Faras, which was dated no earlier than 100BC. By the mid-20th century, the principle of abandonment and resettlement was integrated into more general syntheses (e.g., Adams 1964, 107; 1976; Emery 1965, 221; Shinnie 1967, 62-63; Millet 1969, 1), even if the notion of hydraulic crisis itself had begun to be questioned (Trigger 1965, 113) and, eventually, vigorously critiqued (Trigger 1976, 105-106; Jacquet-Gordon 1982, 452; Heidorn 1992, 10-15).

There is no unequivocal evidence to support the idea that a dramatically falling Nile resulted in the abandonment of Lower Nubia, or that the perceived 'resettlement' was brought about by *saqia* introduction. While there were undeniable periods of drought throughout the 1st millennium BC, inscriptions recording the maximum height of inundation in Egypt during the 22nd dynasty, 23rd dynasty and Ptolemaic period also demonstrate that there were episodes of extremely high Niles (Broekman 2002, 164-165; Bonneau 1971, 221-233). Indeed, a well-known stela from Kawa records an exceptional inundation *c.* 685BC, during which it was even said to have rained in Nubia (Eide *et al.* 1994, 150-151). Furthermore, closer inspection of the archaeological data indicates that, if the *saqia* was introduced in the Meroitic period at all, it only appeared in the terminal phase and cannot be cited as an explanation for resettlement (Monneret de Villard 1941, 44-46; Edwards 1996, 51; 1999c, 88; Fuller 2015, 9; cf. Adams 1976, 15). At Faras, a site which produced almost 3000 diagnostic pottery vessels and, even by Griffith's preliminary chronology, was in

² For the saqia, see Adams 1977, 346, fig. 56.

continuous use for five centuries, just four *saqia* jars were recorded, all from terminal-Meroitic or X-Group graves (Griffith 1924, 145).

The primary support for both the resettlement-by-*saqia* and hydraulic crisis hypotheses was Firth's original assumption that a lack of archaeology equates to a lack of population. The supposed chronological gap *c*. 900–300BC that subsequently emerged can now be filled. There is, for example, evidence for Saite and Persian occupation at the Second Cataract fortress of Dorginarti (Heidorn 1991; 2023), 25th dynasty activity at Qasr Ibrim and Kalabsha (Griffith 1924, 116; Aldsworth 2022), and possible Napatan pottery from Gezira Dabarosa (Hewes 1964, 178-179; Lister 1967, 63). Particularly pertinent to this paper is Bruce Williams' (1985; 1991) important analysis of the Meroitic cemetery at Qustul (Cemetery Q) which was argued to have been in use from the early Ptolemaic period, perhaps with direct Napatan continuation (Williams 1985, 151-170; 1991, 9-23, 171).

The earliest graves at Qustul Q ('Phase I') consisted of subterranean chambers cut on the same axis as the shaft (so-called 'cave graves') and seldom contained grave-goods other than a garland of leaves and a palm-log coffin (Williams 1991, 23, fig. 141). The human remains were, as is typical for northern Meroitic practice (Francigny 2016, 147-148), extended on their backs with their heads orientated approximately west. Atypically, however, the chamber entrances often opened from the east, towards the foot of the burial (e.g., Williams 1991, fig. 74). East-entering cave graves with small assemblages are also characteristic of Meroitic remains at Amir Abdallah (Abri) where they have been independently dated to the 3rd century BC (Fernández 1983, 143-148 'Generación 1') and, as identified by Griffith (1923, 77; 1925a, 58; cf. Lohwasser 2010, 35), were common in the Napatan cemetery at Sanam (*c.* 8th–5th century BC). They might also be compared to early-Ptolemaic graves excavated by Reisner (1910, 343) between Philae and Kalabsha that, while containing mummified remains in stone or pottery coffins, had no grave-goods other than garlands of leaves and palm fronds. It would certainly seem that east-opening cave graves lacking grave-goods could be a marker of early-Meroitic mortuary practice between the First and Third Cataracts: a possibility that is returned to below.

Beyond archaeology, certain historical sources support the conclusion that Lower Nubia was not totally abandoned during the 1st millennium BC. As discussed by Török (2009, 380-384), Bion of Soloi's late 4th or early 3rd century BC itinerary records various toponyms between the First and Second Cataracts, indicating permanent or semi-permanent settlement during the early years of Ptolemaic rule (Pliny *HN*, 6.178-9). Similarly, the annals of the Napatan kings Harsiyotef and Nastasen allude to some form of population in the territory, potentially as early as the 5th century BC (Eide *et al.* 1996, nos 78, 84).

Harsiyotef's inscription (regnal year 35, early 4th century BC) records a campaign into a territory called 'Akne' where battles were fought against a certain 'Braga' and 'Saamanisa' (Eide *et al.* 1996, 450-451). During this campaign, the Napatan forces reached Aswan with the implication that these two chiefs held jurisdiction in a territory of Lower Nubia. That 'Akne' does equate to Lower Nubia is supported by Pliny the Elder's (*HN* 6.184) claim in the 1st century AD that 'Acina' was situated some 64 miles south of Qasr Ibrim, and four Meroitic funerary inscriptions from Karanòg and Faras that list their subjects as viceroys of 'Akine' (Griffith 1911, nos 47, 77, 78; 1922, no. 21). In the Meroitic period, Akine is understood to be the southern half of Lower Nubia, indicating direct continuation of the toponym from the time of Harsiyotef. This is important as Harsiyotef's inscription clearly demonstrates that the region was populated (cf. Priese 1976, 87). This population is mentioned again in Nastasen's inscription (regnal year 8, mid-late 4th century BC), this time led by the local chief Kambasawden who appears to have been the leader of

a pastoral group operating in the region during the late 4^{th} century BC (Eide *et al.* 1996, 485-486).³ In sum, the archaeological and historical evidence pertaining to Lower Nubia in the late Napatan and early Meroitic periods reveals that the real issue is not *whether* this region was settled, but *by whom*.

When discussing 'settlement', it is vital to consider what it is meant by the term and what archaeological traces can be expected from it. Implicit within the flawed chronological model of Firth is the assumption that Lower Nubia always entertained fixed communities reliant on mud-brick architecture and riverine cemeteries (cf. Edwards 1999c, 66-67; Cooper 2022, 58). Hence, when remains indicative of such habitation appear to be absent, it has been assumed that the territory was abandoned. This ignores the possibility, alluded to in the records of Harsiyotef and Nastasen, that throughout the 1st millennium BC the region supported groups that migrated into the river valley from the Eastern Desert on a seasonal basis and left only ephemeral traces (cf. Cooper 2022, 50-51). Research has demonstrated that various populations were active in the Eastern Desert throughout the preceding millennia (e.g., Sadr et al., 2004; Cooper and Vanhulle 2019; Manzo 2020). While knowledge of its peoples in the 1st millennium BC is slight, the possibility that it continued to sustain a population into this period should not be discounted, particularly as much of the evidence, for example the proliferation of tumuli surveyed along the Wadis Allaqi and Gabgaba, is extremely difficult to date (Sadr et al. 1995, 206-220; Manzo 2020, 77). Indeed, recent study of ceramics from the Ptolemaic fort at Bi'r Samut on the road between Edfu and Berenike documents a previously unknown pottery type from a 3rd century BC deposit suggested as indicative of a contemporary desert group (Gates-Foster 2022).

The possibility that independent groups inhabited Lower Nubia throughout the 1st millennium BC adds further objections to the abandonment and resettlement model. It also raises important questions surrounding how these groups might have interacted with both the newly-installed Ptolemaic rulers of Egypt and the growing power of Meroe. Reassessment of the Meroitic cemetery at Faras offers the possibility to shed some light on this enigmatic period, and to test Williams' important conclusion that Meroitic activity in Lower Nubia commenced in the early 3rd century BC. Faras also offers the opportunity to attempt a new chronology of the cemetery based on ceramic seriation that can be used to retrospectively date other Meroitic sites in the territory. The following section outlines the methodology and results of just such a chronology.

A new chronology of the Meroitic cemetery at Faras: summary and results

The new chronology of the Meroitic cemetery at Faras was based on information contained within the complete catalogue of unpublished grave cards from Griffith's original excavation (Figure 4). The quality and quantity of data available in these cards was far greater than that which was published in the preliminary reports and enabled the creation of a spreadsheet detailing the structure, inventory and stratigraphic relationship of every grave Griffith excavated. Almost half (1035) these graves were found to contain no artefacts of any class and were simply recorded as 'empty'. The remaining 1185 all contained some form of object, 717 yielding at least one *in situ* ceramic vessel. The graves with *in situ* pottery were then used to create a dataset detailing the different vessel forms found in each assemblage. Sufficient information was thus available to attempt a chronology of the cemetery based on ceramic seriation.

The use of seriation to produce relative chronologies of ceramic forms has been successfully demonstrated by David Edwards (1999a; 1999b) on pottery from Meroe's western pyramid field (Begrawiyah

³ Hintze's (1959, 17-20) suggestion that Kambasawden should be equated with the Late Period pharaoh Khabbash is unconvincing. Following Katznelson (1966) and Spalinger (1978, 147), Kambasawden should instead be considered an independent chief of Lower Nubia.

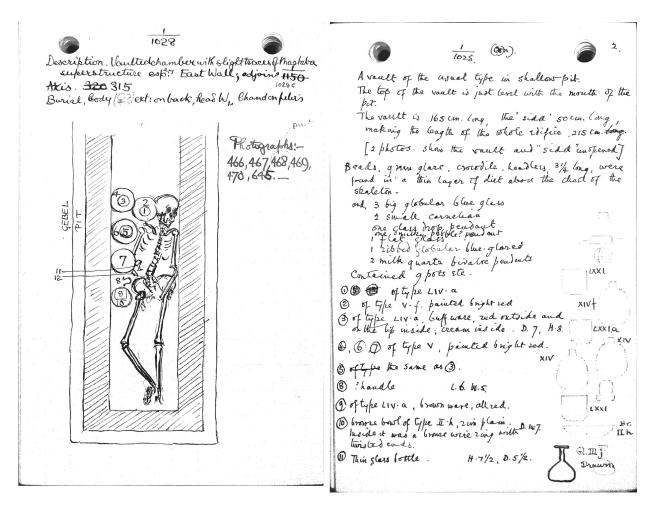


Figure 4. Inked field card for Faras G.1028 (two sides). Reproduced with permission of the Griffith Institute, University of Oxford.

West). Indeed, this technique has been a mainstay of archaeological research since Petrie's pioneering assessment of the predynastic cemeteries at Abadiyeh and Hu (Petrie 1901; Kendall 1971). More recently, the advancement of computer science has produced increasingly nuanced analytical methods facilitating detailed explorations of large and complex datasets with multiple variables, like that from Faras. One such statistical technique, particularly suited to seriation studies, is correspondence analysis (Greenacre 1984, 3-11; Baxter 2015, 133-139).

Correspondence analysis (CA) provides a way to summarise the numerical association between categorical variables (i.e., pottery forms and assemblages) and present their relationships in a twodimensional plot that is far easier to interpret than a sprawling dataset comprising thousands of entries (Alberti 2013, 27-28; Carlson 2017, 279-295; Pitts 2019, 26-28). As a method of archaeological investigation, CA has many applications and, even within studies of ancient Sudan, has successfully been deployed in explorations of mortuary assemblages at Amir Abdallah and Sanam (Lohwasser 2010; Fernández 2018; also see Sinclair and Troy 1991). Increasingly, it is also being used as a tool to complete contextual seriations for site chronologies (Bellanger *et al.* 2008; Peeples and Schachner 2012), and it is for this purpose that the author employed CA on the Faras dataset.

Completing a ceramic seriation using CA demonstrated that the appearance and disappearance of different pottery forms in assemblages at Faras could be used to arrange graves into a relative sequence. This sequence was then tested against stratigraphic information and, following a vigorous process of checks and balances, resulted in seven successive ceramic periods that suggested continuous use of the

cemetery over several centuries. Through detailed assessment of *comparanda* and the consideration of all available materials, particularly externally-dated imports such as glassware, transport *amphorae* and bronzes, this relative sequence was then assigned absolute date ranges.⁴

The result was a continuous ceramic chronology of the Meroitic cemetery that commenced *c*. 200BC (Period 1A) and terminated towards the end of the Meroitic period, *c*. 300 AD (Period 3B). There was also a limited phase of post-Meroitic reuse in the 4th or 5th centuries AD (Period 4), and an additional phase of use (Period 0) represented by atypical graves lacking any ceramic components that was tentatively assigned to the early 3rd century BC (Figure 6). The spatial distribution of these eight periods (0–4) was then represented graphically using coloured overlays on a plan of the cemetery (Figure 5). This demonstrates a clear division between the north side of the site, dominated by Periods 1A–2B, and the south side dominated by Periods 3A–4. The terminal Meroitic graves (3B) were clustered on the periphery of Period 3A zones, and Period 4 graves were restricted to the southern extremity. Certain areas of the cemetery therefore corresponded to specific phases of use and, as expected, chronologically adjacent periods tended to overlap spatially. This does not, however, elucidate the question of Period 0 which occupies a central area of the cemetery that is quite distinct from other periods.

An overview of material change throughout this new chronology has been offered elsewhere and will not be repeated here (Bishop-Wright 2022, 95-111; forthcoming c). Instead, the remainder of this paper examines the significance of Period 0 to the understanding of Lower Nubia in the 3rd century BC.

Period 0 and the 3rd century BC

Owing to their lack of pottery, assemblages assigned to Period 0 were not recognised in the ceramic sequence. Instead, they were only identified when a particular type of bronze vessel commonly known as an 'Achaemenid Bowl' was consistently noted in their assemblages (Figure 7). This form is well attested in Egypt during the late Persian and early Ptolemaic periods and seems to have ceased production in the 3rd century BC (e.g., Bissing 1901, nos 3519-3520; Strong 1966, 99; Dumbrell 1971, 35-36; Petrie 1977, 28 nos 57-67).⁵ Examples from northern Meroitic contexts are rare, but a spectacular silver vessel is known from a late-4th or early-3rd century BC pyramid at Begrawiyah South, which supports this early dating (Dunham 1957, fig. 18.21-1-51).⁶ A bronze example is also known from Grave 15 at Amir Abdallah, which was dated slightly later to c. 175-150BC and also contained a hand-made pottery jar (Fernández 1983, 528, fig. 64.15-1). In addition, undated bowls have been published from Semna South (Leclant 1969, fig. 52; Žabkar and Žabkar 1982, 26), a small Meroitic settlement near Abu Simbel (Klasens 1964, 149, fig. 65), the Taharqo Temple at Kawa (Macadam 1955, 158), and an east-entering cave grave at the Meroitic cemetery of Nag-Shayeg (Catalan 1963, 37, fig. 19.5). It is possible that the form was eventually replicated in Meroitic workshops, perhaps explaining its appearance as far south as Sennar (Dixon 1963, 230-231) and in various early-mid Meroitic tombs at Bagrawiyah West (e.g., Dunham 1963, 106, 118, 127). However, considering Faras' proximity to the Egyptian frontier, its 13 examples should be regarded as imports and correspond to the early dating of the Egyptian comparanda.

The graves that contained these so-called Achaemenid Bowls were all axial chambers ('cave graves') that opened via a shaft or sloping descent on their east sides, much like the earliest graves at Qustul Q and Amir Abdallah (Figure 8). This is unusual at Faras where the majority of cave graves, including all those containing pottery, opened on their west sides. The only other class of object to consistently appear in these atypical structures were pairs of penannular bronze anklets that were usually recovered clasping

⁴ For the dating of imports, see Bishop-Wright forthcoming a; Hoffmann 1991; 1994.

⁵ For ceramic versions from Achaemenid Sardis, see Dusinberre 1999, 91; for Assyrian prototypes, see Curtis 2013, 69. ⁶ Now in the Museum of Fine Arts, Boston (no. 24.1041).

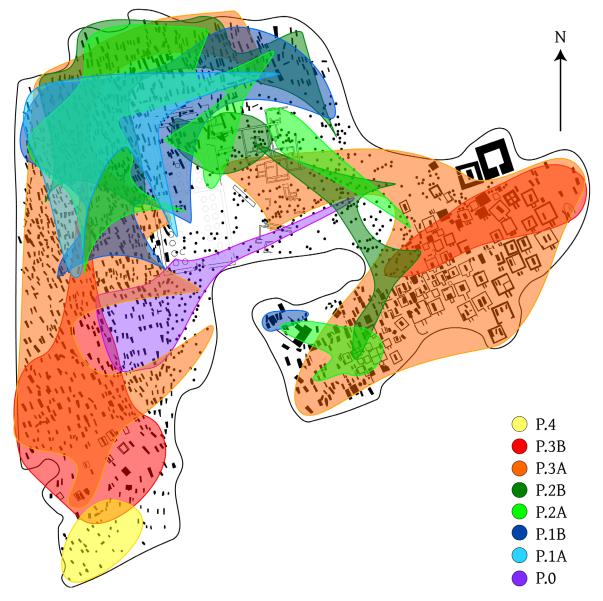


Figure 5. Plan of the Meroitic cemetery at Faras illustrating the approximate distribution chronological periods. © H. C. Bishop-Wright.

Faras		Corresponding epoch	
Period	Approximate date range	Kush	Egypt
0	275-200BC	Early-mid Meroitic	Ptolemaic
1A	200-100BC		
1B	100-21BC		
2A	21BC-AD75	Mid-late Meroitic	Roman
2B	AD75-150		
3A	AD150-250		
3B	AD250-300+		
4	4 th /5 th century AD	Post-Meroitic	Late Roman

Figure 6. The new chronology of Faras and its corresponding epochs in Kush and Egypt.



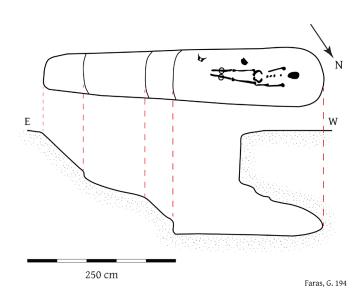


Figure 7. Bronze 'Achaemenid bowl' from Faras G.365. H. 8.7 cm. British Museum EA51584 (photo reproduced with permission © The Trustees of the British Museum).

Figure 8. Sketch plan of Faras G.194 (Period 0). Redrawn from Griffith's original field card (© H. C. Bishop-Wright).

the fibula and tibia of the burial. These exceptional objects weigh between one and three kilograms each and usually have terminals decorated with incised geometric designs (Figure 9). Comparable examples are known from several other Meroitic cemeteries in Lower Nubia, all from graves with similar structures that are usually aceramic (e.g., Catalan 1963, 44; Pellicer and Llongueras 1965, fig. 32.1-2; Williams 1991, fig. 76a).

Griffith regarded these 'anklet burials' as the earliest at Faras and suggested a connection with the Napatan cemetery at Sanam (Griffith 1925a, 58). This was challenged by Vila (1982, 187-194; cf. Näser 1999, 23) who, based on the excavation of 12 apparently post-Meroitic graves at Missiminia (Abri) that contained iron anklets of quite different form, suggested that all such anklet burials were universally late (*c.* 4th century AD). However, in reviewing the records from Faras, Griffith's original assertion would seem to be correct. As has been stated, the east-opening cave graves from which the bronze anklets originate correspond in structure and orientation to early Meroitic graves at Amir Abdallah and Qustul, and Napatan graves at Sanam. Bronze anklets were also found *in situ*, not only with two Achaemenid Bowls, but also with a deep bronze bowl of a shape that is otherwise unattested at Faras but has Napatan parallels, and a stemmed bronze mirror that appears similarly early (Griffith 1925a, 59). In addition to containing an Achaemenid Bowl and a pair of anklets, Grave 194 also contained a hand-made pottery censer for which the closest analogue is, again, Napatan (Figure 10; cf. Lohwasser 2010, pl. 1, fig. 32). There is, therefore, a strong case to support the early place of Period 0 in the new chronology; indeed, its 29 graves appear to represent the first use of the cemetery.

The early dating of Period 0 indicated by the bronzeware is problematised by Amir Abdallah Grave 15 which, while containing an Achaemenid Bowl, was assigned to the first half of the 2nd century BC (*supra*). The chronology that underpins this date was based on the principle that graves at Amir Abdallah were constructed in east-west rows, each of which represented a single 'generation' that lasted 25 years (Fernández 1983, 156-157; 1984, 49-50). Supported by five radiocarbon samples, these generations were then assigned date ranges between 300BC and 25BC (Fernández 1983, 162-165; 1984, 51). The overall result of this exercise is convincing, but there is room for adjustment based on the observation that the distribution of graves within rows was evidently subject to some variation. Indeed, Grave 15 is situated in



Figure 9. Bronze anklet from Faras G.582. Diam. 11.3cm. British Museum EA5155 (photo reproduced with permission © The Trustees of the British Museum). Figure 10. Pottery censer from Faras G.194. H. 10.2cm. Ashmolean Museum AN1912.301 (photo reproduced with permission © the Ashmolean Museum, University of Oxford).

proximity to several other graves assigned to earlier generations and could feasibly be raised in date by as much as a century, thus bringing it into alignment with Faras Period 0.⁷ Another possibility, suggested by its ruined blocking, is that Amir Abdallah Grave 15 contained a secondary burial in which the Achaemenid Bowl had been reused. This may also explain why, unlike any of the Faras examples, it was found in conjunction with a pottery jar.

Even if the original date for Amir Abdallah Grave 15 is sustained, it is not enough to dismiss the positive evidence supporting the assignation of Faras Period 0 to the 3rd century BC. This is significant as direct Meroitic intervention in Lower Nubia only commenced *c*. 200BC with the activities of Arkamani and Adikhalamani-Tabirqo.⁸ The lack of Meroitic political activity in the territory before this watershed is reflected in the marked absence of pottery vessels – the mainstay of Meroitic funerary custom (cf. Francigny 2021, 601) – in Period 0 assemblages. Such objects only appeared at Faras in the 2nd century BC (Period 1A), at which point the early bronzeware, anklets and east-opening graves disappeared. The possibility that Period 0 represents a local group that was already present in Lower Nubia prior to a Meroitic push north should, therefore, be considered.

The 3rd century BC saw significant political change in Lower Nubia as a result of Ptolemaic intervention. Around 275BC, Ptolemy II annexed the territory and created a new administrative unit known as the *Triakontaschoinos* (30 Mile Land) that spanned the First to Second Cataracts (Török 2009, 384-385). In the centuries prior to this, the region had functioned as little more than a 'no man's land' and, according to the records of Harsiyotef and Nastasen, was the province of bellicose desert groups that required periodic pacification (*supra*). Ptolemaic administration stabilised this frontier and provided access to both the goldbearing Wadi Allaqi and trade routes south towards the Fourth Cataract (Vincentelli 2003; Castiglioni and Castiglioni 2004; Bashir and Emberling 2021, 998-999). Formal commerce between Egypt and the nascent

⁷ Graves 16, 242 and 243 (Generation 5, 200-175BC), and 235, 244 and 245 (Generation 2, 275-250BC). See Fernández 1983, 162, fig. 2.

⁸ Arkamani and Adikhalamani-Tabirqo are attested on temple inscriptions at Dakka, Debod, Kalabsha and Philae. Their activities in Lower Nubia appear to have taken advantage of sustained crisis in Egypt during which Thebes temporarily broke from Ptolemaic rule under the indigenous pharaohs Herwennefer and Ankhwennefer (206-186BC). See Eide *et al.* 1996, nos 129-35; Hölbl 2001, 153-59; Török 2009, 391-93, 400-11.

Meroitic kingdom subsequently began and must have had a transformative effect on the economy of Lower Nubia. Regular trade would have provided new models of subsistence and, with an intimate knowledge of desert routes, local groups that had previously moved in and out of the river valley on a seasonal basis would have been ideally suited to take advantage of this by operating as commercial 'middlemen'. It may then have become advantageous to create permanent riverine settlements that functioned as trading stations. Owing to a wider floodplain that offered greater agricultural potential than is typical in the region, and perhaps because a desert road terminated in the area, Faras was ideally located for this purpose. The modest community that subsequently emerged would have needed somewhere to bury their dead; thus, a new cemetery was inaugurated around the ruined temple of Tutankhamun which would have provided ample *spolia* for the blockings of burial chambers and perhaps held some apotropaic appeal.

This explanation for the emergence of Period 0 at Faras remains hypothetical, but it does have precedence in Harry Smith's (1991, 108) analysis of Lower Nubia in the mid-fourth millennium BC when contact with Naqada Egypt had a similarly profound impact on the region's A-Group population. It may also relate to an enigmatic deposit of hand-made pottery from Site 6-G-9 in the region of Gezira Dabarosa which, while associated with a modest Meroitic settlement of 2nd or 1st century BC date, appears not to be of Meroitic manufacture (Nordström 1962; Hewes 1964, 176-180; Lister 1967, 61; Adams 1976, 138-139; Edwards 1996, 98). Indeed, it was argued by Lister (1967, 61) to originate with a 'non-Egyptianised' desert group that moved into the Lower Nubian river valley during the early Ptolemaic period, 'when the region was sparsely settled'. Unfortunately, no cemetery was ever located at 6-G-9 and nothing is known of the graves that may have corresponded to this pottery. Nevertheless, Lister's suggestion that it could indicate an independent desert group corresponds to one explanation for the appearance of Period 0 at Faras. It is, therefore, an intriguing possibility that the habitation evidence from 6-G-9 and the funerary evidence from Faras relate to the same transition from desert-based nomadism to riverine settlement that may have commenced around 275BC. If so, the use of the term 'aceramic' to describe Faras Period 0 requires the qualification that whatever group was responsible for these early graves may have utilised pottery in its domestic activities: perhaps a crude, hand-made ware such as that found at 6-G-9.

The hypothesis that Period 0 graves correspond to an independent group goes some way towards explaining their atypical nature, particularly the bronze anklets. Such a group could have moved north from the direction of the Third Cataract, perhaps explaining the analogies with early graves at Amir Abdallah, south from the area between Philae and Kalabsha, or west from the direction of the Eastern Desert. The latter possibility is pertinent to the wider debate surrounding the 'abandonment' of Lower Nubia and continued existence of desert groups throughout the 1st millennium BC. Whatever their origins, the notion that Ptolemaic reorganisation of Lower Nubia was the impetus for settlement at Faras provides a credible *terminus post quem* for the inauguration of the cemetery and agrees with the dates of the bronzeware. Hence, Period 0 is assigned to *c.* 275–200BC, whereafter increasing Meroitic political presence saw a shift towards the more typical Meroitic funerary practice that began with Period 1A and continued throughout the cemetery's use-life.

Conclusion: Lower Nubia in the 3rd century BC

The 3rd century BC date of Faras Period 0 offers an important parallel for Williams' analysis of 'Phase I' at Qustul Cemetery Q. With the possible exception of 6-G-9, these are the only two Meroitic sites in Lower Nubia for which such an early date has been argued and it is significant that they were located within 20km of each other, in a region where several *wadi* channels gave access to the Eastern Desert and at the point where the Nile bent south to meet the 2nd Cataract. In short, an excellent location for trade. It is the author's view that this is not coincidental, and, after an extended period of nomadism, Period 0 represents the first stages of a gradual shift to permanent riverine settlement for which the impetus was Lower Nubia's renewed importance as a trading corridor after Ptolemaic intervention *c.* 275BC.

That the cemetery at Faras was in use from the early 3rd century BC invites the important question of how its first inhabitants related to both southern Meroitic and Eastern Desert populations. This could be elucidated through renewed study of other sites in the region that are overdue for reassessment or full publication: Karanòg (Woolley and Randall-MacIver 1910), Gebel Adda (Grzymski 2010) and Semna (Žabkar and Žabkar 1982) are excellent candidates for such work. For now, it can be concluded that the cemetery at Faras began two centuries earlier than Griffith's original chronology, has convincing parallels with both Williams' 'Phase I' at Qustul Q and Fernández' 'Generación 1' at Amir Abdallah, and offers a body of evidence that problematises the assumption that its first inhabitants were Meroitic settlers. The graves of Period 0 with their characteristic bronze anklets may, instead, be markers of a specifically Lower Nubian cultural group that settled at Faras before the Meroitic kingdom had any formal involvement in this now drowned land. Even if this hypothesis proves false, it should encourage closer consideration of what is meant by the term 'Meroitic'. While this ethnonym is undoubtedly convenient, it risks reducing the people of the Meroitic kingdom to a culturally-homogenous mass in which the existence of regional or supra-regional identities, such as that evidenced by Faras Period 0, can easily be overlooked.

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References

- Adams, W. Y. 1964. 'Post-Pharaonic Nubia in the light of archaeology. I', *The Journal of Egyptian Archaeology* 50, 102-120.
- Adams, W. Y. 1976. 'Meroitic North and South. A study in cultural contrasts; author's response', *Meroitica 2. Meroitic North and South. A Study in Cultural Contrasts*, 11-26, 119-175.

Adams, W. Y. 1977. Nubia Corridor to Africa. London-Princeton.

- Adams, W. Y. 2000. Meinarti I: The Late Meroitic, Ballaña and Transitional Occupation. Oxford.
- Alberti, G. 2013. 'An R script to facilitate correspondence analysis. A guide to the use and the interpretation of results from an archaeological perspective', *Archeologia e Calcolatori* 24, 35-53.
- Aldsworth, F. 2022. 'The Taharqa temple-church at Qasr Ibrim, Egypt', Sudan & Nubia 26, 33-65.
- Bashir, M. S. and G. Emberling. 2021. 'Trade in ancient Nubia: routes, goods, and structures', in G. Emberling and B.B. Williams (eds), *The Oxford Handbook of Ancient Nubia*. New York, 995-1014.

Baxter, M. J. 2015. *Exploratory Multivariate Analysis in Archaeology* (2nd Edition, Foundations in Archaeology). New York.

Bellanger, L., R. Tomassone and P. Husi. 2008. 'A statistical approach for dating archaeological contexts', *Journal of Data Science* 6, 135-154.

Bishop-Wright, H. C. 2021. Chronology and Connectivity at Meroitic Faras. PhD Thesis, University of Exeter. Exeter.

Bishop-Wright, H. C. 2022. 'Dying for a drink on the Meroitic frontier: imported objects in funerary assemblages at Faras, Sudanese Nubia', *Mare Nostrum: Estudos sobre o Mediterrâneo Antigo. A Antiguidade do Nordeste Africano*, 87-121.

Bishop-Wright, H. C. forthcoming a. 'Glass vessels from the Meroitic cemetery at Faras, Sudanese Nubia', Annals of the 22nd Congress of the International Association for the History of Glass.

Bishop-Wright, H. C. forthcoming b. 'Across Rome's Southern frontier: the Meroitic cemetery at Faras in Sudanese

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Nubia', LIMES XXV. Proceedings of the 25th LIMES Congress, Nijmegen, 21-27 August 2022.

- Bishop-Wright, H. C. forthcoming c. 'A global revolution on the Nubian frontier: objects and change at Meroitic Faras',
- in M. J. Versluys (ed.), A Global Revolution? Objects and Change in Afro-Eurasia in the Final Centuries BCE. Cambridge.
- Bissing, F. W. 1901. Catalogue Général des Antiquités Égyptiennes du Musée du Caire. Metallgefässe. Vienne.
- Bonneau, D. 1971. Le Fisc et le Nil: Incidences des Irrégularités de la Crue du Nil sur la Fiscalité Foncière dans l'Égypte Grecque et Romaine. Paris.
- Broekman, G. P. F. 2002. 'The Nile level records of the Twenty-Second and Twenty-Third dynasties in Karnak: a reconsideration of their chronological order', *The Journal of Egyptian Archaeology* 88, 163–178.
- Cailliaud, F. 1826. Voyage à Méroé, au Fleuve Blanc, au-delà de Fâzoql dans le Midi du Royaume de Sennâr, à Syouah et dans Cinq Autres oasis; fait dans les années 1819, 1820, 1821 et 1822. Paris.
- Carlson, D. 2017. *Quantitative Methods in Archaeology Using R. Cambridge.*
- Castiglioni, A., and A. Castiglioni. 2004. 'Gold in the Eastern Desert', in D. A. Welsby and J. R. Anderson. (eds) *Sudan Ancient Treasures*. London, 121-31
- Catalan, M. P. 1963. La Necropolis Meroitica de Nag-Shayeg, Argin (Sudan). Madrid.
- Cooper, J. 2022. 'Beyond the Nile: long term patterns in nomad-state interactions across northeast Africa', *Mare Nostrum: Estudos sobre o Mediterrâneo Antigo. A Antiguidade do Nordeste Africano* 13, 37-86.
- Cooper, J. and D. Vanhulle. 2019. 'Boats and routes: new rock art in the Atbai Desert', Sudan & Nubia 23, 3-12.
- Curtis, J. 2013. An Examination of Late Assyrian Metalwork with Special Reference to Nimrud. Oxford.
- Dixon, D. M. 1963. 'A Meroitic cemetery at Sennar (Makwar)', KUSH 11, 227-234.
- Dumbrell, W. J. 1971. 'The Tell el-Maskhuta bowls and the 'Kingdom' of Qedar in the Persian period', *Bulletin of the American Schools of Oriental Research* 203, 33-44.
- Dunham, D. 1957. Royal Tombs at Meroë and Barkal (The Royal Cemeteries of Kush, vol. 4). Boston, MA.
- Dunham, D. 1963. The West and South Cemeteries at Meroë (The Royal Cemeteries of Kush, vol. 5). Boston, MA.
- Dusinberre, E. R. M. 1999. 'Satrapal Sardis: Achaemenid bowls in an Achaemenid capital'. *American Journal of Archaeology* 103 (1), 73–102.
- Edwards, D. N. 1996. The Archaeology of the Meroitic State. New Perspectives on Its Social and Political Organisation. Oxford.
- Edwards, D. N. 1999a. 'Meroitic ceramic chronology: exploring the Meroe West Cemeteries', Azania 34, 25-44.
- Edwards, D. N. 1999b. 'Meroitic ceramic studies I: a preliminary study of the Meroe West cemetery', *Meroitic Newsletter* 26, 54-68.
- Edwards, D. N. 1999c. 'Meroitic settlement archaeology', in D. A. Welsby (ed.), *Recent Research in Kushite History and Archaeology. Proceedings of the 8th International Conference for Meroitic Studies*. London. 65-110.
- Eide, T., T. Hägg, R. H. Pierce, and L. Török. (eds) 1994. Fontes Historiae Nubiorum, vol. 1. Bergen.
- Eide, T., T. Hägg, R. H. Pierce, and L. Török. (eds) 1996. Fontes Historiae Nubiorum, vol. 2. Bergen.
- Emery, W. B. 1965. Egypt in Nubia. London.
- Fernández, V. M. 1983. La Cultura Alto-Meroitica del Norte de Nubia (PhD Thesis, Universidad Complutense de Madrid).
- Fernández, V. M. 1984. Early Meroitic in northern Sudan: the assessment of a Nubia archaeological culture. *Aula Orientalis*, 2 (1), 43–84.
- Fernández, V. M. 2018. 'The Amir Abdallah cemetery (Abri, Sudan) and the emergence of Meroitic social complexity', in M. Honegger (ed.), Nubian Archaeology in the XXIst Century. Proceedings of the Thirteenth International Conference for Nubian Studies, Neuchatel, 1st-6th September 2014, 473-80.
- Firth, C. M. 1915. The Archaeological Survey of Nubia, Report for 1909-1910. Cairo.
- Firth, C. M. 1927. The Archaeological Survey of Nubia, Report for 1910-1911. Cairo.
- Francigny, V. 2007. 'Faras oublié', Mélanges offerts à Francis Geus, cahiers de recherches de l'Institut de Papyrologie et d'Egyptologie de Lille 26, 99-106.
- Francigny, V. 2016. Les Coutumes Funéraires dans le Royaume de Méroé: Les Enterrements Privés. Orient & Méditerranée

22. Paris.

- Francigny, V. 2021. 'Death and burial in the Kingdom of Meroe', in G. Emberling and B. B. Williams (eds), *The Oxford Handbook of Ancient Nubia*. New York, 589-603.
- Fuller, D. Q 2015. 'The economic basis of the Qustul splinter state: cash crops, subsistence shifts, and labour demands in the post-Meroitic transition', in M. H. Zach (ed.), *The Kushite World. Proceedings of the 11th International Conference for Meroitic Studies Vienna, 1-4 September 2008. Beiträge zur sudanforschung. Beiheft 9, 33-60.*
- Gates-Foster, J. 2022. 'New archaeological evidence for the indigenous peoples of the Eastern Desert in the Ptolemaic and Roman eras', in H. Cuvigny (ed.), *Blemmyes: New Documents and New Perspectives Including O.Blem.* 1-107, 61-73.
- Gau, F. 1822. Antiquités de la Nubie, ou monuments inédits des bords du Nil, situés entre la première et la seconde cataracte, Dessinés et mesurés en 1819. Stuttgart-Paris.
- Godlewski, W. 2020. 'Pachoras: a brief history of the town from the 5th to the 7th centuries', *Polish Archaeology in the Mediterranean* 29, 699-713.

Greenacre, M. 1984. Theory and Applications of Correspondence Analysis. London.

- Griffith, F. L. 1911. *Karanòg, the Meroitic Inscriptions of Shablûl and Karanòg* (Eckley B. Coxe Junior Expedition to Nubia, Vol. 6). Philadelphia.
- Griffith, F. L. 1921. 'Oxford excavations in Nubia', University of Liverpool Annals of Archaeology and Anthropology 8, 1-18, 65-104.
- Griffith, F. L. 1922. 'Meroitic funerary inscriptions from Faras, Nubia', Recueil d'etudes egyptologiques dediees a la memoire de Jean-Francois Champollion. Paris, 565-600.
- Griffith, F. L. 1923. 'Oxford excavations in Nubia', University of Liverpool Annals of Archaeology and Anthropology 10, 73-171.
- Griffith, F. L. 1924. 'Oxford excavations in Nubia', University of Liverpool Annals of Archaeology and Anthropology 11, 141-180.
- Griffith, F. L. 1925a. 'Oxford excavations in Nubia', University of Liverpool Annals of Archaeology and Anthropology 12, 57-172.
- Griffith, F. L. 1925b. 'Pakhoras: Bakharâs: Faras in geography and history', *The Journal of Egyptian Archaeology* 11, 259-268.
- Griffith, F. L. 1926. 'Oxford excavations in Nubia', University of Liverpool Annals of Archaeology and Anthropology 13, 17-37, 49-93.
- Griffith, F. L. 1927. 'Oxford excavations in Nubia', University of Liverpool Annals of Archaeology and Anthropology 14, 57-116.
- Grzymski, K. 2010. 'Gebel Adda revisited', in W. Godlewski and A. Łajtar (eds), Between the Cataracts. Proceedings of the 11th Conference of Nubian Studies, Warsaw University, 27 August - 2 September 2006. Part Two, Fascicule 1: Session Papers. 25-30.
- Heidorn, L. 1991. 'The Saite and Persian period forts at Dorginarti', in W. V. Davies (ed.), *Egypt and Africa. Nubia from Prehistory to Islam.* London. 205-19.
- Heidorn, L. 1992. *The Fortress of Dorginarti and Lower Nubia During the Seventh to Fifth Centuries B.C.* PhD Thesis, The University of Chicago. Chicago.
- Heidorn, L. 2023. *The Second Cataract Fortress of Dorginarti*. Institute for the Study of Ancient Cultures of the University of Chicago Nubian Expedition. Chicago.
- Hewes, G. W. 1964. 'Gezira Dabarosa: report of the University of Colorado Nubian expedition, 1962-63 Season', KUSH 12, 174-87.
- Hintze, F. 1959. Studien zur meroitischen Chronologie und zu den Opfertafeln aus den Pyramiden von Meroë. Berlin.
- Hofmann, I. 1991. 'Der wein- und ölimport im meroitischen reich', in W. V. Davies (ed.), *Egypt and Africa: Nubia from Prehistory to Islam.* London. 234-245.

Hofmann, I. 1994. 'Die Ägyptischen wienamphoren im sudan', in C. Berger, G. Clerc and N. Grimal (eds), *Hommages* à *Jean Leclant*. Cairo. 221-234.

Hölbl, G. 2001. A History of the Ptolemaic Empire. London.

Irby, C. L. and J. Mangles. 1845. Travels in Egypt and Nubia, Syria, and the Holy Land. London.

Jacquet-Gordon, H. 1982. 'Review: Adams, William Y. Meroitic North and South. A study in cultural contrasts. Berlin: Akademi-Verlag 1976.', *Orientalistische Literaturzeitung* 77, 451-454.

Katznelson, I. S. 1966. 'Kambesweden et Khababash', Zeitschrift für ägyptische Sprache und Altertumskunde 93, 89-93.

Kendall, D. G. 1971. 'Seriation from abundance matrices', in F. R. Hodson, D. G. Kendall and P. Tǎutu (eds), Mathematics in the Archaeological and Historical Sciences: Proceedings of the Anglo-Romanian Conference, Mamaia 1970, Organized by The Royal Society of London and The Academy of the Socialist Republic of Romania. Edinburgh, 215-252.

Kilroe, L. 2021. 'Meroitic black-burnished wares at Faras: shared motifs and symbols across Sudan', Bulletin de Liaison de la Céramique Égyptienne 30, 153-174.

Kilroe, L. and M. Spataro. 2023. 'Preliminary investigation of the chaîne opératoire of Meroitic potsherds from the cemetery of Faras, northern Nubia (Sudan)', *Cahiers de Céramique Égyptienne* 32, 297-318.

Klasens, A. 1964. 'De Nederlandse opgravingen in Nubië. Tweede seizoen: 1963-1964', Phoenix 10 (2), 147-56.

Leclant, J. 1969. 'Fouilles et travaux tn Égypte et au Soudan, 1967-1968', Orientalia, Nova Series 38 (2), 240-307.

Lepsius, K. R. 1849-1859. Denkmäler aus Ägypten und Äthiopien V.

Lister, F. C. 1967. Ceramic Studies of the Historic Periods in Ancient Nubia. Salt Lake City, UT.

Lohwasser, A. 2010. The Kushite Cemetery of Sanam. A Non-Royal Burial Ground of the Nubian Capital, c. 800-600 BC. London. Macadam, M. F. L. 1955. The Temples of Kawa. II. History and Archaeology of the Site. Oxford.

Manzo, A. 2020. 'The Nubian and Pharaonic ceramic materials', in W. V. Davies, and D. A. Welsby (eds), *Travelling the Korosko Road: Archaeological Exploration in Sudan's Eastern Desert*. Oxford. 68-83.

McCann, E. 2012. 'A fresh look at the site of Faras: important findings concerning local and regional ceramic industry in North Sudan during the Meroitic period (*c.* 350 BC-AD350)', *Beiträge zur Sudanforschung* 11, 107-135.

Michałowski, K. 1962. Faras. Fouilles Polonaises 1961. Warszawa.

Michałowski, K. 1965. Faras. Fouilles Polonaises 1961-1962. Warszawa.

Mileham, G. S. 1910. Churches in Lower Nubia. Eckley B. Coxe Junior Expedition to Nubia, vol. 2. Philadelphia.

Millet, N. B. 1969. Meroitic Nubia. PhD Thesis, Yale University. New Haven.

Monneret de Villard, U. 1941. La Nubia Romana. Rome.

Morkot, R. G. 2023. 'Tutankhamun in Nubia', in P. Lacovara (ed.), *Wonderful Things. Essays in Honor of Nicholas Reeves*. Columbus, GA. 195-209.

Näser, C. 1999. 'Cemetery 214 at Abu Simbel North. Non-Elite Burial Practices in Meroitic Lower Nubia', in D. A. Welsby (ed.), *Recent Research in Kushite History and Archaeology. Proceedings of the 8th International Conference for Meroitic Studies*. London. 19-27.

Nordström, H-Å. 1962. 'Excavations and survey in Faras, Argin and Gezira Dabarosa', KUSH 10, 34–58.

Peeples, M. A. and G. Schachner. 2012. 'Refining correspondence analysis-based ceramic seriation of regional data sets', *Journal of Archaeological Science* 39, 2818-2827.

Pellicer, M. and M. Llongueras. 1965. Las necropolis meroiticas del Grupo 'X' y Cristianas de Nag el Arab. Madrid.

Petrie, W. M. F. 1901. Diospolis Parva. The Cemeteries of Abadiyeh and Hu. 1898-1899. London.

Petrie, W. M. F. 1977. Stone and Metal Vases. Warminster.

Pitts, M. J. 2019. The Roman Object Revolution. Objectscapes and Intra-Cultural Connectivity in Northwest Europe. Amsterdam Archaeological Studies 27. Amsterdam.

Pliny. Naturalis Historia.

Priese, K. H. 1976. 'Response', Meroitica 2. Meroitic North and South. A Study in Cultural Contrasts, 81-88. Reisner, G. A. 1910. The Archaeological Survey of Nubia 1907-1908 (Vols 1 and 2). Cairo.

- Sadr, K., A. Castiglioni and A. Castiglioni. 1995. 'Nubian desert archaeology: a preliminary view', *Archeologie du Nil Moyen* 7, 203-235.
- Sadr, K., A. Castiglioni and A. Castiglioni. 2004. 'The archaeological sequence in the Nubian desert: CeRDO's explorations 1989-1994', *Neueste Feldforschungen im Sudan und in Eritrea: Akten des symposiums vom 13. bis 14. Oktober 1999 in Berlin.* Meroitica 21, 191-204.
- Shinnie, P. L. 1967. Meroe a Civilization of the Sudan. London.
- Sinclair, P. J. J. and L. Troy. 1991. 'Counting gifts to the dead: a holistic approach to the burial customs of Lower Nubia using correspondence analysis', in W. V. Davies (ed.), *Egypt and Africa: Nubia from Prehistory to Islam.* London, 166-85.
- Smith, H. S. 1991. 'The development of the 'A-Group' culture in northern Lower Nubia', in W. V. Davies (ed.), *Egypt and Africa: Nubia from Prehistory to Islam.* London, 92-111.
- Spalinger, A. 1978. 'The reign of King Chabbash: an interpretation', *Zeitschrift für Ägyptische Sprache und Altertumskunde* 105, 142-154.
- Strong, D. 1966. Greek and Roman Gold and Silver Plate. London.
- Török, L. 1987. 'The historical background: Meroe, North and South', in T. Hägg (ed.), Nubian Culture Past and Present. Main Papers Presented at the Sixth International Conference for Nubian Studies in Uppsala, 11-16 August, 1986. Stockholm. 139-229.
- Török, L. 2009. Between Two Worlds. The Frontier Region Between Ancient Nubia and Egypt 3700 BC 500 AD. Leiden.

Trigger, B. G. 1965. History and Settlement in Lower Nubia. Yale University Publications in Anthropology 69. New Haven.

- Trigger, B. G. 1976. 'Response', Meroitica 2. Meroitic North and South. A Study in Cultural Contrasts. Berlin, 103-117.
- Vila, A. 1982. La Nécropole de Missiminia II, Les Sépultures Méroïtiques. La prospection archéologique de la vallée du Nil au Sud de la cataracte de Dal, Nubie Soudanaise. Paris.
- Vincentelli, I. 2003. 'Trade and caravan routes in Meroitic times', in M. Liverani (ed.), *Arid Lands in Roman Times*. Arid Zone Archaeology 4, 79-86.
- Wilkinson, G. 1843. Modern Egypt and Thebes: Being a Description of Egypt; Including the Information Required for Travellers in that Country. London.
- Williams, B. B. 1985. 'A chronology of Meroitic occupation below the Fourth Cataract', *Journal of the American Research Center in Egypt* 22, 149-195.
- Williams, B. B. 1991. *Meroitic remains from Qustul cemetery Q, Ballana cemetery B, and a Ballana settlement (Parts 1 and 2).* Excavations between Abu Simbel and the Sudan Frontier 8. Chicago.
- Woolley, L. and D. Randall-MacIver. 1910. *Karanòg, the Romano-Nubian Cemetery. Text and Plates.* Eckley B. Coxe Junior Expedition to Nubia, vols. 3 and 4. Philadelphia.
- Žabkar, L. V. and J. J. Žabkar. 1982. 'Semna South. A preliminary report on the 1966-1968 excavations of the University of Chicago Oriental Institute expedition to Sudanese Nubia', *Journal of the American Research Center in Egypt* 19, 7-50.