

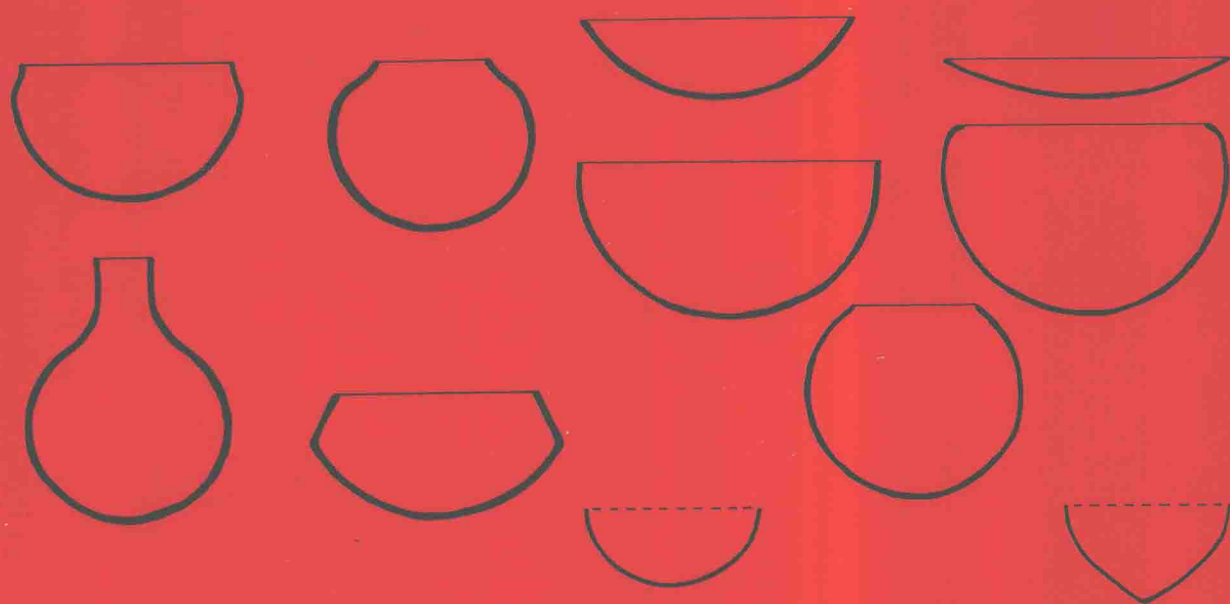
Cambridge Monographs in African Archaeology

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Series Editors: Laurence Smith, Brian Stewart and Stephanie Wynne-Jone

# The Butana Group Ceramics and their Place in the Neolithic and Post-Neolithic of Northeast Africa

Frank Winchell



BAR International Series 2459

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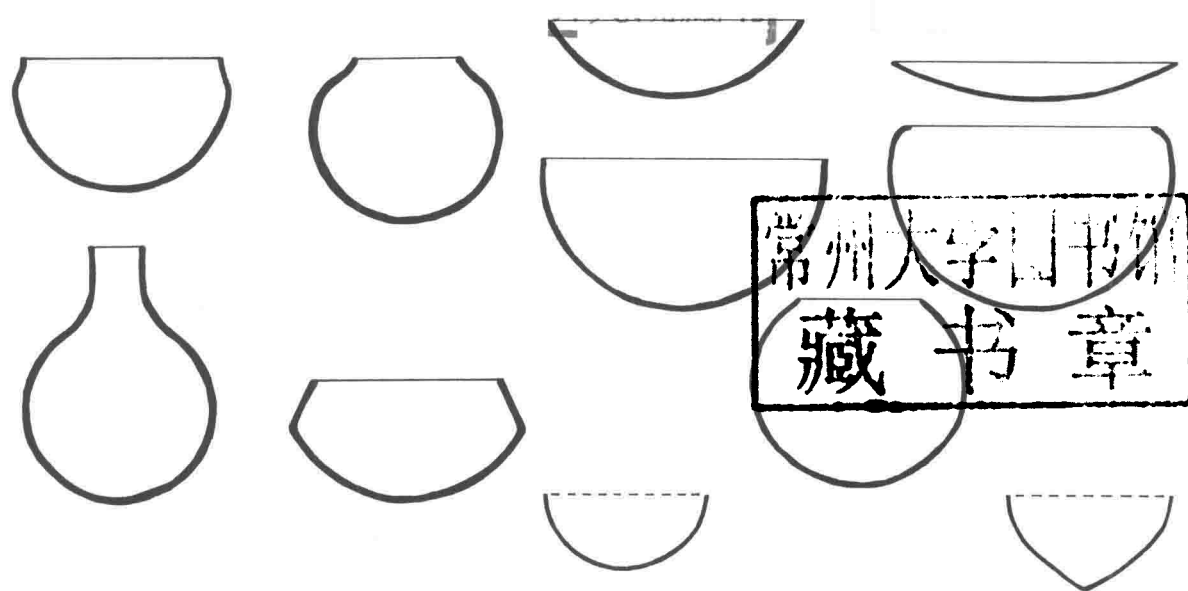
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## PREFACE

### A BRIEF REVIEW OF LITERATURE SINCE THE PUBLICATION OF THIS WORK

This study was completed as a dissertation for a doctoral degree in Anthropology in 1992. Since then, two decades of archeological investigations have been conducted in the Nile Valley, and adjacent areas, broadening the body of research and adding a number of new publications that were not covered in this study. In the Sudan, new sites and associated excavations (mostly in the central Nile Valley in and around the Khartoum area, and in the Dongola Reach area) have contributed significantly to the archaeological database since the early 1990s (See Edwards 2004 and Sadig 2010 for examples on overviews). Nevertheless, the basic themes and observations made in this study, involving the archaeological culture groups, associated paleoenvironments, material culture, settlement patterns, and overall culture history and chronology of Lower and Upper Egypt, Lower and Upper Nubia and the central Nile Valley and adjacent areas of eastern Sudan, remain relatively unchanged.

In dealing with the development associated with the first ceramic cultures of northern Africa, one basic pattern not mentioned and improved upon since this study was completed, is that Dotted Wavy Line ceramics were dominant in the Sahara and Sahel west of the Nile and were contemporary with the earliest manifestations of Wavy Line ceramics in the central Nile Valley (See Caneva 1991: 267, Mohammed-Ali and Khabir 2003, Garcea and Hildebrand 2009: 314-315, Jesse 2010). There, it appears that Dotted Wavy Line ceramics come in later, perhaps indicating that populations, or ideas, from the Sahara and Sahel moved west into the central Nile Valley (Caneva 1991: 265-267). Thus, it appears that at least two separate ceramic traditions apparently evolved independently out of northern Africa, one in the central Nile Valley, and the other(s), across the Sahara and Sahel west of the Nile Valley (Caneva 1991), and perhaps as far west in Mali during the 10<sup>th</sup> millennium BC (see Hysecom, *et al.* 2009).

Following the Early Khartoum in the central Nile Valley, literature since the early 1990s (however, see Hassan 1986) tends to divide the Khartoum Neolithic in an early and late period, and where researchers have drop the “Khartoum”; thus, either “Early Neolithic” or “Late Neolithic (see Sadig 2010 for example).<sup>1</sup> As it will be presented in greater detail in this study, the Butana Group of the eastern Sudan belongs chronologically to the late Neolithic period, but is culturally separate from the developments in the central Nile Valley. As will be discussed in more detail in this study, the term post-Neolithic (which does not appear in the recent literature) is also used to demarcate those cultures, in particular the Predynastic groups in Lower and Upper Egypt where metallurgy began, but which were, nonetheless, contemporary to the late Neolithic developments further up the Nile in central and eastern Sudan. Perhaps some readers may object to the broad-brush use of early Neolithic and post-Neolithic chronological demarcations, and to which everyone familiar with these terms knows only too well that some cultures were, or were not truly “neolithic” in a technological, food-producing sense. Furthermore, some archaeological groups, such as the Abkan culture actually transcended both the early and late Neolithic periods. Nevertheless, and as it will be further explained, this study will illuminate more on how these terms were originally defined and how they still can be effectively used for coherent temporal and spatial constructs that further aid in integrating the various ceramic-bearing cultures across northeast Africa, even in light of the more recent literature.

The more recent publications have also provided a revised chronology for the early Neolithic (4900-3800 BC)<sup>2</sup> and late Neolithic (3800-1250 BC) periods of the central Nile Valley (see Krzyzaniak 1992:243, Sadig 2008:45, and Garcea and Hildebrand 2009<sup>3</sup>, Fernández, *et al.* 2003). In this study, I placed the beginning of the Khartoum Neolithic (i.e. early Neolithic) at 4900 BC, but had the late Neolithic begin slightly earlier at

<sup>1</sup> Note that I retain the lower-case terms “early Neolithic” and “late Neolithic” to be more consistent with the use of such terms in the body of the original study.

<sup>2</sup> Garcea and Hildebrand place the beginning of the early Neolithic at 5000 BC (see Garcea and Hildebrand 2009:306).

<sup>3</sup> However, Garcea does not like using the term late Neolithic at Sai Island (personal communication, 2011).

4000 BC and ending sometime around 2500 BC. Through his excavations at es-Sour, Azhari Mustaf Sadig wisely uses the presence of ripple pottery as a general indicator of the late Neolithic in the central Sudan to which he ascribes a date of about 3800 to 3000 BC, and where he notes the Bardarian culture in Upper Egypt has ripple ceramics a few hundred years earlier, around 4000 BC, and where the Terminal Abkan has similar ripple ceramics around 3200 in Nubia (Sadig 2008:45, 2010:170-171, Bietak 1986).<sup>4</sup>

South of the 2<sup>nd</sup> Cataract, I place the beginning of the Abkan culture just prior to 4000 BC and it ending a little prior to 3500 BC. In Garcea and Hildebrand (2009), they place the chronological order of the Abkan culture between 5000 and 4000 BC, and cite Nordstrom 1972 and Lange and Nordstrom 2006 (and Gatto 2002, 2006a, b, and c) for placing the Abkan at this time (Garcea and Hildebrand 2009: 307). I also cite Nordstrom 1972 in this study suggesting that the Abkan can be dated as early as 3800 BC, or even earlier. Garcea and Hildebrand also state that there are Abkan-related sites in Nabta Playa that date to 4900 BC, and at Kadruka at 4800 BC (Garcea and Hildebrand 2009, Gatto 2006a).

What probably has changed most since the publication of this study in 1992, is the addition of new archaeological investigations which have filled-in some of the gaps along the Sudanese Nile Valley where no research had been conducted prior to publishing the study (See Sadig 2010). In examining Figure 5.2 in this study, the reader will note that there is a considerable gap involving Neolithic and post-Neolithic archaeological data from Melik-en-Nasir where the Abkan Group ends south through the 3<sup>rd</sup> Cataract and Kerma, up to the Karat Group at the confluence of Wadi El Milk.<sup>5</sup> Likewise, from the Karat Group upriver along the Nile past the 4<sup>th</sup> and 5<sup>th</sup> Cataract to Kadada, and further up the Atbara River to the Butana Group there was another gap where no archaeological sites were recorded at the time. What comes to light since the publication of this study, and supported by the more recent literature, is that a key element for some of these gaps along the Nile River is that less hospitable environments for human habitation were in existence since the early Neolithic period, and later on up through the late Neolithic, post-Neolithic, and later historic periods. Such areas would include Abu Hamed Reach between the 4<sup>th</sup> and 5<sup>th</sup> Cataract, the Abri-Delgo Reach between the 3<sup>rd</sup> Cataract and Dal Cataract, and Batn el Hajar, between Dal Cataract and 2<sup>nd</sup> Cataract.

Nevertheless, recent investigations between the 2<sup>nd</sup> and 3<sup>rd</sup> Cataract, including the archaeological investigations at Sai Island, have found that Abkan Group ceramics (dating from 5000 to 4000 BC) are distributed farther up the Nile from the site of Abka, to Sai Island, Laqiya, Kadruka, and Dongola Reach (see Garcea and Hildebrand 2009:307). A Pre-Kerma archaeological component (dating from 3300 to 2600 BC) has a similar distribution area along the Nile from Dongola to the south, northward to Kadruka, Kerma, Arduan, Laqiya, Soleb, Sai, Saras, Buhen and Faras (Garcea and Hildebrand 2009:307&310, Honegger 2004a&b, and 2006). Garcea and Hildebrand (2009) also see some overlap or affinity between the ceramics associated with the Abkan, Pre-Kerma cultures, and the A-Group, of which the latter has a more northern distribution along its traditional territory between the 1<sup>st</sup> and 2<sup>nd</sup> Cataracts. The Sai Island sites during the late Neolithic period probably represents a Pre-Kerma type of affiliation but provides ceramic and ethnobotanical data (presence of wheat and barley) that clearly shows cultural interaction with cultures associated with the A-Group and perhaps with Early Dynastic Egypt (Garcea and Hildebrand 2009:319).

In this study, the Pre-Kerma component or culture of the 3<sup>rd</sup> Cataract area was not defined nor discussed, since very little was known about this manifestation at that time. Since then, Matthieu Honegger has published a number of articles based on his excavations at Kerma and el-Barga defining what he calls the Pre-Kerma culture that was originally discovered by Bonnet in his excavations at Kerma in the late 1980s (Honegger 2003, 2004a, 2004b, 2004c, 2004d, and 2006). The Pre-Kerma culture has a similar chronological placement (existing between 3300 and 2600 BC) to the Butana Group (existing between 3750 to 2500 BC). The socioeconomic makeup of peoples associated with the Pre-Kerma culture are described as proto-urban, with a village site at Kerma which was 1.5 hectares in size (Garcea and Hildebrand 2009:310). They were cattle herders who may have practiced agriculture, as well, although there is no direct evidence for cultigens at this time (See Garcea and Hildebrand 2009, and Hildebrand 2006-2007). Ceramics associated with the Pre-Kerma culture include both mineral and organic tempered pastes (organic temper was dung), where pots were burnished or polished, sometimes with a red slip and often black-topped. Ripple wares appear to be

<sup>4</sup> It is also worth noting that the more recent publications use the term "Early Neolithic" in place of the "Khartoum Neolithic" for the central Nile region (referred also as the central Nile Valley in this study).

<sup>5</sup> Sadig has illustrated that along the Nile from the Delta down through the Khartoum area from 5300 to 3500 BC, there were concentrations of populations centering around the Egyptian Delta area, then around the Great Bend and south through Upper Nubia down to about Melik en Nasir, then picking up smaller pockets of populations around Kerma and the Karat Group at Wadi El Milk, and finally along the Khartoum area (See Map 1.7 on page 22 in Sadig 2010). Gaps where there were fewer to no settlement generally correspond with the gaps depicted in Figure 6.2 of this study.



common, and other ceramic decorations include incising, impressing, rocker-stamping, horizontal and vertical combing. The distribution of Pre-Kerma ceramics appears to go as far north as the 2<sup>nd</sup> Cataract, overlapping with A-Group cultures, and extends as far south as the 4<sup>th</sup> Cataract. As discussed above, the archeological sites associated with Sai Island may have been a northernmost facies of the Pre-Kerma culture and where the presence of wheat and barley appear there at around 2700 BC, indicating some contact with A-Group cultures or Egyptian groups farther to the north (Honegger 2004a, Garcea and Hildebrand 2009:311). Overall, it would be interesting to make further comparisons between the Butana Group and the Pre-Kerma culture as it appears that both groups were contemporary, notwithstanding that the Butana Group was more than 800 kilometers to the south and east of Kerma. In fact, some preliminary comparisons between ceramics of the Butana Group and Pre-Kerma culture have been made (see Manzo 2010 below). The use of horizontal combing as an exterior surface treatment, and as noted with some of the Pre-Kerma ceramics, is a hallmark of the Butana Group and overall principal trait associated with the Atbai Ceramic Tradition of the eastern Sudan. One important distinction to be made, however, is that ripple wares quickly disappear in the southern Atbai from the Malawiya/Butana transition where they are virtually absent in the Butana Group by 3750 BC. As discussed further in this study, the disappearance of ripple wares in the Butana Group may signal a cultural separation of the Butana Group from other developments along the central Nile Valley at this time. It is fascinating to speculate that perhaps one of the reasons for the Butana Group separating culturally from the Nile could have been due to emerging Kerma culture in the Dongola Reach area, of which peoples associated with the Butana Group retreated from. However, Manzo (2010) contradicts this, and postulates that there is new archeological data, supported with more current linguistic evidence, that shows the Pre-Kerma culture and Butana Group were related. In any case, the Butana Group started out as a larger cultural manifestation than the Pre-Kerma culture (the largest Butana Group sites were 8 to 12 hectares in size in comparison with the Pre-Kerma site at Kerma which was 1.5 hectares), and where the former predated the latter culture by at least several centuries. Nevertheless, both groups appear to have practiced a similar subsistence pattern (however, domesticated animals appear later in the Butana Group) and were probably organized along a chiefdom-like social structure (Fattovich 2010). Both groups may have also been in the beginning stages of domesticating plant resources indigenous to Africa, especially sorghum and millet.

Through his synthesis of recent archeological investigations in the Sudan, David Edwards also gives a well-reasoned discussion about an overall reassessment of the Egyptian-centric A-Group phenomenon in Lower Nubia where recent archaeological investigations further south in the Sudan demonstrates that the A-Group may represent a more northern-most manifestation of a Sudanic-centric culture originating in the heavily populated areas of Dongola Reach and further south into the Khartoum region (Edwards 2004: 68-74). The early A-Group cultures near the 1<sup>st</sup> Cataract may indeed indicate a movement of Naqada II cultures extending south from Upper Egypt, but where the southerly Classic/Middle A-Group cultures were more Sudanese in comparison. Nevertheless, additional work needs to be done in discerning these kinds of cultural differences (Edwards 2004: 70). By the mid third millennium BC, Edwards contends that the concentrated settlements of Dongola Reach associated with the Kerma Culture from Mirgissee to the north, and as far south as Barkal near the 4<sup>th</sup> Cataract, is the dominant culture south of the Egyptian state, and that the contemporary C-Group that re-inhabits Lower Nubia during this time is actually a northward extension of the early Kerma culture (Edwards 2004: 75-78, 110-111). Thus, Edwards asserts that the origins of C-Group is probably based in the more heavily populated area of Dongola Reach as opposed to Lower Nubia (Edwards 2004; 77, Gratien 1978, 1995, Bietak 1979).

In her comprehensive analysis of the A-Group and other Nubian/Sudanese groups in the Sudan and Egypt, Maria Gatto includes site KG28 (associated with the Malawiya/Butana transition) of the Butana-Gash area as part of a greater Nubian phenomena which she concludes is culturally different from the predynastic developments in central and southern Egypt, but separate from the central Nile Valley (Gatto 2002: 11). She feels that KG28 is more akin to a lower Nubian facies (i.e. Nubian Group), somewhat related to the A-Group, but different from developments in the Khartoum region (i.e. Sudanese Group). Overall, Gatto sees the A-Group as a significant indigenous development in northern Sudan which was a much more widespread Nubian manifestation than being merely restricted along the Nile Valley between the 1<sup>st</sup> and 2<sup>nd</sup> Cataracts. She argues that A-Group peoples were also traders who ventured into both the Western and Eastern Deserts of Egypt and the Sudan, including the Atbai region. Gatto also postulates that the A-Group likely developed out of the early Abkan Group, and where the Abkan may also have been the progenitor of the Badarian (or Tasian) culture further north in Egypt (Gatto 2006b). It is interesting to note that in her dissertation (2001), Gatto did a similar synthesis of ceramic-bearing cultures in Northeast Africa as discussed in this work. Neither author appeared to have been aware of each other's research at the time, however. Nevertheless,

Gatto, as a talented expert in ceramic analysis, has fortified her basic research with a number of recent field investigations in the Sudan and Egypt.

Farther to the south in the Meroe region, and just north of the site of Meroe, Azhari Mustafa Sadig has conducted excavations at the late Neolithic site of es-Sour (Sadig 2005, 2008, 2010). The site of es-Sour consist of two low mounds together with an area of 176 by 90 meters and dates sometime between 4300 and 4000 BC (Sadig 2008: 39-41, and Sadig 2010: 34-35).<sup>6</sup> A number of pot burials have been recovered there, some buried in ripple-marked vessels. Basically, the ceramics and material culture of es-Sour is comparable to other late Neolithic manifestations in the central Nile area, such as Kadada to the south, and other nearby sites of Al Ghaba and Ushara. North of es-Sour, Sadig recorded another 15 archeological sites along the Atbara-Shendi Road on the east side of the Nile to the confluence of the Atbara River, where 8 of the 15 sites dated the 3<sup>rd</sup> millennium BC and where the components at these sites (dating before 2500 BC) are comparable to materials associated with the Pre-Kerma culture (Sadig 2010: 95). These particular sites are also not too far down river from the Butana Group sites in the southern Atbai region and could perhaps share some similarities.

Archeological investigations along the Atbara near the confluence of the Nile has also been done by Randy Haaland and Sadig where they located three sites that dated to the Early Khartoum period (Early Holocene) (Haaland 1995, 1997, 2005, Haaland and Magid 1995, Edwards 2004: 25-26). Haaland notes that there were thin cultural deposits dating to the Neolithic period (Mid-Holocene) above the more substantive Early Khartoum occupations at the three archaeological sites. Although Haaland describes the ceramics associated with the Early Khartoum period at these three sites, there is little about the ceramics dating to the Neolithic period. Nevertheless, Haaland states that a decrease in rainfall from the Early to Mid-Holocene times resulted in fewer people inhabiting this region near the confluence of these two rivers after the Early Khartoum period (Haaland 2005).

In the Gezira plains between the White and Blue Nile, the more recent investigations by Rudolf Gerharz have significantly modified the ceramic sequence at Jebel Moya (Gerharz 1994). Based on Gerharz's reanalysis, it appears that the earliest occupation at Jebel Moya begins with Phase I (beginning at ca. 5000 BC) which is followed by a nonconforming Phase II (beginning at ca. 3000 BC) and which Phase II develops into a Phase III occupation (ca. 700 BC) and lasts on up to around 100 BC when the site of Jebel Moya was abandoned. The Phase I occupation appears to be a later manifestation of a late Mesolithic (Early Khartoum) occupation characterized by unburnished Dotted Wavy Line and impressed wares. The Phase II occupation appears not to have evolved out the earlier Phase I occupation as there is a hiatus between the two phases at Jebel Moya. The Phase II occupation is more substantial and is characterized by ceramics with everted rims (called "Rabak ware") similar to the contemporary occupation at Rabak, some 70 kilometers to the west, and a more predominant group of ceramics characterized by rocker-stamped and incised decorations over a burnished exterior. There appears to be some similarity of the Phase II occupation at Jebel Moya with the Pre-Kerma and C-Group cultures further to the north. The phase III occupation at Jebel Moya continues with the same Phase II ceramic tradition with the addition of imported trade items associated with the Napatan and Meroitic cultures, including jewelry of semi-precious stones, ivory, gold, and silver, along with smaller tools and weapons made of iron. Michael Brass who is in the process of reanalyzing the archaeological collections at Jebel Moya, basically agrees with Gerharz's chronological placements; however, Brass suggests that the early Phase I component could be also be placed perhaps within a Early Neolithic context, and he expects that additional new insights will be obtained when he reanalyzes the ceramics (Brass 2011, and personal communication, 2011). It is also quite conceivable that Brass' new analysis on the ceramics at Jebel Moya could shed additional light on whether there are any connections with the late Neolithic developments in the southern Atbai.

In the southern Atbai region where the focus of this study concentrates on the development of the Butana Group, no new intensive investigations have taken place there since the late 1980s. However, through a reconnaissance survey conducted in November 2010 by the University of Naples (as an outgrowth of Rodolfo Fattovich's work and direction through the Italian Archaeological Expedition to the Sudan, Kassala) Andrea Manzo and his colleagues did reinvestigate the southern Atbai region in and around Kassala (investigations at Mahal Teglinos stopped in 1995) and further to the west where sites associated with the Butana Group had

<sup>6</sup> The 4300 to 4000 BC occupation at es-Sour would place it at the end of the early Neolithic period, however, the presence of ripple-marked ceramics would characterized the occupation as late Neolithic. As a result, a 4000 BC date for the beginning of the late Neolithic period as argued in this study might be more appropriate.



been previously investigated in the 1980s (Manzo 2010).<sup>7</sup> New areas north of the 1980s investigations were also surveyed. In total, Manzo and his colleagues recorded 135 sites, representing the full range occupations associated with the Atbai Ceramic Tradition. Basically, Manzo and his colleagues reconfirmed Fattovich's, Marks, Mohammed-Ali, and Sadr's earlier work about the development of the Atbai Ceramic Tradition and the related movements and social evolution of its people. Manzo also noted that an earlier Butana Group component was documented at Mahal Teglinos which underlay the main Gash Group component there (Fattovich, Manzo, and Usai 1994: 15). The earlier Butana Group component at Mahal Teglinos contained ripple-decorated ceramics (Manzo 2010:5). Manzo and his colleagues believe that the Butana Group ceramics at Mahal Teglinos, and the Butana Group occupations further west in the southern Atbai also attest to strong cross-cultural relationship with other groups in Upper Nubia, namely the Pre-Kerma culture of the Dongola Reach area (Manzo 2010: 5 and 31). Manzo and his colleagues further state that the similarities between the Butana Group and pre-Kerma culture ceramics are "remarkable" and that there may have been an overland route from the confluence of the Atbara and Nile rivers to the 4<sup>th</sup> Cataract area (Manzo 2010: 5 and 31, Honegger 2004d, 85, Figure 3-4, 2004a 39-40). Manzo uses the linguistic correlations of Claude Rilly who argues for a broader Northern East Sudanic language group (of Nilo-Saharan stock--see Rilly 2009) to support similarities observed in the ceramics between the Butana Group and Pre-Kerma culture (Manzo 2010: 31, Rilly 2008: 6-10).

Finally, the more recent literature produced since the publication of this study include a number of brief references about the southern Atbai and Atbai Ceramic Tradition, including the Gash, Butana, and Mokram Groups of the Kassala Phase (some of the more recent literature refers to the Mokram Group as the "Jebel Mokram Group"). It is important to note that the recent references about the southern Atbai and related archeological cultures of the Atbai Ceramic Tradition is based on the earlier writings of Mohammed-Ali, Fattovich, Marks, and Sadr of the 1980s and early 1990s.

Beginning with Sadig's 2010 publication, Sadig make the observation that by the 5<sup>th</sup> millennium (before present), the "Atbai plains east of the Nile in Eastern Sudan" increasing appear to be culturally distinct from the riverine areas (Sadig 2009: 258; Sadig 2010: 50, Mohammed-Ali 1985, Fattovich, Marks, and Mohammed-Ali 1984: 182). Later, Sadig states that the Butana and the Atbai plains east of the Nile Valley provides indirect evidence of domesticated plants associated with the later Neolithic cultures of the Kassala phase, namely the Mokram Group, where seed inclusions in potsherds have been identified as domestic sorghum (Fattovich, Marks, and Mohammed-Ali. 1984: 182, Sadig 2010: 75). It is interesting to note, that in this study there are sherds associated with the earlier Butana Group of the Kassala phase where such seed inclusions could be domesticated varieties of sorghum or millet (see the *Khordhag Plain* type in Appendix A). Sadig also makes observations that similar-looking finely ground stone mace-heads recovered at es-Sour resemble similar examples found in the eastern Butana and near Kassala (Marks *et al.* 1985: 47, Sadig 2008: 39; 2010: 144). Such similar looking mace-heads made from porphyry are located on Butana Group sites dating to the 4<sup>th</sup> millennium B.C. (See Mbutu 1991: 364, Plate 4).

In 2003, Abbas Mohammad-Ali and Abdel-Rahim Khabir note in their physicochemical analyses, that a principal tempering material used in ceramics of the Khasm el Girba area was derived from Abyssinian basalts that were transported by the Atbara River (Mohammad-Ali and Khabir 2003: 32). Although this study did not attempt to source the mineral tempering materials used in the making of Butana Group ceramics, it seems perfectly reasonable that the non-plastic materials were derived from igneous rocks that were recovered or found near the Atbara River in the southern Atbai region.

In a reanalysis of the ceramics recovered by Arkell in 1954 at Agordat, Alemseged Beldados notes that combed ceramics (combed on both the interior and exterior surfaces) are present at this site, along with a characteristic appliqué technique on the sites of pots that he notes are similar to such motifs found at Gash Group sites dating between 3500 to 3820 B.P. (Beldados 2010: 97, Phillipson 1977: 60). The combed ceramics noted at Agordat are also comparable to the *Butana Combed* type ceramics described and illustrated in this study, and the appliqué motif can also be similar to the motif (called the Atbara Rim Band Mode) noted on the exterior of wiped ceramics associated with the *Socodad Wiped* ceramics of the Butana Group (See Appendix A). Beldados also notes that the prevalent cross-hatch decorative pattern present in Agordat ceramics is associated with other ceramics of Atbai Ceramic Tradition (Beldados 2010: 99, Fattovich, Marks, and Mohammed-Ali 1984). Such cross-hatch decorative patterns can perhaps be seen on Butana Group ceramics associated with the type *Zirhalla Pattern Burnished* described in this study (See Appendix A in

<sup>7</sup> Manzo and his colleagues plan to return to the southern Atbai in 2011 and will no double elaborate more about the Butana Group and Atbai Ceramic Tradition. Publications on their work are expected to come out later in 2012.

this study). Rodolfo Fattovich (2002), believes that Agordat is actually a northern outlier, or is within the sphere of influence of Mahal Teglinos and the Gash Group.

Brass makes the observation that the presence of new ceramic styles seen across the Sudan and which are present Napatan and Meroitic sites may have some connections with the Butana Group ceramics in general (Brass 2009: 123, Mohammed-Ali and Khabir 2003, Winchell 1992). This would be especially true with the decorated ceramics associated with the late Butana Group, as well as many ceramics types associated with the Mokram Group that post-dates the Butana and Gash Group after 1500 BC.

Victor Fernández, Alfredo Jimeno, Mario Menéndez, and Javier Lario note that ceramics decorated with simple zoned and impressed decorations associated with Late Neolithic assemblages from the Blue Nile area of the central Sudan are comparable to the Gash Group of the southern Atbai area of eastern Butana (Fernández *et al.* 2003: 255, Sadr 1991). Comparable Butana Group ceramics in this study would be associated with the *Sirjino Simple Dentated* type (see Appendix A). These authors further note that another comparable feature between the Late Neolithic Blue Niles ceramics and the southern Atbai ceramics of the same period is the prevalence of rough wide scraping or combing of the surfaces of pots (Fernández *et al.* 2003: 260, Fattovich, Marks, Mohammed-Ali 1984). As with similar combed ceramics noted at Agordat, such combed ceramics associated with the Butana Group would be the *Butana Combed* type noted above. In surmising the basic economic subsistence pattern of late Neolithic cultures in the Blue Nile and Western Butana, Fernández, Jimeno, Menéndez, and Lario, observe similar patterns in the southern Atbai, noting that all of these groups exploit significantly larger proportions of wild savannah species over domesticated ones (Fernández *et al.* 2003: 263, Fattovich 1991b, Sadr 1991). They also note that evidence for food production does not appear until the later half of the Butana Group (ca. 6000–45000 bp), but being fully established in the Gash Group (ca 4500–3500 bp) (*ibid.*). These observations made by Fernández, Jimeno, Menéndez, and Lario appear to be consistent with data presented in this study on the subsistence pattern of the Butana Group population; however, there remains the possibility of Butana Group peoples domesticating sorghum and millet from the early Butana Group period from as early as 3750 BC on through the late Butana Group period at about 2500 B.C. The clearest indicator of a continual use of possible domesticated plants in the Butana Group is seen through the seed-tempered sherds associated with the *Khordhag Plain* type (see Appendix A in this study). In terms of macro settlement patterns and the movements of peoples of the central Sudan at the close of the Late Neolithic period (ca. 2500 BC) and beginning the of Napatan-Meroitic periods (ca 700 BC), Fernández seems to agree with Haaland's earlier observations that Cushitic-speaking populations were moving out the Eastern Butana/Khashm el Girba area into the central Nile and constructing tumuli in the Khartoum region (Fernández 2003: 417–418, Haaland 1987: 224–231). Again, Fernández sees similar ceramic decorative traits such as exterior cross-hatched pottery between the Nubian Pan Grave culture of Northern Sudan with those associated with the Mokram Group of the southern Atbai in the eastern Butana, who, in turn, may be have been ancestral to the present-day Cushitic-speaking Beja (Fernández 2003: 418, Caneva 2002, Sadr 1990).

M.J. Grove (2007) uses Karim Sadr's 1991 synthesis on nomadism in the southern Atbai and uses a complex series of statistics and computer simulations to demonstrate that the spatial patterning of sites shows an increase in mobility through time between cultural groups associated with the Butana, Gash, Mokram, and Hagiz groups of the Kassala and Taka phases of the Atbai and post-Atbai Ceramic Tradition. Grove shows that among the four groups he analyzed, the Butana Group demonstrated the least mobility, followed by slightly more mobility in the Gash group. Thus, Grove's least mobility model for the Butana Group would give credence that this group represented, for the most part, a sedentary society.

Finally, Rodolfo Fattovich has recently synthesized the entire Atbai Ceramic Tradition that he, Anthony Marks, and Abbas Mohammed-Ali originally defined in 1984 into the developments of complex societies and states in the northern Horn of Africa (Fattovich 2010). He basically demarcates the northern Horn of Africa cultural developments into at least two distinct trajectories that are indirectly related; one occurring in the Eritrean-Sudanese lowlands, and the other in the Eritrean-Ethiopian highlands, culminating into the Kingdom of Aksum. Fattovich puts forth that the Atbai Ceramic Tradition represents the material manifestations of the Eritrean-Sudanese lowlands which develops in lowland plains of eastern Sudan between Kassala and Khashm el Girba (Fattovich 2010:150). As it will be explained in greater detail in this study, Fattovich surmises that the Atbai Ceramic Tradition is based in the earlier Early Khartoum ceramic tradition and divides the Atbai Ceramic Tradition into three phases and associated groups: (1) Saroba Phase (ca. 5000–3800 BC), including the Malawiya Group; (2) Kassala Phase (ca. 3800–800/700 BC), including the Butana Group (3800–3000 BC) and Gash Group (ca. 3000–1500/1400 BC), and Jebel Mokram Group (termed in this study as the Mokram

Group as it was originally defined) (ca. 1500/1400-800/700 BC); and (3) Taka Phase (ca. 800/700 BC to AD 300/400) including the Hagiz Group (Fattovich, Marks, and Mohammed-Ali 1984, Fattovich 2010: 150). Although Fattovich believes that the origins of the Atbai Ceramic Tradition may be located at the Amm Adam 1 site and related sites in the northern Gash Delta sometime in the 6<sup>th</sup> millennium BC, he notes the primary early development of the Atbai Ceramic takes place within the Khashm el Girba region associated with the transitional Saroba/Kassala Phase archaeological site of KG28 (ca. 4200-3800 BC), and in particular with the subsequent rise of the very large archaeological sites associated with the Butana Group of the Kassala Phase, such as KG23, KG7, and KG96. These archaeological sites and the sudden dramatic rise of the Butana Group is discussed in greater detail in this study. Fattovich also notes that porphyry mace-heads found on Butana Group sites may indicate some class differentiation, since porphyry had to have been transported about 300 kilometers from their original sources located in the Red Sea Hills (Marks, Mohammed-Ali, and Fattovich 1986, Sadr 1991, Fattovich 2010: 154). Fattovich goes on to say that such porphyry mace-heads have been found in other contemporary cultures in Egypt and Nubia and are associated with the high elite burials. Fattovich postulates that the Butana Group developed into a chiefdom society associated with the later Gash Group of the Kassala region where the latter group was centered at Mahal Teglinos and Shurab el Gash (Fattovich 2010: 154 and 160). Funerary stelae erected at Mahal Teglinos during middle and late times (ca. 2300-1900 BC and 1700-1500/1400 BC) of the Gash Group resemble similar-looking stelae found at early proto-Aksumite tombs (ca. 400-50 BC) of the Eritrean/Ethiopian highlands, to which Fattovich believes could show some cultural connection between the Gash Group and formative development at Aksum (Fattovich 2010: 158, 161). In any case, the archaeological record in Fattovich's perspective demonstrates that the mixed foraging/farming/herding economy associated with the Butana Group develops into a mixed foraging/herding economy associated with the Gash Group (Fattovich 2010: 161). As discussed in more detail in this study, and as Fattovich (2010) points out, the transition between the Butana and Gash Groups is rooted in a physiographic shift of the Gash River migrating away from its confluence to the Atbara River to the present-day Gash Delta. Thus, by the middle of the 3<sup>rd</sup> millennium BC, the Khashm el Girba homeland of the Butana Group was essentially abandoned, where peoples slowly migrated with the Gash River into the Kassala region and establishing themselves around the centers of Mahal Teglinos and Shurab el Gash. Due to a continued drying trend in the Eritrean-Sudanese lowlands, the culture of the Gash Group in Kassala diminishes significantly and people disperse into smaller but more widespread agro-pastoral communities associated with the Jebel Mokram Group which basically divided into two cultural economic divisions; one being associated mainly with cultivation and the other with herding (Marks and Sadr 1988, Sadr 1991: 52-56, Fattovich 2010: 161). The Jebel Mokram Group ceramics consist of two principal wares; one associated with the Gash Group Ware, and the other with the Middle Nubia Ware, to where the Middle Nubia Ware indicates an intrusion of people coming in from the Eastern Desert into the central Sudan into Eritrean-Sudanese lowlands of the Khashm el Girba and Kassala regions (Fattovich, Sadr, Vitagliano 1988-1989, Fattovich 1991b, Sadr 1991: 45-48, Fattovich 2010: 150-151). Fattovich notes that there are archaeological sites near Agordat in the middle Barka valley of Eritrea that contain ceramics similar to those found in late Gash Group and Jebel Mokram components. This would suggest that the widespread phenomenon of the Jebel Mokram Group of the Atbai Ceramic Tradition reached into, or influenced other cultures in the central Sudan/Nile area across into the Eritrean/Ethiopian Highlands, and maybe farther north into historic Nubia. Again, this study goes into more detail about the transition from the Butana to Gash to Jebel Mokram Group and which parallels close in what Fattovich expressed in 2010 (See chapter 2 in this study).

To close, in light of the more recent literature, the place the Butana Group ceramics have in the Neolithic and Post-Neolithic eras of northeast Africa, and in relation to the other ceramic-bearing cultures in the region, appears to correlate well with the observations and conclusions originally made in this study. One observation not made in this study, and probably warrants additional research is the relationship between the Butana Group and Pre-Kerma culture. Nevertheless, the Butana Group as an archaeological phenomenon, represented a major development in the eastern Sudan that appeared as an autonomous and indigenous manifestation in the first quarter of the fourth millennium BC and lasting into the first half of third millennium BC, totaling an occupation spanning more than a thousand years. There are no abrupt changes within the Butana Group suggesting that it was relatively stable over this period of time. As Fattovich (2010), Sadr (1991), and others hypothesize, the disappearance of the Butana Group in the southern Atbai can be attributed to the northeastern migration of the Gash River, which had originally drained into the Atbara, and which eventually shifted course and drained into the inland Gash Delta by the third millennium BC. As Fattovich points out, and to which this study make an unequivocal conclusion, the ceramics of the Butana Group are directly ancestral to the ceramics associated with the Gash Group at Mahal Teglinos and Shurab el Gash. Why the Butana Group did not spread further downriver along the Atbara to the Nile, may have simply

been an unintended byproduct of the Gash River shifting its course inland and away from the Atbara River.<sup>8</sup> Unlike the Pre-Kerma culture, there also appears to be no outward push of the Butana Group into other areas in the central Sudan, either across land or along the Nile. However, this hypothesis may be modified (or even changed) in the near future, perhaps suggesting that at least during the development of the early phase of the Butana Group, that peoples in the southern Atbai were indeed exporting ideas (or even people) down the Atbara River, and beyond. Nevertheless, the Butana Group ceramics do appear to represent a clear cultural separation from the Central Nile developments, where such decorative traits as rippling the surfaces of ceramics, which manifested in greater numbers along the Nile from Lower Nubia into the Khartoum region, disappeared entirely from the Butana Group in the southern Atbai. Finally, and as this study attests, the Butana Group remains as a significant cultural development, perhaps exporting some of its innovations outside the southern Atbai, and perhaps fostering the first domesticated varieties of sorghum and millets in this part of Africa that were later adopted by the Gash Group at Mahal Teglinos, and perhaps elsewhere. Such innovations would have allowed peoples of the Butana Group to congregate and settle into some of the largest village sites known in northeast Africa at the time.

Frank Winchell  
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<sup>8</sup> Nevertheless, additional research downriver along the Atbara may prove that some aspects of the Butana Group did indeed move in this direction.

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