CENTRAL SUDANIC OVERVIEW

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1. Introduction

1.1 Central Sudanic within Nilo-Saharan

The Central Sudanic languages are a large, complex subgroup of Nilo-Saharan stretching between western Chad and Northeast DRC and Uganda, first identified by Joseph Greenberg (1963, 1971). Central Sudanic consists of some 40-50 languages, depending on how Sara and Moru-Madi languages are counted. Since Greenberg, the main authors to work on characterising Central Sudanic are Bender (1992) and Boyeldieu (2000, 2004). Overviews of Nilo-Saharan have generally included Central Sudanic as a unity (e.g. Bender 1997; Ehret 2001). Although the unity of Central Sudanic is usually accepted but the published evidence for this is thin. The researchers who have worked most on these languages, Pascale Boyeldieu & Pierre Nougayrol (2008) leave the question open, pointing out that a lexicostatistical evaluation falls to values as low as 10%, which is only just above chance. Despite these low percentages, there are a significant number of reconstructible roots in Central Sudanic, suggesting its coherence. This paper[1] is intended to support the argument for the unity of Central Sudanic and to provide evidence for a proposed internal classification. The evidence is mainly lexical; grammatical descriptions of Central Sudanic languages are scattered and not every branch is covered by even a sketch, so identifying common grammatical structures at more than a basic level is a task for the future. Central Sudanic phonology is also strikingly varied, especially in the east, with the complex consonants of Lendu and the Mangbetu group posing particular challenges.

1.2 The history and culture of Central Sudanic languages

Central Sudanic languages are scattered across some of the most inaccessible regions of Central Africa, which in recent times have been further troubled by vicious civil wars. As a result, some of the information about numbers, locations and even the very existence of the smaller languages, may be inaccurate. Ironically, this is not the first episode of major insecurity to rock the region; From the eighteenth century, the slave trade almost certainly had an important role in further dispersing the western branches.

The consequence of this has been fragmentation and dispersal, with Central Sudanic intertwined with regional Arabic, Fur, Ubangian and Eastern Sudanic languages. Map 1 presents a recent synthesis of what is known about the location of the component languages, with the caveat that some may no longer be in the same place as they were in previous eras of relative peace.

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[1] Thanks to Don Killian, Pascale Boyeldieu, Harald Hammarstrom, Didier Demolin, Connie Kutsch Lojenga, John Keegan for access to unpublished data.

Map 1. Central Sudanic languages
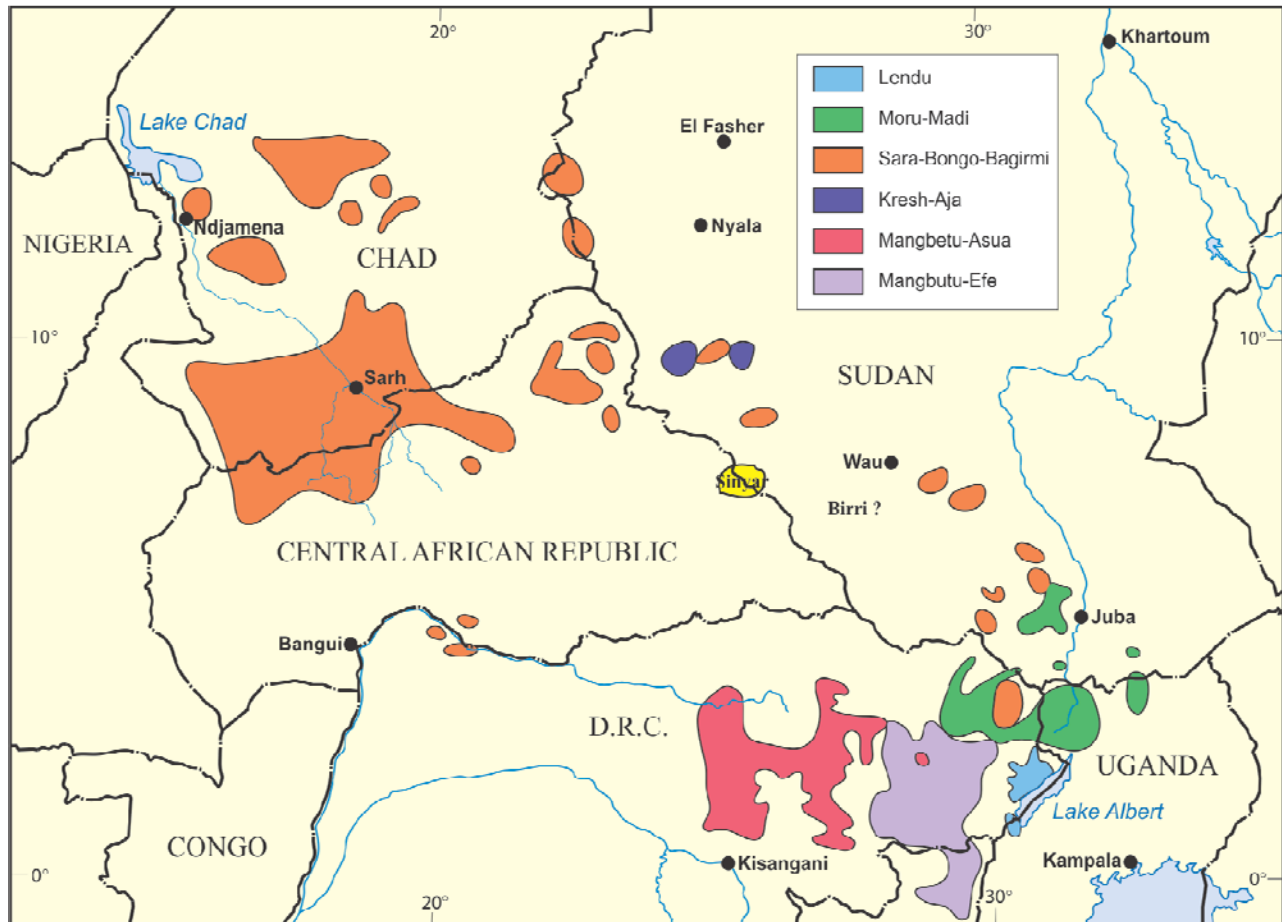
Source: Updated from Boyeldieu (2004)

It is unclear why the languages should be spread across the map and thus where they originated. Sara-Bongo-Bagirmi (SBB) languages are relatively coherent and the centre of diversity is all in the Southeast. This suggests that Central Sudanic began to diversify in the region north and west of Lake Albert. There is no evidence for the reconstruction of agriculture in Central Sudanic which points to a dispersal of hunters east to west. Central Sudanic speakers encountered speakers of Ubangian languages spreading eastward and there must have been a major interaction between the two at some point, since the Banda languages in particular are shot through with Central Sudanic loans (Cloarec-Heiss 1994).

Boyeldieu recalls a science fiction story, published before the First World War, which envisaged Bagirmi, the language of a small state in Central Africa, becoming the *lingua franca* of Africa in the year 9040, when Europe has sunk beneath the waves (Van Gennep 1911). This is still in the future, but it is pleasant to see an African language being given such high status in fiction.

2. Classification

Central Sudanic is a branch of Nilo-Saharan (Greenberg 1963, 1971). It was formerly part of a larger subgroup, 'Chari-Nile', but this is no longer considered valid. There have been doubts about its coherence, as a family in the light of low lexicostatistical cognacy percentages between branches (Boyeldieu 2013) but a series of strong lexical isoglosses provides good evidence for its status as a valid family. However, some putative branches are so poorly documented, that any internal classification must remain provisional.

Central Sudanic is usually divided into two major branches, East and West (Figure 1). The documentation of Birri is too weak to be sure of its position and it is provisionally given a branch of its own, pending further research. Formona-Sinyar is also sparsely documented and its position as a part of the Western branch must remain a best guess.

Figure 1. Classification of Central Sudanic languages
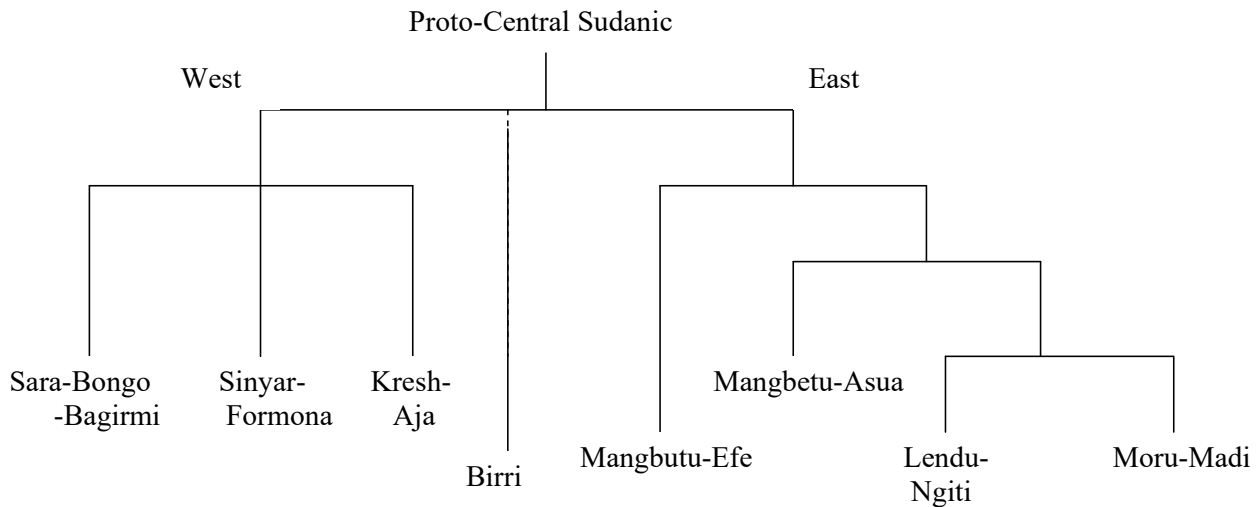
Source: Adapted from Boyeldieu (2004)

A series of short forms has been adopted for Central Sudanic branches to make reference to them less unwieldy, and this is shown in Table 1;

Table 1. Acronyms for Central Sudanic branches

Short form	Expansion
SBB	Sara-Bongo-Bagirmi
KA	Kresh-Aja
Birri	
FS	Formona-Sinyar
ME	Mangbutu-Efe
MA	Mangbetu-Asua
LN	Lendu-Ngiti
MM	Moru-Madi

Evidence for both the coherence of Central Sudanic and for the individual branches is given in

3. Subgroups

3.1 Sara-Bongo-Bagirmi

The Sara-Bongo-Bagirmi (SBB) languages constitute the single largest and most coherent subgroup of Central Sudanic. The first outline of the languages in the group appears in Tucker & Bryan (1956:10-19) which lists Kresh together with Yulu as a branch of SBB. Greenberg (1971:) separates out Kresh and lists the groups pretty much as they are still listed today. Boyeldieu (2013) has a detailed discussion of whether FS (or at least Sinyar) might be an SBB outlier but concludes it is still difficult to distinguish

Thayer (1976) is a published version of a thesis, Thayer (1974) which is a historical phonology of the 'Chari' languages, SBB under another name. Keegan (1982) provides a strong critique of Thayer, both in terms of the approach to old sources and analytic weaknesses. Caprile (1981) is a compressed overview of SBB languages in which some general phonological features are plotted, largely superseded by Boyeldieu (2000). Saxon (1980: 126) presents a genealogical tree of SBB based on lexicostatistical counts of nine languages. Saxon is the first author to consider the implications of reconstructing economic and cultural items and their possible relevance for prehistory. However, the thesis is marred by many errors in transcription and a lack of archaeological data to anchor his results.

Two theses completed in the 1980s, Huguet (1986) and Djarangar (1989) present revised classifications in their text, as well as new field data. Neither author went on to pursue their work in print and the results have been little cited. Bender (1992) is a quasi-reconstruction of Central Sudanic with a presentation of starred forms. The author himself considered it highly provisional and so it is. Bibliographies occasionally include references to an unpublished manuscript by Christopher Ehret on Central Sudanic from the same period, but I have never seen a copy of this. Following this, SBB languages were the subject of a general monograph and reconstruction (Boyeldieu 2000), including substantial wordlists. Further papers and overviews can be found on Pascale Boyeldieu's website[2].

The study of the Sara languages themselves has been revolutionised by the publication of material from the surveys of John Keegan[3]. Apart from lexicons of many individual languages, Keegan has published comparative dictionaries and an overview of the family as a whole (Keegan 2016a,b,c). He presents a rather different view of the division of the Sara languages from Boyeldieu and this view is adopted here as Keegan presents evidence for his categories. Figure 2 shows a composite view of the likely internal structure of SBB, combining the higher-level phylogeny of Boyeldieu with that of Keegan;

Figure 2. Internal structure of SBB languages
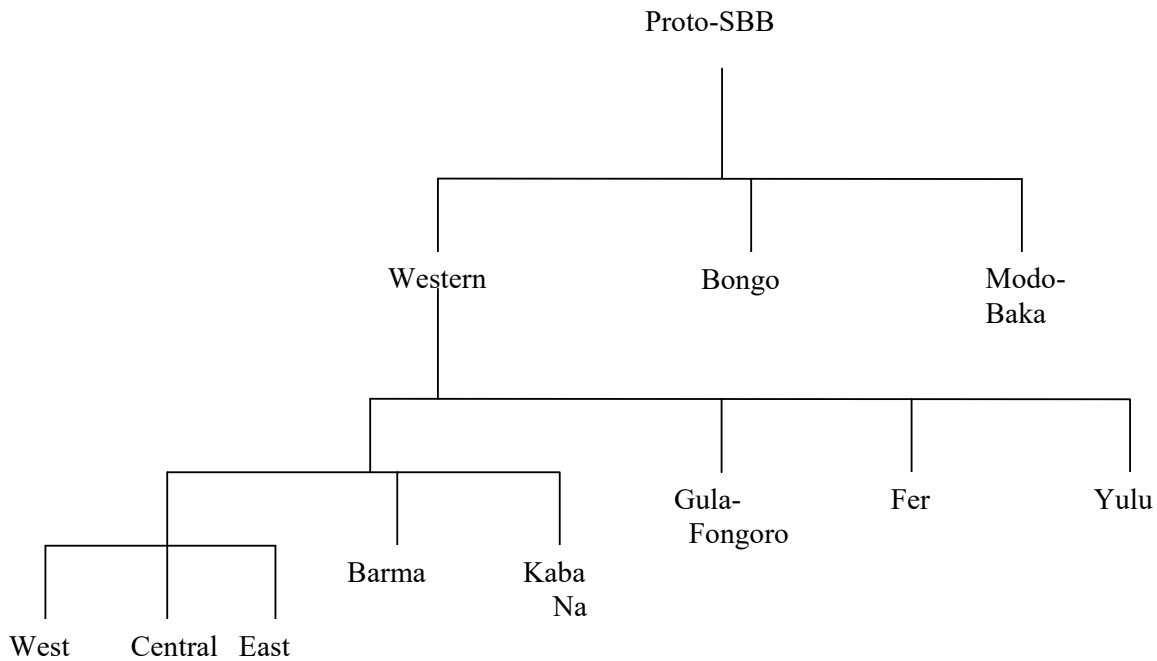
Map 2 shows the location of the SBB languages, at least before the recent civil wars in the region;

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[2] URL:
[3] URL: http://morkegbooks.com/Services/World/Languages/SaraBagirmi/

Map 2. Location of the SBB languages
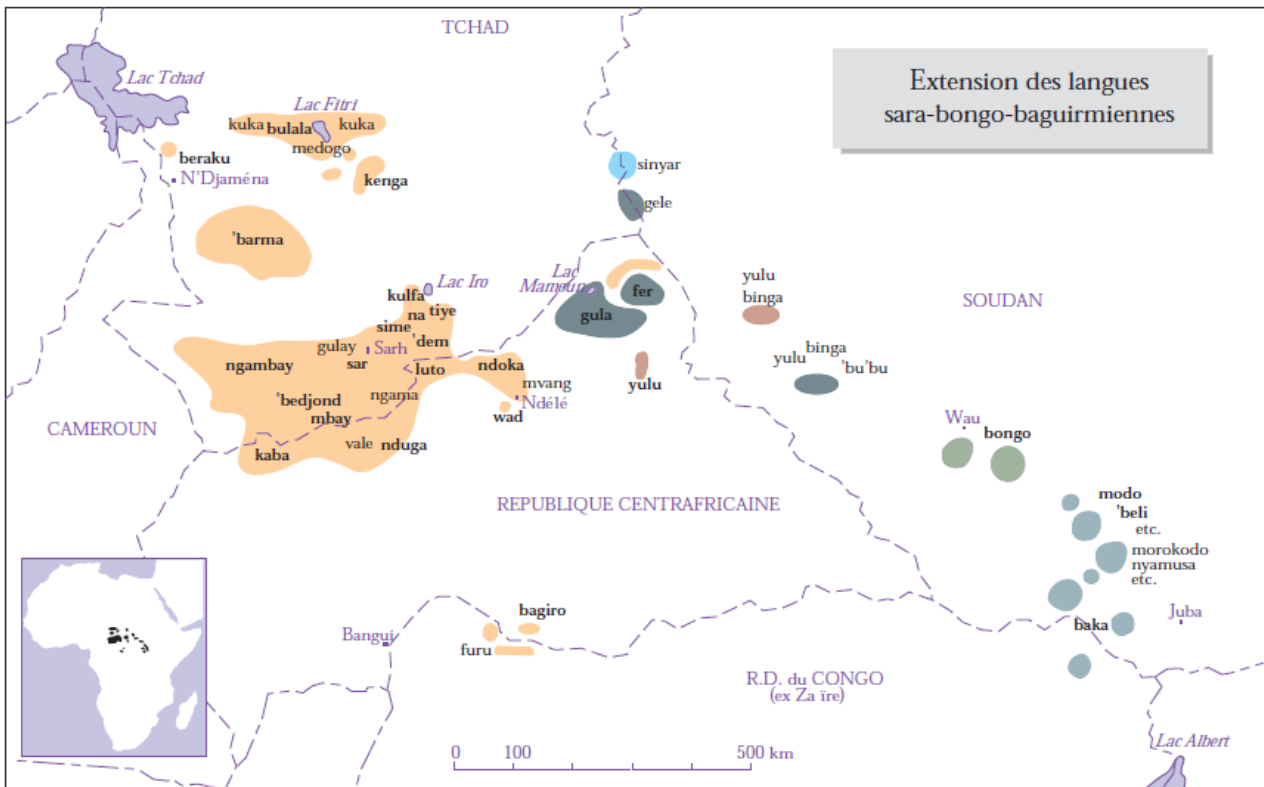
Source: courtesy Pascale Boyeldieu

Table 2 shows some examples of lexical items which separate Kaba Na from the remainder of 'Sara Proper'.

Table 2. Evidence for separation of Kaba Na

Gloss	Kaba Nà	Sara Proper
child	mōnō	ngōn, ngō
crocodile	kíɓàlè	màr, mà
song	lā	pā
speech	hàā	tà, nàjī̄
vomit	túrē	tōm,tɔ̄mbɔ̄, etc.
wait	ákò	ngóō, ngə́bī̄
wash	tɔ́ɔ̀	tógō, etc.
weep	káȳ	nɔ̃̄
woman	màndé	dèné, dǐyá̰
year	tànáà	ɓäl

Source: Keegan (2016c: 20)

Keegan (2016a,b,c) gives evidence for the division of Sara Proper into three branches.

The position of Bagirmi [=Barma] remains difficult to determine, but Keegan (2016) has now published a dictionary and grammar sketch in modern transcription. The early material of Gaden (1909) and the grammar of Stevenson (1969) has been reprised in different sources. Keegan notes that many of Stevenson's examples are not confirmed by his informants.

A language for which published data is very limited is Fongoro, a language of hunter-gatherers in Dar Fongoro, straddling the Chad-Sudan border (Doornbos & Bender 1983: 74). The language is that of an outcast group and there were only a few speakers in the 1970s when the sparse data we have was collected.

However, Fongoro turns out to be quite a close relative of the Gula languages described in Nougayrol (1999). Table 3 shows some of the evidence for aligning Fongoro with Gula;

Table 3. The Gula affiliation of Fongoro

Gloss	Fongoro	Gula
ashes	mviti	bítī
big	oro(fe)	ōrō
foot	kunza	kùnzà
hair	mvele	vèlè
kill	tele	tɔ̄lɛ̄
meat	ʌndi	hàndì

Lutos and Vale are two very little known languages in RCA. They are the subject of so-far unobtainable theses (Moundo 1975 ; Ndoko 1991). Kenneth Olson has put on line a basic wordlist of Lutos[4] and a phonology based on a conference handout (Olson 2013).

3.2 Kresh-Aja

The Kresh-Aja (KA) languages are one of the smallest and least-known subgroups of Central Sudanic. The main source (and in some cases the only source) for this group is Santandrea (1976). Santandrea gives a grammatical sketch for Kresh, Woro and Aja, as well as a comparative wordlist which also includes Baka, a Ubangian language. Brown (1986) provides a small amount of additional data on Kresh phonology, and Boyeldieu (2000a) had access to a wordlist of J-P. Caprile, which is cited in his appendix on the affiliation of Kresh. It is clear from the data that KA is the nearest relative of SBB, but should not be included within it.

3.3 Biri

The Biri [also Birri] language is only known from publications by Santandrea (1950, 1965-66). According to him, the language is correctly known as Vìrì. There is another Bviri language, aligned with Sere, with which this Biri has sometimes been confused (e.g. in Ethnologue 2009). The Biri seem to originate in CAR, but in the period of his research some were resident in the Sudan. The report in the Ethnologue cites and assessment of their numbers from 1996, when there were 5000 claiming Biri ethnicity but only 200 speaking the language. However, this may well apply to the Bviri, not the Bir (see above). Santandrea reports Zande as the prestige language for Biri speakers, but it may well be Banda today. Given the chronic insecurity of the region and the declining status of the language during the 1960s, Biri may well be extinct today.

Santandrea reports that the Biri were locally regarded as the 'oldest' autochthonous group in the region, whatever that may mean. Although there has been a tendency to class Biri with Sara-Bongo-Bagirmi, but the evidence for this is weak. Biri seems to have cognates across the Central Sudanic languages, and for this region it is provisionally given a subgroup of its own. The table shows it is sometimes aligned with East and sometimes western Central Sudanic.

East		Gloss
Birri	vò	earth
Madi	vò	earth
West		
Birri	árá	dance
Kenga	àalā	*danser*

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[4] URL: http://www-01.sil.org/~olsonk/lutos/

3.4 Formona-Sinyar [FS]

Sinyar [=Shemya] has 5-10,000 speakers and was spoken in Chad and Sudan. According to the Ethnologue (2009) the Sudanese population may well have crossed into Chad. The first source on this language is Grossard (1925) which is a short wordlist written in the French orthographic tradition. Haaland (1978) appends a wordlist collected by Robin Thelwall, which is manifestly the same language. Haaland also includes a comparative wordlist of a language called Formona, spoken by a group which has become culturally Masalit. Formona is apparently related to Sinyar but is significantly different and is thus treated as a separate language. The transcriptions are difficult to use and no information on grammar is available. It has been classified with the SBB languages, but it has a variety of problematic features which suggest it should be given its own subgroup, hence its representation on Map 1.

3.5 Mangbutu-Efe

Mangbutu-Efe (ME) is a group of six languages spoken in northeast DRC and adjacent parts of Uganda. Table 4 shows some basic statistics on the ME languages;

Table 4. Mangbutu-Efe languages

Name	Also	Population	Location and subgroups
Efe		20,000	Orientale Province, Mambasa, Watsa, Irumu, and Djugu territories.
Lese	Lesa, Lesse, Lissi, Walisi, Walese, Balese, Mbuti	50,000	Orientale Province, Watsa, Djugu, Irumu, and Mambasa territories.
Mamvu	Tengo	60,000	Orientale Province, west and southwest of Watsa in Watsa Territory. Possibly some in Uganda.
Mangbutu	Mombuttu, Wambutu, Mangu-Ngutu	15,000	Orientale Province, south of the Kibali River and east of the Moto River in Watsa Territory.
Mvuba	Mbuba, Bambuba, Bamvuba, Mvuba-A, Obiye	5,095	Nord-Kivu Province, Beni Territory, around Oicha. Also spoken in Uganda.
Ndo	Kebu, Oke'bu, Ndu	300,000	Northwestern. Mahigi is the center. Also spoken in Democratic Republic of the Congo.

The first identification of this group appears to be in Van Geluwe (1957). Mamvu-Lese is the main language which has been studied in depth, particularly by Vorbichler (1965, 1971, 1974, 1979). A complete bibliography to 1993 is in Bokula & Irumu (1994). Coens and Goederie (1912) published a short dictionary of Mamvu.

3.6 Mangbetu-Asua

Mangbetu-Asua (MA) consists of a group of four languages spoken in the northeast of the DRC. One of these, Bendi, is erroneously listed as Lendu-Ngiti in the Ethnologue. The MA languages are;

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Table 5. Mangbetu-Asua languages

Name	Also	Population	Location and subgroups
Asoa	Asua, Asuati, Asuae, Aka	25,474	Orientale Province, Rungu Territory, Ituri Forest, among Mangbetu groups Maele, Meje, Aberu, and Popoi
Bendi	Mabendi, Mabeni	32,000	Orientale Province, Djugu Territory, midway between Bunia and Djalasiga.
Lombi	Lumbi, Rombi, Rumli, Odyalombito	12,000	Orientale Province, Tshopo District, Bafwasende Territory, Barumi and Bekeni collectivités.
Mangbetu	Nemangbetu, Mangbettu, Mambetto, Amangbetu, Kingbetu	620,000	Orientale Province, Rungu, Niangara, Poko, Watsa, Wamba, and northeast corner of Banalia territories. The Popoi group is in Banalia Territory, and the Aberu group is in Wamba Territory. Subgroups: Meje (Medje), Mangbetu, Makere, Malele, Popoi. The Medje dialect is reported to have the most speakers, and is the most widely understood. Lombi and Asua are related separate languages.

The literature on the group as a whole is very sparse, but Demolin (1992) includes a comparative wordlist of several Mangbetu dialects plus Lombi and Asua, though not Bendi, and also posits reconstructed forms. The group is referred to in reference literature as 'Moru-Mangbetu' combining the Moru-Maɗi languages (e.g. Thomas 1981). Bokula & Irumu (1994) contain a comprehensive bibliography up to 1994. The first sketch of the group is probably in Tucker & Bryan (1958) reprised in Tucker (1966). Almost all the published literature concerns Mangbetu, beginning with Autrique (1912), Vekens (1928), Larochette (1958), Demolin (1992) and Bokula & Irumu (1994).

3.7 Lendu-Ngiti

Lendu and Ngiti are two related languages spoken in the Northeast DRC. Ngiti is well known from a comprehensive grammar (Kutsch-Lojenga 1993) and an unpublished dictionary (Kutsch-Lojenga n.d.). Material on Lendu (Bhadha ~ Bálɛ́dhá) was first published by Struck (1913) and a first grammar was published by Deleu (1934). The striking phonology of Lendu was first marked in the literature by Hertsens (1940) and then the subject of studies by Dimmendaal (1986) and Kutsch-Lojenga (1989, 1991). Trifkovic (1973) completed a thesis on Lendu grammar which has remained unpublished. Bokula & Irumu (1994) give data on Ndru, a southern Lendu dialect which may be a distinct language. The Ethnologue also lists Bendi as part of this group, but according to Kutsch-Lojenga (p.c.) Bendi is part of Mangutu-Efe.

3.8 Moru-Maɗi

Moru-Maɗi consists of very large number of lects spoken between northeast DRC, Uganda and Sudan. There are considered to be ten language clusters, but many of them are subdivided into marked dialects. Figure 3 shows the internal structure of the Moru-Maɗi group.

Figure 3. Moru-Madi languages

Moru-Madi

South	Central	North
(Maɗi-Olubo)	(Avokaya, Lugbara, Logo etc.)	(Moru)
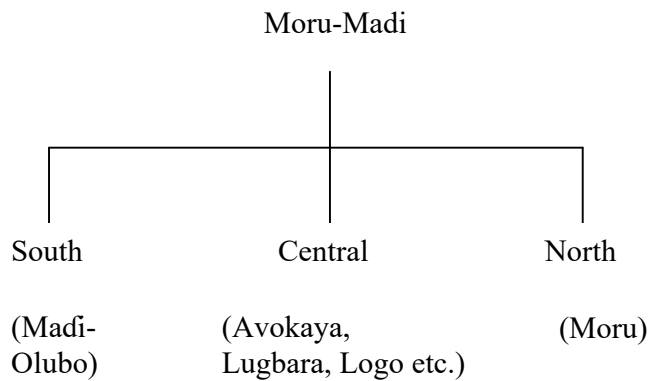
All these languages are lexically very similar. The group was first characterised by Tucker (1966) and later in the 1990s (Boone & Watson 1996) who carried out a major dialect survey, a large-scale comparative wordlist amd a comprehensive bibliography. The importance of languages like Maɗi and Lugbara in missionary education meant that there exists a pedagogic literature for them. For Lugbara, for example, there is Crazzolara (1960). Lugbara is divided into 'high' and 'low' Lugbara, the second of which, Aringa is quite distinct. Moru has been studied by Andersen (1981, 1986a), Logo (Goyvaerts 1981, 1983, 1986) and Vallaeys (1986, 1988).

4. Linguistic features (preliminary only)

4.1 Phonology

4.1 Vowels

Central Sudanic certainly has ATR vowel harmony, like many other branches of Nilo-Saharan. Many language reported with nine vowels and so probably either nine or ten should be reconstructed. Poor transcription of some branches such as Formona-Sinyar and Kresh-Aja makes this uncertain for their particular subgroup.

Table 6. Central Sudanic vowels

	Front	Central	Back
Close	i		u
	ɪ		ʋ
Mid	e	(ə)	o
	ɛ		ɔ
Open		a	

It seems there are no underlying nasalised vowels and long vowels only arise from interconsonantal deletion.

4.2 Consonants

Despite some of the highly unusual consonants in some branches, notably the bilabial trills in MA and ME languages, it seems unlikely these are PCS. PCS probably had a quite small underlying inventory;

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	Labial	Alveolar	Retro-flex	Pala-tal	Velar	Labio-velar	Glot-tal
Plosive	p b	t d	ɖ		k g	kp gb	
Implosive	ɓ	ɗ					
Fricative		s					
Affricate				ʧ ʤ			
Nasal	m	n		ɲ	ŋ		
Trills		r					
Approximant				y		w	
Laterals		l					

Many languages are transcribed with 'dr' and this almost certainly represents the retroflex /ɖ/.

Labialisation and palatalisation are present in some languages, but unlikely to be phonemic, but rather phonetic consequences of back and front vowels.

4.3 Tones

For those which have descriptions, Central Sudanic languages have predominantly three level tones and limited inventories of glide tones. However, four tone heights have been reported for Gula Koto (Boyeldieu & Nougayrol 2004) and two for other languages, so the question is far from certain. Boyeldieu (1989, 1998, 2000b) is a much more detailed discussion of tone for SBB languages.

4.2 Morphology

The striking feature of Central Sudanic morphology is the extreme reduction of roots. Most roots that have been retained appear to be (V)CV, with longer roots developing from affixing and reduplication.

Some verbs have retained their shape across Central Sudanic in a remarkable way. See. for example, 'dig', 'kill I' and 'sleep'. The shape is VCV, where V is often a back vowel and usually the same back vowel, indicating copying.

5. The internal classification of Central Sudanic

5.1 Coherence of Central Sudanic as a family

Central Sudanic has the advantage of being highly dispersed geographically, which suggests that if a cognate lexeme occurs at the extreme ends of its range, then this constitutes good evidence for a proto-form, since borrowing is an unlikely explanation.

Table 7 compiles the glosses which provide evidence for the coherence of Central Sudanic as a whole. The glosses refer to the tables of evidence in the Appendix, following the same order. A + means there is positive evidence, a blank indicates either no cognate identified, or else inadequate sources, especially when applied to slightly more obscure lexemes.

Table 7. Evidence for the coherence of CS as a family

Root	Gloss	LN	MM	MA	ME	Birri	KA	FS	SBB
#and̪ra	tongue	+	+	+	+		+	+	+
#tari	mouth	+	+	+	+			+	+
#[k]ɔmvɔ	nose		+	+			+		+
#kVŋ-	tooth I	+		+				+	+
#use(li)	tooth II		+		+		+	+	+
#mbile	ear	+	+	+	+		+	+	+
#-ud̪ru	head	+	+	+	+	+	+	+	+
#(ŋ)ale	belly, I		+					+	+
#Vʧu	intestines	+	+	+		+	+		+
#kud̪ɔ	buttocks	+	+						+
#mbà	breast I	+	+	+			+	+	+
#-d̪u	breast II		+						+
#kunza	leg, foot I			+				+	+
#-goro	throat		+	+			+	+	+
#[k]uru	liver/heart		+	+	+				+
#lugu	brain								
#-kpa	bone	+	+	+		+	+	+	+
#gbara	rib, side		+						+
#kyod̪o	urine	+	+	+			+	+	+
#idza	meat I	+	+				+	+	+
#(k)adʒa	horn	+	+		+		+	+	+
#sila	tail		+					+	+
#kaɓu	egg		+		+		+		+
#-si	dog	+	+	+				+	+
Root	**Gloss**	**LN**	**MM**	**MA**	**ME**	**Birri**	**KA**	**FS**	**SBB**

5.2 Evidence for an East/West split

5.2.1 Eastern Central Sudanic (ECS)

The membership of Eastern Central Sudanic (ECS) is somewhat less certain, in particular whether Formona-Sinyar and Birri are part of it. Table 8 compiles the evidence for a WCS branch on the same basis as the previous tables.

Table 8. Evidence for the coherence of ECS as a branch

Root	Gloss	LN	MM	MA	ME	Birri	KA	FS
#mwi	eye I		+	+		+	+	
#le-ɲɔ	eye II	+		+			+	
#[l]aga	leg, foot II	+			+		+	+
#-(k)ari	blood I		+	+				
#ɲuɽa	animal		+		+			

5.2.2 Western Central Sudanic (WCS)

The membership of Western Central Sudanic (WCS) is somewhat less certain, in particular whether Formona-Sinyar and Birri are part of it. Table 9 compiles the evidence for a WCS branch on the same basis as the previous tables.

Table 9. Evidence for the coherence of WCS as a branch

Root	Gloss	Birri	KA	FS	SBB
#koma	eye III			+	+
#bibi	hair	+	+	+	+
#maŋa	blood II	+	+	+	+

6. Historical

Historically speaking, the puzzle is to explain how Central Sudanic has become so territorially dispersed. The core of its diversity appears to be west of Lake Victoria on the Uganda-Zaire border, although most languages are far to the northwest, in the Sara area. Fragmented population islands connect them, including some relatives of Sara-Bagirmi now spoken in the extreme southwest of Sudan. Separating them today is the great eastward salient of Ubangian languages which extend from North Cameroun to Southern Sudan. Bouquiaux & Thomas (1980) point out that the Ubangian expansion must have taken place north of the forest prior to the Bantu expansion and they assign it a tentative date of 35-4000 BP. The clearer picture now available of the structure of Central Sudanic shows that in what is now Central African Republic, the Ubangian expansion must have broken up a continuous chain of Central Sudanic languages from NE Zaire to the borders of Cameroun. The Sara languages subsequently underwent a secondary expansion north of Ubangian.

Boyeldieu (2000) uses the rich ethnohistorical data to accompany his linguistic reconstructions of Sara-Bongo-Bagirmi, spoken between Chad, Sudan and Central African Republic. The Sara-Bongo-Bagirmi languages are today remarkably scattered, often spoken in small islands among quite different languages, and they are mostly known for the Sara language complex which extends over much of southern Chad. Boyeldieu (2000: Map V.) is able to show through a detailed reconstruction of the historical phonology of the group that their origin must lie on the border of Sudan, where only remnant languages are now spoken and that the much more extensive populations of Sara speakers in western Chad are secondary expansions. This exciting demonstration contradicts previous models of the Sara expansion, which were probably based more on geographical guesswork than the comparative method.

Etymological dictionary

The function of the Central Sudanic etymological dictionary is to work towards cognate sets for the group as a whole. This has been extracted from my larger Nilo-Saharan etymological dictionary and has not yet been fully edited. I have currently excluded speculative and doubtful sets.

1 Nouns

1.1 The body

1.1.1 Body parts

1.	#anḍra	tongue			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Lendu	lɛ̀dra	*langue*	DD
CS	LN	Ngiti	-dà	*langue*	CKL
CS	MM	Okollo	áḍā	tongue	B&W96
CS	MM	Avokaya	lànḍā	tongue	B&W96
CS	MA	Mangbetu	náàḍrà pl. ááḍrá	*langue*	De92
CS	ME	Mamvu	qédrū	*langue*	DD
CS	KA	Kresh	nʤānʤā	*langue*	Bo00
CS	FS	Formona	dyalli	tongue	Ha87
CS	SBB	Baka	dɛ̀ndɛ̀nɛ̀	*langue*	Bo00
CS	SBB	Proto-Gula	*ndrɛ̄	*langue*	Bo00
CS	SBB	Proto-Sara	*ndɔ̃	tongue	Ke12

Commentary: The Formona may be a borrowing from Fur which is itself a metathesis. The nasal preserved in Avokaya probably shows up as –r- in Lendu-Ngiti and then as nasal prefixes in SBB.

Refs: Gr. 88, 146, 159; Bender (1992) W. 251; Ar64. 48; C. 316; P. 39;

2.	#tari	mouth			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Ngiti	-li?ɔ̀	mouth, muzzle	CKL
CS	MM	Madi	ti	mouth	Bl00
CS	MM	Okollo	tílɛ́	mouth	B&W96
CS	MA	Mangbetu	né.tí.kpò	*bouche*	De92
CS	ME	Mamvu	ūʈī	*bouche*	DD
CS	ME	Efe	útí	*bouche*	DD
CS	FS	Formona	tari	mouth	Ha78
CS	FS	Sinyar	tàar	mouth	Bo13
CS	SBB	Lutos	tàrà	mouth	Ol13
CS	SBB	Bongo	tàrà	mouth	Bo13
CS	SBB	Yulu	tāà	*bouche*	
CS	SBB	Baka	tàrà	*bouche*	Bo00
CS	SBB	Gula Mere	tàrä	*bouche*	No99
CS	SBB	proto-Sara	*tà	*bouche*	Ke12

Commentary: First mentioned by Greenberg and discussed in Fleming (1983a:455). Fleming's discussion seems to conflate three very different forms, split up into three distinct roots here. A proto-Central Sudanic form *tari* would neatly explain the surface forms found across the various branches, but then its cognacy with other Nilo-Saharan is only doubtful.

Refs: Gr. 142; B.; Fleming (1983a:455);

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3. #mwi eye I

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Madi	mī	eye	Bl00
CS	MA	Nabulu	nɛ́mɔ̀ pl. ɛ́mɔ́	eye	De92
CS		Birri	mʊ́	eye	Sa50
CS	KA	Kresh	mūmū	*oeuil*	Bo00

Commentary: Assuming this is really a separate root from the preceding. The vowel shift in Moru-Maɗi is hard to explain, unless there are two distinct roots.

Refs: Gr. 138;

4. *le-ɲɔ eye II

Family	Subgroup	Language	Attestation	Gloss	Source
CS	LN	Lendu	le-ɲɔ	eye	
CS	LN	Ngiti	-ɲɨ̀	face	CKL
CS	MA	Mangbetu	nɛ́ŋɔ̀ pl. ɛ̀ŋɔ̀	eye	De92
CS	KA	Aja	iɲi	eye	Sa76

Commentary:

Refs: B.

5. *koma eye III

Family	Subgroup	Language	Attestation	Gloss	Source
CS	FS	Sinyar	kwòm	eye	Bo13
CS	SBB	Lutos	kam	eye	Ol13
CS	SBB	Modo	kɔ̀mɔ̀	eye	Bo13
CS	SBB	Bongo	kɔ̀mɔ̀	eye	Bo13
CS	SBB	Gula	kàmà	*oeil*	No99
CS	SBB	Fongoro	kʌma	eye	DB83
CS	SBB	*SBB	*k-m-	*oeil*	Bo00
CS	SBB	Bagirmi	kàmò	*oeil*	Ke16

Commentary:

Refs: B.

6. #[k]ɔmvɔ nose

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Logo	kɔ̀mvō	nose	B&W96
CS	MM	Madi	ɔmvō̄	nose	Bl00
CS	MA	Mangbetu	námɔ̀ pl. ámɔ́	*nez*	De92
CS	KA	Kresh	ùŋù	*nez*	Bo00
CS	SBB	Bagirmi	ə̀m	*nez*	Ke16
CS	SBB	Fongoro	aam	nose	DB83
CS	SBB	Baka	sɔ̀mɔ̀	*nez*	Bo00
CS	SBB	Gula	sɔm	*nez*	Bo00
CS	SBB	Fer	sùm	*nez*	Bo87
CS	SBB	Kenga	òòmò	*nez*	Pa06

Commentary: The k- prefix in some of Moru-Maɗi is not attested elsewhere in Nilo-Saharan although is a characteristic affix.

Refs: B.

7.	#kVŋ-	tooth I			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Ngiti	-kù	tooth	CKL
CS	MA	Mangbetu	nɛ̀-kí pl. ɛ́.kí	*dent*	De92
CS	FS	Formona	kia	tooth	Ha87
CS	SBB	Bongo	ʃɔ̀ kɔ̀	*dent*	PN
CS	SBB	Yulu	káaŋɔ̄	*dent*	Bo00

Commentary: Probably a nominalisation of 'to bite' (129.).

Refs: Bender (1992)

8.	#use(li)	tooth II			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	PMM	*sí	tooth	BW96
CS	ME	Lese	ʊ́sɛ́	*dent*	DD
CS	KA	Kresh	sɛ̀sɛ̀	*dent*	Bo00
CS	FS	Sinyar	sʊli	tooth	Ha87
CS	SBB	Yulu	óosɔ̀	*dent*	Bo00
CS	SBB	Bongo	usu	*dent*	Bo00

Commentary: Proto-Central Sudanic should be *u.se.li* with the C_2 from Sinyar confirmed by the external cognate –di in Aiki. Lendu-Ngiti retains what is probably an older root.

Refs: Bender (1992)

9.	#-ŋaŋa-	tooth III			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	SBB	Lutos	ŋgaŋga	*dent*	KO
CS	SBB	Gula	ŋāŋa	*dent*	No99
CS	SBB	Daba	ŋāŋ	*dents*	Ke12
CS	SBB	Bagirmi	ŋāŋ	*dent*	Ke16

Commentary: cf. Ed p. 198

Refs:

10.	#mbile	ear			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Lendu	bí	*oreille*	DD
CS	LN	Ngiti	bɨ̀	*ear*	CKL
CS	MM	*MM	*bí, *ɓí	ear	B&W96
CS	MM	Lugbara	bílɛ́	ear	B&W96
CS	MA	Mangbetu	nɛ́bí pl. ɛ̀bì	*oreille*	De92
CS	ME	Mamvu	úbì	*oreille*	DD
CS	KA	Kresh	mbímbí	*oreille*	Bo00
CS	FS	Formona	ambɔ	to hear	Ha78
CS	SBB	Lutos	mvi	ear	KO
CS	SBB	Modo	mbílí	ear	PP
CS	SBB	Fongoro	mvi	ear	DB83
CS	SBB	Bagirmi	mbī̄	*oreille*	Ke16
CS	SBB	Proto-Sar	*mbī	*oreille*	Ke16

Commentary: The presence of a cognate second syllable in both Lugbara and Modo argue that this must be reconstructed to PCS. The nasal prefix is characteristic of Western Central Sudanic only. In Moru-Madi languages, 'leaf' and 'ear' are the same word, and indeed the leaf/ear polysemy is quite widespread in Nilo-Saharan (Bender ref; Boyeldieu 2013). The notion is that the leaf is the 'ear of the tree'. Leaf (51.) has a cognate syllable -bi- with a prefix or compounded noun.

Refs:

11.	#-uɖru	head			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Ngiti	-dɔ	head, top	CKL
CS	LN	Lendu	ʤɔ	*tête*	DD
CS	MM	PMM	*ɖì	head	B&W96
CS	ME	Mangbutu	úɖū	*tête*	Vi94
CS	ME	Mamvu	úʒū	*tête*	DD
CS	MA	Mangbetu	néɖrù pl. éɖrú	*tête*	De92
CS	MA	Asua	lù	*tête*	DD
CS		Birri	ɖru	head	Sa50
CS	KA	Kresh	ʤùʤù	*tête*	Bo00
CS	FS	Formona	kudyo	head	Ha78
CS	SBB	Bagirmi	dálà	*tête*	Ke16
CS	SBB	Gula	drò	*tête*	Bo00
CS	SBB	Fongoro	ndru	head	DB83
CS	SBB	Bongo	dò	*tête*	Bo00
CS	SBB	Bagirmi	ʤìʤò	*tête*	Ke16
CS	SBB	Bedjond	dɔ̀	*tête*	Bo00

Commentary: Formona may be a borrowing from Masalit.

Refs: G. 155; B. 79; R. 26;

12.	#(ŋ)ale	belly, I			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Okollo	ʔālɛ̄	belly	B&W96
CS	FS	Sinyar	ki.ɲare	belly	Ha78
CS	SBB	Fer	ŋgāɭ	*ventre*	Bo00
CS	SBB	Bagirmi	ngālā	*ventre*	Ke16

Commentary: This is similar to the widespread Niger-Congo root #-*la* for 'intestines'.

Refs: B. 77;

13.	#Vʧu	intestines	navel	belly, II	
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Ngiti	-tsu	intestines	CKL
CS	MM	Madi	ɔ̀tɔ̃̄	navel	Bl00
CS	MM	Logo	kɔ̀tɔ̄	navel	Bl00
CS	MA	Mangbetu	nɔ́ɔ́tò pl, ɔ́ɔ́tɔ́	*nombril*	De92
CS		Birri	ʈu	belly	Sa50
CS	KA	Aja	uʧu	belly	Sa76
CS	SBB	Modo	tòkpɛ̀	*intestins*	Bo00
CS	SBB	Gulay	tĩ̀ĩ	*intestins*	Ke12
CS	SBB	Bagirmi	tìtìk	*intestins*	Ke16

Commentary: The evidence from Aja and Ngiti suggests we have to supposed there was an affricate in C_1 position. Thus PCS was *ɔ̀ʧū* or similar.

Refs: Gr. 142; Be05:21;

14.		belly, navel			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	SBB	Mödö	kúmú	*nombril*	Bo00
CS	SBB	Lutos	kumu	navel	KO
CS	SBB	Fongoro	ʃemi	belly	No99
CS	SBB	Fer	kūm	*nombril*	Bo00
CS	SBB	Bagirmi	kūm	*nombril*	Ke16
CS	SBB	Sar	kèm	*ventre*	Bo00
CS	SBB	Kenga	màakà (↔)	*ventre*	Bo00

Commentary: Kenga is assumed to be a metathesis. Fongoro s- may either be a rather unusual sound correspondence or an alternate reduction of the old first syllable attested in Ik. Navel/belly/liver polysemy is also attested in the following gloss.

Refs: Gr. 97, 142; ST1:365

15.	#kuɖɔ	buttocks			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Ngiti	-sŭtù	buttocks	CKL
CS	MM	Logo Ogambi	kɔdɔ	buttocks	B&W96
CS	MM	Lugbara	ɔ́rɔ́	buttocks	B&W96
CS	SBB	Lutos	nza.kuzi	bottom	KO
CS	SBB	Gula	kɔ̄ɭɛ̄	*fesse*	No99
CS	SBB	Bebote	kùtɨ̀	*fesse*	Ke12

Commentary:

Refs: G. 133;

16. #mbà breast I

Family	Subgroup	Language	Attestation	Gloss	Source
CS	LN	Lendu	ba	breast	RCS
CS	LN	Ngiti	ɨba, -bà	breast	CKL
CS	MM	PMM	*bà	breast	B&W96
CS	MA	Mangbetu	nɛ́bà pl. ɛ́bà	*sein*	De92
Cs	KA	Kresh	mbāmbā	*sein*	Bo00
CS	FS	Sinyar	mbàár	breast	Bo13
CS	MM	Mödö	mbà	breast	PP
CS	SBB	Bongo	òmb(ə̀)	breast	Bo13
CS	SBB	Gula	mvà	*sein*	Bo00
CS	SBB	Bagirmi	mbà	*sein*	Ke16
CS	SBB	proto-Sara	*mbà	*sein*	Ke12

Commentary: First discussed in Blench (1995) but later found to have a wider distribution than noted there. The Songhay forms are very similar to Berber and may be old borrowings and thus not evidence for Nilo-Saharan.

Refs: W.207-8; M. 28; Guthrie CS 71; B:254; E. 296

17. #-ɖu breast II

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	T	nɖū	breast	B&W96
CS	SBB	Baka	úlù	*têter*	Bo00

Commentary: Also has some resemblants in Afroasiatic (Fleming 1991).

Refs: B.

18. breast III

Family	Subgroup	Language	Attestation	Gloss	Source
CS	FS	Sinyar	kuri	breast	Ha78
CS	KA	Dongo	kute	breast	Sa76

Commentary:

Refs: Gr. 135;

19. #kunza leg, foot I

Family	Subgroup	Language	Attestation	Gloss	Source
CA	MA	Mangbetu	nɛ-kɔ́nzɔ́ /ɛ-	*pied, jambe*	DD
CS	FS	Sinyar	kàffà	leg	Bo13
CS	SBB	Gula Mere	kùnzà	*pied*	Bo00
CS	SBB	Ndoka	nzà	*pied*	Bo00
CS	SBB	Bagirmi	nɗʒà	*pied, jambe*	Ke16

Commentary: The conservation of the basic root shape across Central Sudanic is quite remarkable. In the light of this, it is possible Sinyar is not cognate.

Refs:

20.	#[l]aga	leg, foot II			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Ngiti	-agà	leg	CKL
CS	ME	Mamvu	qārú	*pied*	DD
CS	KA	Kresh	làgá	foot	Sa76
CS	FS	Sinyar	gwàar	foot	Bo13

Commentary:

Refs:

21.	#-goro	throat,	voice, neck		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Lugbara	ɔgɔrɔ	neck	
CS	MA	Lombi	nèkóró	*cou, gorge*	De92
CS	MA	Mangbetu	ne-'kórókpwɔ /e-	*cou, gorge*	De92
CS	KA	Aja	kɔrɔkɔ	neck	Sa76
CS	FS	Sinyar	kwàalà	neck	Bo13
CS	SBB	Lutos	kpɔ̄rɔ̄	throat	Ol13
CS	SBB	Modo	mùgù	neck	Bo13
CS	SBB	Bongo	gɔ̀	*nuque, cou*	PN
CS	SBB	Yulu	gɔ̄ɔ	neck	Bo13
CS	SBB	Sar	kɔ́ɔ̀	*cou, gorge*	Ke12
CS	SBB	Bagirmi	kōrɓō	*gorge*	Ke16

Commentary: Reconstructed by Bender (1992:35) as an isogloss for Central Sudanic, but clearly a very widespread root. Apparently replaced in Mamvu-Efe.

References: W. 245; M.288; G. 1161+1162; Greenberg (1963: 159);

22.	#bibi	hair			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	FS	Sinyar	fíí	hair	Bo13
CS	KA	Kresh	bíbí	hair	Sa76
CS	SBB	Bongo	bìi	hair	Bo13
CS	SBB	Yulu	íb(ɜ̀)	hair	Bo13
CS	SBB	Sar	bĩ̀ĩ̃	hair	Bo13

Commentary: The nasalisation in Sar is treated as secondary

References:

1.1.2 Internal organs

23.	#[S]uru	liver/heart			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Lugbara	ʧúlú	heart	B&W96
CS	MA	Mangbetu	né-sú /é-	*coeur*	De92
CS	ME	Mamvu	ʈùlù	*coeur*	DD
CS	SBB	Lutos	wuru	liver	KO
CS	SBB	Bongo	kúlúꜜ	*cœur*	No99
CS	SBB	Gulu	sùř	*foie*	No99
CS	SBB	Fer	sùř	*foie*	Bo00
CS	SBB	Bedjond	ùr	*foie*	Bo00
CS	SBB	Gor	ùr	*foie*	Ke12
CS	SBB	Bagirmi	sàytì	*foie*	Ke16

Commentary: The cognacy of the Bagirmi form is unclear.

Refs:

24.	#lugu	brain			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Ngiti	-lŭlù	brain	CKL
CS	MM	Madi	lúgé	brain	Bl00
CS	MA	Mangbetu	ná-mangú /á-	*cervelle*	?
CS	SBB	Bulala	tɔgo	brain	St91

Commentary:

Refs:

25.	#-kpa	bone			
Family	**Group**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Lendu	kpa	*os*	
CS	LN	Ngiti	-kpa	bone	CKL
CS	MM	Madi	kwà	bone	Bl00
CS	MA	Mangbetu	nɛ́kpɔ̀ pl. ɛ́kpɔ́	*os*	De92
CS		Birri	kpɔ	bone	Sa50
CS	KA	Kresh	kpɔkpɔ́	bone	Sa76
CS	FS	Sinyar	kʊkʊli	bone	Ha78
CS	SBB	Sar	kə̄ngā	*os*	Bo00
CS	SBB	Bagirmi	ʧūŋō	*os*	Ke16

Commentary: Also in Niger-Congo.

Refs:

26.	#gbara	rib, side			
Family	**Group**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	bārā	side	Bl00
CS	MM	Keliko	gara		
CS	SBB	Bagirmi	gàlà	*côté*	Ke16

Commentary:

Refs: Gr. 125, 145;

1.1.3 Body fluids

27. #-(k)ari blood I

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Madi	àrɨ́	blood	Bl00
CS	MM	Logo	kàrí	*sang*	DD
CS	MA	Mangbetu	álí	*sang*	De92
CS	MA	Asua	álí	*sang*	De92

Commentary: see also Ed 186 on 'red'. Replaced in Mamvu-Efe.

References: Gr. 135; Bender (1992)

28. #maŋa blood II

Family	Subgroup	Language	Attestation	Gloss	Source
CS	KA	Kresh	sɨ́rá.mà	*sang*	Bo00
CS	FS	Sinyar	maŋa	blood	Ha78
CS	SBB	Fer	màŋ́	*sang*	Bo87
CS	SBB	Bagiro	màngàˤ	*sang*	Bo00
CS	SBB	Kenga	mosò	*sang*	Pa06
CS	SBB	Bagirmi	mɨ́sù	*sang*	Ke16

Commentary: Reconstructible for PWCS.

References:

29. #kyoḍo urine

Family	Subgroup	Language	Attestation	Gloss	Source
CS	LN	Ngiti	odzo	urine	CKL
CS	MM	Logo	kɔ̄ḍí	urine	B&W96
CS	MA	Mangbetu	ɛ́ḍrwɛ́	*urine*	De92
CS	KA	Kresh	sóďŏ	*urine*	Bo00
CS	FS	Sinyar	wèrdʒí	urine	Bo13
CS	SBB	Modo	yàdí	urine	Bo13
CS	SBB	Bongo	hèdí	urine	Bo13
CS	SBB	Gula Zura	kéḍ̄	urine	Bo13
CS	SBB	Sar	yèdɨ̄	urine	Bo13
CS	SBB	Ngambay	ɨ̀dɨ̄	*urine*	Ke16c
CS	SBB	Bebote	kɨ́dɨ̄-màn̄	*urine*	Ke16c
CS	SBB	Bagirmi	ídʒì	*urine*	Ke16c

Commentary:

References: Gr. 146;

1.2 Animals and plants

1.2.1 Animal parts

30. #iʤa meat I animal

Family	Subgroup	Language	Attestation	Gloss	Source
CS	LN	Lendu	ză	*animal*	Me
CS	LN	Ngiti	ìză	*viande, animal*	CKL
CS	MM	Madi	ɨzá	*meat*	Bl00
CS	KA	Kresh	kàzà	fierce animal	Bo00
CS	FS	Formona	idya	meat	Ha78
CS	FS	Sinyar	ìʤʤà	meat	Bo13
CS	SBB	Lutos	zãã	animal	Ol13
CS	SBB	Modo	yìdá	meat	Bo13
CS	SBB	Yulu	ëʤ(ɔ̄)	meat	Bo13
CS	SBB	Gula Mere	drā	*chair, viande*	Bo00
CS	SBB	Mbay	dä̀	*viande*	Bo00
CS	SBB	Bebote	dā	*viande, animal*	Ke12c
CS	SBB	Bagirmi	ʤā	*viande, animal*	Ke16

Commentary: Replaced in MA. The sporadic nasalisation on SBB is hard to interpret.

References:

31. #ɲuɽa animal

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MA	Mangbetu	n-érí	*animal*	De92
CS	ME	Efe	úɽá	*animal*	DD

Commentary:

References: Gr. 103, 123;

32. #(k)aʤa horn

Family	Subgroup	Language	Attestation	Gloss	Source
CS	LN	Ngiti	ɔtdyʉ	horn	CKL
CS	MM	Moru	kʷɔyi	horn	B&W96
CS	ME	Mvuba	hàtsí	*corne*	DD
CS	KA	Kresh	àʤà	*corne*	Bo00
CS	FS	Formona	kaddya	horn	Ha78
CS	FS	Sinyar	kòʤʤù	horn	Bo13
CS	SBB	Lutos	gaza	horn	Ol13
CS	SBB	Modo	kàzò	horn	PP
CS	SBB	Fer	kiy	*corne*	Bo87
CS	SBB	Gula Mere	kwàzù	*corne*	Bo00
CS	SBB	Bagirmi	kàʧà	horn	Ke16
CS	SBB	Sar	gàʤɔ̀	horn	Bo13

Commentary:

References: G. 140; B. 79

33.	#sila	tail			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Maɗi	sà	tail	Bl00
CS	FS	Formona	alan	tail	Ha87
CS	SBB	Baka	sɔ̀nɔ̀	*queue*	Bo00
CS	SBB	Fer	sīlá	*queue*	Bo87
CS	SBB	Bagirmi	ỹ̄lā	horn	Ke16

Commentary:

References:

34.	#kaɓu	egg			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Avokaya	ɓú	egg	B&W96
CS	ME	Lese	íbū	*oeuf*	DD
CS	KA	Dongo	ɓoɓu	egg	Sa76
CS	SBB	Lutos	kaɓe	egg	KO
CS	SBB	Fer	káb`	*oeuf*	Bo00
CS	SBB	Fongoro	kɛb	egg	DB83
CS	SBB	Yulu	kɛ́ɛ́ɓə̀	*oeuf*	Bo00
CS	SBB	Ngambay	kàb-	*oeuf*	Bo00
CS	SBB	Bagirmi	kàɓò	*oeuf*	Ke16

Commentary:

References: Gr. 138;

1.2.2 Domestic animals

35.	#-si	dog		
Family	**Subgroup**	**Language**	**Attestation**	**Source**
CS	LN	Lendu	kazʑ	RCS
CS	LN	Ngiti	ìtsĕ	CKL
CS	MM	Moru	kʷɔʧɛ	B&W96
CS	MM	Okollo	ɔ̀ʧɛ̃	B&W96
CS	MA	Makere	nésì pl. èsí	De92
CS	FS	Sinyar	ɓìsì	Bo13
CS	SBB	Lutos	bisi	KO
CS	SBB	Fer	wīs	Bo87
CS	SBB	Baka	ísì	Bo00
CS	SBB	Ndoka	bísì	Bo00
CS	SBB	Bagirmi	bísì	Ke16

Commentary: Although originally cited by Greenberg (1963:120), more complete evidence was marshalled by Bender (1981:258) with attestations in Fur, Sudanic, Kordofanian and possibly Ari [Omotic]. Not attested in Khoesan, Mande and most branches of Afro-Asiatic, which have variants of kVr/n-. This root is extremely widespread in Central Africa and yet does not form a convincing pattern. In Central Sudanic, for example, it is attested in almost every language (Bender, 1992:40,48). Bender separates the roots with initial b-, but it is likely that the two forms go together.

Refs: Gr.120; Be05 22; R. 39;

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36.   cow

Family	Subgroup	Language	Attestation		Source
CS	LN	Lendu			RCS
CS	LN	Ngiti			CKL
CS	MM	Moru	*tí	cow	B&W96
CS	MA	Makere			De92
CS	FS	Sinyar	ìʧʧà	cow	Bo13
CS	SBB	Modo	sà	cow	Bo13
CS	SBB	Bongo	càa	cow	Bo13
CS	SBB	Yulu	éʧ(ɔ̄)	cow	Bo13
CS	SBB				Ke16

Commentary:

Refs:

1.2.3 Mammals

37.   leopard

Subgroup	Language	Attestation	Gloss	Source
MA	Asua	kàʔùà	*léopard*	De92
ME	Mamvu	qāū		DD
KA	Kresh	kàzàà	*léopard*	Bo00
SBB	Modo	kàgbà	*léopard*	PP
SBB	Bongo	kɔ̀gɔ̀	*léopard*	
SBB	Kenga	kàgɛ̀	*léopard*	

Commentary: Replaced in Lendu-Ngiti. Formona-Sinyar no data.

Refs:

38.   hippo

Subgroup	Language	Attestation	Gloss	Source
LN				
MM				
MA				
ME	Efe	afo		DD
ME	Lese	apfo	*Flusspferd*	Vo65
FS				
KA				
SBB	Bongo	hàbà		
SBB	Ndoka	àvà		Bo00

Commentary:

Refs:

39.		#(g)oŋoro	elephant,	tusk	**Attestation**			
Family	**Subgroup**	**Language**						**Source**
CS		Birri	nv	ò	r	ɔ̀		Sa50
CS	KA	Kresh	mór	ó	ŋ	ó		Bo00
CS	SBB	Bongo	ndʒ	ɔ́	ŋ	ɔ́		PN
CS	SBB	Fer	ŋ	ò	ý			Bo87
CS	SBB	Yulu	m	ɔ̀	ŋ	(ə̄)		Bo13

Commentary: The original shape of the word must have been something like #ŋoro with r→N in C_2 position in some languages. The velar nasal in turn became a palatal and the back vowel became fronted under the influence of the palatal. It would have appeared in this form in Proto-Nilo-Saharan. In some Tama languages this root has shifted to 'giraffe' (ref?). Eastern Central Sudanic languages have generally innovated, e.g. Moru-Maɗi *lìwá. Central Sudanic languages such as Mangbetu have forms like nɔ́kɔ́ which may be metatheses of Dinka àkɔ́ɔ̀n or similar. In Songhay the name of the elephant has been replaced by periphrastic expressions meaning 'big foot'. This root is borrowed into a variety of Kordofanian languages, which add noun-class prefixes, for example Kwalib xx. Ik loŋorom-on is the verb 'to be big' which suggests either the verb was formed from 'elephant' or else in turn the noun was formed from an original verb 'to be big'.

Ref: Gr. 138; W. 264; M. 394; G. 1388; E. 556; B05 23;

40.			big cat			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	ɔ̀ďŏ	leopard	Bl00
CS	MA	Mangbetu	nò-kóndó / ó-	*panthère*	De92

Commentary:

Ref: Gr. 141;

41.		crocodile			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	SBB	Modo	tìmàrà	crocodile	PP
CS	SBB	Gula Mere	màrà	*crocodile*	Bo00
CS	SBB	Bagirmi	màrà	*crocodile*	Ke16
CS	SBB	*SBB	*màr[à]	*crocodile*	Bo00

Commentary: SBB seems to be a metathesised form of *(k)árám*, once the initial k- is lost.

Ref:

42.		snake	(generic)		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	ìnì	snake	Bl00
CS	MA	Mangbetu	nɛ́-tatála /ɛ́-	*serpent*	?
CS	SBB	Gula	ili	*serpent*	Bo00
CS	SBB	Bagirmi	kɨlā	*serpent*	Ke16

Commentary: The resemblance of Madi to Gula points to a distinct Central Sudanic root.

Ref:

43. frog

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Madi	údrú	frog	Bl00
CS	KA	Kresh	tòʔdò	*grenouille*	Bo00
CS	SBB	Bongo	mbòɗò	*grenouille*	Bo00

Commentary: May contain an ideophonic element.
Ref:

44. #kuru   tortoise, turtle

Family	Subgroup	Language	Attestation				Gloss	Source
CS	LN	Lendu		kú	l	ù	*tortue*	
CS	MM	Madi	ò	kù			tortoise	Bl00
CS	MA	Mangbetu	na	kɔ́			*tortue*	?
CS	MA	Asua	ù	ŋú	l	ú wɛ̀	*tortue*	De92
CS	KA	Kresh	ɔ̀	kɔ̀			*tortue*	Bo00
CS	SBB	Ndoka	yú	kò			*tortue*	Bo00
CS	SBB	Bagirmi		gō	n	ī	*tortue*	Ke16
					d			

Commentary: An early version of this table was presented in Blench (1997) where it was argued that the importance of turtles and tortoises in the gathering phase of human history had made this word particularly salient. The diversity of forms attested may reflect the fact that different species may have compound names (see the Kanuri and Aiki forms). Extra-African cognates have also been recorded.

1.2.4 Fish

45.   fish (gen.)

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Logo	kɔ̄sʸá	fish	B&W96
CS	KA	Kresh	kézé	*poisson*	Bo00
CS	FS	Sinyar	kwùndʒó	fish	Bo13
CS	SBB	Lutos	kanze	fish	KO
CS	SBB	Modo	kɛ́nzɛ́	fish	Bo13
CS	SBB	Bongo	kíndʒí	fish	Bo13
CS	SBB	Baka	kɛ́nzɛ́	*poisson*	Bo00
CS	SBB	Gula	kānz	*poisson*	Bo00
CS	SBB	Fongoro	kʌnzi	fish	DB83
CS	SBB	Ndoka	kānzē̄	*poisson*	Bo00
CS	SBB	Bagirmi	kāndʒē̄	*poisson*	Ke16

Commentary:

Refs:

1.2.5 Insects

46. bee

Family	Subgroup	Language	Attestation	Gloss	Source
CS	LN	Ngiti	mɔ̌mɔ̀	*mouche*	CKL
CS	MM	Moru	kumu	fly	
CS	MA	Mangbetu	nɛ́-kɔkɔmá /ɛ́	mosquito	???
CS	KA	Aja	moo kama	bee	Sa76
CS	SBB	Fongoro	kʌŋ	fly	DB83
CS	SBB	Mango	kə́m	*mouche*	Ke12
CS	SBB	Bagirmi	kə́ŋù	*mouche*	Ke16

Commentary: cf. Hausa *kuma* 'fly'. The polysemy of 'fly' and 'bee' is carried over into Hausa, but is not found in Niger-Congo languages.

Refs: Gr. 134;

47. #(k)ɔ(lɔ)ŋɔ fly n. **Attestation**

Family	Subgroup	Language								Gloss	Source
CS	MM	Madi					ā	ɲ	ú	fly	Bl00
CS	MM	Madi				l	à	ɲ	ú	bee	Bl00
CS	MM	Lugbara					a	ɲ	u	honey	
CS	MA	Asua	á	ŋ			í	ɲ	é	*abeille*	De92
CS	KA	Kresh					ɔ	ŋ	ɔ	fly	Sa76
CS	SBB	Lutos		k	ɔ́ɔ́	tì		g	ì	bee	Ol13
CS	SBB	Bongo	ŋ	g	ɔ́			ŋ	ɔ́	*mouche*	Bo00
CS	SBB	Mbay		k	ó			ŋ		*mouche*	Bo00

Commentary:

Refs: Gr. 139; 134, 140;

1.2.6 Birds

48. bird

Family	Subgroup	Language	Attestation	Gloss	Source
CS	LN	Lendu			
CS	MM	*PMM	àrí	bird	BW97
CS	MA	Mangbetu			
CS	ME	Efe	ná-rí /á-	*oiseau*	?
CS	ME	Mamvu	qὲrì	*Vogel*	Vo71
CS	FS	Sinyar	wèl	bird	Bo13
CS	KA	Aja	wèri	bird	Sa76
CS	SBB	Lutos	ʤìlì	bird	Ol13
CS	SBB	Modo	yàlí	bird	Bo13
CS	SBB	Bongo	hòlí	bird	Bo13
CS	SBB	Yulu	sáal(ə)	bird	Bo13
CS	SBB	Gula Zura	sēl	bird	Bo13
CS	SBB	Sar	yèl‾	bird	Bo13

Commentary:

Refs: Bo13

1.2.7 Plants

49.   *(k)ɔɗɔ   calabash

Family	Subgroup	Language	Attestation	Gloss	Source
CS	LN	Lendu	ɔ̄dɵ̃	gourd	
CS	LN	Ngiti	ʔdō	gourd	CK
CS	MA	Mangbetu	nɔ́-ɔ́ɗɔ̃/ɔ́-	*calebasse*	
CS	ME	Mamvu	qɔ́lɔ̄	*Kurbis*	Vo71
CS	ME	Lese	hɔ̄lɔ́	*Kurbis*	Vo65
CS	SBB	Bongo	kɔ́ɗɔ̃ꜝ	*calebasse*	
CS	SBB	Yulu	kɔ̄ɔɗɔ̄	*calebasse*	
CS	SBB	Na	kārō	*calebasse*	
CS	SBB	Kenga	kāaɗā	*calebasse*	

Commentary:

Refs:

50.   #-kVnV   firewood   tree

Family	Subgroup	Language	Attestation	Gloss	Source
CS	LN	Lendu	kàlí	*bois (mort)*	Me
CS	MM	Madi	kwɛ̄	tree	Bl00
CS	MA	Mekere	nè-kírè/ é-	*arbre*	De92
CS	MA	Mangbetu	ná-ki /á-	*arbre*	De92
CS	ME	Mamvu	ɔ̄qā	tree	DD
CS	ME	Efe	úgbá	tree	DD
CS	FS	Formona	kagga	tree	Ha87
CS	SBB	Lutos	kāgā	tree	Ol13
CS	SBB	Fongoro	kaga	tree	DB83
CS	SBB	Fer	kāg	*arbre, bois*	Bo87
CS	SBB	Bagiro	kāgā	*arbre, bois*	Bo00
CS	SBB	Bagirmi	kākā	*arbre, bois*	Ke16

Commentary:

Refs:

51.   *Sebi   leaf

Family	Subgroup	Language	Attestation	Gloss	Source
CS	LN	Lendu	tsúbī		
CS	MM	Madi	hwɛ̄bí		
CS	MM	Logo	kībí		
CS	MA	Mangbetu	sɛ́bí		
CS	ME	Mamvu	ūbí		
CS	ME	Lese	ípí		

Commentary: Only reconstructible to PECS. The *-bi* element of the root is cognate with 'ear' (10.).

Refs:

52.	#kaN-	thorn, spine			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	òkí	thorn	Bl00
CS	MA	Asua	kòkì	*épines*	De92
CS	ME	Mamvu	qōkī	*épine*	DD
CS	SBB	Lutos	kono	thorn	KO
CS	SBB	Bongo	kíɲóꜜ	*épine*	Bo00
CS	SBB	Na	kōnō	*épine*	Bo00
CS	SBB	Bagirmi	kōnō	*épine*	Ke16

Commentary: Also in Niger-Congo. Greenberg recognised this root as diagnostic for the Sudanic languages but not as widespread in Nilo-Saharan. There are scattered attestations of a nasal consonant in C_2 position in Nilo-Saharan as well as in Central Sudanic.

Refs: Gr. 126, 146, 159; D.:60, M. 171; G. 1997+2021+2044;

53.	#-(k)iri	root			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Okollo	ɔ̄lā	root	B&W96
CS	SBB	Lutos	ŋgīrā	root	KO
CS	SBB	Na	àlé	*racine*	Bo00
CS	SBB	Kenga	ììrì	*racine*	Pa04
CS	SBB	Bagirmi	ìrì	*racines*	Ke16
CS	SBB	Sar	ŋgə̀ra	*racine*	Bo00

Commentary:

Refs: St91:364

54.		seed			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MA	Mangbetu	nɛ-kpwɔ́kpwɔ́ /ɛ	graine	De92
CS	FS	Sinyar	kùfò	seed	Bo13
CS	SBB	Modo	kúpó	seed	Bo13
CS	SBB	Bongo	kóhó	seed	Bo13
CS	SBB	Yulu	kōof(ə)	seed	Bo13
CS	SBB	Sar	kō	seed	Bo13

Commentary:

Refs: Bo13;

1.3 Natural world

1.3.1 Earth

55.	#bwiro	earth, ground	land		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Moru	vurú	earth	??
CS	MM	Madi	vò	earth	Bl00
CS		Birri	vò	earth	Sa50
CS	KA	Kresh	bùbù	earth	Sa76
CS	SBB	Mödö	bèrí	down	P&P
CS	SBB	Sara	bòr	mud	Pa92

Commentary:

Ref: Gr. 99; B. xx; E. 55, 197; G. 215

56.		mountain, hill	termite	mound I	
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Ngiti	ítú	small ant-hill	KL
CS	MM	Madi	útó	ant-hill	Bl00
CS	ME	Mamvu	ʈùlù	*colline*	DD
CS	KA	Kresh	dʒudʒu ŋɔŋɔ	ant-hill	Sa76
CS	SBB	Bagirmi	túlō	*termitière*	Ke16
CS	SBB	Bagirmi	tòtò	*montagne*	Ke16

Commentary: Also in Niger-Congo and in Hausa *tudu*. The meanings are intertwined, but the example of Bagirmi suggests there are two separate roots here, possibly multiply borrowed.

Refs: W. 291; M. 537; G. 1841; P. 44;

57.		mountain	stone, hill	II	
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Ngiti	ngù		CKL
CS	MA	Mangbetu	nó-ʔòlò/ó-	*montagne*	De92
CS	FS	Formona	gɔl	stone	Ha87
CS	SBB	Jur Beli	ngɔlɔ	hill	
CS	SBB	Fer	kòt	*pierre, caillou*	Bo87

Commentary: Also widely attested in Niger-Congo and used by Gregersen (1972:87) in his argument for a 'Kongo-Saharan'. Gregersen associates terms for 'testicle' with 'stone', a comparison also made in colloquial English. The glottal stop in Mangbetu-Asua is assumed to be a lost velar.

cf. Ed p. 173 for more.

Refs: Gr. 87, 145; D. 53,

58.	#koŋgo	mountain	stone, hill	III	
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Logo	kòŋgɔ̄	mountain	B&W96
CS	MM	Moru	kuni	stone, mountain	B&W96
CS	MM	Madi	óní	stone	Bl00
CS	SBB	Lutos	koŋgo	hill	KO
CS	SBB	Bagiro	kɔ́ŋgɔ̄	*colline*	Bo00
CS	SBB	Baka	kúlóngò	*colline*	Bo00
CS	SBB	Yulu	káŋ	stone	

Commentary:

Refs:

59.	#ɲapa	moon			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Ngiti	àbĭ	moon	CKL
CS	MM	Madi	ɨmbá	moon	Bl00
CS	ME	Efe	tìbá	*lune*	DD
CS	KA	Kresh	ɛ̀pɛ́	*étoile*	Bo00
CS	SBB	Modo	ɲɛ́pɛ́	moon	Bo13
CS	SBB	Bongo	ɲíhí	moon	Bo13
CS	SBB	Yulu	ɲɛ̄.ɛpɔ̄	*lune*	Bo00
CS	SBB	Baka	ɛ́fɛ́	*lune*	Bo00
CS	SBB	Bagirmi	nāpō	*lune*	Ke16

Commentary: The Central Sudanic forms seem particularly similar to common Niger-Congo forms.

Ref: W. 276; M. 428a; Gr:85; P. 41; E. xx

60.		star I			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Lendu	dyodyo	star	RCS
CS	MA	Mangbetu	né-túlú /é-	*étoile*	De92
CS	FS	Formona	ntudyu	star	Ha87

Commentary:

Ref:

61.		star II			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Okollo	īwīlī	star	B&W96
CS	SBB	Bongo	kìr	*étoile*	PN
CS	SBB	Baka	kélí	*étoile*	Bo00

Commentary:

Ref: Gr. 126;

62.	ka-		sun		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Logo	kìtú	sun	B&W96
CS	MA	Asua	lí.kó	*soleil*	De92
CS	KA	Dongo	kulud	sun, day	Sa76
CS	FS	Formona	kaddya	sun	Ha08
CS	SBB	Baka	kàdrà	*soleil*	Bo00
CS	SBB	Gula Sara	kádrà	*soleil*	Bo00
CS	SBB	Fer	kàdɽ	*soleil*	Bo87
CS	SBB	Ngambay	kàr	*soleil*	Bo00
CS	SBB	Bagirmi	kàdʒà	*soleil*	Ke16

Commentary:

Ref: Be92;

63.			night I		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Lendu	kū	*nuit*	?
CS	LN	Ngiti	īkū	*nuit*	CK
CS	MM	Kaliko	íníkī	night	B&W96
CS	MA	Asua	kíní	*nuit*	De92
CS	MA	Mangbetu	né-kini pl. e-kíní	*nuit*	De92
CS	FS	Formona	dikitin	night	Ha78
CS	FS	Sinyar	dìkìttì	night	Bo13

Commentary: Kaliko and other Moru-Madi langusages appear to have subjected the root to metathesis, and then lost the final -ki making cognacy difficult to establish.

Ref: Gr. 143;

64.			night II		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	SBB	Lutos	nduri	night	KO
CS	SBB	Modo	kòrɔdɔ́	night	Bo13
CS	SBB	Bongo	hìndɔ́	night	Bo13
CS	SBB	Sar	ndɔ̄	night	Bo13

Commentary:

Ref:

65.	#-ʃəʃa		sand		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Logo	síɲá	sand	B&W96
CS	FS	Formona	nasi	sand	Ha78
CS	SBB	Baka	sə̀yì	*sable*	Bo00
CS	SBB	Kenga	sīlá	*sable*	Bo00
CS	SBB	Bagirmi	sìɲákà	*sable*	Ke16

Commentary: The striking similarity between Logo and Bagirmi is a rich argument for the unity of Central Sudanic. Formona is a metathesis of MM forms.

Ref: Gr. 144; B. 93;

66.			lake, well	river		
Family	**Subgroup**	**Language**	**Attestation**		**Gloss**	**Source**
CS	FS	Formona	kodya [koʤa]		water	Ha87
CS	SBB	*SBB	*k-r-		*mare*	Bo00
CS	SBB	Baka	kàrà		*mare*	Bo00
CS	SBB	Bagiro	-kàrà		*mare*	Bo00

Commentary:

Refs: B. 79

67.	[n]gʊlʊ		lake, well	river		
Family	**Subgroup**	**Language**	**Attestation**		**Gloss**	**Source**
CS	MM	Moru		gʊlʊ	river	B&W96
CS	MA	Asua		gwò	*eau*	De92
CS	SBB	Bongo		ngùlù	*eaux profondes*	PN

Commentary:

Refs:

68.			#[k]apara	pool, water		
Family	**Subgroup**	**Language**	**Attestation**		**Gloss**	**Source**
CS	MM	Madi	ápārā		pool	Bl00
CS	KA	Kresh	kàpá		*marigot*	Bo00
CS	SBB	Fer	pál		*mare*	Bo00
CS	SBB	Bagirmi	bā		*fleuve*	Ke16

Commentary:

Ref:

69.			water body			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**		**Source**
CS	MM	Madi	bírì	well		Bl00
CS	MM		ɓù	rain		B&W96
CS	MM	Madi	áʻbú	river		Bl00
CS	ME	Mamvu	tìɓō	*pluie*		DD
CS	MA	Mangbetu	nɛ́ɛ́-mbia /ɛ́ɛ́-	*mare, flaque*		De92

Commentary:

Ref: St91:367

70. *-da water body

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MA	Mangbetu	nɛ́'da pl. ɛ'dá	*rivière, fleuve*	De92
CS	SBB	Lutos	dɛ̀	well	Ol13
CS	SBB	Bagirmi	bɨ̀dã̀	*marigot*	Ke16

Commentary:

Ref:

71. #-(b)uru- cloud I

Group	Subgroup	Language	Attestation	Gloss	Source
CS	LN	Ngiti	àpbù	cloud	CKL
CS	MM	Maɗi	rú'bū	cloud	Bl00
CS	MM	Lugbara	ɓu	cloud	
CS	FS	Sinyar	mbʊrbu	cloud	Ha78

Commentary: Maɗi is assumed to be a metathesis.

Refs:

72. cloud II

Group	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Avokaya	ndùrùkú	cloud	B&W96
CS	KA	Aja	kɔ́rɔkɔ́	cloud	Sa76

Commentary:

Refs:

73. #(k)asi fire I

Group	Subgroup	Language	Attestation	Gloss	Source
CS	LN	Lendu	kazz	fire	
CS	MM	Madi	àʧɨ́	fire	Bl00
CS	MM	Miza	a(t)si	fire	Be92
CS	MA	Asua	àkìdʒɛ̀	*feu*	De92
CS		Birri	úsì	fire	Sa50
CS	KA	Kresh	òsò	*feu*	Bo00
CS	SBB	Bagiro	sà	*fumée*	Bo00

Commentary: Bender (1992:43) reconstructs Proto-Central Sudanic #*co*, which does not seem to be supported by the data.

Refs: Gr. 139; Be91:5; St91:365;

74.			ashes, fire		
Group	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	főndɔ́	ash	Bl00
CS	MM	Lugbara	ɔ́fɔ́rá	ashes	B&W96
CS	ME	Mamvu	tɛ́tū	*cendres*	DD
CS		Birri	kúvùtu	ashes	Sa50
CS	FS	Sinyar	fòɗù	fire	Bo13
CS	SBB	Lutos	fuɗu	fire	KO
CS	SBB	Modo	pàɗʊ̀	*feu*	Bo13
CS	SBB	Bongo	fɔ̀ɗù	*feu*	Bo13
CS	SBB	Fongoro	fʌdu	ashes	DB83
CS	SBB	Bagirmi	pə̀ɗù	*feu*	Ke16
CS	SBB	Bedjond'	pòr	*feu*	Bo00
CS	SBB	Proto-SBB	*fòɗ-	fire	Bo00

Commentary: Polysemy between 'ashes' and 'fire' in Central Sudanic is highly unusual in Africa as a whole. To judge by their distribution, forms with –r- in C_2 position may have diverged from –d- at an early stage, but the meanings remained intertwined. If the Mamvu-Efe forms are cognate then the first syllable must be lost and the root then reduplicated.

Gula and Fongoro have innovated for 'ashes' within Central Sudanic (possibly from the 'earth' roots with a bi- element). Thus;

Gula	bítī	No99
Fongoro	mviti	DB83
Lutos	viti	KO

Refs: Gr. 134; B. 78;

75.			ashes II		
Group	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MA	Mangbetu	ná-pú / á-	*cendres*	De92
CS	FS	Sinyar	kabʊr	ashes	Ha78
CS	SBB	Modo	bùrúkù	*cendres*	Bo00
CS	SBB	Bongo	bùrùkú	*cendres*	Bo00
CS	SBB	Yulu	vūk	*feu*	Bo87
CS	SBB	Fer	úk	*cendres*	Bo87
CS	SBB	Bagirmi	būrkū	*cendres*	Ke16

Commentary: Forms such as Bongo were originally a compound, perhaps 'dust of fire'.

Refs:

76.	#-bugulu	hole			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	ɓú		hole	Bl00
CS	MA	Lombi	nò.Bù		*trou*	De92
CS	SBB	Mödöd	'bɔ́	rɔ́	hole	PP
CS	SBB	Ngambay	bò	lò	*eau profonde*	Bo00
CS	SBB	Bagirmi	bù	lò	*cendres*	Ke16

Commentary: Also widespread in Niger-Congo

Refs: W. 213; M. 264; G. 122,140; G. 84, 122, 140;

77.	#-agu	hole II					Attestation	
Family	**Subgroup**	**Language**					**Gloss**	**Source**
CS	MA	Mangbetu	ne-pó	ng	ó		*trou*	De92
CS	SBB	Lutos		g	ɔ	tɔ	hole	KO
CS	SBB	Bagirmi		g	ò		*trou creusé (oiseau)*	Ke16
CS	SBB	Baka		g	ò		*trou*	Bo00
CS	SBB	Kenga		g	ɔ̀ɔ̀		*trou*	Pa06

Commentary: It is clear that if the lexical sources were more precise about the different types of hole we might well have several widespread reconstructions.

Refs:

78.	#kili	charcoal			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MA	Mangbetu	nì.kìlì	*charbon*	De92
CS	KA	Aja	ngiṛi	coal	Sa76
CS	SBB	Lutos	kūlù	charcoal	Ol13
CS	SBB	Modo	kòlólɔ́	*charbon, braise*	Bo00
CS	SBB	Fer	kùl′	*charbon*	Bo00
CS	SBB	Bongo	kìlìlí	*charbon*	PN
CS	SBB	Bedjond	kúl	*charbon, braise*	Bo00
CS	SBB	Bagirmi	kúlù	*charbon*	Ke16

Commentary:

Refs: W. 230; M. 255+259a; G. 780; Bo00216;

1.4 Human world

1.4.1 Persons

79.#	brother,	male I			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Ngiti	adɔ̀	*frère*	CKL
CS	MM	PMM	átá	father	B&w96
CS	MA	Mangbetu	ná-dry pl. á-drú	*frère*	De92
CS		Birri	ánd(r)ù	elder brother	Sa50
CS	KA	Aja	ada	father	Sa76

Commentary: It seems likely this is the same root that Greenberg lists under 'self'. Generally speaking, the Mangbetu-Asua languages have innovated, but the suppletive plural of Lombi retains what appears to be the more widespread Central Sudanic root.

Ref: Gr. 102, 142, 144; B. 78

80.	#	brother,	man, male II		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Lendu	ba	man	
CS	LN	Ngiti	àba-lu-tì	paternal uncle	KL
CS	MM	Madi	ɓá	man	Bl00
CS	MA	Mangbetu	nápá pl. ápá	*père*	De92
CS	ME	Mamvu	fàfā	*père*	DD
CS		Birri	ɓu	father	Sa50
CS	FS	Sinyar	ɓandan	father	Ha78
CS	KA	Kresh	belu	man	Sa76
CS	SBB	Gula Mere	vɾā	*père*	Bo00
CS	SBB	Mbay	bə̀rà	father, male	Ke12
CS	SBB	Na	ngà'bà	*homme* (vir)	Bo00
CS	SBB	Bagirmi	bə̀bù	*père*	Ke16

Commentary:

Ref: Gr. 135, 143; B. 80

81.		male			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	màdī	person	Bl00
CS	MM	Logo Bari	mādí	person	B&W96
CS	ME	Mvuba	ìmá	*mère*	DD
CS		Birri	ama	female (?)	Sa
CS	SBB	Yulu	mɛ̀ɛ̀cə̄	*beau-parent*	Bo00
CS	SBB	Bongo	máa꜔	*enfant; neveu*	PN
CS	SBB	Bagirmi	máyànà	*frère*	Ke16
CS	SBB	Bagirmi	màlà	*soeur du mari*	Ke16

Commentary: Assuming it the same and not a homophonous root, #*ma* appears to switch to a female set in eastern Central Sudanic.

Ref: Gr. 102, 140; R. 23;

82.		woman, wife			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Lendu	dhi	woman	CK
CS	MM	Madi	ēndrɛ̄	mother	Bl00
CS	MA	Mangbetu	ná-nɖrɔ /á-ndró	*femme*	?
CS	ME	Lese	dórɛ́	*femme*	DD
CS	SBB	Lutos	dɛ	person	Ol13
CS	SBB	Baka	ɔ̀ɗɔ̀	*époux*	Bo00
CS	SBB	Bongo	bʊ̀ɗɔ̀	*époux*	Bo00

Commentary:

Ref: Gr. 147; R. 32;

1.4.2 Human constructs

83.   oil, fat

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MA	Mangbetu	ɛ́ɛ'bʊ	*graisse*	?
CS	FS	Sinyar	ìbì	grease, oil	Bo13
CS	KA	Kresh	klɛbɛ	fat	Sa76
CS	SBB	Lutos	kuɓu	fat, oil	KO
CS	SBB	Modo	ɓú	grease, oil	Bo13
CS	SBB	Bongo	hìɓú	grease, oil	Bo13
CS	SBB	Gula Zura	kūɓ	grease, oil	Bo13
CS	SBB	Sar	yìbə̄	grease, oil	Bo13

Commentary:

Refs: Bo13

84.   #-kuC-   house

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Okollo	àkú	village	B&W96
CS	ME	Mamvu	u̯yá	*Haus*	Vo71
CS	KA	Kresh	kóyò	*maison*	Bo00
CS	SBB	Yulu	gúù	*maison*	Bo00
CS	SBB	Ndoka	kúzù	*maison*	Bo00
CS	SBB	Bagirmi	kúʤ	*maison*	Ke16

Commentary: Stevenson (1991:365) restricts his series to 'house' but reconstructs #-lá(k).

Refs: Gr. 84, 101, 122, 140;

85.   war

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Moru waɗi	kʊmba	war	B&W96
CS	SBB	Bongo	mɔ̀kɔ́ (↔)	war	Bo00

Commentary: Bongo is interpreted as metathesis.

Ref: St91:366

86.   spear

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Logo	dìlì	spear	B&W96
CS	MA	Meje	nɔ́ɔ́rʊ̀ pl. ɔ́ɔ́rʊ̀	*lance*	De92

Commentary:

Refs: Gr. 145;

87. path

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Lugbara	gὲrì	path	B&W96
CS	KA	Kresh	igbɔ̀rɔ̀	road	Sa76
CS	SBB	Morokodo	göri	path	
CS	SBB	Bagirmi	sìngìtì	*route*	Ke16

Commentary:

Ref:

88. road

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Moru	tavʊ	*sentier*	BW96
CS	ME	Lese	ípú	*chemin*	DD
CS	SBB	Kaba Na	róbò	*chemin*	Ke16
CS	SBB	Kulfa	dŏvò	*chemin*	Ke16

Commentary:

Ref:

1.4.3 Abstracts

89.   -ari   name

Family	Subgroup	Language	Attestation				Gloss	Source
CS	LN	Lendu			ɗ	ɔ̀	*nom*	?
CS	MM	Madi			r	ú	name	Bl00
CS	MA	Mangbetu		é	r	u	*nom*	?
CS	KA	Kresh	d	í	r	í	*nom*	Bo00
CS	FS	Sinyar	è	e	r	è	name	Bo13
CS	SBB	Lutos			ʈ	i	name	Ol13
CS	SBB	Bongo			r	ɔ́	name	Bo13
CS	SBB	Gula Zura			r	ɔ́	name	Bo13
CS	SBB	Bagirmi			r	ī	*nom*	Ke16
CS	SBB	Baka		ì	r	ì	*nom*	Bo00
CS	SBB	Ngambay			r	ī	*nom*	Bo00

Commentary: According to Boyeldieu (2000:227) 'name' can show polysemy with 'body'. Replaced in Mamvu-Efe.

Refs: Gr. 124, 142; St91:365

2. Pronouns, demonstratives and interrogatives

90.	#ama	I, me			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	mà, má	I, me	Bl00
CS	MM	Logo	mā	*je, moi*	DD
CS	LN	Lendu	mā	*je, moi*	DD
CS	MA	Mangbetu	ímá	*je, moi*	De92
CS	ME	Lese	ūmū	*je, moi*	DD
CS	KA	Aja	[m]ama	I, me	Sa76
CS	FS	Sinyar	màá	I, me	Bo13
CS	SBB	Lutos	ma	I	KO
CS	SBB	Modo	má	I, me	Bo13
CS	SBB	Bongo	má	I, me	Bo13
CS	SBB	Fongoro	ma(ki)	I, me	DB83
CS	SBB	Sar	mā̃	*je, moi*	Ke12c
CS	SBB	Bagirmi	mā	*moi*	Ke16

Commentary:

Ref:

91.		you sg.,	thou		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Lendu	nī	*tu*	De92
CS	MM	Madi	àɲī	you pl.	Bl00
CS	MA	Mangbetu	ímí	*tu*	DD
CS	ME	Mamvu	ìnì	*tu*	DD
CS	KA	Kresh	umu	you sg.	Sa76
CS	SBB	Lutos	ii	you sg.	Ol13
CS	SBB	Fongoro	yi(ki)	you sg.	DB83
CS	SBB	Sar	ī	*tu*	Ke12a
CS	SBB	Bagirmi	ī	*tu*	Ke16

Commentary:

Ref:

92.	#ama	we			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	àmā	we	Blx
CS	MM	Logo	àmā	we	
CS	MA	Mangbetu	àmà	we	
CS	MA	Asua	màmà	we	
CS	ME	Lese	àmū	we	
CS	KA	Aja	màmà	we	Sa76

Commentary: Evidence for a WCS group, since this is completely replaced in ECS.

Ref:

| 93. | | this | | | |
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MA	Mangbetu	néì	*ceci*	De92
CS	FS	Formona	ani	this	Ha87
CS	SBB	Lutos	ānὲ	this	Ol13
CS	SBB	Fongoro	ini	near	DB83
CS	SBB	Sar	ní	*ce*	Ke12a
CS	SBB	Bagirmi	ὲnn	*ceci*	Ke16

Commentary:

Ref:

| 94. | #adɨ | what~who? | | | |
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Ngiti	àdhɨ	who?	CKL
CS	MM	Logo	àdɔ̃	what?	B&W96
CS	MM	Madi	àdõ	what (pron.)	Bl00
CS	MM	Madi	àdɨ	who (pron.)	Bl00
CS	MA	Mangbetu	àdì	*qui?*	De92
CS	ME	Efe	àdɛ̌	*qui?*	DD
CS	KA	Kresh	ɛɖɛ	which?	Sa76
CS	FS	Sinyar	ɗeˀe	who	Bo13
CS	SBB	Lutos	ɗì	what?	KO
CS	SBB	Modo	wáɗí	what?	Bo13
CS	SBB	Bongo	ɗì	what?	Bo13
CS	SBB	Yulu	āaɗẽ	what?	Bo13
CS	SBB	Sar	rí	what?	Bo13
CS	SBB	proto-Sara	ɗì	who	Ke12c
CS	SBB	Bagirmi	ɗĩ̀	*que, quoi*	Ke16

Commentary:

Ref: Gr. 107, 127, 147;

| 95. | | not | | | |
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN				
CS	MM	Madi	kὸ	*ne pas*	DD
CS	MA	Lese	gɔ̄	*ne pas*	DD
CS	ME	Mangbetu	kà	*ne pas*	DD
CS	KA				
CS	FS				
CS	SBB	Lutos	go	not	KO
CS	SBB				

Commentary:

Ref:

3. Numerals

96.	#kVnV	one I			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	àlō	one	Bl00
CS	MA	Mangbetu	kànà	one	De92
CS	FS	Formona	kalla	one	Ha78
CS	FS	Sinyar	kullu	one	Ha78
CS	SBB	Jur Modo	kɔtɔ	one	PP
CS	SBB	Fongoro	kʌla	one	DB83
CS	SBB	Fer	kàl	one	Bo87
CS	SBB	Kenga	kàlaŋ	*un, unique*	Pa04
CS	SBB	Bagirmi	kédē̆	*un*	Ke16

Commentary: Bender (1992) only identifies this in Central Sudanic, but it is clearly much more widespread (and in Niger-Congo as well).

Ref: Ar64. 52; Williamson (1989b:255);

97.	-dok-	ten, one			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MA	Makere	tɛ̀kɛ̀wɛ̀	*dix*	De92
CS	SBB	Bagirmi	dokkeme	ten	St69
CS	SBB	Gula	daago	*dix*	No99
CS	SBB	Fer	dɔ̆ğ	*dix*	Bo87
CS	SBB	Sara	kùtè	*dix*	Pa92
CS	SBB	Bagirmi	dòkkèmè	*dix*	Ke16

Commentary: It seems very likely this root arose from a metathesis of 'one' (above) but the switch to meaning 'ten' is more unusual.

Ref:

98.	#-ari(ma)	two			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Lendu	ʔǎrɔ̄	*deux*	Me
CS	MM	Madi	èrì	two	Bl00
CS	MM	PMM	*ìrì	two	B&W96
CS	MA	Mangbetu	sóórú	*deux*	DD
CS		Birri	úkwàarì	two	Sa50
CS	FS	Formona	rɔ	two	Ha87
CS	FS	Sinyar	róò	two	Bo13
CS	KA	Kresh	rɔ̀mɔ	two	Sa76
CS	SBB	Bongo	ríyó	two	Bo13
CS	SBB	Gula Zura	ɖɔ̆	two	Bo13
CS	SBB	Sar	ʤɔ̄ó	two	Bo13

Commentary: There are two related forms which are equally distributed in Central and Eastern Sudanic, making it likely that the forms with the –ma affix developed in the early period of Central African and developed separately if simultaneously with the original #-*ari* root.

Ref: Gr. 107, 127, 146; St91:367

99.		three			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Moru	nʌtu	three	B&W96
CS	MA	Mangbetu	sóta	three	DD
CS	FS	Sinyar	mùʈʈà	three	Bo13
CS	Kresh	KA	tɔtɔ́	three	Sa76
CS	SBB	Lutos	muta	three	KO
CS	SBB	Modo	mòtá	three	Bo13
CS	SBB	Bongo	mòtà	three	Bo13
CS	SBB	Yulu	mŏotà	three	Bo13
CS	SBB	Sar	mòtá	three	Bo13
CS	SBB	Bagirmi			

Commentary:

Refs:

100.	#-so	four			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	īsū	four	Bl00
CS	MM	PMM	*īsū	four	B&W96
CS	MA	Mangbetu	sósua	four	DD
CS	FS	Sinyar	ussa	four	Ha87
CS	SBB	Lutos	sɔɔ	four	KO
CS	SBB	Gula	soo	four	
CS	SBB	Bebote	sɔ́	*quatre*	Ke12c
CS	SBB	Bagirmi	só	*quatre*	Ke16

Commentary:

Refs:

4. Adjectives and adverbs

101.	#-bo	big			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Lendu	bɔ̀	*grand*	
CS	MM	Madi	ógbóró	big	Bl00
CS	MM	Lugbara	ambo		
CS	MA	Makere	màɓóɓó	*grand*	De92
CS		Birri	gbɔ	big	Sa50
CS	FS	Sinyar	ilekubo	big	Ha78
CS	SBB	Lutos	ɓoli	big	KO
CS	SBB	Gula	bò	*grand*	Ke16

Commentary:

Refs: Gr. 141;

102.	#(k)ulu	cold			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Lulubo	īdûē	cold	B&W96
CS	ME	Mamvu	ɛ̀ʈū	*froid*	DD
CS	MA	Mangbetu	nɛ̀ɛ́tʊ	*froid*	?
CS	SBB	Bagirmi	kūlū	cold	Ke16
CS	SBB	Ndoka	kūlū	*froid*	Bo00

Commentary:

Refs: Gr. 136; B.

103.		(be) hot			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Moru	ɛmɛ/amɛ	warm	BW96
CS	ME				
CS	FS	Sinyar	uŋŋa	hot	Bo13
CS	SBB	Lutos	ūmà	be hot	Ol13
CS	SBB	Modo	ɔ́ŋmá	hot	Bo13
CS	SBB	Yulu	òŋə̄	hot	Bo13
CS	SBB	Gula Zura	ʌ̄m	hot	Bo13
CS	SBB	Sar	tə̀ngā	hot	Bo13

Commentary:

Refs:

104.	#pu	white			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MA	Mangbetu	móúɓù	*blanc*	De92
CS	SBB	Mödö	ɔ̀pɔ̀	white	PP
CS	SBB	Bagirmi	ndʒàpè	*blanc*	Ke16

Commentary: This root is widely attested in Niger-Congo and also has similarities to some Afroasiatic forms. Greenberg (1963: 147) believes the roots with initial p ~ b and –t- in C_2 position are distinct, but these are treated as a single root here. Stevenson (1991:364) gives additional forms for Eastern Sudanic. Also used by Schadeberg (1981:297) in his discussion of the classification of the Kadu group.

Refs: Gr. 23, 88, 127, 147, 160; W. 279; M. 423; G. 1472+1473; P. 4;

105.	#(nd)ur-	black				
Family	**Subgroup**	**Language**	**Attestation**		**Gloss**	**Source**
CS		Birri	nḓr(i)		black	Sa50
CS	FS	Sinyar	kìttì		black	Bo13
CS	SBB	Ngambay	ndùl		*noir*	Bo00
CS	SBB	Lutos		kīlì	black	Ol13
CS	SBB	Bongo		òlù	*noir*	Bo00
CS	SBB	Modo		òlù	black	Bo13
CS	SBB	Gula Zura	tʌ̀l		black	Bo13
CS	SBB	Sar	ndùl		black	Bo13
CS	SBB	Sar		ìl	black	Bo13
CS	SBB	Bagirmi		ìlì	*noir*	Ke16

Commentary: Sar appears to have two reflexes of what may be ultimately the same root.

Refs: Be05:21

106.　#-ka(s)　red

Family	Subgroup	Language	Attestation	Gloss	Source
CS	LN	Lendu	kaka	rouge	De92
CS	MM	Maɗi	īkā	red	Bl00
CS	MM	Logo	kīkā	red	B&W96
CS	SBB	Lutos	kakɛ	red	KO
CS	SBB	Fongoro	nʌkaʃi	red	DB83
CS	SBB	Mongo	kàsɨ̀	*rouge*	Ke16
CS	SBB	Bagirmi	àʧè	*rouge*	Ke16

Commentary: The Western CS languages have added the fricative in C_2 position.

Refs: Gr. 143;

107.　#guru　round,　circle

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Madi	ŋgólóló	round	Bl00
CS	SBB	Mödö	gúrúgúrú	in a circle	PP

Commentary: Stevenson (1981:157) first drew attention to the cognates of this form within East Sudanic languages.

Refs: B.

108.　#grV　left (side)

Family	Subgroup	Language	Attestation	Gloss	Source
CS	LN	Lendu	gru	left	De92
CS	SBB	Bongo	gèl	*gauche*	Bo00
CS	SBB	Sar	gèl	*gauche*	Bo00
CS	SBB	Bagirmi	gèlè	*gauche*	Ke16

Commentary:

Refs:

109.　*kpo　all

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Maɗi	kpɔ́ɔ̀	all	Bl00
CS	MA	Makere	kpɛ̀	*tous, tout*	De92

Commentary:

Refs: Be05:21;

110.			other		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	ákà	other	Bl00
CS	MA	Mangbetu	nékóné	*autre*	De92
CS	SBB	Formona	kwini	other	Ha78
CS	SBB	Bagirmi	kūyú	*autre*	Ke16

Commentary:

Refs:

111.			rainy season		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Lugbara	ayi		
CS	MM	Madi	kìɲà	year	Bl00
CS	ME	Mamvu	aye		

Commentary:

Refs: Gr. 147;

112.			tomorrow		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	ɔ̀'bʊ́	tomorrow	
CS	MA	Mangbetu	obúro	*demain*	??
CS	SBB	Laka	bàrà	*demain*	Ke nd

Commentary:

Refs: Gr. 148;

5. Verbs

113.	to dance,	sing, play	#-bV	#ala		
Family	**Subgroup**	**Language**	**Attestation**	**II**	**Gloss**	**Source**
CS	LN	Ngiti	ūbhɛ́tá		*danser*	CK
CS	ME	Mamvu	íbvú		*chanter*	DD
CS	MA	Mangbetu	nɔ̀-ɓɛ̀ pl. kɔ̀-		dance	De92
CS		Birri		árá	dance	Sa50
CS	SBB	Kenga		àalā	*danser*	Bo00
CS	SBB	Daba		lā	*danser*	Ke16
CS	SBB	Bagirmi		ɓārā	*chanter*	Ke16

Commentary: Birri clearly patterns with WCS.

Ref: B. 95;

114. #keri to cut I

Family	Subgroup	Language	Attestation	Comment	Source
CS	MA	Mangbetu	-gɔ̀	*couper avec hache*	De92
CS	KA	Kresh	àgɜ̀	*couper*	Bo--

Commentary: Greenberg identfied this root as 'to break' and brings in some related forms with a front vowel. Rilly (2009: 128) suggests this is cognate with Meroitic *ked-* 'massacre' and provides a substantial table of Nilo-Saharan 'cut' cognates.

Refs: Gr. 135; Be. 268, 344; E. 505, 543, 1078;

115. #li to cut II

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Madi	lī pl. rɛ̄	to cut	Bl00
CS	SBB	Mödö	ìlìlì	cut into strips	PP
CS	SBB	Bagirmi	ólò	*couper en tranchant*	Ke16

Commentary:

References: W. 287; M. 516+517; G. 1703+1709+1711+1740; Williamson (1992:389);

116. #-ya drink I

Family	Subgroup	Language	Attestation	Gloss	Source
CS		PWCS	*aya	drink	RMB
CS		Birri	áyá	drink	Sa50
CS	FS	Formona	iya	drink	Ha78
CS	FS	Sinyar	iya	drink	Bo13
CS	SBB	Fer	ày	*boire*	Bo00
CS	SBB	Yulu	ɔ̀ɔyɔ̄	drink	Bo13
CS	SBB	Bagirmi	āyō	*boire*	Ke16
CS	SBB	Bongo	yɛ́	*boire*	PN
CS	SBB	Sar	àȳ	drink	Bo13

Commentary:
Refs:

117. drink II

Family	Subgroup	Language	Attestation	Gloss	Source
CS		PECS	*ɔmbvò	to drink	RMB
CS	LN	Lendu	mbò	*boire*	Me
CS	MM	Madi	mvū	to drink	Bl00
CS	MM	Logo Bari	ɔ̀mbō	to drink	B&W96
CS	ME	Lese	àbvù	to drink	DD
CS	ME	Mamvu	āmvù	to drink	DD
CS	MA	Mangbetu	nɔ́mBɔ̀	to drink	DD
CS	MA	Asua	ɔ́mBɔ̀	to drink	DD
CS	KA	Kresh	ɔ̀mɔ̀	*boire*	Bo00

Commentary: Central Sudanic clearly divides into two subgroups but Kresh is grouped with eastern Central Sudanic.

Refs:

118. be, exist

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Madi	āʼà	exist	Bl00
CS	MA	Mangbetu	a		

Commentary:

Refs: Gr. 96;

119. take away

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MM	Madi	dū	to take	Bl00
CS	MA	Mangbetu	nɔ̀.ḍrwà	*prendre*	De92
CS	SBB	Bongo	tɔ̀gbà	*prendre, ramasser*	BNP06
CS	SBB	Bagirmi	túnù	*prendre* (fréq.)	Ke16

Commentary: The Bagirmi root is *únù* so this may be an accidental resemblance.

Refs: B. 358;

120. #-ka(r)- to give

Family	Subgroup	Language	Attestation	Gloss	Source
CS	MA	Mangbetu	kùò	*donner*	De92
CS		Birri	akpa	give	Sa50
CS	SBB	Lutos	kada	give	KO
CS	SBB	Fongoro	uka	give	DB83
CS	SBB	Laka	kàr̄	*donner*	Ke nd
CS	SBB	Bagirmi	kàdà	*donner*	Ke16

Commentary:

Refs:

121. #ka[l]o to go

Family	Subgroup	Language	Attestation	Gloss	Source
CS	LN	Lendu	ū	*aller*	Me
CS	MA	Mangbetu	nɔ̀ɔ̀ pl. kɔ̀ɔ̀	*aller*	De92
CS	SBB	Laka	kàw̄	*aller*	Ke16
CS	SBB	Bagirmi	káɓè	*aller*	Ke16

Commentary:

Refs:

122.	#-nɗə	to walk			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	KA	Kresh	àndə̀	*marcher*	Bo00
CS	SBB	Lutos	ndiga	walk	KO
CS	SBB	Bongo	andɛ́	*marcher*	Bo00
CS	SBB	Baka	ndɛ́rɛ́	*marcher*	Bo00
CS	SBB	Mbay	ndə̄yā	*marcher*	Bo00

Commentary:

Refs:

123.	#-ɗǐ	fall I			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	dɛ̃̌	to fall	Bl00
CS	MM	Lulubo	òdɛ̃̌	to fall	B&W96
CS	MA	Asua	ódődì	*tomber*	De92
CS	MA	Mangbetu	(n)-o'de	*tomber*	De92
CS		Birri	èdɛ̃̌	to fall	Sa50
CS	SBB	Gor	ə̀dɨ̌	*tomber (pluie)*	Ke12b
CS	SBB	Bagirmi	kèdɛ̀	*tomber (pluie)*	Ke16

Commentary: There are two roots for 'fall' and this one appears to mean fall itr. as 'fall like rain'.

Refs: Gr. 138;

124.		fall II			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MA	Mangbetu	-asú	*tomber assis*	?
CS	SBB	Bagirmi	ōʧō̄	*tomber*	Ke16
CS	SBB	Nar	òsō̄	*tomber*	Ke12a

Commentary:

Refs:

125.	#-arye	come I			
Family	**Group**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Moru	aɽi	come	B&W96
CS	ME	Lese	ɛ̀rɛ́	*venir*	DD
CS	FS	Sinyar	uwe/weeŋ	come	Bo13
CS	SBB	Bongo	àí	come	Bo13
CS	SBB	Yulu	àayə̄	*venir*	Bo00
CS	SBB	Sar	rèē̄	come	Bo13

Commentary:

Refs: Gr. 136;

126.	*-ku	come II			
Family	**Group**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MA	Mangbetu	kékù	*venir*	De92
CS		Birri	a(kɐ)	come	Sa50
CS	FS	Sinyar	aku	come	Ha78
CS	SBB	Modo	ákʊ́	come	Bo13
CS	SBB	Bagirmi	kíɗè̀	*venir, arriver*	Ke16

Commentary:

Refs: Gr. 136;

127.	#ɲaNa	eat, bite (v.)			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	ɲā	to eat	Bl00
CS	MM	Logo Bari	ɔ̀ɲā	to eat	B&W96
CS	MA	Makere	ɲɔ̀ɲɔ̀ pl. kɔ̀ɲɔ̀	*manger*	De92
CS	MA	Mangbetu	nè-ɲíɲí /ɛ̀-	*viande*	De92
CS	ME	Mamvu	āɲū	*manger*	DD
CS	ME	Lese	ànù	*manger*	DD
CS		Birri	aʔa	bite	Sa50
CS	FS	Sinyar	wiɲ	to eat	Bo13
CS	SBB	Lutos	zoɲo	bite	KO
CS	SBB	Modo	ʊ̀ɲʊ̀	to eat	Bo13
CS	SBB	Bongo	ɲù	to eat	Bo13
CS	SBB	Gula Mere	ɔ̄ɲɔ̄	*manger*	Bo00
CS	SBB	Bagirmi	ʤʊ̀ɲʊ̀	*mordre*	Ke16

Commentary: The SBB languages are clealy marked by the shift to a mid-back vowel and a prefixed fricative.

Ref: B05 22; W.253; M. 110; G. 70:696; E. 387, 518;

128.	#-sa	bite hard			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	ʧɨ̄	to bite	Bl00
CS	MM	Moru	ɔsi	to bite	B&W96
CS	KA	Kresh	òʃə̀	*manger*	Bo00
CS	SBB	Gula Mere	ùsà	*manger (dur)*	Bo00
CS	SBB	Bagirmi	sáà	*manger*	Ke16

Commentary: The synchronic distinction between the two roots in Central Sudanic may provide a clue to their differences; one applied to eating soft foods, the other to chewing hard foods. The back vowel prefix in Central Sudanic is probably a verbal prefix which differentiates it from 'tooth' (cf. 8.).

Ref: W.253; M. 110; G. 70:696; E. 387, 518;

129.	#-ka	bite			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Lendu	kà	*mordre*	DD
CS	MM	Madi	gā	to bite	Bl00
CS	MA	Mangbetu	nɔ̀kà	*mordre (chien)*	De92
CS	MA	Asua	hɔ́kà	*mordre*	DD
CS	ME	Mabendi	ókà	*mordre*	DD
CS	SBB	Bagirmi	kàʧà	*mordre (serpent)*	Ke16

Commentary: Nilo-Saharan has a widespread root, something *#kari*, which generally means 'bite', 'eat hard food' connected with a root *#ka* for 'tooth'. The existence of two forms of 'bite' in Mangbetu, according to the species of animal doing the biting, may well explain the pairs of roots apparently found across Nilo-Saharan.

Ref: Be0522;

130.	#-go	bite II			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MA	Mangbetu	nògò	*mordre (serpent)*	De92
CS	ME	Mamvu	ràgɔ́	*mordre*	DD

Commentary:

Ref:

131.	#dona	bite III			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	ME	Lese	tàhɔ́	*mordre*	DD
CS	FS	Sinyar	ɟunna	to bite	Ha78
CS	SBB	Sara	dùùn	*mordre*	Bo00
CS	SBB	Ngambay	tɔ̆	*mordre*	Bo00
CS	SBB	Kenga	dɔ̀ɔɲɔ̀	*mordre*	Bo00

Commentary:

Ref: E. 387, 518;

132.	#du	to hit, beat			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Lendu	dǔ	*battre, écraser*	Me
CS	MM	Madi	dī	hit	Bl00
CS	MA	Mangbetu	nòdò pl. kùdò	*frapper*	De92
CS	SBB	Lutos	kunda	hit	KO
CS	SBB	Bongo	dù	*battre (le tambour)*	No99
CS	SBB	Nar	ìndə̀	*battre, frapper*	Ke12
CS	SBB	Bagirmi	túkù	*battre, taper*	Ke16

Commentary: Similar to common NC *#du* 'to pound'.

Ref: B. 161;

133.			to make pot		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM				
Cs	MA	Lombi	lìmbè	to make pot	De92
CS	FS	Sinyar	uɓa/umba	to make pot	Bo13
CS	SBB	Modo	óɓá	to make pot	Bo13
CS	SBB	Bongo	ɓá	to make pot	Bo13
CS	SBB	Yulu	òoɓɔ̄	to make pot	Bo13
CS	SBB	Gula Zura	ā̄ɓ	to make pot	Bo13
CS	SBB	Sar	ə̀ɓā	to make pot	Bo13

Commentary: Lombi is exceptional in the Mangbetu cluster for retaining this root.

Ref:

134.	#ɲeli		to know		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	nì	know, think	Bl00
CS	FS	Sinyar	u(n)gol	know	Bo13
CS	SBB	Lutos	geɽi	know	KO
CS	SBB	Modo	íkàlí	know	Bo13
CS	SBB	Bagirmi	ndʒélè	*savoir, connaitre*	Ke16
CS	SBB	Gula Mere	ŋgēɽē	*savoir, connaitre*	Bo00
CS	SBB	Sar	gèɽ̄	*savoir, connaitre*	Bo00

Commentary:

Ref:

135.	#-ɖi		cook, burn		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Lendu	ri	cook	
CS	MM	Madi	ɖɨ	cook	Bl00
CS	MA	Mangbetu	(n)o'di	*cuire à l'eau*	De92
CS		Birri	íɖì	cook	Sa50
CS	KA	Kresh	īdì	*cuire*	
CS	SBB	Bongo	ɖì	*cuire*	Bo08
CS	SBB	Kenga	nìiɖ̀	*cuire*	Bo08
CS	SBB	Bagirmi	nìɖì	*cuire*	Ke16

Commentary:

Refs: Gr. 136; B. 81

136.	#ʧa	spread out	to dry,	stretch out	
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	īʧá	spread out	Bl00
CS	SBB	Mödö	ilèré	to dry	P&P
CS	SBB	Yulu	táa'dʒə̀	*étendre*	Bo00

Commentary: Also in Niger-Congo.

Ref: W. 284; E. 711

137.	#tV-		to pour		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Maɗi	sò *pl.* tū	to pour	Bl00
CS	MA	Mangbetu	-ɛtú	*verser*	
CS	SBB	Mödö	òtì	to pour	P&P
CS	SBB	Bagirmi	tīnéè	*verser*	Ke16

Commentary:

Refs: B. 82

138.			to say		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Logo	tà	say	B&W96
CS	KA	Kresh	àdə̀	*dire*	Bo00
CS	FS	Formona	adama	say	Ha78
CS	SBB	Bagirmi	láà	*dire*	Ke16

Commentary: Strikingly similar to common Niger-Congo #*ta* 'tell'. Replaced in Mangbetu-Asua.

Refs: B. 81

139.			to see		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MA	Mangbetu	nò.gwò pl. kù.gwó	*voir*	De92
CS	KA	Kresh	ɔ̀kɔ̀	*voir*	Bo00
CS	SBB	Laka	kò	*voir*	Ke12c
CS	SBB	Bagirmi	ákà	*voir*	Ke16

Commentary:

Refs: Gr. 144;

140.			to throw		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Lendu	bu		
CS	MM	Madi	vī̄	throw	Bl00
CS	MM	Logo Bari	ɔ̀vò	throw	B&W96
CS	ME	Mamvu	ebi		
CS	SBB	Bagirmi	rə́ɓù	*jeter (chose boueuse)*	Ke16

Commentary: Not attested in Mangbetu-Asua.

Refs: Gr. 127, 146;

141.	#(k)udi	to dig			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Moru	ū'dī		
CS	ME	Mamvu	ùlī		
CS	MA	Asua	kèdì		? Na
CS	KA	Kresh	īɗì		Bo00
CS	SBB	Lutos	k-uɗi	dig	KO
CS	SBB	Gula Zara	ìɗì		Bo00
CS	SBB	Sara Na	òrì		Bo00
CS	SBB	Bagirmi	ūdū	*creuser*	Ke16

Commentary: Not attested in Lendu-Ngiti.

142.		to kill I			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Ngiti	ōhōtā	*tuer*	CK
CS	MM	Miza	ufú	kill	B&W96
CS	MA	PMA	*ɔ̀Pɔ̀	*tuer*	De92
CS	ME	Mamvu	àfó	*tuer*	DD
CS	KA	Kresh	ùfù	*tuer*	Bo00
CS	SBB	Yulu	ōofə̄	kill	Bo13
CS	SBB	Baka	ófò	*tuer*	Bo00
CS	SBB	Sara Na	òhò	*tuer*	Bo00

Commentary: This root has retained its shape in a remarkable way across Central Sudanic. The -ta element in Ngiti might be the same as the tV- in the second root for 'kill' (143.).

Ref:

143.	#-tu-	to kill II			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Madi	dĩ	*kill*	Bl00
CS	KA	Kresh	ili	*kill*	Sa76
CS	FS	Sinyar	wille	die	Bo13
CS	SBB	Lutos	tala	kill	KO
CS	SBB	Yulu	ùlə̀	*tuer*	Bo00
CS	SBB	Bongo	túnú	kill	Bo13
CS	SBB	Fongoro	tɛle	kill	DB83
CS	SBB	Gula	tɔ̄lē	*tuer*	No99
CS	SBB	Ngambay	tōlō	*tuer*	Ke12a
CS	SBB	Bagirmi	ūdū	*mourir*	Ke16
CS	SBB	Bagirmi	tōl	*tuer*	Ke16

Commentary: Kresh is transcribed differently in the two sources and the two roots appear to fall in diffferent sets. Boyeldieu (2013) puts together part of this set with '*dei*', but these are separated out here.

Ref: Gr. 122;

144.	#xwi	to kill III			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Lendu	xwì	*tuer*	DD
CS	FS	Formona	owi	kill	Ha78
CS	FS	Sinyar	wii	kill	Bo13

Commentary: Central Sudanic appears to have a remarkable number of roots for 'to kill'.

Refs: Armstrong (1964:55); B. 156, 162, 185; Gr. 84; M. 325; W. 225

145.		to die			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	KA	Kresh	ìyì	*mourir*	Bo00
CS	SBB	Sar	òy	die	Bo13
CS	SBB	Bongo	yò	die	Bo13
CS	SBB	Bagirmi	(k)òyò	*mourir*	Ke16
CS	SBB	Kulfa	òyò	*mourir*	Bo00

Commentary:

Ref:

146.	#(n)dri	to sit			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
Cs	LN	Lendu	dī	*s'asseoir*	DD
CS	MM	Madi	rì	sit	Bl00
CS	MM	Logo	līrí	sit	DD
CS	MA	Mangbetu	drì	*s'asseoir*	De92
CS	FS	Formona	owirdyi	sit	Ha78
CS	SBB	Fongoro	ndri	sit	DB83
CS	SBB	Baka	ndísì	*s'asseoir*	?
CS	SBB	Bagirmi	kìndʒì	*s'asseoir*	Ke16

Commentary: Replaced in Mamvu-Efe.

Ref:

147.		to vomit			
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	MM	Logo	'dì	vomit	Bo08
CS	ME	Mamvu	àlī	vomit	Bo08
CS	ME	Lese	ʈàlí	vomit	Bo08
CS	SBB	Lutos	tuɗɛ	vomit	KO
CS	SBB	Bongo	tíɗǐ	vomit	Bo08
CS	SBB	Yulu	tèɗə̌	vomit	Bo08
CS	SBB	Na	túrē	vomit	Bo08

Commentary:

Ref:

148.			to sleep I		
	Subgroup	**Language**	**Attestation**	**Gloss**	**Source**
CS	LN	Ngiti	ɔ̄dɔ̀	sleep	CKL
CS	LN	Lendu	ʔdɔ̀	*dormir*	Me
CS	MM	Lugbara	kudŭ	sleep	
CS	MM	Moru	udŭ	sleep	
CS	MM	Madi	ōdŭ	sleep	Bl00
CS	MA	Mangbetu	nédĕdò pl. kédò	*coucher*	De92
CS	KA	Dongo	ood̠	sleep	Sa76
CS	FS	Sinyar	sudo	sleep	Bo13
CS	SBB	Lutos	tɔdɔ̀	sleep	KO
CS	SBB	Modo	òdò	*dormir*	Bo00
CS	SBB	Bongo	dò	sleep	Bo13
CS	SBB	Yulu	ndòodə̀	*dormir*	Bo00
CS	SBB	Ndoka	tɔ̀dɔ́	*dormir*	Bo00
CS	SBB	Sar	tò	*dormir*	Bo00
CS	SBB	Bagirmi	tódò	*dormir*	Ke16

Commentary: Lost in Mangbutu-Efe. Forms with a k- prefix are confined to WCS and those with t- to ECS. Mangbetu probably provides a clue, as the singular/plural alternation indications reduplication in the singular and the genesis of a pre-syllable with a dental, which become t- in ECS.

Ref: Bo08

149.			to sleep II		
Family	**Subgroup**	**Language**	**Attestation**	**Gloss**	**Source**
CS	ME	Efe	àbō	*dormir*	DD
CS	KA	Kresh	ɓíɓí	*dormir*	Bo00

Commentary:

Ref:

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