

NIGER-SAHARAN: ADDITIONAL GLOSSES

**This paper was presented at the VIIIth Nilo-Saharan Conference in Hamburg, 22-25th August, 2001.
It was submitted and emended by early 2002, but there has been silence ever since Another lost
paper? This version contains a few additional corrections.**

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This version: Cambridge, Wednesday, 23 June 2004

ABSTRACT

In two previous papers in this conference series I proposed that Niger-Congo and Nilo-Saharan formed a single macrophylum and adduced lexical, phonological and morphological evidence for this hypothesis. This paper presents further lexical evidence for Niger-Saharan and examines what implications this has for the placing of Nilo-Saharan families in relation to the genesis of Niger-Congo.

A feature of certain branches of Nilo-Saharan that has frequently been noted is the existence of verbal extensions, particularly in East Sudanic. Although these are widely recognised to be a feature of Niger-Congo as well, and to be reconstructible back to Proto-Niger-Congo, an absence of recent work on these extensions has made it difficult to undertake transphylic comparisons. The paper looks at verbal extensions in Niger-Congo and Nilo-Saharan and asks whether this is simply typological similarity or can any cognate features be identified, and if so what implications this has for the structure of the Niger-Saharan macrophylum.

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Acronyms and Terminology

I have adopted the convention for reconstructions used in the Niger-Congo volume edited by Bendor-Samuel (1989), distinguishing those established by regular sound-correspondences from those derived by quick inspection of cognates. By this criterion, most major reconstructions are 'quasi-reconstructions' (inevitably). The effect of this is to translate the starred forms of various writers to hache '#'.

- * Reconstruction established from complete analysis of sound-change
- # 'Pseudo-reconstruction' established from quick inspection of cognates

Acronym	Expansion or source	Reference or language treated
A58	Abrahams (1958)	Yoruba
Ag	Agheyisi (1986)	Edo
ALGCI	Mensah & Tchagbale (1983)	Gur
ALKCI	Hérault (1983)	Kwa
ALKrCI	Marchese (1983)	Kru
ALMCI	Halaoui, Tera and Trabi (1983)	Mande
B	Bender (1996)	Nilo-Saharan
B79	Bender (1979)	Gumuz
BC	Benue-Congo	
BCCW	Williamson & Shimizu (1968) & Williamson (1973)	Benue-Congo
Be	Bertho (1953)	Dogon
Bo93	Boyeldieu (1993)	Sara-Bongo-Bagirmi
BWK	Bernard & White-Kaba (1994)	Zarma
C	Consonant	
CB	Common Bantu	Guthrie 1967-71
Chr	Christaller (1933)	Twi
CS	Central Sudanic	
DC	Ducroz & Charles (1978)	Songhay Kaado
E	Edgar (1991)	Maba group
EBC	East Benue-Congo	
ES	Eastern Sudanic	
G	Greenberg (1963)	African languages
Gr	Gregersen (1972)	Kongo-Saharan

Acronym	Expansion or source	Reference or language treated
Gt	Guthrie (1967-1971)	Bantu
JI	Jungraithmayr & Ibrizimow (1995)	Chadic
KW	Kay Williamson (p.c.)	Ijoid
M	Mukarovsky (1976/7)	Proto-Western Nigritic [=Proto-Atlantic-Congo]
Man	Manessy (1975)	Oti-Volta
Me	Meeussen (1980)	Proto-Bantu
Mo	Moñino (1988)	Ubangian
N	Nasal	
NC	Niger-Congo	
NS	Nilo-Saharan	
P	Prost (1953)	South Mande
PB	Proto-Bantu	
PD	Proto-Daju	Thelwall, 1989
PI	Proto-Ijò	Williamson, in prep.
PM	Perrin & Mouh (1995)	Mambila
PN	Proto-Nilotic	
PNC	Proto-Niger-Congo	
PNS	Proto-Nilo-Saharan	
PWN	Proto-Western Nigritic	Mukarovsky, 1976/77
PWS	Proto-West Sudanic	Westermann, 1927
RCS	Roland Stevenson mss.	Nilo-Saharan, Kordofanian
RMB	Author's fieldwork	
Sch81a	Schadeberg (1981a)	Kadu
Sch81b	Schadeberg (1981b)	Heiban Kordofanian
Sch94	Schadeberg (1994)	Kadu
V	Vowel	
Vo82	Voßen (1982)	Eastern Nilotic
Vo88	Voßen (1988)	Maa
Vo97	Voßen (1997)	Khoisan
W	Westermann (1927)	Western Sudanic [proto-Mande-Congo]
WBC	East Benue-Congo	

1. Introduction

The concept that a Niger-Saharan macrophylum exists may be said to be slowly gaining acceptance; at least no strong case has been advanced against it. Although the original idea goes back to Westermann's (1911) 'Sudansprachen', its modern form dates from Gregersen (1972). Apart from two previous papers by the present author in this conference series (Blench 1995, in press), Bender (1996) and Boyd (1997) have also considered the issue although with different results from those proposed here.

In recent years a major competing proposal for the internal classification of Nilo-Saharan has been circulated and may be soon published (Ehret, in press). The differences between this and Bender's version have been exhaustively rehearsed in print and will not be repeated here. Ehret does represent a significant source of new suggestions for roots, despite the often unusual semantics. At the same time, a more comprehensive defence of the unity of Niger-Congo has been published (Williamson & Blench 2000). This paper¹ presents further lexical evidence for Niger-Saharan in the light of these recent developments.

A feature of certain branches of Nilo-Saharan that has frequently been noted is the existence of verbal extensions, particularly in East Sudanic. Although these are widely recognised to be a feature of Niger-Congo, and to be reconstructible back to Proto-Niger-Congo, an absence of recent work on these extensions has made it difficult to undertake transphylic comparisons. The paper looks at verbal extensions in Niger-Congo and Nilo-Saharan and asks whether this is simply typological similarity or can cognate features be identified, and if so what implications this has for the structure of the Niger-Saharan macrophylum.

2. New proposals for Niger-Saharan roots

Proposed Niger-Saharan roots are set out in the same fashion as previous papers. Where a branch is not cited, it means either that I have been unable to find the lexical item in the sources available to me or that it does not appear to be cognate. All citations are referenced either directly or following the acronyms preceding the paper. The entries are ordered by English gloss. The references below, typically to Westermann and Ehret, simply indicate that a root of similar shape is noted by them, not that I in any way concur with their analysis. I have generally been very conservative with the semantics, and only admitted those shifts that are attested synchronically in present-day languages.

?C means I am doubtful of the cognacy of a particular item. The # reconstructions are definitely quasi-reconstructions meant to suggest the general shape of a root and subject to revision.

¹ I would like to thank Chris Ehret, Didier Demolin, Nigel Fabb, Lionel Bender and Robin Thelwall for unpublished data used in this paper.

1. #bulV(k) belly, stomach

Phylum	Group	Language	Attestation	Comment	Source
NS	Shabo	Shabo	ḡaḡu	liver	Teferra (1991)
NS	Kuliak	Ik	bubú	stomach	Heine (1999)
NS	Gumuz				
NS	Koman	Anej	a-buun	belly	Bender (1983)
NS	ES	Burun	huri		
NS	ES	Bari	ḡur pl. ḡurōn	stomach?	
NS	ES	Daju (Shatt)	ḡilek	belly	RCS
NS	CS	Yulu	mbèekā	<i>ventre</i>	Boyeldieu (1987)
NS	Maban	Mimi	bok	belly	Edgar (1991)
NC	PWS		#-pu-		W. 278
NC	Mande	Bambara	fūru	<i>estomac</i>	Bailleul (1996)
NC	Atlantic	Kissi	pùléí		Childs (2000)
NC	Gur	Moore	puu-gà /-se		
NC	Ubangian	Nzakara	vūlū		Monino (1988)
NC	Kwa	Gonja	è-pún		
NC	WBC	Igala	efu		
NC	EBC	Yala	di-pu		
NC	Bantu	CB	#-pù		

Commentary: One of the most striking and widespread Niger-Saharan roots. The variation between front and back vowels suggests either that both were present in the original form or that a now-vanished palatal was present. The reduplication in Shabo and Ik are treated as local developments. Some NS forms suggest a -k in C₂ position although this is not widespread enough to reconstruct to PNS with confidence. The absence of front vowels in the Niger-Congo forms suggests that by the time Proto-Niger-Congo evolved, front vowels were definitively absent. Westermann's PWS form is somewhat surprising since his own evidence suggests strongly the presence of a lateral in C₂ position and even paired high back vowels.

Ref: W. 278; M. 458; Ehret (293 + 298)

2. #nduma to bite

Phylum	Group	Language	Attestation	Comment	Source
NS	Gumuz				
NS	Kunama	Kunama	‘nínà	to bite	Bender (2001)
NS	ES	Gaam	nōm	to eat, chew	
		Temein	lam	to eat	
NS	CS	Sara	dùùn	to bite	
NS	Saharan	Kanuri	nànd-	to bite	Cyffer (1994)
NS	Songhay		nàmà	to bite	
NS	Kadu	Tulishi	a’dōnâ		RCS
NC	PWS		#lum-		
NC	Mande	Bambara	dumu-ni	eating	Bailleul (1996)
NC	Atlantic	Joola Kujamutay	-rum	to bite	Sapir (ined.)
NC	Atlantic	Bijogo (Bubaque)	-num	to bite	Seegerer (ined.)
NC	Kru	Nyabwa	nūmū		ALKCI
NC	Gur	Degha	dómó	<i>mordre</i>	ALGCI
NC	Ubangian	Mba	nómó-		Monino (1988)
NC	Kwa	Lelemi	dū		
NC	WBC				
NC	EBC	Efik	dum	to bite	
NC	Bantu	CB	dúm-		G. 70:696

Commentary: Although the Niger-Congo roots for ‘bite’ are fairly consistent and certainly distinct from the ‘eat’ series (#ri) in Nilo-Saharan the widespread ‘eat’ form, #pa, thought to be connected with Niger-Congo ‘meat’ may well be intertwined with ‘bite’. The persistence of initial d- from CS to Bantu makes it likely that forms with nd- initials go back to at least PCS and perhaps further.

Ref: Ehret p. 337, 369, 370; M. 110

3. #mbora breast

Phylum	Group	Language	Attestation	Comment	Source
NS	Gumuz				
NS	Fur	Fur	bòrà	milk	
NS	ES	Sungor	mbol		
NS	CS	Mödö	mbà		P & P
NS	Songhay	Gao	fafa		Prost (1956)
NS	Kadu	Kurondi	oba		RCS
NC	#PWS		#-bi-		W.:207-8
NC	Mande	Boko	bi	<i>lait</i>	Prost (1953)
NC	Atlantic	Diola-Fogny	fiil		Seegerer (ined.)
NC	Atlantic	Pepel	pile		Seegerer (ined.)
NC	Gur	Dagaare	bir / bire		
NC	Ubangian	Manza	bèrè		Monino (1988)
NC	Kwa	Kposo	è-ví		Heine (1968)
NC	WBC	Nupe	ebé		Banfield (1914)
NC	EBC	Toro	bene		RMB
NC	Bantu	CB	-béedè (5/6)		

Commentary: First discussed in Blench (1995) but later found to have a wider distribution than claimed there. Perhaps not be reconstructed to PNS but to some intermediate level of NS. There is a clear division between Nilo-Saharan (back vowel) and Niger-Congo (front vowel) as well as the loss of the prenasalised initial unless forms such as Limba **hu-bili/ma-** hint at a nasal prefix, as in Central Sudanic.

Ref: (B:254, M.:II,25, W.:207-8) Ehret p.296

4. #ɲara buffalo

Phylum	Group	Language	Attestation	Comment	Source
NS	Kuliak	Ik	gasar		
NS	Koman	Madin	gwas		
NS	Kunama	Kunama	gàu'gà		Bender (2001)
NS	ES	Nilotic	anyaar		
NS	Maba	Masalit	gurei		Edgar (1991)
NS	Saharan	Kanuri	ɲgàrà̀n		Cyffer (1994)
NC	Gur	Lamba	nyar		
NC	WBC	Nupoid	eya⁺		Banfield (1914)
NC	EBC	Plateau	gyà̀r		RMB
NC	EBC	Mambilo d	ɲar		Co
NC	Bantu	PB	#-ɲáti		

Commentary: Evidence for this reconstruction is rather sparse compared with some other items, but the similarities of this root across a large geographic area suggest that it should be considered. The absence of the root in some higher nodes of Niger-Congo suggests the possibility of a loan into Niger-Congo from Nilo-Saharan, for example from Saharan into Adamawa and thence to Benue-Congo. The weakening of ɲ to ɲ in Nilotic is presumed to be independent of this same process in BC. Also in Chadic: Daffo **yà̀t**, although probably a loan.

Ref: BCCW, I, 12; Ehret p. 411

5. #bwiro earth, ground

Phylum	Branch	Group	Language	Attestation	Comment	Source
NS	Shabo		Shabo	boka	earth, ground	Fleming (1991)
NS	Gumuz					
NS	Koman		Uduk	p'én	down	
NS	Berta		Fadasi	emboro	earth	Bender (1989)
NS	Fur		Fur	böru	earth	Beaton (1968)
NS	ES	Nilotic	Lokoya	a-ǫórò		Vossen (1982)
NS	ES	Surmic	Me'en	bwi	ground	
NS	Tama		Aiki	bapa	earth	
NS	Maba		Masalit	abíí	earth	RCS
NS	CS		Moru	vurú	earth	RCS
NS	CS		Mödö	bèrí	down	P & P
NS	CS		Sara	borr		
NS	Saharan		Daza	bi	world	Le Coeur (1950)
NS	Saharan		Zaghawa	èbir	dust	
NS	Saharan		Berti	bira	mud	
NS	Songhay		Zarma	lààbú	<i>terre</i>	BWK
NS	Kadu		Miri	butulu	earth	RCS
NC	Mande		Bisa	bela	<i>argile blanchâtre</i>	Prost (1953)
			Bambara	bògò	<i>terre</i>	Bailleul (1996)
NC	Atlantic		Bassari	bār		Ferry
NC	Gur		Lorhon	burko	<i>terre</i>	ALGCI
NC	Kwa		Krobu	gbě	<i>terre</i>	ALKwCI
NC	WBC					
NC	EBC	Plateau	Tarok	m̀bin	earth, soil	L & B
NC	Bantu					

Commentary: PNS must have had a form that allows the development of both front and back vowels. If C₁ was labialised, this would account for the different vowels. Bender permits semantic shifts to 'swamp' and 'charcoal' which is not accepted here. Evidence for this root in Niger-Congo is rather weak. Sudan Arabic **barr** is perhaps borrowed from Nilo-Saharan languages?

Ref: Bender (1996:78); Ehret (289, 292, 440)

6. #kV-guri egg

Phylum	Group	Family	Language	Attestation	Comment	Source
NS	Kuliak		Soo	keḃc-at pl. keḃe		Carlin (n.d.)
NS	Gumuz					
NS	CS		Gula Mere	kwó'bù		Boyeldieu (1993)
NS	Saharan		Kanuri	ngówúl		Cyffer (1994)
NS	Songhay		Zarma	gùurí		BWK
NS	Kadu		Tulishi	kunzule		RCS
NC	Kordofanian		Jomang	j-îŋ /m-		Schadeberg (1981b)
NC	Mande		Lebir	gyír		Prost (1953)
NC	Mande		N. San	dyiri		Prost (1953)
NC	Atlantic		Serer	gin (li)		Segerer (ined.)
NC	Kru		Dida	jiè		ALKCI
NC	Gur		Gurma	dyen-li /-a		
NC	Kwa		Ewe	àzi		Rongier (1995)
NC	Kwa		Avatime	li-dze /é-		Heine (1968)
NC	WBC	Nupoid	Nupe	ezi		Ba
NC	EBC	Mambiloid	Ba	gi		Co
NC	Bantu		CB	# -gí		G.70:809

Commentary: It is difficult to determine the original shape of the root. The KV- prefix is quite widely attested although it clearly did not survive into Niger-Congo. Alternations of g/b in Nilo-Saharan almost suggest a labial-velar although this is not attested synchronically. The nasals in Niger-Congo are held to derive from the C₂ laterals.

Ref: Westermann (1927:214), Mukarovsky (1976: 89-90); Ehret p. 396

7. # elephant, rhino

Phylum	Group	Language	Attestation	Comment	Source
NS	Kuliak	Ik	oŋor		Heine (1999)
NS	Gumuz				
NS	Koman	Anej	gəl		Bender (1983)
NS	Maba	Maba	ŋòon		Edgar (1991)
NS	ES	Murle	aŋəl		RCS
		Temein	lɔŋɔ̀l		RCS
NS	Tama	Tama	ŋór		RCS
NS	CS	Fer	ngòy		Boyeldieu (1987)
NS	Fur	Fur	àngír		Jakobi (1990)
NS	Saharan	Kanuri	gargardán	rhinoceros	Cyffer (1994)
NS	Kadu	Katcha	mɔŋɔ		RCS
NC	PWS		#-ni-		
NC	Atlantic	Pulaar	nyiiwa		Segerer (ined.)
NC	Ubangian	Mba	ngiá		Monino (1988)
NC	Kwa	Avatime	ó-nyi /bé-		Heine (1968)
NC	WBC	Bini	èŋj		Agheyisi (1986)
NC	EBC	Anaang	é-nì:n		Co91
NC	EBC	Mada	ji		RMB
NC	Bantu	CB	-nyi		

Commentary: The link with rhinoceros suggested by Ehret is far from certain but as the word is poorly represented in the sources and such as semantic shift can be left open at present. Despite clearly being a Niger-Congo root, it is unaccountably absent in several branches. The original shape of the word must have

been something like **#ɲoro** with regular weakening of the /r/ to a nasal. 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-Niger-Congo. The shift back-vowel, Nilo-Saharan to front vowel, Niger-Congo is almost a pattern (see 'breast' above).

Ref: Ehret p. 401

8. #duri	to fall	(as rain)				
	Group	Family	Language	Attestation	Comment	Source
NS	Shabo	Shabo	Shabo	ɗim	rain	Fleming (1991)
NS	Kuliak	Kuliak	Ik	rúb-(ét)-on	to fall (as a tree)	Heine (1999)
NS	Gumuz		Gumuz	dama	rain	Fleming (1991)
NS	Kunama	Kunama	Kunama	dùd'dà	to fall, descend	Bender (2001)
NS	Berta	Berta	Undu	rɔ	rain	Bender (1989)
NS	ES		Nera	lɔ	to rain	RCS
NS	ES		Temein	lèè	to rain	RCS
NS	ES		Bari	kudú	to rain	Vossen (1982)
NS	CS		Mödö	ùlörù	to fall (trees)	P & P
NS	CS		Gula Mere	è'dì	to rain	Boyeldieu (1993)
NS	Maba		Masalit	tɛr	falling	Edgar (1991)
NS	Saharan		Kanuri	dùr	to fall as rain	Cyffer (1994)
NS	Kadu		Krongo	aadí	to rain	RCS
NC	Mande		Dan	ɗà		ALMCI
NC	Atlantic		Joola	-lub	to rain	Segerer (ined.)
			Kujamutay			
NC	Kru					
NC	Ubangian		'Bofi	lo	fall	Monino (1988)
NC	Gur		Proto-Gurunsi	*du	rain (n.)	
NC	Kwa		Ega	edú	rain (n.)	ALKwCI
NC	WBC	Yoruboid	Yoruba	rò	fall as rain	
NC	WBC	Edoid	Uneme	rho		
NC	WBC	Igboid	Owere	dò		
NC	WBC	Nupoid	Nupe	du		Ba
NC	EBC	Tarokoid	Tarok	ru	to fall in general	L & B
NC	EBC	Jukunoid	PJC	*tù	rain (n.)	
NC	EBC	Cross River	Ibibio	dùs		Co91
NC	EBC	Dakoid	Daka	dùrí	rain (n.)	
NC	Bantu		CB	*-dùmbí	'continuous rain'	G

Commentary: One of the most widespread and best attested roots in Niger-Saharan.

Ref: Greenberg (1963:117); Ehret (321)

9. #mora fat

Phylum	Group	Language	Attestation	Comment	Source
NS	Shabo	Shabo	mat	fat (a.)	Fleming (1991)
NS	Gumuz				
NS	Koman	Kokit	moo ‘a		
NS	Kunama	Kunama	(h)apa	fat (?C)	Bender (2001)
NS	Berta	Fadasi	mórfí	fat (of person)	Bender (1989)
NS	ES	Anywa	màaḍ	fat	Reh (1999)
NS	ES	Acoli	mḍḍ		RCS
NS	ES	Daju	mwid-	fat	
NS	ES	Murle	more		
NS	ES	*PN	*mɔ-r		
NS	ES	Proto-Daju	*mwi-		
NS	Tama		mɿ	oil	RCS
NS	Maba	Masalit	ɲami		Edgar (1991)
NS	Saharan	Daza	mbi	<i>huile</i>	Le Coeur (1950)
NS	Songhay	Zarma	máaní	fat (n.)	BWK
NC	Kordofanian	Talodi	ɲ-aag	(?C)	
NC	Kordofanian	Moro	ɲela	grease	
NC	#PWS		-mì		W. 257
NC	Mande	Gban	ɲwǔ	<i>huile</i>	ALMCI
NC	Atlantic	Temne	maro	<i>huile</i>	Seegerer (ined.)
NC	Ubangian	Ngbaka	mó		Moñino (1988)
NC	Kwa	Abbey	mùny	oil	ALKCI
NC	Kwa	Ewe	amì		
NC	WBC	Nupe	emi		
NC	EBC	Gure	mani	oil	
NC	EBC	Gure	manai		RMB

Commentary: The analysis of this word is complicated by the fact that forms for mass nouns typically have m- affixes (see Blench 1995). The Kordofanian forms are probably cognate, as ɲ- classes for mass nouns usually correspond to m- classes in other branches of Niger-Congo (Black and Black, 1971:11). The Moro form is thus more convincing as a possible cognate. Greenberg (1966:156) has another root for Proto-Mande-Congo, something like #-kpa, but his comparisons are only with Kadu languages. The V₂ in ES was probably subject to raising and is responsible for the shift high front vowels in most of Niger-Congo.

Ref: D. 40; W. 257; Ehret p. 312

10. #turu		five					
Phylum	Group	Family	Language	Attestation	Comment	Source	
NS	Shabo		Shabo	tuul	? < Surmic	Fleming (1991)	
NS	Kuliak	Ik		tud-on	to be five	Heine (1999)	
NS	Gumuz						
NS	ES		Tama	tɔr	six ?C		
		Surmic		*tur			E!
NS	CS		Ma'di	tóú		Blackings (2000)	
NS	Maba		Masalit	tóor		Edgar (1991)	
NS	Kadu		Mudo	túmmu		Schadeberg (1994)	
NC	Mande		Yauri	solu		Prost (1953)	
NC	Atlantic		Temne	tamath		Segerer (ined.)	
NC	Gur		Lorhon	tɔ'		ALGCI	
NC	Kwa		Avatime	ò-tú		Heine (1968)	
NC	WBC	Nupoid	Nupe	gutsū		Banfield (1914)	
NC	EBC		Idun	etón		BCCW	
NC	Bantoid	Grassfields	Meta'	tàn		BCCW	
NC	Bantu		CB	-táanò		G.1662	

Commentary: Long recognised as a Niger-Congo root it is also widespread in Nilo-Saharan.

Ref: M. 562, Ehret p. 473

11. #neli		to know					
Phylum	Family	Subgroup	Language	Attestation	Comment	Source	
NS	Kuliak		Ik	íŷe-és		Heine (1999)	
NS	Gumuz						
NS	ES		Gaam	nel		Bender & Malik	
		Tama	Sungor	nyel			
		Nilotic	Lopit	hí-yén		Vossen (1982)	
NS	CS		Ma'di	ni		Blackings (2000)	
NS	Saharan		Kanuri	noŋ-		Cyffer (1994)	
NC	Kordofanian	Tagoi	Orig	-ŋini		S&E	
		Koalib	Koalib	iligidhi		RCS	
NC	PWS			ni-, nia- + N		W.266	
NC	Atlantic		Biafada	yan		Segerer (ined.)	
NC	Kru		Tepo	yì		ALKCI	
NC	Gur		Palaka	yõ		ALGCI	
NC	Ubangian		Gbanzili	ɲì		Monino (1988)	
NC	Kwa		Adele	ɲĩ		Rongier (ined)	
NC	Kwa		Twi	nyim			
NC	WBC	Edoid	Urhobo	niɛ		Elugbe (1989)	
NC	EBC	Upper Cross	Iyongiyong	yín		Sterk (ined)	

Commentary: It is assumed that the -l- in C₂ position in Nilo-Saharan became -n- in Niger-Congo. Mukarovsky reconstructs #mi- which seems likely to be a distinct root characteristic of Gur, though possibly reflected in Bantu. The Koalib form may well not be cognate as the **liŋ-** element appears as a detachable element in some languages of the group.

Ref: Ehret p. 339; W. 266; M. 375

12. #kombu navel

Phylum	Family	Group	Language	Attestation	Comment	Source
NS	Kuliak		Ik	ƙɔb pl. ƙɔb-íńń		Heine (1999)
NS	Gumuz					
NS	Fur		Fur	ombul		Beaton (1968)
NS	ES	Nubian	Kadaru	kemndu		RCS
NS	ES		Nyimang	kwúrè		RCS
NS	CS		Kenga	kúmú		RCS
NS	CS		Bagiro	kūmū		Boyeldieu (1993)
NS	Songhay			humu		
NC	Mande		Yauri	kone		Prost (1953)
NC	Atlantic		Sua	kɔn /mkɔn		Segerer (ined.)
NC	Kru		Aizi	muko	?metathesis	ALKCI
NC	Senufic		Tenyer	ɣkunu		
NC	Ubangian		Proto-Gbaya	kɔn		Monino (1988)
NC	Kwa		Lelemi	lè-kú		
NC	WBC	Edoid	Èdo	ù-xǎ		Ag
NC	EBC	Plateau	Nindem	ikom		Ge83
NC	EBC	Mambiloid	Cambap	kúmbūn		Co
NC	EBC	Jukunoid	Kuteb	u-kóm		Sh
NC	Bantu	Bantu	CB	#-kóbù		G.70:1098

Commentary: A very conservative root, to judge by the similarities between Ik and Bantu. Also in Chadic: Mwaghavul **kúm**, Tangale **kúmbi**

Ref:

13. #moro(k) neck, to swallow

Phylum	Group	Language	Attestation	Comment	Source
NS	Kuliak	Ik	morók	throat	Heine (1999)
NS	Gumuz				
NS	Kunama	Kunama	‘méénà	neck, voice	Bender (2001)
NS	ES	Daju	amice	neck	
		Bari	murut	neck	
		Anywa	mūɔŋ	to swallow	Reh (1999)
		Shilluk	muno	neck	RCS
NS	CS	Mödö	mùgù	neck	P & P
		Kulfa	míndī	<i>cou</i>	Boyeldieu (1993)
NS	Saharan	Daza	morɔŋar	to swallow	Le Coeur (1950)
NC	PWS		#mi, min-		
NC	Mande	Mana	mani	to swallow	Prost (1953)
NC	Atlantic	Sua	dimij̄		Segerer (ined.)
			/idimij̄		
NC	Kru	Dida	mnā	to swallow	ALKCI
NC	Gur	S. Toussian	mōyo	to swallow	Prost (1964)
NC	Ubangian	Amalo	-me-	<i>cou</i>	Monino (1988)
NC	Kwa	Twí	mene	to swallow	
NC	WBC	Yoruba	mi	to swallow	
NC	EBC	Horom	mara	to swallow	
NC	Bantu	Mambila	mèl		PM

Commentary: With the exception of Anywa, it seems that Nilo-Saharan 'neck' became Niger-Congo 'to swallow'. This root is intertwined with another for 'throat' discussed elsewhere (Blench 1995). This root has been argued by Greenberg and Ruhlen to be a candidate for proto-World.

Ref: Boyd (1994:62), Williamson (1989b:253-4); Ehret p. 304

14. #tabar pool, water

Phylum	Group	Language	Attestation	Attestation	Comment	Source
NS	Kuliak	Ik	tabarr		pool	Heine (1999)
NS	Gumuz					
NS	Kunama	Kunama	dàà'ḅà		lake	Bender (2001)
NS	Kunama		bia		water	Bender (2001)
NS	Fur	Fur	bàù pl.		pool	Beaton (1968)
			bauta			
NS	ES	Lopit	táḅár		lake	Vossen (1982)
NS	ES	Gaam	bāi		marsh	Be
NS	ES	Anywa	thàar		flooded area	Reh (1999)
NS	CS	ECS (E)	*mbi		small body of water	
NS	CS	Mödö	tà'bulú		deep pool	P & P
NS	CS	Ma'di	apārā		pool	Blackings (2000)
NS	Saharan	Zaghawa	bi		water	
NS	Songhay					
NS	Kadu	Tolibi	ṭumbólóóló		lake	Schadeberg (1994)
NC	Kordofanian	Laro	dhibírtha		river	RCS
NC	Mande	Ngain		yí-báń	river	ALMCI
NC	Mande	Guro		yi-bari	<i>marigot</i>	Prost (1953)
NC	Atlantic	Temne		ra-boŋ /te-	river	
NC	Kru					
NC	Gur	Gurma		bùŋ-u	river	
NC	Gur	Degha	pólú		<i>marigot</i>	ALGCI
NC	Ubangian					
NC	Kwa	Akposo		i-bu /à-	pool	
NC	Kwa	Krachi		ś-bôŋ	river	
NC	WBC	Nupe		ewō	lake	Banfield (1914)
NC	EBC					
NC	Bantu	PB	diba			
NC	Bantu	CB		-búŋgò	beach	

Commentary: Poorly attested in the sources. If this is a cognate set then Bantu has remained astonishingly conservative, retaining the same two syllables as Ik. I have divided the attestations into two columns and the #bVnV set in Niger-Congo may either be distinct or have become distinct within Niger-Congo. Anywa is assumed to have lost the intervocalic -b-.

Ref: M. 54

15. #bire(n) red						
Phylum	Group	Language	Attestation	Comment	Source	
NS	Koman	Komo	p'el-		Bender (1983)	
NS	Gumuz					
NS	Berta	Fadasi	beeǵí		Bender (1989)	
NS	Kunama	Kunama	bii'bà		Bender (2001)	
NS	Fur					
NS	ES	Gaam	bèrte(n)			
		Daju	pir			
		Surmic	Zilmamu	bire		
NS	Kadu	Mudo	ɔbbé		Schadeberg (1994)	
NC	PWS		*pia		W. 276	
NC	Mande	Bobo	pene		Prost (1953)	
NC	Atlantic	Manjaku	u-Lund	paw	Segerer (ined.)	
NC	Gur	Sisaala	fia	be red		
NC	Ubangian	Mayogo	mbé		Monino (1988)	
NC	Kwa	Abidji	bèné		ALKCI	
NC	WBC	Edoid	Epie	baa	Elugbe (1989)	
NC	EBC					

Commentary: Niger-Congo is characterised by the loss of -r- in C₂ position.

Ref: W. 276; Ehret p. 439

16. #fya roast, burn						
Phylum	Family	Branch	Language	Attestation	Comment	Source
NS	Kuliak		Ik	fa-		
NS	Kuliak		Soo	pey	to roast, burn	
NS	Gumuz					
NS	ES	Nilotic	Naath	pet	to burn	
NS	CS		Mangbetu	nɔ̀pè	brûler intr.	Demolin (ined.)
NS	Kadu		Kadugli	afaana	to burn	RCS
NC	Atlantic		Pepel	pessó	brûler tr.	Segerer (ined.)
NC	Gur		Degha	fúù	brûler tr.	ALGCI
NC	EBC	Idomoid	PId	*fá		
NC	EBC	Plateau	Horom	fwas		
NC	EBC	Jukunoi	PJ	*fwaP		
		d				

Commentary: Poorly attested in Niger-Congo. Given in BCCW as #-pap-. Also in Chadic: e.g. Daffo fâf, probably a loan from BC languages.

Ref: Williamson (1989:259); E. 423

17. #tara spread out to dry, stretch out

Phylum	Group	Language	Attestation	Comment	Source
NS	Kunama	Kunama	ibatála	dry in sun	Bender (2001)
NS	CS	Mödö	ilèré	to dry	P & P
NS	CS	Gula Mere	ndùtù	to dry	Boyeldieu (1993)
NS	Saharan	Kanuri	tár-	spread out, lay out	Cyffer (1994)
NS	Songhay	Songhay	tendèr	spread out to dry	
NC	Atlantic	Diola	tal		
NC	Gur	Dagbane	ta		
NC	Kwa	Baule	sǎ	spread	
NC	WBC	Idoma	tá	stretch out	
NC	WBC	Bini	tá	spread	
NC	WBC	Yoruba	tàn		
NC	EBC				
NC	Bantu	CB	tànd-	spread	

Commentary: Clearly reconstructible for PMC, but poorly represented in the Nilo-Saharan sources.

Ref: Ehret p. 459

18. #tV(rV) to pour

Phylum	Group	Language	Attestation	Comment	Source
NS	Kuliak	Ik	ot-és		Heine (1999)
NS	Koman	Twampa	t^hēr	to pour off liquid	
NS	Gumuz				
NS	Berta	Undu	k'iθá	to pour	Bender (1989)
NS	Kunama	Kunama	'todà	to pour out water	Bender (2001)
NS	ES	Anywa	thīrw		Reh (1999)
NS	CS	Mödö	òti		P & P
NS	CS	Ma'di	sù pl. tū	to pour	Blackings (2000)
NS	Maba	Kibet	ateyin		Edgar (1991)
NS	Saharan	Kanuri	tá(b)-		Cyffer (1994)
NC	Mande	Gben	li	<i>verser</i>	Prost (1953)
NC	Gur	Dugubere	le	<i>verser</i>	ALGCI
NC	Kwa	Ikpòsò	dɛ		
NC	WBC				
NC	EBC	Horom	tɛ		RMB
		Berom	tè		Ku
NC	Bantu				

Commentary: There is some evidence that this word was CVCV in Nilo-Saharan but reduced to CV in Niger-Congo. C₂ might have been -r-, if the -d- in Kunama and the -θ- in Undu are cognate.

Ref: Ehret p. 471

19. #togo to pound

Phylum	Group	Family	Language	Attestation	Comment	Source
NS	Kuliak		Soo	toŋ	to pound	Carlin (n.d.)
NS	Gumuz					
NS	Kunama		Kunama	tokko-	to knock	Bender (2001)
NS	Fur					
NS	ES		Acoli	tək	to pound	
NS	CS					
NS	Maba					
NS	Saharan		Kanuri	təgás-	to pound lightly	Cyffer (1994)
NS	Songhay					
NS	Kadu					
NC	Mande		Bobo	tugo	<i>piler</i>	Prost (1953)

Commentary: Poorly attested in the sources. Westermann reconstructed this to PWS.

Ref: Ehret p. 474

bV(n)t- white

Phylum	Group	Language	Attestation	Comment	Source
NS	Kuliak	Ik	βets'	'be white'	Heine (1999)
NS	Koman	Opo	pata		Bender (1983)
NS	Gumuz	Gumuz	mpuma		
NS	Kunama	Kunama	à'rà		Bender (2001)
NS	Berta	Undu	fùdí		Bender (1989)
NS	Fur	Fur	futa		Beaton (1968)
NS	ES	Gaam	pǝǝ(n)		
NS	ES	Nyimang	ṭabar		
NS	ES	Anywak	tàr		Reh (1999)
NS	ES	Naath	həye		
NS	ES	Mayak	ḃḃḃ		RCS
NS	ES	Sila	fafáára		
NS	ES	Murle	əvər		
NS	CS	Asua	kúbúè		Demolin (ined.)
NS	Maba	Aiki	furr		
NS	Saharan	Kanuri	bûl		Cyffer (1994)
NS	Kadu	Krongo	òffíró	'be white'	Reh (1985)
NC	Kordofanian	Tegem	būɬl		Schadeberg (1981b)
NC		PWS	-pu		
NC	Mande	Bobo	furo		Prost (1953)
NC	Atlantic	Diola	fur		
NC	Kru	Krao	pulu		ALKCI
NC	Gur	Degha	puɬmó		ALGCI
NC	Ubangian	Proto-Gbaya	*pu		Moñino (1988)
NC	Kwa	Ewe	fù	be white	
NC	WBC	Yoruba	fu		
NC	EBC				
NC	Bantu				

Commentary: Early in Nilo-Saharan, the shape of this root was something like bVt-, perhaps with a nasalised vowel. Forms such as Nyimang **ṭabar** would represent a metathesis of this and would then reduce to Anywak **tar** with loss of the intervocalic C₂. However, in Maba, Saharan, etc. there is no trace of an alveolar in C₂ position and it is assumed the nasal has become a lateral. It is this form which is inherited by Niger-Congo. There has clearly also clearly been interchange with Afroasiatic languages, witness Hausa **farii** and Coptic **fori**.

Ref: W. 279; Ehret (290)

3. Verbal extensions

3.1 General

Niger-Congo is generally considered to have had verbal extensions that can be reconstructed to the proto-language (Williamson & Blench 2000). Verbs commonly end in suffixes that modify their meaning and often their valency, creating causatives, reciprocals, and the like. Voeltz (1977) claimed that some of these suffixes can be reconstructed to Niger-Congo level, and thus constitute evidence for its genetic unity. The evidence for this is less than perfect and depends largely on the existence of such systems in elaborate form in two branches, Atlantic and Benue-Congo (particularly Bantu). For other groups, there is clear evidence for an affix renewal process, making the elucidation of intra-phylum cognacy problematic at best. For Kordofanian, only a single language, Moro (Black & Black 1971) is known in any detail. Nonetheless, the widespread existence of extensions is generally accepted as evidence for their reconstructibility, despite the absence of the kind of detail that enables to accept Proto-Niger-Congo noun-classes. Newman (1990) has drawn attention to ‘pluriactional’ verbs in Chadic, i.e. verbs which require plurality in their subject or object, or which refer to multiple action. Such verbs are also widespread in Niger-Congo, either as part of the verbal extension system or as different lexical items. They are also present in Nilo-Saharan (e.g. Mbay see Keegan 1996 or Ma’di see Blackings 2000) but their distribution remains unknown.

Even this cannot be said for Nilo-Saharan; the two main sources that make claims for reconstruction do not focus on this area. Nonetheless, the clear presence of such forms in some Nilotic languages should alert us to their likely more widespread presence. Bender (2000:63) sets out summary tables to support a verbal transitive/causative or factitive (‘to cause s.o. to do s.t.’) and a passive intransitive in his ‘innovating group’ (op. cit. 65). He points out that similar features can be established for Afroasiatic but argues that these are not cognate and thus the Nilo-Saharan features are evidence for genetic unity. Cyffer (1983) undertook to reconstruct Saharan verbal extensions which creates a useful precedent for a single branch of Nilo-Saharan.

All attempts to work with verbal extensions come up against a problem of fragmentary description. Unlike nominal affixes, which can often be elucidated through simple wordlist material, verbal extensions are unpredictable and often not used by the type of younger speaker who forms the typical informant. Therefore, they appear in more complete grammars, a monographic form that is in short supply for many branches of Nilo-Saharan. Nonetheless, in order to go beyond the merely lexical, an attempt will be made to pull together the material on verbal extensions that might support the case for Niger-Saharan.

4. Conclusions

As more data become available, the case for Niger-Saharan is strengthened. However, the present lack of consensus on the internal structure of Nilo-Saharan makes it impossible to be sure that the roots which appear to be handed down to Niger-Congo are really PNS or simply a reflection of some internal branching. Similarly, there have been significant loans of fundamental vocabulary into Niger-Congo from Nilo-Saharan (‘elephant’ may be one of these) and these therefore do not constitute evidence for a macrophylum. Only further work on Nilo-Saharan will clarify these issues.

References

- Abraham, R.C. 1949. *Dictionary of the Hausa language*. London: University of London Press.
- Abraham, R.C. 1958. *Dictionary of Modern Yoruba*. London: University of London Press.
- Agheyisi, Rebecca N. 1986. *An Edo-English dictionary*. Benin City: Ethiope Publishing Corporation.
- Bailleul, Charles 1996. *Dictionnaire Bambara-Français*. Bamako: Donniya.
- Banfield, A.W. 1914. *Dictionary of the Nupe Language*. Shonga: The Niger Press.
- Beaton, A.C. 1968. *A grammar of the Fur language*. Linguistic Monograph Series, 1. Khartoum: Khartoum University.
- Bender, M.L. 1979. Gumuz: a sketch of grammar and lexicon. *Afrika und Übersee*, LXII: 38-69.
- Bender, M.L. 1989. Berta lexicon. In: *Topics in Nilo-Saharan Linguistics*. Bender, M.L. ed. 271-304. Hamburg: Helmut Buske Verlag.
- Bender, M.L. 1983. Proto-Koman Phonology and Lexicon. *Afrika und Übersee*, LXVI: 259-297.
- Bender, M.L. 1992. Central Sudanic Segmental and Lexical Reconstructions. *Afrikanische Arbeitspapiere*, 29:5-61.
- Bender, M.L. 1996. *The Nilo-Saharan languages: a comparative essay*. Munich: Lincom Europa.
- Bender, M.L. 2001. English-Kunama lexicon. *Afrikanische Arbeitspapiere*, 65:201-253.
- Bender, M.L. and M.A. Ayre 1980. *Preliminary Gaam-English-Gaam dictionary*. Available from the author.
- Bennett, Patrick R. & Sterk, Jan P. 1977. South-Central Niger-Congo: a reclassification. *Studies in African Linguistics*, 8,3: 241-273.
- Bernard, Yves & Mary White-Kaba 1994. *Dictionnaire Zarma-Français*. Paris: ACCT.
- Bertho, J. 1953. La place des dialectes Dogon (*dogō*) de la falaise de Bandiagara parmi les autres groupes linguistiques de la zone soudanaise. *BIFAN*, 15,1:405-441.
- Blackings, M.J. 2000. *Ma'di English – English Ma'di Dictionary*. München: Lincom Europa.
- Bleek, Dorothea. F. 1956. *A Bushman Dictionary*. New Haven: American Oriental Society.
- Blench, Roger M. 1995. Is Niger-Congo simply a branch of Nilo-Saharan? In: *Proceedings of the Fifth Nilo-Saharan Linguistics Colloquium, Nice, 1992*. ed. R. Nicolai and F. Rottland. 68-118. Köln: Rudiger Köppe.
- Blench, Roger M. in press Further evidence for Niger-Saharan and the problem of pan-African roots. In: *Proceedings of the VIIIth Nilo-Saharan Conference in Vienna, 2-6th September, 1998*. ed. N. Cyffer. Köln: Rudiger Köppe.
- Boyeldieu, Pascale 1987. *Les Langues Fer (Kara) et Yulu du Nord Centrafricain*. Geuthner, Paris.
- Boyeldieu, Pascale 1993. *Identité tonale et filiation des langues Sara-Bongo-Baguirmiennes (Afrique-Centrale)*. Thèse pour le doctorat d'état ès-lettres. Paris: Sorbonne.
- Boyd, Raymond 1997. Congo-Saharan revisited. *Frankfurter Afrikanistische Blätter*, 8:15-48.
- Canu, Gaston 1976. *La langue Mò:rē*. Paris: SELAF.
- Carlton, E. Masland & Sharon Rand 1993. *Enquête sociolinguistique sur les langues Diolas de Basse Casamance*. Dakar: SIL.
- Childs, T. 2000. *A dictionary of the Kisi language*. Köln: Rudiger Köppe.
- Christaller, J.G. 1933. *Dictionary of the Asante and Fante language called Twi*. Basel: Basel Evangelical Missionary Society.
- Creissels, Denis 1981. Songhay et Niger-Congo (mandé). In: *Nilo-Saharan*. Schadeberg, Thilo C. and Marvin L. Bender eds. 307-327. Holland: Foris Publications.
- Cyffer, Norbert 1983. Rekonstruktion der Verbalerweiterungen in Saharanischen sprachen. In: *Sprache, Geschichte und Kultur in Afrika*. R. Vossen & U. Claudi (eds.) 35-55. Hamburg:Buske.
- Cyffer, Norbert 1994. *English-Kanuri Dictionary*. Köln: Rudiger Köppe.
- Demolin (ined.). *Lexique comparatif des langues du groupe mangbetu*. ms.
- Dimmendaal, Gerrit J. 1988. The lexical reconstruction of Proto-Nilotic: A first reconnaissance. *Afrikanische Arbeitspapiere*, 16:5-67.
- Ducroz, Jean-Marie & Charles, Marie-Claire 1978. *Lexique Songey (Songay) Français*. Paris: Harmattan.
- Edgar, John T. 1991. *Maba-group lexicon*. Berlin: Reimer.
- Ehret, Christopher 1998. *A comparative historical reconstruction of Nilo-Saharan*. ms.
- Elugbe, B.O. 1989. *Comparative Edoid: phonology and lexicon*. (Delta Series No. 6.) University of Port Harcourt Press.
- Ferry, M-P. 1991. *Thesaurus Tenda*. Paris: Peeters.
- Greenberg, Joseph H. 1963. *The Languages of Africa*. Published for Indiana University by Mouton, the Hague.
- Gregersen, Edgar A. 1972. Kongo-Saharan. *Journal of African Languages*, 11,1:69-89.

- Guthrie, Malcolm 1967-71. *Comparative Bantu*. 4 vols. Farnham: Gregg International Publishers.
- Halaoui, Nazam, Tera, Kalilou and Trabi, Monique 1983. *Atlas des langues mandé-sud de Côte d'Ivoire*. Abidjan: ACCT and ILA.
- Heine, Bernd 1975. Ik – eine ostafrikansche Restsprache. *Afrika und Übersee*, LIX:31-56.
- Hérault, G. 1983. *Atlas des Langues Kwa de Côte d'Ivoire, Tôme 2*. Abidjan: ACCT and ILA.
- Jakobi, Angelika 1990. *A Fur grammar*. Hamburg: Helmut Buske Verlag.
- Jungraithmayr, H. and Dymitr Ibrizimow 1995. *Chadic lexical roots*. [2 vols.] Berlin: Reimer.
- Keegan, John M. 1997. *Dictionary of Mbay*. München: Lincom Europa.
- Kleinewillinghöfer, Ulrich 1991. *Die Sprache der Waja (nyan wiyáù)*. Frankfurt am Main: Peter Lang.
- Kropp-Dakubu, Mary-Esther 1973. *Ga-English Dictionary*. Legon: Institute of African Studies.
- Manessy, Gabriel 1975. *Les langues Oti-Volta*, Paris: SELAF.
- Marchese, Lynell 1983. *Atlas Linguistique Kru*. Abidjan: ACCT and ILA.
- Meeussen, A.E. 1980. *Bantu lexical reconstructions*. Tervuren: MRAC.
- Mensah, E.N.A. & Z. Tchagbale 1983. *Atlas des langues gur de Côte d'Ivoire*. Abidjan: ACCT and ILA.
- Mikkola, Pertti ined. *Nilo-Saharan revisited: some observations concerning the best etymologies*. ms. available from author.
- Moñino, Yves ed. 1988. *Lexique comparatif des langues oubangiennes*. Paris: Geuthner.
- Mukarovsky, Hans G. 1976-1977. *A study of Western Nigritic*. 2 vols. Wien: Institut für Ägyptologie und Afrikanistik, Universität Wien.
- Nettle, D. 1998. *An outline of the Fyem language*. München: Lincom Europa.
- Nougayrol, Pierre 1989. *La Langue des Aiki*. Paris: Geuthner.
- Perrin, M. J. and Mouh, M. 1995. *Lexique mambila-français*. Yaoundé: SIL, Cameroun.
- Prost, R.P.A. 1953. *Les language Mandé-Sud du groupe Mana-Busa*. Dakar: IFAN.
- Reh, Mechthild 1985. *Die Krongo-Sprache (niino mó-dì)*. Berlin: Reimer.
- Rongier, Jacques 1995. *Dictionnaire français-éwé*. Paris: ACCT-Karthala.
- Rottland, Franz 1982. *Die südnilotischen Sprachen: Beschreibung, Vergleichung und Rekonstruktion*. Reimer, Berlin.
- Rytz, O. ed. n.d. *Gonja-English dictionary and spelling book*. Legon: Institute of African Studies.
- Schadeberg, Thilo C. 1981b. *A Survey of Kordofanian. Volume 1: The Heiban Group*. Hamburg: Helmut Buske.
- Schadeberg, Thilo C. 1994. Comparative Kadu wordlists. *Afrikanische Arbeitspapiere*, 40: 11-48.
- Schadeberg, Thilo C. and Marvin L. Bender eds. 1981. *Nilo-Saharan*. Holland: Foris Publications.
- Shimizu, Kiyoshi 1983. *The Zing dialect of Mumuye: a descriptive grammar*. Hamburg: Helmut Buske.
- Teferra, Anbessa ined. *Shabo wordlist*. Typescript.
- Thelwall, Robin 1981. *Subgrouping and Reconstruction of Daju*. In Schadeberg, T.C. and Bender, M.L., : 167-184.
- Voßen, Rainer 1982. *The Eastern Nilotes: Linguistic and Historical Reconstructions*. Kölner Beiträge zur Afrikanistik, Volume 9. Berlin: Reimer.
- Voeltz, Erhard 1977. *Proto-Niger-Congo Verb Extensions*, Ph.D. UCLA.
- Westermann, Diedrich 1927. *Die Westlichen Sudansprachen und ihre Beziehungen zum Bantu*. Berlin: De Gruyter.
- Williamson, Kay (ed). 1972. *Igbo-English dictionary: Based on the Onitsha dialect*. Benin: Ethiope Publishing Corporation.
- Williamson, Kay 1973. *Benue-Congo comparative wordlist: Vol. 2*. Ibadan: West African Linguistic Society.
- Williamson, Kay in prep. *Comparative Ijò*.
- Williamson, Kay and Shimizu, Kiyoshi 1968. *Benue-Congo comparative wordlist: Vol. 1*. Ibadan: West African Linguistic Society.
- K. Williamson and R.M. Blench 2000. Niger-Congo. In: *African languages: an introduction*. B. Heine & D. Nurse eds. 11-42. Cambridge: Cambridge University Press.