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FIRST STEPS TOWARD PROTO-MABA*

(with a historical note by John E. Lavers)

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1. Introduction

The languages of the Maba group, spoken in eastern Chad, western Sudan and north-eastern C.A.R., are classified by Greenberg (1963) as part of the Nilo-Saharan phylum, and by Tucker and Bryan (1956) as an independent language group. There are four members of this group for which there are available adequate amounts of lexical data to allow a first attempt at phonological reconstruction of the proto-language: Maba, Masalit, Aiki (listed as 'Runga' in older sources), and Kibet. A total of 242 items are given in Appendix 1, most of which have equivalents in at least three of these languages. These have been selected (on the grounds of being cognates) from longer lists which have been compiled in the Maba Group Lexicon (Edgar 1991).

There are not enough data available at present to do other than speculate as to the relative position of most other members of the group listed in Edgar (1991). Kodoi is certainly a dialect of Maba (and is referred to as the 'original speech' by the Maba themselves). The Muru and Dagal data are taken from Nougayrol (1986) and Tourenq (1913), and from these they would seem to be marginally nearer Kibet than Aiki. The only published linguistic data available for Karanga, Baxat and Marfa is Le Rouvreur's short seven item list (1962: 168) which includes two interesting semantically 'basic' items – 'fire' and 'water' – which may provide clues to the phonological interrelationships of the group (Tourenq's 'ou' replaced with 'u', my proto-forms):

(1)

	'fire' (< *n s -k)	'water' (< *ta-k, *aji)[1]
Aiki	n`s`k	tàk
Kibet	n`s`k	ta
Muru	nussuk	ta
Dagal	nussuk	taa
Masalit	wàasú	sàa
Marfa	wasik	sa
Maba	wàsík	anjii
Kodoi	wʌsîk	ʌnjí

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* Editor's note: John Edgar submitted this paper to *African Languages and Cultures* several weeks before his death in April 1991, and I am grateful to Ekkehard Wolff for valuable comments on this initial draft. For obvious reasons, it has not been possible to incorporate all the suggestions in the final version, and some interpretive and empirical matters remain unresolved. I would also like to thank John Lavers for contributing the historical note which follows the main article [PJJ].

[1] The -k in these two suggested proto-forms is a singulative/definitive suffix, not part of the lexical root.

Karanga	itak	aji
Baxat	itak	aji

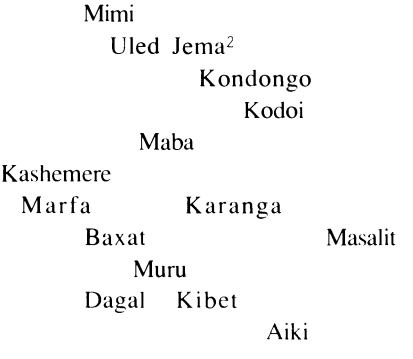
In neither case do the Mimi equivalents bear an unequivocal resemblance to any one of the sub-groups – it seems clear from the limited amount of data available that the Mimi lists of Decorse (in Gaudefroy-Demombynes 1906) belong to a Maba-group language, though this needs further investigation. The Mimi lists of Nachtigal (Lukas and Völkers 1938/39) have been renamed Biltine and reclassified as part of the Fur group. As far as I know, Jungraithmayr's (1971) Mimi remains a mystery. The sub-groups for proto-Maba are as follows:

(2)

SOUTH	CENTRAL		NORTH
Kibet (Kb)	Masalit (Ms)	Karanga	Maba (Mb)
Aiki (Ak)	Marfa	Baxat	Kodoi
Dagal			Mimi (?)
Mura			

The distribution in (3) below shows that the three linguistic divisions correspond roughly to the geographical divisions north/central/south; whether or not Karanga and Baxat form a separate division from Maba and Kodoi must await further data. Nougayrol (1986: 40) suggests a similar outline division of Maba, Karanga, Masalit, Aiki-Kibet; and Tucker and Bryan 1956: 56) place Maba, Karanga and Masalit in the 'isolated' language group Maba, but Kibet in the Tama group 'since it appears to be related to MARARIT, according to both Lukas and van Bulck'.

(3)



That the Maba languages *do* form a genetic group distinct from their neighbours is demonstrated by the existence of similar morphemes and lexemes in all the languages. This is illustrated best by their characteristic verb morphology. Verb forms comprise three obligatory morphemes: a subject prefix, a lexical base, and a tense/aspect/mood suffix. The clinching piece of

[2] No linguistic data are available for the Uled Jema, Kondongo and Kashmere units/tribal groupings.

evidence is the unusual and distinctive characteristic of allomorphy exhibited by the 2sg prefix. In all of the languages the 2sg prefix varies from verb to verb according to no presently descernible phonological conditions or correlation with semantic categories. The sets of 2sg prefix allomorphs are set out in (4) below (D represents the deletion of the initial vowel of the base (according to my analysis all bases are vowel- or glide-initial), accompanied by the voicing of certain unvoiced consonants, given in parentheses).[3]

(4)	Aiki					g	j	D (s>j; t>d)
	Kibet	d				g	j	D
	Maba	d	n	l		g	z	D (s>z; t>d; k>g; p/f>v/b)
	Masalit	d	n	l	r	g	j	D (s>j; c>j; f>b)

In a comparison of 108 basic lexemes, cognates were observed between pairs of languages as follows:[4] Aiki-Kibet 95/108 (see Nougayrol 98/112); Maba-Masalit 63/108; Masalit-Aiki 60/108; Maba-Aiki 65/108; Maba-Kibet 68/108 (see Nougayrol 49/101 and 11/101); Masalit-Kibet 60/108. While Aiki and Kibet are clearly closer to one another than they are to Maba and Masalit, these figures suggest an approximate 'lexical equidistance' between Maba (to the west), Masalit (to the east) and Aiki-Kibet (to the south).

Although this comparison of the four members of the Maba group for which there are available data gives an idea of the main trends (the exceptions noted are all diverse, where a pattern is apparent it is noted), more detailed comparisons of pairs of languages should produce more revealing information about the relationships of the languages to each other.

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[3] See Schadeberg (1981) and Wolff (1989) for competing analyses. The most common 2sg allomorphs in Maba, Masalit and Kibet are D g j/z. The 2sg allomorphs of cognate verbs do not coincide in all cases, e.g.,

	'scratch' verb base	2sg	'bury' verb base	2sg
Maba			íms	d
Masalit	iŋosiŋ		D imis	g
Aiki	íñàsón		g	
Kibet	iñasɛn		g	

[4] Based on the comparative list of 115 Kibet, Aiki and Maba items given by Nougayrol (1986) to which I have added Masalit, and which I have reduced to 108 by cutting out five items for which there are no available equivalents in *all* four languages: 'cut (with knife)', 'swell', 'faggot', 'hearth', 'navel', 'rain (= water)', and 'war (= spear)'.

2. Languages and sources

The sources of the language data are: Maba (Trenga 1947; Lukas 1952, 1953; Doornbos nd; Edgar nd); Masalit (Doornbos nd; Edgar nd; Stevenson nd); Aiki (Doornbos nd; Nougayrol nd); Kibet (Doornbos nd; Nougayrol nd). These are all collected together (with other, older sources) in Edgar (1991) from which the corpus in Appendix 1 is drawn.

3. Phonemes and proto-consonants

There are some general trends discernible, but there are many irregularities which are inexplicable if one adheres strictly to the 'regularist postulate' (Hall 1964) that Dyen (1969: 499) calls 'the law of the regularity of phonetic change'. It is more helpful to consider Wang's statement (1969: 9) that 'phonological change may be implemented in a manner that is phonetically abrupt but lexically gradual. As the change diffuses across the lexicon, it might not reach all the morphemes to which it is applicable.'

Despite many apparent irregularities, there are enough recurrent correspondences to allow the reconstruction of the following consonants in proto-Maba:

(5) Maba proto-consonants

Plosives		b			t		d			k	g
Liquids						r	l^l	l			
Fricatives			f		s		s^l		z/ʃ/j		
Nasals		m					n		ñ		ŋ
Pre-nasalised stops		mb					nd				ŋg
Glides		w							y		

(6) Reflexes of proto-Maba phonemes in Maba, Masalit, Aiki and Kibet

Proto-Maba	*b	*m	*f	*mb	*w	*t	*d	*s	$*s^l$	$*l^l$	*r
Maba	b	m	f	mb	w	t	d	s	s	l	r
Masalit	b	m	f	mb	w	t	d	s	s	r	r
Aiki	b	m	p	mb	w	t	d	s	t	y	r
Kibet	b	m	f	mb	w	t	d	s	t	l	r

Proto-Maba	*n	*nd	*j	*ñ	*y	*k	*g	*ŋ	*ŋg
Maba	n	nd	z/s	ñ	y	k	g	ŋ	ŋg
Masalit	n	nd	j	ñ	y	k	g	ŋ	ŋg
Aiki	n	nd	j	ñ	y	k	g	ŋ	ŋg
Kibet	n	nd	j	ñ	y	k	g	ŋ	ŋg

Notes:

1. This is a first tentative reconstruction giving the main trends and exceptions. It does not attempt to explain all the phonemic and phonetic features of the phonologies of all the current languages in detail, e.g. the occurrence of [x] in Maba and Masalit and [z] in Masalit as extraneous sounds – both adoptions from Arabic – and the presence of retroflex /ʈ/ and /ɖ/ in Maba.

2. Glottal stop only occurrs non-phonemically in initial position (before vowels) in Maba and Masalit.

3. Prenasalised stops are included as they illustrate what appears to be a general rule in all the languages (and hence probably in proto-Maba), that prenasalisation is restricted to voiced obstruents – there are examples of /nj/ as well as the nasal stops (e.g. 'shadow', 170). Whether or not there is a homorganic restriction rule requires further investigation as some of the sources are not clear in their orthographies as to the phonetic value of the nasal element of prenasalised 'clusters'.

4. /*s^1/ represents a phoneme of proto-Maba that has given rise to /s/ in Maba and Masalit and to /t/ in Aiki-Kibet; as may be seen from the lists of examples given below it is quite distinct from proto-Maba /*s/ and /*t/ and does not form a complementary distribution with either.

5. /*l^1/ represents a phoneme of proto-Maba that has given rise to /l/ in Maba and Kibet, /y/ in Aiki and /r/ in Masalit; this is the major pattern, there is a minor pattern also in which /l/ occurs in all the current languages.

3.1. Sound correspondences and putative proto-Maba consonants

There are many common correspondences, though none is without exception and many form minor correspondence groups. Final consonants are less common than final vowels in Masalit (in a ratio of about 4:1) and appear to be subject to as yet unanalysed restrictions in all the languages. Symbols: + = Arabic origin; I = initial; M = medial; F = final; ? = dubious; § = correspondence previously noted by Nougayrol (1986).

3.1.1. Labial

(7)	Maba	Masalit	Aiki	Kibet	Examples
*b	b	b	b	b	I: 83, 173, 227 M: 106, 148, 180, 190 (exceptions: 11, 23, 67, 71, 95+, 99, 114, 162)
*f	f	(f)	p §	f §	I: 116, 142+, 232 M: 145+
	(Ø	f	p	f	I: 19)
	f	(f)	w	(w)	M: 73, 84

Although there is not enough data here to allow a detailed analysis (e.g. for a complementary distribution), f/f/p/f seems to be the major pattern, and f/f/w/w the minor one.

(8)	Maba	Masalit	Aiki	Kibet	Examples
*m	m	m	m	m	I: 110, 111, 126, 132, 135, 151, 169, 178, 202, 230, 234, 241 M: 9, 12, 61, 63, 93, 94, 100, 102, 108, 127, 134, 158, 161, 179, 187, 217, 235 F: 217 (exceptions: 33, 46, 53, 54, 71, 102, 123, 224)

*mb	mb	mb	mb	mb	I: 222 M: 113, 185, 199
*w	w	w	w	w	I: 208, 221 M: 5, 101 (exceptions: 64, 129, 182)

3.1.2. Dental-alveolar

(9)		Maba	Masalit	Aiki	Kibet	Examples
	*t	t	t	t	t	I: 66, 84, 96, 136, 140, 160, 171, 172 M: 42, 116, 138, 207 (exceptions: 2, 102, 218)
	*d	d	d	d	d	I: 39, 148 M: 5, 6, 80, 126, 131, 198, 223, 239 (exceptions: 4, 27, 53, 107, 122, 124, 137)
	*s	s	s	s	s	I: 149, 179, 190, 203, 220, 221 M: 36, 56, 60, 64, 166, 224, 236
	but:	s	Ø	Ø	Ø	I: 177+
		s	Ø			M: 213
		s	Ø	s	s	M: 50, 63
		(y)	y	s	s	M: 51, 55
		Ø	Ø	s	s	M: 169, 212 (morphemic deletions?)
		z	z	s		I: 72+
	*s[l]	s	s	t/d	t	I: 152, 164 M: 70, 103, 188, 192, 229

As there is no obvious complementary distribution to explain the regular distribution of alveolar fricatives in Maba and Masalit reflexes, and stops in the Aiki and Kibet reflexes, I suggest a voiceless alveolar proto-phoneme /*s[l]/ of a manner yet to be determined. There are a number of other examples which are of the same general pattern:

(10)	Maba	Masalit	Aiki	Kibet	Examples
		c	d		I: 37
	j	(c)	t	t	M: 98
	s	ʃ	t	t	M: 17
	ʃ	c	t	t	M: 216
	ʃ	(rc)	d	d	M: 211
	s	c	d	t	M: 104
but:	t	t	s	s	M: 177+

(11)	Maba	Masalit	Aiki	Kibet	Examples
*n	n	n	n	n	I: 49 M: 5, 25, 133, 140, 168, 219 F: 149 (exceptions: 54, 64, 90, 169, 214)
*nd	nd	nd	nd	nd	I: 20 M: 8, 28, 75, 78, 129, 130 (exceptions: 119, 169, 226)
*r	r	r	r	r	I: 82, 220

					M: 34, 40, 60, 62, 83, 85, 111, 117, 139, 142+, 156, 165, 189, 191, 193, 199, 202, 221 F: 25, 26, 66, 67, 73, 116, 173 (exceptions: 45, 61, 63, 222 (the last three involve deletion of /r/ in one or more of the languages))
	*l	l	l	l	I: 89 M: 59, 145+, 201 F: 198+
	*l^{l}	l	r	y§	l§	I: 81 M: 15, 30, 35, 47, 88, 89, 107, 126, 138, 143, 157, 162, 175, 181, 184, 213, 225, 231, 233 F: 144

l/r/y/l is clearly the major pattern here (at least in medial position). There is insufficient evidence to say whether there is a complementary distribution between the reflexes of /*l/ and /*l^{l}/, but it seems likely that there are in fact only two liquid proto-phonemes: *r and *l^{l}. The numerous irregularities are set out below:

(12)	Maba	Masalit	Aiki	Kibet	Examples
	l	l	Ø	l	F: 2
	l	Ø	Ø/y	l	F: 70, 177, 212
	r	r	y §	l §	M: 19
	l	r	l §	y §	M: 204
	l	r	r		M: 41
	r	r	l §	y/Ø §	M: 95

Although insufficient in themselves as evidence for a voiced alveolar plosive proto-phoneme (a possible counterpart to *s^{l}?), the irregular examples set out below present some interesting clues to follow up when more data become available:

(13) *?	r	r	nd		M: 108
	r	rd	d	d	M: 97
	d	r			M: 141
	l	l	d		M: 163
	l	d	d	d	I: 18
	l		d	d	M: 153
	l	ñ		d	I: 59

3.1.3. Palatal and palatal-alveolar

(14)	Maba	Masalit	Aiki	Kibet	Examples	
*j?	j	j	j	j	I: 78	
					M: 86	(see *t, *s)
	c	j	c		I: 13, 32+	
	s	j	j	j	I: 115	
	z	j	j	j	I: 2sg verb prefix allomorph	

*ʃ?	ʃ	ʃ	s	s	M: 16
	ʃ	c	s	s	M: 234
	j	c	s		M: 214
	c		s		M: 209
	k	c	y	ʃ	M: 29?
		y	j	ʃ	M: 194

As there is insufficient evidence available and no obvious pattern for the distribution of palatal and palatal-alveolar fricatives, the existence of more than one proto-phoneme here remains very tentative.

(15)	Maba	Masalit	Aiki	Kibet	Examples
*ñ	ñ	ñ	ñ	ñ	I:61, 121, 184, 206 M: 52, 65, 68, 74, 91, 176, 237 (exceptions: 1, 24, 76, 93, 114, 166, 191, 200; ñ = ñ/ñy)
*y	y	y	y	y	I: 125 M: 57 77 160 (exceptions: 19, 55)

3.1.4. Velar

(16)	Maba	Masalit	Aiki	Kibet	Examples
*k	k	k	k	k	I: 1, 12, 15, 30, 31, 33, 35, 38, 51, 53, 56, 62, 65, 80, 85, 86, 88, 91, 93, 97, 113, 123, 124, 125, 128, 153, 155, 157, 174, 205, 212 M: 37, 107, 228 F: 207 (exceptions: 9, 29, 32+, 52?, 72+, 94, 142+)

There are some examples of initial velar deletion from Maba/Masalit to Aiki/Kibet:

(17)					
	Ø	k/g	Ø	Ø	I: 102, 204, 217
	g	k	Ø	Ø	I: 144
(but:	Ø	Ø	k	k	I: 131)
*g	g	g	(g)	(g)	I: 90, 117, 199 M: 40, 92, 210 (exceptions: 3, 10)

(18)	Maba	Masalit	Aiki	Kibet	Examples
*ŋ	ŋ	ŋ(g)	ŋ	ŋ	M: 54, 156, 227 F: 121 (exceptions: 68, 71, 96, 168, 201, 240)
*ŋg	ŋg	ŋg	ŋg	ŋg	M: 24, 27, 148, 220 F: 141, 146 (exceptions: 2, 50, 129, 149, 150)

3.1.5. Vowels

As mentioned above, space does not permit a thorough overview of vowels; however there is an interesting occurrence/non-occurrence of initial /a/ in some examples (possibly morpheme deletion):

(19)	Maba	Masalit	Aiki	Kibet	Examples
*a	a	a	a	a	I: 5, 24, 40, 68, 70, 98+, 100, 118, 120?, 198+, 200, 211, 233
	Ø	Ø	a	a	I: 117, 127, 154, 203, 217
	a/ɔ	a	Ø	Ø	I: 60+, 108?

4. Nominal number suffixes

The arrays of nominal singular/plural suffixes is summarised as follows:

(20)	Maba		Masalit		Aiki		Kibet	
	S	P	S	P	S	P	S	P
	Ø	Ø	Ø	Ø	Ø		Ø	
	V	i/e	V	V	V	V	V	V
		tu, tiri	di, ti	di, ta	(n)di	t, it, tit	di	dik, duk, do
						ti, dɔ		tuk, tik
	k, ak, lok, ik, dakal		kɔ, gi, ŋgi		k	(ke)	k	gɔ, ik, k
		sɛ, si, kasi, gisi, enji		(V)s, sI, jɛ, yu				
	ŋ, uŋ, suŋ	ŋi, ni		iŋ, ldiŋ	ŋ			
			rV	r(V), kar, ter, dur, cor				

This is a brief overview and it is discussed further in a comparative context in section 5. It also ignores the role of tone differences which are significant in nominal number distinction in the Maba languages, e.g. (Aiki) mùndú (pl múndú) 'nose'.

5. The Tama and Maba groups compared

It is of interest to make some comparisons between the neighbouring Tama and Maba language groups. They are both classified as Nilo-Saharan but are ascribed to different branches – Maba as an 'independent' branch, Tama as part of East Sudanic.

5.1. Nominal number suffixes

In both Tama and Maba groups, nominal number distinction is marked by a limited number of suffixes; some, e.g. in Masalit, may be distinguished in terms of tone alone, but for simplicity's sake I restrict this description to segmental suffixes. Each lexeme has a unique pair of S/P suffixes which appear to be unpredictable according to any synchronic phonological rules. Some semantically related groups of words may share the same pattern of S/P

suffixes (see the colours below) but, so far, larger semantic patterns are not discernible. It is worth noting, however, that the basic principle is the same for both the Tama and Maba groups (and other Nilo-Saharan languages as far as I am aware), and that the sets of S/P suffixes are rather limited. I set out these arrays below, which include the vast majority of suffixes, though there are exceptions to the patterning – I feel it is more important at this stage to map out the general shape. Parentheses are used where a suffix does not occur in all the languages of the group.

(21)

Tama		Maba		Suffix consists of or includes:
S	P	S	P	
Ø	(Ø)	Ø	(Ø)	zero morpheme
V	V	V	V	vowel
T	(T)	(T)	T	alveolar plosive
(N)	N	(N)	N	alveolar/velar nasal
			(S)	voiceless sibilants and palatal fricatives: /s, ʃ, j, c/
		(R)	(R)	liquids: /r/, rarely /l/
(K)	K	K	(K)	velar plosive

It is interesting to note the suffixes that are common to all the members of each group (i.e. not in parentheses), as this array is yet more restricted and may give some idea of how the complex present-day situation came about from relatively simple origins. However, this is speculation and needs further investigation. Suffixes common to all members in each group are:

(22)

	S	P
Tama	Ø V T	V N K
Maba	Ø V T	V N T

What is clear, however, is that in both groups there may be a nasal element in the plural, and there appears to be a T/K contrast (S/P Tama, P/S in Maba). It would be interesting to investigate other Nilo-Saharan languages to find out to what extent these features are shared by them.

5.2. *Colours*

In both the Tama and Maba groups there are four 'basic' colours: white, red/brown, black/blue, green/cyan. There are other colours in the lexicons but their colour aspect is a secondary lexical function, e.g. 'grey' = 'smoke', or they may be adoptives, e.g. 'yellow' < Arabic). The comparison of the Tama and Maba groups is interesting in that, although it is evident that there is no (close) genetic relationship between the two groups, the underlying principle of their arrangements is the same:

(23)

	Maba	Masalit	P-Maba	P-Tama	Tama	Miisiirii	Ibiri
white	fà-fár-àk	ji-sa	far-	cen-	èk	cenik	ék
red	kù-kúy-àk	ko-ŋgi	kU-	ar-	àřák	ʌrʌk	ɪrʌk
black	lù-lúy-òk	dú-ŋgì	dU-	kid-	kìrík	kitik	kídìk

green dri-dri-yak ráa-ŋgì ra- ʃirn- iřni ʃiřni juk

Note: Masalit ji-sa is related to jii 'milk'; Ibiri ék pl éŋèn, i.e. the underlying singular is éŋ-ek.

6. *Summary*

As noted above, the three languages Maba, Masalit and Aiki-Kibet are equidistant from one another lexically. Phonologically the situation is not so clear, and the following differences have been observed:

(24) Maba and Kibet /l/ = Masalit /r/ = Aiki /y/ < ?*l[1]
Aiki /p/ = Maba, Masalit and Kibet /f/ < *f
Aiki-Kibet /t/ = Maba and Masalit /s/ < *s[1]
Aiki-Kibet /d/ = Maba and Masalit /l, r/ < *?

It appears that Maba and Masalit are phonologically closer to each other than either is to Aiki-Kibet. This is also apparent from a comparison of the ranges of 2sg prefix allomorphs of Maba.

A historical note

John E. Lavers

This was the last paper written by John Edgar. His death sadly leaves the study of the languages of the Tchad-Sudan borderlands without an obvious successor. This note attempts to bring further relevant material to the attention of the interested reader, material that Edgar himself would have incorporated if it had been brought to his attention in time.

Maba and the related languages covered in this paper are and were spoken by peoples linked in various ways with the Sultanate of Wadai. Maba was spoken by the core peoples, the so-called royal tribes, and the others by subordinate polities. The sultanate was founded in the 1630s and quickly established authority over its smaller neighbours such as the Daju state of Dar Sila to the south, and apparently shared authority with its eastern neighbour, Dar Fur, over Dar Tama, Dar Gimr and others. According to tradition the inhabitants of all these states were subject to the Tunjur in the sixteenth century, a people who now speak Arabic and who are found scattered from Dar Fur in the east to Borno in the west. It is this Tunjur state that was referred to by Giovanni Anania (1582: 349-50):

> Then comes Uri, a very important place, whose Prince is called Nina, that is to say Emperor. The neighbouring kingdoms that obey him are Aule, Zurla... Sagava (Zaghawa), Memmi (Mimi), Musalat (Masalit), Morga and Dagio (Daju).

Uri is the former capital of this state situated in Dar Fur. It should be noted that several of the kingdoms are named in Edgar's study and that one of them – Mimi – causes problems of identification. The foregoing underlines the antiquity of these peoples as identifiable groups, but without specifying language. The earliest linguistic evidence known to me from the area dates from the first decade of the nineteenth century. There are two sources, and both contain short vocabularies of Maba. The first was collected by the young German traveller and linguist, Ulrich Jasper Seetzen (1810: 137-155), from 'Mobba' pilgrims passing through Cairo in 1808, and consists of the names of various natural objects and verses of a song. The second was collected in Wadai itself about the same period by Muhammad b. Umar al-Tunisi (1851: 245-252). In this instance there is a note on the languages of Wadai with a short vocabulary and a few phrases. Elsewhere he incorporates information on the peoples and polities with references to Macalyt (Masalit) and Mymeh (Mimi). Undoubtedly more material remains to be discovered in the archives and libraries of the wider world.

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APPENDIX 1: Maba group cognates and equivalents

Abbreviations and conventions: {–}: plural; –/–: lexical alternatives; ––-: verb bases (the shortest alternant is given, whether base 1 or base 2); –*: Arabic; Fl: Fulfulde; Sn: Sango; Fu: Fur.

	gloss	*Maba*	*Masalit*	*Aiki*	*Kibet*
1	abdomen	kùñi-k	kunyi	kúi	
2	above	tál	dól	tàŋga	tʌŋgʌl
3	accusative	gú	-ko	ga	
4	all	dum*	támà*	tum*	du*
5	ashes	àwún	àwén-dì	àw`n-dí	awun-di
6	back	der-iŋ/dahr*	sar-gi(-ko)*	sìdá	siida
7	bad	nemere-k tan	biyɛ	cén*	jar san
8	be	-índ-	-ind-	-èend-	
9	beard	kamur	kàmárì	gàmsì {gàmsù}	
10	because	ká	gì-taʃanim	go	
11	bed	angareb	kárá	agera/àŋgèrép	
12	bee	kimin	tímíŋ-gì {ø}	kènéñé-tíñíŋ	kimeñ-i {-u}
13	beehive		jùkù-tá	còk/zúŋgo (?)	
14	belly	tabu-k	kúnyò	bùtùlù*	kul
15	big/old	kula-k	kódì/guri	kwàyè/kùdè-ndé	kwɔlɛ/kuyoy
16	bird	kùʃí-k {-tu} {kúʃkúʃée}	kúʃí-k kúcì {kúcé/kucije}	kòs-í {-ìt}	kwòsí {kusudduk}
17	bite	-is-	-iʃ-	-òtí-	-ut-ed-

18	black	lù-lú-yòk	dú-ŋgì	d`k´n{d`k`nò}	dì-ndík{-ndó}
19	blood	àríi	fàríŋ	pày{-ó}/fáai	fal{-u}ari
20	body	ndúu	ndŭ	ndù-k	ndu-k
21	bone	kàñjí-k	kónjì	jìŋg`r {jùŋgòrò}	njekedi {njùkùdú}
22	boundary		la-ldi{-ri}	yà-i{-yò}	
23	branch	bíláa	fira		
24	breast	àŋgûn	áŋgùinì	àŋgòñì	àŋgòñì
25	bring	-ánár-	-ınar-	-ínàr-	-anʌr-
26	brother	-ir	-ir	-ir	-ir
27	calabash	àŋgóyìì		àŋgòdòdòŋ	
28	*causative*	nd-	nd-	nd-/-taa-	
29	charcoal	kikimi-k	kicimi	kúyúy-ì	g`ʃìʃìim-âŋ
30	child	kà-kàlá-k*f*	kara*f*	kàykày	kálkàl
31	child	kàlà-k*m*	kima*m*		kʌlme*m*
32	cloth	caaka*	joox*	cáaká*	
33	cold	kera*	kérí-mà*	àtàandí	àtàandí
34	come	-àr-	-ár-	-èer-	-âr-
35	corn	kalla	kornyaŋ	kíyáŋ	
36	corn	ésée	ásè	ás´-k	assee
37	cough		-ıcokor-	-dòkòr-	
38	country	daar*	gani/kasɛ*	kàsè*	laŋ
39	cow	dè-k	dèe	dò-k	dò-k
40	crow	agura-k	agura*		
41	cry	-ool-	-oor-	-òrò-	
42	cut	-atam-	-ífél-	-èt´m-	-and(ay)-
43	day	dalka	dɛkadi*	sɔ́ɔrɔ́	sarwɔ
44	die	-ɔ́y-	-ıy-	-í-	-iy-
45	dig	-uur-	-uul-	-or-ɔŋ-	
46	dog	ñû-k	ínjì	míñ{mìñjìt}	miñ{mìnjík}
47	dream	-ɔ̀lɔ̀l-	-arir-	-òyèy	
48	drink	-y-áŋ-	-aŋ-	-àŋ-	-aŋ-
49	dry	nojir	fɛrɛ	nàbày/ninjim	nʌbaai
50	dust/sand	gìsìŋáa/ ganun	gani/gari	k`siaá-k/ kí(y)ák	kʌsya/kí(y)à
51	ear	koi-k	kwóyè	kàsá	kàsá
52	eat	-añ-	-iny-	-ñɔ-	-ñó-
53	egg	kademi-k	kéndèŋgí {kédèm}	kàdèmɔ̀ŋ{ɔ̀}	kadɛm-aŋ {-ɔŋɔ}
54	elephant	ŋɔ̀o-n{-ñíi}	mùŋ-gì{jɛ}	àŋɔ̀n{-tí}	aŋɔn
55	enter	-àay-	-ac-/-ay-	-aas	-as-
56	eye	kàʃì-k{-ñi}	kóo-gí{-sí}	kàs-`k{-ò}	kàs{-u}
57	face	(n)yo{yetu}	úyò{úyé}	àydó/wújé*	wujɛ*

			yo-gi {-sɛ} 'forehead'	{áydò/wújó}	{wujildò}
58	fall	-ongun-	-inder-cir-	-ùs-´t-	-us-it-
59	far	lɛl-ti	nyɛlɛ		dɛl
60	farm	ɔsur*	asurti*	sɔɔrɔ*	
61	fat (n)	niamu-k	nyomor	ñìm {ñímú}	ñim {ñumo}
62	finger	kartoŋgala-k	nagaram	kàrá	kàrá
63	finger-nail	ñíŋgírmísì-k	kinjimi	síŋgímì	síŋgírìm
64	fire	wàsí-k {-ì}	wàasí	n`s`k{nusu}	n`s`-k
65	fish	kuño	kúnyò	kùñúŋ {-ó}	kuñaŋ
66	five	t(ú)ùr	tur	túur	tur
67	fly (v)	ber-ir-	fɪr-ig-		
68	fly (n)	áñìŋ	áñìŋ-gì	àñíñí	añini
69	foot	ja-k {-ñi}	jo-ŋyi {-ø}	dò-dí	dòo-dí
70	four	àssàal	as	áttéy	atal
71	full	fíŋ {-ti}	biŋga	bíyím/bíc/ bíjàsé	bɪc
72	garden	zagia*	zágè*	sɔkɔ*	
73	giraffe	ifir* {-ii}	leri garaŋgi	àwár* {àwàrtí}	
74	give	-ɔny-	-ìŋy-	-ìiñ-	-iñ-
75	give	-and-	-and-	-àndàas-	
76	give birth	-uŋ-	-uuny-	-ìñ-	
77	go	-ày-	-ay-	-ày-	-ɔkɔŋ-
78	goat	jo-k	ju-lgi	àndèi	ʌndi
79	good	nemere-k	kallɛ*	sám*	jár
80	gourd	kuudu-k	kòdòkó	kédé	kɛde
81	grass	luwa	tari	yà-k	la/lɔ
82	green	drì-drí-yàk	ráa-ŋgi	raa-ndɪk	raa-ndɪk
83	ground	bárr	bùurá	bàañíŋ	bañʌŋ
84	hair	tìfí-k {-í}	tíŋà/tifa	tòw	tɔwi
85	hand	kara/kana	kórò	kàrá {kɔro}	kàrá {kóró}
86	head	kíjí-k	kújò	kì {kíjé}	kìc {kujo}
87	hear		-in-uŋg-	-`n-	-in-ɪn-ʌŋ-
88	heart	kùlì-k {-íi}	kùrî	jì	ad sa, cf kul {-do} 'belly'
89	heavy	lulu	lera		
90	here	gun	gìm	gin	gɪn
91	hoe	kañya	kaña	kìñáñá	
92	hole		agu	àgù	àgù
93	honey	kimiin	kìrímà-k	kèméñé	kimɪñi
94	horn	kèmí-k	kámì	gàm-dí	gàm-dí
95	horse	bèré-k {-íi}	bɛrɛ	fila/pla {p ltìt}	fia

96	house	táŋ	taŋi	tòŋgó	tòŋgó
97	house/nest	kuruŋ	kurdi kùdé/korok 'inside'	kùdù {-wó}	kuduo
98	hunger	ajuu*	wɪcitiɛ	àtú*	àtú {àtùdó}*
99	hyena	húiyà ('howl')	awiyɛ	àbólí {àbòlìt}	aboi {-dik}
100	I	àm	ama	àmɔ̀	ámɔ̀
101	kill	-ìyw-ír-	-iyaw-	-àsɔ́w-	-asao-
102	knee	túmó-k {-jé}	kádìŋyo	d`m-dí {-dú}	dàm-tí {-tú}
103	know	-as-iŋ-	-os-iŋ-	-òt-èŋ-	-ot- k-
104	laugh	-ask-	-ɛcɛk-	-dé-	-àt-ây-
106	leave	-àbbàan-	-abas-iŋ-	-bù-	-ubunn-
107	left	bala	kèré	dèkía	dʌkʌle
108	lion	àmárà-k	ama-ra {-kar}	màndày {màndèltí}	
109	long	le-le-k	cùkáŋgí	dè-dì {-ké}	dè-dì {-ké}
110	louse	mèsèlé-k {-ø}	akiŋgi	mànjé {munjo}	minj-e {-i}
111	male	már-ʃée {-ø}	már-gì {-sɛ}	már	
112	man	máʃì-k {-ún}	kà-ŋgi {-ø}	kà-méré	kà-mèré
113	man	kámbà-k	kàmbâ	mérét {mèrèt}	
114	meat	ñù-k {-´ú}	nyú-gì	ndobo	yibo {-do}
115	milk	sílá	jíi	jù-k {-ø}	ájù
116	millet-paste	futiir		pàttár	
117	monkey	gùr {-íi}	gur-gi {-i}	àgùr {-tí}	
118	moon	éyè-k	áyè	ànj´-k	ànj´-k
119	mortar	fonduk*	funduk*	b`dì	
120	mosquito	agel-ek {-ni}	anjul-gi	àjìkíñí {-t}	
121	mother	ñíŋ		ñiŋ	
122	mother		daa	yá	
123	mountain	kodo-k {-ø}	kómà {-jɛ}	kòmàan-dí {-dó}	kùmàan-dí
124	mountain	kodo-k {-ø}	kondola	kadʌkkei 'stone'	
125	mouth	kan-a {-tu}	kánà	yù-k	yù-k
126	name	mílí-i {-síi}	mirsi {-ldiŋ}	mèek-í {-ú}	m lk-i {-udɔ}
127	navel	dùmú-k {-ú}		àdìm {àdùmù}	àd´m {adumo}
128	neck	biti-k	kótì	k`rmí	k`rmí
129	new	ñɛnd-ɪk {-isi}	ŋúndì {´´}	w`nd-í {-ò}	
130	night	íʃè/òjùrkó	kosaŋ	diindé	díindò
131	nine	òddói	adɛ	kadeel	kʌdai
132	nose	boiñ	dúrmì	mùndú	mùndù
133	of	-na	-taŋ	-na-ŋ	
134	oil (cf. fat)	ñàmú-k	ñámì	ñum	ñum
135	old person	manjil	monjo-kola *f*	mìnjò/mɔ̀njɔ̀	
136	one	tɔ́ɔ	tyom/tóo/	tùwá	tuwni

			tíilo		
137	only	dee	dei	ndó	
138	open	-wútúl-	-uutur-		
139	outside	fèríŋ	orro 'behind'	àrí	kòlé
			sóolè	-ifiriŋ- 'go out'	
140	owner	tènέ	tέnè	tènέ	
141	palm of hand	adadaŋg	adaraŋgi	kàrá kwíy	
142	paper	furuk*	farax*	párák*	
143	path	liŋa-k [Sn]	búrtì [Fl]	ñɔ̀ŋgwéyè	ñóŋgɔ̀lè
144	penis	gùmbûl	kumbor	àwéy	auw l
145	pepper	filfil*		pílpíl*	
146	person	kaŋg/kai	kaŋgi	kàŋ {kè}	kaŋ {ke}
147	porridge	nyèré-k	nyuguru	ñàŋ	
148	pot	dábáŋgáa*	dabaŋga*		dabʌŋga*
149	pot	siŋgaŋ	sakana	sàkán	
150	pound	-uddunŋg-	-ɪduk-	-dɔɔk-	
151	rabbit	mɔ̀mɔ́-k {-tu}	máamà {-jɛ}	màsá	
152	rain	inji	sa	tà-k {tá}	ta
153	/monsoon	kilèɛrí		kɔ́dírwɔ̀	kɔdɔrwo
154	rat	jik {-etu/isi}	jù {-´cé}	àj-ù {-út}	ʌ̀jú {-tuk}
155	red	kù-kú-yàk	ko-ŋgi {-ni}	ndàláŋ	kwɔ̀njé-k
			'brown'		{kùnjɔ́}
156	remain	-iirŋ-	-irɛŋg-	-ri-t-	
157	right	kolon	kòdɔ̀rkónjí	koyɪŋga	kolɔŋ
158	ripen	-yɔ̀m-	-ɔom-	-ɔ̀m-	
159	river	bita-k {-si}	madaldi [Fu]	tà-k {-ø}	ta
160	rotten		tuyɛ	tiyɔye	tiyoi
161	salt	uja	áŋgɔ̀	síim	silim
	/iron			sàim-í {-ú}	salmiɛ
162	sand	fi 'soil'	abi	abiyó-í {-yu}	abileli
163	satisfied	-iil-	-ɔil-	-iid-	
164	sauce	su	su	tɔ̀-k	
165	say	-er-	-ɛr-	-ày`r-	-ayer-
166	scratch		-ɪŋos-	-íñàs-ón-	-iñas-ɛn-
167	see	-oko-	-iser/ikel-	-ɔ̀ɔnd-	-ɔnd- k-
168	sesame	wanaaŋga	ànínjá	ànáŋá	
169	seven	mέndríi	màrí	mʌndirsi	mɪndɪrsɪk
170	shadow	ɔ̀njúlɔ̀-k*	anjilo/asro*	ànjíè/ànjìboŋ*	
171	sharp	tiñi	tèŋéñè	tèríñ	
172	s/he	ti	ti	tìi	tì
173	shoe	bara	bar-jaŋi	bàrr	
174	shoulder	kɔrkɔr-uk		kɔ̀sɔ̀kór {-ɔ́}	kɔ̀sɔ̀kór {-ɔ}
		{-jɛ}			'wing'

175	shut	-ils-	-wurs-		
176	sit	-oñeg-	-unyuŋ-	-ùñùŋ-	-uñuŋ-nduk
177	six	síttàal*	it(t)i*	issèi*	issʌl*
178	skin	koi-k	bárá	màɗà	madda
179	sky	samaa*	sama*/mundu	mùnùnù	sámà*
180	sky/cloud	abioo	abiri	sáap*	sahap*
181	sky/god/rain	kalak	kariŋga	kàìŋá	
182	slave	wùyó		gùyá	
183	sleep	-èbìy-	-ibi-'lie'	-`bèi-	-ubi-tik-
184	small	nyílì-k	súwánà nyer-ko'baby'	káakéy	kàdéɛkàl
185	smoke	kúuldaa-k/ kúndík	uruŋgi/ kurunda'dust'	àmbròñí	àmbrùñí
186	snake	taraŋga-g	taráŋgì	kɔ̀lɔ́	kɔyɔ
187	sour	-kámà-k	juma	káyám-ndí	
188	sow	-ask-	-ind-is-	nd-èt-	
189	speak	-uur	-oor-	-òor-	
190	spear	sùbá-ŋ*	nyori	s`bò-k*	s´b`-k*
191	spear/war	yorre	nyori	ñùr'sword (*sabre*)'	
192	spend day		-óos-	-òd-	
193	stand up	-urnʌŋ-	-ornaŋ-	-uran-	-urʌŋ-
194	star	mıña/menue-k	kíyè/muñiŋɛ 'Mercury'	kèij-á {-ɔ}	kèɛʃ-á {-ɔ}
195	steal	-éníy-	-eniŋñ-an-	-aŋei'covet (*convoiter*)'	
196	stick	dolo-k/cum	buta		
197	stone	kodo-k	kómà/ditɛra	dùs-ì {-ù}	dúusì {dúsúdò}
198	straight		àdíl/ndelli	àdíl/dilʌŋsé	adiil
199	sugar-cane stalk	gamberi-k	gember-ti {-i}	gàmbárí	
200	sun	èñí-k	áyìŋgé	àñíŋ	àñ-íŋ {-ùŋú}
201	swallow	-líŋgá-	-oliŋ	-l`ŋ-	
202	sweat *n*	moruu	muri		
203	sycamore		sisi*	àsísí*	
204	tail	ɔ̀lú-k/àlú-k	kora	àl`m-dí	àyù-dí
205	tamarind	konji-k	kúnjí	kùnjù-k	
206	tears	nyi-nyi	nyi		
207	ten	ɔ̀túk	ùtúk	ituk	ituk
208	they	wáŋ	wii	wìi	wì
209	thirst	ace-k*		àsò*	
210	this	ago	ìgì	gɔ́	go
211	thorn	aʃi-k/èsí-k	arcɛ/arci	àdí-k {ádí}	adi-k {-i}
212	three	kòŋàal	káaŋ	kásáŋgá	kàsáŋgàl

213	throat	saŋgala-k	agara {-s}		
214	throw	-ajan-	-icum-	-sàŋ-	
215	thunder	durda-k	turi	trùgá	
216	tie up	-uuʃ-	-wac-	-òt-	-ut-ʌŋ-
217	tongue	delmi-k	gélmèdì	àdìyím	àd`lém
218	tooth	sati-k	kácìŋgi	sàdí	sàdí
219	*transitive*	n-	n-	n-	
220	tree	soŋgo-k	síŋgì	rí-k	ri-k
221	trousers	serwal*	sirwal-ko*	sòrwál*	
222	two	mbar	mbárà	mbá	mbar
223	uproot	-ùud-ùŋ-	-od-o-	-òd-`-	-od-ʌŋ-
224	urine	ísíi	ísà	mùsù-k	musu
225	wait	-uuls-	-wurus-		
226	want	-ìdìy-	-ind-	-ndày-	-ʌndal-
227	warm	bɔŋɔ	boŋgo	baŋ	bʌŋtɪr
228	wash	-wùk-	-uk-	-òok-	
229	water	inji	sá	tà-k	ta
230	we	maŋ	mí	mì	mì
231	well	gule-k {-si}	kúrtî	kùrtó/àgùyɛ́	kùttó
232	white	fà-fár-àk	ji-sa	pár {-ó}	far {fórɔ̀}
233	wind	auli-k/òili-k	ágùrí	àgwìy	ágúlì
234	woman	mùjɔ̀-ŋ {-o}	múcò	mì {mís}	mì-l {-sík}
235	wood		xaʃab*	njóm	njìrîm
236	woods	àsé		ʌsʌk	ʌsé
237	world	dunya*	dinya*	dúníá*	
238	wound	ɔndur/andur	àndúrtì	ànd´r {àndró}	
239	year	kudria-k	sɛnɛ*	kàdàrɔ̀wɔ̀n-dí	kadarwun-di
240	yesterday	kondaŋ	géndégù	kàndáŋ	
241	you *sg*	mè	maŋ	mɔ̀	mɔ
242	you *pl*	káŋ	kìi	kìi	kì

APPENDIX 2: Verb lists

Verbs are listed in the format used in Edgar (1991): base 1 ~ base 2, 2sg allomorph. Maba does not appear to have the base 1~2 distinction.

List A: Cognate verbs with different 2sg allomorph in different languages

gloss	*Maba*	*Masalit*	*Aiki*	*Kibet*
be angry	a?ion,D	?~ɪñɪ?ar,l		
be, live	índ,g/i,g	ind~ind,j/i,j	ènd,j/ìnd,j	
become		wak~wak,g	èk~èkt,j	
break	arm,d		ràm,D	
bring	anar,D	ɪnar~ɪnar,D	ínàr~ínàarn,n	anʌr~ɪnarʌ?,n

			nar~nèer,D	
buy/sell	ark,d	arok~aron,D		
bury	íms,d	imis~imisi?,g		
count	inin,D	ını(ı)n,n		
cut	átám,d		dèm,D	
	`cut many`			
	ùtùm,d *intr*			
drink	ya?,l	a?~a?i?,l	à?~a?an,j	ʌ?n~ʌ?nın,j
fall			us,g	us~usın,d
fear		ɔorak~ɔoran,g		ulan~ulanın,d
forge	ime,d	ɔim~ɔimen,g		
give	ɔny,D	i?j~i?y,g	nìñ~nìñj,D	unjik,?
give birth	u?,d	uuny~uunya?,l	ìñ,j	
jump, dance		em~emi?,l	`m,g/òm,g	
leave	àl(ɛ),D	ɛl~ɛlɛ?,l		
be lost	àfày,l		àbà~àbàtt,j	
open	wútúl,?	uutur~uuturu?,l		
pull out	ùudù?,l	ud~uda?,l	òd`~òd`d,g	odʌ?~odʌ?ın,g
		odod~ododo?,l		ùd`~úd´d,g
				'harvest`
refuse	uus,g		ès,j	
say	ɛɛr,?	ɛr~irna?,D	ìr,j	
scratch	ı?os~ı?osi?,D		íñàsón,g	iñasɛn~iñasɛnın,d
sex (have)	iin,l	iin~iin,l	ìin~iinò,j	
steal	énìy,g	eni?ñan,?	a?ei~à?ı,j	
struggle	iir,z		d`m~òor,D,j	
throw	àjjàan,g	icum~arc,D	sa?,D	
want	índ,g	ind~ind,g	ind,j	
want	ìdìy,g	índ~ind,n	ndày,D	ʌndal,D
wash *tr*	wùk,l	uk~ukan,l	òok,j	
wash *intr*	yik,l	ok~okan,l	òk~òkò,?	
weep	ool,l	oor~ooli?,l	òrò,g	

List B: Cognate verbs with the same 2sg allomorph in all the languages

bite	íis,g	iiʃeʃ~iiʃ,g	`tì~`tìt,g	uted,?
close, shut	ils,?	wurs~wursuŋ,D		
cough		ıcokor~ıcokorn,D	dòkò(o)r,D	
eat	añ,D	iny~inyen,D	ñò~ñòw,D	ñór~ñàwín,D
fall		indercir~ider,D	d`r~d`rtè,D	
		inj~ider,D		
get out	íŋ,d	iiŋ~iiŋñer,d		(Mimi: iŋ,z)
go	aka,g			ak,g

know[5]	was,g	was~wasiŋ,g	ɔtɔ,g	otek,ʔ
laugh	ask(ir),D	ɛcɛk~ɛcɛn,D		
ripen	amo,ʔ	oom,g	òm~òmt,g	
be satisfied		ɔilus~ɔil,g	ìid,g	
sow		indis~indiseŋ,D	ndet,D	
spend day		oos~oos,g	òd,g	
swallow	líŋgá,ʔ	oliŋ~oliŋan,D	l`ŋ~l`ŋ,D 'keep in mouth'	
		ʔ~ılıŋan,l		
wait	uuls,D	wurus~wurusɛn,D		
weave	usk,D		sòo~sùw,D	

[5] Cf. Kanuri nɔ̀t´ 'knowing', Fur iwisi.