

# Diachronic Aspects of the Phonology of Nizaa

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*In addition to being a study of the history of the Nizaa language, in which two earlier stages of Nizaa are reconstructed, an important purpose of the present article is to make preparations for a more systematic comparative work on the Mambiloid language group (the hypothetical language branch to which Nizaa is thought to belong) and its Bantoid relatives.*

## 1. INTRODUCTION\*

### 1.1. The name of the language

The Nizaa language is spoken by approximately 10,000 people in the district of Galim in the western part of the Adamaoua province in northern Cameroon. In Grimes (1988), the language is referred to as *inter alia* Nyemnyem, Nyamnyam, Suga, Galim, and Mengaka. The people themselves, the Nizaa (/nɪzɔɔ/, regard Nizaa (i.e., /ɲanɪ nɪzɔɔ/ ‘the Nizaa language’) as the original name, although Nyemnyem (/ɲanɪ ɲɛmɲem/ ‘the Nyemnyem language’ is also widely used. *Nyemnyem/Nyamnyam* is actually derogatory, cf. Fulfulde *nyaamnyaamjo* ‘cannibal’. *Suga* is probably the Pere (Kutin) word *súgò* ‘non-Pere’, cf. Raen (1981:84); the Pere are the northern neighbors of the Nizaa. *Galim* is the name of the main village in the Nizaa area. The name Mengaka is not known by this author.

### 1.2. Earlier genetic classification

Westermann and Bryan (1952/1970) mention two peoples, (a) “ ‘Galim’ among the MBUM” and (b) “SUGA (SSUGA, JEMJEM, NJEMNJEM), on River Gendero” that according to Tessman [1932] speak dialects related to VUTE. These “dialects” are undoubtedly one and the same language, i.e. Nizaa. According to Greenberg’s (1963) classification, Vute (“Bute”) is mentioned among the Non-Bantu languages in the Bantoid branch of the

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\* I thank Elizabeth Lanza for having corrected my English. I would also like to thank the Délégation Générale à la Recherche Scientifique et Technique, Institut des Sciences Humaines, Yaoundé, for my research permit (no. 45/1983), and the Norwegian Institute for Comparative Research in Human Culture, Oslo, for their financial support.

Benue-Congo sub-family of the Niger-Congo family. Williamson (1971) classifies Vute as a member of the Mambila-Vute group of Non-Bantu Bantoid. In Greenberg (1974), the term Mambiloid is introduced to replace Mambila-Vute. Bennett and Sterk (1977) also adopt the name Mambiloid. Since Tessman's (1932) characterization of "Galim" and "Suga" as close relatives of Vute was apparently not the result of any linguistic analysis, and since no systematic comparative work on Nizaa has been carried out since, we have no linguistic basis for including Nizaa in the Mambiloid group. Furthermore, the Mambiloid group itself is not established on the basis of systematic comparative work to discover the regular phonological correspondences between the languages in question. The comparative method, the only method generally accepted in the more firmly established science of comparative Indo-European linguistics, has not been utilized, but rather methods whose relevance for genetic classification are highly questionable, like lexicostatistics, the discovery of shared lexical innovations, and mass comparison. When these latter methods are applied, for example, to groups of European languages whose internal genetic relationships are known on the basis of historical records, their unreliability is easily demonstrated.

Blench (1991) proposed an internal classification of the Mambiloid languages, including Nizaa, apparently on the basis of shared lexical innovations. Further comments on this classification must await publication of the analysis.

### *1.3. The data*

The linguistic analysis presented here is based on data collected during the author's fieldwork in Galim from November 1979 until January 1980 and from August 1983 until June 1984. The main informant was Hamadicko Daniel, born in 1944 in the village of Wogomdou, approximately 20 km. west of Galim. When reference is made to the language of the older generation, it is primarily to the language of another informant, Gadji, born between 1910 and 1915 in the village of Mayo Taparé, southwest of Galim. With the exception of wordlists by R. Boyd (cf. e.g. Boyd 1978), M. Sachnine, and M. Dieu, the present author's work on Nizaa appears to be the first linguistic analysis of this language.<sup>1</sup> A synchronic description of the phonology is presented in Endresen (in press).

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1 The wordlists by Sachnine and by Dieu are unpublished.

## 2. THE PHONEMIC SYSTEM OF MODERN NIZAA

2.1. *The vowel phonemes*

There are three types of vowel phonemes: 5 short and oral, 10 long and oral, and 7 or 8 long and nasalized, as shown in table 1.

**Table 1**  
**Vowel phonemes**

<i>Unrounded</i>		<i>Rounded</i>	
<b>i</b> [ɪ ɪ]		<b>u</b> [ʊ ʊ]	<i>Close</i>
<b>e</b> [e ɛ]		<b>o</b> [o ɔ]	<i>Mid</i>
<b>a</b> [a]			<i>Open</i>
<i>Front</i>	<i>Back</i>	<i>Back</i>	
<i>Unrounded</i>	<i>Unrounded</i>	<i>Rounded</i>	
<b>ii</b>	<b>uuu</b>	<b>uu</b>	<i>Close</i>
<b>ee</b>	<b>ɛɛ</b>	<b>oo</b>	<i>Close-mid</i>
<b>ɛɛ</b>	<b>ʌʌ</b>	<b>ɔɔ</b>	<i>Open-mid</i>
<b>aa</b>			<i>Open</i>
<i>Front</i>	<i>Back</i>	<i>Back</i>	
<i>Unrounded</i>	<i>Unrounded</i>	<i>Rounded</i>	
<b>ĩĩ</b>	<b>ũũ</b> ( <b>ɿɿ</b> )	<b>ũũ</b>	<i>Close</i>
<b>ẽẽ</b>	<b>ãã</b>	<b>õõ</b>	<i>Close-mid</i>
<b>ãã</b>			<i>Open-mid</i>
			<i>Open</i>

There is a generation difference concerning the long and nasalized vowels: younger people use /ãã/ where older people have an opposition between /ãã/ and /ɿɿ/. Compare for example Hamadicko Daniel's /cãã/ 'guinea-fowl' and /cãã/ 'to adorn' with Gadjì's /cãã/ 'guinea-fowl' and /cɿɿ/ 'to adorn'.

Nizaa has three types of syllables: CV, CVV, and CVC; VV represents a long vowel.

## 2.2. The consonant phonemes

There are 2 major consonant phoneme systems: the syllable onset system and the syllable coda system.

The 58 phonemes in the syllable onset system are presented in table 2. There are altogether 21 labialized phonemes, not counting /w/. Notice that the unvoiced dorsal fricative /x/ is highly marginal, as it is found in one root only, /xag/ 'to clear the throat'. The glottal phonemes also have a very low frequency, being found mostly in loanwords and ideophones.

**Table 2**  
**Phonemes in the onset system**

<i>Labial</i>	<i>Apical</i>	<i>Laminal</i>	<i>Dorsal</i>	<i>Lab-dors</i>	<i>Glottal</i>
<b>p</b>	<b>t</b>	<b>c</b> [tʃ]	<b>k</b>	<b>kp</b>	<b>ʔ</b>
	<b>t<sup>w</sup></b>	<b>c<sup>w</sup></b> [tʃ <sup>w</sup> ]	<b>k<sup>w</sup></b>		<b>ʔ<sup>w</sup></b>
<b>b</b>	<b>d</b>	<b>j</b> [dʒ]	<b>g</b>	<b>gb</b>	
	<b>d<sup>w</sup></b>	<b>j<sup>w</sup></b> [dʒ <sup>w</sup> ]	<b>g<sup>w</sup></b>		
<b>ɸ</b>	<b>ɖ</b>				
<b>ɸ<sup>w</sup></b>	<b>ɖ<sup>w</sup></b>				
<b>mb</b>	<b>nd</b>	<b>nj</b> [ndʒ]	<b>ŋg</b>	<b>ŋmgb</b>	
	<b>nd<sup>w</sup></b>	<b>nj<sup>w</sup></b> [ndʒ <sup>w</sup> ]	<b>ŋg<sup>w</sup></b>		
<b>m</b>	<b>n</b>	<b>ɲ</b>	<b>ŋ</b> [ɲ]		
<b>m<sup>w</sup></b>	<b>n<sup>w</sup></b>	<b>ɲ<sup>w</sup></b>	<b>ŋ<sup>w</sup></b> [ɲ <sup>w</sup> ]		
<b>mv</b>		<b>nz</b>			
		<b>nz<sup>w</sup></b>			
<b>f</b>		<b>s</b> /ʃ	<b>x</b>		<b>h</b>
		<b>s<sup>w</sup></b> /ʃ <sup>w</sup>			
<b>v</b>		<b>z</b>			
		<b>z<sup>w</sup></b>			
	<b>l</b>		<b>y</b> [j]	<b>w</b>	
	<b>l<sup>w</sup></b>		<b>y<sup>w</sup></b> [ɥ]		
	<b>r</b> [ɾ]				
	<b>r<sup>w</sup></b> [ɾ <sup>w</sup> ]				

*Note:* Phonemic symbols whose values differ from IPA usage are explained in square brackets.

The 11 phonemes in the syllable coda system are presented in table 3. Notice that /d/, /y/ and /ỹ/ are marginal. /d/ and /y/ are mostly found in loanwords and ideophones, and /ỹ/ is only found in ideophones.

**Table 3**  
**Phonemes in the coda system**

<i>Labial</i>	<i>Apical</i>	<i>Dorsal</i>	<i>Labial-Dorsal</i>
<b>b</b> [p, b]	<b>d</b> [t, d]	<b>g</b> [k, g]	
<b>m</b>	<b>n</b>	<b>ŋ</b>	
		<b>y</b> [j]	<b>w</b>
		<b>ỹ</b> [j̃]	<b>ỹ</b>
	<b>r</b> [r]		

*Note:* /ŋ/ is pronounced [ũŋ] in onset position and [ŋ] in coda position.)

### 2.3. The tone system

The tones will not be discussed in this article. Here we shall simply explain how they are represented in the phonemic transcriptions. For practical reasons they are represented differently in CV, CVV and CVC syllables:

**Table 4**  
**The representation of tones**

NO.	TONE	VC	CVV	CVC
1.	H	/tá/	/táá/	/tám/
2.	M	/ta/	/taa/	/tam/
3.	L	/tà/	/tàà/	/tàm/
4.	LH	/ǎ/	/tàá/	/tǎm/
5.	HM	/tá-/	/táa/	/tám-/
6.	HL	/tâ/	/tàà/	/tâm/
7.	MH	/ta´/	/taá/	/tam´/
8.	ML	/ta`/	/taà/	/tam`/
9.	LHM	/tǎ-/	/tǎa/	/tǎm-/

*Note:* H = high; M = mid; L = low.

The first four tones, that is H, M, L and LH, are the Primary Tones, which are found on all types of syllables. The five remaining tones, that is HM, HL, MH, ML and LHM, are the Secondary Tones, which are only found on word-final syllables; they can be interpreted as Primary Tones plus an addition: 5. H+M, 7. M+H, 8. M+L, 9. LH+M. More details will be given in Endresen (forthcoming).

### 3. THE MAIN MORPHOPHONOLOGICAL ALTERNATIONS OF MODERN NIZAA

#### 3.1. Coda weakening

The two most important morphophonological alternations in Nizaa are Coda Weakening and Vowel Lowering. Coda Weakening is a process that may be presented as in (1):

#### (1) Coda Weakening

	1	2	3	4	5
Strong Grade of coda	<b>Vb</b>	<b>Vm</b>	<b>Vn</b>	<b>Vg</b>	<b>Vŋ</b>
Weak Grade of coda	<b>Vw</b>	<b>Vw̃</b>	<b>ĀĀ</b>	<b>AA</b>	<b>ĀĀ</b>

*Note:* AA = long, “modified”, oral vowel; ĀĀ = long, “modified”, nasalized vowel.

The following changes take place:

I. /b/ is weakened to /w/; notice that /b/ is called a Strong Grade consonant and /w/ a Weak Grade consonant.

II. /m/ is weakened to /w̃/.

III. /n/ is weakened to zero, but leaves three traces on the preceding vowel: nasalization, lengthening and quality modification—the details will be discussed later.

IV. /g/ is weakened to zero, but lengthens and modifies the preceding vowel.

V. /ŋ/ also disappears, but nasalizes, lengthens, and modifies the preceding vowel.

In (2) verbs are presented showing all the different CVC sequences participating in the Coda Weakening. The imperfective forms, which end in the suffix /ci/, always have the Weak Grade. The perfective forms of most verbs have the Strong Grade, but there are also quite a few with the Weak Grade.

(2)	<b>PERFECTIVE</b>	<b>IMPERFECTIVE</b>	
	<i>Strong Grade</i>	<i>Weak Grade</i>	
	dib	diwci	'to go/come out (S: sg)'
	ceb	cewci	'to split'
	cáb	cáwci	'to form a ball'
	ʃ <sup>w</sup> áb	ʃ <sup>w</sup> áwci	'to anoint'
	tob	towci	'to join'
	sub	suwci	'to tear'
	lím	líwci	'to extinguish'
	tém	téwci	'to mention (e.g. a name)'
	cam	cawci	'to deny'
	nz <sup>w</sup> am	nz <sup>w</sup> awci	'to be arranged in groups'
	lóm	lówci	'to bite'
	mum	muwci	'to yield corn (S: maize, millet)'
	pín	pííci	'to do'
	ben	bēēci	'to hate'
	dan	dēēci	'to cultivate'
	m <sup>w</sup> án	m <sup>w</sup> éēci	'to dig up, unearth (S: cockchafer)'
	kon	k <sup>w</sup> ēēci	'to twist, wring'
	kun	k <sup>w</sup> īici	'to lie down (like a dog)'
	nig	nuiwci	'fly (S: e.g. bird)'
	leg	lɣɣci	'to carry out a religious ceremony'
	tág	tállci	'to spread'
	tog	tɔɔci	'to create'
	bug	buuci	'to catch, arrest, hold'
	jij	jūūci	'to return, turn'
	gég	gʒʒci/gállci	'to bar'
	taɲ	tállci	'to eat'
	ndón	ndóóci	'to surpass'
	cun	cūūci	'to urinate'

To show that Coda Weakening is not phonologically conditioned in Modern Nizaa, for example by the following suffix-initial /c/, a few noun forms are added in (3). These nouns have the Weak Grade in their base form and the Strong Grade in the augmentative, which has a suffix starting with /c/.

(3)	<b>BASE FORM</b>	<b>AUGMENTATIVE</b>	
	<i>Weak Grade</i>	<i>Strong Grade</i>	
	dīw	dībcún	'face'
	sīw	simcún	'bird, fowl'
	njēē	njancun	'affair, news, word'
	ɲgʒɣ	ɲgɛgcún	'crocodile'
	ndūúú	ndínjcún	'tuft'

### 3.2. Vowel lowering

Vowel Lowering, which is exemplified in (4), has the effect of lowering all vowels to /a/. If the original vowel is rounded, this rounding or labialization “survives” on the preceding consonant, which was allophonically labialized prior to Vowel Lowering. This is summed up in (5). Vowel Lowering is mainly found in unproductive verbal derivations and in irregular noun plurals. Notice that two of the forms with a lowered vowel, /daw/ and /ʃ<sup>w</sup>áw/, also exhibit Coda Weakening.

- (4) *Vowel Lowering (“A-umlaut”)*
- |             |                            |                         |                          |
|-------------|----------------------------|-------------------------|--------------------------|
| <b>dib</b>  | ‘to go/come out (S: sg)’   | <b>daw</b>              | ‘to go/come out (S: pl)’ |
| <b>njúb</b> | ‘to strike (once)’         | <b>nj<sup>w</sup>áb</b> | ‘to strike (many times)’ |
| <b>ngen</b> | ‘to become twisted, wrung’ | <b>ngan</b>             | ‘to twist, wring’        |
| <b>sóm</b>  | ‘to be dry’                | <b>ʃ<sup>w</sup>áw</b>  | ‘to dry up’              |

- (5) *Vowel Lowering (Summary)*
- | Original Vowels |   | Lowered Vowels         |
|-----------------|---|------------------------|
| <b>CiC</b>      | → | <b>CaC</b>             |
| <b>CuC</b>      | → | <b>C<sup>w</sup>aC</b> |
| <b>CeC</b>      | → | <b>CaC</b>             |
| <b>CoC</b>      | → | <b>C<sup>w</sup>aC</b> |

## 4. THE INTERNAL RECONSTRUCTION OF PRE-NIZAA A

It is evident that Coda Weakening and Vowel Lowering provide us with important information for the internal reconstruction of earlier stages of Nizaa. In the internal reconstructions, we shall examine two earlier stages of the language, first, Pre-Nizaa A, and then the even earlier Pre-Nizaa B.

### 4.1. The vowel system and the coda consonant system of Pre-Nizaa A

We shall start with the reconstruction of the vowel system and the coda consonant system of Pre-Nizaa A. Here Coda Weakening plays an important part. In (1), we saw that the Weak Grades of the labials /b/ and /m/ are semivowels, the oral semivowel /w/ and the nasalized semivowel /w̃/ respectively. From a phonetic point of view, it is plausible to assume that the Weak Grades of /n/, /g/ and /ŋ/ were also semivowels at an earlier stage. In table 5, the postulated Pre-Nizaa A forms are presented in column II. Notice particularly the following reconstructions:



- I.  $*/\tilde{y}/$ , a nasalized, front, unrounded semivowel, was the Weak Grade of  $*/n/$ ;
- II.  $*/u/$ , an oral, back, unrounded semivowel, was the Weak Grade of  $*/g/$ ;
- III.  $*/\tilde{u}/$ , a nasalized, back, unrounded semivowel, was the Weak Grade of  $*/\eta/$ .

**Table 5**  
**Reconstruction of the Coda System**

I.	II.	III.	IV.
Cin	*Ci $\tilde{y}$		> C $\tilde{y}$
Cen	*Ce $\tilde{y}$		> C $\tilde{e}$
Can	*Ca $\tilde{y}$	> *Ce $\tilde{y}$	> C $\tilde{e}$
C <sup>w</sup> an	*C <sup>w</sup> a $\tilde{y}$	> *C <sup>w</sup> e $\tilde{y}$	> C <sup>w</sup> $\tilde{e}$
Con	*Co $\tilde{y}$	> *C <sup>w</sup> e $\tilde{y}$	> C <sup>w</sup> $\tilde{e}$
Cun	*Cu $\tilde{y}$	> *C <sup>w</sup> i $\tilde{y}$	> C <sup>w</sup> $\tilde{y}$
Cig	*Ci $\tilde{u}$	> *C $\tilde{u}$	> C $\tilde{u}$
Ceg	*Ce $\tilde{u}$	> *C $\tilde{y}$	> C $\tilde{y}$
Cag	*Ca $\tilde{u}$	> *C $\tilde{u}$	> C $\tilde{u}$
Cog	*Co $\tilde{u}$	> *C $\tilde{u}$	> C $\tilde{u}$
Cug	*Cu $\tilde{u}$		> C $\tilde{u}$
Ci $\eta$	*Ci $\tilde{u}$	> *C $\tilde{u}$	> C $\tilde{u}$
Ce $\eta$	*Ce $\tilde{u}$	> *C $\tilde{y}$	> C $\tilde{y}$ > C $\tilde{u}$
Ca $\eta$	*Ca $\tilde{u}$	> *C $\tilde{u}$	> C $\tilde{u}$
Co $\eta$	*Co $\tilde{u}$	> *C $\tilde{u}$	> C $\tilde{u}$
Cu $\eta$	*Cu $\tilde{u}$		> C $\tilde{u}$

*Note:* Column I: Modern Nizaa forms with Strong Grade coda consonants.  
 Column II: Pre-Nizaa A forms with Weak Grade coda consonants.  
 Column III: Forms with Weak Grade coda consonants and vowels assimilated in quality to the following semivowel, constituting an intermediate stage between Pre-Nizaa A and Modern Nizaa.  
 Column IV: Modern Nizaa forms with Weak Grade coda consonants, where the vowels and semivowels have merged into long vowels.

These reconstructions are phonetically plausible, and they also give a plausible development from Pre-Nizaa A to Modern Nizaa.

On the basis of these reconstructions of the coda system, we are able to postulate a vowel system for Pre-Nizaa A which is much simpler than that of Modern Nizaa. The postulated Pre-Nizaa A vowel system is presented in table 6, with 5 short oral vowels, 5 long oral vowels and probably no nasalized vowels.

**Table 6**  
**The vowels of Pre-Nizaa A**

<i>Short, oral</i>	<i>Long, oral</i>	<i>Long, nasalized</i>
*i      *u	*ii   *uu?	
*e      *o	*ee   *oo	
*a	*aa	(*ãã)

The nasalized vowel \*/ãã/ is added in parentheses; it is the only nasalized vowel that does not participate in the Coda Weakening process in modern Nizaa. Still, there are reasons to believe that it was not a part of the phonology of Pre-Nizaa A. As will be shown in 5.2, Modern Nizaa syllables of the type /C<sup>w</sup>ãã/ probably correspond to Pre-Nizaa A \*/C<sup>w</sup>au̯/. Modern Nizaa syllables of the type /Cãã/, that is syllables with a non-labialized onset consonant followed by /ãã/, on the other hand, are more problematic. It is apparently impossible to “get rid of it” in Pre-Nizaa A through internal reconstruction. It is only a comparison with other languages that may give us a idea about its historical origin. The correspondences (i) Modern Nizaa /p<sup>h</sup>ãã/ ‘animal, cow, meat’ vs. Proto-Bantu \*/-(p)àmà/ ‘animal, meat’, and (ii) Modern Nizaa /hãã/ ‘to yawn’ vs. Vute /hàm/ ‘to yawn’ indicate a change \*/am/ > /ãã/, but it remains to be seen if it is possible to decide whether this change took place before or after Pre-Nizaa A.

A question mark has been placed after \*/uu/. Although this vowel is the output of the Coda Weakening, (cf. column IV in table 5), it is plausible to assume that not all occurrences of /uu/ in Modern Nizaa are the result of Coda Weakening. At least from a phonological point of view, one would expect Pre-Nizaa A to have had five long and oral vowels when it had five short and oral vowels. But admittedly, there are apparently no decisive arguments for the postulation of Pre-Nizaa A \*/uu/ to be found in internal reconstruction. If comparisons with other languages are allowed at this stage in our reasoning, it is worth pointing to the correspondence between Modern Nizaa /kúú/ ‘to die’ and Proto-Bantu \*/-kú-/ ‘to die’, which apparently supports a Pre-Nizaa A reconstruction \*/kúú/ ‘mourir’ instead of \*/kúu/. (The representation of the Proto-Bantu vowels is seen in 6.3.)

Finally, the reason for not including the long, front open-mid vowel /ɛɛ/ in the Pre-Nizaa A vowel system needs a separate explanation. At least the following two facts support the postulation of a Pre-Nizaa A vowel system without /ɛɛ/.

First, there is a generation difference in the use of /ɛɛ/. In nouns, the younger generation, e.g., Hamadicko Daniel, uses /ɛɛ/ where the older generation in most cases uses the VC sequence /ar/, (cf. /bɛɛ/ vs. /bar/

'cloud'). These are clear indications that a change *\*/ar/* > */εε/* has taken place in Nizaa. The fact that there is generation difference today, combined with loanwords like /jéétu`/ 'file' < Fulfulde *jarto* indicate that it has taken place fairly recently, and probably after Pre-Nizaa A. In an even more recent influx of loanwords, even the younger generation has */ar/*, (cf. /martô/ 'hammer' < French *marteau*).

Secondly, Modern Nizaa has nouns exhibiting the following morpho-phonological alternations: */εε/* is found in the base form, while */ar/* is found when the (probably enclitic) locative element is added to it. In most cases, this locative element has the form */na`/*, cf. the nouns in (7).

(7)	NOUN	NOUN+LOCATIVE	
	bám	bámná	'yam'
	cii	ciina`	'porridge'

With nouns ending in */n/*, however, a degemination takes place. When the locative element is added, for example, to /bín-/ 'earth, ground', the resulting form is not *\*/bínna`/*, but */bína`/*. Nouns ending in */r/* exhibit the same degemination, but in this case the locative element must be assumed to have the form */ra`/* instead of */na`/*. Therefore, when the locative element is added to, for example, /gùr/ 'rainy season', the resulting form is not *\*/gùrrà/*, but */gùrà/*. Finally, (8) shows what happens to nouns ending in */εε/*:

(8)	NOUN	NOUN+LOCATIVE	
	bεε	bara`	'cloud'
	jèè	jàra`	'kidney'
	g <sup>w</sup> εε	g <sup>w</sup> àra`	'tree trunk'

The alternations in (8) get a natural diachronic explanation if an earlier stage *\*/ar/* is postulated in all these words: *\*/bar/*, *\*/jàr/* and *\*/g<sup>w</sup>àr-/*, in accordance with the older informants' pronunciation of Modern Nizaa. Then the noun+locative complexes were formed in the same way as for /gùr/ 'rainy season' above, giving forms identical to those in (8). In Modern Nizaa, the younger generation's pronunciation *\*/ar/* has changed into */εε/*, but only when *\*/r/* was a coda consonant. In the noun+locative complexes, on the other hand, there is a syllable boundary between */a/* and */r/*, so that */r/* is an onset consonant, and this has prevented the change *\*/ar/* > */εε/*.

Still, it should be added that there are several unclear details in the change *\*/ar/* > */εε/*.

Let us now consider table 7, where the coda system of Pre-Nizaa A is presented.

**Table 7**  
**The coda consonants of Pre-Nizaa A**

<b>*b</b>	<b>*d</b>	<b>*g</b>	<b>*m</b>	<b>*n</b>	<b>*ŋ</b>
<b>*w</b>	<b>*(y)</b>	<b>*uq</b>	<b>*w̄</b>	<b>*ȳ</b>	<b>*ūq̄</b>

It has been assumed that /r/ of Modern Nizaa corresponds to \*/d/ in Pre-Nizaa A. By postulating \*/d/ instead of \*/r/, we obtain a more symmetrical phonological system, where there is an oral stop corresponding to each of the nasal stops.

But then another question automatically arises: Was there also a Weak Grade of \*/d/ in Pre-Nizaa A? It seems that the answer may be “yes”, and that the weak stage was \*/y/. There are reasons for the plausibility of the postulation of such a Weak Grade. We shall discuss one of them. First, the coda /y/ is marginal in the Wogomdou dialect of Hamadicko Daniel, but it is found in a few words in the Galim dialect (informant: Koulagna Simon), confer (9).

- |     |                        |                         |  |
|-----|------------------------|-------------------------|--|
| (9) | <i>Wogomdou</i>        | <i>Galim</i>            |  |
|     | <b>ʃee</b>             | <b>ʃey</b>              | s. ‘taboo word’                              |
|     | <b>s<sup>w</sup>ēe</b> | <b>s<sup>w</sup>ēy-</b> | s. ‘flour made of peanuts and grilled maize’ |

These words may indicate a more regular occurrence of \*/y/ in Pre-Nizaa A than in Modern Nizaa; however, a more thorough study of dialect differences in Modern Nizaa is needed. Possible Pre-Nizaa A reconstructions for these words may be \*/sey/ ‘taboo word’ and \*/sōy-/ ‘flour made of peanuts and grilled maize’. (On the relation between /s/ and /ʃ/, cf. 4.2.)

#### 4.2. The onset consonant system of Pre-Nizaa A

In table 8 the onset system of Pre-Nizaa A is presented. This system differs minimally from Modern Nizaa. It has only been neatly arranged in a way that should not be very controversial.

**Table 8**  
**The onset consonants of Pre-Nizaa A**

<i>Labial</i>	<i>Apical</i>	<i>Laminal</i>	<i>Dorsal</i>	<i>Labial-dorsal</i>
<b>*p</b>	<b>*t</b>	<b>*c</b>	<b>*k</b>	<b>*kp</b>
<b>*p<sup>w</sup></b>	<b>*t<sup>w</sup></b>	<b>*c<sup>w</sup></b>	<b>*k<sup>w</sup></b>	
<b>*b</b>	<b>*d</b>	<b>*j</b>	<b>*g</b>	<b>*gb</b>
<b>*b<sup>w</sup></b>	<b>*d<sup>w</sup></b>	<b>*j<sup>w</sup></b>	<b>*g<sup>w</sup></b>	
<b>*ɸ</b>	<b>*ɸ</b>			
<b>*ɸ<sup>w</sup></b>	<b>*ɸ<sup>w</sup></b>			
<b>*mb</b>	<b>*nd</b>	<b>*nj</b>	<b>*ŋg</b>	<b>*ŋmgb</b>
<b>*mb<sup>w</sup></b>	<b>*nd<sup>w</sup></b>	<b>*nj<sup>w</sup></b>	<b>*ŋg<sup>w</sup></b>	
<b>*m</b>	<b>*n</b>	<b>*ɲ</b>	<b>*ŋ</b>	
<b>*m<sup>w</sup></b>	<b>*n<sup>w</sup></b>	<b>*ɲ<sup>w</sup></b>	<b>*ŋ<sup>w</sup></b>	
		<b>*nz</b>		
		<b>*nz<sup>w</sup></b>		
		<b>*s</b>		
		<b>*s<sup>w</sup></b>		
		<b>*z</b>		
		<b>*z<sup>w</sup></b>		
	<b>*l</b>	<b>*y</b>	<b>*w</b>	
	<b>*l<sup>w</sup></b>	<b>*y<sup>w</sup></b>		
	<b>*r</b>			
	<b>*r<sup>w</sup></b>			

Notice the following points:

I. The glottal phonemes have been omitted. They seem to have come into the language quite recently through borrowing, with the exception of the Wogomdou pronoun /ʔu/ ‘they/them’, where an isolated sound change *\*/ɸ/ > /ʔ/* seems to have taken place. Notice the form *\*/ɸu/* found in some other dialects, which is more archaic if we assume an etymological connection with Proto-Bantu 3rd person plural forms starting with *\*/ɸ/*.

II. The phoneme */x/*, only found in the onomatopoeic */xag/* ‘to clear the throat’, has been omitted. It is impossible to say anything about the age of this word, but the phoneme */x/* is of peripheral interest in the diachronic study of the language, if it is assumed that */x/* is used in this word simply to render the sound of clearing the throat.

III. If the Modern Nizaa onset system is considered again (cf. table 2), some striking phonological gaps are discovered: The labial phonemes */p/* and */f/*, */b/* and */v/*, */mb/* and */mv/* have no labialized counterparts, while the

other labial phonemes, and most other phonemes with other places of articulation, have. This has an evident explanation: /t/ is the original \*/p<sup>w</sup>/, /v/ is the original \*/b<sup>w</sup>/ and /mv/ is the original \*/mb<sup>w</sup>/. These reconstructions are confirmed by loanwords. Notice, for example, /mvum/ 'Mbum' (an ethnic group, one of the neighbors of the Nizaa people), indicating the sound change \*/mb/[mb<sup>w</sup>] > /mv/ / \_ /u/.

IV. The lamino-postalveolar fricatives /ʃ/ and /ʃ<sup>w</sup>/, which have an unclear status in Modern Nizaa, have been omitted. There is a considerable amount of variation between /s/ and /ʃ/, and between /s<sup>w</sup>/ and /ʃ<sup>w</sup>/. All speakers seem to alternate freely between /s(ʷ)/ and /ʃ(ʷ)/ in some words, for example, between /sóóje/ and /ʃóóje/ 'soldier', from English *soldier* via Fulfulde *sooje* (ejo). There is, moreover, a considerable amount of variation from one individual to the other; confer, for example, /sùú/ and /ʃùú/ 'god' or /s<sup>w</sup>áá/ and /ʃ<sup>w</sup>áá/ 'morning'. There is apparently no basis for postulating an opposition \*/s(ʷ)/ vs. \*/ʃ(ʷ)/ in Pre-Nizaa A.

## 5. THE INTERNAL RECONSTRUCTION OF PRE-NIZAA B

Now we shall go to Pre-Nizaa B, from an earlier period than Pre-Nizaa A, in an attempt to reconstruct an even earlier stage of the language.

### 5.1. The coda consonants of Pre-Nizaa B

Let us first consider table 9 where the postulated coda consonants of Pre-Nizaa B are presented. This reconstruction of Pre-Nizaa B from Pre-Nizaa A is in no way a revolutionary step—it has simply been assumed that Coda Weakening, a morphophonological alternation in Modern Nizaa and Pre-Nizaa A, was an allophonic alternation in Pre-Nizaa B.

Table 9  
The coda consonants of Pre-Nizaa B

*/b/ [b/p, w]	*/d/ [d/t, y]	*/g/ [g/k, ʷ]
*/m/ [m, ʷ]	*/n/ [n, ɣ]	*/ŋ/ [ŋ, ʷ]

The alternation presented in table 9 presupposes the allophonic rule in (10), which is a rule changing stops into semivowels in intervocalic position.

(10) STOP → SEMIVOWEL / V \_ V

The reason why this rule was not allophonic any more in Pre-Nizaa A, was that an apocope rule eliminated the phonetic conditioning, confer (11).

(11)	PRE-NIZAA B	apocope	PRE-NIZAA A
	*CVb [CVb/p]	>	*CVb
	*CVbV [CVwV]	>	*CVw
	*CVg [CVg/k]	>	*CVg
	*CVgV [CVɥV]	>	*CVɥ
	*CVm [CVm]	>	*CVm
	*CVmv [CVwV]	>	*CVw
	*CVn [CVn]	>	*CVn
	*CVnV [CVyV]	>	*CVy
	*CVŋ [CVŋ]	>	*CVŋ
	*CVŋV [CVɥV]	>	*CVɥ

What evidence is there for these hypotheses? There are some interesting correlations in the irregular noun plurals. Let it first be mentioned that the category of number is not obligatorily expressed in most Nizaa nouns, although the plural suffixes /wu/ (for humans) and /ya`/ (for non-humans) may be added optionally. However, there is a small group of nouns, most of them denoting humans, for which the expression of number is obligatory. Some of these are shown in (12). What is interesting about these plurals in this connection is that all of them exhibit both Coda Weakening and Vowel Lowering; therefore, it is highly plausible that Coda Weakening and Vowel Lowering in these forms have the same diachronic explanation. By postulating a plural suffix /a/ in Pre-Nizaa B, an intervocalic environment for Coda Weakening is created, (cf. (10)), and it becomes possible to interpret Vowel Lowering as an assimilation rule, which we may call an “a-umlaut”. This hypothesis is strengthened by the fact that it appears possible to identify the suffix /a/ with the Benue Congo class 6 plural affix.

(12) *Irregular plurals (all have coda weakening and vowel lowering)*

SG.	PL.	
bagrì	b`λλ	‘clothes’
mvúú	mváa	‘wine’
ndũn`	nd`wěě	‘man’
nitam	nitaŵ	‘person’
nìi	nàw	‘person’
njan`	njěě	‘woman’
tũũ	t`λλ	‘slave’
ŋun	ŋ`wěě	‘child’
yéw	yáw	‘thing’

In (13), an indication is provided as to how the relationship between the singular and plural of the noun meaning ‘man’ may be construed:

(13)	<i>Stage I</i> <i>Pre-Nizaa B</i>	<i>Stage II</i> <i>V-Lowering</i>	<i>Stage III</i> <i>C-Weakening</i>	<i>Stage IV</i> <i>Pre-Nizaa A</i> <i>Apocope</i>	<i>Stage V</i> <i>Modern Nizaa</i>
SG	*ndũn-				>ndũn-
PL	*ndũn-a	>nd <sup>w</sup> ān-a	>*nd <sup>w</sup> āy-a	>*nd <sup>w</sup> āy-	>nd <sup>w</sup> ēē

## 5.2. The onset system of Pre-Nizaa B

Now we move on to the onset consonant system of Pre-Nizaa B, which is presented in table 10. A system with only 28 phonemes has been postulated, which is less than half the number of onset phonemes in Modern Nizaa.

**Table 10**  
The onset consonants of Pre-Nizaa B

<i>Labial</i>	<i>Apical</i>	<i>Laminal</i>	<i>Dorsal</i>	<i>Labial-dorsal</i>
*p	*t	*c	*k	*kp
*b	*d	*j	*g	*gb
*ɸ	*ɖ			
*mb	*nd	*nj	*ŋg	*ŋmgb
*m	*n	*ɲ	*ŋ	
		*nz		
		*s		
		*z		
	*l		*y	*w
	*r			

The Pre-Nizaa B system differs from that of Pre-Nizaa A in one way only: Pre-Nizaa B has no labialized consonant phonemes. The argument for postulating a system without labialized phonemes are presented in the reconstructions in (14). As can be seen in the rightmost column, Modern Nizaa has labialized consonants followed by vowels of four different qualities—some oral, some nasalized. “Labialized consonant” means here a consonant with distinctive labialization.



(14) *Vowel Lowering*

<i>Pre-Nizaa B</i>	<i>Pre-Nizaa A</i>	<i>Modern Nizaa</i>
*COba	*C <sup>w</sup> aw	C <sup>w</sup> aw
*COma	*C <sup>w</sup> a <sup>w̃</sup>	C <sup>w</sup> a <sup>w̃</sup>
*COda	*C <sup>w</sup> ay	C <sup>w</sup> εε
*CONa	*C <sup>w</sup> a <sup>ỹ</sup>	C <sup>w</sup> ε̃ε̃
*COga	*C <sup>w</sup> au	C <sup>w</sup> aa
*COŋa	*C <sup>w</sup> aũ	C <sup>w</sup> āā
*CodU	*Coy	C <sup>w</sup> ee
*ConU	*Co <sup>ỹ</sup>	C <sup>w</sup> ε̃ε̃
*CunU	*Cu <sup>ỹ</sup>	C <sup>w</sup> īī

*Note:* C = any consonant; O = any rounded vowel; U = any non-open vowel.

In Pre-Nizaa A, on the other hand, labialized vowels are followed by /a/ only. It is evident that all cases of distinctive labialization are the result of Vowel Lowering. Therefore, in Pre-Nizaa B, we are obliged to postulate a consonant system without any labialized phonemes.

The reconstructions in (14) also illustrate another point. Modern Nizaa syllables of the types /C<sup>w</sup>aa/ and /C<sup>w</sup>āā/ are postulated to have developed via Pre-Nizaa A \*/C<sup>w</sup>au/ and \*/C<sup>w</sup>aũ/ respectively from Pre-Nizaa B \*/COga/ and \*/COŋa/ respectively. This explains two Modern Nizaa syllable types by connecting them to syllable types that would, otherwise, have to be judged as non-existent in Pre-Nizaa A. Two Modern Nizaa words that are particularly interesting in this connection are /b<sup>w</sup>aa/ ‘hand, arm’ and /t<sup>w</sup>āā/ ‘ear’, for which we are forced to postulate the reconstructions in (15).

(15) MODERN NIZAA	PRE-NIZAA A	PRE-NIZAA B	
b <sup>w</sup> aa	*b <sup>w</sup> au	*bOg-a/*bug-a	‘hand, arm’
t <sup>w</sup> āā	*t <sup>w</sup> aũ	*tO ŋ-a	‘ear’

Both words may be old plural forms of the same type as those presented in (12) above. Since both words are of a kind often occurring in the plural, it is not unexpected that the plural form should be the only one to survive (cf. Tiersma’s 1982 discussion of “local markedness”). The vowel symbol \*/O/ is used in (15) because we do not know which of the two vowels \*/u/ and \*/o/ occurred in these words in Pre-Nizaa B. In the case of /b<sup>w</sup>aa/, however, we may perhaps choose the reconstruction /bug-a/, because what may be the original singular form \*/bug/ is probably the element /bug/ found in the words /bugdūr/ ‘[hand/arm] left’ and /bugl55/ ‘[hand/arm] right’.

Finally, the following reconstruction have been included in (14): Pre-Nizaa B \*/CodU/ > Pre-Nizaa A \*/Coy/ > Modern Nizaa /C<sup>w</sup>ee/. It should be mentioned, however, that the Pre-Nizaa A alternation between \*/d/ and \*/y/ is still uncertain.

## 6. A PHONOLOGICAL COMPARISON OF PROTO-BANTU AND PRE-NIZAA B

To complete this article, a short and preliminary report is given on a comparison the author is carrying out between Pre-Nizaa B and Meeussen's (1967, 1969/1980) and Guthrie's (1967–71) Proto-Bantu. In cases in which Meeussen's and Guthrie's reconstructions differ, Meeussen's forms have been chosen. This comparison seems to support the internal reconstruction of Pre-Nizaa A and B.

### 6.1. A comparison between $C_1$ in Proto-Bantu and the onset in Pre-Nizaa B

First, consider table 11, which is a comparison between  $C_1$  in Proto-Bantu and the onset of Pre-Nizaa B; the numbers under *References* refer to examples in the appendix.

**Table 11**  
**A comparison between  $C_1$  in Proto-Bantu and Pre-Nizaa B**

<i>Proto-Bantu</i>	<i>Pre-Nizaa B</i>	<i>References</i>
*p	*p	28
*t	*t	33,34,35,36,37,38
*c	*c	5,8
*k	*k	16,17,18,19
*k	*I-k > *c	4,6,7,9
*b	*b	1,2,3
*d	*d	10,11,12
*d	*l	20,21,22
*j	*s	29,30,31,32
*j	*y	39,40,41
*j	*ɲ	26,27,(25?)
*g	*g	13,14,15
*m	*m	23
*n	*n	24
*ɲ	*ɲ	(25?)

*Note:* Pre-Nizaa B \*/l/ = any front, non-open vowel, i.e., /l/ or /e/.

The main differences between Proto-Bantu and Pre-Nizaa B in table 11 can be summed up in the following manner:

- I. Proto-Bantu \*/j/ corresponds to Pre-Nizaa \*/s/, \*/y/ and \*/ɲ/.
- II. Proto-Bantu \*/d/ corresponds to the Pre-Nizaa B \*/d/ and \*/l/.

## 6.2. A comparison between $C_2$ in Proto-Bantu and the coda in Pre-Nizaa B

Now let us consider table 12. As previously mentioned, the numbers under *References* refer to examples in the appendix.

**Table 12**  
**A comparison of  $C_2$  in Proto-Bantu and Pre-Nizaa B**

PROTO-BANTU	PRE-NIZAA B	REFERENCES
*p	*b	18
*b	*b	5,13
*t	*d	17
*d	*d	6,10,11,15,23,27,29,31,39
*c	*d	41
*j	*d	40
*k	*g	16,22
*g	*ϕ?	36
*m	*m	12,20,21,28,30,35
*mp	-	
*mb	*m	2
*n	*n	1,7,26,33
*nt	-	
*nd	-	
*ɲ	-	
*nc	-	
*nj	-	
*ϕ	*ɲ	(8?),24,38
*ɲk	*ɲ	32
*ɲg	*ɲ	4,37

The Pre-Nizaa B coda system is simpler than the Proto-Bantu  $C_2$  system:

- I. Proto-Bantu has a voicing opposition (\*p/ vs. \*/b/; \*/t/ vs. \*/d/; \*/c/ vs. \*/j/; \*/k/ vs. \*/g/) that Pre-Nizaa B lacks.

- II. Proto-Bantu has a place of articulation opposition (*\*/t/* vs. *\*/c/*; *\*/d/* vs. *\*/j/*) that Pre-Nizaa B lacks.
- III. Proto-Bantu has nasal+plosive clusters (*\*/mb/*, *\*/ŋk/*, *\*/ŋg/*) corresponding to nasals in Pre-Nizaa B.

All these differences can be interpreted as simplifications that have taken place in Nizaa—simplifications that are phonetically plausible.

On one point, Pre-Nizaa B is more conservative than Proto-Bantu: Pre-Nizaa B has a dorsal nasal (*\*/ŋ/*) corresponding to *\*ϕ* in Proto-Bantu.

### 6.3. *A comparison between the vowels in Proto-Bantu and Pre-Nizaa B*

Finally, we come to the vowels. Pre-Nizaa B has nothing corresponding to *V*<sub>2</sub> in Proto-Bantu. The *V*<sub>1</sub> system, on the other hand, is quite similar to that of Proto-Bantu (cf. table 13).

**Table 13**  
**A comparison of *V*<sub>1</sub> in Proto-Bantu and Pre-Nizaa B**

PROTO-BANTU	PRE-NIZAA B	REFERENCES
<i>*i</i>	<i>*i</i>	20,26,29,40,41
<i>*e</i>	<i>*e</i>	14,33,39
<i>*ɛ</i>	<i>*e</i>	5
<i>*u</i>	<i>*u</i>	(9),12,19 (exception: 18)
<i>*o</i>	(i) before labials: <i>*o</i>	2,3,21,30,34,35
	(ii) elsewhere; <i>*u</i>	7,8,15,22,23,24,27 (exception:36)
<i>*ɔ</i>	<i>*o</i>	31,37
<i>*a</i>	<i>*a</i>	1,4,5,10,11,13,16,17,25,28

*Note:* The numbers under “References” refer to words in the appendix.

The main difference is: Proto-Bantu has an opposition between close-mid and open-mid vowels (*\*/e/* vs. *\*/ɛ/*; *\*/o/* vs. *\*/ɔ/*) that Pre-Nizaa B lacks.

#### 6.4. Conclusion

We can conclude from the comparisons made in 6.1, 6.2 and 6.3 that the segmental phonological differences between Proto-Bantu and Pre-Nizaa B are few in number. In an attempt to find arguments for or against classifying Nizaa as a Bantu language we must conclude that most phonemes of Pre-Nizaa B seem to be derivable from Proto-Bantu if only a few sound changes are postulated, all of which are phonetically plausible. It is only in the cases where Proto-Bantu seems to have innovations not shared by Pre-Nizaa B that problems are encountered:

- I. The Proto-Bantu  $C_1$  phoneme \*/d/ corresponds to the two Pre-Nizaa B phonemes \*/d/ and \*/l/. This can be interpreted as a Proto-Bantu innovation: merger of two phonemes kept apart in Nizaa.
- II. The coda phoneme \*/ŋ/ in Pre-Nizaa B corresponds to Proto-Bantu \*/ϕ/. Once again a Proto-Bantu innovation: loss of a phoneme that is retained in Nizaa.
- III. The Proto-Bantu  $C_1$  phoneme \*/j/ corresponds to the three Pre-Nizaa B phonemes \*/s/, \*/y/ and \*/ɲ/. This can also be interpreted as a Proto-Bantu innovation: merger of three phonemes kept apart in Nizaa.

These innovations, however, do not show that Nizaa is not a Bantu language because they are not shared by Proto-Eastern Grassfield (PEG), as reconstructed by Elias, Leroy and Voorhoeve (1984). (For the first innovation, confer, for example, PEG \*/dàl/ 'bridge' (PB \*/-dàdɔ/, PN-B \*/-dàd/) versus PEG \*/-lóm-/ 'to bite' (PB \*/-dóm-/ , PN-B \*/-lóm/), and for the second confer for example PEG \*/-tóŋ/ 'ear' (PB \*/-tói/, PN-B \*/-tÓŋa/)). These innovations may instead define "Narrow Bantu", that is a sub-branch of the Bantu languages in a wider sense.

The third apparent Proto-Bantu innovation, PB  $C_1$  \*/j/ versus PN-B \*/s/, \*/y/ and \*/ɲ/, is more difficult to interpret. Generally Pro-Bantu  $C_1$  \*/j/ corresponds to PEG \*/j/ (for example PB \*/-jóm-/ 'become dry', PEG \*/-jóm-/ 'dry up', PN-B \*/-sóm/ 'to be dry'). However, there are interesting exceptions, as in PB \*/-jícɔ/ 'eye', PEG \*/-ít/ 'eye', PN-B \*/-yíd/ 'eye', where PEG lacks a \*/j/ in a word in which PN-B has \*/y/. The problems pertaining to the reconstruction of Meeussen's PB \*/j/ versus Guthrie's PB \*/j/ and \*/y/ are well-known, and it, therefore, seems best to avoid drawing hasty conclusions concerning the relationship between Nizaa and the Bantu languages on the basis of this particular point. Consequently, there are to date no convincing phonological criteria for distinguishing Nizaa from the Bantu languages.

## APPENDIX: A SELECTION OF NIZAA – PROTO-BANTU CORRESPONDENCES

In this appendix, a small number of words are included as illustrations of the regular phonological correspondences presented in 6 above. The list is far from exhaustive. No attempt has been made here to reconstruct a Pre-Nizaa toneme system, although words have generally been chosen in which the tonal correspondences are regular. The diachronic tonology of Nizaa will be discussed in Endresen (forthcoming).

## Abbreviations:

MN = Modern Nizaa; PN = Pre-Nizaa; PB = Proto-Bantu of Meeussen (1967, 1969/1980); PBg = Proto-Bantu of Guthrie (1967–71).

/A/ = any vowel; /U/ = any non-open vowel, i.e. /i/, /e/, /u/, or /o/; /I/ = any non-open front vowel, i.e. /i/ or /e/; O = any rounded vowel, i.e. /u/ or /o/.

1. MN /bēē/ 'arrow', PN-B \*/ban-A/; PB \*/-bànò/ 'shaft (of arrow)'.
2. MN /bom/ 'to mason, build with bricks, mud', PN-B \*/bom/; PB \*/-bómb-/ 'form, mould'.
3. MN /bów/ 'dog', PN-B \*/bób-U/; PB \*/-bóà/ 'dog'.
4. MN /cāā/ 'guinea-fowl', PN-B \*/caŋ-À/ < \*/I-kaŋ-À/; PB \*/-káŋgà/ 'guinea-fowl'.
5. MN /cèw/ 'shaft (of arrow)', PN-B \*/cèb-Û/; PB \*/-cèbè/ 'arrow'.
6. MN /cē/ 'crab, louse, flea', PN-B \*/ađ-/ < \*/Ī-kád-/; PB \*/-kádá/ 'crab'.
7. MN /cún/ 'tree', PN-B \*/cún/ < \*/Ī-kún/; PB \*/-kóni/ 'firewood'.
8. MN /cuŋ/ 'urinate', PN-B \*/cuŋ/; MN /cún/ 'urine', PN-B \*/cún-/; PB \*/-co/ 'urine'; PB \*/-co-b(ad)-/ 'urinate'.
9. MN /c'wáa/ 'death', PN-B \*/c'Ó-a/ < \*/Ī-k'Ó-a/ (probably \*/Ī-kú(ú)-a/); PBg \*/-kú/ 'death'. Cf. no. 19 MN /kúú/ 'to die'.
10. MN /d'ēē/ 'to be tired', PN-B \*/d'ád/; PB \*/d'áád-/ 'to lie down, spend night, sleep'.
11. MN /d'ēē/, /d'ār/ 'bridge', PN-B \*/d'ād/; PB \*/-d'ādò/ 'bridge'.
12. MN /dum/ 'to roar, thunder (S: rain)', PN-B \*/dum/; PB \*/-dùm-/ 'to roar, thunder'.
13. MN /gab/ 'to divide', PN-B \*/gab/; PB \*/-gàb-/ 'to divide, distribute'.
14. MN /ge/ 'to go', PN-B \*/ge/; PB \*/-gè-/ 'to go'.
15. MN /gur/ 'to buy', PN-B \*/gud/; PB \*/-gòd-/ 'to buy'.
16. MN /kag/ 'to tie up', PN-B \*/kag/; PBg \*/-kàk-/ 'to tie up, untie'.
17. MN /kaŋkè/ 'headpad', PN-B \*/(kaŋ-)kad-/; PB \*/-kátà/ 'headpad'.
18. MN /h'w-/ 'bone', PN-B \*/h'b-U/; PB \*/-kúpà/ 'bone'.
19. MN /kúú/ 'to die', PN-B \*/kúú/; PB \*/-kú-/ 'to die'.
20. MN /lím/ 'to extinguish', PN-B \*/lím/; PB \*/-dím-/ 'to extinguish'.
21. MN /lóm/ 'to bite', PN-B \*/lóm/; PB \*/-dóm-/ 'to bite'.
22. MN /lug/ 'to weave', PN-B \*/lug/; PB \*/-dòk-/ 'to plait'.

23. MN /mur`/ 'dawn', PN-B \*/mud`-/; PB \*/-mòdè-k-/ 'to give light'.
24. MN /nùũ/ 'mouth', PN-B \*/nùŋ-Û-/; PB \*/-nòà/ 'mouth'.
25. MN /ɲàà/ 'animal, cow, meat', PN-B \*/ɲàm-À/?; PB \*/-(ɲ)àmà/, \*/-(j)àmà/ 'animal, meat'.
26. MN /ɲĩĩ/ 'tooth', PN-B \*/ɲín-U/; PB \*/-jínò/ 'tooth'.
27. MN /ɲúr-/ 'nose', PN-B \*/ɲúd-/; PB \*/(j)ódò/ 'nose'.
28. MN /pám/ 'to shout', PN-B \*/pám/; PBg \*/-pám-/ 'to shout'.
29. MN /sír/ 'black', PN-B \*/síd/; PB \*/-jíd-ò/ 'dark, black', \*/-jíd-/ 'become dark, black'.
30. MN /sóm/ 'to be dry', PN-B \*/sóm/; PB \*/-jóm-/ 'to become dry'.
31. MN /sòr/ 'laughter', PN-B \*/sòd/; MN /sʷεε/ 'to laugh', PN-B \*/sod-a/; PBg \*/-jòdà/ 'laughter'; PB \*/-jòd-/ 'to laugh'.
32. MN /sʷāā/ 'to suck', PN-B \*/sOŋ-a/; PB \*/-jóŋk-/ 'to suck'.
33. MN /tén/ 'to cut', PN-B \*/tén/; PB \*/-tén-/ 'to cut'.
34. MN /tób/ 'to sting (S: e.g. bee)', PN-B \*/tób/; PBg \*/-tób-/ 'to pierce'.
35. MN /tóm/ 'to send', PN-B \*/tóm/; PB \*/-tóm-/ 'to send'.
36. MN /tóó/ 'to draw water', PN-B \*/tóó/; PBg \*/-tóóg-/ 'to draw water'.
37. MN /tṵṵ/ 'to crow (S: cock), to blow (O: flute)', PN-B \*/tón-Ú/; PBg \*/-tónŋ-/ 'to crow'.
38. MN /twāā/ 'ear', PN-B \*/tÓŋa/; PB \*/-tói/ 'ear'.
39. MN /yer`/ 'path, road', PN-B \*/yed`-/; PB \*/-jèdà/, \*/-jèdà/ 'path, road'.
40. MN /yír/ 'to be full', PN-B \*/yíd/; PB \*/-jīj-àd-/ , \*/-jīj-òd-/ 'to become full'.
41. MN /yír-/ 'eye', PN-B \*/yíd-/; PB \*/-jícò/ 'eye'.

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