The noun form classes
-ʈe/i, -nʈe and -nʈɩ in Kulaal
and their probable cognates in Benue-Volta

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Niger-Congo, Llacan Paris 22-05-2025

Acknowledgement 1

Terms used in this paper

"**Noun class**" and "**gender**"

  AGR = "**agreement class**"
        the set of nouns which trigger the same agreement patterns
        their sg/pl pairings define a "**gender**"

- **NF** = "**nominal form class**", **or "noun form class",**
        morphological classes of nouns which bear the same affix(es)

- **noun class = agreement class + nominal form class**

   ◦ adapted from Güldemann & Fiedler 2019
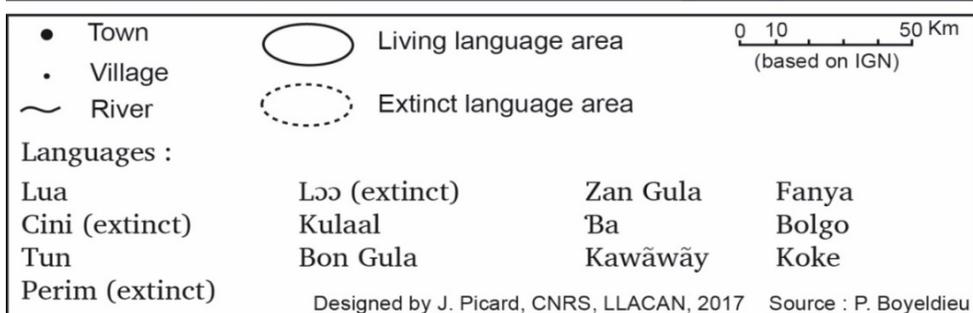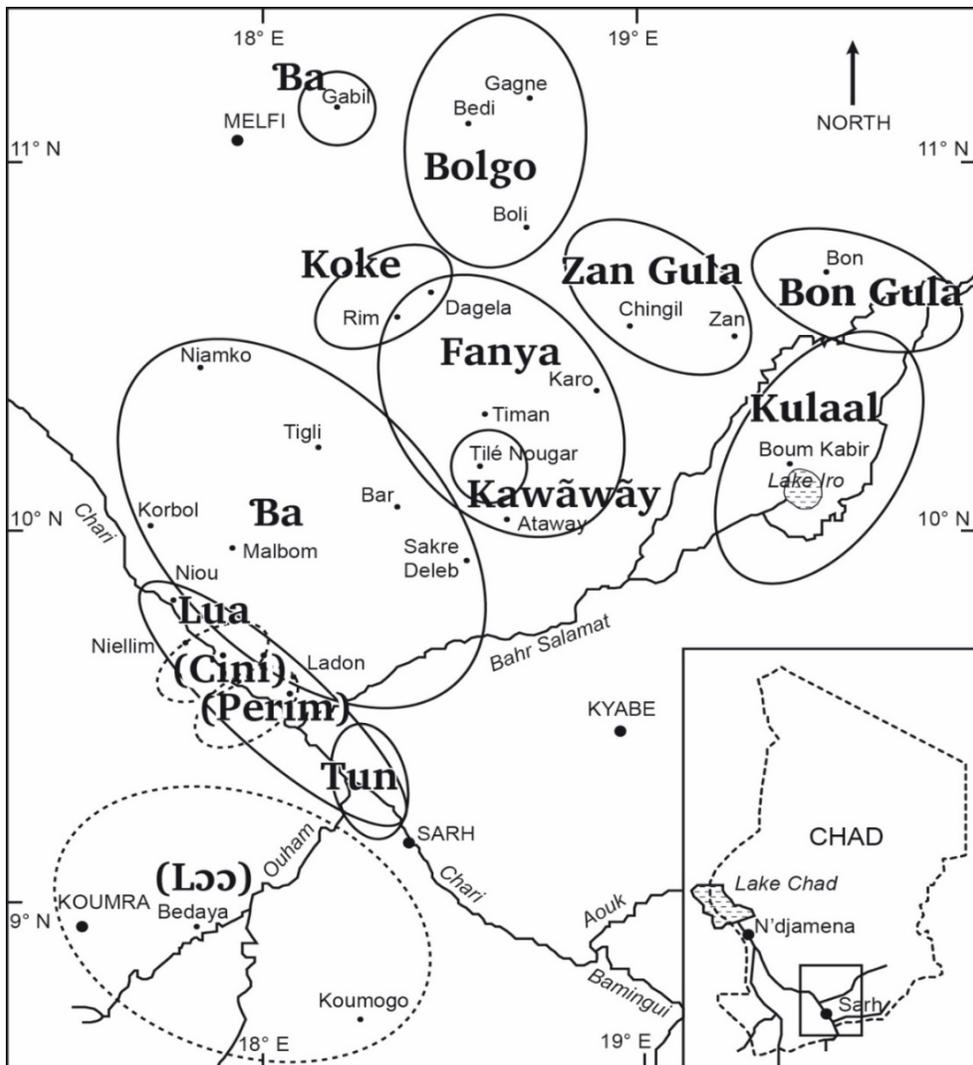
Map 1. Distribution of the Bua languages in Southern Chad

Introduction

In 2018, 2020 and 2023 we demonstrated that the Bua languages, spoken in Southern Chad, show morphological traces of a nominal classification system. Yet only one, **Kulaal**, preserved a functioning class system where particularly the determiners display patterns of grammatical agreement (AGR), while most nouns bear nominal affixes (NF)

Lionnet 2024 revealed that **Fanya** varieties preserved a set of connectives, relating to most of the alleged Proto-Bua AGR classes. However, in Fanya their use in associative constructions is mostly optional: one singular and one plural form have become the default; others are only optionally (and rarely) used.

Other Bua languages merely display alternating internal and/or final segments that chiefly express a contrast of number.

Kulaal : Marqueur de pluriel -(n)ṭe/i/ɪ

genre	sg.	pl.		CS *Bua
	hámm (-mɛ̀)	hóṭí (-kì)	alcool, bière	035
	–	–	cendre(s)	064
	lòòm (-ɛ̀)	–	sommeil/dormir (inf.)	152
	ím (-mɛ̀)	íṭè (-kì)	eau	155
	fɔ̀m (-mɛ̀)	fɔ̀rè (-kì)	farine	203
	héém (-ɛ̀)	héénṭé (-kì)	fumée (tabac)	238
	nóm (-mɛ̀)	nóṭè (-kì)	huile, beurre, graisse	276
	–	–	lait	293
*-m₁_mɛ / *-(n)te_ki	fậm (-mɛ̀)	fɔ̀ṭì (-kì)	lait	294
	–	ɛ̀ɛ̀ṭé (-kì) (sans sg.)	larmes	299
	nnàòm (-mɛ̀)	–	pleuvoir (inf.)	422
	–	lóóṭì (-kì) (sans sg.)	saletés	489
	–	héṭè (-kì) (sans sg.)	sang	492
	lòm (-mɛ̀)	lòṭè (-kì)	sel (végétal)	506
	–	héɛ̀ṭè (-kì) (sans sg.)	urine	573
	–	hậrè (-kì) (sans sg.)	cuvée (= moût + marc)	(i)
	–	tínṭè (-kì) (pl. inv.)	lie de moût (jus de mil germé dans lequel on ne met pas de ferment, boisson d'enfants)	(ii)
	fíí (-kò)	fĩ́nṭè (-kì)	chant	068
	kíú (-kò)	kínṭì (-kì)	front	236
*-U_kʊ / *-(n)te_ki	tíú (-kò)	tíínṭí (-kì)	hanche (au dessus de pásá)	263
	héɛ́ (-kò)	hénṭé (-kì)	queue	455
	wíí (-kò)	wíínṭì (-kì)	soleil, jour	526
*-l_lɛ / *-(n)te_ki	ùl (-lɛ̀)	ùṭè (-kì)	sentier, chemin, route	075
*-A_kɛ ? / *-(n)te_ki	tɔ́ɔ́lì [-kɛ̀ ?]	tóónṭɪ [tóónṭì ?] [-kì ?]	aine, creux de l'aine	(iii)

Thus, the reconstruction of the Proto-Bua nominal classification (BKL 2023) is, as regards AGR classes largely, but not entirely, based on the evidence in Kulaal.

The overview shows the principal nominal suffixes = NF, as they are linked to the various AGR classes.

SINGULAR		PLURAL	
NF	AGR	NF	AGR
*-A	*kɛ	*-i [+ATR]	*ɟi Kul: ki
*-U	*kʊ		*ɲi
*-l	*lɛ	*-n	*tʊ
*-m₁	*mɛ	*-(N)ʧe	
		*-b/ɓ/w(V)	*ɓɛ	(vestigial) **human, kinship terms**
?	*zɔ	*-m₂	(*me ?)	(Vestigial) kinship, relational terms
?	(*kí ?)	*-m₃	(*mo ?)	(Vestigial) 'thing', 'place'

AGR classes are cited in the form of the determiners in Kulaal. Highlighted in green are singular/ plural pairings relevant to this paper

The classes below the dotted line are vestigial

Nominal form classes in Kulaal
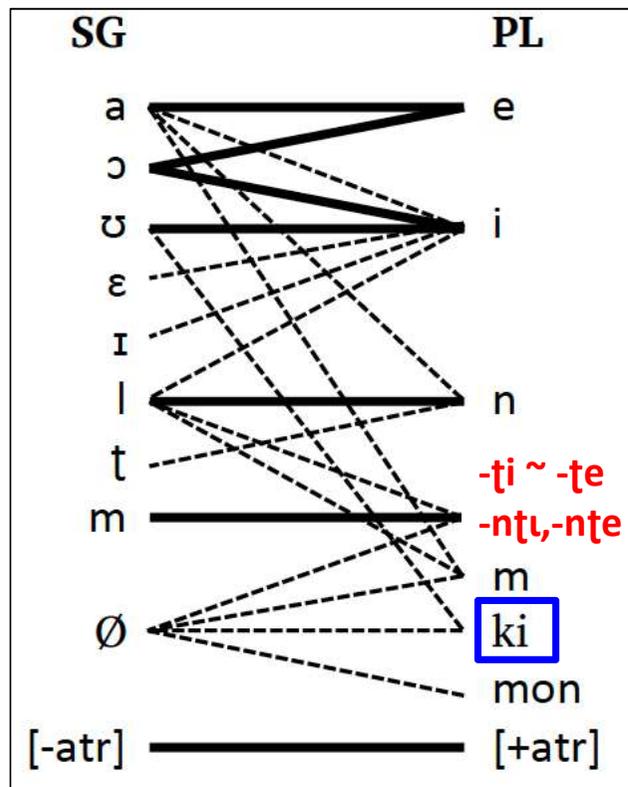
The preceding slide shows that the general nominal suffix of AGR class **ki** (< proto *ɟ**i**) is **-i** [+atr] (< proto*-**i**).

However, among the almost 600 nouns in the largest AGR class **ki**, there are less than 20 nouns with nominal suffixes, which do not formally match with the main class morphemes: AGR **ki** nor the plural suffix *-i.

Most remarkable are the nouns with the **NF**s -ʈi ~ -ʈe, -nʈɩ and -nʈe, which only occur with small, but distinct sets of nouns, respectively.
We can distinguish the following manifestations.

(i) -ʈi ~ -ʈe, (-re), the exclusive plural NF in gender mɛ / ki

- hám̰ / hóʈí   beer
- fà̰m / fo̰-ʈì   milk
- ím / î-ʈè   water
- hḛém̰ / hḛén-ʈé   smoke
- nóm / nó-ʈè   oil, fat
- lòm / lòʈè   salt
- fò̰m / fò̰-rè   flour

Gender mɛ / ki is attested with 7 singular/plural pairs, all denoting liquids or masses.

Their respective 'singulars' are in AGR class mɛ, representing the wide-spread proto noun class *ma. *ma is, however, mostly viewed as a single class (gender).

Such 'plurals' usually refer to different quantities, conglomerations, or varieties.

(ii) -ʈi ~ -ʈe, the nominal suffix of liquids and 'dirt' in AGR class ki

- hḗ-ʈè (kì)   blood
- ḛ̀ḛ̀-ʈé (kì)   tears
- hḛ́ḛ̀-ʈè (kì)   urine
- tín-ʈè (kì)   drink sp.
- lóó-ʈì (kì)   dirt
-

  cf. Fanya: hí-mé 'blood'
                ʔḭ̃ḭ̃-ɼí 'tears'

The semantics of this set of nouns with NF -ʈi ~ -ʈe resembles the preceding one, liquids, but also 'dirt'.

Yet there are no corresponding 'singulars' in class mɛ, nor any other class attested.

The cognate terms from Fanya have no singular/plural pairings either. 'blood' relates to 'singular' class mɛ, and 'tears' shows a nominal suffix -ɼí, matching Kulaal -ʈe.

(iii) plural NFs -nʈɩ and -nʈe in gender kʊ / ki

- The major gender kʊ / **ki** contains a small set of nouns, which form their plurals with the NF suffixes **-nʈɩ** and **-nʈe**, 3 out of 5 of the examples denote body parts.

-

- tɩ́-ú (kʊ̀) / tɩ̃́ɩ-**nʈɩ́** (kì) 'hip'
- kɩ́-ú   / kɩ́-**nʈ̀ɩ**   'forehead'
- hɛ́ɛ̰́   / hɛ̰́-**nʈé**   'tail'
- wɩ̃́ɩ   / wɩ̃́ɩ-**nʈ̀ɩ**   'sun, day'
- fɩ̃́ɩ   / fɩ́-**nʈè**   'song'

The nasal onset of the plural suffixes in this set, and why the final vowel of **-nʈɩ** does not adjust to ATR vowel harmony remains unexplained.

- cf. Bolgo S: tɩ̀r / tɩ̌-**rɩ** 'forehead'; hɪ̄-l / hɪ̄-**dɪ̄** 'song'

- uncertain is: tɔ́ɔ-lɩ̀ (?) / tóó**nʈ̀ɩ** 'groin' (= 'aine, creux de l'aine')   **?** a locative derivation with -**ʈɩ ?**
  cf.   fɑ̰́ɑ̰́l / fɑ̰́ɑ̰́n 'œuf'; fɑ̰́ɑ̰́n**ʈɩ** 'oeufs (de poule), réunis au même endroit'

(iv) nominal suffix -ʈe, a single case in gender lɛ / ki

- 4 of the 7 nouns in the **minor** gender **lɛ / ki** denote body parts. Yet only 1 noun marks the plural with the NF variant -**ʈe** of class **ki,** while the others build plurals with the 'regular' suffix -**i** [+atr].
  The cognate items from Fanya and Bolgo are cited to show that gender lɛ / ki appears to be a morphologically marked semantic subset, containing body parts and terms from the basic vocabulary.

		Fanya	Bolgo S
way, road	ù-l / ù-**ʈè**	ʔùlù / ʔùl-**kè**	ʔù-l / ʔù-**dɪ̌**
breast	máá-l / móó	máá-lɛ́ / máá-y	mɛ̀ɛ̀-l / mɛ̀ɛ̀-**dɪ**
leg, foot	ná-l / nó	ná-lɛ̀ / náà-y	ná-n / né-gí
tooth	nèè-l / nèè	(nɪ́y-à / níy-è)	nî-l / nî-gí

- the other nouns in Kulaal are 'vagina', a plant sp., and a fish sp.; the latter two are uncertain.

plural NF -ki   AGR ki

- 4 nouns in the Kulaal data form the plural with the nominal suffix **-ki**.

   On a first glance this is not surprising, since **-ki** matches formally with AGR **ki.**

-   <u>Fanya</u>   <u>Bolgo S</u>

- yàà (kὲ) / yòò-**kì** (kì)   water-hole
  pḛ̀ḛ̀ (kʊ̀) / pḛ̀ḛ̀-**kǐ** (kì)   (fence) mat
  èʊ̀ (kʊ̀) / èŋ-**kǐ** (kì)   compound   Ɂèw / Ɂèè-kì; Ɂèè-ɽ̃í
  tòŋ (kʊ̀ / tòŋ-**ki** (kì)   house   tɔ́ɔ̀/ tô-y-**kè**   tɔ̀ɔ / tòò-**gǐ**

- Yet, the cognates in the related languages and the fact that Kulaal AGR **ki**

   relates to Proto Bua ***ɟi,** may indicate that the NF **-ki** may share a similar status

   as the other NF under discussion.

-ki

- yàà (-kɛ̀) / yòò-kì (-kì)   water-hole
- pɛ̰̀ɛ̰̀ (-kʊ̀) / pɛ̰̀ɛ̰̀kì (-kì)   mat (for fences)
- èʊ̀ (-kʊ̀) / èŋ-kǐ (-kì)   compound   ʔèw / ʔèè-kì; ʔèè-ɽí
- tòŋ (-kʊ̀ / tòŋ-ki   house   tɔ́ɔ̀/ tô-y-kè   tɔ̀ɔ / tòò-gì

-         mouth   mù / mù-y-kè   mùù / mùù-gǐ
-         ear   tú / túy, túy-kétò / tò-gǐ
-         arm   tɛ̰̀w / tɛ̰̀-y-kè   tɛ̂ɛ̂ / tèè-gǐ 'main'
-         nose   hɔ̰̀ / hɔ̰̀-y-kè   hɔ̃́ / hɔ̃̄-gī

Summary of the Kulaal evidence

- the major plural AGR class **ki,** forming plurals in several genders with almost 600 singular / plural pairs contains:

- 12 nouns with the **NF -ʈi ~ -ʈe,**   which denote exclusively liquids and masses
     7 of them are the 'plurals' in 'gender' me / ki ,
     while 5 occur without a 'singular'

- 5 nouns with the **NFs -nʈɩ** and **-nʈe,**   which mainly denote body parts in gender ku / **ki**

-         while the plural of 'road' is the only noun with plural NF **-ʈe**
     in the minor gender le / **ki**   (which also contains several body parts).

- *From an internal Bua perspective, it is tempting to relate the morphemes to one single archi-morpheme, and search for explanation of their distinct formal differences.*
  However, the comparative data also allow the supposition of distinct NF morphemes.

In quest of probable cognates beyond Bua

- The existence of either morphological sets of nouns which do not trigger an own agreement pattern, or else NFs formally unrelated to the respective AGR morphemes are in language where noun class and agreement systems are on the verge of extinction neither very remarkable nor surprising.

- What is remarkable is, however, that the mismatching NFs in AGR class ki of Kulaal, which predominantly occur on terms from the basic vocabulary, are apparently linked with distinct semantics, and/or function ('pluralising' liquids and masses).

- And which furthermore, seem to be cognates to NF morphemes occurring elsewhere in noun class languages across 'Benue-Volta', with similar characteristics, and equally unrelated to the respective morphemes of the plural noun class which harbours them. Thus, these Nfs may be part of the common morphological heritage.

- The evaluation of this hypothesis is the topic of the remainder of this paper.

'plural class 4a'

- Since, the respective plural noun class where these specific NFs generally occur, seems to be in most cases cognate to the widespread plural class **4 *i**, as reconstructed for example for Gur, I propose to introduce - for easier reference - the term **'4a'**, denoting a formal subset of class 4 ***i** defined by the use of distinct formally unrelated NFs.

- This term would be in accordance with the commonly used term '2a', denoting a formal and semantic subset of proto class *ba, which contains kinship, and relational terms ('friend', 'chief'). The plurals in class *2a generally bear similarly mismatching affixes or NFs, while using the same AGR pattern as class 2.

In quest of probable cognates beyond Bua - 2

- A decisive characteristics of the NFs NF -ţe/i, -nţe and -nţɩ in Kulaal is their formal mismatch with the AGR morphemes of the respective noun class.

- Therefor only 'full-fledged' noun class languages with complex sets of AGR and NF morphemes are eligible for the evaluation.

- Apart from Kulaal, full-fledged noun class languages within the so-called "Adamawa" branch or "pool" (Güldemann 2018) are only found in 4 groups.

- All of them are situated at a considerable distance to the west in the mountains of the Upper Benue Basin.   …

Upper Benue (Basin)

where they are concentrated north and south of the Upper Benue, where the Gongola and Faro River feed into the Benue.

In conjunction with noun class languages spoken in the upper part of the Volta Basin, they form the proposed **"Benue-Volta"** unit**.**
Thus …

1 Tula-Waja; 2 Longuda; 3 Ɓəna-Mboi;
4 Gimme-Vere and Lɔŋto

Bua

Gongola

BENUE

Faro

(Mayo) Kebi

Faro
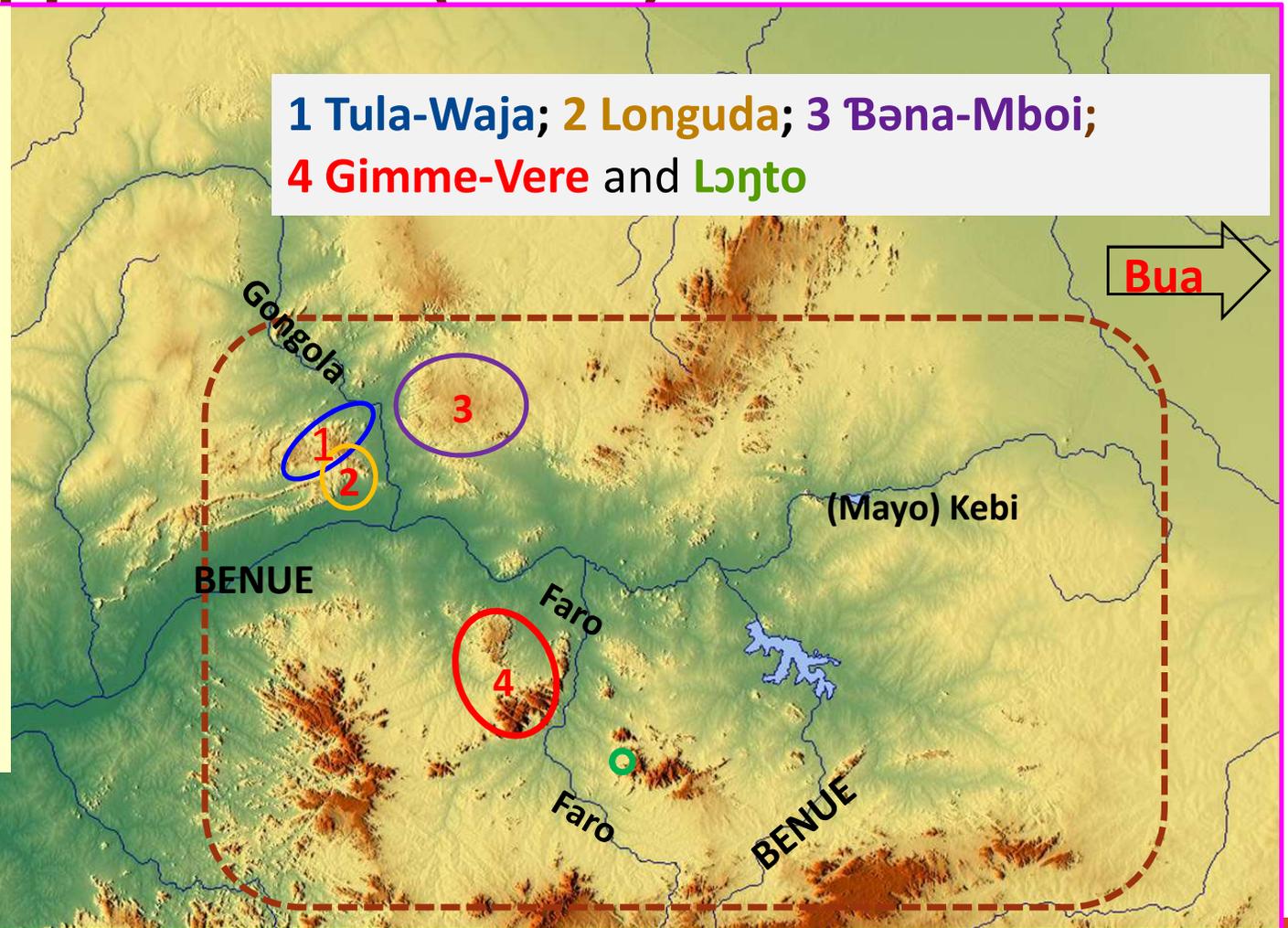
BENUE

'Benue - Volta' is combining the class languages of the 'Upper Benue' with the class languages of the upper part of the 'Volta' basin

Volta Basin

formed by its tributaries :
Oti - Mouhoun - Nakambé

NIGERIA

Upper Benue

Cameroon

Bua
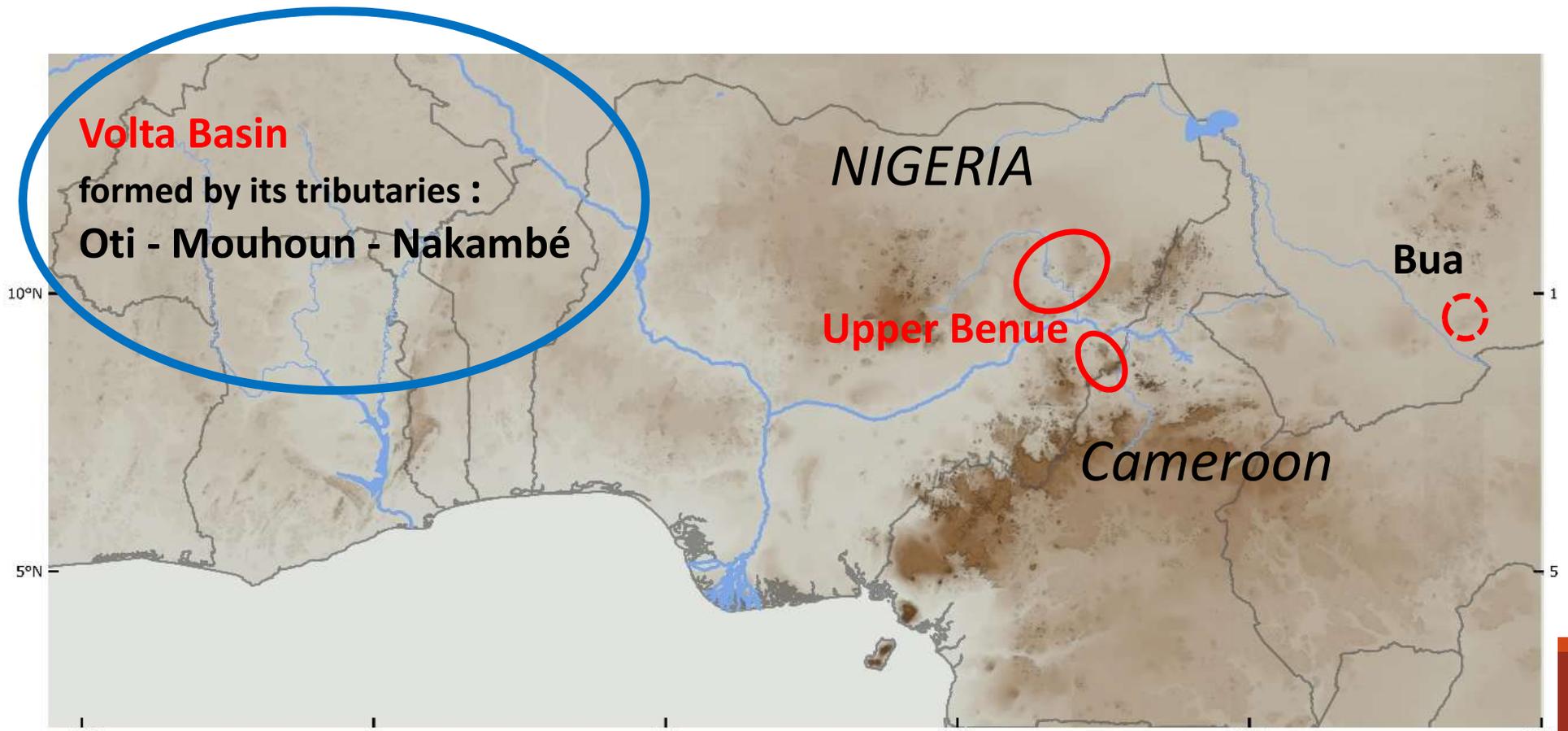
Benue-Volta or Upper Benue-Gur

- is defined by a bundle of morphological (and also lexical) features shared by noun class languages of the **Upper Benue Basin** and noun class languages of the upper part of the Volta Basin, commonly referred to as **Gur**. (U.Kw. 1996, 2024)

- Common heritage is - apart from basic and cultural vocabularies - a nominal classification system based on morphemes cognate in form, semantics and functions. Nouns are predominantly marked by nominal suffixes (= NF).

- The proposed term 'Upper Benue', avoids misconceptions about 'Adamawa' which does not appear to be a valid unit (cf. Bennett 1983, Güldemann 2018, U.Kw. 2020).

Gəmme - Vere

- We start the quest in the Gəmme - Vere languages, spoken in and around the Alantika Mountains. They and Lɔŋto, are the only 'full-fledged' noun class languages in the Samba-Duru group.

- As regards the NFs -ʈe/i, -nʈe and -nʈɩ in Kulaal, we also noticed the most significant similarities in this language group.
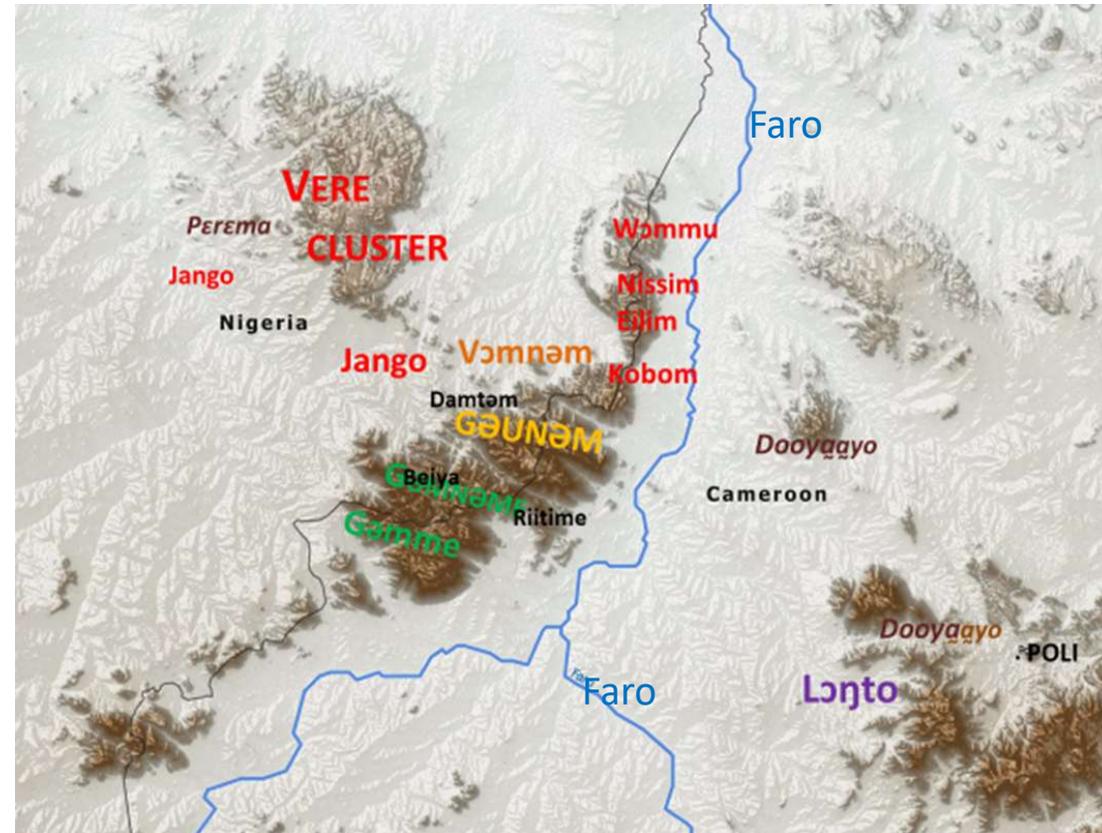
AGR classes of Samba-Duru
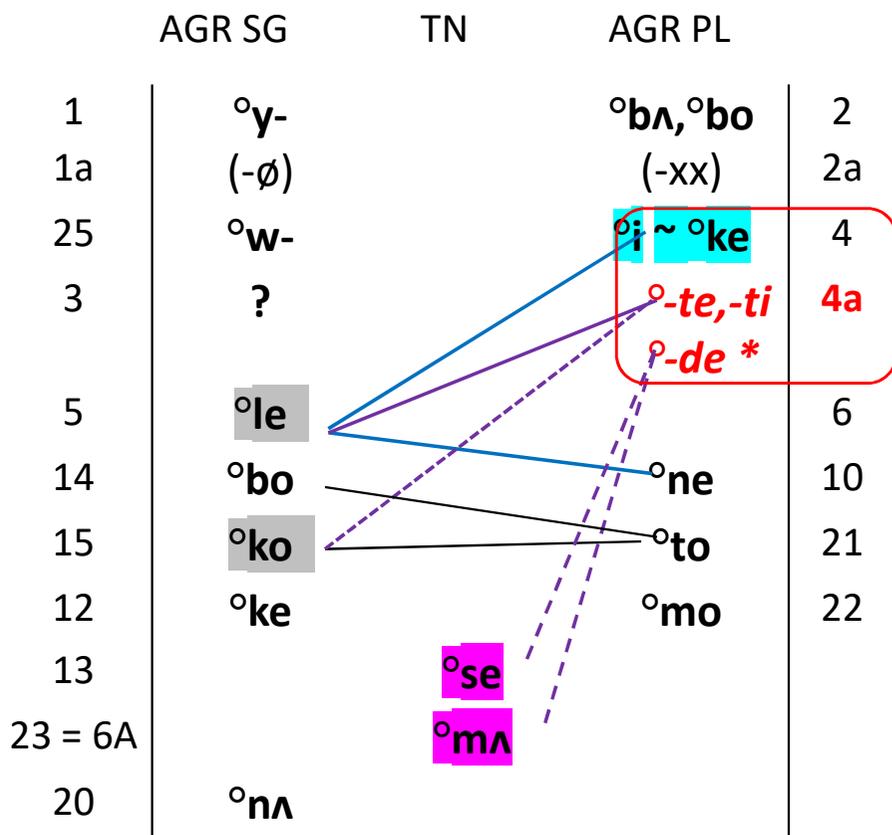
This extract of the overview outlines only aspects relevant for our quest. The lines connect the specific genders. Class 4 and subclass 4a use the same AGR class: *i in most of the Vere group, and *ke in Eilim and Nissim.

Subclass 4a is defined by an exclusive use of the NF suffixes °-te,-ti, and °-de, which do not match the principal NF suffixes of class 4, nor the respective AGR morpheme i ~ ke.

In Gender le/ i ~ke a subset of nouns forms the plurals with the NF -te, -ti of sub-class 4a. They mainly denote body parts. Further items noted are 'name', 'grinding stone', 'stone' and 'mountain'.

plural subclass 4a : NF -te, -ti   in Gender l / i ~ ke

	AGR	NF pl.: *-te, -ti*		NF pl.: *-r, -ˀ, -V*	
Vere-Batəm	l / i	mɛ́ɛ́-l / mɛ́ˀ-té	tongue; language	gú-l / gú-r	horn
		zu-r / zuˀ-te	head	ba-l / bá-r	egg
		ríˀí-r / ríˀ-te	name	núú-r / núˀ	tooth
Vere (Momi)	l / i	tìì-r / tìˀì-tì	forehead	nòr / nòˀ	eye
		zuu-r / zuˀu-tì	head	guu-l / guu-r	horn
		bàà-r / bàˀà-tì	stomach	baa-l / baa-r	egg
Kobom	ni / i	náá-rì / náá-té	grinding stone	wə-rì / wəˀ	year
		ʒú-rì / ʒúú-té	head	nɔ́-rì / nɔ́ɔ́	eye
Nissim /Eilim	l / ke	náá-l / náá-té	grinding stone	nɔ́-l / nɔ́ɔ́	eye
		baa-r / baa-te	stomach	djú-l / djú-ú	head
Beiya	l / r	fu-l / fuu-tə	belly	tó-l / tó-r	millet
		tíí-l / tíí-tə	forehead		

AGR classes of Samba-Duru

The NF *-de* of subclass 4a, is the main suffix morpheme forming, where accepted, plurals of liquids and mass nouns of AGR class °mʌ. Examples of gender °mʌ / **°i ~ °ke** in Vere-Gəmme languages are, however, rare.

More common is the use of *-de* as the principal pluralising suffix for collectives, and generic term of AGR class °se, in the gender °se / **°i ~ °ke.**

'Plurals' of transnumeral nouns with the NFs -de, -te
in gender ˚se / ˚i ~ ˚ke,   and gender ˚mʌ / ˚i ~ ˚ke

Batəm	**s / i**	raa-s / raaʔ-te	broom	‖			
		daŋ̀-s / daŋ-té	leaf				
Kobom	**si / i**	ráá-shì / ráá-dé	broom	‖	**mu / i**	tam / tamìtì	ashes
Nissim	**s / ke**	gə́m-sə́ / gə́m-dé	load	‖	**m / ke**	tam / tám-dé	ashes
/Eilim		gu-sə / gu-de	stew, meat			júm / júm-dé	flour
Beiya	**s / r**	dúk-sə / dúk-tə́	fish	‖	**m / r**	zum / zum-tə	flour
		kúʔ-sə / kú-**tə́r**	bush; grass			nɨɨm / nɨɨm-tə	sleep
Gəmme				‖	**me / me**	meme / mem-de	water
						zɨmɛ / zɨm-dɛ	flour

In Gəmme the plural AGR class *i is lost, the 'pluralised' nouns still use the NF -de,
but take the same AGR as their 'singulars'.

Oti-Volta class *ci

- Comparable phenomena, i.e. the existence of a subset defined by the use of an unrelated NF in class *I and which in addition, is also linked to a peculiar semantic are also known in Gur, mainly from the Oti-Volta languages.

- There Miehe et al. postulated a 'provisional plural class' *ci :

- *"Under the label *ci we group together different noun class morphemes, mostly suffixes, found in North Central Gur and two isolated languages, i.e. the pronoun ci, the suffixes **-ci, ɟə, -hɪ̯, -k, -ŋ, -x, -di, -ɗe, - rɪ** and possibly -fi, **most of which look like suffix variants of class 4 [*i]** because they all show **the class 4 pronominal concord**."* (Miehe et al 2012: 34f).

- The table on the next presents the languages where this class is attested and the respective AGR and NF morphemes. I slightly modified the table, in adding the terms AGR and NF and deleting 2 languages which do not have an AGR set, to adjust to this presentation.

Oti-Volta class *ci = 4a

	language	cl. *ci			cl. 4		
		(AGR) pron.	(NF) suff.	sg. to *ci	(AGR) pron.	(NF) suff.	sg. to cl. 4
OV-East	Byali	=4	-hí	*ŋʊ,*kʊ; *fʊ	ì	-í	*ŋʊ,*kʊ; *fʊ
	Ditammari	=4	-ri	*fʊ	ì	i-...-í	*ŋʊ,*kʊ;*fʊ;*da
	Nateni	ci	-ci	*ŋʊ,*kʊ; *fʊ	=*ci	=*ci	
OV Gurma	Ngbem(Gangam)	=4	-x,-N	*bʊ; *ma	ì	í-...-Ø	1; *ŋʊ; *bʊ
	Dye (Gangam)	=4	-De	*bʊ	ì	í-...-˜-H	1; *ŋʊ; *bʊ
	Gulmancema	=4	-di	*bʊ	ì	-í	1; *ŋʊ; *bʊ
	Konkomba SW	=4	-k,-g	*bʊ	i	-Ø	1; *ŋʊ
	Konkomba	=4	-i	*bʊ	i	-Ø	1; *ŋʊ
	Moba	—	-dî	*ka	—	-î	*ŋʊ; *bʊ
	Ncam	=4	-fí	*bʊ; *ma	ì	-ᴴ,-ᴹ	1; *ŋʊ
OV-W	Farlfarl	=4	-RI	*bʊ,*fʊ	ʔì	-i	*bʊ,*fʊ
	Viemo	ci	-cɔ	1	—	—	—

The formal differences of the NFs of "class *ci" and the AGR morphemes are clearly noticeable.
But also, the striking formal similarity of the NFs of class *ci with the Nfs of class 4a in Vere-Gəmme and the NFs of ki in Kulaal.

The semantic of "class *ci" in Gurma languages

- "The establishment of a "new" plural class *ci … is greatly supported by the evidence from Gurma languages, some of which attach the "irregular" class 4 suffixes only to the plurals to class 14 or use them as pluraliser for mass nouns…." [i.e. of class *ma]

- …"Class *ci is only preserved in the form of noun suffixes."

- Winkelmann 2012 : 537

- Class 14 *bʊ generally contains the tree names plus a set of other nouns, like bow, spear, …

class *ci in Dye forming plurals of mass nouns *ma and class * bʊ

mī-ɲṹ-m / í-ɲṹ-**dé**	water	bútɔ̰̄bū / ítɔ̰̄-**dé**	bow
mī-kpɔ̀-m / í-kpɔ̰̀-**dé**	oil	bú-sāā-bū / í-sāā̰-**ré**	porridge (tz)
mī-dāā-m / ídàà-**ré**	beer	bú-ɲàà-bū / î-ɲàà-**ré**	navel
mī-yɔ̰̀-m / í-yɔ̰̀-**dé**	flour	bú-kō̰-m / í-kō̰-**dé**	testicles
mī-gùɔm	sleep	bú-sàà̰-bū / í-sàà̰-**dé** *	shea tree
		búpùk-b / í-pùk-**ré**	Indian tamarind
		bú-tūō-bū / í-tūō-**ré**	baobab

Roɓma: pl. NF : -ti ~-te; -mse; -me   AGR   Y(A)

Roɓma has 4 singular and 4 plural AGR classes. The class markers are in the form of the demonstrative pronouns. Their uniform vowel **A** is probably the result of an homogenization. The respective NF or nominal suffixes are more numerous.

SG **Y.**A (< *ye-a?) represents class 1 [+human]. Our focus is on PL class **Y.**A (< *i-a?) which I assume to be cognate to **class 4 *i, (*yi).**

The plural class **Y**A has the three NF or nominal suffixes: **-te ~ -ti**, **-mse**; and **-me.**

SG		TN	PL	
AGR	**NF**		**NF**	**AGR**
YA	-é		-á	ꞌBA
WA	-ó~-ú -ʼ		-zà~-sà -à	ZA
	-to			
RA	-ra (-da)		-ta	TA
			-te, -ti	YA
ꞌBA	-á, -ø		**-me**	
			-mse	
		MA -ma		

Each of them predominantly builds the plurals of discrete sets of nouns, which also differ in their singular class assignments.

Roɓma: pl. NF : -ti ~-te   AGR   Y(A)

While most of the nouns of singular class RA (= *class 5) build their plurals with the NF **-ta** and take AGR of class **TA**, e.g.

sumba-rá / sumba-tá   egg   RA / **TA**
dín-dá / dín-**tá**   name
ɗoo-rà / ɗoo-tà (Sirima)   breast

A smaller but still sizable group builds their plurals with the NF variants **-te ~ -ti** and takes accordingly agreement of AGR class **YA**.
The majority (15) of the cases in my data denote plurals of body parts, others are plurals of *wound, death, hoe, stone, rope, star, path, and hare.*

	SG		TN		PL	
AGR	**NF**				**NF**	**AGR**
YA	-é				-á	**ƁA**
WA	-ɔ́~-ú -				-zà~-sà -**à**	**ZA**
	-to					
RA	-ra (-da)				-ta	**TA**
					-te, -ti	
ƁA	-á, -∅				**-me**	**YA**
					-mse	
		MA	-ma			

ɗùù-ra / ɗùù-**ti**   head   RA / **YA**
tɔ́ʔɔ̀-rá / tɔ̲ʔɔ̲-**te**   breast (Robma)
tìm-rá / tìm-**tí**   nose
kwɛ́ɛ́-rá / kweẹ-**te**   neck
dunga-rà / dunga-**tè** stone

Roɓma: pl. NF : **-ti ~-te, -mse**   AGR   **Y(A)**

NF: **-te ~ -ti** also form plurals of a very small set of nouns of gender ƁA / **YA** e.g.
tə̀f-á / tə̀ù-**té**   bone

NF **-mse** (Sirima -mje) of AGR **YA** forms the plurals of the couple mass nouns of class MA which are attested with a "plural", by adding NF **-mse** to the full 'singular' form.

món.má / món.má-msè   blood   MA / YA
rota.ma / rota.ma-mse   dream

(mbrá̰à̰ / mbráá-msà   water)   MA / ?

AGR	NF	SG	TN	PL NF	PL AGR
YA	-é			-á	ƁA
WA	-ó̰~-ú -´			-zà~-sà -à̰	ZA
	-to				
RA	-ra (-da)			-ta	TA
				-te, -ti	
ƁA	-á, -ø			-me	YA
				-mse	
		MA -ma			

-mse ~ mje occurs in addition with several plurals nouns as an optional(?) or general plural suffix variant.

Roɓma: pl. NF : -me

The suffix **-me** of plural class **YA** is probably the remnant of a noun class *mV, cognate to Samba-Duru *mo, and Gur *mu, and thus does not belong to the category of NFs under discussion.
-me is the 'regular' plural suffix in gender ƁA / **YA** which contains almost all the trees, plus several other items.

	ƁA / YA	
rową́ / rową-**mé**	locust-bean tree	
dól-á / dol-**mé**	mahagony, Khaya s.	
ar-á / ar-**mé**	fire	

AGR   Y(A)

AGR	NF (SG)	TN	NF (PL)	AGR
YA	-é		-á	ƁA
WA	-ó̰~-ú -̰		-zà~-sà -à̰	ZA
	-to			
RA	-ra (-da)		-ta	TA
			-te, -ti	
ƁA	-á, -ø		-me	YA
			-mse	
		MA -ma		

The presence of these semantic subsets in the AGR plural class YA may, however, be an indication of an inherited undefined semantic of class *i, and its function as a general pluraliser.

Conclusion

- Taking on their own these 'oddities' and 'amomalies' can be brushed away by 'chance resemblances' but the more 'oddities' 'amomalies' are shared by the same languages, the less likely is 'chance.

- Captivating is, that the morphological sets of nouns which do not trigger an own agreement pattern, and also those NFs formally unrelated to the respective AGR morphemes seems to be found in one and the same wide-spread plural class reconstructed as *i (or class 4) for Proto-Gur (Miehe et al. 2012).

- As Manessy said about this class in Oti-Volta where he even reconstruted four class morphemes

- *"le contenu de *i-*yi-*ki-*ŋi auquel nous reconnaîtrons une valeur pluralisante, sans plus de precision."* 1975: 100

	'water'	'blood'	smoke	'flour'	'sleep(ing)'
Kulaal	ím (mὲ) / í-ʈè (kì)	hé-ʈè (kì)	hέέm / hέέn-ʈé	fõm / fõ-rè	lòòm
Beiya	máám / máám-tə	meeme / mem-te	rààm / rààm-tə	zum / zum-tə	niim / niim-tə
Kobom	meme / mem-de	mime / mim-de	ìyèèm (Vere)	zime / zim-de	nime / nim-ne
Lɔŋto	pl. màà-ntó	mɛ̰-dó	li-mɛ / li-n-tó	zə-mɛ / zə-n-tó	ləmɛ
Tula; *Waja	*nyɪnmà / nyɪnma-ndɪ (beer)	kòtòòm/kòtòm-tí *tʊmà / tʊma-ndɪ		miìm / mììm-ti	dùùm / dùùm-ī *dwɪɪmà /dɪmà-ndɪ
Yom	nyám / nyá-ì	zέm̀ / zέ-ì		zêm	góm
Dye	mī-ɲṵ́-m / í-ɲṵ́-dé			mī-yɔ̰̀-m / í-yɔ̰̀-dé	mī-gùɔm
Lon G	mama / mam-tha				dùmá / dùm-thá

Tula plural NF -ti in AGR class Y, plural of the genders W/Y and B/Y

- **-i**   yìb-ɛ / yìb-ˊɩ   chicken **(W/Y)**
         kùm / kum-i   night

- **-ni**   kúu / kuu-ní   farm
         lɔ-ɔ / lɔ-nɩ   house

- **-ti**   tɔɔ́ / tɔɔ-tɩ́   knife
         kàda / kàda-tɩ   dog

- kùtʊ̀ʊ̀m / kùtʊ̀m-**tí**   blood   **(B/Y)**
- mīìm / mììm-**ti**   flour
- cààm / cààm-**ti**   corn, grain
- dùùm / dùùm-i   sleep
- wʌm / wʌm-í   beans

The plural AGR class **Y** has three nominal suffixes: **-i**; -ni, and **-ti**.
-i is the principal NF of AGR class Y, -ni is most likely the remainder of the merger of proto classes *i (class 4) and *ni (class 10), while **-ti – as** I assume - is a cognate to the NF of class 4a.
AGR **Y** forms the plurals of the gender W/Y, K/Y, and B/Y.
Gender B/Y contains liquids, masses and abstract nouns. Most of the 'plurals' are build with the NF **-ti,** and in a couple cases with -i, the regular suffix of class Y.

Tula also has the AGR class genders D/T, K/T, plus a single class T (containiong abstracts and masses). In none of these is a plural form with a nominal suffix **-ti** attested.