

Plural verb morphology in Eastern Berom

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SYMBOLS

B	b or p
C	any consonant
N	any nasal
S	s or ʃ
V	any vowel

1. Introduction: plural verbs

The East Benue-Congo languages constitute a very large family of languages spoken in Nigeria and Cameroon but extending through to the remainder of Eastern and Southern Africa, when the Bantu languages are included. They retain in various stages of completeness many features now ascribed to Niger-Congo as a whole, such as noun-classes marked by affixes with concord and verbal extensions (Williamson & Blench 2000). A feature whose present distribution is somewhat unclear is the 'plural' or 'pluractional' verb. Verbs have at least two morphologically distinct forms, one of which can be derived from the other by more or less transparent processes, except in rare cases of suppletion. Plural verbs occur in all four language phyla of Africa (Brooks 1991) although the way they are described varies from author to author, often making data hard to compare. They are a common feature both of East Benue-Congo languages and neighbouring Chadic languages. They also occur in Edoid (Kari 1995), Gurunsi languages such as Vagla (Blench in press) and in some Central Togo languages. Keegan (1997) notes plural verbs in Mbay, a Nilo-Saharan language of southern Chad. Newman (1990) describes the operation of both nominal and verbal plurality in Chadic. Although there are clearly interesting questions relating to the proximity of these two analogous systems and their inter-relations, this must be reserved for a broader study.

Plural verbs have been described principally from Plateau and Cross River families. The first description of plural verbs may be Bouquiaux' (1970) account of Berom, but Gerhardt (1971) presents an overview of what was known about Plateau languages at the same period. Izere has been the subject of at least two partial accounts (Wolff & Meyer-Bahlburg 1979; Gerhardt 1984), McKinney (1979) characterised Jju and more recently Aron (1996/7) has described plurality in verbs in Obolo, a Cross River language, as well as providing some references to extra-African literature. This relatively weak documentation derives from the fact that plural forms are often poorly known by younger or urban speakers. Whether, as Aron (1996/7) seems to think, this is evidence that they are disappearing, or alternatively that they have always been gradually learnt as speakers grow older, remains to be determined.

The exact definition of plural verbs is more than a little confusing, in part because they are almost always in fragmentary systems and because the emphases of their use do indeed vary from language to language. Bouquiaux (1970) used the term *frequentatif*, for Izere and Fyem they have been described as 'continuous'; in Jju (Kaje) and Berom as 'plural' verbs. Newman (1990) coined the term pluractional as a cover term for these uses. Aron (1996/7) contrasts 'distributive' (where the subject or object can be plural) with 'iterative' where an action is performed many times. Their uses can be described as follows;

1. Describing an action repeated many times
2. Describing an action with multiple subjects
3. Describing an action with multiple objects
4. Describing an action conducted over a long time
5. Any combination of these

The iterative use of the plural forms has led some researchers to associate these forms with an imperfect; if an action is undertaken many times it is presumably incomplete and thus contrastive with a completed form. However, in most languages where the verbal system has been described, aspect and plurality are distinct.

Data on two Plateau languages as yet unpublished suggest that these systems can be very rich. Hasha (=Yashi) probably has the most elaborate system of verb plurals yet recorded for a Plateau language, made all the more surprising by the apparent borrowing of its strategies from nearby Chadic languages¹. Every

¹ R.M. Blench, electronic ms. *The Hasha language and its affinities*. Hasha speakers seem to have borrowed from Sha, a neighbouring Ron language.

verb has a plural form, usually predictable from the singular once the rules for nominal plurals are applied. Fyem has a quadripartite system, generating distinct forms for plural subjects and repeated actions and combinations of both of them².

This paper describes the morphology of plural verbs in Eastern Berom, a Plateau language spoken North of Jos in central Nigeria³. Berom has a very large number of these forms with many different subtypes and categories; their existence and the pattern of their morphology seems inherently unpredictable. Bouquiaux (1970: 206 ff.) describes the patterns that occur in Berom of Du, although within a rather different framework from that presented here. Similarities and contrast with Bouquiaux' material are noted within the body of the paper. The paper classifies these and illustrates some hypothetical processes that may have led to their evolution. It also considers why there should be so many diverse forms. The historical hypothesis underlying the presentation is that the surface pairings that occur today are to be explained by the addition, erosion and re-affixing of fossil verbal extensions which have been semantically bleached so that they now only indicate plurality. No case exists synchronically of verbs where the productive application of more than one affix is permitted. Nonetheless, it is likely that such extensions existed in pre-Berom, since they are widely attested in Niger-Congo (Williamson & Blench 2000). However, they may well have become fossilised before a language something like present-day Berom came into being.

One hypothesis concerning irregularity in Berom derives from the nature of intensive borrowing with neighbouring languages. Of these languages, only Izere is sufficiently well known in respect of its plural verbs to establish the extent of common lexical items. Izere is not closely related to Berom, as its connections are rather with the Central languages such as Tyap and Irigwe. Nonetheless, it has a significant number of items where both singular and plural are evidently cognate with Berom and which must be borrowings (§3.2.4). The direction of borrowing is still unknown, but the consequence of borrowing must be irregularity in the recipient language. If analogical levelling occurs then the borrowed item may become parallel to patterns in the historic lexicon; however, both languages seem to tolerate high levels of irregularity⁴ in verbal plurals. Both languages have presumably also borrowed from other nearby languages such as Irigwe and Iguta, but these languages are barely known and the impact of this cannot be established.

Eastern Berom has been discussed by Bristow (1953) and Wolff (1963) and Berom of Du in Bouquiaux (1967a,b; 1970, 2001). Berom has at least four other dialects, Central, Rim, Tahos and Aboro; of these only Central (broadly similar to Bouquiaux' Du) is known at a level greater than a standard wordlist. The standard Berom orthography is given in Kuhn & Dusu (1985) and the analysis of Berom phonology is followed here. This study is based on an extensive dictionary of Eastern Berom from which the examples are drawn (Blench *et al.* forthcoming).

² R.M. Blench, electronic ms. *The Fyem language and its affinities*.

³ I would like to acknowledge long-term collaboration with Hanni Kuhn and Barnabas Dusu on the Berom dictionary which has been the principal source of the data and examples given in this paper. The analysis, however, is strictly my own.

⁴ Curiously, Berom nouns are also highly morphologically diverse; in contrast the segmental morphology in Izere has been regularised quite recently (Blench 2000).

2. Berom phonology

Eastern Berom has twenty-four consonant phonemes:

	Labial	Labio-dental	Alveolar	Palato-Alveolar	Palatal	Velar	Labio-velar	Glottal
Plosives vls	p		t			k	kp	
vd	b		d			g	gb	
Fricatives vls		f	s	ʃ				h
vd		v	z					
Affricates vls				tʃ				
vd				dʒ				
Nasals	m		n		ɲ	ŋ		
Laterals			l					
Vibrants			r					
Approximants					y		w	

/ts/ occurs in the Foron dialect but is not represented in the data in this paper. Berom permits approximants in final position. The orthography represents final /y/ as ‘i’ and final /w/ as ‘u’, giving a misleading appearance of diphthongs; orthographic **rou** is /ròw/ and **vei** is /vèy/. The present paper transcribes these as approximants. /ŋ/ is written ‘ng’ in Berom orthographic practice.

There are seven vowel phonemes:

	Front	Central	Back
Close	i		u
Close-Mid	e		o
Open-Mid	ɛ		ɔ
Open		a	

Vowels can long or short, but in sequences of similar vowels each can bear a separate toneme, suggesting that length should not be analysed as an underlying feature.

Berom has three level tones and four glide tones (Bouquiaux 1970). The glide tones are treated here as rising and falling tones. Berom orthographic conventions mark plurality with an acute accent prior to the noun and mid-tone with a macron over the vowel. For greater precision I have dropped these conventions in favour of marking tone as follows:

- /’/ for a high tone
- mid tone is shown by the absence of a tone mark.
- /’/ for a low tone
- /˘/ for a falling tone
- /˙/ for a rising tone.

3. Plural or iterative verbs

3.1 How are plurals used?

The most striking aspect of Berom verbal morphology is the diversity of plural or iterative forms. Eastern Berom has 579 primary verbs recorded to date, of which 213 (37%) have plural forms. It is unclear what predicts the existence of such a form. Plural forms are familiar to older speakers with younger speakers often having a more patchy knowledge of them. The main use of verbal plurals in Berom is simply to denote a

plural subject or object. More rarely, plural forms indicate a plural action by an individual, either continuous or repeated action over a period of time. Where two distinct forms co-exist in the language I have cited both. This section exemplifies the principal uses of Berom plurals, while §3.2 illustrates the morphology of plural forms.

The most common use of plurals in Berom is to indicate a plural subject (Table 1). Thus;

Table 1. Verbal plurals used to mark plural subjects

to climb	s.	tút	a tút é rà tîn pwat ná a vós gwɛ <i>he climbed up an African olive tree to pick the fruits</i>
	pl.	túrus	bèmat ba sé túrus é ràku wòro <i>people are climbing that mountain</i>
to cook	s.	kyé	má sé kyé pyɛ <i>I am cooking food</i>
	pl.	kyérés	yèn é kyeres pyéna sɔŋ <i>they cook using grass for fuel</i>
to teach, read, preach, to be jealous	s.	bàsa	má tík Bót é lɔ a sé bàsa tákàda <i>I left Bot at home reading a book</i>
	pl.	masa	yɛn é masa yish é rà pyédètídètu <i>they are jealous over many things</i>

However, plural verbs can also mark actions that apply to multiple objects (Table 2).

Table 2. Verb plurals marking plural objects

to turn, to look back, to translate	s.	dòyò	séde hwei ó ha sé kyè, ha dòyò kó ha dí vu wà sé raa héas <i>the child was walking, he looked back and saw the dog following him</i>
	pl.	doysa	é rá fwôm doysâ bètákàda é ji bàlem <i>he is translating books into (different) languages</i>
to intercept, to prevent	s.	dùl	cògot yémó yà dùl dùk ó nà gábá <i>the stick propped up the house and prevented it from collapsing</i>
	pl.	dùlus, dùsul	sájál mɛ é ngamó ngàn é dùlus a wot pyépyàk <i>his living there prevents us from getting many things</i>
to show, point out	s.	dúra	Yöp a dúra á nêŋ mɛ gwòrùgu gwòpwàs dè a séí <i>Yop showed her mother the new dress she had bought</i>
	pl.	dúsa	yɛn a sé kyê kyè ná be dúsa á yɛnèkwôn fwom mɛn <i>they are taking him round to show their places of work to him</i>
to pull out, remove, drive out	s.	pát	ba pát a yéróǵó é bwol mɛ <i>they removed a thorn from his foot</i>
	pl.	paa	a páá céŋ pyàk <i>he drove out many spirits</i>

Repeated action or iterative are sometimes combined with the above (Table 3);

Table 3. Verb plurals with iterative meaning

to throw	s.	tòrò	a tòrò gwà mē ná gwòfwà é vwo <i>he threw a stone at his brother's hand</i>
	pl.	to	hwò yímó dè hwà sé tó mé ná bètà <i>you have been throwing stones at me for a long time</i>
to learn, test, imitate, covet	s.	mara	mara hín hēna yin dí <i>test him and see</i> a mara kùsh bèrùgu mēwet <i>he did not try washing his clothes</i>
	pl.	masa	yēn é masa yish é rà pyédètídètu <i>they constantly covet the things of their fellow humans</i>
to rub with ointment	s.	mómò	mómò hín ná nēi na yin dè kyè <i>rub ointment on your body before you go</i>
	pl.	mómsôl	a kát mómsôl pyédètídètu <i>she is fond of anointing herself with many kinds of ointment</i>
to be inadequate but pl.	s.	ràdè	pyémó ya ràdè <i>the food is insufficient</i>
to beat unevenly (heart)	pl.	ràsá	nsòŋ né ràsá a yē <i>his heartbeat is uneven</i>

An iterative meaning can also be transferred to verbal nouns. Thus;

state of being locked up **báná** **sá mē á sé é báná** *his friend is locked up*
banas **ba gá banas hé** *he's been locked up more than once*

Iteratives are responsible for the use of the term 'continuous' in some of the literature. Thus;

to buy, receive **sei** **má sé sei regyi** *I am buying an egg*
to deliver babies (lit. receive them) **sérés** **Naomi a sérés nēy** *Naomi is a midwife (lit. receives babies all the time)*

or;

to shake once in a while **dìgta** **a dìgta héná a sènè** *he shook him to wake him up*
to shake continuously **dìgish** **cògòt ó yé dìgish** *the tree is shaking*

mòglò to raise voice, announce just once
mok to shout loudly

to press something **ngyít** **dè hwò ngyít me wet** *don't press me*
to trample on **ngyìgit** **dè hwò ngyìgit me wet** *don't trample on me*

This can come to simply refer to the relative frequency of an action;

to rest a little **pòŋlò** **má sé pòŋlò** *I am resting a little*
to rest, to breathe **pòŋ** **má pòŋ** *I am rested* **má sé pòŋ** *I am resting*
to rest constantly **pòŋos** **má sé pòŋos** *I rest all the time*

There are also (rare) examples of a change in transitivity;

to become torn (of old material)	hànta	a gá hànta hé	<i>it tore, became torn</i>
to tear	hàmo	hàmo hín wɛ	<i>tear it</i>

to smash s.t. against the ground, to hit with a stick	rusu	a rusu héná gwèle	<i>he hit him with a stick</i>
to bring down, destroy, topple	rùnùs	gul gwa rùnùs cògòt yèmó	<i>wind brought down this tree</i>

Transitivity change is also a feature of Vagla plurals (Blench 2002) where it is also highly sporadic. As in Obolo and Vagla, there is some evidence for a triple system of plurality, contrasting a single action, the action in general and performing the action many times (see example of **pòŋlò** above). Other examples of this in Berom are;

lwata	to pierce just once	a lwata hé	<i>he pierced him just once</i>
luga	to pierce	luga yéná bá	<i>pierce it with a knife</i>
ló	to pierce many times	a ló ná bare	<i>he pierced it with a spear</i>

and;

rot	to bite	rot kyit ó	<i>bite the yam and eat</i>
royo	to throb with pain	kwón ó hé royo	<i>it is painful</i>
roros	to bite habitually, sting	bejàs bé roros bèmat	<i>soldier ants bite people</i>

and;

ngùkta	to dent	a ngùkta rwey ó	<i>he dented the pot</i>
ngút	to be dented	rwey ó ha gá ngút é	<i>the pot is dented</i>
ngùgut	to trample	a ngùgut héná bòl	<i>he trampled on him with his feet</i>

and;

sata	to cut in two with a knife, i.e. to cut once
sara	to cut with a knife
saras	to cut many times with a knife

In this case, the middle member of the triplet provides a transitivity change and the second plural an iterative meaning.

Another example is difficult to interpret consistently, possibly due to semantic change;

to confuse somebody, to twist the facts, to stir something thick

rikta	kwón ó ha rikta hé	<i>there was confusion in the place</i>	single state
rigit	hwong ó a tók rígit tuk	<i>the girl cannot stir the food</i>	habitual
rigim	a gá rigim mé	<i>he has confused me</i>	habitual
	mwât shòt ó a sé rigim shòt ó	<i>the judge is twisting the facts</i>	habitual with plural object

These rather rare elements and the morphological diversity of plurals suggest that the Berom system is synchronically the remnant of a more complex and structured system, probably a series of distinct verbal extensions with assignable meanings that have become semantically reduced. The same appears to be true of Tarok where the system is still more eroded (Blench, in press).

3.2 Morphology of plural verbs

3.2.1 Synchronic processes

Berom plural verbs are highly diverse and although the plurals form some general patterns, it is difficult to predict whether a particular verb will have a plural and if so what process will be applied to form it. The large number of unique patterns remain to be explained. Some look similar to nouns in a way that suggests they may have been formed by analogous processes. Others closely resemble Izere, suggesting that borrowing individual verbs from a neighbouring language with their plurals could account for the incidence of low-frequency forms. This section attempts to classify the regular developments that have been identified, sorted approximately by their incidence.

Table 4 summarises the main processes that can be generalised from the data;

Table 4. Surface processes in Berom plural verb morphology						
Process	1	2	3	4	5	6
Suffix addition	-sV(m)	-(V)s	-ta	-ro	ŋ	
Affix insertion	-s(j)-					
C₂ voicing change	g/k	k/g	p/b			
C₁ alternation	y/t	b/m				
C₂ alternation	r/s	r/b	t/y	t/r	g/s	r/t
C₃ alternation	k/s			k/t		
Suppletion						
Tone-change						

From these surface alternations, a partial model of the source of verb plurals can be developed. It is assumed that Berom, as other Plateau languages, originally allowed verbal extensions, usually of CV form, probably similar to those in Bantu. Erosive processes incorporated these into the stem and new affixes were then added. At the same time, a loss of semantic distinctions caused a convergence on plurality, with iteratives and transitivity remaining at low frequency. The data in §3.2.2 sets out all the surface forms so far encountered that occur more than once in the set of verbal plurals. Table 14 collects together all the single-case verb plurals. Section §4.1 puts forward a possible range of affixes that are reconstructible from the data.

3.2.2 Data patterns

This section provides data tables for all the affix-pairings recorded. The tables are as complete as possible; every recorded case is included;

3.2.2.1 –SV addition

The single most common plural suffix is –SV, which has a wide variety of allomorphs. The -V of the suffix usually copies the V₁ of the stem; exceptions to this are marked with an asterisk. Only the suffix –sa can over-ride the vowel copy rule, although the circumstances are undefined. Tone is similarly copied, although there are some exceptions. Three allomorphs occur in the data;

- SV is simple added to the singular stem
- V₂ of the singular can be deleted and –SV added
- s- can be inserted following a lateral in C₂ position.

In only two cases, /j/ occurs in the –SV instead of /s/. The table shows that this is determined neither by the quality of V₁ or C₁. In one case, **sègè**, C₂ undergoes a voicing change.

Table 5 shows optional deletion of V₂ and addition of –sV, where V usually corresponds to the stem vowel V₁;

Table 5. –SV addition

s.	pl.	
bène	bènse	rear animals
cùga	cùgsa	incite
dòyò	doysa	turn
gábá	gábsá	fall, fail
gána	gánsa	throw a stick at animals to make them turn
gwě	gwěse	add, increase
hàlà	hàlsà	leave, let escape, let go, forgive
kàbà	kàbsà	catch hold of, catch, hold
ku	kufu	die, faint
kùlù	kulsa	make a hole, pierce
kwɛlɛŋ	kwɛlsɛŋ	deceive
kyini	kyinsi	abandon, very often following a quarrel
làgà	làksà	ride on a horse
sɛlɛ	sɛlse	help
sègè	seksa	change, alter
sènè	sensa	wake up (passive and active)
sila	silsa	fill
shigi	shigfi	steal
sògo	sògso	leave, get up
tálá	talsa	pay
tɛ	tɛse	put
tɛnɛ	tɛnse	put out to dry, spread out to dry, be extensive
tɛs	tɛs	hit, strike
tolo	tolso	sew
tono	tonso	deny, lie to
túla	tulsa	assemble, gather (to a meeting)
tùlù	túlisa	come out from, sprout (of seed)
vèy	vɛse	come, return
vùrù	vusa	lose something, get lost
wuna	wunsa	join
yɛnɛ	yɛnse	finish
yíla	yílisa	put in some place

The vowel quality change in **vèy** is exceptional for any morphological process in Berom.

-rV/-sV alternation

A related pattern is the surface alternation of -rV(C)/-sV(C) (Table 6). In two cases, a final -k occurs in C₃ position, suggesting affix renewal and erosion. Berom has a -tV singulative verb suffix and -rV is probably its allomorph.

Table 6. -rV/-sV alternation

bárák	básák	throw e.g. stones aimlessly
dúra	dúsa	show, point out
gwóro	gwóso	go round
gyira	gyisa	put into, dip
kyere	kyese	mix
lere	lese	hide, bury
mara	masa	learn, test, imitate, covet
nára	nasa	stretch out, extend
shira	shisa	swear
sira	sisa	threaten, rebuke
sira	sisá	promise, swear, take oath
wérék	wésék	throw

3.2.2.2 Addition of -(V)s

This process has a number of allomorphs, including -s addition, and -Vs addition with the voicing of C₂. A probable allomorph is -Vs addition plus s→t of C₂. In all cases, V₂ copies V₁. The hypothesis is that this is an allomorph of -SV addition (§3.2.2.1) where V₂ in the stem is preserved and -V of the suffix deleted. Table 7 presents all the recorded examples of -Vs addition and its allomorphs. In this case, C₂ of the singular stem is always a nasal or a liquid.

Table 7. Addition of -Vs

baŋ	baŋas	close, cover, pacify a spirit
bəm	bəməs	winnow, while grain is on the ground
ciŋ	ciŋis	dig
dəl	dələs	surpass
dél	delés	give a great deal
dùl	dùlus, dùsul	intercept, prevent from passing
dún	dunus	not to know, not recognise
gaŋ	gaŋas	push
dyɛŋ	dyɛŋəs	lie down, please, satisfy
fɛŋ	fɛŋəs	be drunk
fuŋ	fuŋus	smoke out, fumigate
gaŋ	gaŋas	push, find guilty
gyɛŋ	gyɛŋəs	wait, watch over, tend, obey
hwon	hwonos	shave
kaŋ	kaŋas	separate two fighters (people or animals)
ləl	lələs, ləsol	take down from the head
man	manas	meet, join
nɔŋ	nɔŋəs	give
póm	pomos	reach, arrive
pəl	pələs	spend the night
pɔŋ	pɔŋəs	rest, breathe
raŋ	raŋas	bake in a kiln, fire
síŋ	siŋis	soak
sól	solos	put a haft/handle on a knife
vəl	véles	be ripe, be cooked
vɔn	vɔnəs	mix acca with water, soak
wùl	wùlus	reach, arrive
yel	yéles	enter, start with
yoŋ	yoŋəs	prepare, get ready

In no case is the V₂ copy rule violated. This process would then be as follows;

	Original		Synchronic
s.	CVCV	→	CVC
pl.	CVCVsV	→	CVCVs

Addition of -s (Table 8) is almost certainly an allomorph of -Vs addition, and in most cases can be explained by the incomplete erosion of V₂;

Table 8. –s suffixing

bòmo	bòmòs	throw deliberately
bórð	bóròs	step on
dirì	díris	kick
kwərɔ	kwəròs	break
rəno	rənoðs	go around, surround
ruru	rurus	be tired
tìri	tíris	knock against something unintentionally, bump into, stumble on
tð	tðs	give birth
vó	vós	catch, fetch, harvest
vugu	vùgùs	chop, split
yí	yís	come from

Three additional suffixing groups are characterised by devoicing or weakening: stem C₂ devoices in intervocalic position when the –sV is suffixed. In all cases V₂ copies V₁. The weakening of t→r is a probable third case of the same process.

–k→–g- devoicing and –Vs addition (Table 9);

Table 9. C₂ devoicing (k/g) and –Vs addition

dak	dagas	beat, strike, thresh
jək	jəges	write
kak	kagas	crucify, nail to a cross
kwək	kwəges	take maize kernels off the cob, to hatch
kyək	kyəges	hatch (eggs)
kyðk	kyðges	see off, escort
lək	ləges	build
luk	lugus	mix, trample with feet, (mud for building)
mok	mogus	wish, desire
sək	səges	move
shək	shəges	chop
shək	shəges	give to drink with the hand, bother somebody
suk	sugus	stir
tak	tagas	weave, plait, cause suffering
tík	tígis	put down, leave, set aside
vək	vəges	have, hold
wók	wogus	hear, feel

The appearance of /ʃ/ in final position occurs sporadically in Berom and appears not to be phonologically determined.

In one case, this pairing appears only as an adjective, the verb **tók** ‘to tempt’ apparently having been lost.

tók	tógós	persuasive, deceptive, tempting	a sé tók éná a kyè ná yɛ <i>he is being persuasive so that he'll come along</i>
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-p→-b- devoicing and -Vs addition (Table 10);

Table 10. C₂ devoicing (p/b) and -Vs addition

dop	dóbós	join two ends
gyep	gyebes	support
hwóp	hwóbós	lend, borrow
kwop	kwobos	grow old, become old
rop	robos	rain
sàp	sàbas	honour, care for

-t→-r- weakening and -Vs addition (Table 11);

Table 11. C₂ weakening (t/r) and -Vs addition

bòt	bòròs	put on the lap
bwat	bwaras	be very happy
jùt	jùrus	carry, hand over
mòt	mòròs	cheat
nòt	nòròs	give
rot	roros	bite, sting, throb with pain
sét	sèrəs	fix one's eyes on something, await eagerly
tət	tərəs	reduce
tút	túrus	climb
wét	weres	prick up the ears, listen
wèt	wòròs	taste, take a sip

In three additional cases, V₂ -y is deleted from the singular and the plural is -rVs.

kwey	kweres	pass by
sey	sèrəs	buy, receive
wey	weres	die, destroy, perish

In one verb, **kye**, -rVs is added to the stem. In all cases the V of the suffix copies V₁ of the stem. The following is probably also related, as Berom will not permit palatalisation of kw-, s- and w-. CyV and CVy can therefore be considered allomorphs.

kyé	kyeres	cook
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-CVs addition

The following examples are difficult to explain through affixing. C₂ in the plurals was probably originally -k- and therefore the earlier form of the singular CVkV, which eroded in the singular and gained and -sV suffix in the plural.

pú	púgus	swell, rise (like dough)
rá	rágas	do, touch

ta is a widespread root for 'shoot' but not for the other meanings given here. Probably the **ta/tabas** alternation has been applied to 'shoot' by analogy with the other meanings.

ta	tabas	reach, hew, mix, shoot
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The following cases are of interest, because in each case, their external cognates are usually in the simple CV form in which they occur in Berom.

re	reres	eat
sɔ	sɔrɔs	drink
to	toros	pound

It is most likely these are the consequence of double-affixing, or perhaps a reduction from a three-way alternation, since these –rVs finals do occur in such triplets (cf. **rot** ‘bite’ below).

–sVl

The following pairings are quite diverse but are probably all allomorphs of one another. Probably all the singular forms originally had final –l which has been lost in some synchronic forms. The plural –sV suffix then moved leftwards so that all plurals became –l final.

Table 12. –sVl suffixing

mɔmɔ	mɔmsɔl	rub e.g. with ointment
pɛŋɛ	pɛŋsɛl	work hard, without time for other things
raŋal	raŋsal	ask
sàŋál	sàŋsál	sit down
sɔglɔ	sɔgsɔl	pierce, stab, puncture
tomo	tomsal	send (person or thing)
tùmál	tùmsál	stop, stand, wait
yɛglɛ	yɛgsɛl	press down

The following probably also represents the same process;

kwɛlɛŋ	kwɛlsɛŋ	deceive
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–sVm addition

–sVm addition suggests re-affixing; the initial process reflects –SV suffixing with an additional –mV and loss of V₃

hwò	hwòsom	fall on top of something,
kyè	kyèsɛm or kyèŋɛs	go away, lead
sɛ	sɛsɛm	get, find

Some additional evidence for a (rare) –mV plural suffix is found in Table 13. The CV singulars make this less evident, but it is likely that this represents another example of leftwards movement of the –sV suffix. There is thus a tendency for –ŋ, –m and –l to remain in final position.

–t deletion and –yu suffix addition

Historically, this looks like a primary t/r alternation as exemplified in Table 11 and shown in the second plural of **rot**. Intervocalic –r- then weakens to –y-, giving the synchronic forms.

lùt	lùyu	uproot, pull out
rot	royo roros	bite, sting, throb with pain
tùt	tùyu	cut loose, with one blow

y/t alternations also occur in initial position in some otherwise unclassified verbs (Table 14).

-rV deletion and -bVs suffix addition

moro	mòbòs	kill, break
viri	vìbìs	untie, loosen

This is probably underlyingly -rV/-sV alternation (Table 6) with a -bV suffix in the plural which has been metathesised with the eroded -sV suffix.

Final -k/-s alternation

The following might represent re-analysed borrowings from a nearby language. Other Berom words which have -k in C₃ position often turn out to be loans from Izere (cf. Table 15). The -s in the plural form may thus represent a typical pluralisation of an unusual sounding word.

gyirik	gyiris	come down, descend
hwòròk	hworos	dry up, fade
sirik	siris	satisfy

-tV suffix

Table 13 shows a number of cases of a -tV singulative suffix in Berom. Curiously, -the form is -ta with every stem vowel except -ɔ-, where the V of -tV shows concord with the stem. The addition of -ta occurs with many stem forms and often involves unpredictable shortening of the plurals. As a consequence it seems that -tV suffixes are rather recent in Berom morphological history and are less than fully integrated into the overall morphological system.

Table 13. -tV singular suffix

hànta	hàmo		make a small tear in (of old material), pl. tear many things
hwòlta	hwòlɔ		pull, tow, draw out
hwòta	hwòshɔ		draw, pull along
kpòkta	kpògòdɔm		cut off
lɛlta	lɛlɛ		lick
lwata	luga	ló	pierce once
mògta	mògòdɔm		taste, get the feel of by touching with hands, feet or an object
mukta	muna		twist (one's arm or leg)
ɲàgta	ɲàgat		bite once, pl. is bite repeatedly, mangle (esp. of animals)
ɲùkta	ɲút	ɲùgut	dent, pl. is be dented
ruŋta	ruŋ		collect e.g. grass
sata	sara	saras	cut in two with a knife (once, general and many times)
tɔŋta	tɔŋɔt		splash, drip a small quantity
tsipta	tsip		twist, wring the neck of
tùkta	tùgut		rub, polish (pl. is 'wear out', hence 'cause to suffer')
wùmta	wùma		open

Only a small number of Berom verbs with double plurals generally occur with the singulative -ta.

3.2.3 Miscellaneous alternations

Apart from the patterns listed above, Berom has a large number of single-case alternations. These are listed in Table 14;

Table 14. Single-case Berom verb plurals

bàsa	masa	teach, read, instruct, preach
bid ɛ	biris ɛ	lack, miss, fail, not being able to get
bòro	bòsot	pierce, stab
fìrik	kpánánɲ	tie tightly
fugum	fungam	swell, rise (dough)
gyìli	gyílsit	jump
how	horos	farm, hoe
hwðlɔ	hwðltɔ	pull, tow, draw out
kwɛlɛɲ	kwɛlsɛɲ	deceive
kyè	kyèsem or kyèɲes	go away, lead
losho	lusha	pour out, spread out
lwata	luga	pierce. also ló [?]
lùmlà	lulum	rumble, roar, sound distant thunder
mòglò	mok	raise voice, announce just once
mukta	muna	twist (one's arm or leg)
nusu	nùnùs	go out
ɲút	ɲùgut	crumple, dent, trample
ɲyít	ɲyìgit	press something, trample over
pat	paa	pull out, remove, drive out
pɛl(ɛ)	pɛsɛl	blow, make fire
rá dèdan	te dèndès	be unsteady from sickness or alcohol
rá nu	tou nu	quarrel, rebuke
ràdé	ràsá	beat unevenly (heart)
rimo	rìmis	put off, quench (light, fire)
ròu	rɛsɛl	sell in small quantities
ru	rusu	strike, slap
sàɲál	sàɲsál	sit down
sɛ	sɛsɛm	get, find
ʃigi	shigʃi	steal
ʃira	shisa	harass, threaten
ʃùfu	ʃùfa	pour on, anoint
sògo	sògso	leave, get up
tàklà, tàkli	taksil	burst (out)
tàrà	tow	chop, cut off
télé	sètélé	run, fear, leak
tɛsɛ	to	pound a small quantity
tòrò	tó	throw a spear etc.
tosh	toros	carry on the head
tsiba	tsip	be determined, be in earnest
tùlù	tugus	cause to come out
tùlus	tùlùs	spill, spit
wðlɔk	wðlsɔk or wðsɔt	swallow
wók	wóros	challenge
wosho	wusal	spend the day
wðlɔt	wðlsɔt	swallow
wùmta	wùma	open
wuna(ɲ)	wunsa	join
vèy	vɛsɛ	come, return
yaɲ	taɲ	tell
ye	te	say

Table 14. Single-case Berom verb plurals

yɛɛ	yɛt	cut, slaughter
yilà	yishi	call

3.2.4 Interaction with Izere

Plateau languages have a long history of interaction, and are subject to intense borrowing processes, both lexical and morphological. Most of the languages with which Berom has presumably interacted are poorly documented and thus it is not yet feasible to analyse the effects of this interaction. Where the neighbouring language is not closely related to Berom, it is possible to infer borrowing, usually with the singular-plural alternation intact. In the case of Izere, a dictionary exists (Blench & Kaze, in press), which documents the plural forms in some detail. From this source, Table 15 sets out all the cognates so far identified where the plural morphology is also matches.

Table 15. Berom-Izere verb cognates with comparable morphology

Berom			Izere		
sg.	pl.	Gloss	sg.	pl.	Gloss
bárák	básák	throw e.g. stones aimlessly	bárák	bárás <i>or</i> barak	throw
gaŋ	gaŋas	push	gaŋ	gáás	push
kaŋ	kaŋas	separate two fighters (people or animals)	kam	káás	separate out, differentiate, disperse
ku	kushu	die, faint	kú	kús	die
lók	lɔɔs	build	nók	nóós	build
lɛɛ	lɛsɛ	hide, bury	nɛr	nésék	bury, hide (object)
nára	nása	stretch out, extend	nár	násàk	surpass
rá	rágas	do, touch	rá	rás	touch
royo	roros	bite, sting, throb with pain	rómón	rós	bite
sɛ	sɛsɛm	get, find	sɛ	sɛs	locate, find
tò	tòs	give birth	té	tés	dress up, fit, wear, give birth, become, spend (time), put
tɛ	tɛsɛ	put	té	tés	dress up, fit, wear, give birth, become, spend (time), put
tsipta	tsip	twist, wring the neck of	tsíbík	tsip	twist, dislocate, steer, drive car
vó	vós	catch, fetch, harvest	bó	bós	fetch
wók	wógos	hear, feel	fók	fóòs	hear, experience something
wùl	wùlus	reach, arrive	wúruk	wurus	come out, go out

Berom and Izere fall into very different subgroups of Plateau and such similarities do not arise from analogous morphological processes. The direction of borrowing is hard to determine although more detailed analysis of Berom may establish which of these fall into regular patterns within Berom and are thus likely to come *from* Berom.

4. Conclusions

4.1 Likely affixes in pre-Berom

The data tables illustrate the highly irregular surface morphology of verbal plurals in Berom. Analysis suggests that many observed pairings can be reduced to relatively few underlying suffixes. The perplexing

diversity of forms then arises because erosion and morphological regularisation are taking place at differential rates for almost every pairing and moreover produce different results because of speakers' competing analyses of individual lexical items. Similar singular forms can have morphologically diverse plurals, arguing that we must also invoke historical explanations rather than appeal to regular processes. There is, moreover, at least one process whereby singulars are generated from plurals through a singulative affix. A further source of skewing is intense bilingualism with neighbouring languages. In the case of Izere, where the documentation is fairly complete, paired cognate forms show that borrowing, probably in both directions, usually includes the plural form rather than just the root. As a result this creates interference in regularisation processes, increasing the level of surface complexity. It is likely that if similar documentation were available for other neighbouring languages such as Irigwe, comparable cognates would likely be observed.

Table 16 shows the proposed historical verbal affixes of Eastern Berom. It can be assumed that none are truly productive today in the sense of generating novel pairings. Nonetheless, the process of erosion and re-analysis continues so that the pairings may not remain stable. Apart from singular plural oppositions, no more precise meaning can now be assigned to these morphemes, and it is likely the meanings were lost before Berom took its present shape.

Table 16. Proposed verbal extensions in Berom

Affix	Application
-mV	?
-rV	? but probably an allomorph of an earlier -tV suffix
-sV	Generalised plural
-tV	Singulative

Of these, -rV and -sV also occur in Izere and probably much more widely in Plateau and -ri also occurs in Vagla, a Gur language (Blench 2003). The loss of any more specific meaning than plurality and that fact that they are now unproductive will make it difficult to relate them to better documented affixes, such as those in Bantu, without a great deal more historical information.

4.2 Wider implications for Plateau languages

Our knowledge of the complex morphology of Plateau languages remains very limited and it is unlikely that most languages have more than a fraction of their verb morphology recorded. The extreme irregularity of Berom may be exceptional but it is just as likely that other systems will prove equally intractable when they are better known. If the argument of this paper is accepted there are two sources of this; the borrowing of verbs with their plurals from neighbouring languages and the process of erosion and re-analysis continuing at different rates for individual lexical items leaving islands of patterns in sea of irregularity. The second step in the analysis of Berom is to record comparable lists for the other main dialects, both to establish which of these pairings can be reconstructed for proto-Beromic and to see what clues are available for the segmental content of longer forms. But it is likely that it will not be possible to put together a convincing account of Berom verbal plurals until similar data is also available for all the languages bordering on Berom.

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