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The fate of the Benue-Congo velar nasal in Bantoid

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Abstract:
Proto-Benue-Congo has been reconstructed both with a simple velar nasal **ŋ* and with the velar nasal as part of a **ŋg* structure. The loss of the simple velar nasal has been noticed as a feature of Bantu languages but has not been studied in other Bantoid groups. This paper considers the lexemes for which this phoneme has been reconstructed and then examines the subsequent development of the velar nasal in several groups. The results vary from preservation in Ekoid to near absence in Bantu. The phonological loss of velar nasals is not surprising, as parallels demonstrate. Rather the question arises of why certain languages only preserve remnants of the original velar nasal, and a partial answer is connected to suffixation and cluster formation.

Keywords: Bantoid, Bantu, velar nasal, reconstruction

1 Introduction

One of the differences between the phonemic inventories reconstructed for Proto-Benue-Congo (PBC) and its descendant Proto-Bantu (PB) is that the latter does not usually include the velar nasal **ŋ*, except as an element in the realization of certain nasal + consonant structures.[1] De Wolf (1971) was probably aware of the absence of the simple velar nasal in PB because his PBC reconstructions were modelled on PB lists and he distinguished PBC forms reconstructed with **ŋg* from those with simple velar nasal **ŋ*. The former often have descendant PB forms in **ŋg*, whereas the latter often have a zero reflex in PB. For example, PBC **kaŋga* 'guineafowl' > PB *káŋgà* shows preservation, whereas PBC **tuŋi* 'ear' > PB *tʊ́ì* shows loss.[2]

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[1] Cf. Hyman (2003: 49), Meeussen (1967: 83, 85), and Meinhof et al. (1932: 32–3).

[2] Unless otherwise stated, PBC reconstructions are from de Wolf (1971: 53–59) with class markers in parentheses, while PB reconstructions are taken from *Bantu*

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Mukarovsky (1976–77: 248) also noted the unusual loss of his Proto-Western Nigritic **n* in C_2 position in certain PB reconstructions. Then Dimmendaal (1978: 233–34) was the first to state that there is a regular correspondence between stem-medial and stem-final **ŋ* in Proto-Upper Cross (PUC) and *ø* in Proto-Bantu for which he gave several examples.

But besides the Bantu reflexes, what happened to the PBC velar nasal in other Bantoid groups?[3] After highlighting the general problem of velar nasals in Proto-Benue-Congo and Niger Congo, the plan of this article is first to identify stems which can be reconstructed with simple **ŋ* at the level of Proto-Cross-Congo (PCC)[4] or earlier, and then look in detail at a range of Bantoid language groups for evidence of preservation or loss. Finally, we will look at the Bantu evidence for greater clarity on that subgroup.

The Bantoid data in this paper is cited from publications whose authors vary in their conventions for transcribing or analyzing nasal + velar structures (*ŋg* or *ng*, prenasalized or not, compound or not). But I will refer to all those structures as complex *ŋg* in contrast to simple *ŋ* (without any additional component). Likewise, the term "*ŋ* loss" only refers to a language's loss of the inherited PBC simple phoneme **ŋ* not to its loss in a complex structure. It is also important to keep in mind that the presence of simple *ŋ* in a language today does not mean that the language failed to undergo "*ŋ* loss", since after the

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Lexical Reconstructions 3 (BLR3) (Bastin, Coupez, Mumba & Schadeberg 2002), sometimes with examples from Guthrie (1967–71). The convention of BLR3 (following Meeussen's usual style) is to write **ng* for the PB prenasalized velar, but in this paper I use **ŋg*, as had been the custom of Meinhof and Guthrie. Regardless of the convention of the authors cited, I write reconstructed roots without preceding or following hyphens. Letters following PB reconstructions indicate the Guthrie zones where reflexes are attested; the symbol " + " indicates additional zones, that is to say "ABDE + " is a shorthand for zones A, B, D, E and some further letters.

[3] A description of possible Bantoid branches can be found in Blench (2015), but it must be stated that there is a lack of clear characteristics, much less confirmed innovations, that would distinguish the members of a Bantoid group or many subgroups, including Bantu itself. Although Dakoid is included in Bantoid in Blench (2009), I think much of its core vocabulary has roots divergent from the conventional Bantoid languages.

[4] To label the ancestor of the Cross River and Bantoid languages, I use the term Proto-Cross-Congo (rather than Proto-Bantoid-Cross) to maintain consistency with the pattern Niger-Congo and Benue-Congo and to avoid confusion with PBC, the abbreviation for Proto-Benue-Congo. PCC reconstructions are mine.

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loss of inherited *_ŋ_ the simple velar nasal often arose anew from the reduction of *_ŋg_ or other consonants.

2 The velar nasal in early Benue-Congo or Niger-Congo

There is not yet a list of reconstructions for PCC or Proto-Bantoid, so we must begin at an earlier stage. What Benue-Congo roots might be candidates for studying the reflexes of PBC simple *_ŋ_ in Bantoid? De Wolf (1971) was focused on PBC noun classes rather than phonology and he provides no description of how he reconstructed his tentative PBC phonemic system, which includes both *_ŋ_ and *_ŋg_, or even how he reconstructed roots. Nevertheless, de Wolf's main list of tentative PBC noun roots includes twenty roots with simple *_ŋ_ and nine roots with *_ŋg_.[5] Only some of these have Bantoid reflexes. In his list of PBC phonemes, Blench (2004) reconstructs *_m_, _n_, _ɲ_, and *_N_ (presumably an unspecified nasal), but he also uses *_ŋ_ in his Eastern Benue-Congo reconstructions (e.g. 253 #_koŋ_ 'hill') and *_ŋg_ in the Bantoid-Cross ones (e.g. 329 #_kaŋga_ 'guinea-fowl'). Sometimes these match PB reconstructions, sometimes they do not.

So, how and why we should reconstruct this phonemic difference for PBC *_ŋ_ and *_ŋg_ are difficult questions, mainly because very few modern Benue Congo languages make this distinction. Most languages only have the simple velar nasal. De Wolf's Central Kambari (Kainji) is one of the minority with _ŋg_ but it apparently lacks simple _ŋ_ and the principle for his PBC reconstructions is not clear: Kambari _ùù-dàŋgâ_ 'tree' (<*_ú-taŋga_ 'stick, whip'), _tsì-pə̣̀nə̂_ 'brains' (<*_mà-boŋgo_), _ùù-rũ̀ʔũ̂_ 'depth' (<*_bu-doŋo_), _ùù-nə̂_ 'mouth' (<*_ú-nuŋa_). There are some Plateau languages with _ŋg_, but the instances do not consistently correspond to reflexes in other languages and there is the possibility that a *_-ŋgV_ suffix has sometimes played a role.

In fact, in Niger-Congo in general, the complex *_ŋg_ is not very common (mainly Bantu and the Atlantic or Mel languages). Among his 600+ pseudo-reconstructions of Proto-Western-Nigritic (covering most of the groupings of current Niger-Congo), Mukarovsky (1976–77)

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[5] De Wolf (1971: 51–59), grouped by gender. Those with _ŋg_ are *_kweŋge_ 'cheek', *_ŋgwana_ 'child', *_kaŋga_ 'guinea fowl', *_baŋga_ 'jaw', *_kpaŋga_ 'mat', *_peŋga_ 'shoulder', *_kwoŋga_ 'spear', *_taŋga_ 'stick, whip', *_gaŋgo_ 'tooth'. In addition, there are occasional incidental reconstructions throughout the volume.

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includes eight with a simple velar nasal or *ŋw* complex (all initial only).[6] The PWN complex **ng* appears 26 times (only in C_2 position), often as an alternative, and often without examples for *ng/ŋg* outside Bantu.[7] Even the presence of *ŋg* in a sample language is not very indicative. For example, one of the few languages that Mukarovsky regularly cites with *ŋg* is Gonja, a North Guang language of the Kwa group, but Snider (1989) uses *ŋ* or *ŋŋ*, e.g. *e-peŋi* 'sun' instead of Mukarovsky's *è-peŋgí*. In any case, Snider (1990: 10) derives North Guang **ŋŋ* from Proto-Guang **ŋk*, so Guang will not provide any confirmation for reconstructing Proto-Niger-Congo **ŋg*. Yet, for the widely attested stem of 'guinea fowl' (PWN **kuang*, PBC **kaŋga*, PB **káŋgà*), other than the Bantu and Benue-Congo reconstructions, Mukarovsky's only reflexes with **ŋg* are a Gonja form and possibly Kisi (Mel) *kaŋgb-u* 'kind of dove'.

The paradox is that PB has **ŋg* but no simple **ŋ*, but beyond Bantu there is plenty of simple *ŋ* but little evidence for **ŋg*. There is a similar deficit of evidence in languages outside Bantu for the other nasal complexes (**mb* and **nd*) reconstructed by Mukarovsky and de Wolf,[8] but there are at least numerous oppositions in Bantu of **m/*b/*mb*

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[6] Mukarovsky (1976–77) discusses *ŋ* at 1.116–17, and the "denasalization of **ŋm*" in some languages at 1.142–46 (later he uses **ŋw* in listing those same roots). Mukarovsky writes his PWN pseudo-constructions with capital letters, but for ease I have written them with miniscules. Those with **ŋ*: **ŋiu* (**ŋium*, **ŋu-*) 'drink', **ŋun* (**ŋunk*) 'smell', **ŋwa* 'scratch', **ŋwá* (**ŋwyá*, **ŋwúna*) 'nose', **ŋwákì* (**ŋwátì*) 'smoke', **ŋwál* 'moon', **ŋwát* 'star', **ŋwo* 'bee; honey'.

[7] PWN roots with **ng*: **baga (*banga*) 'jaw', **bung* 'waterhole, river', **beng* 'dislike, hate', **bhang* 'shine brightly', **bhung* 'roar', **cang* 'charm', **gwàng* 'hang up', **jing* 'build', **kuang* 'guinea-fowl', **kung* 'bend (eel)', **kwúng* 'gather up', **liang* 'hang down, dangle', **lingi* 'water', **mún* (*mung*) 'suck', **mang* (**mak*) 'astonish', **ní* (**níang*) 'elephant tusk', **pin* (**ping*) 'lie across', **pok* (**pong*) 'knead', **pek* (**peng*) 'be bent sideways', **ping* 'plait', **phán* (**pháng*) 'cutlass', **phuk* (**phung*) 'blow, breathe', **tagi* (**tangi*) 'kind of trap', **tang* (**tiang*) 'be first, in front', **ting* 'cut (off)', **tung* 'basket', **tsuang*? (**tuang*) 'stick'.

[8] De Wolf has only a few reconstructions with **mb* or **nd* and, as usual, the evidence for them is not clear. For example, none of his examples for **kondi* 'moon, month' or **tende* 'palm tree' have */nd/*, so presumably they are based on PB **gòndè* and **téndé* respectively. For **kumba* 'pig' (no PB cognate), he cites the Upper Cross River forms Mbembe *ò-ḳómbà* and Humono *è-kóm̀bạ/ì-*. But */mb/* is very rare inside a morpheme in those languages, and the Okom variant *akku* 'pig' suggests that the Mbembe forms *okkómba, akkómba* involve a clitic. Dimmendaal does not reconstruct **mb*, **nd* or **ŋg* for PUC.

and **n/*d/*nd*. Without PB reconstructions, which heavily influenced Mukarovsky and de Wolf, it is quite possible that PWN and PBC might have been reconstructed with just **ŋ*, and not **ŋg*. Two general solutions to the puzzle are obvious: 1) a widespread shift of **ŋg* > *ŋ* except in Bantu,[9] or 2) only early **ŋ* (without **ŋg*) and then Bantu innovated **ŋ* > *ŋg*. From the phylogenetic viewpoint, it seems unusual for so many branches of Volta-Congo to lose a phonemic feature independently. But the fact that the other PB nasal complexes look solid makes an early **ŋg* plausible typologically.

How solid is the Bantu evidence for non-initial **ŋg*? The various NC$_2$ structures are regularly attested in hundreds of languages from all zones, regardless of tones or surrounding vowels. There is an occasional tendency toward nasal complexes inside the history of the Bantu group, e.g. early Bantu **yàb-ʊk-* 'cross river' > Eastern Bantu **yàmb-ʊk*. But there is really nothing internal to justify the case for a uniform change like PBC **ŋ* > PB **ŋg* (and in certain cases PB **ø*).[10] Bantu languages differ in this regard from the neighboring Grassfields languages, where NC$_1$ structures are frequent but no NC$_2$ structures have been reconstructed for Proto-Grassfields.[11] In general, the simplification of consonants in C$_2$ and the limitation of coda consonants are widespread phenomena in the Nigeria-Cameroon area and are often connected with the loss of V$_2$ but do not require it. Some Bantu languages in the area were also affected by these changes, for example, PB **ŋg* is fairly consistently preserved by Sawabantu languages like Duala (A24), as well as by Tuki (Mbam A601), but not usually by Tunen (A44) or the Manenguba group: e.g. PB **gàŋgá* 'root' > Duala *mwangá* and Tuki *ongangá* but Tunen *mòkaŋa* and Akossi (A15c) *ŋ̀-kàŋ*. The change **ŋg* > *ŋ* (and sometimes further *ŋ* > *ø*) is also a feature of many B70–80 languages.

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[9] If both existed earlier, this would have been a merger of **ŋg* and *ŋ*. For the change **ŋg* > *ŋ* and general background on the velar nasal in Germanic languages, see Bailey (2019).

[10] Among the C$_2$ consonants for a hypothetical Proto-Potou-Akanic-Bantu (PPAB), Stewart (2002: 209) lists *mb*, *nt*, *ŋg*, *ŋk*, and *n* (but not *m* or *ŋ*). He states, "the simple nasal *n* is presumed to go back diachronically to a prenasalized stop *nd*" (so the occasional PB **nd* is a non-systematic innovation when it occurs, as is Proto-Akanic **ŋ* < **n*). But his **ŋg* is early, e.g. PPAB **tĩŋgĩ* 'vein' > PB **tíŋg[-]à*.

[11] The apparent exception PGr **sàm ́ bà(l) ́* 'seven' (PB *càmbàdì*, *càmbʊ̀àdì* BLR 8433) is a compound formation.

In summary, there is reason to wonder about the early history of pre-nasalized consonants or nasal complexes at the stages before Proto-Bantoid. But putting aside these speculations about the phonemes of Proto-Niger-Congo and Proto-Benue-Congo, this paper will continue with the standard assumption that PBC had both **ŋg* and **ŋ* and that PB **ŋg* is a reliable indicator of the former. The question under study then is to what extent PBC had simple **ŋ* and what its fate was in Bantoid languages.

2.1 PBC or PCC reconstructions with simple velar nasals

If they were in fact distinct, PBC **ŋg* and **ŋ* merged in early Cross River in favor of **ŋ*, e.g. PB ***káŋg*** 'fry, roast' ~ PUC ***káŋà***, PLC ***káŋ***. So, by themselves the forty PUC roots with **ŋ* in Dimmendaal (1978) do not distinguish any difference in source. But he devised a simple test for distinguishing them by listing six cognate roots for which PUC **ŋ* has a corresponding **ø* in Guthrie's PB, thus demonstrating the phenomenon of simple *ŋ* loss in Bantu: 'knee', 'egg', 'ear', 'louse', 'root/hair', 'faeces'.[12] The Bantu comparisons are needed because Cross River **ŋ* is ambiguous in itself. Likewise, reconstruction based on Bantoid alone is complicated by languages where contemporary *ŋ* can have a variety of sources. Accordingly, the evidence of PB is critical for distinguishing PCC **ŋ* and **ŋg*.

For this analysis, I have further added several roots from other sources that might be relevant. Proto-Lower Cross (PLC), Proto-Cross River and Proto-Ogoni reconstructions are from Connell (1991, 2025a), Proto-Western-Nigritic (PWN) reconstructions from Mukarovsky (1976–1977), Benue-Congo Reconstructions (BCR) from Blench (2004), Proto-Jukunoid (PJ) from Shimizu (1980), Proto-Plateau (PP) from Gerhardt (1983: 139–154), Proto-Grassfields (PGr) from Hyman (1979). Also cited when available is data from the Benue-Congo Comparative Wordlist (BCCW) collected in Williamson & Shimizu (1968) and Williamson (1973). Many contemporary language forms are those collected by the Grassfields Bantu Working Group (GBWG) in the 1970s or in the Bantu database accompanying Grollemund et al. (2015).

We can create a list of possible PBC or PCC forms with a simple velar nasal by filtering the various lists above for roots where a PB

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[12] Dimmendaal 1978: 233–34. For the velar nasal in specific Upper Cross languages, with reconstructions of PUC, see Sterk (n.d.: 71–2).

form lacks the velar nasal found in the PBC, PUC, or PLC reconstruction. Simple velar nasals have not been reconstructed at the beginning of PBC roots.[13] I have separated the root-medial (1) and root-final examples (2), because assessing final velar nasals is often more complicated. Some roots do not have good Bantoid evidence for a final consonant, and in some forms it is possible that the reconstructed final velar nasal is based on an original suffixed class marker (especially likely to be preserved on monosyllables). Since all PB nouns are reconstructed with a vowel coda, it is also possible that the lack of final velar nasals is due to a general loss of all PB final consonants.

(1) PBC or PCC proto-forms with velar nasal **in medial position**

'ear' PBC **tuŋi* (*ku/a*)
PB **tʊ́ì* 15/6, 5/6 (BLR 3030)

The velar nasal is well attested in Cross River (PUC **ttóŋ(ì)*, PLC **ú-tɔŋ́ /a-*) and somewhat in Jukunoid, Plateau and Western Gur (BCCW 31, PJ **tóŋ* (*ku/a*), PWN 556 *thúi*, *thú*). We will see that Bantoid languages sometimes show what look like frozen **-lɪ* or **-kʊ* suffixes, both frequently seen as class markers in Gur forms.

'ashes' PBC **toŋ* (de Wolf 1971: 71)
PB **tó*, **tʊ́é* 3, 14 (BLR 2954)

Despite de Wolf, Bantu forms support a CVCV structure for PCC. The velar nasal is well attested in Plateau, Jukunoid and Cross River (BCCW 5, PJ **tóŋ* (*u-/i-*), PWN 560 **thún*). Across Benue-Congo and Bantoid, the most common vowel in this word is ɔ (so PUC **tɔ́ŋ*, PLC **ń-tɔŋ́*). Guthrie's reconstruction of **tʊ́é* (C.S.1810.5, 1769), followed by BLR, is based on forms like Songe (L23) *e-twe*, which helpfully provide V_2, but the glide in those forms only suggests an unspecified rounded back vowel and all the examples with vowels in zones ABD have *o* or ɔ.

'hair, root, vein' PUC **dɪŋa* (*dò-/ɪ*)
PB **dì* 3/4, **dia* 3 'root, fibre' (BLR 1003)

The PUC reconstruction is supported by PLC **ɔ́-lɔ̀ŋ* 'root', but not PWN 344 **líul*, *líl* 'root', PJ **dzin* (*u/i*) 'hair' or Proto-Central-Jukunoid **dén* 'root', PLC **dét* 'hair'. Unfortunately, it is not easy to be sure about Bantoid cognates because the root has

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[13] Even a prenasalized velar appears initially in only one of de Wolf's stems: PBC **ŋgwana/*bana* 'child', where the nasal in the singular is clearly a remnant of the class prefix **mʊ-*.

metaphorical semantics, which seem to overlap with possible by-forms or other roots:

1. PUC *_tɪna_ (_dò-/ɪ_) ‘root, hair’, PWN 515 *_tin_ ‘root (trunk)’, PB _tínà_ ‘root, base of tree trunk - banana plant’.
2. PBC *_duŋu_ (_ú/ti_) ‘cord / rope’, *_digi_ (_ú/i_) ‘cord / rope / liana’; PJ *_diT_, *_diK_ (_u/i_) ‘rope’; PUC -_dyíkì_, PLC *_ó-lók_; PB *_dígì_ 3/4 ‘string’ in zones CDE+, PB *_dí_ 11 ‘string’ BGH+. The two PBC proto-forms for ‘cord, rope’ look suspiciously similar especially since the velar nasal in *_duŋu_ is probably just a velar, as in Cross River.
3. PB *_cìŋgà_ ‘string; hair (on body)’.
4. Also, for ‘root’, Bantoid languages often use the cognates of PB *_gàŋgá_.

‘knee’ PUC *_dúŋí_ (_dè-/dà-_)
PB *_dúí_ 5/6 (BLR 1239)

The velar nasal is likewise reconstructed for PLC *_ɛ́-lɔ́ŋ /n-_ and BCR 220 #_rúŋù_ (with forms from Plateau and Tarokoid). PWN 363 *_lúnku-_ (*_dúnku-_). There is limited data for PWN 109 *_dui_. The basis of De Wolf’s reconstruction of PBC *_duno_ (*_li_/*_a_) is unclear since none of the forms he cites have C_2 or V_2. Perhaps he was making a connection with the Eastern Bantu *_dʊ̀ŋgò_ ‘knee’ EGJL+ (BLR 1217) but BLR derives that from the verb ‘join’. PBC *_kudu_ (_li/a_) may reflect this root with a *_kʊ̀_ class prefix for body parts.

(2) PBC or PCC proto-forms with velar nasal **in final position**

‘dew’ PBC *_miŋ_ (_ma_)
PB *_mè_ 3, 5, 11 (BLR 2158)

The velar nasal is found in Plateau reconstructions but the word was not included in the usual Cross River lists for reconstruction. Blench (2022) gives common Plateau #_myeŋe_, with _ŋ_ as a Plateau innovation. PWN 366 *_màni_, *_mìna_. A possible conflation exists with stems for ‘water’: PBC *_ni_ (±) (*_ma_), PUC *_nì_ (_mà-_); or PLC *_´mɔ́ːŋ_, PGr *_mò´_.

‘egg’ PBC *_kiŋ_, *_tiŋ_
PB *_gí_ 5/6 (BLR 1368)

Reconstruction of the velar nasal for PBC is uncertain at best. Cf. PJ *_kyì_ (_ri/a_), PP*_tii_ and *_zeŋ_, PWN 122 *_gíla_, BCCW #33. From PUC (Dimmendaal 1978: 297) *_kkèŋí_, PUC (Sterk n.d.:

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80) *_ˋ-kkèddí_ and PLC *_ŋ́-kíɛǹ_, Connell reconstructs Proto-Cross-River *_kìɛǹ_. These forms and the Bantoid forms discussed below often appear to have the relic of a class 5 marker.

‘excrement’ PBC *_biŋ_ (_a_)
PB *_bíî_ 13, 6 (BLR 6425)

The velar nasal is seen in reconstructions of Plateau and Jukunoid (PJ *_byíŋ /a-_), but for Proto-Cross-River, Connell reconstructs *_bín_ (cf. PUC (Dimmendaal 1978: 256) *_ˋ-biŋ_, PUC (Sterk n.d.: 72) *_ˋ-bín_, PLC possibly *_fíːŋ_ or *_fíD_). PWN 32 *_bin_. BCR 98 #_mi_. Protoforms for Mambiloid and Grassfields are reconstructed with final *_d_, see below.

‘louse’ PUC *_dáŋ_ (è-/i-), PLC *_ó-láŋ / i-_
PB *_dá_ 9/10 (BLR 780)

Dimmendaal (1978: 67) and Sterk (n.d.: 34–5) discuss the problem that *_ŋ_ is absent in this stem in a number of Central Upper Cross languages. But Northern Jos has *_laŋ_ (_bì/ì_). BCR 240 #_daNi_ is based on Tarokoid (Sur) _dani_, the PLC reconstruction and Nizaa (Mambiloid) _lām_. No entries for ‘louse’ in PWN or BCCW, and de Wolf only offers PBC *_i-kodu/*i-_. I have not found other Bantoid cognates.

‘mosquito’ PUC *_boŋ_, PLC *_é-bɔŋ_
PB *_bʊ́_ 9/10, 11/10 (BLR 279)

Also Proto-Plateau 2 (Jaba) _ì-buŋ_. Sterk’s reconstruction of PUC *_ˋ-bbɔ́ŋŋV̀_ suggests a suffix is at issue. The velar nasal is not supported by PWN 53 *_búne_, BCR233 #_boN_ (in fact, none of the three forms cited there has any nasal).

‘wing’ PBC *_pabaŋ_, *_babaŋ_ (li/a)
PB *_pàpá_ 5/6, 11/10, *_bàbá_ (BLR 2407)

The velar nasal is seen in some Plateau languages but is not reconstructed for Plateau groups. It is, however, reconstructed for PUC *_bábàŋ_ (Dimmendaal 1978: 258) and perhaps with a suffix in PUC *_ˋ-bbàŋɔ̀_ (Sterk cited by Connell 2025a) but not PLC *_ú-bâ / m-_. See also BCCW 101; PWN 419 *_papa_ ‘shoulder, wing’. This word, and related verbs to ‘flap wings’, may have an onomatopoetic dimension that complicates reconstruction.

Altogether, these ten roots above provide a few good cases for reconstructing a PBC or PCC simple velar nasal, although only four are medial, and in most of the word-final cases the evidence is rather weak. It should be noted that all of these are nouns, partly because de Wolf's list only includes nouns but also because the great majority of PUC reconstructions with velar nasals are nouns.

2.2 Unlikely or uncertain cases of PBC **ŋ* and **ŋg*

Few BC languages have pre-nasalized or compound NC structures, so de Wolf apparently reconstructed **ŋg* on the basis of the Bantu data like that in Table 1.

Table 1. Proto-Benue-Congo forms in **ŋg*

	PBC	PB
'guineafowl'	**kaŋga* (*ì/í*)	**káŋgà* 9/10 (BLR 1720)
'jaw'	**baŋga* (*ku/í*)	**báŋgá* 11/10 (BLR 108)
'spear'	**kwoŋga* (*li/a*)	**gòŋgá* 5/6 (BLR 1448)

Thus, we should be able to pair PBC **ŋg* with PB **ŋg* and PBC **ŋ* with PB **ø*. But it is well known that many of de Wolf's reconstructions deserve reconsideration. Based on PB or other Bantoid reflexes, it seems that some PBC forms, listed in (3), should actually have different types of velars than those reconstructed by de Wolf, or none at all.

(3) Disputable PBC or PCC proto-forms
'shoulder' PBC **peŋga* (*ku/a*)
PB **bègà* 5/6 (*pègà* 5/6) (BLR 139)
De Wolf (1971: 63, 158) only gives two uncertain reflexes and PBC **ŋg* looks unlikely here in general: PWN 41 **buaka* (*bueka*); PP2 (Jaba) *gu-pek / a-*, PGr **mbèk*(*-a?*); Ekoid: Balep *ɛ̀-pɛg*, Ejagham *efâŋ*, Ekajuk *ɛ́-bə́g*.

'tooth' PBC **gaŋgo* (±) (*li/a*)
PB **gègò* 5/6 'molar tooth' (BLR 1356)
De Wolf (1971: 62) only gives one possible example Central Kambari *áá-ŋgá/á*. Cf. PWN 200 **kéka*.

'buffalo, bush cow' PBC **poŋ* (*ì/í*)
PB **bògó* 9/10 (BLR 258)
De Wolf gives several examples with final *-m* (so also PUC **pɔ́m* 'cow') but none with a velar nasal. The Bantoid evidence suggests either **ŋg* or possibly **g*: PGr **mbòŋ*`; in Yemne-Kimbi, Bu *mbɔ̀lā/bìmbɔ̀lā* (1/2) and Koshin *mbɔ̀ŋ/bòmbɔ̀ŋ* (1/2); the

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Ekoid-Mbe evidence is discussed later. If PBC **ŋg*, perhaps the PB form in classes 9/10 reflects some dissimilation of double NC structures – to which the varying C_1 of this difficult word may also contribute. Cf. BCCW 46.

‘blood’ PBC **luŋ* (*ma*)
PB **dʊ́ŋgó* 6 (BLR 4488)

De Wolf’s examples do not show a velar nasal (or *ŋg*), but we will see below that the Bantoid data supports PBC **ŋg*. There are other ‘blood’ roots that might be relevant for some of the Bantoid data: 1) PBC **zi* (*ma*), PGr **cɪ̀´*, PB **gìdá* (5) 6; 2) PJ **yíŋ* (*ma*), PUC **yìŋ*, PB **jíŋgà* 6, but perhaps some forms are related to the previous series; 3) PGr **lém`* looks like a cognate of PUC **dè* but is more likely from PBC **luŋ* with the class 6 marker **-ma* suffixed.

‘charcoal’ PBC **kalaŋ* (*li/a*)
PB **kádà* 5/6 (BLR 1662)

There is no strong evidence for **ŋ* in Plateau or Jukunoid and Connell (2025a) reconstructs Proto-Cross River **káDV*. In any case, a putative C_3 in this form would be at risk in most languages. Cf. BCCW #16, PGr **ké`*. There is also the problem of the PB pair **kádaŋg*/**káŋg* ‘roast’.

‘leopard’ PBC **kpoŋi* (*ì/í*)

Without a clear PB descendant, it is hard to know whether to reconstruct PBC **ŋ* or **ŋg*, although the latter seems more likely. De Wolf’s velar nasal seems to be based on a form in Kainji (Anaguta *ù-kpɛ̀ŋ/ì*), and three Bendi forms: Alege *ì-kpɔ̀ŋ*, Boki *ì-kpaŋ/ì-* and Bete *ù-kpɔ̀ŋ/ì*, which are ambiguous. PBC **kpoŋi* has some resemblance to PB **gòì* 9 ‘leopard’ (BLR 7154), but there must have been several terms for wild cats, and there is no velar nasal in PJ **kù* (?)(*i/i*), PUC **kpè* and PLC **é-kpè* /**i-*, PWN 150 **gwìl*. Cf. BCCW 56. Some groups like Ekoid have both roots (or stems of the same root?).

‘mouth, lip’ PBC **nuŋa* (*ú/ti*)
PB **nʊ̀à* 12, **nyʊ̀à* (BLR 4709)

De Wolf only cites Kagoro (Plateau) *u̍-núŋ* with the velar nasal, and there is limited support for a velar nasal from Cross River. PLC **í-núà* argues against the reconstruction of a velar nasal, as does PUC **mà* (often forms in *mmà*), which is likely from **nua*

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with a labialization of the nasal by the rounded vowel. Proto-Ogoni *_ngegã_ is ambiguous at best. See also PWN 404 _níuma, núa_. In general, this root has been seen as a likely denominative of ‘drink’ (cf. PB *_nyó_ (BLR 7047), PWN 406 *_ŋiu(m)_, *_ŋu_), and *-_a_ or a class affix seems a more likely suffix than *-_ŋa_. But note occasional second nasals in Bantu forms for ‘drink’ like Nugunu (A622) _nyóɛna_, Mangisa (A63) _ə-nyuŋ_, Eton (A71) _mè-ɲúŋ_.

‘throat/voice’ PBC *_toŋo_ (_ì/í_)

The velar nasal in Plateau 2, Ekoid, Bendi, and PLC *_ù-tɔ́ŋ_ ‘neck’ is ambiguous. The noun is apparently not known in Bantu but the Mambiloid and Grassfields evidence discussed below suggests the root was *_toŋgo_. In that case, perhaps related is the verb seen in PB *_tóŋg_ ‘crow, groan’ and Nchane (Beboid) _thɔ̄ŋɛ̄_ ‘crow (v)’ (Boutwell 2020). Williamson (1989: 250–54) considers #_toŋ_ a Benue-Congo innovation.

‘sheep’ PBC *_tiaŋe_ (*_bu_/*_í_)

De Wolf’s evidence is very weak, including Tiv _ì-yɔ̀ngò_. PUC *_tama_ and PJ *_tam_ better fit the fragmentary Bantu data: *_tààmà_ 9 (BLR 9217) cited from zone J and forms in -_tomba_ found in various A70 languages. Bendi data discussed below.

‘tooth’ PBC *_sana_ (_li/a_)

De Wolf only provides evidence from two Upper Cross River languages (Humono _rὲ-sạ̀n/rạ̀_, Mbembe _ὲ-ṣà/à-_) and three varieties of Bendi (which at that time was considered Cross River). It seems that these are two separate roots. The Cross River proto-forms have been reconstructed without velar nasals as PUC *_ttân_ (_dè-/dà-_) (Dimmendaal), *_`-sàdɔ̀_ (Sterk), PLC *_é-dɛt`_, Pr-Ogoni *_àdáNa_. But the Bendi forms all have final _ŋ_ (e.g. Bete _ù-ʃáŋ/ì_) and are likely cognates of PGr *_sòŋ´_ ‘tooth’, PB *_còngà_, *_cʊ̀ngá_ (BLR 6826, 736), apparently a Bantoid derivative of *_còng_ ‘sharpen to a point’ (BLR 670, BCR #389), like the use of English ‘incisor’ for a front teeth.

There are still several other roots with a simple velar nasal in de Wolf, but they lack clear PB correspondences.[14] Because of the complexi-

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[14] Not discussed in this article are: PBC *_taŋ_ (*_ù_/*_ba_) ‘thief’, *_kpaŋe_ (*_ku_/*_a_) ‘canoe/boat’, *_ziŋin_ (*_ì_/*_í_) ‘guineafowl’, *_toŋi_ (*_li_) ‘honey’, *_kiaŋ_ (*_ku_/*_a_) ‘thing’, *_kodoŋ_ (*_ú_/*_í_) ‘throat / voice’, *_mbaŋ_ (*_ú_/*_í_) ‘rain, rainy weather’, *_tieŋu_ (*_ù_/*_ba_) ‘witch’ and *_tieŋu_ (*_bu_) ‘witchcraft’.

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ties of numbers as a separate topic, I have also not treated ‘four’ in this article. However, the velar nasal reconstructed for Cross River (PUC **nàŋì*; **nàŋ*, PLC **ìnìàŋ*) is absent not only in Bantoid languages (including PB **nàì*) but also in Jukunoid, Kainji, and most Platoid languages (Pozdniakov 2018).

3 The velar nasal in various Bantoid groups

To summarize so far, based on data outside Bantoid, we have about ten lexemes for which we might want to reconstruct a simple velar nasal for the proto-Bantoid stage. That is not a lot, but enough to examine the Bantoid evidence, with an emphasis on the four stems with medial **ŋ* (‘ashes’, ‘ear’, ‘hair/root’ and ‘knee’). As we go along, we can re-assess some of the problematic reconstructions.

3.1 Ekoid-Mbe

We begin with the Ekoid-Mbe group which provides the fullest data. These languages regularly have a consonantal reflex of PBC **ŋg*, but they show a difference in reflexes of the PBC simple **ŋ*. Ekoid varieties like Ejagham and Efutop regularly preserve the simple velar nasal, but Mbe does not, as shown in Table 2. Included are Proto-Ekoid-Mbe (PEM) reconstructions from John Watters (p.c.).[15]

Table 2. Ekoid-Mbe evidence for preservation of a velar nasal

Language	‘ashes’	‘ear’	‘excrement’	‘knee’
PBC	**toŋ*	**tuŋi*	**biŋ*	**dúŋí*
PEM	**tôŋ*	**tôŋ*	**bîŋ*	**rúŋ~lúŋ* (?)
Ejagham	*a-tôŋ*	*o-tûŋ*	*à-bɨ̂ŋ*	*a-rúŋ, ê-rʉ́ŋ*
Efutop	*ǹ-tûŋ*	*ò-tâɷ̀ŋ*	*à-bîŋ*	*è-dâɷ̀ŋ*
Mbe	*bé-tùɛ̀* (pl.)	*ó-tūɛ̀*	*a-bí*	*lɛ́-lù*

The word for ‘root’ (PUC **dɪŋa* – PB **dì* 3/4, **dia* 3) is one more example where Ekoid has a velar nasal (N. Etung *ì-yɨ̀ŋì/à-*, S. Etung *ɛ̀-yɨ̀ŋà*) but Mbe does not (*è-lì/bè-*).[16] An alternative stem is seen in

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[15] Unless otherwise stated, Ekoid data comes from Blench (2014), which is based on Ejagham data from John Watters and David Crabb’s comparative wordlist. The Mbe data comes from the unpublished wordlists collected by Otronyi et al. (2009) or Blench (2014).

[16] For **d* > Etung *y*, Mbe *l*, cf. PB **dúm* ‘bite’ ~ Etung *yûm*, Mbe *lwɔ́m*.

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PEM **rŭg* (?) ‘root’ (Ejagham *ìrʉ̀k*, Efutop *ǹ-duɔ̌g/à-*) which might suggest a velar plosive rather than velar nasal in PBC **duŋu* ‘cord/ rope’, as discussed above.

Table 3. Ekoid-Mbe evidence for lack of inherited velar nasal

Language	‘egg’	‘wing’	‘mouth’	‘mosquito, bee’
PBC	**kiŋ*, **tiŋ*	**pabaŋ*, **babaŋ*	**nuŋa*	[PUC **boŋ*, PLC **é-bɔŋ*]
PEM	**kǐ*	(*)-*papɛ*	*nyò*	*búm*
Ejagham	*eji*	*efaβe*	*ɲ̀ɲɔ̀/ɔ̀ɲɔ̀* (GBWG)	*ḿ-bə́m*
Efutop	*è-zí*	—	—	*m̀-bú*
Mbe	*lɛ̀kīː*	*épūpūrù*	*úɲūŋ*	—

Since Ejagham and Efutop seem reliable indicators of PBC velar nasals, it is noteworthy that velar nasals are missing in Ekoid reflexes of some of de Wolf’s PBC reconstructions, as seen in Table 3. No Ekoid languages have a final nasal in the roots for ‘egg’ or ‘wing’. For ‘mouth’, Ekoid evidence suggests there is no **ŋ* in PBC, but Mbe has a surprising velar nasal. For ‘mosquito, bee’, the final *m* in Ejagham and the missing final nasal in Efutop suggest an incorporated class 9/10 marker rather than a lost velar nasal.

It must be emphasized that the lack of velar nasals in the Mbe forms above is not because Mbe does not have that phoneme. Rather, Mbe is like Bantu in losing the simple velar nasal but showing a consonantal reflex of PBC **ŋg*, e.g. PB **káŋg* ‘fry, roast’ ~ Efutop *kaáŋə̀*, Mbe *yáŋ*; cf. PB **búmb* ‘mould pottery’ ~ Efutop *mɷ̀ŋ*, Mbe *mwɔ́ŋ*. Accordingly, the presence of a velar nasal in both the Ekoid and Mbe forms of a word, together with PB **ŋg*, is a good indicator that the relevant PCC reconstruction should be **ŋg*. This distinction suggests three revisions to PBC reconstructions (Table 4).

Table 4. Series of PCC **ŋg* rather than simple velar nasal

Language	Phonemes	‘blood’	‘horn, tusk’	‘cow, buffalo’
PBC	various	**luŋ*	**tano*	**poŋ*
PCC	**ŋg* (*vs.* **ŋ*)			
Ejagham	*ŋ*	*a-gyʉ́ŋ*	*ń-táŋ*	*m-fóŋ*
Efutop	*ŋ*	*à-lɷ́ŋ*	*ǹ-tə́ŋá*	*ŋ̀-fɷ́ŋ*
Mbe	*ŋ* (*vs.* *ø*)	*bɛ̄-lūŋ*	*n̩-táŋ*	*n̩-pūɔ̄ŋ* (*lìbʲɛ̀*)
PB	**ŋg* (*vs.* **ø*)	**dʊ́ŋgó*	**tóŋgʊ*	[**bògó*]

At the PCC stage, it certainly seems that all three of these roots should be reconstructed with **ŋg*, and accordingly at the PBC stage too, rather than de Wolf’s proposals.

Likewise, the final consonant in Mbe *ǹ-júkpɔ̀ŋ* ‘leopard’ suggests **ŋg* in PBC **kpoŋi* ‘leopard’. But the reconstruction of ‘leopard’ is uncertain (as discussed above), especially since most Ekoid varieties have cognates of PB **gòì* 9 ‘leopard’, e.g. Ejagham *m̀-gbè/ò* or Ekparabong *ŋ̀-kɔ̀i/bɔ̀-*.

Overall, it seems that Proto-Ekoid-Mbe inherited a distinction between simple **ŋ* and complex **ŋg*. Ekoid later merged them, while Mbe lost the velar nasal. So Ekoid and Mbe forms help us establish distinct reconstructions and confirm medial **ŋ* in ‘ashes’, ‘ear’, ‘hair/root’ and ‘knee’, as well as support a final consonant in ‘excrement’ (perhaps earlier **d*, cf. PGr **bɪ́d*).

3.2 Bendi

Closest to Ekoid geographically, and perhaps linguistically, are the Bendi languages. Like most Bantoid groups, Bendi languages have simple velar nasals as C_2 reflexes of PBC **ŋg* ~ PB **ŋg* (Table 5).[17]

Table 5. Correspondences of PB **ŋg* with Bendi *ŋ*

Meaning	PB	Bendi data
‘guineafowl’	**káŋgà*	*kě-kâŋ* (Bokyi), *kù-kʌ̂ŋ* (Bisu)
‘tooth’	**còŋgà*	*-ʃáŋ* (Bokyi), *ɔ̀-ʃɔ́ŋ* (Alege)
‘blood’	**dʊ́ŋgó*	*ɛ̄-ɾūŋ* (Ukwortung), *èbɛ̀-nūŋ* (Bekwara)
‘horn’	**tóŋgʊ*	*í-tʲúŋ* (Ukwortung)

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[17] Bendi group examples are from Blench (2010) and the wordlists in Otronyi et al. (n.d.). The *ŋg* in C_2 of Bendi *ù-ŋgìŋgiè* ‘woman’ (where other varieties have *g*, *ŋɲ*, or *ɲ*) is merely due to reduplication.

But a number of Bendi varieties have final *m* where *ŋ* is expected, e.g. Bekwara *itʃʷom* ‘horn’. On the other hand, the final *ŋ* in Ukwortung *úlʲúŋ* ‘dry season’ (PGr **lùm`*, Bekwara *ùjɔ̀m*) and *ítʲɛ̀ŋ* ‘heart’ (cf. PB *tʊ́mà*, Bekwara *ɾítʲɛ́m*) is surprising. Although Ukwortung has a number of words with final *m* (e.g. *íkúm* ‘corpse’), it can also elide it altogether, e.g. *íɲã̄* ‘animal’ (cf. PB *nyàmà*, Bekwara *ìɲàm*). Until these coda rules or developments are clarified, it is useful to cite multiple Bendi varieties in cases of divergence. For example, we find differing nasals in Bendi as well as in Benue-Congo reconstructions for ‘sheep’: Ukwortung *útʲāŋ* (cf. PBC **tiaɲe*) vs. Bekwara *utʲam* (cf. PUC **tama*, PJ **tam*). The latter seems more reliable.

In ‘ear’ and ‘ashes’, the velar nasal is seen in almost all varieties (4).

(4) Bendi simple velar nasals as reflexes of PBC velar nasals:
   a. ‘ear’ (PBC **tuŋi* (*ku/a*) – PB **tʊ́ì* 15/6)
      Bete *ko-ʧoŋ /a-*, cf. Bisu *ko-ton/a-*
   b. ‘ash(es)’ (PBC **toŋ* – PB **tʊ́é* 3)
      Bete *à-tyúŋ*, Bisu *à-ʧûŋ*

Other Bendi words which look like inheritances of simple velar nasals are ‘knee’ (e.g. Mbube *ɾī-ɾúŋ/ē-ɾúŋ*) and ‘root’ (e.g. Okworogung *ī-dâŋ*), presumably cognate with PUC **dɪŋa* (PB **dì* 3/4, **dia* 3) where Ekoid also has a velar nasal but Mbe does not.

Bete *ù-kpàŋ/ì-* ‘leopard’, *ki-tuŋ* ‘neck’ and Bokyi *mpoŋ* ‘dwarf cow’ are ambiguous for **ŋg* or **ŋ* but are most likely reflexes of **ŋg*, as discussed above. There is no C_2 in Bekwara *òŋù* ‘mouth’, or Bete *lì-tì/à-* ‘egg’, presumably from PBC **tiŋ* (*li/a*). Bokyi *bu-byibabaŋ* ‘wing’ is exceptional for the final velar nasal (cf. Bete *kù-bìbà*), but perhaps the extra syllables are an onomatopoetic effect of flapping wings. Cf. the reduplication in Ekoid varieties like Balep *ɛ̀-kpòŋmkpòŋ/bɛ̀-*.

In general, the Bendi group behaves like the neighboring Ekoid, preserving a velar nasal in the key words for ‘ear’, ‘ashes’, ‘knee’, and omitting it in ‘mouth’. There are no signs of suffixation.

3.3 Tivoid group and its neighbors

Blench (2016) has rightly raised questions about the membership of the Tivoid group. I have even more doubts than he does, since I do not think the presence of both prefixes and suffixes in these languages is sufficient for grouping. I would limit the name Tivoid to the two groups he calls Central Tivoid A and B, each of which can be further divided. Near them, Esimbi and Ugarə (Mesaka) look like distinct other languages. Of those so-called Tivoid languages west of the Mambila Plateau, based on lexical isoglosses and more frequent relics of nasal prefixes, I would distinguish the Batu group (Blench's Northern Tivoid), and two other languages Njwande (Bitare) and Buru, which are perhaps related to or influenced by Batu.[18]

3.3.3 Tivoid

Generally, Central Tivoid languages have CV(C) roots with a varying range of prefixes and suffixes. First, we should observe some forms that look like inherited _*ŋg_, e.g. Caka-Batanga _ogaŋga_ 'root' (PB _*gàngá_), _iyaŋgɔ_ 'spear' (PB _*gòŋgá_), _atiŋgɛ_ 'count (v)' (PB _*táŋg_) and Tiv _auŋgwa_ 'hear' (PB _*jí(ŋ)gua_). But some caution is warranted because most Central Tivoid A verbs rarely have _ŋg_ in any position, and noun forms suggest that the NC combinations in Tivoid can sometimes be expanded versions of a simple nasal C_2, either by phonological processes or the inclusion of suffixes, for example we seem to see _*d_ ~ _*nd_ (PB _béèdè_ 'breast', Caka-Batanga _ibanda_), as well as _*m_ ~ _mb_ (PBC _*lemi_ 'tongue' > Otanga _olɛmbəɣ_, Tiv _nómbǒr_).[19]

Whether current _ŋg_ in Tivoid is a preservation or a secondary development, the reflexes of the inherited _*ŋ_ in 'ear' and 'ashes' in (5) and (6) mostly show loss.

(5) Tivoid examples for 'ear' (PBC _*tuŋi_ (_ku/a_) – PB _*tʊ́ì_ 15/6)
Central Tivoid B: Caka-Batanga _ɔtu_, Eman _ɔto_
Central Tivoid A north: Tiv _utox_, Iyive _kə́tɔ́k/átɔ́_, Otanga _oto_
Central Tivoid A other: Evand _kʷɔ́tɔ́ŋgɔ́k/átɔ̄_, Oliti _otuŋ_, Baceve _ɔtuŋo_

Tivoid languages often preserve both class prefixes and old suffixes, hence the Iyive form historically analyzable as _kə́-tɔ́-k_. The final consonant in Tiv _utox_ probably also historically reflects the Tiv class marker _ku_ as it does in _itiɔx_ 'head' (PB _*tʊ́è_). The unusual example of a singular-plural contrast in Evand _kʷɔ́tɔ́ŋgɔ́k/átɔ̄_ looks like a reflex

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[18] Data on the languages grouped with Tivoid are from Blench (2016) and Koops & Blench (2010).

[19] This phenomenon may also be seen in varieties of Mambiloid (Connell 2025b), e.g. 'navel': Mvur Mambila _kubil_, but Cambap Mambila _kʊ́mbʊ̄n_, Oumyari Wawa _tʃómbāì_ (PB _*kóbú_ 5/6, Tiv _ì-combò_).

of _*kʊ-tʊŋ-kʊ/*a-tʊŋ-a_ 15/6 (with an additional _*-k_ added once the original one assimilated to _g_). Apparently, the class 15 suffix _-k_ in the singular provided a consonant cluster environment that preserved the nasal C_2, but the vocalic plural marker did not. The Oliti and Baceve forms look like reduced forms of the Evand form.

(6) Tivoid examples for ‘ash(es)’ (PBC _*toŋ_ – PB _*tʊ́é_ 3)
Oliti _mutumu_, Tiv _ituɛm_, Iyive _mutwim_

No variety preserves a velar nasal. The Oliti form looks rather like what we would expect from a class 3 noun with a _*mʊ-_ prefix and a related suffix (or perhaps a _*wʊ_ concord). Evand _mɔtumɛlam_ is similar with an additional suffix. Independent diphthongization is rare in these languages, so Tiv _ituɛm_ seems to faithfully preserve the same vowels as PB _*tʊ́é_, and Iyive _mutwim_ is similar but with glide formation.

Tivoid provides no good evidence for the preservation of a velar nasal in other candidates like ‘mouth’, ‘excrement’, and ‘dew’. For ‘egg’, almost all languages have prefixed forms of _gi_, _ge_, or _ki_, with apparent remnants of class 5 suffixes seen in Baceve _ɛdzinɛ_, Oliti _ɛdziŋ_.

3.3.2 Other languages sometimes labelled Tivoid

Esimbi seems to maintain _*ŋg_ sometimes, e.g. _ɔ-ghəŋgə_ ‘root’ and _mɛ-yuŋgu_ ‘blood’, but note also _təŋə̀_ ‘count’ (PB _*táŋg_). If Esimbi _atə́ŋgə_ ‘moon’ is related (as Indo-European words for ‘month’ are from _*meh_$_1$ ‘measure’), then there might be a difference of intervocalic and final reflexes (or suffixes?). In contrast, the inherited simple velar is lost in Esimbi, e.g. _mɔɔtù_ ‘ashes’, _ó-to/ɔ́-to_ ‘ear’. In short, Esimbi patterns with some of the Central Tivoid languages.

Likewise, Ugare (Mesaka) distinguishes inherited _*ŋg_ > _ŋ_ (_ú-tăŋ_ ‘moon’, _u-gaŋ_ ‘root’) from inherited _*ŋ_ (_ú↑tô_ ‘ear’, _vatu_ ‘ash’).

The Batu group is not always consistent but has fewer NC complexes, e.g. Afi _ŋgógə̀n/àkóŋ_ ‘spear’ and _mbánə̄n/ábán̄_ ‘breast’, but these reflexes contrast with the absence of consonants in the words for ‘ear’: Afi _ndún/ándó_, Njwande _out/atu_. Afi _mūtāmwū_ ‘ashes’ has either a _*-mʊ_ or _*-wʊ_ suffix, which makes it unclear whether a C_2 consonant is preserved. There is a final _-n_ in Kamino and Afi _ø-nún / á-_ ‘knee’ but lacking in some other varieties, so it might be a frozen class marker, like the suffix seen in ‘ear’. Kamino _gû_ ‘leopard’ shows no C_2. Likewise in Buru, we can distinguish the reflexes of _*ŋg_ (e.g.

_ē-gə́ŋ_ ‘root’, _e-θɔ̄ŋ_ ‘horn’) from the loss of simple _*ŋ_ (e.g. _ē-té_ ‘ear’, _e-nú/a-nu_ ‘knee’).

In summary, if the distinctions seen in Esimbi, Ugare, Buru and some Tivoid languages are systematic, then they might also be used to distinguish PCC _*ŋg_ from _*ŋ_, in the way that PB and Mbe can be. The only Tivoid+ relics of the simple PCC _*ŋ_ seem to be in the word for ‘ear’ in a few languages where the velar nasal was protected by a CV suffix.

3.4 Mambiloid

Mambiloid deserves a separate section because Endresen (1990/1991: 191) noted three nouns where “The coda phoneme _ŋ_ in Pre-Nizaa B corresponds to Proto-Bantu _ø_. Once again a Proto-Bantu innovation: loss of a phoneme that is retained in Nizaa”; see (7).

(7) Endresen’s correspondence of Pre-Nizaa-B _*ŋ_ to PB _*ø_[20]
   a. ‘urine’: Nizaa _tʃúŋ_¯ – PB _cʊ̀_
   b. ‘ear’: Nizaa _twã́ã_, Pre-Nizaa B _*tƠŋa_ – PB _*tʊ́ì_
   c. ‘mouth’: Nizaa _nũ̀ũ̀_, Pre-Nizaa _*nùŋ-Ʊ̀_ – PB _*nʊ̀à_.

But the value of the Nizaa data is less clear on further examination. First, only _tʃúŋ_¯ ‘urine’ has the velar nasal, and Connell (2025b) considers the final nasal in this word the possible remnant of a class 6a marker (cf. Ba _nʤàm_, Mbenguedje _dʒɪ̃̀m_), as also seen in other Niger-Congo branches (PWN _*cú_ #82).[21] The other two words have a modern nasalized vowel from which the Pre-Nizaa reconstruction is imputed, but Nizaa nasalization also parallels PB _*n_ (_ɲĩ́ĩ_ ‘tooth ~ PB _*ínò_) or PB _*ŋg_ (_cʌ̃ʌ̃̀_ ‘guinea-fowl’ ~ PB _*káŋgà_) as well as PB _*d_ and _*m_. Nevertheless, there is no obvious reason for the nasal vowel in Nizaa _gulũ̌ũ_ ‘knee’ (if it comes from _*kʊ-dúŋí_) except as a reflex of a velar nasal.

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[20] I have cited modern Nizaa forms based on the phonetic transcriptions in Endresen (1990/1991) or Endresen (1992). The orthography of modern Nizaa indicates the nasalization of long nasalized vowels by the use of a subsequent _ŋ_, e.g. _twáàŋ_ [twã:] ‘ear’, which is to be distinguished from the actual velar nasal following short vowels, e.g. _tʃúŋ_¯ ‘urine’.

[21] A reviewer points out that the cognacy of Nizaa _tʃúŋ_¯ ~ PB _cʊ̀_ is made suspect by the unexplained difference in tone. For the Proto-Bantu reconstruction, the forms with _*b_ (_*cùbà_ ‘urine’ BH and _*cùb(ad)_ ‘urinate’ BDJFHM) look as early as those without (_*cʊ̀_ DFJKLMR, with Eastern D).

We can add ‘ashes’ (PBC **toŋ* – PB **tʊ́é*) to the list of words with velar nasal preservations in Mambiloid based on Ndoro *ātōŋā*, Oumyari (Wawa) *tōōŋgə̄*, Vute *tūúŋ* and Mbaw *àtɔ̂ŋ*.[22] But other than the exception of ‘ashes’ and the Nizaa forms above, Mambiloid languages seem to have lost the inherited velar nasal, which is not surprising since even in Nizaa the evidence is mostly the trace of a nasalized vowel. Rather, we find Ndoro *ŋwū* ‘mouth’ and Oumyari *nùk/nŭmə̀*, and even ‘ear’ is reported without the nasal in Ndoro *ʧɔ̄*, Oumyari *tɔ̄/tɔ́-mə̄*, and Vute *tų́*. This loss is in contrast to the frequent preservation of the pre-nasalized velar PBC **ŋg* ~ PB **ŋg*, as seen in PB **káŋg* ‘fry’ ~ Cambap (Mambila) *káŋgīâ*, Ndung (Kwanja) *káŋ*, Oumyari *kāŋgə̀n* ‘cook’, or PB **kʊ́ŋg* ‘gather’ ~ Vute *kóŋ*.

Mambiloid does not seem to provide any evidence supporting the PBC or PCC reconstruction of a simple velar nasal in final position. Rather, for PBC **miŋ* ‘dew’, we find Ndoro *ā-mɛ̌* ‘dew’; for PBC **biŋ* ‘excrement’, Ndoro *bí* (Proto-Mambiloid **bid*, Connell (p.c.)); for PUC **bɔŋ* ‘mosquito’, Len *mòk*; and for PBC **kalaŋ* ‘charcoal’, Ndoro *ʧānā*, Maberem *tʃanı* and Vute *kāŋkāàr*.

In the case of de Wolf’s reconstruction of PBC **toŋo* (*ì/í*) ‘throat, voice’, we do not have a PB reflex to distinguish whether the root has a velar nasal or a prenasalized velar. In Mambiloid, however, forms like Ndoro *tōŋgə̄*, Maberem *tɔ́ŋgɔ́* ‘neck’, and Mbaw *tɔ́k* ‘throat, neck’ indicate that the PBC and Proto-Mambiloid forms contained a prenasalized velar stop or consonant cluster. This would allow us to connect this root with the verb PB **tóŋg* ‘crow, groan’, Nizaa *tɔ̋ɔ̋* ‘crow (v)’, Vute *tóŋ-*.

So, Mambiloid languages apparently preserve a few traces of the PBC velar nasal. Some varieties may also provide helpful evidence to distinguish the inherited velar nasal from nasals of other origins.

3.5 Beboid and Yemne-Kimbi

In examining some other Bantoid branches, we find that once again the words for ‘ashes’ and ‘ear’ offer solid examples of preserved simple velar nasals, but few other words do. On the whole, it becomes

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[22] Unless otherwise specified, in this section Ndoro forms are cited from Connell & Blench (2014), Mbaw forms from GBWG, Wawa-Oumyari from Martin (2012), Vute from Thwing (1987) and other Mambiloid varieties from Connell (2025b).

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apparent that suffixed class markers were an important factor for the preservation of the inherited simple velar nasal.[23]

In Beboid and Yemne-Kimbi, the complex PBC **ŋg* (reflected in PB **ŋg*) has reflexes in simple *ŋ*, as seen in (8).

(8) Beboid and Yemne-Kimbi velar nasals corresponding to PB **ŋg*
PB: **gàŋgá* ‘root’, PB **dʊ́ŋgó* ‘blood’, **tóŋgʊ* ‘horn’
Beboid: Sari *gwɛ́ŋ* ‘root’, Mungong *kə̀lúúŋ* ‘blood’
Noni *ke-tóŋ* ‘horn’
Yemne-Kimbi: Ajumbu *əgoŋ* ‘root’

The words ‘ear’ and ‘ashes’ in (9) and (10) also maintain the inherited simple velar nasal, but apparently as part of old clusters:

(9) ‘ear’ (PBC **tuŋi* (*ku/a*) – PB **tʊ́ì* 15/6)
Beboid: Saari *kintɔ́ɔ̄ŋ*, Cung *ntônē*
Yemne-Kimbi: Abar *kətɔŋɔ*, Bu *kətuŋwɔ*

The Yemne-Kimbi and Beboid examples show various prefixes and suffixes, or suffix influence. Noni (Beboid) has a helpful doublet: in addition to the pair *ke-tú/bi-tém*, it has a reduplicated byform *kè-ntuŋ-túŋ/bì-*, which seems to preserve the velar nasal. Likewise, Koshin *kə̄-tṹ* has a diminutive *fə̄-túnə́*, which is likely derived from **fə̄-túŋ-lə́*.

(10) ‘ash(es)’ (PBC **toŋ* – PB **tʊ́é* 3)
Beboid: Sari *tāŋɛ̄*, Mungong *tāŋ*
Yemne-Kimbi: Bu *dʒəŋ*

As regular as these velar nasals may look, there are a number of surprises that suggest the frequent presence of suffixes or suffixal remnants. Beboid languages usually lose V_2; however, we see Sari *tāŋɛ̄* and Akweto *tā̰ŋgē* (GBWG) with V_2 and a surprising *ŋg* that look like developments from some suffixal cluster. Noni (Beboid) distinguishes final *m* (*ɲàm* ‘animal’), *n* (*tin* ‘five’), and *ŋ* (*ke-tóŋ* ‘horn’), so Noni *taan* ‘ashes’ is also unexpected unless a suffix influenced it.

Elsewhere, for ‘knee’: Sari *nunu/nuuŋ* 5/6, Bukwe *ńnyũ* (Beboid) and Kenyang (Nyang) *nɛ́-nɛ́n/má-*. For ‘excrement’, Mekaf (Beboid) *m-bə̀-m* historically shows the same double affixes for cl. 6a that Noni

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[23] Unless otherwise indicated, Beboid is from the Eastern Beboid lists in Blench (n.d.) or GBWG, Esimbi and Ugare from Blench (2016), Yemne-Kimbi from the Western Beboid lists in Blench (n.d.) but I follow Good et al. (2011) for the term Yemne-Kimbi and name Ajumbu (instead of Mbu’).

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has: prefix *m-* and suffix *-m*. The alveolar nasals in Yemne-Kimbi cognates like Koshin *tōmbín* (13) and Missong *kībán/bībán* (7/8) are more likely reflexes of the **d* seen in PGr **bɪ́d* and Mundabli *mbyɪ̃́* (Voll 2017). Only Ajumbu *mwaiŋ* 'dew' might reflect PBC **miŋ*, with labialization from the class 3 prefix.

I have found no useful evidence in Beboid for velar nasal preservation in other words. In Noni, final *ŋ* (from **ŋg*) is preserved in class 6 but dropped in the singular form, e.g. *lēè / ɛ̄lə̄ŋ̀* 'pumpkin' (PB *dèŋgè* 5/6) and *gɔ́ɔ̄/ɛgɔ́ŋ* 'spear' (PB **gòŋgá*) (Hombert 1980: 90). From this pattern, Mekaf has generalized the pattern *ø/-ŋ* for a dozen nouns in classes 5/6, e.g. *dê/dəŋ̂* 'pumpkin' and *tū/tūŋ* 'horn', and so it is not possible to deduce any original value from Mekaf *gí/gə́ŋ* 'egg' or *ɲú/ɲúŋ* 'knee'. See also the discussion of 'egg' under Bantu below. There is also a final nasal or nasalization on the vowel in 'mosquito' in some Beboid varieties, e.g. Mbuk *bwɛ́n* ~ *bwɛ́ˠɛ́n* 5 'mosquito' and *βṹː/βṹ* 'blood-sucking fly' 9/10 (Tschonghongei 2018).

In sum, unlike Ekoid and Bendi, which have several words preserving the PCC simple velar nasal, the other Bantoid branches we have discussed (Tivoid and neighbors, Mambiloid, Beboid and Yemne-Kimbi) provide solid examples only in 'ear' and 'ashes', often in forms with suffixal influence.[24] Otherwise the velar nasal in these languages reflects PCC **ŋg* or some other consonant structure. As we continue the Bantoid migration southeastward, we will see that even that short list diminishes, with Grassfields showing an inherited velar nasal only in suffixed forms of 'ear'. Even more reduced, Tikar has nasalized vowel reflexes of PBC **ŋg*, e.g. *ŋ̀gán* 'guinea fowl' and *yán* 'roast', but apparently no remnant of **ŋ* in *dwí* 'knee', *ǹdî* 'root', and *mɛ̀ myì* 'dew'; the ancestor of the glottal stop in *ywí* 'ear' and *mɛ̀ ɓyi'* 'excrement' is unclear (Jackson 1988).

3.6 Grassfields

As the branch closest to Bantu, the Grassfields data is particularly relevant for assessing the stage of the loss of velar nasals. Final velar nasals are very common in Grassfields languages today where they

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[24] I do not include Dakoid in Bantoid, but for comparison relevant Dong forms from Blench (2009) for this study would be *tuŋwa* 'ashes' (the suffix *-wa* might have an origin as a class 3 concord, cf. Daka *tóòmáa*), *utuŋ* 'ear', *ruŋ* 'knee' (cf. Gaa *àlúŋa*), *vĩĩ* 'excrement' (nasalization apparently not due to loss of final *m*, cf. *wɔm* 'husband').

arose as reductions of various consonants including original prenasalized velars, which are preserved in Bantu. See the examples in (11).

(11) Grassfields simple velar nasals as correspondences of PB _*ŋg_
PB _*gòŋgá_ ‘spear’ – PGr _*ɣòŋ`_
PB _*gàŋgá_ ‘root’ – PGr _*ɣàŋ´_
PB _*dàŋgí_ ‘bamboo’ – PGr _*dìŋí_
PB _*bòŋgó_ ‘brain’ – PGr _*bóŋ_
PB _*táŋg_ ‘count’ – PGr _*táŋ_

But there is very little evidence of the survival of the inherited velar nasal in Grassfields. The only good example is ‘ear’ (12) which has an unusual PGr structure with suffix _-li_.[25]

(12) ‘ear’ (PBC _*tuŋi_ (_ku/a_) – PB _*tʊ́ì_ 5/6, 15/6 – PGr _*túŋ-li_)
East Gr: Bandjoun _tăŋ_, Bafou _lə̀tùŋŋ́_, Baba _tɔ́ŋlə́_, Bazou _tòŋú_,
Mankon _àtôŋnə́_
Momo: Njen _àtòŋə́_, Moghamo-Batibo _àtɔ̀ŋí_
Ring: Kom _àtúŋlə́_, Oku _kētóōlé_, Aghem _kə́túŋɔ̄_, Isu _kə́túŋī_[26]
SW Gr: Tanka _ɛtoŋi_, Menka _ɔtɔ́ŋnɔ_, Atong _etɔ́ŋní_, Busam _ɪtóŋní_

Several things are of note here. First, these Grassfields forms are typically in genders 5/6 or 7/8. Secondly, V_2 of noun roots is typically not preserved in Grassfields, so the final vowel here is almost surely from the suffixation of the class 5 concord _*dɪ-_, as Hyman and Elias reconstructed.[27] Thirdly, there is apocope of the final vowel of the root, creating the rare clusters _ŋl_ and _ŋn_ – which were then often simplified to simple _ŋ_. It looks like the velar nasal survived here only as part of a consonant cluster, because in other Grassfields words an inherited velar nasal is uncertain at best.

We have seen that most Bantoid branches have some velar nasal reflexes in the word for ‘ashes’: PBC _*toŋ, PB *tʊ́é_ 3, PGr _*tóe_ (?). The evidence is limited for Grassfields (hence Hyman’s question mark)

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[25] Grassfields forms (including Otang) are cited from the Grassfields Bantu Working Group (GBWG), and Babanki forms from Akumbu (2008). For the name and forms of “Southwest Grassfields”, see Blench (2010a), although key lexical differences make me wonder if these languages should actually be included under the Grassfields umbrella.

[26] Babanki _kə̀tyítyíʔ/ə̀tyítyíʔ_ (7/8) is clearly reduplicated but does it show loss of velar nasal or is the final glottal stop a remnant?

[27] For other relics of a suffixed concord in Ring languages, see Akumbu and Wills (2024).

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because other roots are used for ‘ashes’ in most branches except in Southwest Grassfields, e.g. Obang _mə́tʉ́ə́_ (6a), and some Momo, e.g. Lower Mundani _ḿmót_. The fricative in Atong (SW) _ntuɣɔ_ is a common Western Grassfields hiatus filler, resolving the hiatus seen in the closely related Menka _ontʃúó_. In the case of preservation, we would expect the velar nasal itself, as in Atong _etɔ́ŋní_ ‘ear’. The important point is that nowhere in Grassfields is a velar nasal observed for this word, only the hiatus (or a hiatus filler) from the loss of the velar nasal. In contrast to forms of ‘ashes’ in other Bantoid branches, there is no evidence in Grassfields of suffixation, and also no evidence of preservation.

To reinforce the point, it is worth a look at other lexemes which show velar nasals in some Bantoid languages, but not in Grassfields. First are some examples with reconstructed medial velar nasals (13).

(13) Words without medial velar nasal reflexes in Grassfields
‘knee’ PBC *_duno_ ~ PCC *_dúŋí_ – PB *_dúí_ 5/6 – PGr *_lúÌ_
No velar nasals observed in Grassfields, rather forms that share the Bantu loss, e.g. Babanki _əlwí_.
‘mouth’ PBC *_nuŋa_ – PB *_nʊ̀à_
Grassfields branches regularly use another root (PGr *_cùl_\`), but SW Grassfields does have reflexes of the PBC root, e.g. Bantakpa _ɛɲu_. For Ambele, Jungraithmayr et al. (1975) give _ɛ́-nò(ŋ)/á-_ but his Ambele words for ‘ear’ and ‘ash’ just have _-tO_ with no C_2, while Blench lists Ambele _enu_ ‘mouth’.

Likewise, in (14) Grassfields provides several examples of words without the velar nasals reconstructed by de Wolf in final position:

(14) Words without final velar nasal reflexes in Grassfields
‘charcoal’ PBC *_kalaŋ_ (_li/a_) – PB *_kádà_ 5/6 – PGr *_ké_ \`
No velar nasal found.
‘dew’ PBC *_miŋ_ (_ma_) – PB *_mè_ 3, 5 – PGr *_mÙk_, *_mèk_
No velar nasal is observed in Grassfields examples. Rather Hyman reconstructed a final stop based on the frequent C_2 seen in forms like Fe’efe’e (Bamileke) _mùʔ°_, Adere-Dzodinka (Nkambe) _mə̀k°_, Oku (Ring) _īŋwâk_, Aghem (Ring) _tɨ́mɔ́ʔɔ̀_, Bum (Ring) _ātə̄mʉ́ʌkà_. These words for ‘dew’ look like forms of ‘water’ (PGr *_mò_ ́) with a diminutive suffix *_ka_.

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‘egg’ PBC **kiŋ*, **tiŋ* (*li/a*) – PB **gí* 5/6

Eastern Grassfields, Momo and Ring use forms of **bum* ‘egg’, with the exception of the curious Ngwaw/Ngwo (Momo) *àkɔ̂n/èkɔ̂n* (7/8). But Ngwaw *àtìmé/ètìmé* (7/8) ‘ear’ suggests some nasals in that language are of uncertain history.

‘excrements’ PBC **biŋ* (*a-*) – *PB *bîi̯* 13 – PGr **bÍd*

No velar nasal is found in reflexes of this root, rather final stops: Moghamo (Momo) *tíbít*, Baleng (Bamileke) *ndzɛ́t*, Bamoun (Nun) *mbít* (note the stop also in Bamoun *tɨ́t* ‘ear’).

‘wing’ PBC **pabaŋ*, **babaŋ* (*li/a*) – PB **pàpá* 5/6, **bàbá*
PGr **bàb`-li*

No velar nasal is observed in plentiful Grassfields examples, but the reconstruction PGr **bàb`-li* is based on class 5 reflexes like Mankon *nɨ̀-bàbɨ̀-nə̀* (see Elias 1984: 39), where the class marker could be a source for final nasals in other groups.

Although the simple inherited velar nasal is almost entirely lost in Grassfields languages, they regularly have the velar nasal as a reflex of PBC **ŋg* ~ PB **ŋg*, e.g. PB **gòŋgá* ‘spear’ ~ Bandjoun (Bamileke) *kùŋ*, Aghem (Ring) *īɣɔ̄ŋ*. Thus, Central Ring forms like Babanki *mən-lɥúŋ* ‘blood’ confirm that PGr inherited the **ŋg* seen in Bantu PB **dʊ́ŋgó* 6. The class 6a prefix in Babanki may also explain how a version with a **-ma* suffix could generate the many forms in *-m* that led to the reconstruction of PGr **lém`* ‘blood’ (cf. also Noni (Beboid) *ɛ̀lɛ̀mɛ́/bīlɛ́m* 7/8). The presence of the two versions with and without *-m* in adjacent Momo languages like Njen *àlʉám`* and Lower Mundani *àlə́ŋ* 7 makes it unlikely that two different roots are involved, but cf. the alternative root PUC **dè* ‘blood’. Likewise, PGr **tóŋ* ’throat’ is reflected by velar nasals in every branch of Grassfields and makes it clear that the PBC reconstruction should be PBC **toŋgo* ‘throat/voice’ (the Isu compound *tɔ́ŋɔ́ˈfɔ́ŋ* helpfully seems to preserve some form of V_2).

4 Bantu data

Finally, we reach the Bantu languages, which have regularly lost inherited velar nasals, except in relation to a pre-nasalized velar **ŋg*. Noting the regular correspondence between stem-medial and stem-final **ŋ* in Proto-Upper Cross (PUC) and ø in Proto-Bantu, Dim-

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mendaal (1978: 233–34) cited *-tɔ̄ŋ* ‘ear’ and *-kyèŋ* ‘egg’ in Nyokon (A45) as exceptional and concluded, “The absence of **/ŋ/* in PB can thus easily be explained as an innovation. This innovation could be used for sub-classification (i.e. as a criterion for defining a (very large) subgroup within Broad Bantu). The velar nasal has been lost, e.g., in all but one language of group A 40 in Bantu; */ŋ/* is still found in [Nyokon] (A 45) […]. If the assumption made above is correct, [Nyokon] did not share the innovation and should be reclassified.” While Nyokon’s phylogenetic placement in the Mbam group (A44–46, A601, A62) is currently not in doubt, the limited number of Bantu languages and words with inherited velar nasals is noteworthy.[28]

But first, it is important to remember that simple */ŋ/* is a standard phoneme in the Mbam group today as a regular reflex of PB **ŋg*, along with occasional */ŋg/*, as seen in (15).

(15) Examples of Mbam *ŋ* as the reflex of PB **ŋg*
‘blood’ (PB **dʊ́ŋgó* 6): Nyokon (A45) *mànoŋ*, Tunen (A44) *mànɔŋ*, Nomaande (A46) *manɔ́ŋɔ́*, Tuotomb (A461) *mànòŋàm*, Nugunu (A622) *manɔ́ŋɔ́*
‘horn’ (PB **tóŋgʊ* 5, PGr **ndóŋ*): Nyokon (A45) *à-ndòom*, Tunen (A44) *èndɔ́ŋ*, Nomaande (A46) *ɔndɔ́ŋɔ́*, Tuki (A601) *itóngɔ́*

4.1 Bantu forms of ‘ear’

Now in searching for relics of the inherited simple velar nasal, let us consider the critical word ‘ear’ (PBC **tuŋi* – PB **tʊ́ì*) in Bantu zones AB + Jarawan (6–7). The preservation of the velar nasal is seen in only a few examples (16), with various results otherwise (17).

(16) Preservation of velar nasal is very rare in Bantu AB, Jarawan
a. Nyokon *ù-tɔ́ŋ* and Tuotomb *ɔ̀-tɔ́ŋà-lɔ̀y* (both cl. 3), Yambeta (A462) var. *ʊ̀ʔ-tʊ́ìŋ*
b. But no C_2 in Tunen *mùlu*, Nomande *oo-tú*, etc.
c. Jarawan: Bile *kiiruŋ*, but no C_2 in eight other varieties of Jarawan and A50
d. other nasal in Barombi-Kang (A41) *dǐwón*, Abo (A42) *ǐ-wón*

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[28] This Mbam subset has been identified for some time. Most recently, the phylogenies of Grollemund et al. (2015) and Koile et al. (2022: Figures SS1 and SS3) have these same languages in basically similar groupings. The forms cited for the languages in this section come from the database accompanying Grollemund et al. (2015). Tuotomb (Bonek) forms are cited from Mous & Breedveld (1986), which was also a source for some languages in Grollemund.

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(17) When V_2 is preserved, hiatus resolution is frequent

a. occasional hiatus, e.g. Lefo (A141) *ɛ̀-túì*
b. or glide formation, e.g. Milenge (A15b) *è-tẅə̂*, cf. Koyo (C24) *ì-twéè*
c. often *y*, e.g. Mpongwe (B11a) *o-royi*, Pinzi (B304) *toyi*
d. sometimes *y* > *z*, e.g. Punu (B43) *di-tudʒi*, cf. Lega (D25) *i-tʊ́zi*

The velar nasal in this root is seen only in Nyokon, Tuotomb, Yambeta and Bile (Jarawan) with some possible remnant nasal features in A41–2 (which are not closely related to Nyokon). Tuotomb clearly has a suffixed form and possibly Nyokon and Yambeta once did too. I do not know enough about Jarawan word formation to speculate on suffixation there, but I note the variation in reflexes of PB **táànò* 'five' in Jarawan: Bile *tóŋnó*, Kulung *túŋnúŋ*, Duguri *tóón*; as well as the coda in Bile *murùŋ* 'head' (PB **tʊ́è*).

Nyokon is adjacent to the Eastern Grassfields languages (cf. Bazou *tòŋú* 'ear'), so one could imagine contact as an explanation, just as Yambeta (A462) *nɛ̀-bòm* 'egg' suggests influence of the distinctive PGr **bùm´* 'egg' on a neighboring Bantu language. But the location of Bile in Nigeria would need another explanation.

There is also a curious *n* in place of the velar nasal in Kande (B32) *n̩toni* 'ear' and *motɔni* 'ashes', with the same coronal nasal instead of a labial nasal in *m̩buni* 'belly' (< PB **bùmò*) and *nonene* 'tongue' (PB **dímì*). Apparently, all these C_2 nasals were merged in Kande before front vowels (in contrast to *motema* 'heart', *ndzima* 'ten'). Clearly some reduction was going on in the B30 group in that environment, cf. Pinzi (B304) *toyi* 'ear', *motoyi* 'ashes', *buyi* 'belly', *etsɔyi* 'shame' (PB **cónì*), but *motema* 'heart', *ndzima* 'ten'.

4.2 Other words in Bantu

Other than in 'ear', the Mbam-Bubi-Jarawan languages lack much evidence for a velar nasal in other words where it would be expected if the languages preserved the inherited phoneme (18).

(18) Bantu forms of other words with inherited velar nasal
  'ashes' (PBC **toŋ – PB *tʊ́é* 3)
    A40, 60: Nyokon *mù-ə́l*, Nomande *mɔotá*, Tuki (A601) *utú*, Tuotomb *mɔ̀ɔ̀tɔ́m* 6
    Bubi *obo-tóm*
    Jarawan: Bile *túbú*, Duguri *túb*, Bwazza *tú*

Although the word for 'ashes' has a similar phonological shape to 'ear', it does not yield a velar nasal in Nyokon or related languages, even when protected by a suffix in several Jarawan languages and Ngoro-Bisoo (A61) *lì-sùp* – the suffix is apparently the cl. 14 marker **bu* seen as a prefix in Bubi. The final *-m* in Tuotomb and Bubi looks like the remnant of a class suffix. However, the reduplication in the unusual Lwel (B862) *ŋtúŋ-mtúŋ* 'ashes' seems to preserve the original velar nasal. Lwel *ŋur* 'person' shows that initial velar nasal is a typical reflex of the class marker **mʊ* in that language, but in the middle of the word both the original **ŋ* and class prefix *m-* are preserved (and then the reduplicant copies the coda of the first stem). See also the discussion of Kande (B32) *motɔni* 'ashes' above.

'knee' (PCC **dúŋí* – PB **dúí* 5/6)
Nugunu (A622) *i-núu*
Bubi (A31) *e-ru*, Bafia (A53) *rì-dú`*
Jarawan: Kulung *kúlúŋ*, cf. Bile *nkúŋnú*, Bwazza *nkúúnù*, Duguri *kuŋul*

Kulung has a velar nasal here, and Duguri perhaps with metathesis. For the Jarawan group, one might reconstruct a protoform with the prefixing and suffixing of the class 15 marker **kʊ*, to which a nasal prefix was added later.

'egg' (PBC **kiŋ* – PB **gí* 5/6)
Nyokon *nì-kyèn*, Tunen *yɔ̀n*, Nomaande *yɔɔ́nɔ́*
Tuki (A601) *iga*, Nukalonge (A62a) *nì-kɛ̀ɛ́*
Jarawan: Bile *ǹkì*, Kulung *kiì*

As Dimmendaal noted, there is a final nasal in Nyokon *nì-kyèn* 'egg', but it is not the velar nasal and not restricted to Nyokon. Since the related A44–46 languages share the nasal, this might be a class marker that became affixed to the monosyllabic root. BLR3 offers a main reconstruction PB **gí* 5/6 with several variants: **gé*, **gìjé*, **gìjí*, and **gìdí*. This last variant (e.g. Tiene (B81) *ma-kɩlɩ*, Mongo (C61) *-kèlé*) probably reflects the incorporation of the class 5 concord marker **dɪ*, which would also account for the final nasal in the three A44–A46 languages. Parallel developments can be seen in Koshin (Yemne-Kimbi) *ngɛ́nə̄/ŋgø̄* (5/6), and Afi (Tivoid) *ŋgíñ/ákyí* where the nasal

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suffixes are found only in the singular for ‘egg’.[29] Likewise in Mambiloid, Ndoro has _ŋɟɛ̀nā_ rather than the more typical Mbaw _gʸé/bòŋgʸé_. At this point, we can re-examine the curious final vowel in the PUC reconstruction *_kkèŋí_. PB *_gí_ suggests that PUC also had a single syllable root with the class suffix (i.e. *_kkè-ní_). The other reconstructed PB variants look like they might be reduplications or contain the class 5 nominal marker *_i_, hence Vove (B305) _ekɛyi_, but it is possible that a velar nasal developed (see below) and then was lost, e.g. *_kkè-ní_ > _kkè-ŋí_ > *_kkèí_, cf. PB *_gìjí_.

‘mouth, lip’ (PBC *_nuŋa_ (_ú/ti_) – PB *_nʊ̀à_ 12, *_nyʊ̀à_)

No velar nasal is observed in the expected languages (Nyokon _ɲùúl_, Tunen _mùnu_, Yambeta _ù-nùʔ_, Kulung _kûn_), but frequently there are suffixed class markers in that zone: Tuki _ungúté_, Nugunu _-nyuudé_. Final velar nasals are seen in Mangisa (A63) _ànùŋ_, Eton (A71) _à-nùŋ_, but note the suffix in the related Ewondo (A72a) _anyu-me_.

‘louse’ (PUC *_dáŋ_, PLC *_láŋ_ – PB *_dá_ 9/10)

The most likely case for a velar nasal preservation would be Yambeta _òn-naŋ_, but not in Tunen _yìnə_ or Nomaande _weené_. Since PB *_d_ > _n_ in these languages, there are many forms with multiple nasals like Ngoro-Asom (A61) _ɲìín_ or Libie (A62C) _òŋìnì_, but it becomes difficult to sort them out when one considers the frequency of reduplication for the names of insects, as well as class suffixes.

In general, Bantu looks like Grassfields: there is evidence for the preservation of the velar nasal in the word for ‘ear’ in a few languages, but otherwise perhaps only in marginal cases like a reduplicated or suffixed form.

5 Analysis

The evidence of the Cross River, Ekoid-Mbe and Bantu languages seems sufficient to reconstruct the distinction between simple *_ŋ_

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[29] I omit Nchanti (Beboid) _gíné̄/āgí_ because Beboid languages show a more general rule for loss of C_2 in class 6 that might be at issue here, e.g. Nchanti _tɛ̄dɛ̄/ātā_ ‘stone’, Bebe-Jatto _gə́βí/gé_ ‘egg’, Akweto _gíkī/gîî_ ‘egg’, _līsì/líí_ ‘eye’ (Hombert 1980: 90).

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and complex **ŋg* at the level of Proto-Cross-Congo. But, after several pages of scrutiny, we have found only a few surviving examples of the original simple velar nasal in Bantoid languages. In many groups, we can probably only reconstruct a simple velar nasal in ‘ear’ and ‘ashes’, and possibly also ‘knee’. In Grassfields, that list is narrowed to ‘ear’, and in Tivoid and Bantu even that is very marginal. So, among Bantoid branches, Bantu is not really unusual for losing the PCC simple **ŋ*, but rather it is unusual for preserving PCC **ŋg*, which is often reduced to *ŋ* in most other languages.

A number of questions arise from this review which we will now examine:

i. In Grassfields and Bantu, we have enough evidence of V_2 to see the regular loss of the velar nasal in C_2. So, how do we explain the surviving relics?
ii. Was the loss of the velar nasal independent in each branch or shared by two or more branches?
iii. Why are there so few words with this phoneme at the PCC stage?

5.1 Explaining the phonological change

Because most Bantoid languages developed secondary velar nasals from original **ŋg* or consonants in coda position, velar nasals themselves are quite common in the Bantoid area and their occasional loss is also well known. This loss is quite common in the Teke group of Bantu. For example, in Tiene (B81), NC combinations were simplified to just N, e.g. *tùùmà* ‘cook’ (PB **tùmb*) and *kúóna* ‘desire’ (PB **kúnd-*), but the expected velar nasal in *túa* ‘build’ (PB **túŋg*) was lost (Hyman 2003: 50). The same NC simplifications and loss is seen in Bwala (B70z) *búò* ‘knee’ (PB **bóŋgó*), *ŋkî* ‘neck’ (PB **kíŋgó*) (Bollaert et al. 2021). Even in Upper Cross languages, where the velar nasal is generally stable, it was lost in nouns in KoHumono *-ttō* ‘ear’, *-dū* ‘knee’, *-ttò* ‘road’ (PUC **ttòŋ*), “but for an unknown reason it was retained in verbs” (Dimmendaal 1978: 97, 105).

Often the deletion leads to assimilation or contraction of the adjacent vowels across morpheme boundaries. In Noni, we saw that the class 5 suffix *-e* creates an intervocalic environment that deletes stem final *ŋ* (from **ŋg*) with subsequent vocalic assimilation, e.g. **lēŋ-è* > *lēè* (pl. *ɛ̄lə̄ŋ̀*) ‘pumpkin’ (PB *dèŋgè* 5/6) and **gɔ́ŋ-ē* > *gɔ́ɔ̄* (pl. *ɛ̄gɔ́ŋ*) ‘spear’ (PB **gòŋgá*) (Hombert 1980: 90). In Akoose (A15c), this dele-

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tion affected cl. 1 nouns where the suffix then merged with the stem vowel, e.g. Akoose *koŋ* ‘keep’ > *nkoo* ‘keeper’ (Hedinger 2008: 6, 26); cf. agents in Babanki (Ring) which show loss and vowel raising, e.g. *ə́-tàŋ* ‘stay’ > *wú-tǒ* ‘one who stays’ (Mutaka-Chie 2006: 84). In both of these languages, the deletion of the velar nasal with vowel effects also affected other contexts including possessive phrases, as seen in Babanki, e.g. *ə̀sɔ́ŋ* ‘tooth’ vs. *ə̀sūː ghɔ́mə́* ‘my tooth’ */ə̀sóŋ ə̀-ghómə́/*, or *ə̀káŋ* ‘dishes’ vs. *ə̀kóː wìʔ* ‘dishes of a person’ */ə̀káŋ ə́ ẁik/* (Akumbu 2016). In Akoose, this same change is still in process, as the velar nasal *ŋ* frequently elides in a possessive phrase, e.g. *asoŋ á nzyɔg* > *asoó nzyɔg* ‘tooth (tusk) of elephant’.

In fact, the loss may be less in need of explanation than the preservation is. Why are there relics at all if the loss of the simple velar nasal was a regular phonological change in many Bantoid languages? The best answer seems to be that the velar nasal survived in cases where there was a suffixed class marker. This is perhaps easiest to see in Grassfields, where the PGr reconstructions include a number of stems which incorporated the class 5 concord marker **li* as a suffix. Among them is PGr **túŋ-li* ‘ear’ with descendants like Kom *àtúŋlə́* and Mankon *atóŋ̀nə́*. The key feature is that these forms have lost V_2 of the root, leaving the velar nasal part of a cluster – presumably that was the phonological environment that blocked its loss. So, the loss of the velar nasal occurred in intervocalic positions, but not in consonant clusters which were generally formed either by suffixes or reduplication. Hence the singular-plural contrast of Evand (Tivoid) *kʷɔ́tɔ́ŋgɔ́k/átɔ̄* based on the difference between the consonantal cl. 15 **ku* and vocalic cl. 6 **a* suffixes.

Because of the uncertainty in reconstructing many velar nasals in final position, it is not clear whether final position was regularly an environment for the loss. Instances where the inherited velar nasal is now found intervocalically and finally are presumably later developments, i.e. Bazou *tòŋú* arose from a later simplification of the **ŋl* cluster and Bandjoun *tǎŋ* from the eventual loss of the final vowel of the suffix as well. Since the two most common conditions needed for the original velar nasal’s preservation are class marker suffixation and loss of V_2, and both of those conditions are rare in Bantu outside zone A, it is not surprising that the rest of Bantu has almost no examples of velar nasal preservation.

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The suffixation of concord markers was a variable process, due to individual lexemes and the frequency of various syntactic structures. For example, we might reconstruct forms of 'ear' in two classes, which probably occurred both in Grassfields and Bantu languages:

Pr-Bantu-Grassfields _*kʊ-tʊŋi_ (15/6) > _*kʊtʊ́ì_ [ŋ loss]
(the common pattern in Bantu)
Pr-Bantu-Grassfields _*tʊŋi-lɪ_ (5/6) > _*tʊŋlɪ_ [vowel loss]
(the common pattern in Grassfields)

In languages like the Grassfields group, which lost class 15, it is not surprising that class 5 was used for the singular of class 6. Presumably the class 5 concord marker _*li_ became re-analyzed as a suffix and frozen in certain contexts leading to allomorphy with the plural or remnant _*ku-_ forms. The difference between these variants was originally morphological and then would have become phonological through the relevant losses, with the allomorphs being subject to analogical processes of levelling.

5.2 Was this loss independent in the various Bantoid groups?

The losses of the PCC simple velar nasal must have happened before the merger of _*ŋ_ and _*ŋg_ (or otherwise both would be lost), so we might posit the following processes of development (which did not happen in all languages):

Initial conditions of PCC: distinct _*ŋ_ and _*ŋg_

1. cluster formation (via suffixation, reduplication, V_2 loss) – ongoing process
2. loss of _*ŋ_ except in cluster environments
3. merger of _*ŋ_ and _*ŋg_ > _*ŋ_

Ekoid alone seems to preserve inherited velar nasals so it must have engaged only in Process 3 without any loss of _*ŋ_, and Mbe engaged in Process 2 without apparent cluster formation. So, we can put aside Ekoid-Mbe from any developments shared with others. On the other hand, Grassfields and Bantu languages are closely related and have similar results (no inherited velar nasals except in 'ear'), so it is likely that their loss happened at some stage common to them. But most of the other Bantoid branches had significant exposure to the suffixation of class markers, V_2 loss and _*ŋg_ > _*ŋ_ in ways that could be independent or areal, so the loss of _*ŋ_ may also have been independent. The limited number of relevant roots reconstructed at the

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PCC stage and the limited number of exceptions makes it hard to know what a general pattern is.

5.2 The origin of **ŋ*

The reconstructed Proto-Benue-Congo velar nasal has an uneven distribution: it is never initial, and even in C_2 position it is not very common.[30] It is true that PBC reconstructions are at an early stage and mostly just exist for nouns, but the marginality of the velar nasal suggests that it might have developed through conditioning in a narrow environment. For a clue to the possible environment, let us look at the word for 'firewood'. In Bantu we see doublets, one of which curiously shows the loss of a medial nasal:

PB **kʊ́nì* (9/10, 11/10) zones ABCD+ (BLR 2042)
PB **kʊ́ì* (9/10, 11/10) zones BCEF+ (BLR 1983)

Usually, a C_2 nasal is one of the most stable sounds in Bantu languages, but we could explain this loss if the nasal had become a velar nasal in some environment: **n > *ŋ > ø*. In the case of 'firewood', the nasal's environment is between high back and front vowels, which is exactly the same environment we see in many of the words reconstructed with velar nasals: PBC **tuŋi* 'ear', PCC **tóŋé* 'ashes', PUC **dúŋí* 'knee', PUC *dáŋ* (Sur *dani*) 'louse'.[31] Did those velar nasals also develop from earlier alveolar or dental nasals? Was Mukarovsky right in reconstructing early **n* in some words?

If we look at de Wolf's PBC reconstructions for 'wood', 'fire' and 'firewood', we see several related forms which look like they have a common stem but vary by class and the addition of a suffix *-i*.[32]

PBC **kwon* (**ka/*ti*) 'tree'
PBC **kwoni* (**bu/*ɪ́*) 'firewood' – cf. BCCW *#kónì*
PBC **zwuŋi* (**ku/*a*) 'fire' – cf. PUC **kʷɔ́n* 'fire'

We might want to reconstruct just one root **kʊ́n* with 'tree/wood' as the basic meaning but specified semantically by different class markers. In several Tiv and Grassfields languages, one class is used for 'tree' and another for 'firewood'. The suffix *-i* looks like the con-

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[30] The restriction of velar nasals to non-initial position is fairly common, occurring in about one-third of the languages which have the phoneme (Anderson 2013).

[31] This environment was operative in Umbundu (R11), where we see the loss of a nasal after a back vowel and before *i* not only in *óló-hwĩ́* 'firewood' but also in *é-kwĩ́* 'ten' (PB **kʊ́mì*) and *ó-sóyì* 'shame' (PB **cónì*).

[32] For fuller data on this root, see Williamson (1989: 250–53).

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cord marker for classes 9 and 10 – exactly the gender of PB **kʊ́nì* ‘firewood’. So, these various allomorphs would provide a way to explain the presence or absence of the necessary conditioning environment for producing a velar nasal.

Another explanation for the restricted development of the velar nasal might be to start from **ŋg*, just as final */ŋ/* in modern English arose from */ŋg/* after the loss of final */g/*, as the spelling in spelling still indicates. Perhaps the incorporation of class suffixes (perhaps with syncope?) created a cluster which led to the deletion of *g: e.g. **tuŋg(i)-dɪ* ‘ear’ > **tuŋg-lɪ* > PGr **tuŋ-lɪ*, just as */ŋg/* is sometime reduced to */ŋ/* in pronunciations of the medial clusters in *language* and *English*. We might also wonder whether **ŋg* could also sometimes be reduced by a following **i*, in the pattern above?

Proto-Bantu has some, although not many, verb roots with double vowels or diphthongs which could in theory be the results of a consonant loss. As far as I know, none has been proposed as the result of the loss of the velar nasal – is that because PBC verbs were CVC and none incorporated a high-vowel suffix of the sort needed to generate the velar nasal?

6 Conclusion

It is not clear how far back the simple velar nasal **ŋ* itself should be reconstructed, but there is good reason to reconstruct five or more Proto-Cross-Congo noun roots containing it. However, its marginal status made it easy to be lost or merged with **ŋg*. The Ekoid-Mbe branch is distinctive in that it preserved the simple velar nasal in at least five of the stems seen in PCC, so its subsequent loss in Mbe is a phonological innovation. There are fewer surviving examples in other Bantoid languages, mostly just in the words ‘ear’ and ‘ashes’, often in suffixed forms. There is not enough data to support grouping together Bantoid branches based on this criterion, except possibly Grassfields with Bantu. The Grassfields examples particularly provide evidence to think that exemption from loss could be triggered by an environment in a consonant cluster caused by V_2 loss before a suffix.

Particularly useful is the fact that some Bantoid languages (most clearly Mbe) seem to parallel Bantu in having a distinction in reflexes of reconstructed PBC **ŋg* and **ŋ*. This parallel confirms that the dis-

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tinction should be reconstructed at the PCC stage and also enables improvements for the PBC stage. For example, contrary to de Wolf, I would reconstruct PBC **ŋg* in the words for 'blood' (de Wolf **luŋ*), 'horn, tusk' (de Wolf **tano*), and possibly 'leopard' (de Wolf **kpoŋi*). The absence of final velar nasals in the Bantoid forms for certain words also suggests that velar nasals should be removed from the reconstructions of the roots for 'mosquito, bee', 'egg', and 'wing'.

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Abbreviations

BCCW = Benue-Congo Comparative Wordlist
BCR = Benue-Congo Reconstructions
BLR = Bantu Lexical Reconstructions
C = consonant
GBWG = Grassfields Bantu Working Group
NC = Niger-Congo
PB = Proto-Bantu
PBC = Proto-Benue-Congo
PCC = Proto-Cross-Congo
PEM = Proto-Ekoid-Mbe
PGr = Proto-Grassfields
PJ = Proto-Jukunoid
PLC = Proto-Lower Cross
PP = Proto-Plateau
PUC = Proto-Upper Cross
PWN = Proto-Western Nigritic (Mukarovsky)
V = vowel

Bibliography

Akumbu, Pius W. 2008. *Kejom (Babanki)-English lexicon.* Köln: Rüdiger Köppe Verlag.

Akumbu, Pius W. 2016. Babanki coda consonant deletion and vowel raising: A case of allomorphy. *42nd annual meeting of the Berkeley Linguistics*

Society, Feb 2016, Berkeley, California, United States. 3–20. https://hal.science/hal-03691855

Akumbu, Pius & Jeffrey Wills. 2024. V2 and extensions in Ring languages. In Rebecca Grollemund, Derek Nurse & John Watters (eds.), *Bantoid and Bantu in Cameroon: an historical re-assessment.* Leuven: Peeters. 3–32. https://doi.org/10.2143/AL.28.0.3291206

Anderson, Gregory D. S. 2013. The velar nasal. In Matthew S. Dryer & Martin Haspelmath (eds.), *The World Atlas of Language Structures Online.* Leipzig: Max Planck Institute for Evolutionary Anthropology. http://wals.info/chapter/9

Bailey, George. 2019. Variation and change in Northern English velar nasals: Production and perception. Manchester: University of Manchester Ph.D. dissertation.

Bastin, Yvonne, André Coupez, Evariste Mumba, & Thilo C. Schadeberg (eds.). 2002. *Reconstructions lexicales bantoues 3 / Bantu Lexical Reconstructions 3.* Tervuren: Musée Royal de l'Afrique Centrale. https://www.africamuseum.be/en/research/discover/human_sciences/culture_society/blr (last updated November 2005).

Blench, Roger M. n.d. Eastern Beboid Word Lists. Ms. https://www.rogerblench.info/Language/Niger-Congo/Bantoid/Beboid/General/Beboid%20composite.pdf

Blench, Roger M. 2004. The Benue-Congo languages: a proposed internal classification. Ms. https://www.rogerblench.info/Language/Niger-Congo/BC/General/Benue-Congo%20classification%20latest.pdf

Blench, Roger M. 2009. The Bantoid Languages. Ms. http://www.rogerblench.info/Language/Niger-Congo/Bantoid/General/Bantoid%20languages%20monograph.pdf

Blench, Roger M. 2010. The Bendi Languages: more lost Bantu languages? Ms. https://www.rogerblench.info/Language/Niger-Congo/Bantoid/Bendi/Comparative%20Bendi.pdf

Blench, Roger M. 2010a. The Momo and 'Western Momo' languages: branches of Grassfields. Ms. Kay Williamson Educational Foundation. http://www.rogerblench.info/Language/Niger-Congo/Bantoid/Grassfields/Momo/Classification%20of%20Momo%20and%20West%20Momo.pdf

Blench, Roger M. 2014. Ekoid: Bantoid languages of the Nigeria-Cameroon Borderland. Ms. https://www.rogerblench.info/Language/Niger-Congo/Bantoid/Ekoid/Comparative%20Ekoid.pdf

Blench, Roger M. 2015. *The Bantoid languages* (Oxford Handbooks Online). Oxford: Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199935345.013.17

Blench, Roger M. 2016. The Tivoid languages: overview and comparative wordlist. Paper to accompany a presentation at Bantu VI Helsinki, June, 2016. Ms. https://www.rogerblench.info/Language/Niger-Congo/Bantoid/Tivoid/General/Tivoid%20comparative.pdf

Blench, Roger M. 2022. Prospecting Proto-Plateau. Ms. https://www.rogerblench.info/Language/Niger-Congo/BC/Plateau/General/Prospecting%20proto-Plateau%20Unicode.pdf

Bollaert, Flore, Sara Pacchiarotti & Koen Bostoen. 2021. The noun class system of Bwala, an undocumented Teke Language from the DRC (Bantu, B70z). *Nordic Journal of African Studies* 30(1). 1–40.

Boutwell, Richard L. 2020. A grammar of Nchane: A Bantoid (Beboid) language of Cameroon. Leiden: Leiden University Ph.D. dissertation.

Connell, Bruce. 1991. Phonetic aspects of the Lower Cross Languages and their implications for sound change. Edinburgh: University of Edinburgh Ph.D. Dissertation.

Connell, Bruce. 2025a. Cross River. In Rebecca Grollemund, Derek Nurse & John Watters (eds.), *Bantoid and Bantu in Cameroon: an historical re-assessment.* Berlin & Boston: De Gruyter Mouton.

Connell, Bruce. 2025b. Mambiloid. In Rebecca Grollemund, Derek Nurse & John Watters (eds.), *Bantoid and Bantu in Cameroon: an historical re-assessment.* Berlin & Boston: De Gruyter Mouton.

Connell, Bruce & Roger Blench. 2014. A preliminary assessment of Ndoola (Ndoro). Ms. http://www.rogerblench.info/Language/Niger-Congo/Bantoid/Mambiloid/Ndoro/Ndoola%20wordlist.pdf

de Wolf, Paul P. 1971. *The noun class system of Proto-Benue-Congo.* (Janua Linguarum. Series Practica, 167.) Den Haag & Paris: Mouton.

Dimmendaal, Gerrit J. 1978. The consonants of Proto-Upper Cross and their implications for the classification of the Cross River Languages. Leiden: University of Leiden Scriptie (final essay for the 'doctorandus' degree).

Elias, Philip, Jacqueline Leroy & Jan Voorhoeve. 1984. Mbam-Nkam or Eastern Grassfields. *Afrika und Übersee* 48. 31–107.

Endresen, Rolf Thiel. 1990/1991. Diachronic aspects of the phonology of Nizaa. *Journal of African languages and linguistics* 12. 171–194.

Endresen, Rolf Thiel. 1992. La phonologie de la langue nizaa (nizaà). *Nordic Journal of African Studies* 1. 28–52.

DOI 10.15460/auue.2024.97.1.303

Gerhardt, Ludwig. 1983. *Beiträge zur Kenntnis der Sprachen des Nigerianischen Plateaus.* (Afrikanistische Forschungen IX). Glückstadt: J. J. Augustin.

Good, Jeff, Jesse Lovegren, Patrick Mve, Carine Nguanguep, Rebecca Voll & Pierpaolo Di Carlo. 2011. The languages of the Lower Fungom region of Cameroon: Grammatical overview. *Africana Linguistica* 17. 101–164.

Grassfields Bantu Working Group data (GBWG), collected in the 1970s by an international working group. Ms.

Grollemund, Rebecca, Simon Branford, Koen Bostoen, Andrew Meade, Chris Venditti & Mark Pagel. 2015. Bantu expansion shows habitat alters the route and pace of human dispersals. *Proceedings of the National Academy of Sciences* (PNAS) 112(43). 13296–13301.

Guthrie, Malcolm. 1967–71. *Comparative Bantu: An introduction to the comparative linguistics and prehistory of the Bantu languages* (4 volumes). Farnborough: Gregg International.

Hedinger, Robert. 1987. *The Manenguba languages (Bantu A.15, Mbo cluster) of Cameroon.* London: University of London Doctoral dissertation.

Hedinger, Robert. 2008. *A grammar of Akoose: a Northwest Bantu language.* Dallas: SIL International.

Hombert, Jean-Marie. 1980. Noun classes of the Beboid languages. In Larry M. Hyman (ed.), *Noun classes in the Grassfields Bantu borderland.* Southern California Occasional Papers In Linguistics (SCOPIL) 8. 83–98.

Hyman, Larry M. 1979. Proto-Grassfields Bantu roots. http://comparalex.org/?w1=133.

Hyman, Larry M. 2003. Segmental Phonology. In Derek Nurse & Gérard Philippson (eds.), *The Bantu languages.* London & New York: Routledge. 42–58.

Jackson, Ellen M. 1988. *Lexique Français-Tikar.* Pre-publication ms. Yaoundé: Société Internationale de Linguistique.

Jungraithmayr, Herrmann & Angelika von Funck. 1975. Amasi, Ambele und Asumbo - Klassensprachen aus dem nördlichen Westkamerun (‚Mamfe'-Bantu). *Africana Marburgensia* 8. 56–67, 30–42.

Koile, Ezequiel, Simon J. Greenhill, Damián E. Blasi, Remco Bouckaert & Russell D. Gray. 2022. Phylogeographic analysis of the Bantu language expansion supports a rainforest route. *Proceedings of the National Academy of Sciences (PNAS)* 119(32). https://doi.org/10.1073/pnas.2112853119

DOI 10.15460/auue.2024.97.1.303

Koops, Robert & Roger M. Blench. 2010. Wordlists of Batu, Kamino and Buru languages spoken in southern Taraba State, Nigeria. Ms. https://www.rogerblench.info/Language/Niger-Congo/Bantoid/Tivoid/Batu%20and%20Buru.pdf

Martin, Marieke. 2012. A grammar of Wawa, an endangered language of Cameroon. Canterbury: University of Kent Ph.D. Dissertation.

Meeussen, Achille Emiel. 1967. Bantu Grammatical Reconstructions. *Africana Linguistica* 3. 79–121.

Meinhof, Carl & Nicolaus J. van Warmelo. 1932. *Introduction to the phonology of the Bantu languages.* Berlin: Dietrich Reimer und Ernst Vohsen.

Mous, Maarten & Anneke Breedveld. 1986. A Dialectometrical study of some Bantu languages (A. 40–A. 60) Cameroon. In Gladys Guarisma & Wilhelm J. G. Möhlig (eds.), *La méthode dialectometrique appliquée aux langues africaines*. Berlin: Dietrich Reimer. 177–241.

Mukarovsky, Hans G. 1976–1977. *A study of Western Nigritic.* (Beiträge zur Afrikanistik 1–2). Wien: Afro-Pub.

Mutaka, Ngessimo M. & Esther P. Chie. 2006. Vowel raising in Babanki. *Journal of West African Languages* 33(1). 71–88. https://journalofwestafricanlanguages.org/index.php/downloads/download/92-volume3301/450-vowel-raising-in-babanki

Otronyi, Linus et al. n.d. Obe Wordlists. Ms. http://www.rogerblench.info/Language/Niger-Congo/Bantoid/Bendi/Bendi%20page.htm

Otronyi, Linus, Nengak Bako, Luther Hon, Carol Magnusson, John Muniru, Erika Peterman & Zachariah Yoder. 2009. *A summary of a sociolinguistic survey of the Obe Cluster of Cross River State, Nigeria.* SIL International.

Pozdniakov, Konstantin. 2018. *The numeral system of Proto-Niger-Congo: A step-by-step reconstruction.* (Niger-Congo Comparative Studies). Berlin: Language Science Press.

Shimizu, Kiyoshi. 1980. *Comparative Jukunoid*, 3 vols. (Veröffentlichungen der Institute für Afrikanistik und Ägyptologie der Universität Wien 7–9. Beiträge zur Afrikanistik 5–7). Vienna: Afro-Pub.

Snider, Keith. 1989. *Comparative African wordlists 4: North Guang comparative wordlist: Chumburung, Krachi, Nawuri, Gichode and Gonja.* Legon: Institute of African Studies, University of Ghana.

Snider, Keith L. 1990. The consonants of Proto-Guang. *Journal of West African languages* 20(1). 3–26. https://journalofwestafricanlanguages.org/index.php/downloads/download/59-volume2001/262-the-consonants-of-proto-guang

DOI 10.15460/auue.2024.97.1.303

Sterk, Jan P. (n.d.). The Upper Cross Languages. Ms.

Stewart, John M. 2002. The potential of Proto-Potou-Akanic-Bantu as a pilot Proto-Niger-Congo, and the reconstructions updated. *Journal of African Languages and Linguistics* 23. 197–224.

Thwing, Rhonda Ann. 1987. The Vute noun phrase and the relationship between Vute and Bantu. Arlington: The University of Texas at Arlington MA thesis.

Tschonghongei, Nelson C. 2018. Mbuk documentary grammar. Yaoundé: Université de Yaoundé I Doctoral dissertation.

Voll, Rebecca. 2017. *A grammar of Mundabli: a Bantoid (Yemne-Kimbi) language of Cameroon.* Leiden: Leiden University Ph.D. dissertation.

Williamson, Kay & Kiyoshi Shimizu. 1968. *Benue-Congo comparative wordlist*, Vol. 1. Ibadan: West African Linguistic Society.

Williamson, Kay. 1973. *Benue-Congo comparative wordlist*, Vol. 2. Ibadan: West African Linguistic Society.

Williamson, Kay. 1989. Benue-Congo overview. In John Bendor-Samuel (ed.), *The Niger-Congo languages: A classification and description of Africa's largest language family.* Lanham MD: University Press of America. 247–274.

DOI 10.15460/auue.2024.97.1.303