

**Lexical similarity chains,
morphologization patterns
and stratificational plant names:
Some perspectives on internal
Bantu classification**

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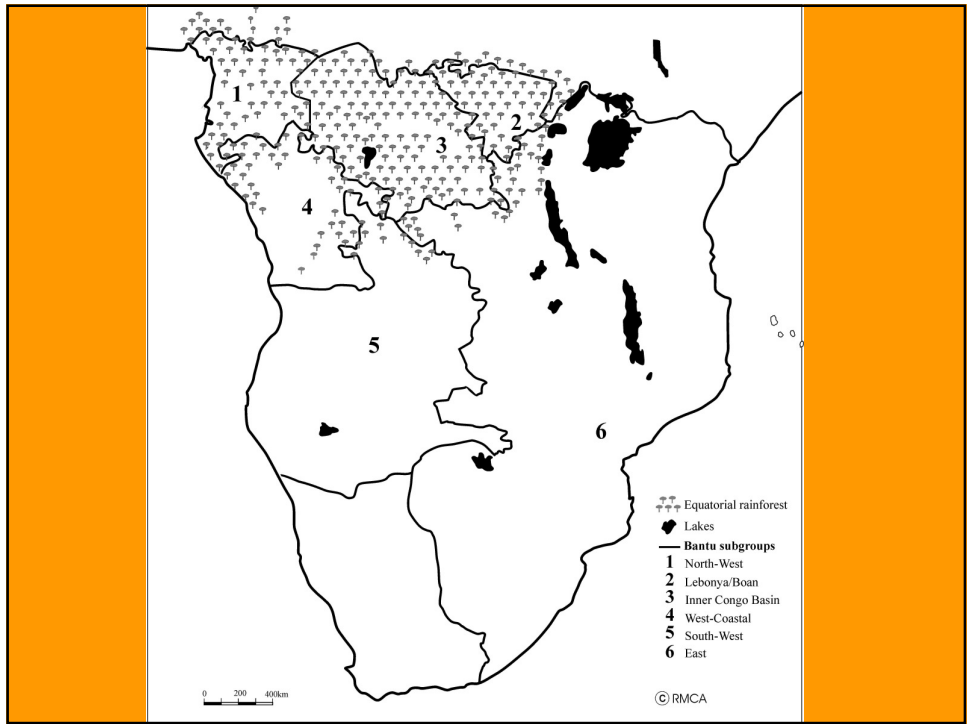
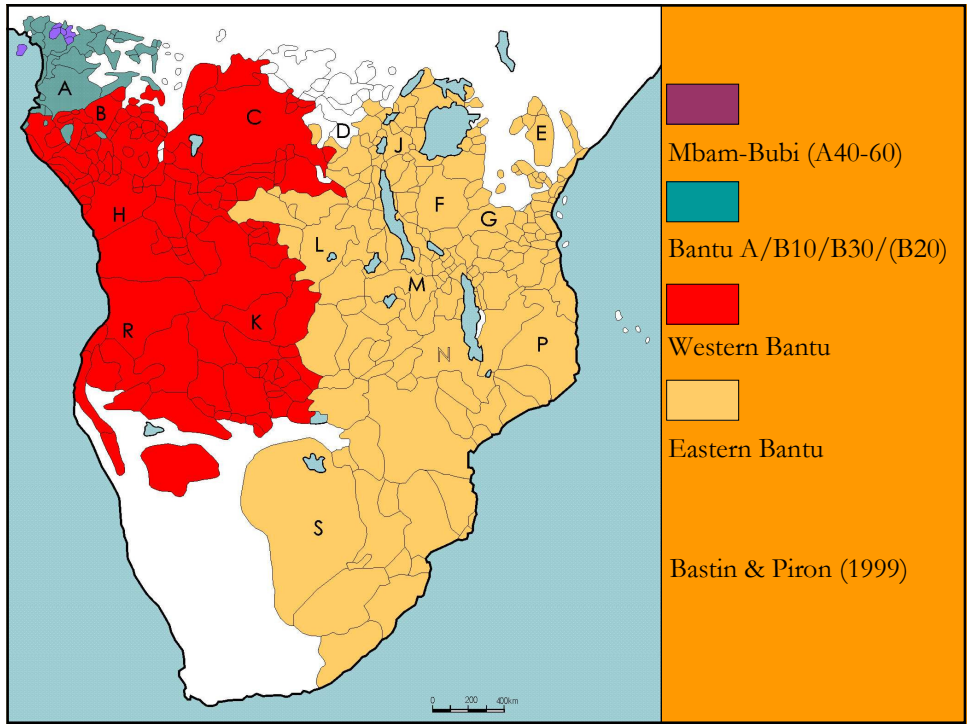
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Internal Bantu classification

- No global proposal of internal Bantu classification achieved unanimous approval yet
- More or less unanimity on the major subgroups, e.g. NW-Bantu as early offshoot, relatively homogeneous East-Bantu, more heterogeneous western Bantu
- Debate on the historical relationship between subgroups, e.g. status of East-Bantu, Forest Bantu *vs.* Savanna Bantu



Methods of internal classification

- Predominance of lexicostatistics (Bastin et al. 1979, 1983, 1999; Coupez et al. 1975; Heine 1973; Heine et al. 1977; Henrici 1973)
- New phylogenetic tree-building methods or network-building methods: maximum parsimony (Holden 2002), Bayesian method (Holden et al. 2005), Neighbor-Net (Holden & Gray 2006)
- Produces well-defined genealogical trees
- Question of historical validity

Comparative Method

- Attempts of non-lexically based classifications far less numerous (e.g. Bastin 1980; Nurse & Philippson 2003)
- Reduced applicability of comparative method (only on minor subgroups, e.g. Sabaki)
- Intensive exposure of Bantu languages to convergence effects due to contact
- Difficult to identify innovations reflecting ancient divergence processes

In search of non-lexical evidence...

Nurse & Philippson (2003: 165):

'We would have liked to present here the first comprehensive non-lexically based historical classification of the Bantu languages [...]. We have been unable to do this satisfactorily in the time available due to the huge mass of data it would be necessary to collect, examine and interpret'

Case study 1

**Bantu Spirantization:
Morphologization,
Lexicalization and
Historical Classification**

The case of Bantu Spirantization

- Nurse & Philippson (2003): not a useful indicator for major Bantu subgroups
- Irregular heteromorphemic application
- Progressive morphologization and lexicalization
- Differing morphologization due to analogical pressure operating in variable morpho-prosodic constraints domains
- Morphologization and lexicalization patterns as tools for historical classification

Terminology

- **Morphologization:** the historical shift from both syntax and phonology into morphology via respectively 'desyntactization' and 'dephonologization'
- **Lexicalization:** integration into the lexicon of words resulting from regular word formation processes, especially derivation

Agent Noun Spirantization

Taabwa (M41)

- <u>en</u> d-a 'to travel'	→	<i>mu-en</i> <u>z</u> -i 'traveller'
- <u>lin</u> d-a 'to watch'	→	<i>mu-lin</i> <u>z</u> -i 'watchman'
- <u>lan</u> d-a 'to talk'	→	<i>mu-lan</i> <u>z</u> -i 'talkative person'
- <u>bum</u> b-a 'to model'	→	<i>mu-bum</i> <u>z</u> -i 'potter'
- <u>lob</u> -a 'to fish'	→	<i>mu-lob-i 'fisherman'</i>
- <u>an</u> d-a 'to win'	→	<i>mu-and-i 'winner'</i>
- <u>lemb</u> -a 'to decorate'	→	<i>mu-lemb-i 'decorator'</i>
- <u>luk</u> -a 'to plait'	→	<i>mu-luk-i 'plaiter'</i>

Phonetic characteristics and origin

- Spirantization: replacement of plosives through homorganic fricatives (Bussmann 1996)
- BS: common denominator for the effect exerted by the Proto-Bantu high front and back vowel on preceding stop consonants
- A particular type of assibilation
- Complex of changes involving both mode and articulation place with a variable phonetic output (Janson 2007, Schadeberg 1994/95)

BS in Nyamwezi (F22)

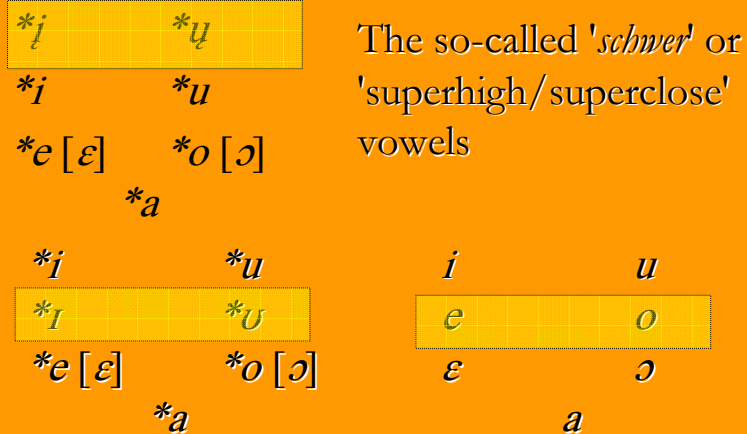
- a. *-dím- 'to extinguish' > -zímá
*-dùb- 'to fish' > -zùba
- b. *-dím- 'to cultivate' > -líma
*-dúk- 'to vomit' > -lúká
*-dèd- 'to bring up' > -lèla
*-dác- 'to shoot at' > -lácá

PB consonant system

Proto-Bantu simple consonants (Meeussen 1967;
Schadeberg 2003)

*p *t *c *k
*b *d *j *g
*m *n *ɲ

PB vowel system



Universally uncommon

Classificationary potential of BS

- Assibilation quite universal sound shift
- Post-PB, but phonetic seeds present in PB
- Present in most of major Bantu subgroups (Forest + Savanna)
- 'Complex mix of genetic and diffusional mechanisms' (Hinnebusch et al. 1981: 41)
- Different phonetics outputs, e.g. **di* > *d^hi* > *dʒi* > *ʒi* > *hi* > *i*, geographically distributed in such a way that they do not allow subgrouping

Bantu Botatwe

	Fwe (K34)	Shanjo (K36)	Totela (K41)	Subiya (K42)	Lenje (M61)	Soli (M62)	Ila (M63)	Tonga (M64)
*pi	si	si	si	si	fi	fi	fi	si
*ti	si	si	si	si	fi	fi	fi	si
*ki	si	si	si	si	fi	fi	fi	si
*bi	zi	zi	zi	zi	fi	fi	ʒi	zi
*di	zi	zi	zi	zi	fi	fi	ʒi	zi
*gi	zi	zi	zi	zi	fi	fi	ʒi	zi

Bantu M40-50 ('Sabi')

	Bemba (M42)	Biisa (M51)	Lala (M52)	Lamba (M54)
*pi	fi	fi	fi	fi
*ti	fi	si	fi	fi
*ki	fi	si	fi	fi
*bi	vi	vi	vi	vi
*di	ʒi	zi	ʒi	ʒi
*gi	ʒi	zi	ʒi	ʒi

BS and the 7-to-5-vowel merger

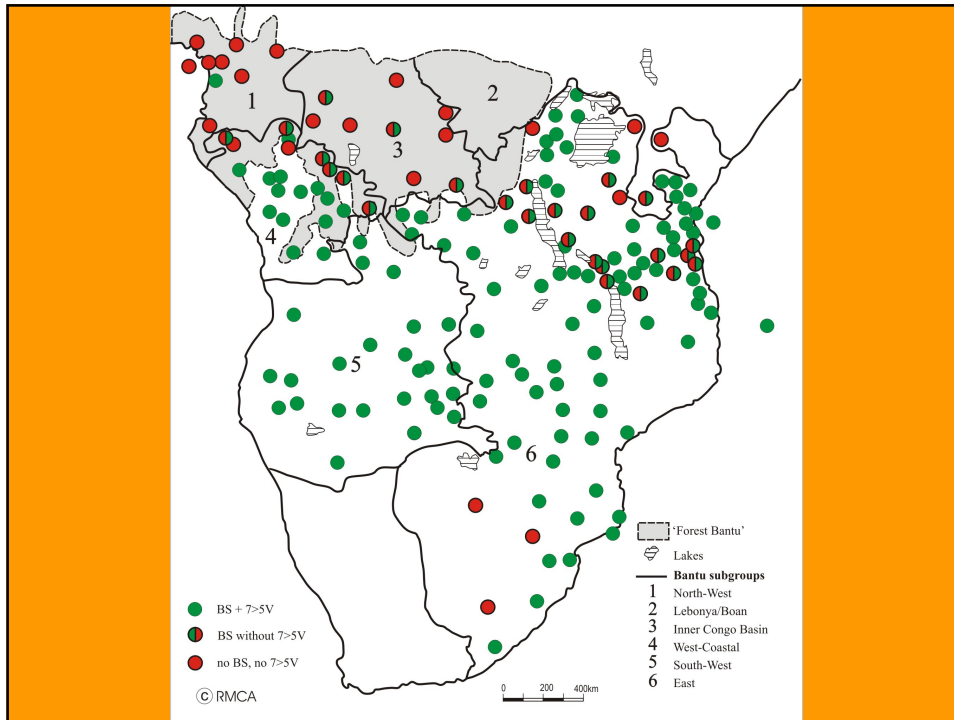
- No vowel merger without BS
- Sometimes BS without vowel merger
- BS always blocked morpheme-internally after vowel merger
- Otherwise, *Ci/*CI and *Cu/Cu oppositions would have vanished in the 5V languages.
- BS continues to exist as a synchronic morphophonological alternation
- Across-the-board phonological process acquired varying morphological restrictions

BS and the 7-to-5-vowel merger

- Loss of second-height vowels [ɪ] and [ʊ]
- Turns BS from an allophonic variation inevitably into a phonological distinction
- Original vocalic opposition is transphonologized to a consonantal opposition

Ciluba (L31a)

*- <u>b</u> ìd-	‘to become plentiful’	>	- <u>v</u> ul-
*- <u>b</u> ó-d-	‘to break, smash’	>	- <u>b</u> ùl-
*- <u>b</u> ítá	‘war’	>	m- <u>v</u> ítà
*- <u>b</u> íd-	‘to call’	>	- <u>b</u> ìl-



BS as a morphophonological alternation

- With the high vowel *-i*, BS commonly appears in 3 morphological contexts (Bastin 1983; Hyman 2003a; Labroussi 1999):
 - a) in front of the causative suffix **-i-*
 - b) in front of the agentive suffix **-i*
 - c) the perfect and/or past tense suffix **-ide*
- Contrasting synchronic behaviour with morphemes that have an identical initial vowel, e.g. applicative (**-id-*)
- Hierarchy of cross-linguistic frequency: $a > b > c$

Jita (J25) (Downing 2001)

Agentive suffix *-i* (< **-i*)

Base verb	Gloss	Agentive	Gloss
<i>oku-twá:ra</i>	'to marry'	<i>omu-twá:si</i>	'bridegroom'
<i>oku-tamíra</i>	'to eat'	<i>omu-tamísi</i>	'eater'

Applicative suffix *-ir-* (< **-id-*)

Base verb	Gloss	Applicative
<i>oku-lamur-a</i>	'to decide'	<i>oku-lamur-ir-a</i>
<i>oku-kúr-a</i>	'to grow'	<i>oku-kur-ír-a</i>

Agentive suffix *-i* (< **-i*) in Hunde (J51) (Kaji 1992)

<i>i-anul-a</i>	'to explain'	→	<i>mu-anut<i>̥</i>-i</i>	's.o. who explains'
<i>i-kól-a</i>	'to work'	→	<i>mu-kól<i>̥</i>-i</i>	'worker'
<i>i-béh-a</i>	'to lie'	→	<i>mu-bé<i>̥</i>-i</i>	'liar'
<i>i-íl-a</i>	'to steal'	→	<i>mw-í<i>̥</i>-i</i>	'thief'

Perfect suffix *-ye* (< **-ide*) in Rundi (J62) (Meeussen 1959)

<i>-hit-</i>	'to pass'	→	<i>-hit-ye</i>	→	<i>-hít<i>̥</i>-e</i>
<i>-dúnd-</i>	'to hit'	→	<i>-dúnd-ye</i>	→	<i>-dún<i>̥</i>-e</i>
<i>-vúg-</i>	'to say'	→	<i>-vúg-ye</i>	→	<i>-vúg<i>̥</i>-e</i>
<i>-shik-</i>	'to arrive'	→	<i>-shik-ye</i>	→	<i>-shít<i>̥</i>-e</i>

Agentive suffix *-i* (< **-i*) in Pende (L11) (Gusimana 1972)

<i>-dig-a</i>	‘to sell’	→	<i>mu-dig-i</i>	‘salesman’
<i>-kub-a</i>	‘to weave’	→	<i>mu-kub-i</i>	‘weaver’
but: <i>*-gídà</i>	‘bird’	>	<i>n-jila</i>	
<i>*-bî</i>	‘excreta’	>	<i>tu-ji</i>	

Perfect suffix *-ire* (< **-ide*) in Jita (Downing 2001)

<i>oku-gur-a</i>	‘to buy’	(< <i>*-gùd-</i>)	→	<i>-gur-ire</i>
<i>oku-mir-a</i>	‘to swallow’	(< <i>*-mìd-</i>)	→	<i>-mir-ire</i>
<i>oku-fú:ra</i>	‘to undress’	(< <i>*-dúvd-</i>)	→	<i>-fu:r-ire</i>
but:	<i>*-dí-m-</i>	‘to extinguish’	>	<i>oku-síma</i>
	<i>*-dìtò</i>	‘heavy’	>	<i>-sìto</i>

ANS: morphologization and lexicalization

- Variable degrees of BS with agentive suffix
- Agent nouns easily lexicalized and conceived independently of their original verb (↔ perfect inflectional suffix *-ide* and to causative verbal derivation suffix *-i-*)
- Fossils of a no longer active process
- True synchronic morphophonemic alternation?
- Fossilized evidence of the past impact of BS and its degree of morphologization

ANS Typology

- Cross-linguistically, 5 different types of ANS:
 1. no ANS
 2. full ANS
 3. phonologically restricted ANS
 4. limited ANS
 5. extensive ANS
- Kinds of conditioning involved?
- Geographic distribution of different types?

No ANS

Shona (S10) (Hannan 1974)

a. Tautomorphemic BS

*-pìn- 'to squeeze' > -svin-a
*-tìngà 'artery, vein' > tsinga

b. Absence of ANS

-zàr-a 'to give birth' → mu-zàr-i 'parent'
-p-a 'to give' → mu-p-i 'giver'
-bik-a 'to cook' → mu-bik-i 'cook'
-rot-a 'to dream' → mu-rot-i 'dreamer'

Full ANS

Rundi (J62) (Rodegem 1970)

-rób-a ‘to fish’	→	<i>umu-róvy-i</i>	‘fisherman’
-rer-a ‘to educate’	→	<i>umu-rez-i</i>	‘educator, tutor’
-rind-a ‘to protect’	→	<i>umu-rinz-i</i>	‘guardian’
-ték-a ‘to cook’	→	<i>umu-téts-i</i>	‘cook’
-timb-a ‘to beat’	→	<i>umu-timvy-i</i>	‘drummer’
-búr-a ‘to prevent’	→	<i>im-búz-i</i>	‘prophet’
-kabar-a ‘to excite’	→	<i>umu-kabuz-i</i>	‘radio reporter’
-simb-a ‘to cross’	→	<i>umu-simvy-i</i>	‘sprinter’
-tégek-a ‘to order’	→	<i>umu-tégets-i</i>	‘manager’

Phonologically restricted ANS

- Agentive suffix only triggers spirantization of certain consonants (also observed in front of other consonants)
- Variation in the way it operates across Bantu languages
- Interaction with morphological conditioning of BS
- Systematic differences between 7V and 5V languages

Phonologically restricted ANS in 7V

Lega (D25) (Botne 1994)

a. Tautomorphemic diachronic BS of **d* and **t*

<i>*-dím-</i> ‘to be extinguished’	>	<i>-zím-a</i>
<i>*-kòtì</i> ‘neck’	>	<i>i-kòsì</i>
but: <i>*-bím-</i> ‘to swell’	>	<i>-bím-a</i>
<i>*-pígò</i> ‘kidney’	>	<i>m-píko</i>
<i>*-gídá</i> ‘blood’	>	<i>mi-kílá</i>
<i>*-kígè</i> ‘eyebrow’	>	<i>lu-kíge</i>

b. Phonologically restricted ANS (only **d*)

-lél- ‘to tend infant’ → *mo-léz-i* ‘nursemaid’ (< **-dèd-*)

-kósɔl- ‘to cough’ → *ke-kósɔz-i* ‘cough’ (< **-kócuɔd-*)

but: *-bór-* ‘to give birth’ → *ba-bór-i* ‘parents’ (< **-bùt-*)

Phonologically restricted ANS in 5V

Shi (J53) (Polak-Bynon 1978)

a. Tautomorphemic diachronic BS

<i>*-dì</i> ‘root’	>	<i>óomu-zìi</i>
<i>*-tíg-</i> ‘to leave behind’	>	<i>óoku-sìg-á</i>
<i>*-bìi</i> ‘excreta’	>	<i>áama-zìi</i>
<i>*-pígà</i> ‘cooking-stone’	>	<i>ù-sìgà</i>
<i>*-gìdò</i> ‘taboo’	>	<i>óomu-zìro</i>
<i>*-kígè</i> ‘eyebrow’	>	<i>éeci-sìke</i>

Phonologically restricted ANS in 5V

b. Phonologically restricted ANS (*d, *t, *g, *k)

-*yaabu*- 'to herd cow' → *oomw-aabu*-i 'cowherd'
(*< *-jàbud-*)

-*burh*- 'to have child' → *aaba-bus*-i 'parents' (*< *-bùt-*)

-*log*- 'to bewitch' → *óomu-loz*-i 'sorcerer' (*< *-dòg-*)

-*jinik*- 'to be a miser' → *óobu-jinis*-i 'avarice'

but: -*lééb*- 'to foretell future' → *óomu-lééb*-i 'prophet'
(*< *-dèeb-*)

• -*buúmb*- 'to make pots' → *óomu-buúmb*-i 'potter'
(*< *-búmb-*)

• -*zih*- 'to play instrument' → *óomu-zih*-i 'musician'
(*< *-dip-*)

Phonologically restricted ANS

- Phonological restrictions on BS may differ from language to language
- **t / *d > *k / *g > *p / *b*
- 7V languages: phonological constraints both morpheme-internal and heteromorphemical
- 5V languages: only heteromorphemical
- Phonological conditioning is primary and applies across the board
- Morphologization is secondary and may be accompanied by levelling of ANS in front of certain consonants

Limited ANS

Ciluba (L31a) (Kabuta 2006)

-*kèb-* ‘to look for’ → *mu-kèb-i* ‘searcher’ (< **-kéb-*)

-*amb-* ‘to speak’ → *mu-amb-i* ‘orator’ (< **-gàmb-*)

-*pá-* ‘to give’ → *mu-p-i* ‘sponsor’ (< **-p-*)

-*bèy-* ‘to shave’ → *mu-bèy-i* ‘barber’ (< **-bég-*)

-*dìng-* ‘to lie’ → *mu-dìng-i* ‘liar’ (< **-dìng-*)

but: -*low-* ‘to bewitch’ → *mu-low-i* ‘witch’ (< **-dòg-*)

-*iib-* ‘to steal’ → *mu-iv-i* ‘thief’ (< **-jìb-*)

but also *mu-ìb-i*

Limited ANS

- BS not productive sound change within the morphological class of agent nouns
- ANS restricted to small set of early Bantu nouns, which is similar across ‘limited ANS’ languages: **-dògì* ‘witch’, **-jìbì* ‘thief’ and to a much lesser extent **-dèdì* ‘parent, caretaker’
- BS was not morphologized as marker of agent noun morphology
- At time of 7>5V merger, ANS was banned as morphophonological alternation
- Only lexicalized early Bantu agent nouns escaped analogical levelling

Extensive ANS

Swahili (Johnson 1939, Sacleux 1939): regular ANS

- <u>lev</u> -a 'to be drunk'	→ m- <u>lev</u> -i 'drunkard' (< *- <u>deb</u> -)
- <u>gomb</u> -a 'to quarrel'	→ m- <u>gomv</u> -i 'brawler'
- <u>lip</u> -a 'to pay'	→ m- <u>lif</u> -i 'payer' (< *- <u>dip</u> -)
- <u>li</u> -a 'to cry'	→ m- <u>liz</u> -i 'shouter' (< *- <u>did</u> -)
- <u>fuat</u> -a 'to follow'	→ m- <u>fuas</u> -i 'follower'
- <u>log</u> -a 'to bewitch'	→ m- <u>loz</u> -i 'sorcerer' (< *- <u>dog</u> -)
- <u>fund</u> -a 'to learn'	→ <u>funz</u> -i 'craftsman'
- <u>chimb</u> -a 'to harm'	→ m- <u>chimv</u> -i 'witch'
- <u>pike</u> -a 'to cook'	→ m- <u>pish</u> -i 'cook' (< *- <u>jipik</u> -)
- <u>andik</u> -a 'to write'	→ <u>mv-andish</u> -i 'writer'

Extensive ANS

Swahili (Johnson 1939): cases of no ANS

- <u>pamb</u> -a 'to adorn'	→ m- <u>pamb</u> -i 'decorator'
- <u>kop</u> -a 'to borrow'	→ m- <u>kop</u> -i 'debtor' (< *- <u>kop</u> -)
- <u>kat</u> -a 'to cut'	→ m- <u>kat</u> -i 'cutter' (< *- <u>kat</u> -)
- <u>fund</u> -a 'to learn'	→ <u>fund</u> -i 'craftsman/tutor'
- <u>chimb</u> -a 'to harm'	→ m- <u>chimb</u> -i 'witch'
- <u>andik</u> -a 'to write'	→ <u>mv-andik</u> -i 'writer'

- Modern derivations leave the consonant unchanged (Schadeberg 1984: 5)
- Once active morphophonemic change has gradually become unproductive

Reasons for deactivation ANS

- Influx Arabic verbs ending in -i with -i final agent nouns lacking ANS, e.g. *-hajiri* 'to emigrate' > *m-hajiri* 'emigrant'
- Competence of ANS free alternative derivation strategies, e.g. *-aji*, which also attract already existing agent nouns, e.g. *mwandikaji* 'writer' (emergence of doublets)
- Marginalization of the agentive -i suffix
- Paradigms without morphophonemic alternations at the right edge of the verb stem

Analogue extension + levelling

a. Old form

ku-andik-a 'to write' : *mu-andish-i* 'writer'

b. **Analogue extension** of the *-aji* pattern

ku-pak-a 'to plaster, paint' : *m-pak-aji* 'painter'; *ku-andik-a* 'to write' : *mu-andish-i* ≈ *mu-andik-aji* 'writer'

c. **Analogue levelling** of the paradigm

ku-andik-a 'to write' : *mu-andik-aji* 'writer'

ku-andik-a 'to write' : *mu-andish-i* ≈ *mu-andik-i* 'writer'

Extensive ANS

- Swahili as *lingua franca*: contact between dialects + interferences from L2-speakers, e.g. *fundi* ‘craftsman’ (N-Swahili loanword in Kiunguja, ‘tutor’ in Lamu)
- Similar phenomena in closely related North-East Coast Bantu languages, e.g. Nyika (E72), Digo (E73) and Zigula (G31)
- ‘Extensive ANS’ languages were once ‘full ANS’ languages which started to ban ANS through analogical pressure

Role of analogy in blocking and retraction of ANS

- Speakers tend to ban morphophonemic alternations within paradigms according to the isomorphism principle of ‘one meaning, one form’
- ‘Paradigm’: ‘the set of inflected forms of a given word’ (Hock 1991)
- Failure of a phonologically predictable alternation to apply at a morpheme boundary: ‘analogical levelling’ (McMahon 1994) or ‘paradigm levelling’ (Hock 1991)

Role of analogy in blocking and retraction of ANS

- BS originally applied as an across-the-board phonological process
- gradually retracted to narrower morphological domains under analogical pressure
- Variable morphologization of BS linked to the difference between morphological and prosodic domains within Bantu verbal inflectional stem (Downing 2007)

Historical evolution ANS

- Strictly phonetic diachronic evolution BS not an useful indicator for Bantu subgrouping
- Historical development of its morphologization is more telling
- Process took place in different steps and its output is not uniform across Bantu
- Interaction with both 7>5V merger and analogical levelling

Stepwise evolution of ANS

- no ANS: 7>5V took place shortly after the activation of BS. All signs of BS in front of the agentive suffix under analogical pressure could still be wiped out
- limited ANS: 7>5V took place shortly after the activation of BS. All signs of BS in front of the agentive suffix under analogical pressure could still be wiped out, except in the few inherited lexicalized cases

Stepwise evolution of ANS

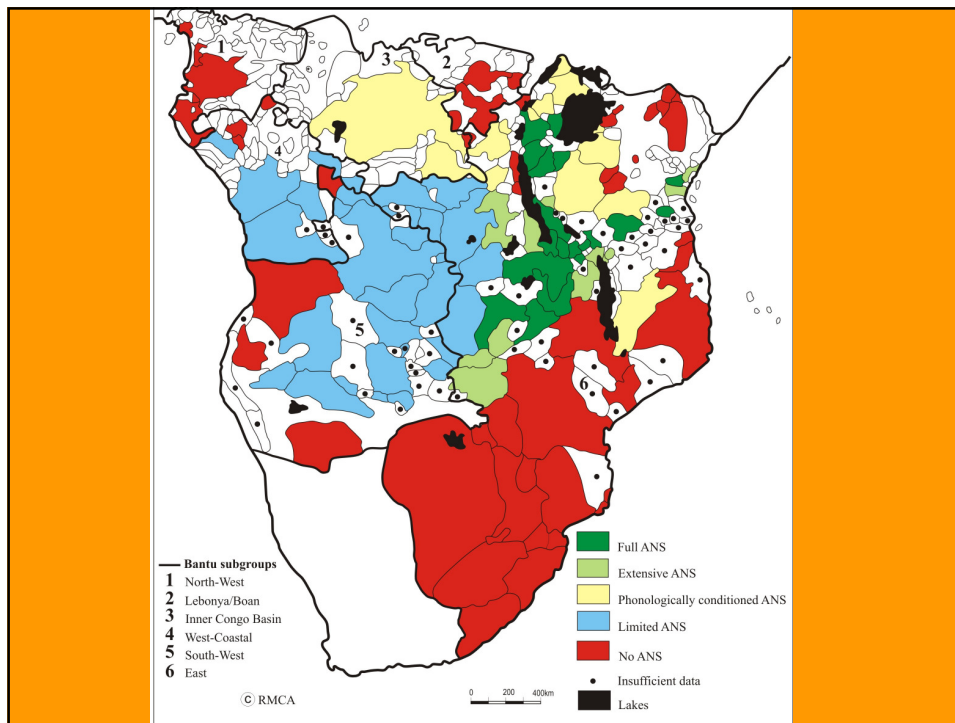
- phonologically restricted ANS: 7>5V took place when BS already deeply affected the lexicon and all plosives had been targeted. Heteromorphemically, BS could still be levelled away before the latest affected plosives (always labials, sometimes velars)
- full ANS: 7>5V took place when BS had already deeply affected the lexicon and became a marker of agentive morphology

Stepwise evolution of ANS

- Extensive ANS: 7>5V took place when BS had already deeply affected the lexicon of a language. BS had become a regular marker of agentive morphology, but it subsequently became irregular, because it was wiped out from certain words due to analogy with competing derivational strategies providing the possibility of analogical extension and/or contact with 'no ANS' languages

Historical significance of ANS

- Advanced morphologization of BS cannot be a 'contact' phenomena
- Convergent development is only likely if most advanced stages of morphologization are randomly spread over the Bantu area
- Indicative of common descent as the result of an inherited ancestral tendency is likely if the most advanced stages of morphologization are not randomly spread geographically



ANS 5V languages

- Limited to the northern part of East-Bantu
- In contrast to southern East-Bantu 5V languages of zones N, P and S which are all no ANS languages: must have broken away from their northern relatives before BS became a meaningful marker of agentive (and perfect) morphology

Phonologically restricted ANS languages (with 5V)

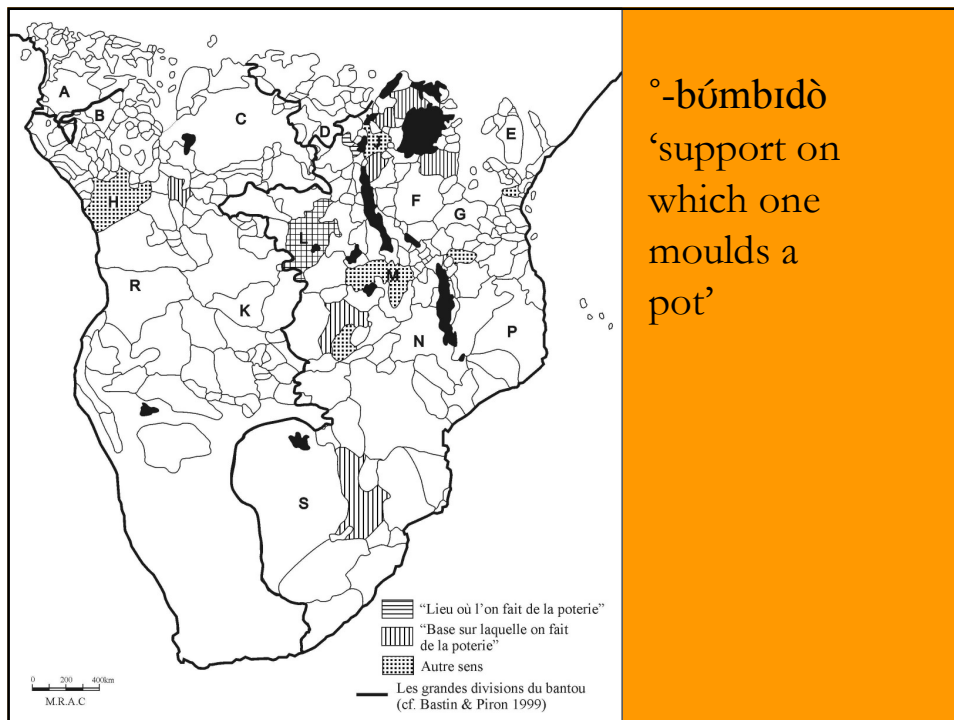
- Only in the J10, J20 and J50 languages
- Relatively closely related Great Lakes Bantu languages (Bastin 2003; Nurse 1999; Schoenbrun 1998)
- All situated to the north of the full ANS languages: initial stage of full morphologization

Extensive ANS languages

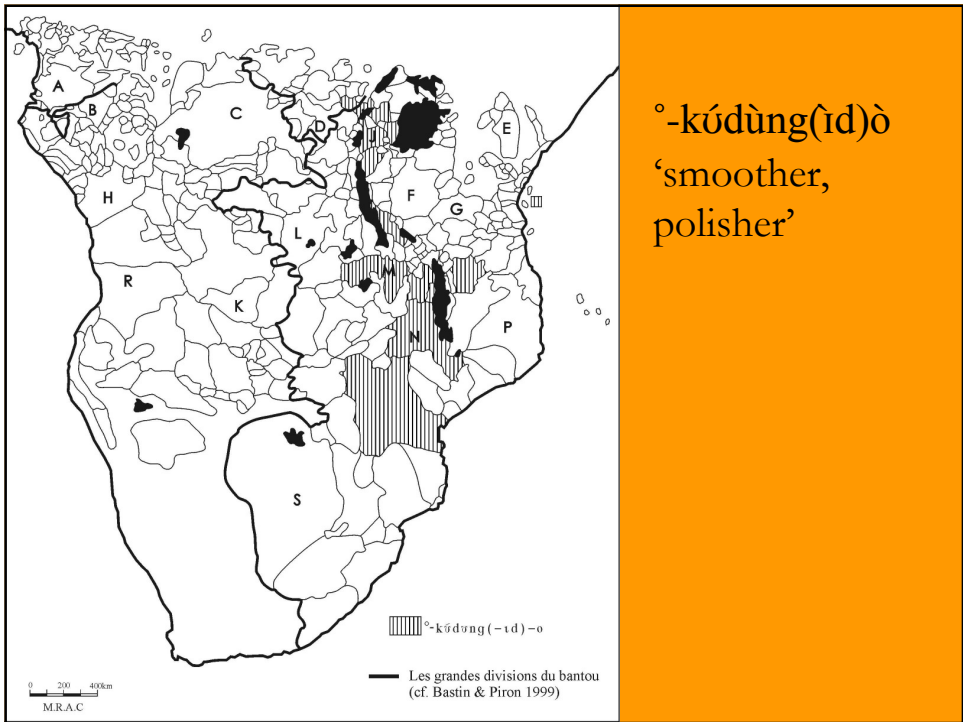
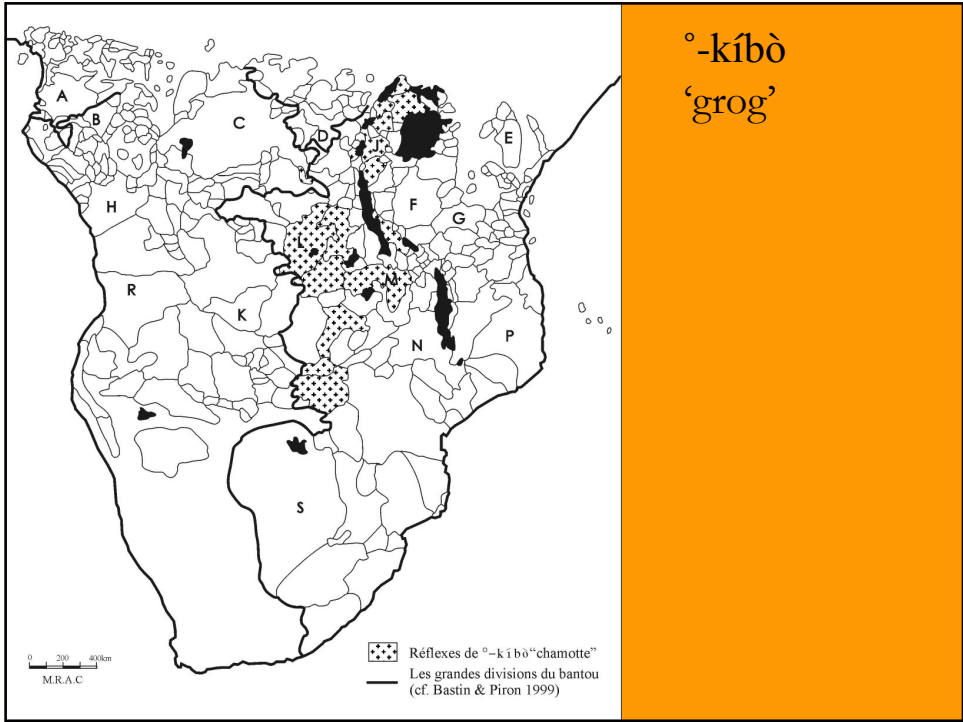
- All situated in the immediate neighbourhood of 'full ANS' languages
- Corroborates the assumption that all 'extensive ANS' languages, at least the ones with 5V, once had 'full ANS'

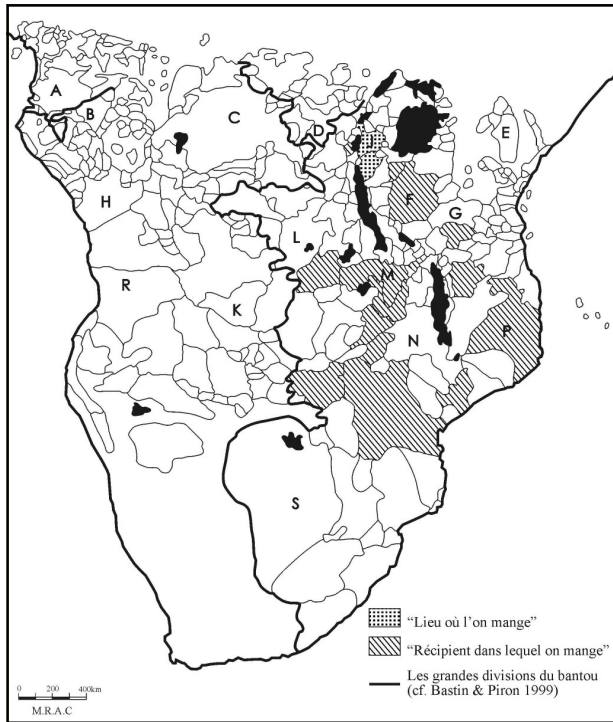
Full ANS languages

- Main axis stretches from the Great Lakes region in the north through the Corridor region in between Lakes Tanganyika and Malawi into Central Zambia in the south
- These languages are historically more closely related amongst each other than with the rest of Bantu
- Earlier observation of lexical innovations (Bostoen 2005)

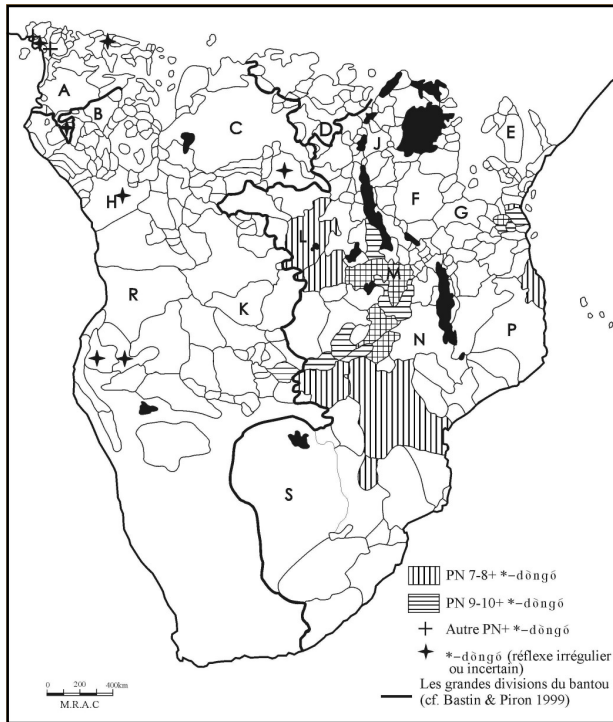


°-búmbidò
‘support on
which one
moulds a
pot’

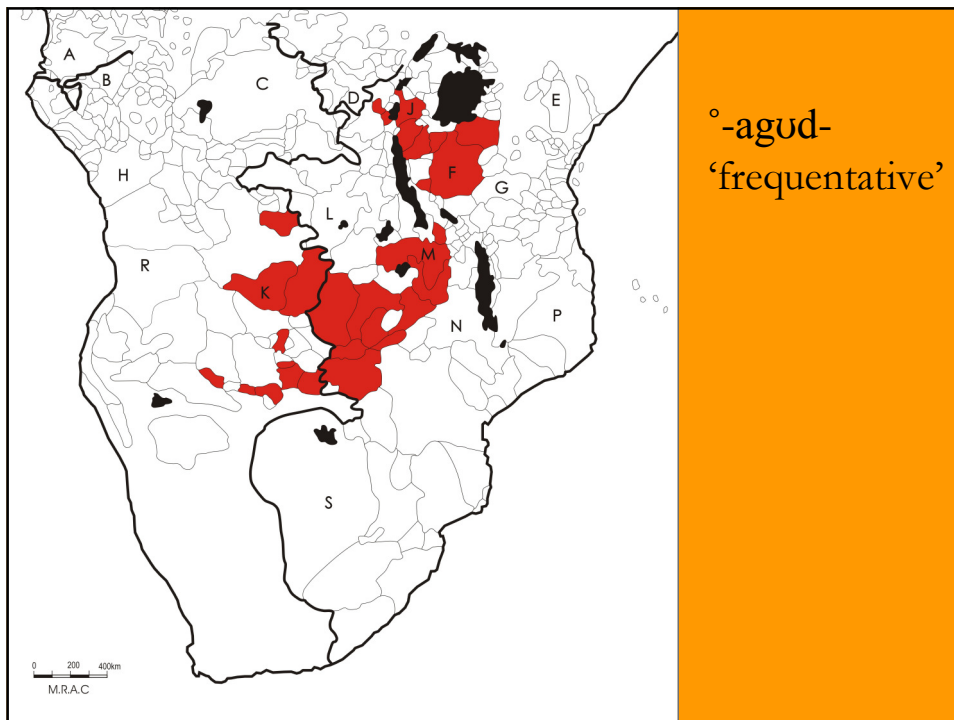




°-dũdò
 ‘bowl in which
 one eats’



°-dòngó
 ‘clay pot’



Full ANS languages

- A less articulated west-east axis of scattered 'full ANS' languages can be distinguished from the Lake Corridor region in the west to the Indian Ocean in Tanzania
- More data are needed to examine their precise historical relationship with the cluster of languages stretching from the Lake Corridor area to the Indian Ocean

Case study 2

Bantu Plant Names as Indicators of Linguistic Stratigraphy

Linguistic stratigraphy

- Lexical, phonological or grammatical layers in a group of languages, which mirror their evolution and the contacts their speakers had with bearers of other linguistic and cultural traditions (cf. Andersen 2003:3)
- Cf. Möhlig (1977, 1982): *Stratification in the History of the Bantu Languages*

Western Province of Zambia

- Lozi vs. minority Bantu languages:
 - Bantu Botatwe: Fwe, Shanjo, Subiya, Totela (K30-K40)
 - Luyana: Luyi, Mwenyi, ... (K30) + Kwamashi/Mbukushu (???)
 - Nkoya
 - Cokwe-Lucazi: K10-L50
- East-Bantu vs. South-West Bantu
- Bantu vs. 'Khoisan'

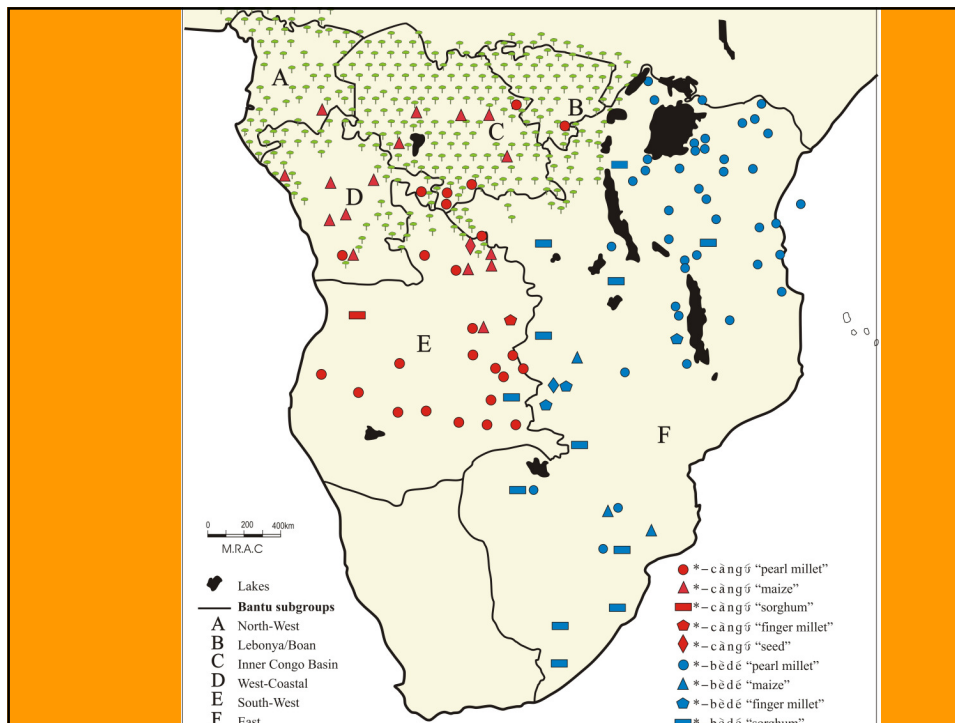
Plant names

- Useful plants of distinct age and origin, i.e. indigenous vs. imported, for instance pearl millet vs. maize
- Plant isoglosses displaying divergent distribution patterns can be used to unravel the complex stratified Bantu language history

Pearl millet
Pennisetum glaucum



Mbunda (K15)	máshàngù	'pearl millet'	
Lozi (K21)	mangu	'millet'	
Luyi (K31)	maangu	'millet'	
Mbukushu (K333)	mahangu	'pearl millet'	*-cángú
Kwamashi (K34)	máhângù	'pearl millet'	
Kwamulonga (K351)	máhângù	'pearl millet'	
Mwenyi (K352)	(a)máungú	'millet'	
Mbwera (L61)	díhângù	'pearl millet'	
Nkoya (L62)	mahângu	'finger millet'	
Shanjo (K36)	màbéré	'millet'	°-bèdé
Fwe (K402)	màbélé	'millet'	
Lozi (K21)	màúzá	'pearl millet'	



Pennisetum glaucum

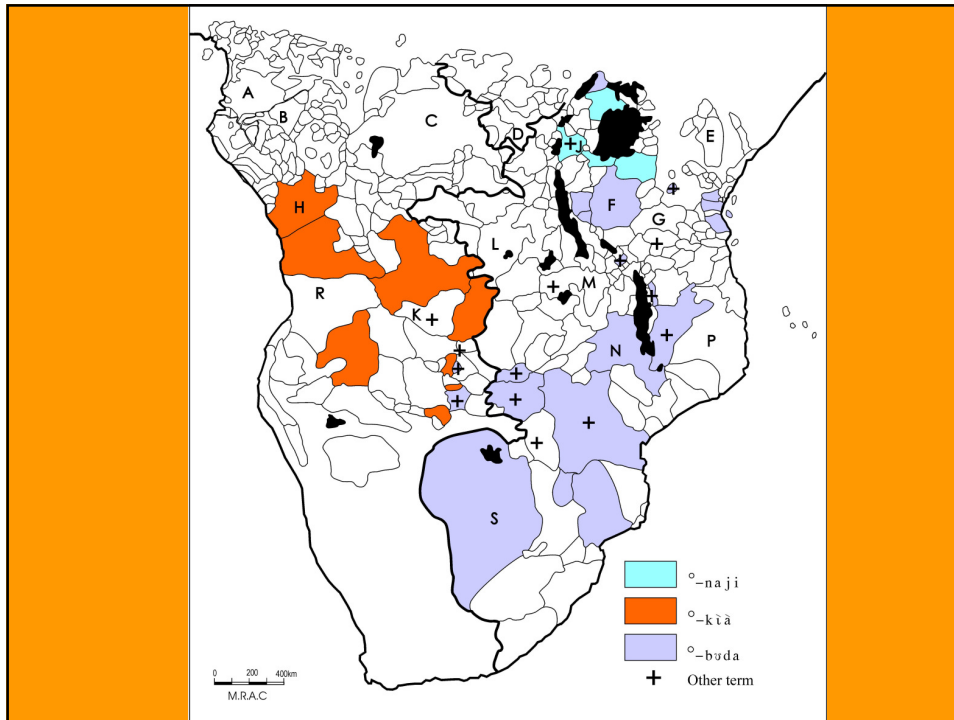
- Common belief: pearl millet (grain cultivation in general) not part of original agricultural traditions of Bantu speakers (savanna species)
- Challenged by discovery of archaeobotanical evidence of domesticated pearl millet (*Pennisetum glaucum*) in the rain forest of southern Cameroon, dated between 400 and 200 BC (Eggert *et al.* 2006) → linked with stronger seasonality in the first millennium BC (cf. Kahlheber *et al.* 2009)
- ***-cângú** reflexes meaning 'maize' in Bantoid languages from Cameroon and several Cross River languages of Nigeria

Parinari curatellifolia
(Chrysobalanaceae)

mobola



Lozi (K21)	mubula	' <i>P. curatellifolia</i> '	
Shanjo (K36)	ímbúlà	<i>P. curatellifolia</i> '	°-búdà
Lozi (K21)	mubulabula	<i>P. capensis</i> '	
Shanjo (K36)	kábúlàbúlà	<i>P. capensis</i> '	
Mbukushu (K333)	ghutha	' <i>P. curatellifolia</i> '	°-cà
Kwamashi (K34)	mùthá	' <i>P. curatellifolia</i> '	
Mbukushu (K333)	shashi	<i>P. capensis</i> '	
Kwamashi (K34)	sháshì	<i>P. capensis</i> '	
Mbwera (L61)	shashi	<i>P. curatellifolia/capensis</i> '	



Parinari curatellifolia

- Low archaeological visibility (e.g. Thukela Basin South Africa, Greenfield *et al.* 2005), but ethnographic prominence (e.g. !Kung in Kalahari) and growing commercial importance as NTFP
- Natural habitat: open woodland, upland grassland, persisting in cultivated land and secondary bush; NOT in tropical forest
- 2 main terms: °-b ū d à (E-Bantu, ‘mobola’) & °-c à (SW-Bantu) ⇒ old exploitation
- possible to reconstruct °-b ū d à in PB, cf. Tiv: *i-bua* ?
- East-Bantu as primary branch?

Lozi (K21)	mbonyi	‘maize’
Mbunda (K15)	múndèlè	‘maize’
Mbukushu (K333)	mundere	‘maize’
Luyi (K31)	mundale	‘maize’
Kwamashi (K34)	mùndàrè	‘maize’
Kwamulonga (K351)	ndálè	‘maize’
Mwenyi (K352)	(o)múndálé	‘maize plant’
Shanjo (K36)	mùndálé	‘maize’
Subiya (K42)	mundale	‘maize’
Mbwera (L61)	mùndàrè	‘maize’

Mbunda (K15)	mwánzà	‘cassava’
Lozi (K21)	mwanja	‘cassava, manioc’
Kwamulonga (K351)	mwánjà	‘cassava’
Shanjo (K36)	mwánjà	‘cassava’
Mbukushu (K333)	mwandja	‘sweet cassava’
Mwenyi (K352)	(o)mwánja	‘cassava’
Mbwera (L61)	dídhékà	‘cassava’
Kwamashi (K34)	mùdhékà	‘cassava’
Mbukushu (K333)	mudhika	‘bitter cassava’
Nkoya (L62)	jikamba	‘cassava’
Mbunda (K15)	lupa lwa mukamba	‘cassava (not yet soaked)’