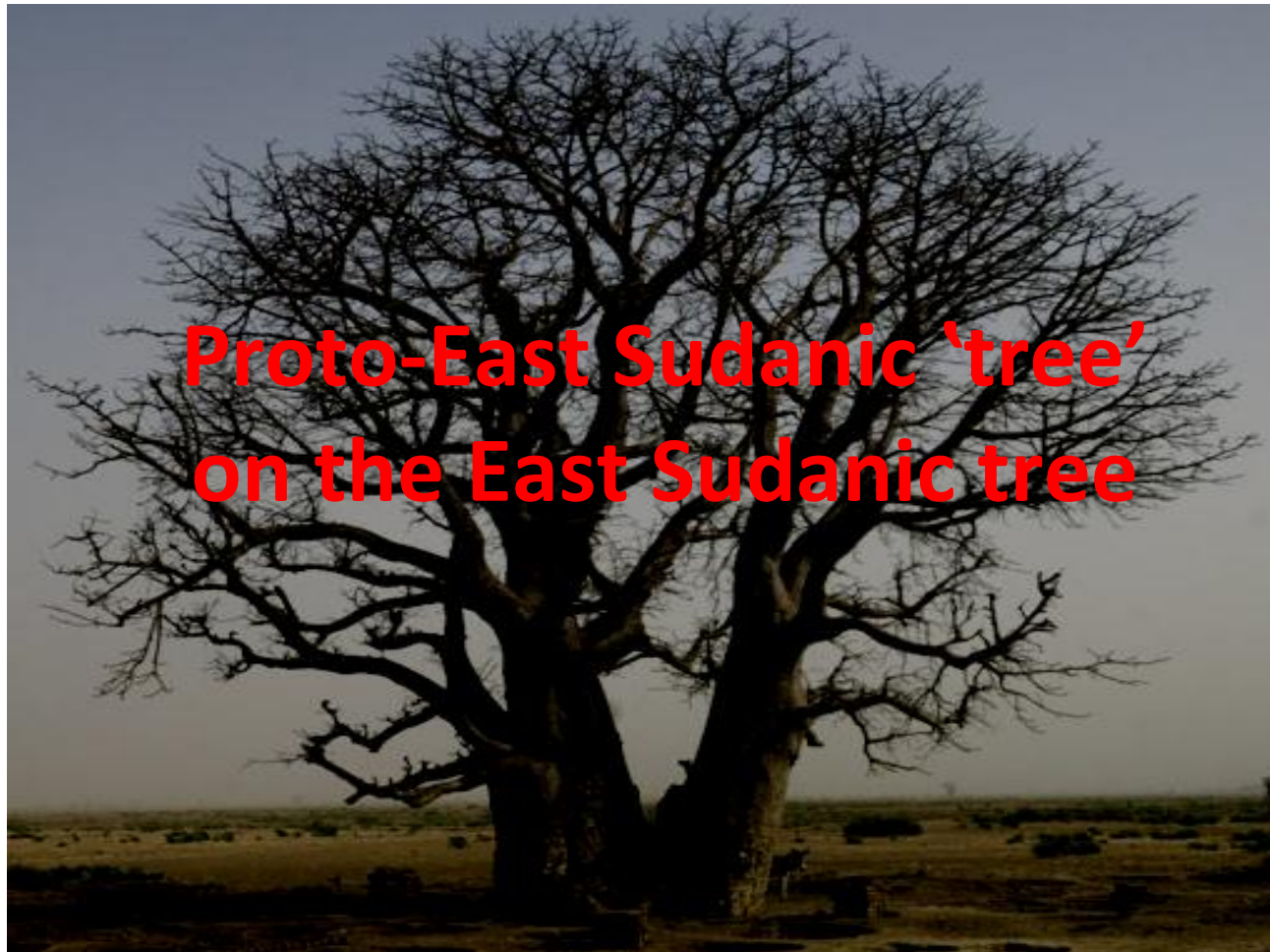


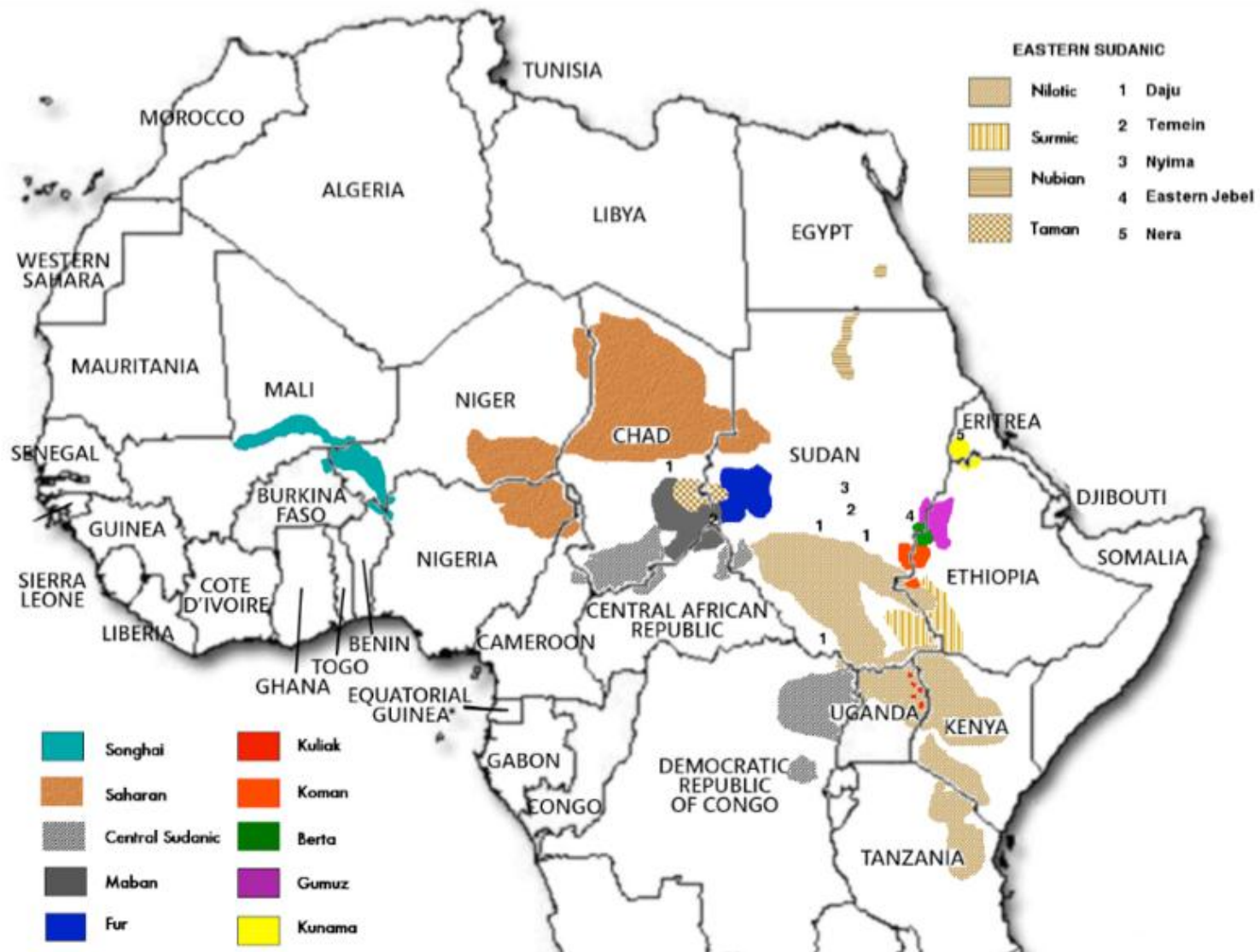
*Russian State University for the Humanities  
Institute for Oriental and Classical Studies  
Center of Comparative Linguistics*

**10th Annual Conference on Comparative-Historical Linguistics  
(in memory of Sergei Starostin)**

## George Starostin

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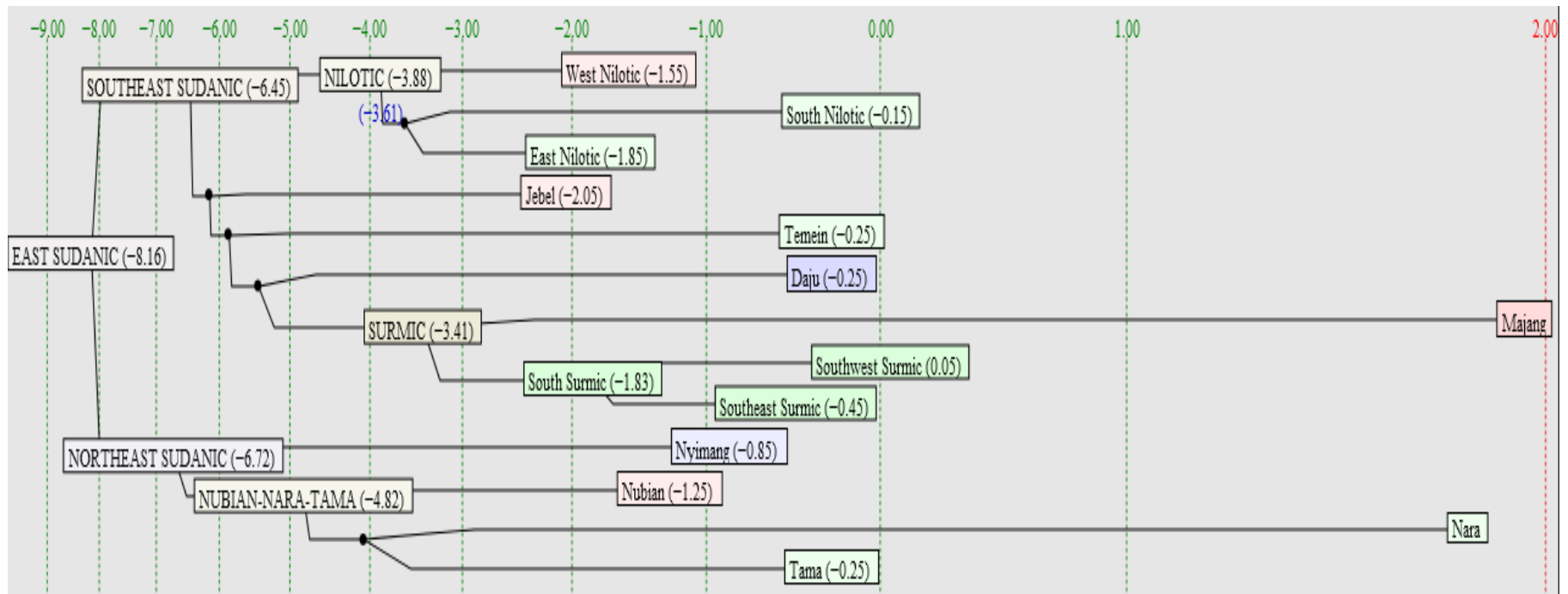


## General map of Nilo-Saharan and Eastern Sudanic languages

(<http://www.languagesgulper.com/eng/Nilo.html>)

**«Conservative»<sup>1</sup> lexicostatistical classification of East Sudanic  
with glottochronological dates**

*(based on etymological and distributional analysis of 50-item wordlists)*



<sup>1</sup> «Conservative» implies that cognate matchings are mostly based on known phonetic correspondences or on direct consonantal class matchings between potential cognates, as opposed to a more permissive understanding of phonetic similarity («à la Greenberg»). Datings given according to Sergei Starostin's glottochronological formula. Tree produced by StarLing software. All wordlists compiled by G. Starostin and gradually becoming available at the Global Lexicostatistical Database (<http://starling.rinet.ru/new100>).

## «Tree» in particular branches of East Sudanic<sup>2</sup>

### (A) Western Nilotic

	Singular	Plural		Singular	Plural
<i>Acholi</i>	yà:t	yá:d-í	<i>Shilluk</i>	yaṭ	yɛŋ
<i>Dho Alur</i>	yàṭ	—	<i>Päri</i>	yà:ṭ	yín
<i>Lango</i>	yàt	yèn	<i>Anywa</i>	jà:ṭ	ʒèn-n <sup>h</sup> ɪ
<i>Luo</i>	yàṭ	yíén ~ yéḏê	<i>Jur Luo</i>	yaṭ	yen
<i>Kumam</i>	yàt	yà:t-á ~ yàt-ná	<i>Belanda Bor</i>	yaṭ	ka=yat
<i>Dop Adhola</i>	yàṭ	yèn	<b>Proto-Northern Luo</b>	<b>*yà-ṭ</b>	<b>*yɛ-n</b>
<b>Proto-Southern Luo</b>	<b>*yà-ṭ</b>	<b>*yɛ-n</b>			
<i>Kurmuk Burun</i>	yá:ṭ	yán	<i>Nuer</i>	jiat	jen
<i>Mayak Burun</i>	ya:ṭ	yɔn			
<i>Jumjum</i>	ʒâ:n	ʒèn-ɔ̀n			
<i>Mabaan</i>	ʒâ:n-̀n	ʒân-ɔ̀n			
<b>Proto-Mabaan-Burun</b>	<b>*ya-ṭ</b>	<b>*yɔ-n</b>			

### Proto-West Nilotic

**\*ya-ṭ**      **\*yɛ-n**

<sup>2</sup> **Note:** the signs - and = denote easily segmented affixes (suffixes and prefixes); italicized forms denote transparent morphological innovations by analogy.

## (B<sub>1</sub>) Eastern Nilotic: intermediate reconstructions

	Singular	Plural		Singular	Plural
<i>Teso</i>	é=kító-ì	—	<i>Maasai</i>	ōl=cānī (+ ōl=cātá 'wood')	īl=kèék
<i>Turkana</i>	è=kìtò-è	ḡí=kìtó	<i>Camus</i>	l=càní	l=kèék ~ l=càní-tà
<i>Karamojong</i>	ε=kito-ɪ	—	<i>Sampur</i>	l=cēnī	
<i>Nyangatom</i>	ḡa=kito	—	<i>Ongamo</i>	ò=šètá	ò=kéyé
<b>Proto-Teso-Turkana</b>	<b>*=kɪtɔ</b>		<b>Proto-Ongamo-Maa</b>	<b>*=kyani ~ *=kyata</b>	<b>*=keye(-k)</b>
<i>Lotuko</i>	á=yyàní	—	<i>Bari</i>	kódíní	kaden
<i>Oxoryok</i>	ō=xyānī	—	<i>Kakwa</i>	kōdīḡí	
<i>Lopit (Vossen)</i>	yyáni	—	<i>Kuku</i>	kōdīnî	
<i>Dongotono (Vossen)</i>	sáni	—	<i>Ngyepu</i>	kōdīnī	
<i>Lokoya (Vossen)</i>	ó=yán-dík	—	<i>Nyangwara</i>	kōdīnī	
<i>Lopit (Driberg)</i>	keta	koyek	<i>Mondari</i>	kōdí	
<i>Dongotono (Driberg)</i>	kyatai	—	<b>Proto-Bari</b>	<b>*kōdini (← kaḡini)</b>	
<i>Lokoya (Driberg)</i>	a=kito-i	—			
<b>Proto-Lopit-Lotuko</b>	<b>*=kyani ~ *=kyatV</b>	—			

**(B<sub>2</sub>) Eastern Nilotic: upper level reconstructions**

	<b>Reconstruction</b>	<i>Reflected in:</i>
Neutral variant: 'trees (coll.), wood'	<b>*k=eye</b> (← <b>*k=aye?</b> )	(i) Ongamo pl.; (ii) with secondary plural suffix -k in Maasai and certain dialects of Lopit-Lotuko
Plural variant: 'trees (as units)'	<b>*k=aye-n</b>	(i) Bari ( <i>kaden</i> ); (ii) Bari, Maa, Lopit-Lotuko generate secondary singulative <i>*kaye-n-i</i> from this stem
Singulative variant: 'tree (a single one)'	<b>*k=aye-tV</b>	(i) Teso-Turkana; (ii) Lopit-Lotuko; (iii) Ongamo-Maa (with various vocalic extensions)

The original root is reconstructible as  
**\*[k]=aye-** or **\*[k]=eye-**  
 (with fused *\*k-mobile* already in Proto-ENI)

(C) South Nilotic (Kalenjin-Datooga-Omotik)

Base opposition:

PSNI	Meaning	Attested in
*kɛ:t	'tree(s)' ( <i>plural or neutral</i> )	Kalenjin; Datooga
*kwɛ:n	'trees (coll.), wood, firewood'	Kalenjin; Omotik

Nandi (Kalenjin):

pl. **kɛ:t** 'trees' → sg. **ké:t-î** 'one tree'

pl. **kwɛ:n** 'firewood' → sg. **kwɛ:n-tê:t** 'piece of firewood'

Datooga: sg. **gê:d-da** 'tree' ↔ pl. **gé:d-îga** 'trees'

Omotik: sg. **kwén-t'ô:tà** 'tree' ↔ pl. **kwɛ:n-kà** 'trees'

Common Nilotic perspective:

	West Nilotic	East Nilotic	South Nilotic
«Zero base»		*k=aye ( <i>neut.?</i> )	
«T-base»	*ya-ṭ ( <i>sg.</i> )	*k=aye-tV ( <i>sg.</i> )	*k=ε:-t ( <i>sg.</i> )
«N-base»	*yε-n ( <i>pl.</i> )	*k=aye-n ( <i>pl.</i> )	*k=we:-n ( <i>coll.</i> )

Remaining questions:

(a) original root structure (monosyllabic \*yV or polysyllabic \*ayV?)

(b) original articulation of root glide (\*y or \*w?)

(c) original ATR-characteristics of root vocalism?



**(D) Surmic languages:**

	Singular	Plural
<i>Longarim</i>	kè:-t:à	kē:-nà
<i>Didinga</i>	kè:-t:à	kè:-nà
<i>Tennet</i>	kè:-t	—
<i>Murle</i>	ké:-t	kɛ:-n
<i>Baale</i>	kē:-ǎá	kē:-ná
<b>Proto-Southwest Surmic</b>	<b>*kɛ:-ta</b>	<b>*kɛ:-na</b>
<i>Suri (Chai)</i>	kē-yō	kè-nò
<i>Mursi</i>	kí-yò	ke-no
<i>Me'en</i>	kè-dó	ke-na [Ricci]
<b>Proto-Southeast Surmic</b>	<b>*kɛ-To ~ *kɛ-yo</b>	<b>*kɛ-n-</b>
<i>Majang (North Surmic)</i>	kè:-t	kɛ:-n
<b>Proto-Surmic</b>	<b>*kɛ:-t/a/</b>	<b>*kɛ:-n/a/</b>

## (E) Daju languages

	Singular	Plural
<b>West Daju</b>		
<i>Sila-Nyala-Lagowa</i>	<i>ette</i>	<i>ewe-ge</i>
<i>Nyalgulgule</i>	<i>ete</i>	<i>ewe-ge</i>
<b>East Daju</b>		
<i>Shatt</i>	<i>ett</i>	<i>ewe</i>
<i>Liguri</i>	<i>e:we-s</i>	<i>ewe</i>
<b>Proto-Daju</b>	<b>*ette ← *ewe-te</b>	<b>*ewe</b>

## (F) Eastern Jebel languages

	<i>Singular</i>	<i>Plural</i>
<i>Aka, Beni Sheko</i>	kəca	kəca-ki
<i>Molo</i>	kəsa	—
<i>Kelo</i>	kəja	kəja
<i>Sillok (= «Old Aka»)</i>	ka:ica	—
<i>Malkan (= «Old Kelo»)</i>	kusa	—
<i>Tornasi (= «Old Molo»)</i>	kaiša	—
<b>Proto-Eastern Jebel</b>	<b>*kəca ~ *kayca</b> <b>(← *kayi-ta?)</b>	—

**Putting it all together:**

	<i>Neutral</i>	<i>Marked sg.</i>	<i>Marked pl.</i>
Common Nilotic	<b>*[k=]ayE</b>	<b>*[k=]ayE-T-</b>	<b>*[k=]ay/wE-n-</b>
Common Surmic		<b>*kɛ:-t/a/</b>	<b>*kɛ:-n/a/</b>
Common Daju	<b>*ewe</b>	<b>*ewe-te</b>	<b>(?) *ewe-ge</b>
Common Eastern Jebel		<b>**kayi-ta</b>	

## Proto-Southeast Sudanic reconstruction:

	<i>Neutral</i>		<i>Marked sg.</i>		<i>Marked pl.</i>	
Var. 1: Two roots	*= <b>eye</b>	*= <b>ewe</b>	*= <b>eye-T-</b>	*= <b>ewe-T-</b>	*= <b>eye-N-</b>	*= <b>ewe-N-</b>
Var. 2: One root	* <b>[k=]ewE</b>		* <b>[k=]'ewe-T-</b>		* <b>[k=]ew'e-N-</b>	

	<i>Two roots</i>	<i>One root</i>
Advantages	No need to ponder over complicated phonetic developments (conditions of *w → y or *y → w)	Economy!
Disadvantages	Not a single shred so far of distributional evidence for two different roots with similar meanings	No additional confirmation of the regularity of *w → y or *y → w development in subfamilies

## Possible traces of the same root(s) in Northeast Sudanic:

### (1) Nyimang:

**kwɛdi ~ kwodi** 'woods'

(? ← \**k=wɛ-di*, if \*-*di* is a fossilized nominal suffix)

### (2) Tama:

Tama: sg. **ki:-di**, pl. **ki-ak** 'wood'

Sungor: sg. **ki:-di**, pl. **ke-k** 'wood'

Abu Sharib: **kiŋe** ← \***k=i-n-ke** 'wood'

Ibiri: **kiŋe** 'trees', sg. **kiŋe-t** ← \***k=i-n-ke** 'wood'

(3) Nubian:

Modern Nobiin: **kóy** 'tree' ← older *\*koyr* (Lepsius: Mahas **koir** ~ **koi**)

Old Nubian: **κoεp-** 'tree'

Dongolawi: **koid** 'Ziziphus spina-christi'

← Nile Nubian **\*koy-d**

'*general or special k. of tree*'



**Dubious: (4) Nara:**

**kèl** 'tree'

(??? ← *\*k=e-l*, if *\*-l* is a fossilized determinant, as in Nubian)

## Traces *outside* of East Sudanic?

Cf. in Proto-Moru-Madi

(one of the primary branches of Central Sudanic):

**\*k<sup>w</sup>ɛ** 'tree'

(Madi *kʷɛ̄*, Miza Moru *kʷɛ̄* ~ *c<sup>w</sup>ɛ̄*,

Wadi Moru *c<sup>w</sup>ɛ̄*, Avokaya *fɛ̄*, Logo *fā*, etc.)

In Kresh-Aja-Birri:

Birri *kpi* 'tree', Kresh *kpi-kpi* (redupl.) (← **\*k<sup>w</sup>I**)



## Previous analyses

*Bender 2005 (East Sudanic):*

60. G118 (part.), R75. tree, wood, °forest, ^branch \*ket

\*kId/t+ 4

E1: [Kd: kot+e]; B: °kit+ir

E3: ^ket+a

E5: Ny: °kwε/od+i

E7: kid+i

\*kεt 4

E2: Mj: ket/ken; SWS: \*kεεt; SES: \*kεd+o, SS pl.:\*ken

[E4: AK: kəc/j+a; M: kəs+à]

[E8: \*e(we)t+e]

E9bc: \*kεt

- reconstructs \*ket as an unsegmentable root
- ignores important West Nilotic evidence
- adds Nara *keta* ‘branch’, probably unrelated

## Ehret 2001 (Nilo-Saharan):

### 1513. \*'ya “tree”

Koman: Gumuz \*ja “tree”

Sah: DAZA yede, PL. yeda “tree”

Astab: Taman: TAMA kiyak “firewood”

Astab: Taman: MERARIT kidi, PL. kiḡ “tree”

Kir-Abb: Surmic: S.Surmic: TIRMA kiano “tree”

Kir-Abb: Surmic: DM: DIDINGA ket, PL. ken “tree”

Kir-Abb: PNil \*yaṭ, PL. \*yan “tree” (PWNIL \*yaṭ, PL. \*yan “tree”; ENil: MAASAI ɔl-catá “tree, wood”; ɔl-càní “wood, tree”)

Kir-Abb: Nil: ENil: BARI kene “sprig”

Kir-Abb: Nil: PSNil \*két “tree”

Rub: SOO itat, PL. iti “branch”

[stem plus NSud \*ṭ n. suff.]

[structure \*ki-Ya-ṭ-k<sup>h</sup>, NS \*k<sup>h</sup> n. pref. plus stem \*Ya- plus NS \*-n pl. or n. suff. plus NS \*k<sup>h</sup> pl. is required to explain long V]

[sing.: NS \*k<sup>h</sup> n. pref. plus stem (-i-) plus NS \*ṭ n. suff. (> d, as sing.?). pl.: \*ḡ pl. suff. substituted for \*ṭ (viewed as ESah \*ṭ sing. marker)]

[\*k-ia-no, NS \*k<sup>h</sup> n. pref. plus stem plus NS \*n n. suff.]

[sing.: NS \*k<sup>h</sup> n. pref. plus stem plus \*ṭ suffixation; pl.: NS \*k<sup>h</sup> n. pref. plus stem plus \*n pl. suff.; see note below]

[sing.: stem plus \*ṭ sing. marker; pl.: stem plus \*n pl. (coll. in “wood”)]

[NS \*k<sup>h</sup> n. pref. plus stem plus \*n suff.; see note below; semantics: “wood” > “bit of wood”]

[structure as in Didinga sing.]

[stem plus NSud \*ṭ n. suff. (originally sing. marker as in other ESah cases)]

Saharo-Sahelian morphological innovation: addition of Nilo-Saharan \*ṭ/ṭ n. noun suffix to stem. Eastern Sahelian developments: (1) The derivation of a multiple reference form of this root, probably collective in its original implication (i.e., “wood”), was brought about by substitution of final \*n for final \*ṭ, apparently interpreted as a singular marker. (2) Coexisting alternate forms of both root shapes were created by adding the Nilo-Saharan \*k<sup>h</sup> prefix.

— no evidence from Daju or East Jebel

— no forms with labial glides or labial vowels taken into consideration

— no detailed analysis of the situation in Nilotic

— multiple «red herrings» from outside East Sudanic

## **Conclusion:**

**The example of 'tree' shows that archaic East Sudanic lexicon may be studied (at least partially) in conjunction with its paradigmatic characteristics, rather than exclusively on the level of root isomorphisms.**

**Particular attention should be paid to potential «fossilized» suffixes (and prefixes — cf. the case of «k-mobile»), especially when they can be aligned with «non-fossilized» grammatical markers in related groups.**