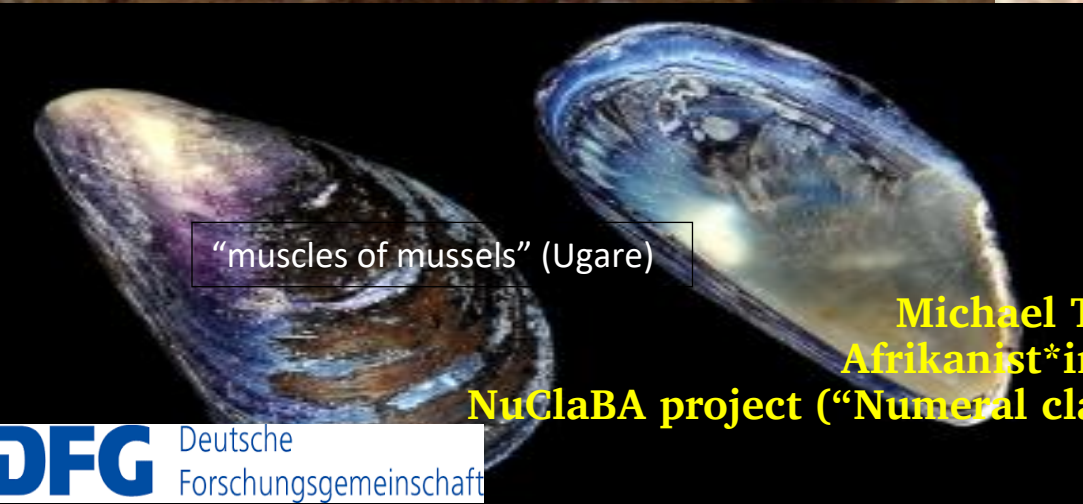
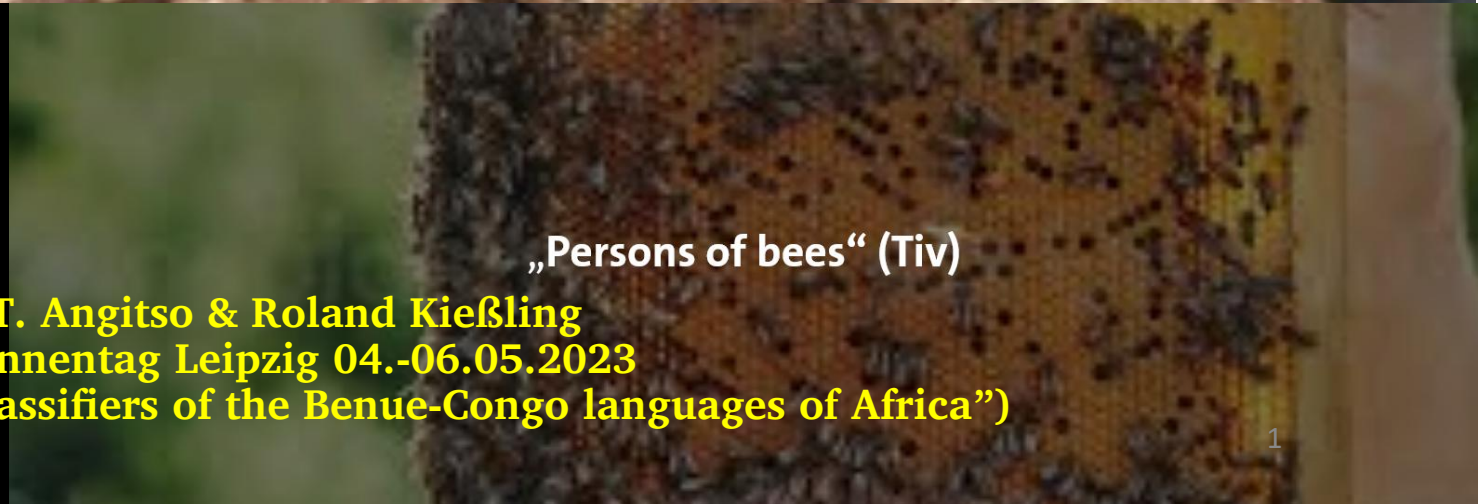


‘Fruits of beancake’ – the (incipient) numeral classifier system of Evand (Tivoid, Cameroon)



“muscles of mussels” (Ugare)

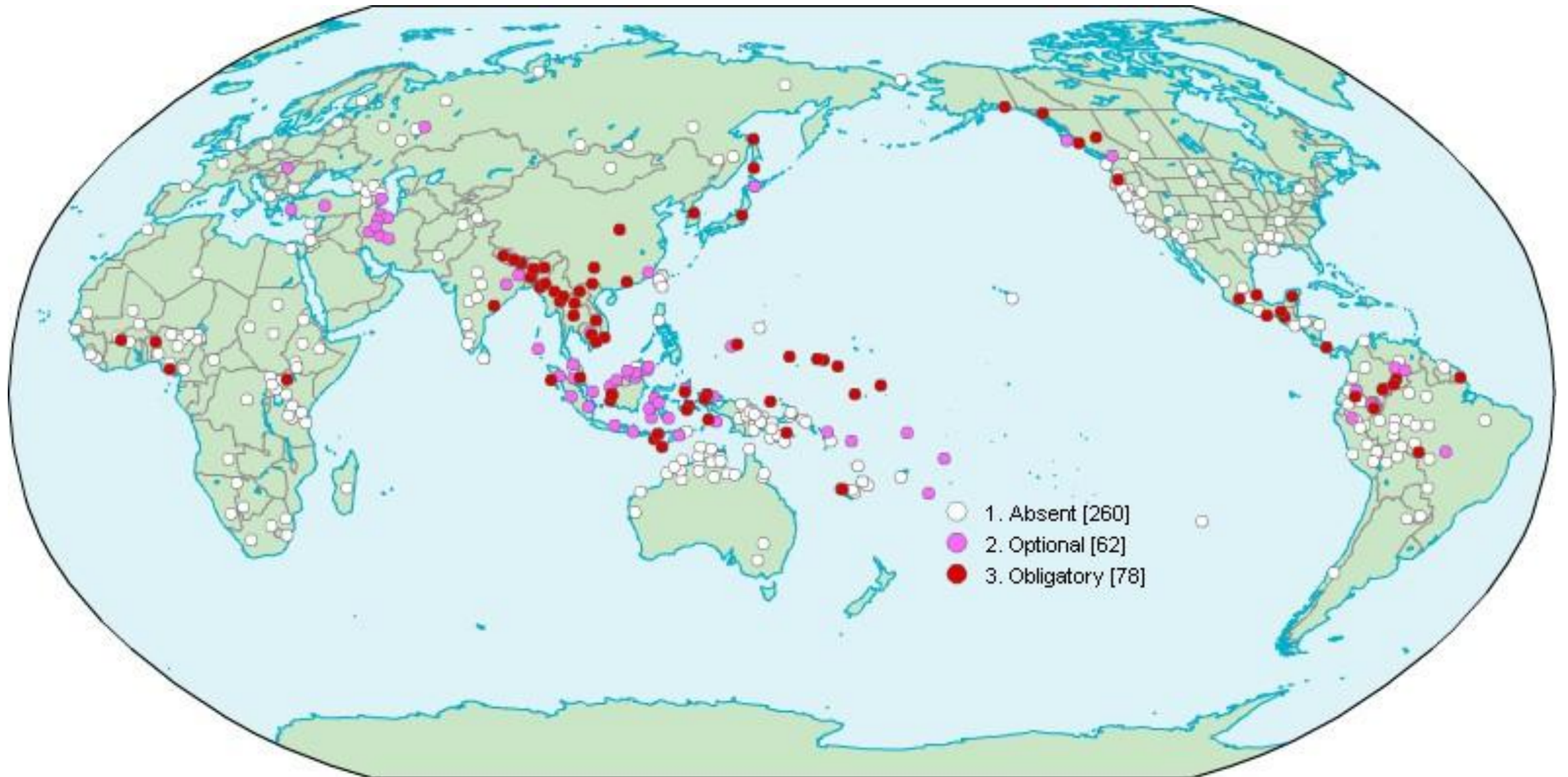


„Persons of bees“ (Tiv)

Michael T. Angitso & Roland Kießling
Afrikanist*innentag Leipzig 04.-06.05.2023

NuClaBA project (“Numeral classifiers of the Benue-Congo languages of Africa”)

Numeral classifiers world wide (WALS)



Attestations of numeral classifier systems in Benue-Congo

Cross River: Kana [...]

Tivoid: Tiv, Ugare, Evand [...]

Grassfields:

 Eastern Grassfields: Ngəmba, Ngiemboon, Ngwe, Bafanji, Bali-Mungaka

 Ring: Isu etc.

Ekoid: Ejagham

Mamfe: Denya

Beboid: ?

Yemne-Kimbi: ?

Jukunoid: ?

Plateau: ?

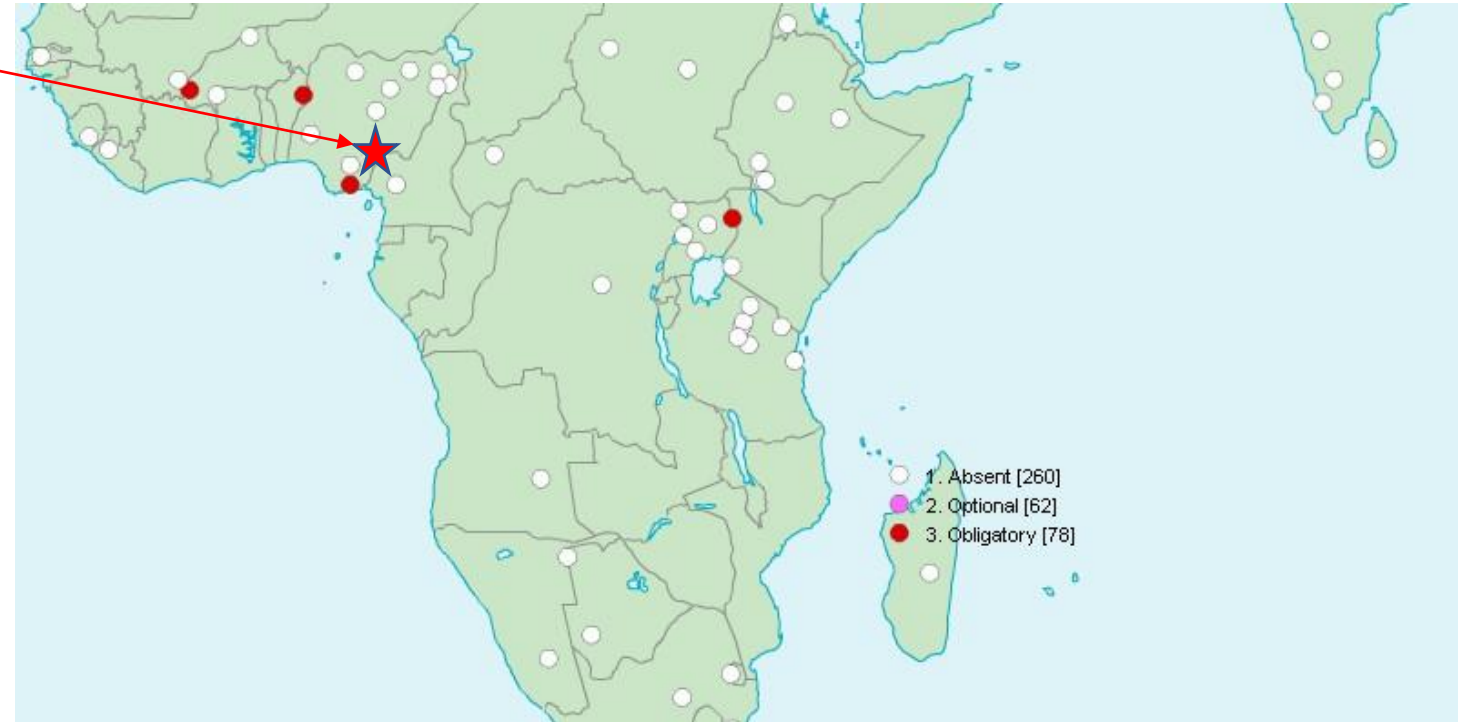
Kainji: ?

Jarawan: ?

Northern Bantoid: ?

Evand as African numeral classifier language

- under-described Tivoid;
Cameroon/Nigeria
- 11,000 speakers (Eberhard & al. 2023)
- Bantoid noun class system, various Tivoid complexities (e.g. circumfixation of adnominal class markers)
- Concurrent numeral classifier system



Evand noun class system: noun affixes and concords

	NP _x /NS _x	CP _x	CS _x	example
1	ò-, ò-, ù-, Ø-, (-̀) [...]	ò-	-ò ~ -̀	ò-kàs 'woman'
2	vá- -(V)v́ [...]	vá-	-(V)v́	vá-kás-év 'women'
3	ú- -ú	ú-	-ú ~ -´	ú-nú-ú 'mouth'
5	í- -í	í-	-í ~ -´	í-kív-í 'hand' í-d̥imbī 'avocado, pear'
6	á- -´, é- -é [...]	á-	-á ~ -´	á-sāŋgí 'seeds'
6a	mó- -ḿ	má-	-(V)ḿ	mó-mùlū-m 'water' má-kà-m 'medicines'
7	kí- -(V)k´, ké- -(V)k´	kí- ~ ké-	-(V)k´	kí-tām-ék 'fruit' ké-tō-k 'head'
8	ví- -(V)v´	ví-	-(V)v´	ví-tām-év 'fruits'
9	ì-, è- (-̀) [...]	ì-	-ì ~ -̀	ì-nàm 'animal' è-sàngē 'seed'
10	í- -´, é- -´	í-	-í ~ -´	í-nām 'animals' é-dzuá 'penises'
12	ká- -k´	ká-	-k´	ká-áná-k 'thing'
14	ó- -vú, vú- -(V)v́	ó- ~ ú-	-v́	ó-kà-v 'medicine' vú-àngér-év 'pain'
15	kú- -k´	kú-	-k´	kú-tóng-k 'ear'

Evand numeral classifier system

- 1a *kí-tām-ék* *k* = àkàrà = *k* *kí-mǎ-k*
 7-CLF < FRUIT-7 7.AM = 1.beancake = 7.ENC 7-one-7
 ‘one beancake’ (lit. ‘one fruit of beancake’)
- 1b *ví-tām-év* *v* = àkàrà = *v* *ví-álǎ-v*
 8-CLF < FRUIT-8 8.AM = 1.beancake = 8.ENC 8-two-8
 ‘two beancakes’ (lit. ‘two fruits of beancake’)

sortal classifiers (vs. mensural classifiers), applied to nouns of high countability, based on haptic features of the enumerated item, e.g. bulging shape of mussels, subdividing the inventory of count nouns into semantic classes (Gil 2005)

restricted system: no full lexical coverage

all classifiers are etymologically transparent, derived from full nouns, e.g. *kí-tām-ék* (7/8) ‘fruit’

incipient stage of development

Morphosyntax: reanalysis of associative construction

$N_1 \ N_2 \ \text{NUM} > \text{CLF} \ N \ \text{NUM}$

Quantification by numeral without additional classifier

- 2a *kí-tām-ék* *kí-mǎ-k*
 7-CLF < FRUIT-7 7-one-7
 ‘one fruit’
- 2b *vá-kásé-v* *vá-tāt*
 2-woman-2 2-three
 ‘three women’
- 2c *í-nǎm* *í-tāt*
 10-animal.10 10-three.10
 ‘three animals’

Evand numeral classifiers as head nouns in associative constructions

Evand numeral classifiers derive from full fledged nouns retaining all nominal properties:
(a) gender assignment, (b) pluralization, (c) trigger of agreement.

1a *kí-tām-ék* *k* = àkàrà = *k* *kí-mǎ-k*
7-CLF < FRUIT-7 7.AM = 1.beancake = 7.ENC 7-one-7
'one beancake' (lit. 'one fruit of beancake')

1b *ví-tām-év* *v* = àkàrà = *v* *ví-álǎ-v*
8-CLF < FRUIT-8 8.AM = 1.beancake = 8.ENC 8-two-8
'two beancakes' (lit. 'two fruits of beancake')

3a *kí-kpé-k* *kí* = ò-kās = *ék*
7-bone-7 7.AM = 1-woman-7.ENC
'bone of a woman'

3b *ví-kpé-v* *ví* = ò-kās = *év*
8-bone-8 8.AM = 1-woman-8.ENC
'bones of a woman'

Evand numeral classifiers in a Tivoid perspective

Evand numeral classifier *kí-tām-ék* (7/8) ‘fruit’:

- 1a *kí-tām-ék* *k* = àkàrà = *k* *kí-mǎ-k*
 7-CLF < FRUIT-7 7.AM = 1.beancake = 7.ENC 7-one-7
 ‘one beancake’ (lit. ‘one fruit of beancake’)
- 1b *ví-tām-év* *v* = àkàrà = *v* *ví-álǎ-v*
 8-CLF < FRUIT-8 8.AM = 1.beancake = 8.ENC 8-two-8
 ‘two beancakes’ (lit. ‘two fruits of beancake’)

Ugare: numeral classifier *ú-gbéndé* (3/6) ‘muscle’ for items with bulging shape:

- 6 *ú-gbéndé* *û-gwándè* *ú-twǎm*
 3-CLF < muscle 3.AM:3-mussel 3-one
 ‘one mussel’ (lit. ‘one muscle of mussel’)

Tiv: numeral classifier *ì-sàngè* (9/10) ‘seed/grain’ for small items

- 7 *ì-sàngè* *ì* *à-bá:tfá* *ì-mǎm*
 9-CLF < seed 9.AM 6-letter 9-one
 ‘one letter’ (lit. ‘one seed/grain of letters’)

Numeral classifiers: sortal vs. mensural

Categories	Source meanings
Sortal classifiers (haptic criteria)	STEM, ROPE, TREE, SEED, FRUIT, LEAF, BRANCH, PEEL, FINGER, PALM NUT, EAR
Mensural classifiers (aggregation or partition, nouns of low countability)	HEAD, BUNDLE, HEAP, LUMP, PIECE , STICK
Quantifiers for counterexpectual low or high number	SINGLE, SEEDLING/GRAIN

Evand sortal classifiers

classifier source forms	range of application
ì-tìnē ~ á-tíné (9/6) ‘stem’	longish outgrowths from a base (root): plantain, hair, [...]
ú-yí ~ í-yí (3/10) ‘rope’	rootless stems of plants whose stems crawl on the ground: beans, potato, cowpea [...]
yá-kún-é ~ é-kwón (5/10) ‘tree’	rootless woody plants detached from their roots: orange, cashew, (wild) mango [...]
è-sàng ~ á-sàng (9/6) ‘seed’	small globular objects: bean, nut, button, seed, fruits with small seeds, seeds of stone fruits like cashew [...]
kí-tām-ék ~ ví-tām-év (7/8) ‘fruit’	ovate botanical products and formations, especially from dough and liquid: potato, cocoyam, onion, buns, tomato [...]
ó-ká ~ é-ká (3/10) ‘leaf’	leaves and (food) items wrapped in leaves: native bread, pudding [...]
ò-sā ~ á-sá (1/6) ‘branch’	tubers that cluster and branch out from a stem like: potato, cassava, yellow yam, ginger [...]
kí-kúl-úk ~ ví-kúlú-v (7/8) ‘peel’	flat objects: banknote, page, paper, tortoise shell [...]
é-yù-ē ~ mó-yò-m (5/6a) ‘finger’	plantain fruits of various types
ì-kī ~ á-kí (9/6) ‘palm nut’	seeds of stone fruits: mango, pear, avocado
kú-tóng-ók ~ á-tó (15/6) ‘ear’	mushrooms of various types
ù-gyūṅgū ~ v-ù-gyūṅgū (1/2) ‘blade’	handle-less implements and blades: cutlass, hoe, knife spear [...]

Sortal classifiers: STEM

ì-tìnē / *é-tiné* (9/6) ‘stem’:

longish outgrowths from a base (root): plantain, hair, [...]

- 9a. *ì-tìnē* *ì* = ð-s̄kwòl *ì-mò*
9-CLF < STEM : 9 9.AM = 1-orange 9-
one:9
‘one orange plant (with roots)’
- b. *é-tiné* *ê* = tǣ *á-tát*
6-CLF < STEM : 6 6.AM = 15-hair:ENC
6-three:6
‘three strands of hair (with roots)’

Sortal classifiers: ROPE vs. DEAD TREE

ú-yí / *í-yí* (3/10) ‘rope’:

flexible phythomorphic items detached from their base: beans, potatoes, cowpeas, [...]

yá-kún-é / *é-kwón* ~ *mó-ákón-ùm* (5/10~6a) ‘(dead) tree’:

rigid phythomorphic items detached from their base: orange / cashew / mango tree

10a. *ó-yí* *î* = *gyèsǎ* *ú-mǎ*
 3-CLF < ROPE:3 3.AM:1-potato:ENC 3-one:3
 ‘one sweet potato plant (without roots)’

b. *í-yí* *ê* = *lòv* *í-tāt*
 10-CLF < ROPE:10 10.AM:9-bean 10-three:10
 ‘three bean plants (without roots)’

c. *yá-kún-é* *í* = *â-sǎkwòl* *é-mù-ē*
 5-CLF < TREE:5 5.AM = 1-orange 5-one-5
 ‘one orange tree (without roots)’

d. *é-kwón* *ê* = *kātfû* *é-tāt*
 10-CLF < TREE:10 10.AM = 1.cashew 10-
 three:10
 ‘one cashew tree (without root)’

Sortal classifiers: SEED

è-sàng ~ *á-sàng* (9/6) ‘seed’:

small globular objects: small globular objects: bean, nut, button, seed, fruits
with small seeds, seeds of stone fruits like cashew [...]

- 11a. *è-sàng* *ì* = *è-lìv* *ì-mò*
9-CLF < SEED:9 9.AM = 5-bean 9-one:9
‘one bean seed’
- b. *á-sāṅg* *ê* = *sā* *á-tát*
6-CLF < SEED:6 6.AM = 9-bead:ENC 6-three:6
‘three beads’
- c. *è-sàng* *ì* = *ò-gwālágwā* *ì-mò*
9-CLF < SEED:9 9.AM = 9-sand 9-one:9
‘one (grain of) sand’

Sortal classifiers: FRUIT

kí-tām-ék ~ ví-tám-év (7/8) ‘fruit’

ovate botanical products and formations, especially from dough and liquid:
potato, cocoyam, onion, buns, tomato [...]

12a. *kí-tām-ék* *kí* = àkàrà = *k*

7-CLF < FRUIT-7

‘one bean cake’

kí-mǎ-k

7.AM = 1.beancake = 8.ENC

7-one-7

b. *ví-tām-év* *ví* = brèd

8-CLF < FRUIT-8 8.AM = 1.bread

ví-ál̃-v

8-two-8

‘two (loaves of) bread’

Sortal classifiers: LEAF

ǝ-ká ~ é-ká (3/10) ‘leaf’:

leaves and (food) items wrapped in leaves: native bread, pudding [...]

- 13a. *ǝ-ká* *ú* = *gyèsí* *ǝ-mǝ*
3-CLF < LEAF:3 3 = 7.potato:ENC 3-one:3
‘one potato leaf’
- b. *ǝ-ká* *ú* = *ì-gyà* *ǝ-mǝ*
3-CLF < LEAF:3 3 = 9-grass 3-one:3
‘one grass blade’
- c. *é-ká* *é* = *ù-mbà* *é-tāt*
10-CLF < LEAF:10 3.AM = 15-native.bread 10-three:10
‘three native breads’

Sortal classifiers: BRANCH

ò-sā ~ *á-sá* (1/6) ‘branch’:

tubers that cluster and branch out from a stem like: potato, cassava, yellow yam, ginger, carrots [...]

14a. *ò-sā* *ǔ = nīfē*
1-CLF < BRANCH:1
‘one root’

ù-mò
1.AM = 1.root 1-one:1

b. *á-sá* *á = kárèt*
6-CLF < BRANCH:6
‘three carrots’

á-tát
6.AM = 1.carrot 6-three:6

Sortal classifiers: PEEL

kí-kúl-úk ~ ví-kúlú-v (7/8) ‘peel’

flat objects: banknote, page, paper, tortoise shell [...]

15a. *kí-kúl-úk* (*k*) = ù-kāt *kí-mǎ-k*
7-CLF < PEEL-7 7.AM = 1-game.card 7-one-7
‘one game card’

b. *ví-kúl-úv* *v* = ù-ηgwè = *v* *ví-tát*
8-CLF < PEEL-8 8.AM = 1-book = 8.ENC 8-three:8
‘three pages’

Sortal classifiers: FINGER

é-yù-è ~ mó-yò-m (5/6a) ‘finger’
plantain fruits of various types

16a. *é-yù-é* *ē̃ = ēkò̃m = ùé* *é-mù-ē̃*
5-CLF < FINGER -5 5.AM = 1.plantain = 5.ENC 5-one-5
‘one plantain’

b. *mó-yō-m̃* *mā̃ = gbēgbē = m̃* *má-álǎ-m*
6a-CLF < FINGER -6a 6a.AM = 1.plantain.(sp.)-6a.ENC 6a-
two-6a
‘two plantains (of a particular type)’

Sortal classifiers: PALM NUT

ì-kī / *á-kí* (9/6) ‘palm nut’

seeds of stone fruits: mango, pear, avocado

17a. *ì-kī* *māṅgwòr* *ì-mò*
9-CLF < PALM.NUT 9.AM:1-mango 9-one:9
‘one mango seed’

b. *á-kí* *î-ḡìmbī-ḡ-gàníé* *á-tát*
6-CLF < PALM.NUT:6 6.AM:5-pear-1-foreign:ENC 6-three:6
‘three pear seeds’

Sortal classifiers: EAR

kó-tóngó-k ~ á-tó (15/6) ‘ear’:
mushrooms of various types

- 18a. *kó-tóngó-k* *kú* = ì-dzò = *k* *kó-mǎ-k*
15-CLF < EAR-15 15.AM = 6-mushroom = 15.ENC
15-one-15
‘one mushroom’
- b. *á-tó* *á* = ò-bwà *á-tát*
6-CLF < EAR:6 6.AM = 1-mushroom(on kernel) 6-three
‘three mushrooms that grows on a palm tree’

Sortal classifiers: BLADE

ò-gyūṅgū ~ v-ò-gyūṅgū (1/2) ‘blade’:

handle-less implements and blades: cutlass, hoe, knife spear [...]

- 19a. *ò-gyūṅgū* *ù* = *è-kùnd* *ò-mǎ*
3-CLF < BLADE 3.AM = 1-hoe 1-one
‘one handle-less hoe’
- b. *v-ò-gyūṅgū* *v* = *à-sōm* *ví-tāt*
2-1-CLF < BLADE 2.AM = 1-cutlass 2-
three
‘three handle-less hoes’
- c. *ò-gyūṅgū* *ù* = *à-sōmîkîlî* *ò-mǎ*
3-CLF < BLADE 3.AM = 1-knife 1-one
‘one handle-less knife’

Evand mensural classifiers (aggregation, partition)

classifier source forms	meaning
ké-tō-k ~ vé-tō-v (7/8) 'head'	items which come in a bunch naturally: palm kernel, plantain, cabbage [...]
ú-wól ~ í-wól (3/10) 'bundle'	items packed in a tied bundle
è-bò ~ vè-bò (9/2) 'bundle'	
é-wūm-é ~ á-wúm (5/6) 'yam heap'	items with (ir)regular shapes and chunks piled up
ú-lùē ~ í-lùē (3/10) 'heap'	
ú-kí ~ í-kí (3/10) 'lump'	portions of fufu
ù-vàsì ~ ví-vāsĩ-v (1/8) 'piece'	some type of lengthy pieces of materials
é-tēn-ē ~ á-tén (5/6) 'piece'	small (short) pieces of items
ké-té-k ~ vé-té-v (7/8) 'stick'	oblong rigid objects and skewered food items: cassava, cricket, [...]

Mensural classifiers with transnumerals

Unpaired nouns (transnumerals) $\hat{\text{ò-lòm̄}}$ (1) ‘fufu’ and $\hat{\text{ì-jàm}}$ (9) ‘meat’ require mensural classifiers such as $\hat{\text{ú-kí}} \sim \hat{\text{í-kí}}$ (3/10) ‘lump’ and $\hat{\text{é-tēnè}} \sim \hat{\text{á-téné}}$ (5/6) ‘piece’

- 20a. $\hat{\text{ú-kí}}$ $\hat{\text{ú}} = \hat{\text{lòm̄}}$ $\hat{\text{ú-mǎ}}$
 3-CLF < LUMP:3 3.AM = 1.fufu:ENC 3-one:3
 ‘one portion of fufu’
- b. $\hat{\text{í-kí}}$ $\hat{\text{í}} = \hat{\text{ù-lòm̄}}$ $\hat{\text{í-tát}}$
 10-CLF < LUMP:10 10.AM = 1-fufu:ENC 10-three:10
 ‘three portions of fufu’
- c. $\hat{\text{é-tēnè}}$ $\hat{\text{é}} = \hat{\text{ì-jàm}} = \hat{\text{è}}$ $\hat{\text{é-mǎ}}$
 5-CLF < PIECE:5 5.AM = 9-meat = ENC 5-one:5
 ‘one piece of meat’

Mensural classifiers with paired nouns

Paired nouns (transnumerals) *yá-kún-é* ~ *é-kwón* (5/10) ‘tree, stick’ and *ké-kómó-k* (7/8) ‘plantain’ are used with classifiers *è-b̀* ~ *vè-b̀* (9/2) ‘bundle’ and *ké-t̄-k* ~ *vé-t̄-v* (7/8) ‘head’, respectively, for specification of their type of aggregation

- 21a. *è-b̀* *è = yà-kūn* *è-m̀*
9-CLF < BUNDLE:9 9.AM = 5-stick
 9-one:9
 ‘one bundle of sticks’
- b. *vé-t̄-v* *ví = è-k̀ḿ = v* *ví-ál̄-v*
8-CLF < HEAD-8 8.AM = 7-plantain = 8.ENC 8-two-8
 ‘two bunches of plantain’

Partitional classifiers with botanical items

Partitional classifiers for referential specification of botanical concepts:

ké-kómó-k (7/8) ‘plantain’, *kí-gyèsī-k* (7/8) ‘potato’, *è-kàsīlā* (9/10) ‘cassava’, *ḡīndḡà* (1/2) ‘ginger’, *kāròt* (1/2) ‘carrot’, *ì-lòvu* (9/10) ‘beans’, *ò-sōkwòl* (1/2) ‘orange’, *kātfū*: (1/6) ‘cashew’, *è-nèṅgīnē* (9/6) ‘garden egg’ and *kí-tú:lǔ-k* (7/8) ‘okra’.

22a. *ó-yí* *î = gyèsī* *ú-mǎ*
 3-CLF < ROPE:3 3.AM = 1.potato:ENC 3-one:3
 ‘one sweet potato plant (detached from its roots)’

b. *ó-ká* *ú = gyèsī* *ó-mǎ*
 3-CLF < LEAF:3 3 = 7.potato:ENC 3-one:3
 ‘one potato leaf’

b. *ò-sā* *ù = gyèsì* *ù-mò*
 1-CLF < BRANCH:1 1.AM = 1.potato 1-one:1
 ‘one potato branch/bunch’

Morphosyntax of numeral classifier constructions

Classifier constructions derive from associative constructions:

CLF AM N NUM < N₁ AM N₂ NUM

Parameters:

- (a) classifier noun (CLF) acts as head noun and triggers noun class agreement in relevant targets:
- (b) AM associative marker that links classifier (CLF) and enumerated noun (N₂) and
- (c) in the numeral (NUM),
- (d) the noun class suffix of the enumerated noun is suppressed and
- (e) replaced by an enclitic (NEncl) that indexes the noun class of the head noun.
- (f) the noun class prefix of the enumerated noun receives a low tone and tends to segmental erosion

[[NP_{x₁}-CLF-NS_{x₁}] [AM₁ = (NP_{x₂}-)N-NS_{x₂} = NEncl₁]] CP_{x₁}-NUM-CS_{x₁}

Legend:

NP_x adnominal noun class prefix
NS_x adnominal noun class suffix
CP_x concordial noun class prefix
CS_x concordial noun class suffix
AM associative marker
CLF classifier (noun)
NEncl noun class enclitic

Morphosyntax of numeral classifier constructions

$[[\text{NP}_{x_1}\text{-CLF-NS}_{x_1}] [\text{AM}_1 = (\text{NP}_{x_2})\text{N-NS}_{x_2} = \text{NEncl}_1]] \text{CP}_{x_1}\text{-NUM-CS}_{x_1}$

Associative construction:

vè-k̄ *vé = mùl = ŭv*

2-cup 2.AM = 6a.water = 2.ENC

‘cups of water’ < *mó-múl-ùm* (6a) ‘water’

Classifier construction:

mó-ȳ-m̄

mé = t̄àkàsē = m̄

má-ál̄-m

6a-CLF < FINGER-6a 6a.AM = 7.plantain.(sp.) = 6a.ENC 6a-two-6a

‘two plantains (of a particular type)’ < *ké-t̄ákásé-k* (7/8) ‘plantain (sp.)’

Legend:

NP_x adnominal noun class prefix, NS_x adnominal noun class suffix, CP_x concordial noun class prefix, CS_x concordial noun class suffix, AM associative marker, CLF classifier (noun), NEncl noun class enclitic

Conclusion

**incipient numeral classifier system parallel to other Tivoid languages
(Tiv, Ugare [...])**

concurrent to full fledged noun class system of Benue-Congo type

restricted lexical coverage

**classifiers originate in synchronically coexisting nouns and retain all
nominal properties (syntactic independence, gender assignment,
number sensitivity, trigger of noun class agreement)**

**classifier construction inherits the full spectrum of its source, i.e.
associative construction**

weakly grammaticalised, sole indicator: semantic generalisation

Conclusion

Embryonic stage of Evand numeral classifier system reflected in weak grammaticalisation

	Evand	Ugare	Tiv	Ejagham	Ngəmba
all CLFs retain syntactic independency	+	+	-	-	-
all CLFs retain PL form	+	+	+	+	-
all CLFs retain gender of source noun	+	+	+	+	-
CLF construction parallels associative construction in all respects	+	+	+	+	-
semantic generalisation of CLF	+	+	+	+	+

Many fruits of thanks und ein Bündel Dank

NuClaBA project (“Numeral classifiers of the Benue-Congo languages of Africa”)
Angitso & Kießling