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in the Light of Reconstructions*

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## New Reconstructions of West African Economic Plants

Roger BLENCH

Cambridge

### 1 Introduction

#### 1.1 Plant domestication and linguistic salience

Given the importance of West Africa as a centre for plant domestication and the broader role of Africa in human prehistory, surprisingly little attention has been paid to the linguistic evidence for plant use and domestication. As our knowledge of African archaeobotany expands, it is clearly of interest to see if salient economic plants in the archaeological record can be matched against the nuclei of linguistic roots. Hohn et al. (2007) reported on the surprising finds of millet in Southern Cameroun. Similarly, Bostoen (2005, 2007, 2014) has analysed the evidence for the reconstructed forms for economic trees such as the oil-palm, *Elaeis guineensis*, in Bantu. Bostoen et al. (2013) point to the importance of vernacular names for anthropic species for the reconstruction of forest history. Along similar lines, Blench (1996, 2003, 2006, 2007a, b, c, 2009) has put forward a number of proposals for reconstructions of African economic plants. Connell (1998) explored the reconstructions for yams and oil-palms in a rather more limited area, the Cross River languages.

Should we expect plant names to reconstruct? Blench (2007c; under review, b) expresses a certain amount of scepticism about the possibilities of distinguishing loan-words from true reconstructions, without much more reliable phonological data for each linguistic family or subgroup. Perhaps this is to be too demanding; where a geographical cluster of cognate terms undoubtedly points to an interest in a particular plant there will undoubtedly be lexical diffusion and semantic shift as well as genuine cognacy between related languages.

With this in mind, it seems useful to present a new set of etymologies for useful plants in West Africa and compare it with whatever archaeobotanical evidence exists. The paper<sup>1</sup> compiles a series of tables of related reflexes of what appear to be com-

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<sup>1</sup> Much of the data comes from unpublished sources; principally my own in relation to Nigerian and Camerounian languages. I would like to thank the many communities and individuals who have agreed to work through field guides and lists of names. I am also grateful to Richard Gravina, Robert Hedinger, Peter Lovett and Russell Schuh for access to much unpublished material.

mon roots, but makes no assumptions as to whether these are true phonological reconstructions or a mosaic of loanwords. In many cases, a mixture of the two is the most likely. Many established economic plants have so far not been recorded in any excavations; but their linguistic saliency hints for species to seek when sieving at a site. In some cases, there is also historical data to explore. For example, the name for the cola nut (Table 8) has undoubtedly spread through trade, although its routes seem rather difficult to reconstruct.

## 1.2 Data representation

Collating data from a large number of sources and presenting it in tables requires a considerable amount of compression to ensure the data is accurate and can be traced to the original. Each of the tables presents the phylum for the language, abbreviated as follows;

AA Afroasiatic  
 NC Niger-Congo  
 NS Nilo-Saharan

Where no phylum column is given, all languages cited are Niger-Congo. Two quasi-reconstructions of Niger-Congo are given;

PWS Proto-Western Sudanic Westermann (1927)  
 PWN Proto-Western Nigritic Mukarovsky (1976-1977)

Neither of these are really reconstructions in the modern sense, but in the absence of something more worked out, they can stand for common Niger-Congo forms. Citing them does not mean that I accept them, rather they are listed for the reference of the reader, to compare with synchronic attestations. In some of the table titles I give a "quasi-reconstruction", a common form extracted from the attested words. However, this should be treated as no more than a convenient reference form and certainly not a worked-out reconstruction (which may be meaningless anyway where a word has been extensively borrowed).

Two further columns present the family (Chadic, Kwa etc.) and the subgroup (West, Oti-Volta). Two names call for comment; Volta-Niger (a proposed grouping of old Eastern Kwa, Yoruba, Nupe etc. with the Gbe languages) and EBC standing for Eastern Benue-Congo (the old Benue-Congo of Williamson (1971)). The language name is the common name of a language. The attestation gives the original form cited in the source. The Gloss column is the definition as in the source, given in the original language, to avoid problems with overly convenient translations. The Source column gives the source in abbreviated form and the reader needs to refer to the table on page 140ff. to find the expansion and then seek it in the reference list. So many prior

works of this type, starting with Greenberg (1963), were content to cite forms without references. Often it is hard to find the original and sometimes it does not seem to match the cited form. Each table has a commentary giving some biological background to the plant in question and a list of references, which cover only linguistic discussions. In other words, where an author has discussed a root or proposed a reconstruction, it will be given here.

## 2 Economic trees

Economic trees have been exploited well before cereal agriculture, and it is often the case that names applied to such trees are deeply embedded in language phyla such as Niger-Congo, which must have been spoken by foragers for a long period. However, the forest is very diverse and tree species only gain salience when a particular product is exploited and traded. Thus the term for the shea tree, *Vitellaria paradoxa* (Table 13), becomes conflated with the term for 'oil' when it was discovered how to crack and roast the nuts. By contrast, a tree that regularly appears in excavation reports, *Celtis* sp., seems no longer to be reflected in widespread roots, and is of little importance today.

2.1 Palm trees represent a particular problem. Many lexicographic sources are not very careful about identifying individual species and thus give rather general definitions. However, the similar appearance of palms may also mean that semantic shifts occur and names for one species jump to another in different ecological zones. Table 1 shows the reflexes of a root, something like #-bal-, where the original referent is hard to establish.

Table 1: #-bal-, a root for palm spp. in Niger-Congo

Family	Subgroup	Language	Form	Gloss	Source
		PWS	-bal-	<i>Palmwedel</i>	W
		PWN	-bá-, -bálè-	oil-palm, k. of palm	M
Mande	West	Bambara	bā	<i>Raphia sudanica</i>	Bu97
Mande	West	Yalunka	mpa	<i>Raphia sudanica</i>	Bu97
Atlantic	North	Badyara	bā	<i>Raphia sudanica</i>	Bu97
Gbaya		Bodoe	báŋá	<i>palmier à huile</i>	Ro08
Kwa	Guang	Chumburung	ká-bàŋ	oil-palm	Sn
Kwa		Anii	gu-pa /a-	oil-palm	ALKwCI
Kwa		Attie	bã	<i>palmier (raphia)</i>	ALKrCI
Kwa		Ga	àbé	palm-nut	Kr99
Volta-Niger		Emai	ìbà	unripe palm-kernel	SE07
Volta-Niger		Nupe	èba	bamboo palm	Ba14

Family	Subgroup	Language	Form	Gloss	Source
Bantoid	Ekoid	Bendeghe	n-bàŋ	palm kernel	Cr65
Bantoid	Furu	Bikyak	ebyaŋ	<i>Palme, Palmnuss</i>	RK
Bantoid	Beboid	Noni	kebaŋ	<i>Palme</i>	RMB
Bantoid	Momo	Mundani	éŋaŋ	palm-kernel	PD90
Bantoid	Grassfields	PW-Ring	kbəŋ'	<i>Palme</i>	RK
Bantu		CB	*-bà	oil-palm	G

Commentary: The 'bamboo' palm, or simply 'bamboo', is a widespread West African term for one of the species of *Raffia*. Westermann analyses a subset of terms as 'palm-fruit', but Mukarovsky collects a wider-ranging set of attestations, some of which he identifies as 'oil-palm' while others are more diverse. Mukarovsky's three sets are here treated as a single set. It is highly unlikely that this root originally applied to oil-palm and more probably referred either to palms in a generic sense or to a savannah palm such as *Raffia sudanica*. Bostoen (2005: 147-151) tabulates the evidence for Bantu where this root is strictly confined to the oil-palm. Strangely, it appears not to be attested in the Bantu groups in the northwest and is most widespread in the "central and southern parts of Western Bantu" in zones B, C, H and R.

Refs: W. 205; M. 1, 11, 29; G. 70:1

2.2 Table 2 shows a very striking root, #-*kundi*-, attested from Mande to Zulu with the most common meaning of the wild date-palm, *Phoenix reclinata*. The wild date-palm has no edible fruits but is much favoured for basketry throughout semi-arid and subhumid Africa.

Table 2: #-*kundi*-, a root for a dryzone palm in Niger-Congo

Family	Subgroup	Language	Form	Gloss	Source
Mande	Mande	PWN	-kint-	k.o. palm tree	M
Mande	West	Bambara	kolo	dum palm	Bu97
Atlantic	South	Temne	a-kent /e-	<i>Raphia</i> sp.	Bu97
Gbaya		Bodoe	kò	<i>Borassus aethiopum</i>	Ro08
Kwa	Ga-Dangme	Ga	kaɔ	k.o. palm tree	Kr99
EBC	Yoruboid	Yoruba	okùkù	<i>Phoenix reclinata</i>	Ve97
EBC	Edoid	Édo	ukukò	<i>Phoenix reclinata</i>	Bu97
Bantoid	Ring	Kom	aku	palm tree	PD
Bantoid	Momo	Mundani	ke	<i>Raffia</i> palm	PD
Bantoid	Momo	Ngwo	ankɔn	date palm	Ey10

Family	Subgroup	Language	Form	Gloss	Source
Bantu		CB	-kîndú	k.o. palm tree	G
Bantu		PB	kîndú	wild date palm <sup>2</sup>	BLR3
Bantu		Zulu	isundu	wild date palm	DN69

Commentary: The pan-African distribution of this root is very striking, despite the fact that it appears to apply to different species in different places. BLR3 finds this root scattered in zones E-S, but in view of its West African cognates it must presumably have formerly also been in the northwestern languages. Populations of *Phoenix reclinata* are found down the littoral of West-Central Africa as far as Pointe-Noire which almost certainly points to anthropic dispersal in the early period of Bantu expansion (Doumenge, p.c.).

Refs: M. 214; G. 1066

2.3 Table 3 shows attestations of #-*bila-*, 'oil-palm', a root which is well-attested in Bantu, but much rarer in West African Niger-Congo.

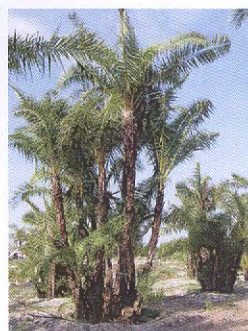


Photo 1: Wild date-palm, *Phoenix reclinata*

Table 3: #-*bila-*, a root for oil-palm [?] in Niger-Congo

Family	Subgroup	Language	Form	Gloss	Source
		PWN	bilà	oil-palm, k. of palm	M
Ijoid		Ikibiri	ḃilaí	raffia palm, 'hamboo'	KW
Kru	West	Guere	bli	oil-palm	ALKrCI
Kwa	GTML	Siwu	kù-héré	oil-palm	MD
Bantoid	Mambiloid	Ndoro	bórá	oil-palm	RMB
Bantoid	Ekoid	Nkim	ù-bîr/m-	oil-palm	Cr65
Bantoid	Momo	Mundani	bi	palm nut	PD
Bantu		PB	*-bídà	oil-palm	G

Commentary: Bostoen (2005: 151ff.) collates the evidence for the Proto-Bantu root \*-*bídà* which occurs across Zones A-D. He notes \*-*bídà* is in complementary distribution with \*-*bá*; the two never occur in the same language. The evidence outside Bantu is scattered, but sufficient to suggest the root is older. The Ijoid forms are almost certainly borrowings rather than deep-level Niger-Congo reflexes.

2.4 Table 4 shows the root #-*eli-*, an old word for oil-palm which has shifted to raffia palm in Kru and the Kru-influenced Ega.

<sup>2</sup> *Phoenix reclinata*.

Table 4: #-eli-, a root for oil-palm *Elaeis guineensis* in Niger-Congo

Family	Subgroup	Language	Form	Gloss	Source
Ijoid	Izɔn	Kolokuma	lǐj	oil-palm	KW
Ijoid	Ijɔ	P-Ijɔ	*demē	oil-palm	KW
Kru		Aizi	dro	<i>palmier</i> (raphia)	ALKrCI
Kru		Koyo	lɪlɪ	<i>palmier</i> (raphia)	ALKrCI
Kru		Guere	dɔu	<i>palmier</i> (raphia)	ALKrCI
Kwa		Ega	ɔli	<i>palmier</i> (raphia)	ALKwCI
Kwa		Abbey	rɔ	<i>palmier à huile</i>	ALKwCI
Kwa		Mbatto	ɔdɛ	<i>palmier à huile</i>	ALKwCI
Kwa		Ga	lɔŋ	raffia palm	Kr99
WBC	Yoruboid	Yoruba	erĩ ðkpè	oil-palm	Ab58
WBC	Edoid	Degema	èdĩ	oil-palm	Ka08
WBC	Edoid	Èdo	ùdĩ	oil-palm	Ag86
WBC	Nupoid	Gbari	èzín	oil-palm	RMB
WBC	Idomoid	Idoma	alĩ	oil-palm	RMB
EBC	Plateau	Ashe	ì-rêk	oil-palm	RMB
EBC	Plateau	Idũ	ìŕe	oil-palm	RMB
EBC	Plateau	Tinor	ìré	oil-palm	RMB
EBC	Plateau	Ninzo	iri	oil-palm	RMB
EBC	Plateau	Eggon	eligi	oil-palm	RMB
EBC	Plateau	Eloyi	erì	oil-palm	RMB
EBC	Central Delta	Abua	àlhè	oil-palm	Ga80
EBC	Upper Cross	Kukele	ùddi	oil-palm	JS
EBC	Upper Cross	Leggbo	lèllí	oil-palm	JS
Bantoid	Tivoid	Tiv	irile	oil-palm	Ab40
Bantu	A	Akɔɔse	melen	oil-palm	RH

Commentary: The oil-palm, *Elaeis guineensis*, remains today the most significant oil-crop indigenous to Africa. Archaeobotanical finds of palm-nut husks occur all the way from Liberia to Kenya and also in the Sudan (see review in Stahl 1993). Although the oil-palm is known all the way to the Kenya coast, it is of limited economic importance east of Central Africa (Maundu et al. 1999). Oil-palms were not cultivated until recently, but protected and allowed to spread by preferential extraction of



Photo 2: Oil-palm fruits



nearby trees. Palynological data on *Elaeis* pollen exists for Lake Bosumtwi in Ghana (Talbot et al. 1984: 185), suggesting an expansion of oil-palms 3500-3000 BP and in the Niger Delta ca. 2800 BP (Şowunmi 1999).

Although this root is common to the Benue-Congo languages and to Ijò, it is probably not cognate with P-Ijò \**dēmē*. The *-li* forms may be loans into Ijò from neighbouring Benue-Congo languages. The perceived salience of the oil-palm began in the southern humid forests, perhaps the Niger Delta, and spread outwards from there, probably at a time when the upper limit of the forest was north of its present location. Bostoen (2005) suggests this has no cognates within Narrow Bantu, but Akɔɔse does appear to be a counter-example. However, it certainly extends no further than the extreme NW Bantu languages and is otherwise replaced by more well-attested roots.

Refs: Burkill (1997: 354 ff.); Bostoen (2005)

2.5 Table 5 shows the reflexes of #-*ten-*, a very widespread root for 'oil-palm' in Niger-Congo.

Table 5: #-*ten-*, a root for oil-palm *Elaeis guineensis* in Niger-Congo

Family	Subgroup	Language	Form	Gloss	Source
		PWN	#-tandi	k. o. palm tree	M
Mande	West	Bambara	nten	oil-palm	Bu97
Mande	West	Susu	teŋ	oil-palm	Bu97
Mande	West	Koranko	ten	oil-palm	Bu97
Mande	East	Samo	tàän	oil-palm	Bu97
Atlantic	South	Gola	má-tende	leaves of (raphia) palm	We21
Kwa	Ga-Dangme	Ga	téŋ	oil-palm	Kr99
EBC	Cross River	PLC	*u-tén	young oil-palm	Co98
EBC	Cross River	PO	*-té	mature oil-palm	Co98
EBC	Cross River	PCD	àtèn	mature oil-palm	Co98
Bantoid	Mambiloid	Mambila	ter	oil-palm	RMB
Bantoid	Grassfields	Yamba	teŋ	palm tree	RMB
Bantoid	Nun	Chufie'	táŋ mbàgǝ	oil-palm	RMB
Bantu		CB	*-téndé	k. o. palm tree	G
Bantu		PB	*-téndé	oil-palm	BLR3

Commentary: Bostoen (2005: 164) has collated a significant number of fresh reflexes of this root which is spread across Bantu zones A-R but also known almost throughout West Africa. Mukarovsky's evidence for the antiquity of this root is clearly over-influenced by the Proto-Bantu reconstruction. The change between a final velar nasal and *-nd-* is so far unexplained, but this may merely reflect the small number of reflexes so far identified.

Refs: M. 496; G. 1712

2.6 Table 6 shows a root *ʃ(n)gbəŋ-* for the fan-palm, *Borassus aethiopicum*, which has only scattered attestations and is borrowed into both Chadic and Nilo-Saharan, as might be expected from a savannah species.



Photo 3: Fan-palm, *Borassus aethiopicum*

Table 6: Fan-palm *Borassus aethiopicum*

Ph	Family	Group	Language	Form	Gloss	Source
AA	Chadic	West	Ngas	gaŋ	fan-palm	RMB
NS	Saharan	West	Kanuri	gàngà	fan-palm	Bu97
NC	Mande	West	Kono	gbe	oil-palm	VV
NC	WBC	Nupoid	Nupe	gbàci	palm sp.	Ba14
NC	EBC	Plateau	Horom	gàŋ	fan-palm	RMB
NC	EBC	Plateau	Eggon	àká	fan-palm	RMB
NC	EBC	Plateau	Tarok	ngàŋ	fan-palm	RMB
NC	EBC	Plateau	Yankam	kaŋa	fan-palm	RMB
NC	Bantoid	Momo	Ngwo	àngbe'	tall palm sp.	Ey10

Commentary: This root has apparently not been identified by previous authors.

2.7 The locust-bean tree, *Parkia biglobosa*, is one of the most widespread and significant useful trees in the Sahel (Hall et al. 1997). Table 7 shows the reflexes of a root for the locust-bean tree, *Parkia biglobosa*, which seems to originate in Gur and be borrowed into Volta-Niger and Benue-Congo and then probably back into Chadic several times.

Table 7: Locust-bean tree *Parkia biglobosa*

Ph	Family	Subgroup	Language	Form	Gloss	Source
AA	Chadic	West	Hausa	dòdráwàà	tree	Ab49
AA	Chadic	Central	Bura	nônà	tree	RMB
NC	Gur	Oti-Volta	Tamari	nuã	néré	Ma75
NC	Adamawa		Bəna [=Yungur]	rwoo	tree	RMB
NC	Volta-Niger	Yoruboid	Yoruba	iru	seed of ~	Ab58

Ph	Family	Subgroup	Language	Form	Gloss	Source
NC	Volta-Niger	Nupoid	Nupe	elo	fruit	Ba14
NC	Volta-Niger	Nupoid	Gbagyi	olo	tree	RMB
NC	EBC	Kainji	Reshe	u-lo /tsu-	tree	RMB
NC	EBC	Kainji	Rin [Pongu]	ùrò	tree	RMB
NC	EBC	Kainji	Basa-Gumna	ulolo	tree	RMB
NC	EBC	Kainji	Cicipu	lɔɔ pl. llɔɔ	tree	SM
NC	EBC	Plateau	Iten	èlool	tree	RMB
NC	EBC	Plateau	Cara	lol	tree	RMB
NC	EBC	Plateau	Ningye	urò	tree	RMB
NC	EBC	Plateau	Ashe	ì-rũ	tree	RMB
NC	EBC	Plateau	Idũ	ìrũwǎ	tree	RMB
NC	EBC	Plateau	Tinor	ì-rũ	tree	RMB
NC	EBC	Plateau	Hasha	ì-nɔn	tree	RMB
NC	EBC	Plateau	Ake	ìrɔ̃	tree	RMB
NC	Bantoid	Dakoid	Samba Daka	loom	tree	RMB
NC	Bantoid	Tivoid	Tiv	nune	tree	Ab40

Commentary: Not identified by previous authors. The unexpected appearance of the *-wa* suffix in Idũ may be formed by analogy with Hausa, although the root is clearly related to the Plateau attestations.



Photo 4: Flower of *Parkia biglobosa*

2.8 Table 8 shows a root for ‘cola’ of uncertain shape, which has a *-fi* suffix in Kwa and not elsewhere.

Table 8: *Cola nut* *Cola nitida*, *C. acuminata*

Family	Group	Language	Form	Comment	Source
Kwa		Abure	běsè	<i>noix de cola</i>	ALKwCI
Kwa	Guang	Krachi	bìsɪʔ	cola nut	Sn89
WBC	Yoruboid	Yoruba	obi	cola nut	Ab58
WBC	Edoid	Bini	evbe	cola nut	Ag86
WBC	Akpes	Ikaramu	mbu	cola nut	FI
WBC	Nupoid	Nupe	ebì	cola nut	Ba14
WBC	Idomoid	Yala Ikom	lénmgbé	cola nut	Ar79

Family	Group	Language	Form	Comment	Source
EBC	Jukunoid	Wapã	bàk	cola nut	KS
EBC	Central Delta	PCD	*ègbè	cola nut	RMB
EBC	Upper Cross	Koring	riḃù / rà-	cola nut	JS
Bantoid	Mambiloid	Len	bī	cola nut	BC
Bantoid	Ekoid	Mbe	le-pel	cola nut	Po08
Bantoid	Nun	Chufie'	pī	<i>Cola nitida</i>	RMB
Bantoid	Ring	Aghem	é-biá	cola nut	RMB
Bantoid	Momo	Ngwo	éfi	cola nut	Ey10
Bantu	Manenguba	PM	*-bèé	(5/6)	He87

Commentary: *Cola*, *Cola acuminata* and *C. nitida* are small West African trees which bear a bitter nut that contains up to 2% dry-weight in caffeine and was once a significant ingredient of Coca-Cola. The *Cola* spp. are indigenous to West Africa, and this root is probably an old name for the tree. It is much favoured as a stimulant throughout West Africa and is widely traded, enters into rituals as well as being a common gift in small social interchanges. The original area where cola was first domesticated appears to be in what is now Ghana and exported eastward to Hausa and Nupeland. The rather diverse shapes in which the root appears strongly suggest that it is a series of borrowings and should not be reconstructed to any proto-language. Once the long-distance trade in cola nuts became important, the term shown in Table 9 developed, which was extensively loaned throughout West Africa.



Photo 5: *Cola*, *Cola acuminata*

Ref: Williamson (1993)

2.9 Table 9 shows a term for cola nut, *Cola nitida* and *C. acuminata*, which must have spread throughout West Africa along the trade routes.

Table 9: The #goro root for cola nut *Cola nitida*, *C. acuminata*

Ph	Family	Subgroup	Language	Attestation	Source
AA	Chadic	West	Hausa	góorò	Ab49
NC	Mande		Mandinka	woro	VV
NC	Mande		Kono	wolo	VV
NC	Mande		Mende	tolo	VV
NC	Mande		Vai	tolo	VV
NC	Mande		Kpelle	tole	VV
NC	Atlantic	North	Fulfulde	goro	Da66

Ph	Family	Subgroup	Language	Attestation	Source
NC	Atlantic	South	Temne	k-ɔla /t-	Da66
NC	Atlantic	South	S Bullom	kol	Da66
NC	Atlantic	South	Kisi	kollo	Da66
NC	Atlantic	South	Gola	ke-golo	We21
NC	Kru		Dida	gwoli	ALKrCI
NC	Kru		Bete G	gwuli	ALKrCI
NC	Gbaya		Bodoe	górò	Ro08
NC	Volta-Niger		Ewe	godɔ	Ro95
NC	EBC	Plateau	Təsu	kókrís	RMB
NC	EBC	Plateau	Hyam	goro	RMB

Commentary: The English name cola, or kola, presumably comes from the Temne language of Sierra Leone (*kɔla*) and similar words occur in neighbouring regional languages (Dalby 1966).

2.10 Table 10 shows one of the most widespread tree-names in Sub-Saharan Africa, the baobab, *Adansonia digitata*.

Table 10: A widespread root for the baobab, *Adansonia digitata*

Ph	Family	Language	Form	Source
NS	East Sudanic	Nuer	kusha	An48
NS	Saharan	Kanuri	kúwa	Cy94
NS	Songhay	Songhay	kò pl. kòà	DC78
NS	Songhay	Dendi	kòò	Zi
AA	C. Chadic	Bacama	kawtə	Ne77
AA	C. Chadic	Bana	kwákwà	RG
AA	C. Chadic	Daba	kàkāw	RG
AA	C. Chadic	Hdi	ka'u	RG
AA	C. Chadic	Mada	kokor mbana	RG
AA	C. Chadic	Logone Kotoko	kuka	RG
AA	C. Chadic	Makary Kotoko	kal kuka	RG
AA	C. Chadic	Malgwə	kwakwa	RG
AA	C. Chadic	Muyang	ăkrām	RG
AA	C. Chadic	Podoko	huhuwá	RG
AA	C. Chadic	Tera	kukwa	Ne77
AA	W. Chadic	Hausa	kúúkàa pl. kúúkóókíí	Ab49
AA	W. Chadic	Ngizim	kuku	Ne77
AA	W. Chadic	Karekare	kuci	Ne77
AA	W. Chadic	Gashua Bade	kukwáu pl. kùkun	RS

Ph	Family	Language	Form	Source
AA	W. Chadic	Duwai	kuko	RS
AA	W. Chadic	Miya	kushi	RS
AA	W. Chadic	Gurduŋ	kwàslà	Co99
NC	Dogon	Dogon Toro	śrɔ	RMB
NC	Kordofanian	Heiban	kwor	An48
NC	Kordofanian	Abri	kwugwor	An48
NC	Kordofanian	Tira	θɔr	RMB
NC	Kainji	Lopa	kufwə	RMB
NC	Kainji	cLela	kùbù	Ri01
NC	Kainji	Ror	u-kuk	RMB
NC	Kainji	sSaare	u-kup	RMB
NC	Kainji	Rogo	u-ub	RMB
NC	Kainji	Kuki	upə	RMB
NC	Plateau	Təsu	kúkúrí	RMB

Commentary: First discussed in Blench (2007b). Baobabs are members of the Bombacaceae, a pantropical family containing a number of well-known economically important plants like kapok, balsa and durian (Wickens & Lowe 2008). Six of the eight species of baobabs are restricted to western and southern Madagascar, a seventh is endemic to northwestern Australia, and the eighth is widespread in sub-Saharan Africa but now introduced by humans throughout the warm tropics. The African baobab is the best known of the eight species. Blench (2007b) has argued that baobabs must have spread across Africa from east to west and that there has been some linguistic crossover with the silk-cotton tree (Table 11).

Refs: Blench (2007b)

**2.11** Table 11 shows a widespread African root for the kapok or silk-cotton tree, *Ceiba pentandra*.

Table 11: Silk-cotton *Ceiba pentandra*

Ph	Branch	Family	Language	Attestation	Source
AA	Chadic	Central	Mafa	kúrmbala	BL90
NS	E Sudanic	Sara	Bejondo	kunɕ	Ad81
NS	E Sudanic	Sara	Ngambay	kura	LF79)
NC			PWS	-gu-	W
NC	Mande		Toura	gwéè	VV
NC	Mande		Wan	kwéè	VV
NC	Mande		Mende	ngúwɔ̄	VV
NC	Mande		Loko	ŋguuhɔ̄	VV

Ph	Branch	Family	Language	Attestation	Source
NC	Mande		Looma	gúò	VV
NC	Mande		Kpelle	wuyɛ	VV
NC	Mande		Dan	gwē	VV
NC	Mande		San	konō	VV
NC	Kru		Bete	gōō	ALKrCI
NC	Gur		Bieri	hun-ga/-si	Ma75
NC	Gur		Tayari	ku-m/-na	Ma75
NC	Gur		Nawdm	gom-be/-ti	Ma75
NC	Gur		Dagbane	gu-ŋwa/-nse	Ma75
NC	Gur		Moore	gu-ŋga /-msi	Ma75
NC	Gur		Baatonun	guma	Bu85
NC	Adamawa		Mambay	húmù	EA
NC	Kwa		Nawuri	gà-kèèlîf?	Sn89
NC	Volta-Niger	Yoruboid	Yoruba	egún	Ab58
NC	Volta-Niger	Yoruboid	Igala	agwu	Bu85
NC	Volta-Niger	Yoruboid	Işekiri	egungun	Bu85
NC	Volta-Niger	Igboïd	Igbo	ákpū	Bu85
NC	Volta-Niger	Nupoid	Nupe	kúci	Ba14
NC	Volta-Niger	Idomoid	Yala	igu	Bu85
NC	EBC	Plateau	Kulu	gù-kúúmú	RMB
NC	EBC	Plateau	Berom	kugul	RMB
NC	EBC	Plateau	Iten	ekum pl. nikum	RMB
NC	EBC	Plateau	Cara	fum pl. akum	RMB
NC	EBC	Plateau	Izere	kákúm	RMB
NC	EBC	Plateau	Hyam	cum	RMB
NC	EBC	Plateau	Shang	cùm	RMB
NC	EBC	Plateau	Idù	ìpfum	RMB
NC	EBC	Plateau	Ashe	ì-kum	RMB
NC	EBC	Plateau	Tinor	ì-kum	RMB
NC	EBC	Plateau	Hasha	ikum	RMB
NC	EBC	Plateau	Ayu	íkúm	RMB
NC	EBC	Plateau	Ningye	kum	RMB
NC	EBC	Plateau	Toro	kumu	RMB
NC	EBC	Plateau	Təsu	kúmú	RMB
NC	EBC	Plateau	Eggon	ebzi akum	RMB
NC	EBC	Plateau	Jijili	ukumu	RMB
NC	EBC	Plateau	Jili	kúkúmú	RMB

Ph	Branch	Family	Language	Attestation	Source
NC	EBC	Plateau	Eloyi	kòkúm úka	RMB
NC	EBC	Jukunoid	Kuteb	kukum	RKo
NC	EBC	Cross River	Anaang	úkúm	Bu85
NC	EBC	Cross River	Ibibio	úkím	Bu85
NC	Bantoid	Bendi	Bokyi	bokum	Bu85
NC	Bantoid	Ekoid	Ejagham	òkám	JW
NC	Bantoid	Grassfields	Ngyembɔɔn	yúm <sup>7</sup>	SA

Commentary: First discussed in Blench (2007b) the root for ‘silk-cotton’ seems inextricably mixed with the names for ‘baobab’ (Table 10) and perhaps even the mahogany (Table 12). Chevalier (1949) was the first to point out that *Ceiba* is a neotropical genus and the apparently ancient presence of *Ceiba* in Africa is anomalous. He counted nine species of *Ceiba*, eight of which are confined to the New World although the most recent revision suggests there are 17 species. Chevalier thought that the seeds may have floated across the Atlantic attached to the floss, although this is apparently unlikely, because the seeds readily detach themselves (Burkill 1985: 280). The similarities with cultural associations in West Africa suggest that it was intentionally brought across the Atlantic. Irvine (1961: 191) assumed that “it was probably introduced by the Portuguese”. There appear to be few archaeobotanical records for silk-cotton in sub-Saharan Africa, but Bedaux (1972) reports both *Ceiba* and baobab on the Dogon escarpment between the 12<sup>th</sup> and 14<sup>th</sup> centuries, i.e. prior to any possible Portuguese introduction.<sup>3</sup>

Refs: Blench (2007b)

**2.12** Table 12 shows a root for the African mahogany, *Khaya senegalensis*, with the apparent shape #kom-, also attested in Chadic and Kanuri.

Table 12: Reflexes of #kom-, African mahogany *Khaya senegalensis*

Ph	Family	Subgroup	Language	Form	Source
AA	Chadic	West	Nimbria	ágo	Ma
AA	Chadic	West	Miya	kwàm	RS
NS	Saharan	West	Kanuri	káàm	Cy94
NC	Ijoid	Izɔn	Mein	kú	Ab96
NC	Gur	Oti-Volta	Moore	kókà /kóʔhì	Ma75
NC	Gur	Oti-Volta	Dagari	ko- /-r	Ma75

<sup>3</sup> René Cappers (p.c.) has extracted references to *Ceiba* from his personal database giving dates for Nqoma am Tso-dilo in Botswana 9-1000 AD and Matlhapaneng in Botswana at 7-1000 AD which seem credible.



Ph	Family	Subgroup	Language	Form	Source
NC	Gur	Oti-Volta	Tayari	kog-bu /-na	Ma75
NC	EBC	Kainji	Lela	kòmò	RMB
NC	EBC	Plateau	Berom	cǒ	RMB
NC	EBC	Plateau	Iten	ɛho	RMB
NC	EBC	Plateau	Izere	kakó	RMB
NC	EBC	Plateau	Tinor	ì-gǒk	RMB
NC	EBC	Plateau	Tarok	ìkò	RMB
NC	Bantoid	Dakoid	Samba Daka	nækum	RMB
NC	Bantoid	Momo	Ngwo	gô	Ey10

Commentary: A tree that is nowadays important in West Africa for its timber, African mahogany must have gained regional importance several thousand years ago, presumably for its medicinal properties. The oil made from its seeds is highly valued and it is often planted around villages as a shade tree. The root #-*ko(m)*- has an intriguing disjunct distribution, occurring in the Gur languages in Ghana and Burkina Faso as well as in North-Central Nigeria (Blench 2007c). This points strongly to contact between these groups, rather than a reconstructible linguistic root with a great time depth and supports the hypothesis that Northern Nigeria was formerly occupied by Gur speakers, who were displaced by the Hausa expansion.



Photo 6: Mahogany, *Khaya senegalensis*

Refs: Blench (2007c)

2.13 Table 13 shows a widespread Niger-Congo root for 'oil, fat' which probably shifted to the specific meaning of the shea tree, *Vitellaria paradoxa*, and its oil somewhere during the evolution of the phylum.

Table 13: Reflexes of η-kpunu 'oil' → shea tree, *Vitellaria paradoxa*

Family	Subgroup	Language	Form	Gloss	Source
		PWS	-kú, -kúa	Öl, Fett	W
		PWN	-gú-, (-gút-)	fat, oil	M
		PWN	-kwúa (-kwút)	oil, fat	M
Kru		Bete G	kpú	huile	ALKrCI
Kru		Aizi	kpu	huile	ALKrCI
Atlantic	North	Mankanya	o-kərə?	oil	Wi07
Gur	Oti-Volta	Moba	kpàm	graisse	Ma75
Gbaya		Bodoe	kôl	shea	Ro08

Family	Subgroup	Language	Form	Gloss	Source
Ubangian		Kpatiri	kpɔ	<i>graisse, huile</i>	Mo88
Kwa		Gonja	ɲ-kú	shea	Sn89
Kwa	Ga-Dangme	Ga	ɲkú	shea-butter	Kr99
Bijogo		Bijogo	ɲ-kiɖi	oil	Wi07
WBC	Igboid	Igbo	òkwùma	shea-butter	KW
WBC	Nupoid	Nupe	èkó	shea-butter nut	Ba14
EBC	Plateau	Obiro	òkʷò	shea tree	RMB
EBC	Plateau	Tinor	kòɲò	shea tree	RMB
EBC	Plateau	Ake	kikyò	shea tree	RMB
EBC	Plateau	Tarok	ikíní	shea tree	RMB
Bantoid	Buru	Buru	ɲko	oil	RK
Bantoid	Momo	Ngwo	ɲgúd	oil	Ey10
Bantu		CB	-gútà, -kútà	oil	G
Bantu	Jarawan	Doori	kólá	shea tree	MR

Commentary: In the western Niger-Congo languages this seems to be a general term for 'oil, fat'. However, with its occurrence in Kwa languages, it becomes specifically ap-



Map 1: Distribution of shea, *Vitellaria paradoxa*, in Africa

plied to the shea (*Vitellaria paradoxa*). However, in the Bantoid and Proto-Bantu areas, which are outside the ecological range of the shea, a savannah species, the word shifted back to its more general meaning of 'oil, fat'. The shea is an important oil tree in savannah regions of West-Central Africa (Hall et al. 1996 and Photo 7). Two subspecies are distinguished, subsp. *paradoxa*, which occurs from Senegambia to eastern RCA, and subsp. *nilotica*, eastwards into Uganda. Map 1 shows its approximate distribution across the continent.<sup>4</sup>

Shea should have highly visible macro-remains, but these are uncommon in the archaeobotanical record. Neumann et al. (1998: 60) report a testa



Photo 7: Shea-fruit

<sup>4</sup> Thanks to Peter Lovett for comments on this map.

from the medieval village of Saouga and note that shea-butter production was recorded by Ibn Baṭṭūṭa in the 14<sup>th</sup> century. Despite its present-day economic importance, it may be that techniques for processing the fruits only spread during the last millennium. The shea, for example, demands considerable investment in ovens and thus in firewood collection and is probably only worthwhile when a market opens up and processing can be conducted during the dry season, thereby signalling the development of long-distance trade routes.

Refs: W. 236; M. 124a+314; G. 914+1278

**2.14** Table 14 shows a root applied to the African olive, *Canarium schweinfurthii*, with a curious distribution, occurring in the Plateau languages of Central Nigeria and across much of Bantu.

Table 14: #-par, African olive, bush-candle *Canarium schweinfurthii*

Family	Subgroup	Language	Attestation
EBC	Plateau	Hasha	à-fār
EBC	Plateau	Iten	èphaa
EBC	Plateau	Ake	ipǎ
EBC	Plateau	Eloyi	òpá
EBC	Plateau	Idū	afar
Bantu		Proto-Bantu	*-pátù

Commentary: The African olive produces a high-quality oil which is traded long distances and this root may be more widespread but is simply so far rather poorly documented. Bostoen et al. (2013) point out that the root has reflexes in NW Bantu and others in the southern half of the Bantu zone. Between the two areas it is displaced by \*-bídí, which they explain by a scenario of forest history and secondary dispersal. The lack of reflexes “between” Plateau and proto-Bantu is perplexing, and perhaps can also be explained by past climatic events.

The seeds are used to play the board game mancala, and also in the divination systems that are widespread on the Plateau, which usually have the same name. It has been noticed before that these names are very similar to the Yoruba Ifa, a divination system which involves throwing cowries on the ground. Whether the two are connected is as yet unclear.

### 3 Crops

Since the work of Murdoch (1959) it has generally been accepted that West Africa was a major centre for plant domestication. Sorghum millet, yams, okra, rizga, cowpea and Bambara groundnut (*Vigna subterranea*) were all domesticated in this zone, as well as a host of minor crops. It was previously thought agriculture emerged early

in Africa, in part due to erroneous radiocarbon dates. However, more recent studies (e.g. Neumann 1999, 2003) suggest that agriculture was relatively recent, probably only arising in the last 3-4000 years. Many finds of seeds and pulses previously identified as cultigens are almost certainly wild. Recent research has begun to fill in the picture for the rainforest areas, for example in southern Cameroun (Eggert et al. 2006).

Unfortunately, plant genetics and archaeobotany remain poorly developed throughout the region and the precise dates and locales of domestication remain obscure. In the case of an important plant such as sesame, which has a bicontinental Africa/India distribution, even the region of domestication remains in contention (Blench 2003). A major problem with the analysis of vernacular names of indigenous species is that the plants may have been gathered prior to being domesticated, and reconstructions therefore show a spurious antiquity, since the names for the wild plant were transferred to the cultigen by analogy during the process of domestication.

**3.1** Despite the growing importance of maize, which comes from the New World, sorghum (also known as guinea-corn) remains a key cereal staple throughout much of Sahelian Africa. Table 15 shows a widespread root for sorghum which appears to have the underlying form #*kVN*-.

Table 15: *Sorghum*, guinea-corn, *Sorghum bicolor*

Ph	Family	Subgroup	Language	Form	Gloss	Source
AA	Chadic	West	Hausa	kóokó	gruel	Ab49
AA	Chadic	West	Mwaghavul	kàs	sorghum	RMB
AA	Chadic	Central	Kamwe	xà	sorghum	RG
AA	Chadic	Central	Bole	kuté	sorghum	RS
AA	Chadic	Central	Dera	kúrè	sorghum	RG
NC	Mande		Vai	kende	sorghum	VV
NC	Mande		Mende	keti	sorghum	VY
NC	Atlantic		Fulfulde	gawri	sorghum	VV
NC	Atlantic		Konyagi	kombo	sorghum	VV
NC	Adamawa		Longuda	kwanla	sorghum	VV
NC	Adamawa		Waka	kóŋ	sorghum	UK
NC	Adamawa		Yandang	kóŋ	sorghum	KY
NC	Kwa		Krobo	koko	sorghum	ALKwCI
NC	Kwa		Gã	àkòkò	sorghum	Kr99
NC	Volta-Niger	Yoruboid	Igala	ókoli	sorghum	RMB
NC	Volta-Niger	Igboid	Igbo	okili	sorghum	Wi72

Ph	Family	Subgroup	Language	Form	Gloss	Source
NC	Volta-Niger	Nupoid	Nupe	kuyi <sup>5</sup>	guinea corn cv.	Ba14
NC	Volta-Niger	Idomoid	Akpa	ikwù	sorghum	Ar79
NC	EBC	Plateau	Obiro	ògró	guinea-corn	RMB
NC	EBC	Plateau	Hyam	guri	sorghum	RMB
NC	EBC	Plateau	Shang	gùrò	sorghum	RMB
NC	EBC	Plateau	Tinor	ogu	sorghum	RMB
NC	Bantoid	Tivoid	Iceve	ì-kùlé	sorghum	KW
NC	Bantoid	Ekoid	Ejagham	nkùì	maize	JW
NC	Bantu	Jarawan	Doori	gù	guinea-corn	MR

Commentary: Cultivated sorghum presents one of the more perplexing problems in African agrarian history (Blench 2003, 2006). It is crucial to African subsistence systems in the subhumid and semi-arid regions of the continent and is embedded in ritual systems, and so would appear to be ancient. But all attested archaeobotanical materials remain stubbornly recent. Moreover, sorghum occurs in archaeological sites in India millennia before confirmed dates in Africa (Fuller 2003). Archaeobotanical evidence is sometimes hard to read because of the difficulties in distinguishing wild and cultivated races (Neumann 2003: 77).

Table 15 shows the reflexes of #*kVN*-, which occurs in Niger-Congo and Afroasiatic. The diverse second syllables argue that this is a term much compounded and widely borrowed, perhaps reflecting its diffusion after the initial dispersal of the major branches of Niger-Congo. Westermann (1927: 28) notes that in some languages the term for 'elephant grass' is cognate and it is conceivable that this is the original meaning. In many languages this term has now shifted to 'maize' as the primary meaning (Blench et al. 1997). The form *koko*, which means 'sorghum in general' in some coastal languages and is the name applied to a gruel made from sorghum in Hausaland, may well have spread independently from the plant as a series of loan-words.

Some Niger-Congo families, such as Ijoid and Kru, are not represented, because they are confined to the humid zone where sorghum does not grow. The evidence seems to be that the underlying form is widespread, much-compounded and ancient, but also much-borrowed between phyla and families, suggesting that sorghum cultivation spread well after the establishment of the main linguistic groups in West Africa.

Refs: W. 228; Burkill (1994: 348 ff.)

<sup>5</sup> The *-yi* element is a generic for 'grain'.

3.2 Table 16 shows a widespread West African root for pearl millet, *Pennisetum glaucum*, which is widely attested in both Chadic and Plateau.

Table 16: #mar(d)a, a root for pearl millet, *Pennisetum glaucum*

Ph	Family	Subgroup	Language	Form	Gloss	Source
AA	Chadic	West	Hausa	máiwáa	millet	Ab49
AA	Chadic	West	Bole	mòrdó	pearl millet	RS
AA	Chadic	West	Ngamo	mòrdô	millet	RS
AA	Chadic	West	Geji	mardá	millet	RMB
AA	Chadic	West	Ngizim	mařdũ	millet	RS
AA	Chadic	West	Karekare	màrdô	millet	RS
AA	Chadic	West	Kushi	moođo	millet	RMB
AA	Chadic	West	Miya	màywá	millet	RS
AA	Chadic	West	Mwaghavul	mààr	millet	RMB
AA	Chadic	West	Fyer	mar	millet	RMB
AA	Chadic	West	Sirzakwai	marday	millet	RMB
AA	Chadic	West	Zaar	màrwá	millet	BCa
NC	Adamawa		Yoti	múri	millet	K&Y
NC	Kwa	Ga-Dangme	Ga	ɲmãã	millet, food	Kr99
NC	Kwa		Adyukru	máy`	<i>mil</i>	ALKwCI
NC	Volta-Niger	Nupoid	Nupe	màyì	millet	Ba14
NC	EBC	Plateau	Ninzo	amar	millet	RMB
NC	EBC	Plateau	Ningye	mwan	millet	RMB
NC	EBC	Plateau	Anib	àmên	millet	RMB
NC	EBC	Plateau	Nyankpa	imala	millet	RMB
NC	EBC	Plateau	Ashe	i-ma	millet	RMB
NC	EBC	Plateau	Idũ	imara	millet	RMB
NC	EBC	Plateau	Shang	mara	millet	RMB
NC	EBC	Plateau	Jili	amo	millet	RMB
NC	EBC	Plateau	Sambe	tik àmâr	millet	RMB
NC	EBC	Plateau	Kwaŋ	mer	millet	RMB
NC	EBC	Plateau	Yaŋkam	marak	millet	RMB
NC	EBC	Plateau	Tarok	imar	millet	Lo08
NC	EBC	Plateau	Sur	mər	millet	RMB
NC	EBC	Plateau	Pe	ime	millet	RMB
NC	Bantu	Jarawan	Mbula	mara	millet	MR
NC	Bantu	Jarawan	Mbat	máár	millet	MR

Commentary: Millet is an important West African cultigen, first domesticated on the margins of the Sahel more than 3000 years ago (Tostain 1998; D'Andrea et al. 2001). Currently the earliest *Pennisetum glaucum* is that recorded at the Malian Neolithic sites of Karkarichinkat from 2500-2000 BC (Manning et al. 2011). One of the emblematic sites of Nigeria, the Nok region, has produced a very large amount of millet dated to 800-450 cal BC (Kahlheber et al. 2009). Perhaps even more surprising is the fact that millet was also cultivated in areas much further south in regions that are now rainforest (Höhn et al. 2007). Millet is still grown as a ritual crop in the sandy, semi-arid areas of the eastern parts of coastal Ghana though it has been completely displaced by maize as a staple. The polysemy of 'millet' and 'food' in a coastal language like Ga is a striking indication of the former importance of millet in this region which has now almost entirely switched to growing maize as a staple.

This root is first identified in Longtau (2008) with a much extended discussion in Blench (under review, a). The Chadic forms such as Karekare *màrdó* look as if they contain the older form and that Hausa *máiwáa* is probably a weakening of the consonants. Zaar *màrwá* illustrates a transitional form in the weakening process. However, the Hausa names have probably been borrowed into other languages, such as Miya, which looks suspiciously similar to Hausa. The Plateau names are all shorter and lack the *-rd-* sequence; hence they were probably borrowed from Chadic at some point (which is also likely from an ecological point of view). The diffusion of this root records the increasing importance of millet which led to it becoming a ritual crop at Nok, beginning some 3000 years ago.

Refs: Longtau (2008); Blench (under review, a)

3.3 Table 17 shows a root for the aerial yam, *Dioscorea bulbifera*, with a shape something like #-tom-.

Table 17: #-tom, a root for aerial yam, *Dioscorea bulbifera*

Family	Subgroup	Language	Form	Gloss	Source
Ijoid		P-Ijò	ɔtomũ	aerial yam	KW
WBC	Edoid	Bini	udin	aerial yam	Ag86
Volta-Niger	Nupoid	Nupe	èdu	aerial yam	RMB
Volta-Niger	Igboid	P-Igboid	*-dũ	aerial yam	KW
EBC	Kainji	tHun	rodiŋ tom	aerial yam	RMB
EBC	Kainji	εBoze	ri-don/a-	aerial yam	RMB
EBC	Plateau	Aten	itôm	aerial yam	RMB
EBC	Plateau	Berom	tôm	aerial yam	RMB
EBC	Plateau	Cara	i-tɔ	aerial yam	RMB
EBC	Plateau	Hyam	kpodom	aerial yam	RMB

Family	Subgroup	Language	Form	Gloss	Source
EBC	Plateau	Izere	a-dom	aerial yam	RMB
EBC	Plateau	Idū	ìdèm	aerial yam	RMB
EBC	Plateau	Ashe	ú-dù	wild yam	RMB
EBC	Plateau	Nyankpa	èdòm	aerial yam	RMB
EBC	Plateau	Hasha	ì-tum	aerial yam	RMB
EBC	Plateau	Sambe	ìntó	aerial yam	RMB
EBC	Plateau	Horom	dùn	aerial yam	RMB
EBC	Plateau	Eggon	àdom	aerial yam	RMB
EBC	Plateau	Pe	atom	aerial yam	RMB
EBC	Lower Cross	Efik	édòmò	aerial yam	Co98
EBC	Central Delta	Abuan	ediom	aerial yam	Ga80
Bantoid	Mambiloid	Gembu	tūār	aerial yam	BC
Bantoid	Grassfields	Yamba	ntóntóŋ	k.o. small yam	RMB
Bantoid	Grassfields	Bafut	nìtū'ù	aerial yam	RMB
Bantoid	Grassfields	Ngomba	netú'	aerial yam	RMB
Bantoid	Grassfields	Chufie'	tó'ù	aerial yam	RMB
Bantu	C10	Aka	tombo	aerial yam	

Commentary: The aerial yam, *Dioscorea bulbifera*, is unusual in that it is cultivated not for its tubers but for the bulbils that develop at the leaf axils of the vine. Indeed, in Nigerian English it is known as the 'up-yam'. In Africa, aerial yams are spread from Senegambia to Kefa in Southwest Ethiopia (Martin 1974; Westphal 1975: 161; Burkill 1985: 657 ff.). There are wild forms in both Africa and India, and Burkill (1911) and Chevalier (1936: 524-529) argued that it was domesticated independently on both continents. The variety of cultivars, and the major morphological distinction between the quadrangular African forms and the ovoidal Indian types strongly suggest this. Chevalier (1936, 1952) claims that the Indian subspecies, *D. bulbifera* var. *birmanica*, was brought to the East African coast by the Arabs and to the West African coast by the Portuguese.



Photo 8: Aerial yam, *Dioscorea bulbifera*

Williamson (1993) first identified this root as widespread in Nigeria. The aerial yam is not always well identified in the sources, so it may well be more common than this distribution suggests. The spread of the #-tom root seems to be coincident with Benue-Congo, while the attested forms in Volta-Niger languages tend to have a nasalised vowel. The Ijoid form is probably a borrowing, and the bilabial nasal marks it as from Benue-Congo. There is no archaeological evidence for the aerial yam, but lin-



guistic evidence suggests that it was brought into domestication some 3-4000 years ago.

Refs: Williamson (1993); Blench (1996, 2006)

3.4 Table 18 collects together reflexes of a root, *#koko*, for cocoyam or taro, *Colocasia esculenta*.

Table 18: *#koko*, a root for cocoyam, taro, *Colocasia esculenta*

Family	Subgroup	Language	Form	Gloss	Source
Kru		Nyabwa	koókò	taro	ALKrCI
Kwa	Ga-Dangme	Ga	kòó'kó	cocoyam	Kr99
Kwa		Agni	kòókò	taro	ALKwCI
Kwa	Potou	Akan	koó'kó	cocoyam	Kr99
Volta-Niger	Edoid	Emai	íxùd̀xúó	cocoyam	SE07
Volta-Niger	Nupoid	Nupe	konkòrò	cocoyam	RMB
EBC	Kainji	tHun	r-kùkù /ə̀tə-	cocoyam	RMB
EBC	Plateau	Iten	èkòbó	cocoyam	RMB
Bantoid	Grassfields	Yamba	kú'	cocoyam gen.	RMB
Bantoid	Grassfields	Chufie'	kò'óú	cocoyam var.	RMB
Bantoid	Grassfields	Bafut	àkū'ù	cocoyam gen.	RMB

Commentary: Cocoyam or taro is one of the least known of the world's staples; essential to agriculture in Oceania, it also makes an important contribution to the diet in the more humid regions of Africa. Like the plantain, the history of its arrival in Africa is controversial and there is no archaeobotanical evidence to resolve the issue. Taro or "old" cocoyam is a South East Asian domesticate that arrived in Africa at an unknown but presumably early period as part of a root-crop complex together with plantains and water-yam, *Dioscorea esculenta*. This species is rather low-yielding and high in tannins, leading to the effect of "scratching the throat". The "new" cocoyam, *Xanthosoma mafaffa*, was only introduced into West Africa from the West Indies in the 19<sup>th</sup> century (in 1843, according to Burkill 1985: 210).

Wild *Colocasia* are found between India and New Guinea and taro may have been domesticated in either area (Blench 2012). Plucknett (1976) and subsequently Watson (1983) have suggested that the cocoyam spread down the Nile valley and thence to West Africa. The basis of this appears to be the presence in West Africa of roots such as *koko* which are said to derive from the Arabic *qulqas*. But Darby et al. (1977, II: 655) concluded that there was no evidence for the cocoyam in antiquity, and that the *qulqas* mentioned in ancient sources was not even necessarily an aroid. Williamson (1993) analysed the linguistic data on cocoyams in the languages of Southern

Nigeria. She concludes that all the evidence points to their ancient establishment and in particular that the Arabic *qulqas* is unlikely to be the source of the widespread root *koko* in West-Central Africa. Blench (1997) discusses the evidence for the diffusion of cocoyams in North-Eastern Nigeria and reached the same conclusion. An account quoted by Mauny (1953) shows that taro was cultivated in Senegambia by 1500, too early for Portuguese navigators to have been instrumental in its diffusion. Philippson & Bahuchet (1996: 106) observe that a common root for cocoyam in northwest Bantu, \**-gàbò*, appears to correspond to terms for cassava in languages of southern Tanzania and Malawi, which would be striking confirmation for the antiquity of the introduction of cocoyam into Africa. The similarities between languages of quite different branches of Niger-Congo certainly point to extensive borrowing, in which direction is unclear at present.

Refs: Williamson (1993)

3.5 Table 19 shows the distribution of a rather restricted root, #-*zo(ko)*, for the cowpea, *Vigna unguiculata*.

Table 19: #-*zo(ko)*, a root for cowpea, *Vigna unguiculata*

Family	Group	Language	Form	Source
Adamawa		Mumuye	zàkó	Sh83
Volta-Niger	Nupoid	Nupe	ezo	RMB
EBC	Plateau	Alumu	dòsò	RMB
EBC	Plateau	Rigwe	̀̀zò	RMB
EBC	Plateau	Tarok	asò	RMB
EBC	Jukunoid	Wapan	a-sò	KS

Commentary: The cowpea, *Vigna unguiculata*, is one of the earliest African domesticates and was carried to India by around 2000 BC (Blench 2003). Cowpea was one of the few crops clearly recorded at Nok sites in Nigeria, so we have clear evidence for its cultivation ca. 500 BC. The root #-*zo(ko)* has a limited distribution, confined principally to Benue-Congo. The longer form in Mumuye is interesting and it may be that this was borrowed from Adamawa languages into Plateau.

3.6 Table 20 shows a root in Plateau languages for the Bambara groundnut, *Vigna subterranea*.

Table 20: Bambara groundnut, *Vigna subterranea*

Family	Group	Language	Form
EBC	Plateau	Iten	ihywì
EBC	Plateau	Hyam	hywì
EBC	Plateau	Shang	hwyé

Family	Group	Language	Form
EBC	Plateau	Tinor	ì-fi
EBC	Plateau	Ashe	ì-hywi
EBC	Plateau	Təsu	šhwì pìrù
EBC	Plateau	Toro	epi ecin
EBC	Plateau	Sambe	qì
EBC	Plateau	Hasha	ifi ikyin
EBC	Plateau	Tarok	afi

Commentary: This term is often applied to the American groundnut, *Arachis hypogaea*, today. The Bambara groundnut is native to West Africa and was domesticated in the region of the Benue near the present-day Nigeria/Cameroon border (Hepper 1963). Archaeobotanical evidence remains scattered. Albert et al. (2000: 343) record Bambara nut from Oursi in Burkina Faso as *Age de Fer ancien (Couche IIa)* dated to ca. 1800 BP. The Bambara groundnut is described by Ibn Baṭṭūṭa in the 14th century in Mali:

المقلّو وريما ويستخرجون من هذه الأرض حبات كالقول فيقولونها ويأكلونها وطعمها كطعم الحمص  
الغين المعجم وسكون الرء وكسر طحنوها وصنعوا منها شبه الإسفنج وقلوه بالغرزي والغرتي بفتح  
6 بالبيضان إذا أكلوه التآء المثناة هو ثمر كالأجاص شديد الحلاوة مضر (Voyages IV p. 392)

“They take out of the ground grains like beans which they fry and eat; their flavour is like fried chickpeas. Sometimes they grind them to make something like a fritter, which is fried with *gharti*, which is a fruit like a very sweet plum, but it is bad for white people if they eat it.” (Baṭṭūṭa (tr. Gibb) 1929)

Words for the different types of groundnut are poorly recorded in many sources and this root may well be more widespread than the table suggests.

3.7 Table 21 shows a widespread root for calabash or gourd, of the general shape #-kora.

Table 21: Calabash, gourd, *Lagenaria siceraria*, *Cucurbita spp.*

Ph	Family	Subgroup	Language	Form	Gloss	Source
AA	Chadic	West	Hausa	gòdràá	calabash	Ab49
AA	Chadic	Central	Lagwan	klá	calabash	RMB
NC			PWS	(n)- gua(n)-	<i>Kalebasse</i> <i>Schlüssel</i>	W
NC			PWS	-kua-	<i>Kalebasse</i>	W

<sup>6</sup> wa-yastahriḡūna min hādīhi al-arḑi habbāti ka-l-fūli fa-yaqlūna-hā wa-yakulūna-hā wa-ṭa'mu-hā ka-ṭa'mi al-himmiši al-maqlūwi wa-rubbamā ṭahanū-hā wa-šana'wā min-hā šibh al-isfunḡi wa-qalaw-hu bi-l-ḡarti wa-l-ḡarti [bi-faṭhi al-ḡayni al-mu'ḡam wa-sukūn al-rā wa-kasr al-tā al-muṭannāh] huwa tamar ka-l-iḡḡāši šadid al-ḥalāwah muḡirr bi-l-biḡān idā akalū-hu.

Ph	Family	Subgroup	Language	Form	Gloss	Source
NC	Mande		Dan Santa	kɔ̃ɔ̃	<i>calebasse</i>	ALMCI
NC	Kwa		Abron	kɔ̃rɔ̃á <sup>7</sup>	<i>calebasse</i>	ALKwCI
NC	EBC	Kainji	Basa	ee-kele	gourd	RMB
NC	EBC	Plateau	Tinor	wu-kūrɔ̃	gourd-bottle	RMB
NC	EBC	Plateau	Təsu	krɔ	gourd	RMB
NC	EBC	Plateau	Berom	kwo	gourd	RMB
NC	EBC	Upper Cross	Lokə	lè-kòlɔ́	gourd	JS
NC	Bantoid	Mambiloid	Nɔ̃oro	kǎřǎ	gourd	BC
NC	Bantoid	Jarawan	Mama	koro	gourd	MR
		Bantu				
NC	Bantoid	Grassfields	Chufie'	kwàlà'	gourd	RMB

Commentary: The bottle-gourd, *Lagenaria siceraria*, is one of the oldest human domesticates. It occurs in both the Old and New Worlds at very early dates. However, the large cucurbits, which are of the same family, are New World domesticates and probably only reached Africa following Portuguese contact. Nonetheless, they are now completely integrated into traditional subsistence and indeed the names for these gourds are intertwined with the bottle-gourd. Lexicographic sources are not very accurate in terms of distinguishing these species. A third species, the calabash-tree, *Crescentia cujete*, which produces large spherical fruits which dry out like cucurbits, is a nineteenth century import from the West Indies. The pervasiveness of this root suggests that it is long-established in Niger-Congo and the name originally must have applied to the bottle-gourd. The Chad-ic forms are probably subsequent borrowings.



Photo 9: Bottle-gourd, *Lagenaria siceraria*

Refs: W. 219+222+240; BCCW, I, 14

<sup>7</sup> Unless a borrowing from Hausa.

3.8 Table 22 shows a widespread root, #*kom-*, applied to ‘wild banana’ and ‘edible banana’, *Ensete ventricosum* and *Musa sapientium*.

Table 22: Reflexes of #*kom-*, *enset*, *banana* *Musa spp.*

Ph	Family	Group	Language	Form	Gloss
AA	Chadic	West	Mwaghavul	kúrgwàh̄m	wild banana
NC	Gbaya		Bodoe	kòn	<i>banane</i>
NC	EBC	Plateau	Izere	ìzàkòm	enset
NC	EBC	Plateau	Berom	makom	enset
NC	EBC	Jukunoid	Kente	m-gbomgbo	enset
NC	EBC	Jukunoid	Kuteb	úkwām	banana
NC	EBC	Upper Cross	Mbembe	ógwòm	cultivated <i>Musa</i>
NC	EBC	Upper Cross	DuRop	ká-kám /bá-	plantain
NC	EBC	Lower Cross	Efik	ú-kóm	plantain
NC	Bantoid	Dakoid	Daka	kom	enset
NC	Bantoid	Tivoid	Saari	ɲgòmbē	plantain
NC	Bantoid	Ekoid	Ejagham	egomé	plantain
NC	Bantoid	Beboid	Noni	góm̄tèèn	wild banana
NC	Bantoid	Momo	Mundani	àngò	plantain
NC	Bantoid	Grassfields	PEG	*-gòm´	plantain
NC	Bantoid	Grassfields	Oku	kengom	banana
NC	Bantoid	Grassfields	Shu Paməm	ɲgwòm	plantain
NC	Bantoid	Grassfields	Yamba	gòm ɲgòɲ	enset
NC	Bantoid	Grassfields	Ndemli	kòɲ	plantain
NC	Bantoid	Ring	Proto-Ring	*-ɲgòm	plantain
NC	Bantu		Bobangi	komo	plantain
NC	Bantu		Mpama	komo	plantain
NC	Bantu	G30	Doe	ɲgombwa	<i>banane</i>
NC	Bantu	G34	Ngulu	mgomba	<i>bananier</i>
NC	Bantu	P21	Yao	ligóómbo	banana
NC	Bantu	S 53	Tsonga	ɲkompfá	banana

Commentary: This root is discussed in Blakney (1963), Rossel (1998) and Blench (2009). The only wild *Musa* species indigenous to West Africa is *Ensete ventricosum*, an enset with an inedible fruit found in rocky areas across West Africa (Champion 1967), and used mainly for magical purposes or as a famine food (Table 22). The root #*kom* is recorded in Central Nigeria and then spreads into the Grassfields still with this meaning. However, as the cultivated banana spread, it appears the name shifted to the plantain and the banana and these are the only meanings the

term now has in Narrow Bantu. Names apply more broadly to bananas and are scattered across the Bantu domain. It is unclear whether these all derive historically from reflexes of *#kom* as some may be local developments from *#konde* (Table 23).



Photo 10: Wild banana, *Ensete ventricosum* (courtesy Robert Hedinger)

3.9 Table 23 shows what may be a related root, *#konde*, for the plantain, *Musa paradisiaca*.

Table 23: Plantain, *Musa paradisiaca*

Family	Group	Language	Form	Source
Mande		Kono	kondeke < Bantu	VV
Mande		Mende	konde < Bantu	VV
Mande		Vai	konde < Bantu	VV
Atlantic	North	Fulfulde	kondoŋ < Bantu	VV
Atlantic	South	Sherbro	kpende < Bantu	VV
Atlantic	South	Gola	konde < Bantu	We21
Gur		Gurunsi	kodu < Twi	Ma75
Kwa	Akanic	Twi	kwadu	Ch38
Volta-Niger	Gbe	Ewe	kwadu	Ro95
Volta-Niger	Igboid	Onitsha Igbo	ògèdè	Wi72
Bantoid	Mambiloid	Cambap	kwènd'	BC
Bantoid	Nyang	Kenyang	ékwá	SIL
Grassfields	Bamileke	Ngyemboon	ɲkàndõŋ'	Anderson (p.c.)
Grassfields	Bamileke	Ngomba	ɲkèndõŋ	Satre (p.c.)
Bantu	Zones	ABCDFHKLMNR	*konde	BLR3

Commentary: The triploid plantain is a significant staple in coastal West Africa and is phenotypically diverse (Swennen et al. 1995). Despite this, the cultivated Musaceae were all brought from island Southeast Asia at some unknown point in the past. The linguistic analysis is expanded and adapted from Blench (2009). *\*konde* is so well-attested in Bantu, it must be reconstructed for proto-Bantu. Blakney (1963: 69) gives a more extensive table of forms in Narrow Bantu languages. Kaalong

[A.52] has *kpende*, which would seem to reflect both the labialisation and the front vowels in Cambap and Kenyang, suggesting a far better proto-Bantu form would be *\*kpende* and *konde* ~ *kondo* a later development. It is assumed that the occurrences in Mande, Atlantic, Kwa and Gur languages are all borrowings from a Bantu language and that this must have occurred as a result of late Portuguese transfers of crops along the coast. An intriguing question is whether the Igbo form is also cognate as the velar and the sequence of two mid-front vowels are very suggestive. The Igbo word has in turn been loaned into many languages further north, as part of the trade networks. Curiously, some of the Mundā languages in NE India have *konDoG* for 'plantain'. Whether this can be in any way related would depend on more precise lexical and botanical information.

#### 4 Conclusion

Compared with language phyla such as Austronesian, progress in reconstructing economic plant names in Niger-Congo remains slow. The data is often patchy or unreliably transcribed, making classic historical linguistics problematic. Often it is difficult to tell if we are dealing with a mosaic of loanwords or a genuinely old root, although both of course are interesting. This paper is in the nature of a progress report, expanding former proposed roots and adding new ones to the list. The next challenge is to link these more comprehensively with archaeobotanical data.

#### Abbreviations

Single-authored major comparative sources are identified by a single capital letter. These are;

- G Guthrie (1967-1971)
- M Mukarovsky (1876, 1977)
- W Westermann (1927)

Multiply-authored major comparative sources, particularly those in series, have abbreviations derived from the initial letters of the main words in the title.

Acronym	Bibliographic reference	Family
ALKCI	Hérault (1983)	Kwa
ALKrCI	Marchese (1983)	Kru
BCCW	Williamson & Shimizu (1968) & Williamson (1973)	Benue-Congo

The following table shows the abbreviations used in the data tables, the reference and the language they cover.

<b>Acronym</b>	<b>Expansion</b>	<b>Language treated</b>
Ab40	Abrahams (1940)	Tiv
Ab49	Abrahams (1949)	Hausa
Ab58	Abrahams (1958)	Yoruba
Ad81	Adami (1981)	Bediondo
Ag86	Agheyisi (1986)	Edo
An48	Andrews (1948)	Sudan
Ar79	Armstrong (1979)	Idomoid
Ba14	Banfield (1914)	Nupe
BC	Bruce Connell (p.c.)	Mambiloid
BCa	Bernard Caron (p.c.)	Zaar
BL90	Barreteau & Le Bleis (1990)	Mafa
BLR3	Bantu Lexical Reconstructions 3	Bantu
Bu85	Burkill (1985)	West Africa
Bu94	Burkill (1994)	West Africa
Bu97	Burkill (1997)	West Africa
BW94	Bernard & White-Kaba (1994)	Zarma
Ch33	Christaller (1933)	Twɪ
Co98	Connell (1998)	Lower Cross
Co99	Co99	Chadic
Cr65	Crabb (1965)	Ekoid
Cy94	Cyffer (1994)	Kanuri
Da66	Dalby (1966)	Atlantic
DC78	Ducroz & Charles (1978)	Songhay Kaado
DN69	Dent & Nyembezi (1969)	Zulu
Ey10	Eyoh (2010)	Ngwo
FI	Femi Ibrahim (p.c.)	Akpes
G	Guthrie (1967-1971)	Bantu
Ga80	Gardner (1980)	Abuan
Gr	Greenberg (1963)	Africa
He87	Hedinger (1987)	Manenguba
JS	Jan Sterk (p.c.)	Upper Cross
JW	John Watters (p.c.)	Ejaghām
Ka08	Kari (2008)	Degema
Kr99	Kropp-Dakubu (1999)	Ga
KS	Kiyoshi Shimizu (p.c.)	Jukunoid



<b>Acronym</b>	<b>Expansion</b>	<b>Language treated</b>
KW	Kay Williamson (p.c.)	Ijoid
LF79	Le Mbaindo & Fédry (1979)	Ngambay
Lo08	Longtau (2008)	Tarok
Ma75	Manessy (1975)	Oti-Volta
Ma72	Matsushita (1972)	Gwandara
MD	Mark Dingemanse (p.c.)	Siwu
Mo88	Moñino (1988)	Ubangian
Mo95	Moñino (1995)	Gbaya
MR	Mike Rueck (p.c.)	Nigeria
Ne77	Newman (1977)	Chadic
P	Prost (1953)	South Mande
PD90	Parker & Durrant (1990)	Mundani
Po08	Pohlig (2008)	Mbe
RG	Richard Gravina (p.c.)	Chadic
RH	Robert Hedinger (p.c.)	Manenguba
Ri01	Rikoto et al. (2001)	cLela
RK	Roland Kiessling (p.c.)	Ring
RKo	Robert Koops (p.c.)	Kuteb
RMB	Author's fieldwork	West Africa
Ro95	Rongier (1995)	Ewe
Ro08	Roulon-Doko (2008)	Gbaya
RS	Russell Schuh (p.c.)	Chadic
SA	Stephen Anderson (p.c.)	Ngyemboon
SE07	Schaefer & Egbokhare (2007)	Emai
Sh83	Shimizu (1983)	Mumuye
SM	Stuart McGill (p.c.)	Cicipu
Sn89	Snider (1989)	Guan
UK	Uli Kleinwillinghöfer (p.c.)	Adamawa
VV	Valentin Vydrine (p.c.)	Mande
We21	Westermann (1921)	Gola
Wi72	Williamson (1972)	Igbo
Wi07	Wilson (2007)	Atlantic

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