THE DIFFUSION OF MAIZE IN NIGERIA: A HISTORICAL AND LINGUISTIC INVESTIGATION

by

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- 1 Introduction
- 2 The lexical evidence
- 3 Discussion of base forms
- 4 Conclusion: the spread of maize

Notes

References

1 Introduction

In conventional text books, the introduction of maize into West Africa is usually assigned to the Portuguese. Textbooks such as Irvine (1969:125) or Purseglove (1975:308) do not mention any possible routes to West Africa apart from the coastal one. Maize is undoubtedly a New World domesticate and the Portuguese are the logical carriers of maize to the coast of West Africa, where there is evidence of its early establishment. Portuguese ships certainly car-

ried maize to the Mediterranean region, where its early name "Indian corn" refers to a notional [West] Indian provenance. Maize seems to have been established along the North African littoral by the end of the sixteenth century.

For the West Coast of Africa there is, however, little historical documentation relating to the introduction of maize. Neither Portuguese nor Arab sources record the intentional introduction of these crops, and indeed some of the early West Coast travellers describe maize as if it was unknown to them. Dapper, however, writing in the late seventeenth century, remarks that maize was carried from the West Indies to Sao Tomé and taken thence to the Gold Coast (Dapper 1668:463). Indeed, in the Senegambian region terms such as "sorghum of Europeans" appear to confirm this historical scenario (Pasch 1980:54).

For the coastal regions of present-day Nigeria, however, there is less documentation of its passage. Nonetheless, by the time the first European observers reached Borno in the early nineteenth century, maize was already well-established. A possible reference to maize in eighteenth century Nigeria is quoted by Miracle (1966). Denham et al. (1828,II:159) refer to maize in Borno but do not make clear where it was sold and in what quantities. Baikie (1856:156) was served a "mess ... of Indian corn-meal" in Wuzu, south of Lau on the Upper Benue, and clearly did not regard this as remarkable. Barth (1862,II:174) was aware that maize was of American origin but observes that it was introduced to Central Africa by way of Egypt. Nachtigal (1879-89, II: 374) noted that it was the second most important crop after sorghum grown on the islands of Lake Chad.

Although an article by Stanton (1961) had pointed to the links between maize distribution and ethnic/language groups, the main historical review of the introduction and spread of maize is Miracle (1966). There are two comprehensive linguistic studies of the introduction of maize into Africa, Portères (1955, 1959) and Pasch (1980, 1983). The earlier studies assumed that maize was a Portuguese import, although Portères also noted the separate introduction of maize across the Sahara. Pasch (1983:211, Map 2) also shows maize being brought to the Lake Chad region from Tripoli and from further east. Terms in many languages of northern Nigeria and the Lake Chad region refer maize to "masar", i.e. Egypt. In West Africa, there is a clear distinction between the hard white flint maizes more suitable for flour and the soft yellow maizes that are boiled or roasted and eaten fresh. Burkill (1994:378ff) has recently reviewed the

origin, cultivars and uses of maize in West Africa and has also compiled a substantial list of vernacular names for both the plant itself and its cultivars.

In Tardits (1981), various researchers were asked to consider the historical evidence for the diffusion of certain crops in Cameroon. One of these was maize, and individual traditions of particular ethnic groups often recall the immediate source of maize. For example, the Vute have two separate types: a reddish type adopted from the Gbaya in the German period and a short-season variety that came from the Bamileke in the 1950s. Accounts such as that of Tardits are usefully assembled in chronological sequence, as they can illuminate the broader picture of diffusion.

At the macro-level, one writer has considered the historical evidence for maize in Africa in considerable detail: M.D.W. Jeffreys, who attempted to prove that maize in West Central Africa was a pre-Columbian introduction (Jeffreys 1971 and references therein). Jeffreys drew his arguments from a wide variety of types of evidence, both from oral tradition and linguistics, as well as Portuguese sources. Although there are very early Portuguese records of *milho zaburro* in Africa the identification of these with maize depends on assigning an exact meaning to a rather vague terminology. No unambiguous archaeological evidence or pre-Columbian illustration of maize has yet been unearthed.

Jeffreys believed that Arab navigators were trading with South America in the pre-Columbian period and apart from maize, also argued that the Muscovy duck and the Basenji (non-barking dog) were evidence of this trans-Atlantic traffic. Few scholars today support Jeffreys's ideas (see comments appended to his 1971 article in Current Anthropology) although it is appropriate to acknowledge his energy in searching sources for early references to crops and livestock. This paper will assume that the case for pre-Columbian maize in the Old World is unproven.

Maize has one unusual feature in terms of its ecology. The traditional cereal cultigens of Africa were confined to the subhumid and semi-arid regions and the peoples who lived in high rainfall areas did not grow cereals and were only familiar with them through trade. Their existing terminology was of necessity vague; for example, in the coastal regions of Cross River millet and sorghum were not consistently distinguished. Maize, like other cereals, can be used to make beer, but this seems to be very rare in Nigeria. However, it is common in parts of Cameroon, especially in the Grassfields bor-

dering Nigeria (Mveng Ayi 1981:590). Some maize cultivars are preferred for beer-brewing and the names for maize beer in Cameroon turn up as names for the crop itself in Nigeria. This suggests that the diffusion of maize types in Adamawa may have been partly driven

by the needs of local brewing.

Whence the problem? The problem is that there is very little in the terminology of maize in West African languages to suggest widespread and significant introduction of maize by the Portuguese. There is a single case of an identifiable loan from Portuguese into a coastal language of southern Nigeria, the Isekiri term imiyò, from Portuguese milho. This term is isolated, however, and even the surrounding languages have a quite different lexical set. This is very much in contrast to a number of other crops and domestic stock types which have clear patterns of origin - most notably cassava, oranges and pigs.

Even the Yoruba, whose territories extend down to the sea and who were in contact with the Portuguese, have consistently denied receiving maize from them. Jeffreys (1971) cites Bowen in the mid-19th century recording the Yoruba tradition that maize came from the east, beyond the Niger. Bascom (1951:45) was "exasperated" by informants in Ife who "challenged statements that it had come from America and insisted that corn has always been grown and used by the Yoruba". If so, then it may be that the trans-Saharan introduction of maize was far more significant than the Portuguese introduction, even in coastal Nigeria. If so, we need to trace the routes by which maize travelled within Nigeria - in the absence of written documentation. Maize was very rapidly adopted into pre-existing cultigen repertoires and its origin forgotten as it spread from one farming community to another.

One writer who collected a significant body of data on maize and began an enquiry into the paths of its diffusion was Meek (1931:39). One of his observations was that the word for maize in many languages is a compound meaning 'guinea-corn of the Jukun':

"Thus among the Yukutare, Batu, and Nyam Nyam of the British Cameroons maize is ajo Kwana and aku Kwan and Kwonga respectively; among the Mbum it is nang Kona; among the Chamba of Donga it is Kpankara, i.e. 'the guinea-corn of the Akpa'; among the Kanakuru it is Apwenen; among the Hona Panu. Even as far north as Zaria Province we find among the Kagoro tribe that maize is silok Akpat, i.e. 'the guinea-corn of the Akpa'. It is but fair to add, how-

ever, that the people of Calabar were also known as Akpa, and that maize was probably introduced into the Benue valley from Calabar. Nevertheless the Jukun appear to have been the principal centre of distribution for North-Eastern Nigeria. It is probable also, as has already been indicated, that Kororofa and Calabar were in close communication, and it is even possible that the terms Kororofa and Akpa were general terms applicable not only to the Jukun, but to the peoples of the sea-coast."

Meek is clearly correct in suggesting that the first few terms indicate that maize was introduced from Kona, a Jukun settlement, to other communities to the (north-)west [?]. But among the Kagoro, Akpat now refers to the Hausa rather than the Jukun, thus suggesting a movement south from Hausaland rather than north from the Jukun. The suggestion that maize was probably introduced from Calabar presumably reflects Meek's assumption that it must have been introduced from the coast by the Portuguese and therefore have been transmitted from south to north. Jeffreys (1953:966), who believed maize was introduced from the Arab world, cites Meek but reverses the direction:

"My researches show that in Nigeria, as one progresses inland from the coast, the tribal names for maize indicate the route by which it migrated. Thus, the name for maize in tribe A is 'sorghum of tribe X', where X is found ultimately to be the name of a tribe east or north of the receiving tribe A. Meek (ref. 7, 1, 252, 253, 39) writing of the Hegi [sic], among whom the Kanuri language is widely understood, says that their name for maize is: 'The guinea-corn (Sorghum) of the Kanuri', while among the Jukun the name is 'the guinea-corn of the Pabir'. Among the Yakutare [sic] the name is Ajo Kwona, or the Sorghum of the Kwona, alias Jukun. Among the Hausa the name for maize is dawar masara, where dawa = Sorghum and Masa = Egypt."

The arguments of both writers are confounded by the relatively small number of terms analysed and their failure to realise that there are a number of soundalike terms that may well have been subject to multiple re-interpretation. The availability of a much larger regional dataset makes it possible to test these hypotheses in a more concrete, historical manner.

The core of this paper is a compilation of terms for maize in

Nigerian languages¹ and related areas and a series of hypotheses about the origin and spread of these terms. Languages outside the Nigerian region are only quoted where their terms are cognate with lexemes within Nigeria. The concluding section tracks the main base forms for maize, maps their extension and suggests a possible historical schema. A series of maps accompanies the paper showing main points of entry for maize into Nigeria (Map 1), main nuclei of diffusion with the country (Map 2), and location of principal maize

2 The lexical evidence

names (Map 3).

Maize is relatively well documented compared with a number of other West African crops. Koelle (1854) included 'maize' as a gloss in his *Polyglotta Africana*. Pasch (1980, 1983) in a study of South American food plants in Africa compiled a valuable list of terms for maize covering the entire continent. The diffusion of maize in Cameroon was studied by the researchers contributing to a historical symposium (see summaries in Tardits 1981).

The table below shows a compilation of terms for maize in Nigerian languages. Languages outside Nigeria are included where they mark the extension of a particular lexical term. Column 1 gives the language classification by phylum, family and branch. The data has been set out in this format for ease of location rather than to support any historical hypothesis - indeed the argument is that a recent introduction like maize easily crosses phylum boundaries. Column 2 gives the name of the individual language and sometimes a location where there are significant dialect variations. Column 3 gives the actual word for maize. Cultivar names are not cited, but on the rare occasions where languages distinguish "hard" from "soft" maize, both terms are cited. Column 4 shows the base forms, i.e. an idealised form extracted from surface attestations. These forms should not be treated as any form of reconstruction - they are essentially arbitrary assignations suggesting a nexus of related forms. Known borrowings are also marked in this column along with etymological parsing where the meaning of component elements is known. Individual base forms are discussed in the following section. Individual lexical citations are not sourced; all the published sources used are cited in the bibliography but the bulk of the data comes from the authors' individual fieldwork.

Terms for maize can be usefully divided into two types; local formations, i.e. constructed within an individual language, an widespread base forms, usually borrowed across the boundaries of individual language families. Where a writing system already exists subdotted letters have been used, following Nigerian orthographic tradition, rather than phonetic symbols: i e o and u are narrow vowels, and n immediately following a vowel represents a nasalise vowel.

Table. Vernacular Names for Maize in Nigeria.

Language: Phylum Familiy Branch	Language with location name	Term (plural affix follows in noun class languages)	Base form or ety- mology if known and comments
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Niger-Congo

Benue-Congo

	0-		
Yoruboid	Yoruba	àgbàdō ìgbàdō ọkà àgbàdō yọngọn	agba + do agba + do ⊳kà + agba + do cf. Malinke nyon 'cereal'
	Ijumu	àgbàdō	agba + do
	Ō ba	okà .	skà
	O ra	àgbàdō	agba + do
	Ufe	igbado	agba + do
	Amusigbo	àgbàdō	agba +do
	Afo	okà	⇒kà
	Ifira	okà .	>kà
	Ife of Togo	bàfó	?
	Iş ekiri	ìmíyò	< Port. milho
	Igala	akagwa	akpà
		akpà, àkpákpà,	akpà (with redupli-
		à'ákpà	cation)
Akokoid	Afa	ìgbàdō	agba + do
	Aje	àgbàdō	agba + do

	Arigidi	àgbàdō	agba + do
	Igashi	ìgbàdo	agba + do
	Oyin	àgbàdō	agba + do
	Oge	àgbàdō	agba + do
	Ojo	asíkàràho	?
Ayere	Ayere, Ahan	àgbàdō	agba + do
Akpes Ukaar	ı		
Akpes	Akpes	icáàdó	ica + do
	Ase	cado	ica + do
	Auga	ènìk	?
	Daja	ìgbàd>	agba + do
	Esuku	ìgbàdo	agba + do
	Gedegede	ììc€dó	ica + do
	Ibaram	ucádò	ica + do
	Ikaram	ìcàdó	ica + do
Ukaan	Ishe	úgbàdó	agba + do
C 11444	Akan	èj à ndó	ica + do
Okoid	Magongo	ekpurakpa	? + akpa (but cf.
OROM	gongo	•	Oruma)
Edoid			Walahari laan (a.u.)
Delta	Degema	ùmbìàkpá	Kalabari loan (q.v.)
	Egene	á-kà	ska
	Epie	à-kậ	⇒ka
North-	Auchi, Avbianwu	ó-kà (é-)	ska
central	Aoma	ókà	ska
	Atte	akpa	akpà
	Edo	ókà	⇒ka
	Ívbie N.	alakpa	ala + akpà
	Okpe	uși	? cf. <i>ésé</i> 'sorghum' in Busa
	Okulosho	итара	probably reduced from forms like Igede
	T.T.	òò-kpà	akpà. Possibly a
	Uneme	оо-кра	shortening of a
			reduplicated form
South-west	Urhobo	ókà (é-)	oka
South West	Uvbie	ókà	ska
	Isoko	òk à	oka
	Eruwa	ókà (í-)	ska
		-	

North-west	Emalhe	ú-bakpa (í-)	akpà
	Ibilo	ù-ghbàdó	agba + do
	Iyayu	ogbado	agba + do
	Okpamheri	ugbado	agba + do
	Uhami	ó-gbàdó	agba + do
	Ukue	ókà	⊳ka
Nupoid	Nupe	kaba	kaba
•	Bassa-Nge	kamba	kamba
	Asu	akaraba	o ka + raba
	Dibo	akaraba	o ka + raba
	Gupa	ayewù	? + 'sorghum'
	Kakanda	ayiwû	? + 'sorghum'
	Kupa	kaába	kaba
	Gbari-Sumwakpna	kambá	kamba
	Gbagyi-Kuta	yàwyì	? + 'sorghum'
	Gbagyi-Nkwa	wiyaì	metathesis of Kuta
		•	form?
	Gade	gú-cúmpwá (í-)	'sorghum that
		3	goes pop!'
	Ebira-Okene	àpáápà	akpà + reduplication
	Ebira-Koto	aákpà	akpà
Idomoid	Agatu	akankpa	oka + akpà
таотош	Agatu Idoma of Otukpo	igbaŋkpà	igba + akpà
	Akweya	ikpaŋkpà	ikpā + akpà
	Yala of Ogoja		guuli + akpà
	Yala of Ugoja	igu-maakpa	guuli + ukpa guuli
		ìgù	•
	Igede	ambàkpà	a + mbì + àkpà
Igboid	Izii	àkpè	
	Afikpo	àkpùkpà	akpu + akpà
			(< Lower Cross)
	Onica (general),	ókà	oka
	Aniocha, Egbema		
	Onica (town)	ògbàdú	agba + do (loan from
			the west)
	Ika	ókà	o <i>ka</i>
	Ekpeye	ókà	ska
	Obolo Afo	ókà	ska
		áz è zè	?
	Olu	ókh <u>à</u>	ka

	Owere Ohuhu (+ Riverine Igbo) Ukwuani Ikwere Ogbakiri	ókh <u>à</u> µkwhà ó rú µkwhà ó rú ókâ òbìkpà èkpà, ìkpà òbìkpà, òbì'à	cereal of Riverine Igbo cereal of Riverine Igbo cereal of Riverine Igbo cereal of Riverine Igbo cereal of Riverine Igbo characteristics cereal of Riverine Igbo cereal of Rive
Kainji West			
Lake	Reshe Laru Lopa	ri-masarə (a-) dumagu domaji	masar ? ?
Lela	cLela (= Dakarkari) tHun (= Duka) tKag tRor tJiir	ù-ma gana (ë-) əp-hyir bə r k əndi ət-hir kwundi hir magana	'sorghum' + Hausa ? + Hausa 'sorghum' of Hausa 'sorghum' + Hausa 'sorghum' + ? + Hausa (? via Lela)
Basa	Gwamhi-Wuri Basa-Kwomu (Dekina) Koromba (= Basa-	ət-məsə lə u-karábà (a-) ə-məsərə	masar karaba masar
Kamuku	Gurmana) Shama Rogi Səgəmuk Cinda Rɛgi Tiyal (= Kuki) Huŋgworo(= Ngwoi)	misir me ser me ser maser me ser maser maser maser maser misil	masar masar masar masar masar masar masar
Pongu	Pongu Fangwa (Ura) Gurmana	rù-məsərə (a-) məs ələ masara	masar masar masar
Kambari	ciBangi Kambari (Salka) Kambari (Auna)	vi-shina gana (i-) kkárábú (ííkárábú) kkàrèbì (àkàrèbì)	'sorghum' + Hausa karaba karaba

	W- 1 1/1 1/1		
***	Kambari (Agaushi)) kakárábú	karaba
Kainji Eas	` ,	pi-rə(i-)	?
	Kono	bi-nmun-səri (i-)	?
	Piti	$1 dal t_1 b \circ k$	'guinea-corn with
	A		a hat'
	Amo	fè-məsərə	masar
	Chawai	dir kwəzak	'sorghum' + ?
	Mala	idan yago	'sorghum that carries
	Cura		a child'
	Gure	piti gadin	'sorghum' + ?
	Kahugu Kurama	$p_1 m s re$	'sorghum' + masar
	_	ımasanm	masar
	Janji Firan	masiri	masar
5.	rnan	gur pat	'sorghum' + Hausa
Platoid	Kadara	kepro	? perhaps cf. Eggon
	Kaninkon	kpikpan	? + Hausa
	Karshi	nzakpad	nza (= 'sorghum' in
	Kulu (= Ikulu)	àgbá nimbók	Aten) + Hausa 'sorghum like a boras-
	Jili (= Koro of Lafiy	a)sisele	sus palm sprout'
	,		? The form suggests the reinterpretation
			of miseri as CV
			prefix + root
	Jijili (= Koro)	a-miseri (u-)	masar
	Ashe	a-gu tama	'sorghum' + ? Perhap:
			cf. PB *tama
	Zhire	gúrí gyèku	'sorghum' + Hausa
	Adun	bvúr íbvur	'sorghum' + 'sor-
			ghum'?
	Hyam (= Jaba)	gu para	'sorghum' + ?
	Kwyeny	gùùr kpárù	guuli + Hausa
	Angan (= Kamanton) gul koshan	'sorghum' + ?
	Izere	í-nyar 'gbá	'sorghum' + 'musical
		<i>y</i> 0	horn'
	Gusu	idi-manseri	'sorghum' + masar
	Ayu	ikuru	= 'sorghum' ?
	Gwanto	kpawur	Hausa + 'sorghum'
	Shall	gungwaren	'sorghum' + ?

		isaŋ kpa	'sorghum' + Hausa ? 'cereal' + Hausa (? cf. PB *-cangu)		Toro(= Turkwam) Arum-Cesu	e-kùrakpa a-krùSì	'sorghum' + Hausa 'sorghum' + ?
	Eggon Dakana (? Eggon dialect) Nungu	ku buru	'sorghum' + ? 'sorghum' + ? Contraction of Eggon form?		Bokyi Bette Bette of Obudu Alege	nkùrùn ù-kúl (ì-) ì-kúléghí, ù-kwə́l (ì-) kólio	kuuli kuuli kuuli + ? -koli(၁)
	Berom Kagoro Jju (Kaje) Morwa Tyap (= Kataf) Atakat	yara kàpas silok akpat solak akpat (Meek) ya kpat tsa kpat suwa kpat sura kpat	? 'sorghum' + Hausa	Upper Cross	_	ejama ansam esut ejama anjam ansam or arasham ì-gù (rà-)	-caam -caam -caam -caam -caam -caam igu applies to any cereal
? Jukunoid	Do Ashuku Kente Kente Kpan	zibra kũ-kpa ki-kpà kùm-kpa fànkpà kùm-kpà	kum + Jukun? kim + Jukun? kum + Jukun? fa + Jukun (for fa cf. Mambiloid forms) kum + Jukun?		Iyoniyong Korop Legbo LeYigha Lokaa Lubila	anjam ŋkwi nzana nsaŋe é-saamã (n-) nsam	-caam ? kuuli -caam -caam -caam -caam
	Etkywan (= Icen) Kuteb of Lissam Kuteb of Bika	màpwà mgbà	ma + Jukun? ? shortened form of Nama, i.e. deletion of initial ku-		Mbembe Nyima Olulomo Olulomo Ikom	óghàk-kpà akpe È-gû ì-gù(ru)	akpà akpà igu igu
	Nama Kporo of Akwenko Kona Mbembe Kona of Gwana Jukun of Pindiga	kũ-gba kúlu-kp3 za keim za-kim za-kim zaa-kĭm mì-k <u>ì</u>	? kum + Jukun? kulu + Jukun? ? + kim ? + kim ? + kim ? + kim ? + kim		Ubaghara (Bia- kpan/Ikun) Ubeteng Ufia	akpakpa ekpoi ìgùrùgúrú	akpà with reduplication? Borrowed from Lower Cross ? akpà iguru with reduplication
	Chomo Jiru Jiru of Wuyar Jiru of Kir Tita	mi-k <u>i</u> a-cim á-shim yi-cim gangwẽ	-kim -kim -kim ?		Ukpet Umon Uzekwe Anaang	ekpai or ekpoi akpoi éggwâ, íggwû à-kpàkpà	akpà Applies to any cereal igu presumably primary form akpà with redupli-
Tarokoid	·	kwòndòŋ ì-dàlòŋ	kom + ? contraction of Dalong Place-name Dalong		Ebughu	m-bòkòxò	cation mbokoro

	Efai	í-yákp5rô	? mbokoro
	Efik	ì-bì-kpòd	bi + kpòd
	Ekit	à-bòkpà	? + akpà
	Enwang	à-pàpà	akpà. kp > p is a regular correspon- dence in Lower Cross
	Etebi	à-bàkpà	akpà
	Ibibio	à-bàkpà or àkpòk	-
		àkpàkpà	• •
	Ibino	àbàkpà	akpà
	Ibuoro	àkpòkpà	<i>akpà</i> with reduplica- tion
	lko	àbàkpà	? + akpà
	Ilue	ìdìkpòd	dì + kpòd ? cf. dì 'cereal' in Platoid
	Itu Mbuso	àkpòkpà	akpà + reduplication
	Obolo	àkpà, àkpàkpà	akpà + reduplication
	Okobo	ńtòkòd	? -kpod
	Oro	mmòkòrò	mbokoro
	Uda	ààpà	akpà
	Ukwa	ìbòkpòd	-kpod
	Usakade	úsân	-caam
Ogoni	Kana	kpàkpà	<pre>akpà + reduplication (< Lower Cross)</pre>
	Ken Kana	kpààkpàà	akpà + reduplication (< Lower Cross)
	Gokana	kpákìrà	akpà + ?
	Eleme	akùkùrì	? kuuli
Central	Abuan	ò-bìàkpà (i-)	cf. Kalabari, Nembe, Ikwere
Delta	Ogbia (E)	à-bịàkpà (ị-)	<i>à + bi + akpà</i> ; cf. Kalabari, Nembe, Ikwere
	Ogbia (W)	obukpa	<i>ò + bi + akpà</i> ; cf. Kalabari, Nembe, Ikwere
	Kugbo	o-biaakpa (i-)	akpà
	Odual	skà	okã
	Bukuma	ò̞-bị̀àkpà (i̞-)	

	Obulom	òbìàkà	Ikwere $\dot{o} + b\dot{i} + 5k\tilde{a}$; cf. Kala bari, Nembe, Ikwere
Dakoid	Lamja	ye <i>l</i> e kàà	'sorghum' + kpara
	Samba Daka	kàì	(= maize beer) ? shortened version of
	Nnakenyare	kàáy	Taram form ? shortened version of
	Taram	ka yiri	Taram form kpara (= maize beer)
	Tiba	apìge ra	+ 'sorghum' ? but cf. 'sorghum' acera
Mambiloid	Mambila of Atta	ngwaam	kom
	Mambila of Warwar	kom	kom
	Mambila of Kuma	taap	? no link with 'sor-
	Mvano	fuan	ghum'? unless cf. punu. Also
	Mbonno	fan	cf. Kpan
	Somyεwε (= Kila)	mu buba	? unless cf. punu
	omjews (= Kna)	mu vuva	? no link with 'sor-
	Vute	minon (soft)	ghum' ?
	Kwanja Sundani	tikpere (hard)	?
	Ndoola (=Ndoro)	gùmbà	gombi
D	,	(a)-kwana	kom or Jukun (Kona)
Buru Tivoid	Buru		kom or Jukun (Kona)
Tivota	Tiv	íkyúlèké	kuuli + ke
	Abon	agumana	'sorghum' + ?
	Batu	aku kwan	'sorghum' + Jukun (Kona)
	Batu Afi	ngúgun	gu + reduplication?
		aku-kwèn	'sorghum' + Jukun
	Batu Angwe	ákwòn	(Kona) 'sorghum' + Jukun (Kona) with contrac-
	Batu Kamino	er ws	tion?
	Esimbi	njúg ^w an, acúgu	?
	-SHIIDI	éé-ngi (óó-)	?

F1 1.1	Ciasham	ncham	caam
Ekoid	Ejagham		-caam -caam
	Ejagham Ekin	nsam m-búkpà (bo-)	
	Ekparabong	<u>-</u> ' '	akpà
	Balep	έ-wâkpà (ŋ-)	akpà
	Bendeghe	ń-kúl	kuuli !!
	N. Etung	ŋ-kúi/ŋ-kùi	kuuli
	S. Etung	ń-kúi/ń-kùi	kuuli
	Efutop	m-màkpà /á-	akpà
	Nde	έ-gù /a-	gu
	Nselle	≅ -gù /a-	gu
	Nta	Ē-gù ∕a-	gu
	Abanyom	έ-gúbákpá /a-	igu + ba + akpà
	Nkim	í-kùl /ŋ-	kuuli
	Nkum	í-kòl /ŋ-	-koli(၁)
	Nnam	ή-kîl /a-	kuuli
	Ekajuk	έl-k≾l /ŋ-	-koli(a)
	•	, ,	
P. aut.			
Bantu Jarawan	Kantana	gu gurán	'sorghum' + ?
Jaiawaii	Mbula	m ¹ sa kono	masara + Kona
	Jar	mbàlwá	balbo (cf. Chadic)
Grassfields	Jai	vaiwa	baibb (ci. Chadie)
	Vembe (- Velse)	admhì	gombi
Mbam-	Yamba (= Kaka)	gòmbì !4	? contraction of
Nkam	Limbum	kwá-	
(examples			-kwana (see Ndoro),
only)			i.e. Kona
	Bali	ngàfút	ngaful
	Bangangte	ngà fúl é	ngaful
	Dzodzinka	kwâ	? contraction of
			-kwana (see Ndoro),
			i.e. Kona
	Bafut	ànsán	-cangu
11.11		•	
Ijoid U	Missass	Manilland	cf. Ibibio (Lower
Įjọ	Nkoroo	àkpùkpà .	-
	** .	1331 3	Cross)
	Ibani	mbìàkpà	mbi + akpa
	Kalabari	ìmbìàká	i + mbi + 9ka. Prob-
			ably a reinterpretation
			as $kp \rightarrow k$ is not regular

	Okrika	ìpìàmgba	cf. Nembe if a shift o nasality has occurred
	Nembe	ìmb <u>ì</u> àkpá	akpà
	Akaha	agbodo	agba + do
Izon	Western Delta	àgbòdò	agba + do
	W. Olodiama	àgbòdó	agba + do
	Bassan & other	àgbódó	agba + do
	Oiyakiri	àká	skã
	East Tarakiri	àká	∍kã
	Ikibiri & other	àká	o k ä
	Mein	àká	∍kã
Inland Ijo	Oruma	ìkpù	?
	Akita (Okordia)	ákâ	∍kã
	Biseni	ákâ	⇒ kã
V			
Kwa	Gun	gbado abado	agba + do
	Fon	gbade	agba + do
Mande	Bisa [this is not the	kampana	kaba
	Busa dialect, see		
	Prost 1953]		
	Boko	agbado	< Yoruba?
	Busa	agbado	< Yoruba?
	Kenga	maïshe	?
	Sorko	manyimo	? but cf. Bambara
			manyo ma + nyo 'big
			sorghum'
	Dyula (vehicular)	kàbà	kaba
West	Fulfulde (Fouta	kaba	kaba
Atlantic	Djalon)		,
	Fulfulde (Sokoto)	kaba	kaba
	Fulfulde (Adamawa)		elsewhere a name for
			'bulrush millet'
4.1			
Adamawa	C 1 - T - 1 C		T 1
Vere-Duru	Samba Leeko of	kpankara	Jukun + kara perhap:
group	Donga		from Cameroon kpare
	~ 1 * 1 ^		'maize beer'
	Samba Leeko of	kaara	? cf. above
	Balkosa	•	•
	Wom (= Perema)	dutu-ra (-vəro)	?

	1 1 J U	shutu-ra (-fa)	?
	(= Mumbake)	oiti	?
	Koma i	rosey	?
	Koma 5	re sara	? not connected with
	Monn (vere)	c suru	'sorghum'
	of Yadim	i pun	?
		i pun	
	of Karlahiri	dərə m	?
	Pere (= Kutin)	2010111	
Trans-Benue			Land radualicated?
Waja group	1000 (11	kwalkwalí	kuul reduplicated?
, , ,	Tula Wange	kwàkwálé	kuul reduplicated?
		tụkụm	cf. Tsobo kutu for
			'sorghum' (by meta-
			thesis?)
	Tula Baule	kwàkwálę	kuul reduplicated?
	Tula Yiri	túkúŋ ɛm	cf. Tsobo kutu for
			'sorghum' (by meta-
			thesis?)
	Waja	ligámè	? cf. jamà for sor-
			ghum' unless a loan from
			Tera likam
		ligámè kwanáà	as above
		(short type)	•
	Waja Deruwo	lịkámệ	as above
	Bangwinji	buk shánè	? unless cf. 'sorghum'
			sam
	Kamo	shangúm	'sorghum' + ?
	Tsobo (= Lotsu-Piri)	máákùm	? not like sorghum
	•		words
	Cham Dijim	butali	< Fulfulde
	·	mínkèm	? but perhaps cf. Kyak
	Cham Bwilim	jáám ku <u>n</u> áárám	'sorghum' of Kona?
	Dadiya	jaŋa fim	'sorghum' + ?
Kwa	Ba (= Kwa)	makum	cf. Tsobo
Bikwin	Burak	yáá bóo	'sorghum' of mucus
group			[or 'evil spirit']
9. our	Mak (= Panya)	yèra kwán (R.M.I	3.) 'sorghum' + Kona
			people

		yìrà kwân (U.K.)	
	Munga Leeláú	mun kwoi	'sorghum' of Kona people
		mom Kwae (Meek)	
	Kyak	mún kùnàà	'sorghum' + Kona
	Moo (= Gwomu)	mun kuna	'sorghum' + Kona
	Maghdi	búbànè	?
Jen group	Dza (= Jen)	ihwe	? no link with 'sorghum'
Kam group	Nyiwom (= Kam)	muro	? unless link with muri, Fulfulde for 'millet'
Yungur	Bana of Dumne	k∍l bog-ra,	kuuli + ?
cluster		pl. k∍ l bokta	
	Roba	kom rima	kom + ?
	Lala of Yang	kur gima (R.M.B.)	kuuli + ?
		kwir gimá (U.K.)	
	Gana (= Mboi)	fa tima (R.M.B.)	? no connection with
		fademá (U.K.)	other cereal names
	Kaan (Libo)	kwaŋ ufa	kom + ?
Mumuye	Pugong	záa kin	'sorghum' + ? food
cluster	Zing	záa gin	'sorghum' + ? food
Yendang	Yendang	si kon	? + 'sorghum'
group	Waka	dzeki	? not connected with
			'sorghum'
	Teme	ko fa	'sorghum' + fa
	Kumba	sopa	'sorghum' + pa
	Gengle	som kiva	'sorghum' + ?
	Kugama	som kiva	'sorghum' + ?
	Balo (= Bali)	sem kwabá	'sorghum' + ?
Longuda	Longuda of Guyuk	ap∈nwa	? punu (see Chadic
			languages)
	Longuda of Gwaanda	yákám jùla	'sorghum' + ?
Mbum	Mbum	nàn kúnà	'cereal' + Kona?
Gbaya	Gbaya	gba-fón	gba + fón ? +
		mbongo	'sorghum' (< Ewond

Nilo- Saharan			kolikoti
	Songhay (kaado) Songhay Zarma Dendi	kotikoli kolikoti	kolikoti kolikoti kolikoti kolikoti
Saharan	Kanuri Kanembu Daza Teda	másár(mì) massar (Barth) masomia wome massarmi (Barth)	masar + ?
Afro- Asiatic			
Semitic	Arabic (Shuwa) Arabic (other)	masar umm abat dura Shami	masar ? 'sorghum' + Syria (Portères 1955:223)
	Arabic of Tunis	engafuli masri	ngaful + masar ngaful
Berber	Ghat Tripoli Tamachek Tamachek (Ahagga	eljafuli ghaful masri tifsut or tifsi or tesu r) engafoulé	ngaful + masar
Chadic			
West Hausa	Hausa	(daawàr) masàraa	masar
Bole-Anga		balwo	balbo
Angas	Angas Maghavul Goemai	saŋ kwá	Probably a loan from Plateau languages. Cf. Ninzam isan kpa
Ron	Kofyar Bokkos	swapas yagôn	'sorghum' + ? ? cf. Mala (Platoid) idan yago
N. Bauch	Daffo-Butura Kulere of Ambul Fyer ii Pa'a	másara 'asu kpúú bálbo gàrin dáw-a (-í)	masar ? balbo < H. (lit. 'cassava flour

			of sorghum')
S. Bauchi	Buli	guum án	'sorghum' (in Plateau
5. Daucin	2411	84477.41	languages) + ?
	Dot	wulé	?
	Geji	wookúdu	'sorghum' + ?
	Polci	buŋware	?
	Zul	okudu	resembles -kuru form:
	241	Ortina i	in Plateau languages
Bole	Karekare	damasar	? + masar
	Galambu	bâu	balbo
	Bole	damasar	? + masar
	Ngamo	masar	masar
	6	haigm	?
	Kutto (= Kupto)	àfínòn	· ?
	Kholok	k ^h óómò	kom
	(= Widala, Kode)		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	Kushi	kóómò	kom
	Pero	kóomò	kom
	Nyam	zekhim	< Jukun
	Tangale	уацуац	? not like 'sorghum'
	Dera (= Kanakuru)	ápónò	punu
	, , ,	apwεnεn (Meek)	1
	Ngizim	másářm-i (-àmín)	< Kanuri
	Boghom	angyilon	?
Central	J	30 3	
Tera	Tera	likám	? + kom
	Pidlimdi (= Hinna)	pmodi	punu + ?
	Jera	likam	? + kom
	Ga'anda	puno	punu
	Gabin	puno	punu
	Hwana	ùpùnú	punu ·
		pənu (Meek)	_
Bura-Higi	Bura	<i>p</i> ə <i>nau</i>	punu
		pmeu (Meek)	
	Kyibaku	apnau	punu
	(= Chibbuk)	masar (Meek)	masar
	Huba (= Kilba)	hí bəgò, hi bəkou	? 'sorghum' + ?
		hi biku (Meek)	
	Ngwaba	gobwus	cf. Gudu
	Margi (s.l.)	khiya masere	'sorghum' + masar
	Margi Babal of	masar	masar

	Lassa		
	Margi of Minthla	apanəu	punu
	Kamwe (Fali of Kiria)	xa vwa	'sorghum' + Kanuri
	Kamwe (Higi) of Moda	xa vwa	'sorghum' + Kanuri
	Kamwe (Higi) of Bazza	harvwá	'millet' + Kanuri
Mandara	Mandara	xi masere	'sorghum' + masar
Manuara	Glavda	χ ia babra	'sorghum arranged in
	Giavaa		rows'
	Taghwa (= Zələdvə)	xia masara	'sorghum' + masar
	Vizik, Woga	bab¤r	? probably from Pabir, the Islamised Bura
	Xə di (= Hide, Tur)	búrbùr	?
	Mafa	gágár	?
	Sukur	xlabir	? not a sorghum root
	ou		but perhaps cf.
			Glavda
Bata	Bacama	dawa	Hausa word for 'sorghum'
	Bata of Zumu	mapinawo	punu
	Bata of Malabu	dawəi	Hausa word for 'sorghum'
	Gude (= Cheke of Mubi)	ngul ^e	? gunli (a loan from BC languages)
	Gude Dərəbəs	nguliya	? guuli
	Uroovin (= Fali	ngulya	? guuli
	of Vimtim)	30 7	
	Bahuli (= Fali of Bahuli)	ngwuliya	? guuli
	Madzarin (= Fali of Muchella	jekov an	? + Kanuri
	Urambwiin (Fali	jekovan	? + Kanuri
	of Bagira) Ulan Mazhilv∍n	3 akovwan	? + Kanuri
	(Fali of Jilbu) Gudu	gau buzə (Kumbi	'sorghum' + 'Buzu'?
	Holma	z »kz» k dialect) mapuna'a	punu

		mapinawin (Meek)	
	Njanyi	ma'puna'o	рипи
		map inawe (Meek)
Kotoko	Afad ə	babra l sad	'millet' + Lake Chad
Yedina	Yedina	masarmi	< Kanuri
	(= Buduma)	má [?] àr	< Hausa?

By setting out terms for maize by language group it becomes apparent that maize is an intrusive crop. In no case is a particular root found throughout a language group - the mixture of terms marks the geographical spread of names clearly and suggests that maize is of no great antiquity in West Africa.

There is very little evidence for significant lexical distinctions between 'hard' and 'soft' or 'yellow' and 'white' maize. Vute is the only clear attestation. It may be, however, that this is an artefact of elicitation; on most wordlists, maize is a unitary category. It is possible that the co-existence of okà and àgbàdo among the Yoruba originally reflected a distinction of maize cultivars, now neutralised.

3 Discussion of base forms

THE DIFFUSION OF MAIZE IN NIGERIA

The following section lists the base forms proposed in column IV of the Table and suggests either etymologies or starting points for their diffusion.

agbado

This is the normal Yoruba form and has spread eastwards along the coast to the western part of the Niger Delta and through the Edoid area into some Igboid-speaking areas as far as to Onitsha. The same word is found to the west of Yoruba as far as the Gbe cluster, e.g. Fon gbade. Prost (1953:120) records agbado for the Mande languages Boko and Busa spoken to the north-west of Yoruba. Portères (1959:86f) claims that this is a compound, agba + do. He identifies do, dé or di as 'sorghum' in Bariba and Fon, claiming that it is of Gur origin. He also identifies Agba with the Yoruba subgroup Egba, thus claiming that the form means 'sorghum of the Egba'. The term would thus have been formed in the territory of the present-day Republic of Benin or Togo and spread, he suggests, through influence of the Kingdom of Abomey.

The term certainly appears to be an old compound, and does not seem to have any obvious etymology in Yoruba. Porteres's etymology depends upon establishing:

(a) that do means 'sorghum' in one or more languages to the

west or north-west of Yoruba,

32

(b) that the first element refers to the Egba,

(c) that the supposed language of origin of the compound has

the word order modifier-head.

The first element cannot possibly be Egba, which has the tone pattern LH, whereas agbado is LLM in Yoruba. The low-toned gbà corresponds much better to the root -kpà(t), discussed below. The word order modifier-head is found in Gbe but not in Yoruba. Hence if the elements are correctly identified as 'the do of the Agba' (and not 'the agba of the Do'), the compound cannot have been formed in Yoruba, but could have been in Gbe, which places the modifier before the head. It thus seems likely that the compound was formed in a language which used do or de for 'sorghum' and had modifier-head word order. It was then borrowed as a whole into Yoruba and spread eastwards from there.

An alternative derivation is that the head is àgbà, a form of akpa(t), and that the modifier is Adó, 'Edo, Benin'. This is unlikely to have been formed in Yoruba, since it would yield a final H and not a final M tone. The meaning also poses some problems, since it would be 'the àgbà of the Edo', implying that àgbà was some earlierknown type of cereal, whereas where it is used alone we have found it referring only to maize. The only real supporting evidence in favour of this derivation is the forms in Ukaan-Akpes, apparent compounds of ica + do or ado (unfortunately there is little consistency in the tones recorded in our sources), where ica could perhaps be the caam-root. In this case compounds would have been formed in the minority languages of the area between Edoid and Yoruboid, ica + Adó or àgbà + Adó, with the latter being borrowed into Yoruba and spreading thence to the west. An objection to this is that the general spread of maize seems to have been from north and west to south and east, and that this general picture is confirmed by the basic role played by maize in Yoruba agriculture and food preparation, where it is ground and used in many dishes rather than being just boiled or roasted and eaten plain as to the east.

akpà(t)

This is the single most common and most problematic base form for maize. It is found in many parts of south-central Nigeria (Map 3), sometimes reduplicated, but often with an additional form compounded initially. Some of the Idomoid forms seem to compound akpa with the kuuli(l) base forms common in the Middle Belt. The confusion may arise because there are two distinct sources for the -kpa element which may be compound and re-interpreted.

akpà(t) has a widespread primary meaning as a qualifier referring to other ethnic groups. In the Plateau languages, -kpa(t) nowadays refers to the Hausa, although it probably originally meant 'Northerner' in general. Further south, as among the Idoma, it is used to refer to the Jukun. In Cross River, it means 'Northerner' in general. The akpa forms in some Upper Cross languages, such as Ubaghara, are probably late borrowings from Lower Cross. Whether these base forms are also related to the term for Kanuri vwa that appears in some Central Chadic languages is open to question, but not an unreasonable hypothesis.

Another puzzling question is the relationship between akpa and the agba element found in Yoruba $\grave{a}gb\grave{a}d\bar{o}$. No convincing etymology for this word has yet been proposed and therefore has the appearance of a borrowing, although this would not explain the -do. One possibility is that this is a meaningful compound in a northern Edoid language and this form was borrowed into Yoruba from the northeast. Some support for this idea is provided by forms in Akpes-Ukaan, such as $\grave{e}j\grave{a}nd\acute{o}$, where a -do element has been compounded with a different stem.

A related ambiguity is found in the Gudu term for maize, gau buz, which apparently refers to the Buzu, a common name for the ex-slaves of the Tuareg. Although there are no Buzu in this region today it may be that they were confused with nomadic northern raiders from present-day Niger at the time of the introduction of maize. The Kanuri are less often identified as the transmitters of maize although the Kamwe (Higi) refer to maize as 'sorghum of the Kanuri'.

balbo

A base form found in a number of West Chadic languages, such as Angas and Fyer. It has also been loaned into the adjacent Jarawan Bantu forms.

-cáŋgú

This is a Guthrie-derived reconstruction for 'cereal' in PB and is probably ultimately connected with the -caam forms widespread in eastern Nigeria. More directly it shows up in the Grassfields as -sán.

-caam, nsam

A base form notably found in Cross River, Jukunoid and Ekoid languages, spreading into the grassfields of Cameroon but probably originally a loan from trans-Benue (Adamawa) languages, where it is standard for 'sorghum' in the Waja group. It also occurs in Plateau, for example in Tyap [Kataf] meaning 'porridge'. Koelle (1854) records it for 'guinea-corn'. The Lower Cross language, Usakade, attests this form in contrast to the rest of the group. Maize would have been introduced to this region after the Usakade split off from the main body of Lower Cross and settled in their present location (Connell & Maison, this volume). Trade connections between the Usakade and either the Ekoid or Grassfields Bantu speakers, via the Akpa Yafe river, probably explains the different term.

Porteres (1955:85) and Pasch (1980:44) argue that this base form is connected with the second element in dura Shami (i.e. 'sorghum of Syria'), a widespread Arabic form from the Nile Valley and certainly attested as far as Lake Chad. Although there are a potentially convincing series of geographical links via northern Cameroon, the early attestation of these forms for 'guinea-corn' makes it possible to rule out this explanation.

dawa

dawa is the common Hausa term for 'sorghum' or 'guinea-corn'. Originally, the Hausa called maize dawan Masar, 'sorghum of Egypt' (Barth 1862, II:174) but this was soon shortened to masará. However, it probably spread in this form to other Chadic-speaking peoples such as the Bata and Bacama, who had quite a different name for sorghum. The qualifier was then deleted, leaving dawa with the meaning maize.

fan

This base form is attested in a scatter of languages in Adamawa, most notably Teme ko fa, Kpan fànkpà and Mbonno fan. It almost certainly spread from Cameroon, where these forms are common, for example, Yamba pón, Maka foán, Ewondo fón. Mveng Ayi (1981:590) identifies the source language as Gbaya, where fon is applied to sorghum, but Blanchard & Noss (1982) note this as an Ewondo loan.

THE DIFFUSION OF MAIZE IN NIGERIA

gumbi

This is a form found locally near the Mambila Plateau, for example in Kwanja gumba and Yamba gòmbi. Both are probably connected with Mambila of Atta ngwaam but are probably separate from the kom root, also occurring in Mambila.

ka(a)

ka is confined to the Dakoid languages and is probably not connected with other similar-looking base forms such as oka. It may also be the second element in the word for 'bulrush millet', maka. The source of this may well be the Chadic base form xa meaning 'sorghum' found in nearby languages such as Kamwe (Higi). Dakoid shows other Chadic loan-words. Since Fulbe in the region have also generated a term for 'maize' from the (quite different) Fulfulde term for 'millet', the analogy is an areal feature. Whether this in turn is connected with the ka for 'cereal' in some Mande languages (see discussion under oka) is unknown.

ka(m)(ra)ba

This base form is most widespread among the Nupoid languages in Nigeria and it is absent only where it is replaced by a local coinage derived from 'guinea-corn'. It is also found in West Kainji and other languages in northwestern Nigeria. However, it is also attested in vehicular Dyula, in Tukolor and in the Fulfulde spoken in Guinea and Senegambia and also in Bisa kampana. This suggests that it was brought to this part of Nigeria via the northwestern route, either through Fulbe or Dyula traders. The infixed -ra in Kambari, Asu and Dibo cannot be original as there is no trace of it in the Senegambian source languages. If so, it is unlikely that there is a connection with the widespread oka base form for 'maize' in southwestern Nigeria (see below) if the last syllable has been deleted. Monteil (1964:227) quotes a Songhay form that is not elsewhere attested, masara kama, i.e. 'Egyptian wheat'. If this is genuine, the link with the Arab term for 'wheat' could provide a source for the kamba forms.

kom

This term for 'sorghum' is most widespread in Adamawa languages but seems also to have spread as far south as Mambila. It is similar enough to both the *cim* forms in Cross River and Jukunoid and even to the *kuuli(l)* forms in central Nigeria to propose that these may all be interconnected. It has also spread into several Chadic languages, such as Pero and Kushi, in close proximity to Adamawa languages. It is also similar to the *kona* base form (see below) and the two cannot always be distinguished.

kona

This does not appear in isolation, but usually compounded with 'sorghum' and seems to refer to the Kona people, a branch of the Jukun who today live between Jalingo and the Benue River. To judge by the number of attestations in the Muri Mountains region, the Kona were active diffusers of maize at some point. The -kwa forms in Grassfields languages such as Dzodzinka and Limbum are probably shortenings of this base form, as it appears as kwana in neighbouring languages.

-kpod

This root only shows up in Lower Cross languages, usually compounded with a variety of first elements. It might be related to the *mbokoro* base form (q.v.) although the sound correspondence $kp \sim k$ is not otherwise attested in Lower Cross.

kuuli(l)

This is undoubtedly an ancient Benue-Congo root for 'sorghum'. It appears in regions such as the Cross River, where guinea-corn is not grown. It is frequently shortened to ku(u) or voiced as in gu(u). It has also spread to some adjacent Adamawa languages, e.g. Lala kur. Adamawa forms for 'maize' such as Yebu kwalkwali may represent reduplications of this form. It is also loaned into some Chadic languages, such as the Fali cluster and Gude, in a voiced form guuli. The analysis of the base form is made complex by its antiquity and the consequent difficulty of knowing at what point it became shortened.

masar(mi)

Portères (1955:223) was the first to point out that the *masar* forms are developed from a supposed Egyptian provenance of maize. This form is very widespread in northern Nigeria (Map 3). Versions of the base form *masar* are commonly derived from the Hausa *masará* as the Hausa have been the most active in spreading maize during the twentieth century. However, if maize came across the desert at an early period, then it is likely to have first reached Borno, and the Kanuri form *masarmi* would have precedence. This term appears to have diffused on a small-scale in the region (e.g. to Ngizim) but to have been less significant than the reduced form. Since Kanuri itself is being re-lexicalised from Hausa and *masar* is now common in Borno this process may have also occurred in some of the intervening languages.

mbokoro

This term shows up only in Lower Cross languages, in a variety of forms, but its origin is unclear. The root, -koro may be connected with kona forms, or (less likely) with kuuli(1).

ngaful

This term is found in North Africa and appears to have spread across the desert via the caravans. Forms are found in Tunis, Tripoli and in Cameroon among the Grassfields Bantu languages Bali and Bangangte where it surfaces with a final dental (Pasch 1980:43, Elias et al. 1984). A strikingly similar form has also been recorded among the Nalu of Guinea-Bissau, presumably suggesting a small-scale independent introduction by Barbary mariners.

ska

This may be a very old root for 'sorghum' or 'millet' if Prost (1953:165) is right in interpreting Bambara ka-ba, 'maize' as 'milgrand'. We have already noted there is another ka root in Adamawa that may be connected. The form oka is found in Yoruba as 'cereal', qualified with bàbà for 'sorghum' and àgbàdō for 'maize'. Unfortunately, we do not have the Baatonun (Bariba) form to see if these words could have entered Yorubaland from the north-west; okà bàbà 'sorghum' looks very like the Bambara ka-ba, 'maize' of Prost.

• kà is also found widely in Edoid for 'maize', particularly outside the north-west area. If it is a loan from Yoruboid, it was

probably borrowed before the spread of àgbàdō, which would then have partly replaced it in the north. In Igboid, it is the chief form, although as we have already noted under akpà(t), it has possibly replaced other forms across the centre of the Igboid area. However, the Igboid forms look like a source of the base form, because the lects which normally preserve the nasal vowel or aspiration which developed from nasality (Owere, Olu, Ohuhu) show it here, whereas those which lose it (Ekpeye, Onica, Ukwuani) do not show it. The only unexpected form is Ika, which normally preserves nasality but does not have it here. This suggests that the root was originally nasal, lost nasality as part of a regular sound change, and was then borrowed into Yoruboid, Edoid, and Ika without nasality. This interepretation rather seems to contradict the implications of the spread of àgbàdo. okà has largely been replaced by àgbàdo in everyday Yoruba, but the existence of a qualified form okà àgbàdo suggests that a descriptor has become a substantive.

punu

A base form common to a number of Central Chadic languages in north-eastern Nigeria. Apparently not derived from a sorghum term. It has also spread to at least one Adamawa language, Longuda. This is similar to the fan/pon forms found in Cameroon (see above) and further south in Nigeria. The two base forms may be part of a single set, although the immediate geographical linkage is missing at present.

vwa(n)

In some Chadic languages, such as Higi and Fali in north-eastern Nigeria, this is found as a suffix apparently meaning 'Kanuri' or simply 'Northerner'. It corresponds to the -kpa base forms in the centre of the country and buttresses the otherwise slender evidence for the diffusion of maize by the Kanuri people.

4 Conclusion: the spread of maize

The most surprising but clear result of the investigation of maize names in Nigeria is that, in contrast to elsewhere in West Africa, maize was not adopted from the Portuguese. In the south of Nigeria, there is almost no trace of a Portuguese introduction, although other sources confirm that this happened elsewhere in West-Central

Africa. Excluding the single case of Işekiri, all names for 'maize', even those on the sea-coast, refer directly or indirectly to a northern origin. This also suggests that Portères's distinction in routes between hard and soft maizes does not apply to Nigeria and that both types almost certainly came from the north.

Two processes have been at work contributing to the spread in Nigeria: diffusion from farmer to farmer and long-distance trade. Farmers, seeing the new crop, constructed names that reflected its similarity to plants they already knew, most commonly sorghum. Some of these names are descriptive, but often they attribute maize to some rather ill-defined group such as 'Northerners' or 'Jukun'. Peoples of the humid zone grew no cereals in the pre-Portuguese era. They tended to have a generalised word for cereal that was applied to grains that came to the markets through trade, which was then applied to maize. The scattering of the Hausa loan-word masara is an example of the complementary process of trade. Maize would have been brought in as a "new" crop to markets as part of the trade networks.

There were apparently two major and three minor routes by which maize reached Nigeria: (1) major northern routes a) via Borno, b) via the Niger river; (2) minor southern routes, a) from Benin Republic [?], b) from the Cameroon Grassfields, c) Portuguese introduction to Iṣekiri. These routes are shown schematically on Map 1.

The Borno route was the most important, to judge by the linguistic evidence. Forms such as *kaba*, which link Nupoid and West Kainji terms to the Senegambia are confined to a small area of west-central Nigeria. From northern Nigeria, maize seems to have "funnelled" through the centre of the country, spreading from the southern Zaria peoples throughout the Benue valley. Crossing the confluence, it then spread southwards to the sea-coast and southeast to the Cross River area. Some traces of the *-kpa* base forms occur among northern Edoid speakers, arguing that there was also a minor diffusion south-west of the confluence.

Maize certainly reached Yorubaland from the north-east and may also have come east from the present-day Benin Republic. It was assimilated linguistically to the sorghum traditionally grown in northern Yorubaland and spread down to the sea-coast. Maize then spread eastward to the Niger Delta and also into the Benin and Edoid-speaking area. The Isekiri example shows a trace of Portuguese contact on the south-western coast. The fan roots in Ada-

mawa probably point to maize spreading into Nigeria from the Bamileke region of Cameroon.

Conventional historical schemas are often adopted by historians in the absence of written documents to fit their own preconceptions. The linguistic investigation of maize has made clear that accepted opinion is incomplete and in some cases actually wrong. This suggests that a wide variety of other topics could be investigated to illuminate this type of unwritten history.

NOTES

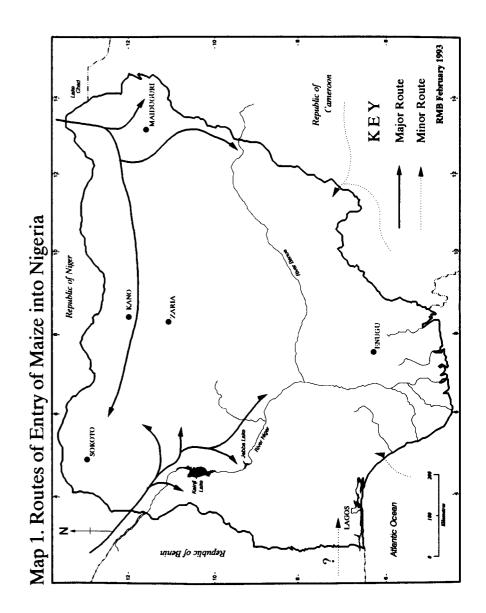
- 1 The core material of the linguistic data came from the fieldwork of the three authors. However, a number of other researchers have assisted us by providing maize names from unpublished fieldwork. The greatest number came from Ulrich Kleinewillinghöfer, but we would also like to thank Rudolf Leger, Rob Koops, Norman Price and Carl Follingstad for additional words. We are grateful to Professor Herrmann Jungraithmayr for a chance to try out some of these ideas on the African Languages Department in Frankfurt in a lecture on the 5th of June 1992. Humphrey Burkill of the Royal Botanic Gardens, Kew kindly commented on a draft of the paper and was also able to incorporate some of the linguistic data into the Families E-I Volume of the *Useful Plants of West Tropical Africa*.
- 2 In general. However, in 1992, migratory Buzu were seen in the region of Maiduguri (R.M.B.).

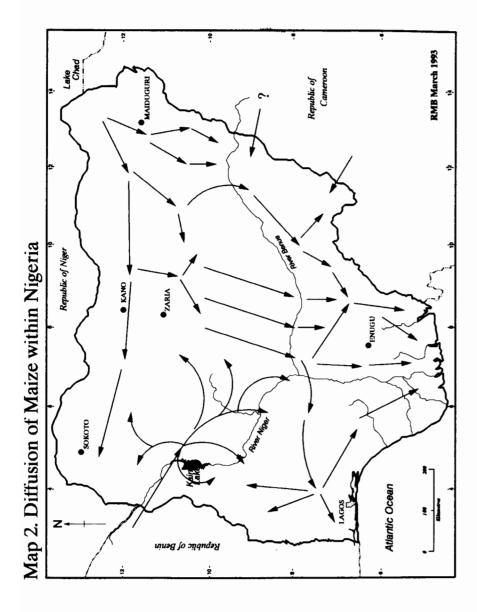
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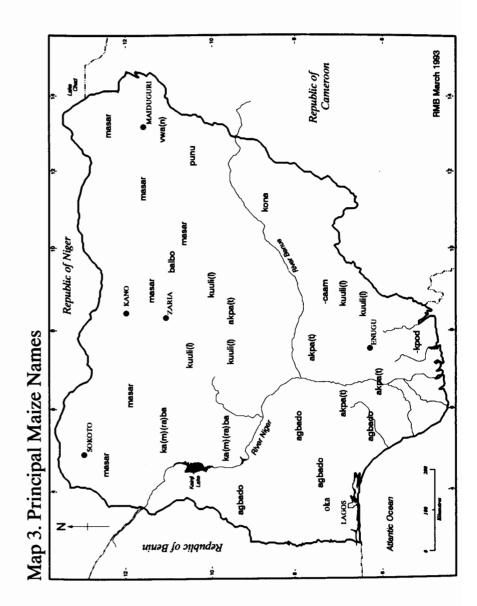
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ZUSAMMENFASSUNG

Nach landläufiger Meinung geht die Einführung des Maises in Westafrika auf die Portugiesen zurück. Obwohl dies mit großer Sicherheit auf die Region Senegambien zutrifft, liegt entsprechendes Beweismaterial für Nigeria nicht vor. Um die Diffusion des Maises dort weiter zu untersuchen, wurde eine Liste vernakulärer Bezeichnungen in einer Vielzahl nigerianischer Sprachen zusammengestellt. Das Ergebnis dieses Surveys legt die Annahme nahe, daß der Mais vorrangig über eine nördliche Route nach Nigeria kam, wahrscheinlich ausgehend von Tripolis durch die Sahara bis hin zum Tschadsee. Mit Ausnahme einiger Bezeichnungen aus der Küstenregion, referieren die meisten Vernakulärnamen für Mais auf "nördliches" oder "Hausa"-Sorghum oder andere ähnliche Kollokationen. Es ist deshalb wahrscheinlich, daß der Mais in Nigeria weitgehend nordafrikanischen Ursprungs ist.

RESUME

Il est généralement admis que le maïs a été introduit en Afrique de l'Ouest par les Portugais. Si cela semble être vrai pour la région sénégambienne, des doutes demeurent cependant en ce qui concerne le Nigéria. Pour suivre la diffusion du maïs au Nigéria, une liste de termes en langues vernaculaires a été recueillie dans beaucoup de langues de ce pays. D'après les résultats de cette étude, le maïs serait venu au Nigéria surtout par la route du Nord, probablement à travers le Sahara, de Tripoli jusqu'au Lac Tchad. Hormis quelques termes de la région côtière, la plupart des noms vernaculaires pour le maïs font reférence soit au "sorgho du nord", soit au "sorgho haoussa", ou à des collocations similaires. Il est donc probable que le maïs au Nigéria soit, dans une large mesure, d'origine nord-africaine.