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ON THE POSITION OF UBI WITHIN EAST CHADIC

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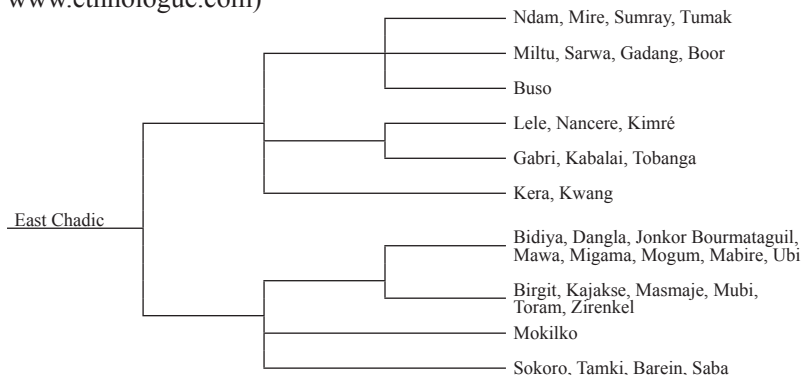
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In the article the position of a recently described East Chadic language Ubi is solved. For this aim the lexicostatistic method was used. Contrary to the classification proposed in *Ethnologue*₁₆, Ubi and Mawa should be classified together with Sokoro and Barain and not together with Bidiya, Dangla, Migama, etc.

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1. The language Ubi is spoken in Central Chad, in the prefecture Guéra, subprefecture Mongo, in southeast from the city of Tunkul, in the village Ubi and other 6 villages around it. The population of Ubi was estimated to 1.100 in 1995 (SIL). The only description of the Ubi grammar and lexicon (c. 365 words) was published by ALIO (2004). Concerning the genetic affiliation of Ubi, its East Chadic provenance is apparent. It is also unquestioned that Ubi is not in any closer relationship with Kera & Kwang – Lele & Kabalai – Ndam – Tumak – Sumray languages. In the most recent issue of *Ethnologue* (16th ed., 2009), Ubi is classified as a language closely related to Bidiya, Migama, Dangla, and especially Mawa. The model accepted in *Ethnologue* represents only a light modification of the model proposed by P. NEWMAN (1977), but without Ubi. Let us compare Newman/*Ethnologue* model and the result of the lexicostatistical test applied to the 12 best documented East Chadic languages (BLAŽEK 2008):

Tree diagram for the East Chadic languages after *Ethnologue*₁₆, 2009 (<http://www.ethnologue.com>)



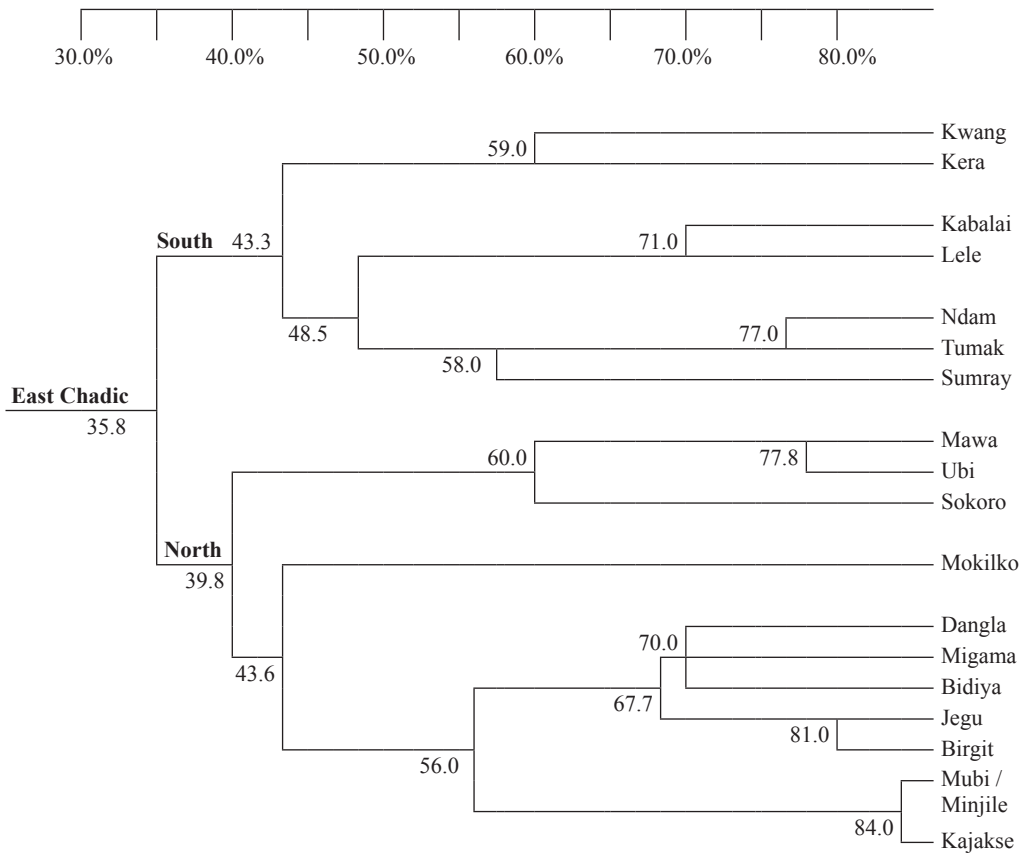
Scheme 1

2. The percentages of common cognates for the the best documented East Chadic languages:

Table 1

[%]	Lele	Sumray	Tumak	Sokoro	Ubi	Dangla	Migama	Bidiya	Mokilko	Jegu	Mubi
Kera	47	42	41	37	29	39	32	31	34	34	32
Lele		52	45	42	33	44	42	41	39	41	45
Sumray			58	40	26	40	44	39	39	41	43
Tumak				40	33	42	35	35	36	41	38
Sokoro					60	48	41	42	39	49	44
Ubi						44	42	44	33	45	36
Dangla							70	70	42	70	58
Migama								70	49	70	53
Bidiya									47	63	53
Mokilko										40	40
Jegu											60

3. Tree-diagram created for the East Chadic languages on the basis of lexicostatistics:



Scheme 2

Note: Toram is closer to Jegu (65.1%) than to Mubi (51.2%). The relatively low figures are caused by very poor Toram lexical data, ca. 40 items from the basic 100-word-list.

4. Till the present time, there are only two attempts to formulate the phonetic correspondences for East Chadic languages, both in the context of the other Chadic languages: one by JUNGRAITHMAYR & IBRISZIMOW (1994₁), the second by Olga STOLBOVA as an integral part of her *Chadic Comparative Phonology* (1996).

4.1. Initial consonant correspondences between East Chadic (JI₁, XX–XXIX):

Table 2

*	p-	ḃ-	b-	b ₂ -	m-	t-	d-	d-	d ₂ -	n-	k-	k̄-	g-	g ₂ -	s ₁ -	s ₂ -	s ₃ -	z-	ʒ-	l ₁ -	l ₂ -	l ₃ -	l-	r-	
Kw		b	w	^(m) b	m	t	d/d		d	n	k	c		⁽ⁿ⁾ g	s	s	s	s		s	s		l	t	
Ke		ḃ	w	b/ ḃ/p	m	t	j			n	k	h	g	⁽ⁿ⁾ g	s	s	s	s	j	s	s		l	r	
Kb	b	b	b		m	d	t/d	t	⁽ⁿ⁾ d	n	g/k	ʔ/y	g	⁽ⁿ⁾ g /k	s	s	s	s		s	s		l	l/r	
Le	b	b	b	^(m) b	m	d	t/d	t	n/d	n	g	ʔ/h	g/k	⁽ⁿ⁾ g	s	s	s	s		s	s		l	l/r	
Su	b	b	b/w	b	m	d	d	t	⁽ⁿ⁾ d	n	g	g/y/j	g	g/k	s	s	s	s	s	s	s	s/ʃ		l	r
Nd	b		b/w	b/p	m	d	d/ʔ	d/j		n	g/j	g/j	g	⁽ⁿ⁾ g	s/h	s	h	h		s/h	s		l	r	
Tu		ḃ	b	m	m	d	ʔ				g	g/ʒ	g	⁽ⁿ⁾ g	h	h	h	h		h	h		l	y/r	
Sk	p/b	f/p	b	^(m) b /m	m	t	d	d	t		g/k	ʔ	g	⁽ⁿ⁾ g	s	s	s	s			s		l	l/r	
Da	p	p	b		m	t	d ^(v)	d			k	k/g	g	⁽ⁿ⁾ g	s	s	s	z				s	l	r	
Mg	p/b	p	b	b	m	t	d ^(v)	d		n	k	ʔ/dʔ	g	g	s		s	z				c	l	r	
Mk	p	b	p/b	m	m	t/d		d		n	g	ʔ	g	g	s	s	s	s		s	s		l	r	
Jg	f		b		m	t	d	d			k	ʔ/k/g	g	⁽ⁿ⁾ g	s	s	s	z		s	c		l	r	
Bi	f		b		m	t	d ^(v) /ʔ	d		n	k	ʔ/k/ h/j	g	ŋ/g	s	s	s	z		s	c		l	r	
Mb	f		b	ḃ	m	t	d ^(v)	d			k	k/j/ʔ	g	ŋ/k	s	s	s	j		s	c		l	r	

Abbreviations: Bi – Birgit, Da – Dangla, Jg – Jegu, Kb – Kabalai, Ke – Kera, Kw – Kwang, Le – Lele, Mb – Mubi, Mg – Migama, Mk – Mokilko, Nd – Ndam, Sk – Sokoro, Su – Sumray, Tu – Tumak

4.2. Medial and final consonant correspondences between East Chadic (JI₁, XX–XXIX):

Table 3

*	-p-	-ḃ-	-b-	-b ₂ -	-m-	-t-	-d-	-d-	-d ₂ -	-n-	-k-	-k̄-	-g-	-s ₁ -	-s ₂ -	-s ₃ -	-z-	-ʒ-	-l ₁ -	-l ₂ -	-l ₃ -	-l-	-r-
Kw	w		p		m	y	d	d	d	n					s	s			s			l	r
Ke	w			b/m	m	ø	d/y	d		n	g		g		s	s			s			l	r
Kb	p		b	p	m	ø/d	r	d/r	⁽ⁿ⁾ d	n			g/y		s	s	s	s	s	y		l	r
Le	p		m	m/b	m	ø/d	r	r	n/d	n	y		g		s	s			s			l	r
Su	w		b		m	r/d	d	d	⁽ⁿ⁾ d	n	g/ø	k	g		s	s	s	s	s			r/l	r
Nd	w		b	m	m	y/t	t	c/r		n	g		g		h	s			h/s			l	r
Tu	w				m	ø	r/d			n	g		g		h	y			h		l	l	r
Sk	p				m	t/y	d/ d/t	d	t	n					s	s					l	l/r	r
Da	p	p	p		m	t	d	d		n	k	g			s	s		ʔ/s		c		ll/r	r
Mg	p	p	b/f	^(m) b	m	t	d ^(v)	d		n	y				s/t			s		s	l	l/r	r
Mk	p		b		m	d/d	d	r/d		n	ø	k	k			s/z	z	d/z			r	l	r
Jg	f		b	b	m	t	d	d		n	ø				s	s		k̄		s	l	l	r
Bi	f	f	b		m	t	d/d	d		n	y				s	s		s		s	l	l/r	r
Mb	f	ḃ	b	^(m) b	m	t/d	d	r		n	c/y/ŋ		g/ø		s	s		s		s	l	l	r

4.3. Initial East Chadic consonant correspondences (without resonants) according to STOLBOVA (1996: 97)

Table 4

pECh *	p-	p ₁ -	f-	b-	ḅ-	t-	ṭ-	d-	ḍ-	s-	z-	č-	č ₁ -	č̣-	ś-	ć-	ć-	k-	g-	γ-	h-
pKera *	p	p ₁	f	b	ḅ	t	ṭ	d	ḍ	s	z	č		č̣	l	s		k	g	γ	h
Kera	p ¹	f	f	b	ḅ	t ⁵		d	ḍ	s	z?	č		č̣	l	s		k	g	h	h, 'i
Kwang	p	p/b	p	b		t		d	ḍ	s	s	č		č̣	l			k	g	g	h, 'o/w
pLai *		p		b		t, -d-		d	ḍ	s	s	č		č̣		s		k	g	h	(h)
Kabalai		p ²		b		t ⁶ , -d-				s	s	č		č̣		s		k	g	h	h, wo
Lele		p ³		b		t-, -d-		d	ḍ	s	s	č		č̣		s		k	g	h	h, wa
pSumray *	p	p ₁	p	b	ḅ	d	t	d	ḍ	s	s	č		č̣?	l	s		k	g	h	'-, (h)
Sumray	b ⁴	p		b	ḅ	d ⁷	t	d	ḍ	s	s	s, č			l	s		k			'-, (h)
Ndam	p	p		b	ḅ	d	t	d	ḍ	h	h	č			l	s		k		h	'-
Tumak	p	p		b	ḅ	d	t	d	ḍ	h	h	s		č̣	l	h		k		h	'-, h
Sokoro	p	?	(f)	b	ḅ	(t)	t	d	ḍ	s	s	č	(č)		l	s		k	g		'-
pDangla *		p		b	ḅ	t		d	ḍ	s	s	č		č̣	l	č	ɸy	k		g	'-
Dangla		p		b	ḅ	t		d	ḍ	s	s	č		č̣	l		ɸy	k		g	'-
Migama		p		b	ḅ	t		d	ḍ	s	s	č		č̣	l	č	ɸy	k		g	'-
Bidiya		p		b	ḅ	t ⁸		d	ḍ	s	s	č		č̣	l	č	ɸy	k		g	'-
Mokilko		p		b	ḅ	t		d	ḍ	s	s	č	z	s	l	s	s	k		g	'-
pMubi *		p	f	b	ḅ	t		d	ḍ	s	s	č		č̣	l	č	ɸy	k		g	'-
Mubi		f	p/f	b	ḅ	t		d	ḍ	s	s	č		č̣	l		'č̣	k		g	h, '-
Jegu		p	f	b	ḅ	t		d	ḍ	s	s	č		č̣	l		'č̣	k		g	'-

¹) *HVp- > Kera f; ²) *upV > Kabalai 'uwV; ³) *-ps- > Lele -ms-; ⁴) *b > Sumray -w-; ⁵) *ti/o > Kera č/i/o; ⁶) *te/o > Kabalai č; ⁷) *dw > Sumray čw; ⁸) *ti > Bidiya čī

4.4. Medial East Chadic consonant correspondences according to STOLBOVA (1996: 144)

Table 5

pECh *	-p-	-f-	-b-	-ḅ-	-t-	(-ṭ-)	-d-	-ḍ-	-s-	-z-	-č-	-č ₁ -	-č̣-	-ś-	-ć-	-ć-	-k-	-k ₁ -	-g-
pKera *	p	f	b	ḅ	t		d	ḍ	s	(š)	č, s	(č)	d	l	s			k	g
Kera	p ¹	f	b	ḅ, b	t		d	ḍ	s			č	d	l	s			k	g
Kwang	b	(b)	b		t		d ¹	ḍ	s ⁹		č			l	s			k	g
pLai *	?b		b	ḅ	d	?	d	ḍ	s	s, č̣		s, č	s		s			k	g
Kabalai	b	b ²	b		d			ḍ	s	č̣			č̣		s			k	g
Lele		b		ḅ	d		d	ḍ	s	s					s			k	g
pSumray *		b	b	ḅ	d	?	d	ḍ	s			(č̣)	(č̣)	l	s		g	k	g
Sumray		b, w			d ³		d ⁵	ḍ	s					l	s		g	k	g
Ndam		b ²			d ³		d ⁵	ḍ	s ¹⁰			č̣	č̣	l	s		g	k	g
Tumak		b	b		d		d ⁶	ḍ	z ¹¹			č̣	nč̣	l	s		g	k	g
Sokoro	p, f		b		(t)	?	d	ḍ	s	č̣		(s)	s	l	s			k	g
Dangla	p			ḅ			d	ḍ	s	d	č	ɸy		l	č	ɸy		k	g
Mig. / Bid.	p			ḅ			d ⁵	ḍ	s	d	č	ɸy	d	l	č	ɸy		k	g
Mokilko	p		b	ḅ, b	t	(d)	d	ḍ	z	s, z				l	s			k	g
pMubi *	p	f	b	ḅ	t		d	ḍ	s	(d)	(č)	d		l	(č)	(ɸy)		k	g
Mubi		f	b	ḅ	t		d ⁷	ḍ	s			d		l		'č̣		k	g
Jegu	p, f	(f)	b		t, -č̣		d ⁸	ḍ	s	d	č	d		l				k	g

¹) *-rp- > -rb-; ²) *-b > -p; ³) *ti > *di > č̣i; ⁴) *di/e > *č̣i/e; ⁵) *di > č̣i; ⁶) *-d > -č̣; ⁷) *idi > iri; ⁸) *-id > ič; ⁹) *si > *č̣i; ¹⁰) *si > *č̣i; ¹¹) *-s > *-z > -č̣.

4.5. The only attempt to reconstruct the Chadic correspondences in vocalism was proposed by O. STOLBOVA (1996: 146). She assumes the regressive vowel assimilation for the vowel of the first syllable:

Table 6

*pCh	a-o	a-u	a-i	o-a	o-u	o-i	u-a	u-o	u-i	e-a	e-i	i-a	i-o	i-u
Kera	a, o	a	a	o / a	o, u	o	a	o	i				wa	
Sumrai	a	u	a / i	o	a, o	o	o / a	o	u	a / e	i	i / a	i / wa	i, u
Dangla	o, a	a	a / e, i	o/a, o	o, a	o	o, a/a	o	i	e, a	e, i	i, e/a	o	i

5. Ubi basic vocabulary with all probable or at least hypothetical cognates in other East Chadic languages

all – Ubi *karaatiti*, Mawa *karat* (R); further perhaps ?Sokoro *kùldiŋ*, Jegu *kot*, ?Mabire *godok*; Kera *keḍe*(^o*i*).

ashes – Ubi *rub*. Cf. WCCh: Hausa *ràushii* “hot ashes”; Yiwom (= Gerka) *rA:p^h* “ashes” (JI₂, 4).

bark – Ubi *piriikà*, Mawa *purka*, Sokoro *fūrkià* = *pòrènyágá* (Sx); cf. Dangla *pàrdé*, Migama *púrdè*, Bidiya *pàraaḍa*, ?Mokilko *ambirsàwá*. JI₁, 4 derive from pCh **ḡ-r* also other forms (see JI₂, 8–9).

belly – Ubi *’atà*, Mawa *at* (R), Barain *ato*, Dangla *ádí* = *ádden* (L), Migama *’á:ḍí*, Bidiya *’adè*, Mokilko *’addé*, Mabire *at*, Jegu *’aad*, Mubi *hàt*, pl. *hòḍút*, Minjile *ḥad*. It is a question, if the forms from CCh quoted in JI₂, 20–21 are really related: Margi *ūwūdūr*; Bata *edie* (Dec); Laamang *xúḍí*; Padukwo *húde*, Wandala *hude*, Glavda *xúda*; Sukur *xut*, Mafa *hwád*, Muktele *hùḍí*; Masa *ḥa’ya* id.

big – Ubi *dèbinà*.

bird – Ubi *ḍiḍé*, Sokoro *ḍiḍí*, Mawa *dit* (R), Dangla *ḍiḍà*, Migama *ḍí:ḍí*, Bidiya *ḍiḍò*, Mabire *ide*, Jegu *ḍéedó*, Birgit *ḍiḍò*, Mubi *ḍiḍuo*, ?Minjile *ḡiḍwí*, Kajakse *ḍèḍiḍwò*; Lele *tídí*, Sumray *dúḍí*, pl. *ḍirbi*, Tumak *ḍèrí*, maybe also Kabalai *cirrò*, Ndam *cáḍíny*. NEWMAN (1977: 22, #6) reconstructs pCh **dəy-*, JI₁, 10: **yḍ*. The forms from W&CCh see JI₂, 22–23. STOLBOVA (1987: 240) reconstructs WCh **yadir* id.

bite – Ubi *’oomin*, Sokoro *ḡmè* (Sx), Mawa *óóm*, Dangla *imè*, Mabire *omià*, Migama *’ó:mó*, Bidiya *’om*, Birgit *’umí* (JI₂, 25; JI₁, 11: **-m*).

black – Ubi *cilmìŋ*, Mawa *cilim* (R), Sokoro *kilmio*, Barain *kolmo*, Kujarke *kálámàdu*, Mabire *čilim*. STOLBOVA (1996: 60) adds Dangla *kèlmò*, Migama *kèlèemò* “shadow”, reconstructing ECh **kil[e]m-*; she also includes here Kera *tilmà* “darkness”, Tumak *dì-glàm* id. etc. JI₂, 28–29 & JI₁, 13 derive these and many other forms from pCh **lm*.

blood – Ubi *seḍè*, Mawa *set* (R), Sokoro *saā* = *sàw’á*. The latter form resembles CCh: Kotoko Logone *skì* (Bouny apud JI₂, 31). JSh 46 speculated about a metathetical cognate of WCh: Ron: Daffo & Bokkos *wash* id., but in JI₂, 30–31 this idea is not kept.

bone – Ubi *’èsà*, Mawa *æc* (R), Sokoro *ósseŋgī*, Barain *uosóngo*, Migama *’àssú*, Mokilko *’òssé*, Mabire *aso*, Jegu *’aso*, Birgit *’ásó*, Kabalai *’i’sí*, Lele *íssi*, Nancere *ese*, Tobanga *’æḡ*; cf. also Dangla *kààsò*, Bidiya *káskō*, Kwang *kīsīgī*, Kera *káskəŋ*, Sumray *gùsállny*, Ndam *gūsé*, Tumak *gūy*. STOLBOVA (1996: 123, 65–66) differentiates two pCh etymons: **es-* and **kas-* (cf. also WCh **V-ḡasi* by STOLBOVA 1987: 211–212), while NEWMAN (1977:

23, #13) tries to derive all from a common Ch source **Jasu* (cf. NEWMAN & MA 1966: 241, #127: **W-s-*), while JI₂, 36–37 & JI₁, 17 from pCh **ks₃*.

breast – Ubi *paynà*, Mabire *paj*. Cf. WCh: North Bauchi: Warji *piyéná*, Tsagu *éépàn*, Kariya & Miya *àpí*, Pa’a *ápi*, Siri *ípí*, Mburku *pihú* id. (**a-pi* by STOLBOVA 1987: 248); CCh: Zime Batna *pá’* (JI₂, 46–47; JI₁, 20 connect it with other forms from all Chadic branches and derive all from pCh **p-b*).

burn – Ubi *’òogin*, Mawa *əəgəŋ* (R), Sokoro *igide*, Migama *’iggò*, Mabire *iga*, Mokilko *’òggè*; ?Kera *kí*; cf. CCh: Zime Batna *yé’*, Musgu *y`* id. (JI₂, 55; JI₁, 24: **yg*, but without Sokoro & Kera).

claw –

cloud –

cold – Ubi *keckeci*, Minjile *kə:súk*; cf. Mubi *kùsúk* “cold wind” and WCh: Gwandara *àkùshúka* “cold” (JI₂, 78, 81; JI₁, 37 add Sokoro *óssò*; Jegu *’és* “cold”).

come – Ubi *’èebin*, Mawa *ooboy* (R), Sokoro *óbē*; Kera *bì*. Cf. WCh: Tal *baa^h*; Kulere *bo*; Warji *buw*, Tsagu *bàà-*, Kariya *bū*, Miya *bu-*, Mburku *bùù-*, Jimbin *bòò-* (STOLBOVA 1987: 248: North Bauchi **ba*); CCh: ?Tera *ba*; Zime Batna *mbù*, Kulung *ba* id. (JI₁, 38; JI₂, 82–83; NEWMAN & MA 1966: 235, #42 include also WCh: Kanakuru *ba*; ECh: Mubi *ba*, *bów* “to go”; JI₂, 162 quote WCh: Tsagu *bə̀*, Kariya, Miya, Mburku, Jimbin *ba-*; CCh: Musgoy, Kola *va*, Daba *va*, *vi*; Muzgu *v`*; ECh: Sokoro *bā*, *bē* (L) = *běy* (Sx) “to go”).

die –

dog – Ubi *kuyù*, Mawa *kuy* (R), Sokoro *kúyo*; Kwang *küyē*, Kera *kóoyá*; further perhaps Dangla *kányà*, Migama *kánnyà*, Mabire *kañ*, Jegu *kány*, Birgit *kájàŋ*, or Mokilko *gédè*; Nancere *gerá*, Gabri *gia*, Kabalai *gàrà*, Lele *gìrà*, Sumray *dògádl*, pl. *gárádē*, Ndam *gáy*, Tumak *gá*, pl. *garák*. NEWMAN (1977: 25, #37) reconstructs pCh **kər-* “dog”, compatible with WCh **k^{wy}arA* (STOLBOVA 1987: 210). JI₁, 49 & JI₂, 106–107 try to derive almost all forms from pCh **kdn*, but they admit that there were more different root of the type **-d*, **kany* or **yn*. They also mention the Saharan parallels: Kanuri *kəri*, Tubu *kedi*.

drink – Ubi *sayin*, Sokoro *sa*, Mawa *sé* = *seay* (R), Dangla *séé*, Jegu *s-*, Birgit *sáyà*, Toram *he*, Mubi *súwà*, Minjile *sūk*, Kajakse *suŋ*, Kwang *sèè*, Kera *sé*, Nancere *suə*, Gabri *so*, Kabalai *súwə*, Lele *si*, Sumray *shl*, Ndam *səgá*, Tumak *hè* < pCh **sa/i* (STOLBOVA 1996: 58; Ead. 1987, 180: WCh **sa/ihv*) = **sa* (NEWMAN 1977: 25, #39; NEWMAN & MA 1966: 234, #23) = **s₂w-* (JI₁, 51). Mokilko *síbè* “to drink” more probably belongs to the root **səbə* “to suck” (NEWMAN 1977: 32, #125; JI₁, 160: **s₂b₂*); otherwise STOLBOVA 1996: 102, reconstructing pCh **sob-*).

dry – Ubi *’iyo*, Mawa *iyò*, cf. *iij* “to dry”, Sokoro *ie*, *iij*, maybe Tobanga *hāy-*, Gabri & Kabalai v. *haiua*, Nancere v. *haio*, Dormo v. *hai*, Mokilko *kùŋiràŋ*; Kwang *komiékin*, Kera *keŋe*.

ear – Ubi *’oniyà*, Sokoro *on*, besides Mokilko *kùude*, pl. *kùwwá* < **kuum-*, Kajakse *kóymí*, pl. *kuyòm* (A), Kujarke *kumayo*; perhaps from **kV-sum-*, attested without the *k*-prefix in Mubi *súmámù*, Minjile *sumaamo*; Kwang *sèmdí*, Kera *kósóŋ*, Nancere *semáng*, Gabri *somain*, Dormo *sumánu*, Kabalai *sámí*, Lele *sùmá*, Sumray *súmí*, Ndam *hām*, Tumak *him*, Sarwa *simedam* < pCh **sim-/ku-sim-* (STOLBOVA 1996: 56–57; Ead. 209: WCh **k/kūma*). NEWMAN (1977: 25, #40) reconstructs pCh **šəmi*. JI₁, 53 offer two variants **km* & **tm*.

earth –

eat – Ubi *tín*, Sokoro *táágo*, Mawa *té* = *teañ* (R), Dangla *tèè*, Migama *tíyáw*, Bidiya *taa*, Mabire *taka*, Jegu *t-*, Birgit *táyà*, Toram *ta*, Mubi *túwà*, Minjile *tūk*, Kajakse *tu*, Kujjarke *tuye* < pCh **ti* (NEWMAN 1977: 25, #41; NEWMAN & MA 1966: 234, #25) = **twy* (JI₁, 56; JI₂, 120–121).

egg – Ubi *deezè*, Sokoro *désē* = *dèèsé* (L), Mawa *deas* (R), Dangla *ḍìsà*, Migama *ḍé:sè*, Bidiya *ḍìsà*, Mabire *desañ*, Jegu *ḍèes(h)é*, Birgit *’íisìyà*, Mubi *ḍìssó*, Minjile *issɔ*, Kajakse *ísò*; Kwang *tásāyńká* & *sē:gá*, Kera *kəcákí*, Kabalai *kəsə̀rəy*, Gabri *kasire*, Lele *kàsìrà*, Sumray *gàsá*, Ndam *nā:s* = *gae* (GD), Tumak *ḡàá*, Sarwa *nanas*. NEWMAN (1977: 25, #42) reconstructs pCh **aši*, but the ECh forms are omitted. This protoform is compatible with WCh **sah^wi* by STOLBOVA 1987: 180. JI₂, 122–123 & JI₁, 57 try to derive almost all forms from pCh **drl*.

eye – Ubi *’irì*, Sokoro *íd-im* = *irí* (B), Mawa *’ir* : *’idim* “thy eye”, Dangla *ódò*, Migama *’idè*, Bidiya *’údiyà*, Mokilko *’érsá*, pl. *’édá*, Mabire *ida*, Jegu *’udè*, Birgit *’udì*, Toram *’udò*, Mubi *irín*, pl. *áràn*, Minjile *iriní*, Kajakse *árin*; Kwang *tè:ḡí* & *tēni* = *k-éd-um* (L), Kera *dər*, Nancere *téreng*, Gabri *tindin* (L) = *kindi* (GD), Tobanga *tij*, Dormo *tine*, Kabalai *cidi* = *cindí* (L), Sumray *dùdí*, Ndam *cí*, Tumak *tùwə̀ḡ* < **tu-’əd*, Sarwa *dèm*. STOLBOVA (1996: 108–109): pCh **’idan-* (such forms as Buduma *yél*, Musgu *aráy*, Lame *irí*, Masa *íra-no*, Zime Batna *’ir* are excluded as the cognates of Egyptian *ir.t* id.; cf. also WCh **’ida* by STOLBOVA 1987: 230) = **idə* (NEWMAN 1977: 26, #46; NEWMAN & MA 1966: 234, #29) = **ydn* (JI₂, 126–127; JI₁, 60).

fat – Ubi *suunè* “oil”, Sokoro *súnē* adj., Mawa *suun* “oil”, Migama *séwén ká tàtà*, lit. “hard oil”, *súúná* adj., Bidiya *suun* “to fat”, *sewèḡ* “oil”, Mabire *seweḡ* id., Mubi *síwín* “fat”, Minjile *síwín*, Kajakse *síbin* = *sawni* (A), ?Kujjarke *kuno*; Kwang *súwānē kənà keèsū*, Kera *sən*, Kabalai *súwə̀ngá*, Lele *sì sòngèy sòngò* (WP), Tumak *hɔ:ɔ:n* < ECh **siwan-* < pCh **siman-* (STOLBOVA 1996: 135) = ECh **swn* “fat” = pCh **swn* “oil” (JI₁, 63, 130; JI₂, 133, 260–261: “oil”).

fire – Ubi *’ákò*, Sokoro *óko*, Mawa *ak*, Barain *aka*, Dangla *ako*, Migama *ókkò*, Bidiya *’ókkò*, Mabire *oko*, Jegu *’òk*, Birgit *’akù*, Toram *’ok*, and maybe further Mokilko *’ínwò*, Mubi *kəwí*, Minjile *kawí*, Kajakse *kawí*, ?Kujjarke *tawe*. STOLBOVA (1996: 81 and 32) differentiates pCh **akuw-* and **uw-*. NEWMAN (1977: 26, #48) reconstructs only pCh **aku/*ak^wa* = **-kw* (JI₁, 66; JI₂, 138–139; Mubi & Mokilko are included too).

fish – Ubi *búuze*, Sokoro *búsí*, Mawa *bùs*, Barain *búsi*, Dangla *bōosō* (Lw), Migama *bú:sú*, Bidiya *bóosà*, Mabire *bis*, Jegu *bíshó*, Birgit *bìsò*, Mubi *bə̀gə̀sə̀*, Minjile *bɔ:gə̀sò*, Kajakse *búḡgə̀sí*, Kujjarke *bújá*; ?Ndam *bá*. JI₂, 141 & JI₁, 67 reconstruct pCh **bgs*, including such forms as WCh: Daffo & Bokkos *gùshé*. On the other hand, they separate WCh: SBAuchi: Wangday *ḡàs* id., connecting it with Tala *kwási*, Geji *kwesi*, Tule *gìwshi*, Zaar *gya:s* etc.

five –

fly (n.) – Ubi *dòwa*, Sokoro *dóóu*, Mawa *dəw* (R), Dangla *díwò*, Migama *dìwwú*, Bidiya *’úduwo*, Mokilko *túúdè*, Jegu *diwo*, Birgit *díwó*, Mubi *ḡirwó*, Minjile *duwə̀ɔ*, Kajakse *tiwíyò*, ?Kujjarke *kibiya*; Sumray *dòny*, Ndam *dúgé*, Tumak *dugə̀n* < pCh **diwa* (NEWMAN 1977: 26, #52). Regarding the forms with the initial *k-* as Hausa *kúdáá/kújèè*, JI₁, 71 & JI₂, 148–149 reconstruct pCh **kdb*.

foot – Ubi *ḍeenà*, Mawa *dām* (R), ?Barain *njidanga*; cf. Kwang *ḍé:nā* “to come”?

four – Ubi *poḍà*, Mawa *pat*, Sokoro *pááda* (N), Barain *fudu*, Dangla *pòòḍ*, Migama *pó:ḍí*, Bidiya *paadaṅ*, Mokilko *piḍé*, Mogum *pot*, Mabire *pot*, Jegu *food*, Birgit *fòòḍí*, Toram *fòòḍa*, Mubi *fáḍà*, Kajakse *faat* (A); Kwang *wùḍāy ~ ’ùḍāy*, Kera *wa:ḍe*, Nancere *pori*, Gabri *porin*, Kabalai *parí’*, Lele *pōrīy*, Sumray *wA:dā*, Miltu *wedi*, Sarwa *we*, Gulei *uori*, Ndam *wè:tí*, Tumak *wəri*. STOLBOVA (1996: 152) reconstructs pCh **fid-od-* (but STOLBOVA 1987: 160 reconstructed WCh **firadu*); NEWMAN (1977: 26, #54): **f^wadā*; JI₁, 73 & JI₂, 152–153: **-pd*.

full – Ubi *munnà*, Mawa *muno* (R), Sokoro *ménna*, Dangla v. *mùnnè*, Mabire *minan*, Jegu *minân*, Mubi *minân* < ECh **mn* (JSh 115).

give – Ubi *birin*, ?Sokoro *ḍrè*, Dangla *bérè*, Migama *biráw*, Bidiya *bèr*, Mabire *birka*, Jegu *bir*, Birgit *biri*, Mubi *bárá*, Kajakse *faaro*, Kujarke *buruno*; Kwang *wúr*, Tobanga *bá*, Kabalai *bí*, Lele *bè*, Sumray *wúr*, ?Ndam *wúddáá*. STOLBOVA (1996: 25–26) reconstructs pCh **-bari-/*-biri-* (Ead. 1987, 154: WCh **ba(-)r*) = **barə* (NEWMAN 1977: 27, #57; NEWMAN & MA 1966: 235, #41) = **br* (JI₁, 76 & JI₂, 158–58).

good – Ubi *’ulnyà*; cf. Tumak *ele?* JSh 122 reconstructed CCh **lw* “good” on the basis of Musgoy *lāw* “good” and Gidar *lewí* “well” (see MOUCHET 1950: 55).

grass – Ubi *’òozò*, Mawa *os* (R), Sokoro *ússi*, Bidiya *’awso*. JSh 123 find cognates in WCh: Nbauchi: Warji *wasə-na*, Mburku *wāsə*, Miya *awasu*, Jimbin *awaši*, Kariya *wasisi*, Diri *asa’atu* “spear grass” (SKINNER 1977: 24; STOLBOVA 1987: 260: **awasi*) and CCh: Masa *usna*, Banana *úsinà* “grass” (Kraft).

hair – Ubi *lòwà*, Mawa *ləwa* (R), Sokoro *lúer = ləwər* (Sx), Barain *láwi*, Dangla *lávà*, Bidiya *laláawà*, Mokilko *’ilil-só*, pl. *’ilàlí*, Jegu *láawó*, Toram *laawa*, Mubi *álè*, Minjile *’alé*, Kajakse *lày* (A) < ECh **lwr* (JI₁, 85 & JI₂, 177).

hand – Ubi *kòyà*, Mawa *kwayidam* (R) – related to Birgit *jùgò*, Mubi *kègí*, maybe Tumak *gēñ*, or to Kwang *kósí*, Kera *kasi?* JSh 129 derived Kwang & Kera forms from **k-sr*, but JI₁, 87 propose another solution: **kws* < **k-ps*.

head – Ubi *goonà*, Sokoro *góndu = gon* (Sx), Mawa *gwám = gwan* (R), maybe Barain *kīgo*, besides Dangla *káá = kāñ* (L), Migama *kàyà*, Bidiya *kaa-te*, Mokilko *’èègò*, pl. *’áw’í* (LUKAS 1977: 13, 21 proposes the root *’èe-*, the nominal suffix *-go* and the plural marker *-w-*; the root has to correspond to Hausa *kāi* “head”); Mabire *kajat*, Jegu *kàatà*, pl. *kīñàù*, Birgit *káḍyà*, Toram *kàata*, Mubi *kàc*, pl. *kò’íc*, Minjile *kac*, Kajakse *kàc*, pl. *kaḍyúk* (A), Kujarke *ákè*; Kera *cə*, Gabri *cain* (L), Tobanga *cà*, pl. *cañən*, Kabalai *cà = cai* (L), Lele *cà*; and with the dental prefix Sumray *dí: = d-um* (L), Ndam *d’íc = dijim* (GD), Tumak *dəg(ə) = deg-um* (GD), Sarwa *ndim*. STOLBOVA (1996: 31) differentiates ECh **eg-* & **tV-eg-* “head” and ECh **gon-* & **tV-gon-* “occiput”, although admits their relationship. NEWMAN (1977: 27, #67) proposes that pCh **ka* was most archaic, f. also WCh **ka[y]A* (STOLBOVA 1987: 211); in some groups of the CCh it was replaced by the forms derivable from **g-n*. JI₁, 89 & JI₂, 182–183 try to find a common denominator in pCh **kdn*. Regarding such forms as Mawa *gwam*, it is tempting to seek cognates in WCh: North Bauchi: Warji *γamai*, Miya, Kariya *γam*, Diri *ama*, Pa’a *ḥama*, Mburku *gamo*, Tsagu *āmai*, Siri *γami*, Jimbin *gama* (Skinner); South Bauchi: Seyanchi *gám*, Dwot *gəm*, Polchi *gavam*, Burma *kàm* id. (Kraft), for which STOLBOVA 1987: 226 reconstructed WCh **ḥama*.

hear – Ubi *nìyin*, Mawa *niiṅ* (R), Sokoro *něyo*, ?Migama *g̃ỹyò*.

heart – Ubi *’oṅilà*, Dangla *kōrlò* (Lw), Migama *kórlá*, Bidiya *kogila*, Mubi *kàrlò*, Minjile *kàrlò*, Kajakse *kàrlò*, Kujarke *karla*; Lele *mú-gúlú*; outside ECh perhaps CCh: Gidar *ma kro* “heart” : *mòkrò* “breast, chest” (Mouchet; JSh 134: *(m-)kd).

horn – Ubi *gàpà*, Mawa *gap* (R), Sokoro *gə̀bel* = *gə̀pən* (Sx), Dangla *gè̀pì*, Migama *gá:pè*, Bidiya *geepinò*, Mokilko *’òpì-só*, pl. *’òmbá*, Mabire *gepo*, Jegu *gééfò*, Birgit *gééfò*, Mubi *gḗbí*, pl. *gā̀bà̀b*, Minjile *gḗbí*, Kujarke *gaffa*; Kera *gàw*, Lele *kḕbḕndi*; cf. CCh: Gudu *njep* id. < pCh **gbn* (J1, 94 & J2, 192–193: plus Hausa *kàhóó* & *kàfóó*, but this form together with South Bauchi cognates as Seyanchi *kàpu*, *kafo* etc., reflex WCh **kafu*; see STOLBOVA 1987: 211).

I – Ubi *naa*, Sokoro *na*, Mawa *nó*, Dangla *noon(o)*, Migama *nàà*, Bidiya *noo*, Mokilko *nùnó*, Mabire *na*, Jegu *nòo*, Mubi *nde*, Minjile *ndé*, Kajakse *inti*, obj. *’in*, Kujarke *annu*; Kwang *’n*, Kera *ten*, Tobanga *nnū*, Lele *dàng*, subj. *nè* (WP), Sumray *ə̀ndi* = *indī* (L), Tumak subj. *nə̀*.

kill – Ubi *dèyin*, Sokoro *da*, Mawa *dē* = *dean* (R), Dangla *déé*, Migama *díyáw*, Bidiya *daa*, Mokilko *tóww-*, pf. *-iìd* (L), Jegu *d-*, Birgit *dááyà*, Mubi *dī*, Minjile *dúuk*, Kajakse *diwa*, Kujarke *duda*; Sumray *’yó*, Ndam *’ə̀já*, Tumak *áj* < pCh **d-* (NEWMAN 1977: 28, #75). J1, 105 & J2, 212–213 reconstruct pCh **dwk*, but the Sumray, Ndam, & Tumak forms are separated.

knee – Ubi *dèrñilà*, Sokoro *dérgel-d-um*, Mawa *dárgál* = *də̀rgəl* (R). Maybe related to CCh: Bata *dogé*, Bacama *dùgè* (J2, 215).

know – Ubi *’udùmin*, Mawa *idim* = *idimiṅ* (R). Could it be related to the lexeme “eye”? Mubi *yā*, Minjile *yeat*, Kajakse *yoomdi* “to know” stand apparently far.

leaf – Ubi *kabila*. If *ka-* is (the masculine?) prefix, it could be related to Mubi *bériyò*, ?Minjile *berrío*, ?Kajakse *fiyayò*; Sumray *bàje*.

lie (down) –

liver – Ubi *tòoziyò*, Mawa *tisa* (R); cf. WCh: Nbauchi: Tsagu *tí’sə̀rə̀se* “kidney”, perhaps a compound of the type Pa’a *tirkwasa* < **tis-kwarsa*, cf. Warji *ɣwursai*, Kariya *ɣwursə̀*, and further Ngizim *kursaasiya* id. (SKINNER 1977: 28; STOLBOVA 1987: 166: WCh **a-tirsa*). JSh 167: WCh **ts*.

long – Ubi *jaggà*, Mawa *jeadi* (R).

louse –

man – Ubi *mòotá*, Mawa *mə̀ta* (R), Sokoro *mátī*, Dangla *mítikò*, Migama *mì:dī*, Bidiya *miidò*, Mabire *mit*, Jegu *mitò*, Birgit *midìwó*, Toram *miito*, *meetit* < pCh **mətu* “person” (NEWMAN 1977: 30, #96) = **mtm* (J1, 114–115, 134 & J2, 230–231, 266–267).

many – Ubi *reeti*, Mawa *rin* (R), ?Jegu *réj*.

meat – Ubi *biigi*, Sokoro *biki*, Mawa *bīik* = *bik* (J) < ECh **bk* (JSh 177).

moon – Ubi *piḍimòtā*.

mountain – Ubi *gabgà*; cf. CCh: Nakatsa *ɣùba*, Gava *ɣubà*, Glavda *ɣwà*; Lame of Peve *gwoi*, Misme of Zime *goy* “mountain, stone” (Kraft).

mouth – Ubi *bùu-rum*, pl. *bùu-reeti*, Sokoro *bót-um*, Mawa *bút*, Barain *búja*, further Dangla *bū*, pl. *bináki* (Lw), Bidiya *biite*, Mokilko *bízé*, Mabire *betò*, Jegu *bèetò*, pl. *béñàù*, Birgit *bì*, Toram *be*, Mubi *bàṅ*, Kajakse *faj*; ?Lele *kùb*, Sumray *bi* = *b-um* (L), Ndam *bə̀g* =

b-um (GD), Tumak *bàg* = *bug-um* (GD) < pCh **ba* (NEWMAN 1977: 29, #88) = **bk* (JI₁, 122 & JI₂, 244–245), cf. WCh **ba-ki* (STOLBOVA 1987: 152).

name – Ubi *sèemò*, Sokoro *óssò*, indiv. *sìntà* (Sx), Mawa *sùùn* = *sun* (R), Dangla *sìŋ*, Migama pl. *sémè*, Bidiya *seme*, Mokilko *sùmá*, Birgit *’ósòm*, Mubi *sàmi*, Minjile *semmí*, Kajakse *simi*; Kwang *kásəm* ~ *səm*, Kera *sám*, Kabalai *kosí*, ?Lele *kōndī*, Sumray *súmi*, Ndam *hām*, Tumak *him* < pCh **sumi* (STOLBOVA 1996: 55; Ead. 1987: 178; WCh **suma-na*) = **šəm* (NEWMAN 1977: 29, #90; NEWMAN & MA 1966: 237, #70) = **s₃m* (JI₁, 124 & JI₂, 248–249).

neck – Ubi *jereyà*, Sokoro *gèrè* (Sx) = *gét-im*, Mawa *jérâ* : *jédí* “his neck” = *jed* (R), Mabire *džerea* “throat”, Dangla *gááŋyá* = *gáájén* (L) “neck”, Bidiya *gè’*; Tumak *geér*; perhaps also Mokilko *góllá* id. reflect pCh **giHad-* id. (STOLBOVA 1996: 109), while Mokilko *’óré*, Migama *úrè*, Mabire *wered*, Jegu *were*, Birgit *’úrèy*, Toram *were*, Mubi *wūr*, Minjile *wírì*, Kajakse *wuriik*; Kwang *kèrí*, Kera *kur*, Dormo-Tobanga *kornu*, Kabalai *kùwòsi*, Lele *kòrgà*, Ndam *kwàd* = *kur-um* (GD) represent the derivatives of pCh **(ha-/ka-)wuyar* “neck” (STOLBOVA 1996: 91; cf. WCh **[h^w]-yara* by STOLBOVA 1987: 239) = **wàra* (NEWMAN 1977: 29, #91; NEWMAN & MA 1966: 237, #71). JI₁, 126 & JI₂, 252–253 derive almost all Ch forms from pCh *gd^r*. The examples from Mabire and perhaps Mokilko indicate that two different lexemes are here.

new – Ubi *’èrwa*, Mawa *əru* (R); further perhaps Mubi *rèwét* (J), Minjile *-rɛwèt*, and Mokilko *’àwàré*, if it does not reflect **amar-*; Kabalai *hùrrùwǎ*, Lele *hìrwà*; the forms as Dangla *màrbìntò*, Birgit *màriyùntà*; Kwang *múrwē*, Kera *ki-mirwi/te-merwá*, are derived from pCh **m[a]ru-hu* (STOLBOVA 1996: 133; cf. WCh **marA* by STOLBOVA 1987: 233). Ndam *kām*, Tumak *kàmáèn* may belong here too. JI₁, 127 & JI₂, 254–255 all connect under the protoform **mr_b*.

night – Ubi *bògùm*, ?Sokoro *bádem* = *bàdúm* (Sx), Mawa *bədəŋ* (R). STOLBOVA (1996: 22) reconstructs pCh **-bur-ođi* (Ead. 1987: 154; WCh **bardi*) = **bədī* (NEWMAN 1977: 29, #92), both without any ECh examples (NEWMAN & MA 1966: 237, #72 included Mubi *de-đem*). JI₁, 128 & JI₂, 256–257 include Sokoro, deriving all from pCh **bd*.

nose – Ubi *dumilà*, Sokoro *dimmol*, Mawa *demwál* = *demel* (R), Mabire *dəməl*. JI₂, 259 & JI₁, 129 derive the Sokoro form from pCh **ntn* without any comment.

one – Ubi *pindari*, Barain *fani*, Mawa *pwənni* = *pənni* (R), Barain *fani*, further Mubi *finét*, *fíni*, Minjile *fíni*, Kajakse *finè*; Nancere *pená*, Gabri *penda* (Dec) = *pena* ~ *puna* (Bruehl), Tobanga *pəná*, Dormo *penā*, Kabalai *pəná*, Lele *pìnà* < pCh **pn* (JI₁, 131 & JI₂, 262–263); JSh 198 indicate the cognates in WCh: Ron: Kulere of Ambul *fáámi* “1” (vs. *’ámi* in other dialects) and CCh: Chibak *patù*, Higi Ghye *paðe*, reconstructing the skeleton **pn(t)*.

person – Ubi *bò*, Sokoro *bō*, Mawa *bò*; Lele *bāyndí*, Ndam *bār* id., and Gabri (L) *barua*, Dormo *bara* “man”. JI₁, 134–135 & JI₂, 266–267 quote some parallels from other branches: WCh: North Bauchi: Mburku *bārgí*; South Bauchi: Tala *mbar*, Geji *mbalíŋ*, Kir *mbə̀rəm*; CCh: Bacama *fwáàrá*; Gisiga *mburo*; Kotoko Logone (L) *bə̀là* id., all from pCh **b₂ln*, while JSh 202 reconstructed **mbr*. It agrees better with the reconstruction of STOLBOVA (1987, 154): WCh **bari* “man, person”.

rain₁ – Ubi *pùrgum*.

rain₂ – Ubi *’àmyò* (also “water”), Mawa *ámí* (also “water”); further Bidiya *’àmay* (also

“water”); Kwang *kàminy*, Nancere *kúma*, Dormo *kumu*, Kabalai *kumugo* (L), Lele *kūmnō* (WP), Tumak *ná:m-* (see also “water”).

red – Ubi *ràabìn*, Mawa *raabi* (R), perhaps Sokoro *ráyo*, Mubi *rèhét*, or via metathesis Bidiya *barga* : v. *baar*, Mabire *bar*, Jegu *báarân*?

road –

root – Ubi *cèrù*, Mawa *sedu* (R), Sokoro *sèđú*, Dangla *tyààrò*, Migama *cá:rú*, Bidiya *cáarà*, Mubi *kyaaru*, Birgit *cáaró*, Toram *šaari*, Kajakse *cara*, ?Kujarke *gadarra*; Kwang *kásár*, Kera *kásár*, Kabalai *hàrà*, *sa:r-hábere*, Lele *sārā*, Sumray *sárbā*, Ndam *sírwé*, Tumak *hārāw* < pCh **cò/uHar-* (STOLBOVA 1996: 53–54; Ead. 1987: 200: WCh **cār/wya*) = **šar-* (NEWMAN 1977: 31, #107; NEWMAN & MA 1966: 238, #87: **s-rw-*) = **l₂rw* “root, vein” (JI₁, 140 & JI₂, 276–277).

sand – Ubi *yoolè*; ?Kabalai *kàliñā*. JI₁, 142 & JI₂, 280–281 connect the Kabalai form with Lele *nàñlā*, and further with CCh: Zime Batna *nyétl*, Masa *ñélná*; WCh: SBauchi: Geji *yelsi* id., plus many others.

say – Ubi *bògin*, Sokoro *bókiō*.

see – Ubi *nayìn*, Mawa *né* = *neyan* (R), ?Sokoro *géna-gō*. Maybe connected with pCh **ciyan-* or **nah-* / **nay-* id., both reconstructed on the basis of W & CCh (STOLBOVA 1996: 78 and 83 respectively; cf. also WCh **cayan-* & **nah-*; STOLBOVA 1987: 228 & 235). NEWMAN (1977: 31, #111) reconstructs pCh **na* “to see”, also only on the basis of the W & CCh data (cf. also NEWMAN & MA 1966: 238, #90). JI₁, 144–145 & JI₂, 284–285 seek a common denominator in pCh **ngn*.

seed – Ubi *lobinà*, Mawa *lābān* (R), Bidiya *luwò*. It is questionable, if such forms as CCh: Gisiga *hilfa*, Mofu *húlfād*; Glavda *xúlāfā*; Margi *wūlfūr* id. (cf. JI₂, 286–287 & JI₁, 146) are related.

sit (down) – Ubi *’unìn*, Mawa *un* (R), Migama *nùntù*, Mokilko *koonè*, Mabire *untu*, Jegu *’un*, Birgit *’untí*; Ndam *wúnyə̃* < ECh **[u]nt* (JSh 230). NEWMAN (1977: 29, #82) connects Mokilko *koonè* with W & CCh forms derivable from pCh *x^wən-* “to lie down”.

skin – Ubi *pinya*, Sokoro *pána*. Cf. CCh: Hona *pana* id. (NEWMAN & MA 1966: 239, #95).

sleep – Ubi *wuyù*, Sokoro *wóiwóí* = *wə̃ ə̃* (Sx), Mawa *woy-* = *weyan* (R), Mabire *oje*; Kwang *wéy* id., Tobanga *wōy* “to lie (down)”, Kabalai *yì* “to sleep”; further perhaps Dangla *wèđyē*, Migama *’òòđyò*, Bidiya *’oođy*, Birgit *’òòđyí*, Mubi *hèyít* = *hàyyàdé*, Minjile *he’ít*, Kajakse *ayđu*. JI₁, 154 & JI₂, 298–299 differentiate pCh **wy* and **w-d^v*.

small – Ubi *teđekè*, ?Toram *đokòđit*, ?Dormo *deiguo*.

smoke – Ubi *siyò*, Mawa *si*, Sokoro v. *sī*, Mabire *sio*, Mokilko *sáà*, ?Bidiya *zìđyà*; Kwang v. *kisé* (L), Kera *késé*, Gabri *gússò*, Lele *kùsá* (WP), Sumray *dísa*, Tumak *hàw*. JSh 241 connect with WCh: Ngizim *zàwuk*, Bade *zákúwán* id.; CCh: Zeghwana *zukè*, Gawa *zukà*, Nakatsa *tsuxa* id. (Kraft).

stand –

star – Ubi *tímyò*, Mawa *tìmbì*.

stone – Ubi *đìrgù*.

sun – Ubi *puđiyò*, Sokoro *piō*, Mawa *pidí*, Dangla *pàtò*, Migama *pá:tó*, Bidiya *páató*, Mokilko *pèèđò*, Mabire *pat*, Jegu *fóot*, Birgit *fòòtó*, Toram *fòo*, Mubi *fāt*, Minjile *fāat*, Ka-

jakse *fáti*, Kujarke *ʌʌr*. STOLBOVA (1996: 28) reconstructs pCh **fati/a* (> WCh **fAtA*; see STOLBOVA 1987: 159) = **fati* by NEWMAN (1977: 32, #126' cf. also NEWMAN & MA 1966: 239, #105) = **p-t* (JI₁, 161 & JI₂, 312–313).

swim – Ubi *'òowin*, Mawa *εweη* (R); perhaps also Mokilko *kùubé*, *kóppé?*

tail – Ubi *borbilà*, Mawa *bərbəl* (R), Sokoro *búmmel*; ?Tumak *bámuro*; maybe also WCh: Ron: Kulere *byéèl* id. (JI₂, 316–317; JSh 260: **bml*).

that – Ubi *'ànam*, Sokoro *ínu*, Mokilko *'éη*.

this –

thou (m./f.) – Ubi *ci / ke*, Sokoro *ca*, Mawa *kí/kó* = *ci/ko*, Dangla *kín/kán*, Migama *kū/kāη*, Bidiya *kinda/kanda*, Mokilko *kèe/kòn*, ?Mabire *gimu-ke*, Jegu *kee/kánée*, Mubi *kám/kín*, Minjile *kam*, Kajakse *kamte*, ?Kujarke *nigi*; Kwang *gi/kìn*, ?Kera *tam/te*, Tobanga *ji/mé*, Lele *digi/dámè* (WP), Sumray *ə(n)jám*, Tumak *yə/mə*.

three – Ubi *sùba*, Sokoro *sùbbá* (Sx), Mawa *súp*, Barain *subu*, Dangla *sùbbà*, Migama *sùbbà*, Bidiya *subaη*, Mogum *sup*, Mabire *sup*, Jegu *sup/b*, Birgit *súúbù*, Toram *suuba*, Mubi *sùbà*, Minjile *subà*, Kajakse *soop*, Kujarke *ubo*; Kwang *sūpáy ~ səbày*, Kera *soope*, Kabalai *sáp*, Lele *sùbù*, Sumray *sùbù*, Gulei *cuba*, Miltu *sobo*, Sarwa *sup*, Ndam *súp*, Tumak *suùb* (cf. NEWMAN 1977: 125, apud#132: ECh innovation **s-ḡ* = **s-b* by JI₁, 168 & JI₂, 327).

tongue – Ubi *silínyò*, Sokoro *sólańd-um* = *sélěň* (Sx), Mawa *siliny*; Kera *kəsəl*; in other languages without metathesis: Barain *lisingo*; Dangla *léésé*, Migama *liit* = *liic-um* (J), Bidiya *liisē*, Mokilko *'ilzé*, Jegu *léesó*, Birgit *liisì*, Toram *liho*, Mubi *lisi*, Minjile *'lisi*, Kajakse *liisi*, pl. *liyàs* (A), Kujarke *alijati*; Kwang *kilisi* = *keles-úm* (L), Nancere *kelendem*, Gabri *kelendin* (L), Dormo *kélene*, Kabalai *kólà-* = *klāndi* (L), Lele *kīlā-*, Sumray *dilésé*, Ndam *dās*, Tumak *dùj*. STOLBOVA (1996: 88) reconstructs pCh **(ha-)lesi-um* “(your) tongue” = **ahləsi* (NEWMAN 1977: 33, #134) = **ls₃-* (JI₁, 169 & JI₂, 328–329). Cf. also WCh **ha-lisi-um* (STOLBOVA 1987: 237).

tooth – Ubi *siinà*, Sokoro *sónd-im* = *sən* (Sx), Mawa *siínó*, Barain *zengu*, Dangla *sààηò*, Migama *sá:nú*, Bidiya *séηo*, Mokilko *sintá*, pl. *siná*, Mabire pl. *sin*, Jegu *sàηó*, Birgit *sàηó*, Mubi *sińáaηə*, Kajakse *sin*, ?Kujarke *kiya*; Kera *kásəη*, Gabri *ksong* (L) = *kasendi* (GD), Dormo *gásene*, Kabalai *kásənda*, Lele *kāsīngá*, Sumray *sándē*, Ndam *hān* = *hindam* (GD), Tumak *hiin*, Sarwa *sandam*. STOLBOVA (1996: 57) reconstructs pCh **sina(n)* “tooth” (cf. also South Bauchi **sin* reconstructed by STOLBOVA 1987: 261), NEWMAN (1977: 33, #135): **šan(-)*. Cf. also NEWMAN & MA 1966: 240, #111: **s-n* and further JI₁, 170 & JI₂, 330–331: **s₃n*.

tree – Ubi *cùwà*, Sokoro *tsui*, Mawa *saww* = *səw* (R), ?Gabri *sehīa* (L). JSh 275 connect them with other forms in Chadic, reconstructing **t(t)*.

two –

walk – Ubi *đu*, Bidiya *dàwàn*; Kwang *ḡē*, Kera *ḡé* < pCh **taw-* (STOLBOVA 1996: 35–36) = **dā* (NEWMAN 1977: 27, #59).

warm – Ubi *iigiro*, ?Mubi *kèrit*, ?Minjile *-kerit*, Kajakse *kłrì*.

water – Ubi *'àmyò*, Sokoro *mbo* (N), Mawa *'ámì*, Barain *amí*, Dangla *ámáy*, Migama *àmmi*, Bidiya *'amay*, Mokilko *'à'ú* < **'àm-ú*, Mabire *amba*, Jegu *'ám*, Birgit *'àmì*, Mubi *àmé*, Minjile *aam*, Kajakse *àmé*; Kwang *kàām*, *ká:m*, Kera *kan*, Nancere *kā*, Gabri *kang*, *kam* (N) = *kama* (GD), Dormo *káng*, Kabalai *ka:mə*, Lele *kāmā*, Sumray pl. *nīmī*, Ndam *nám*, Tumak *nám*, Sarwa *nam* < pCh **am* (NEWMAN 1977: 34, #142; NEWMAN & MA 1966:

240, #116) = **y*mn (JI₁, 176 & JI₂, 340–341); cf. also WCh **hama* id. and / or North Bauchi **ambi* id. (STOLBOVA 1987: 229 & 249).

we (ex./in.) – Ubi *'inani*, Sokoro *ónoŋ*, Mawa *neŋ/é = ne/ea* (R), Dangla *nín/nìir*, Migama *nìi/kéè*, Bidiya *ninda*, Mokilko *kàyé/kíné*, Jegu *nìnee*, Mubi *éné*, Minjile *èné*, Kajakse *ante*, obj. *'ana* (A); Kwang *nàn/tàn*, Kera *áré/áj*, Tobanga *ní/ná .. gaŋ*, Lele *dàngàngù/dàni*, Sumray *ándigē*, Tumak *nà/di*.

what? – Ubi *mò*, Dangla *maa*, Mawa *mí = me* (R), Migama *inimé*, Bidiya *má*, Mokilko *'ammē, mē*, Mabire *ja-ma*, Jegu *mē*, Mubi *mî:*, Minjile *mî*, Kajakse *maande*; Kera *ma mó*, Nancere *me(ne)*, Lele *mē* < **mi*/**mə* (NEWMAN 1977: 34, #143; NEWMAN & MA 1966: 240, #117: **m*-(*n*-)).

white – Ubi *mòrmìn*.

who? – Ubi (*'ay*) *yé*, Sokoro *ye*, besides Mawa *weki* (R), Dangla *waa*, Migama *wè*, Bidiya *wá*, Mokilko *wéè(wé)*, Jegu *wee*, ?Kajakse *kaye*; Nancere *wei*, Lele *wéy* (WP) < **wa* (NEWMAN 1977: 34, #146; NEWMAN & MA 1966: 240, #118: **w*-(*n*-)).

woman – Ubi *meyè*, Mawa *mii* (R), Sokoro *máa*; Nancere *tāma*, Gabri *tama* (L), Dormo *tāma*, Kabalai *tamā*, Lele *tāmá*, pl. *kāmdā* (WP), Sumray *démé*, pl. *nāmde*, Ndam *jām*, cf. *dehem* (GD), Tumak *dèēm*, Sarwa *ndema* < pCh **'am*- (STOLBOVA 1996: 31; ead. 1987: 231: WCh **'ama*). The closest cognates to the ECh forms seem to occur in WCh: NBauchi: Warji *ámái*, Tsagu *óoméy*, Kariya *ám*, Miya *ám*, Jimbin *ámá*, Mburku *dàmà* id., although JI₁, 179 separate them.

ye – Ubi *kunàŋ*, Sokoro *kúnunŋ*, Mawa *kəŋ* (R), Dangla *kún*, Migama *kúŋ*, Bidiya *kunda*, Mokilko *kùnè*, Jegu *kúnèè*, Mubi *kéné*, Minjile *kante*, Kajakse *'eetè*, obj. *kann* (A); Kwang *kàn*, Kera *aŋ*, Lele *dàngù* (WP), Sumray *injimge* (L), Tumak subj. *nì*.

CONCLUSION

Although the incomplete lexicons of some of the languages studied here do not allow their inclusion into the mutual lexicostatistic comparison of all East Chadic languages, the results are convincing enough to determine the position of **Ubi** in other way than it was indicated in the last edition of *Ethnologue*, namely together with **Sokoro** and other close idioms, **Mawa** and **Barain**. One argument is the score 60% of the common basic lexicon for Ubi & Sokoro, 62% for Sokoro & Mawa and even 73% for Ubi & Mawa. It is supplemented by the exclusive lexical or word-formation isoglosses connecting Ubi with Sokoro, Mawa and Barain: “bark”, “blood”, “come”, “dry”, “foot”, “hand”, “head”, “hear”, “knee”, “know”, “liver”, “long”, “meat”, “night”, “nose”, “red”, “see”, “skin”, “star”, “swim”, “tongue”, “tree”, “who?”, “woman”, totally 22. Summing up, in the genetic classification of the Chadic languages, Sokoro does not represent a group consisting of only one language, but a cluster represented at least by four idioms: **Sokoro, Ubi, Mawa, Barain**.

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