

**INSTITUTE FOR ORIENTAL STUDIES  
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**OLGA STOLBOVA**

**Chadic Lexical Database**

**Issue II  
lateral fricatives**

***ɬ, ɬ', ʙ***

**with Semitic, Egyptian and South Cushitic parallels**

**Polygrafiya  
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## Introduction

*This issue continues the publication of Chadic Lexical Database. The present issue includes words with initial lateral fricatives -ɬ, ɬ', ʂ in WCh (warji, zaar, bade groups) and in Central Chadic and related words in other Chadic languages.*

*The choice of letters for the present volume was determined by the previous one -\*l, \*n, \*ny, \*r. Given that initial l in West Chadic-A and in East Chadic languages reflects not only Proto-Chadic \*l- but also Proto-Chadic lateral fricative(s), there was no alternative but to proceed with ɬ, ɬ', ʂ.*

*Lexical base of the present issue (as compared to Issue I) has been enlarged sufficiently thanks to **Web Resources for Chadic Languages**.*

*I am most grateful to all the colleagues who allowed the free access to their dictionaries, grammars, sociolinguistic surveys, articles, word-lists and other data.*

*It is evident that dealing with lateral fricatives in Chadic languages, Semitic, South Cushitic and Egyptian cognates will be of special interest. On the other hand the present publication is aimed, in the first place, at solving internal Chadic problems. Thus one can hardly find Hamito-Semitic etymologies of 'full value' inside.*

**Lateral fricatives in Chadic**  
(also called: ‘lateral sibilants’, ‘lateral obstruents’, ‘H-laterals’).

Chadic system of lateral fricatives includes three phonemes: voiced, voiceless and emphatic/ejective (as compared to two phonemes - voiceless and emphatic - in South Cushitic and in Semitic). The transcription accepted by chadists is as follows: **ɓ** for voiced (in earlier publications - dl, hl, zl,  $\tilde{\chi}$ ), **ɗ** for voiceless (also tl, sl, **e**), **ɗ'** for emphatic (also tl', sl',  $\tilde{\chi}'$ ). Being criticized now and then by my colleagues for using Semitic signs (correspondingly:  $\hat{z}$ ,  $\hat{s}$ ,  $\hat{c}$ ) from this issue on, Chadic transcription will be used, with one exception (see 3. below).

For a few words with laterals in Issue I the following substitution is needed:

$\hat{z} \Rightarrow \mathbf{ɓ}$  ;  $\hat{s} \Rightarrow \mathbf{ɗ}$  ;  $\hat{c} \Rightarrow \mathbf{ɗ}'$  .

Specific notation used by J.Lukas was decoded in the following way:

1. For his ‘velar laterals’ in Logone -  $\tilde{s}$ ,  $\tilde{z}$  and for ‘explosive’  $\tilde{k}$  ([LkL: 11]) we use **ɗ**, **ɓ** and **ɗ'** (correspondingly), as [TrC] and [ALL] do, for  $\tilde{s}$  in Musgu we use **ɗ**;
2. for Wandala  $\tilde{s}$  and  $\tilde{z}$  (‘alveolar laterals’) we use **ɗ** and **ɓ**. ‘Velar lateral’  $\tilde{\chi}$ , attested in Wandala only before front vowels, is a positional variant of Wandala  $\tilde{s}$ - < Chadic **\*ɗ** (note similar reflex in the bura-margi and high groups: **\*ɗy**-> hy-/xy-). Voiced counterpart -  $\tilde{y}$  is attested twice in contact with n/r.

3. For Wandala, Gulfey and Musgu  $\tilde{\chi}$  and  $\tilde{\chi}'$  the notation of J.Lukas has been preserved.

Following Chadic tradition in rendering lateral fricatives provokes misunderstanding on the Hamito-Semitic level (due to the lack of commonly accepted signs).

SCushitic laterals are rendered as *sl*, *tl* by [MMQ], but as *hl*, *sl* - by [Eh] and [EEH]. As these notations contradict to each other, we use that of [MMQ], namely: *sl* for the voiceless sibilant ( *hl* in [Eh, EEN] ) and *tl* for the emphatic ( *sl* in [Eh, EEN]). Note that there are three words in [EEN] with a voiced sibilant (rendered in the present volume by ***b***).

The traditional Sem transcription of laterals is used in the present issue: non-emphatic (e.g., Hebrew "sin" - ש) is rendered by  $\acute{s}$ , emphatic lateral is rendered according to sources:  $\delta$  ("daḏ", ض) in Arabic (and on the proto-Semitic level),  $\acute{z}$  in MSA languages).

**Lateral fricatives in Chadic** were first under consideration as a phonological phenomenon in [Newman 1977]. Since then different aspects of the problem were discussed in [DIgL], [CLR], [St], [StS], [Столбова], [TrC], [GCI].

Regular correspondences between Chadic languages and the proto-Chadic system (including three phonemes) have been elaborated long before [Stolbova 1996:39]. One significant correction only should be made. Earlier

it has been suggested that EChadic lele languages reflect Chadic \*ɓ- as s-. New data (esp. - the Lele dictionary) proved that the lele gr. does not differ in reflecting Ch from other EChadic languages (see the table of correspondences). One more point is the reflex of the emphatic in Mokilko - the same as in dangla and Mubi gr., namely, ɗy-.

For regular reflexes see the table.

**Table I**

	West-Chadic groups					Central-Ch groups		East-Chadic groups			
Proto Chad	Hs	2	3, 7	4	5, 6	8 kotoko	1-7, 9,10	1-3	4	5,7	6
*ɸ-	s, š	L	s,š	ɸ	ɸ	*ɸ	ɸ	s,š	[*č]	č	s
*ɸ'-	ç	s,š	s,š	ɸ'	ɸ'	*ɸ'	ɸ	s,š	Sokoro s,š	ɗy	ɗy
*ɓ-	z	l	l	ɓ	ɓ	Buduma Mak l Log ɓ	ɓ	l	l	l	l

**Commentary to the table.**

I. Already in [Stolbova 1987] a specific reflex of Chadic lateral \*ɸ in combination with a laryngeal in the sura languages has been illustrated, namely: Ch \*ɸVH-> ɸH- > sura s/š- (the same reflex as Chadic \*ɸ'-). Possibly Ch \*ɸVH-> \*ɸH-> ɸ'-> sura gr. s-). Convincing evidence provide Semitic and Egyptian parallels: in all such cases they show a laryngeal (mostly -"ayn").

See \*ɸVHVrV / ɸVrVH 'root', \*HVɸVr- 'ten', \*ɸVHVr- 'friend', and \*ɸV(HwV) > \*ɸHwV 'guinea corn' .

**II.** According to Khalil Alio [Alio], Ubi belongs to the bidiya gr. On the other hand, it has been proved by V.Blazhek (cf. his presentation in Paris, on Biennial Chadic), that Ubi is closer (lexically) to Sokoro, than to Bidiya. Meanwhile, Ubi reflexes Chadic \*ɸ- as č - (like bidiya languages), but not like Sokoro (the latter has s-). V.Blazhek suggested that Ubi preserves the proto-sokoro reflex (namely \*č, as dangla and mubi languages), while in other languages of the sokoro group \*č- (< Chadic \*ɸ-) yielded s-.

### III. Chadic \*ɸ

1. The main difference between our \*ɸ- and \*ɸ<sub>J</sub>- in [CLR] are reflexes in the bata and mubi groups [cf. Table I and CLR I:XXVIII-XXIX].

2. Chadic \*ɸy- > hy-/xy- in the margi gr.

3. In Bele, Buduma, Ndam and Tumak h- is the regular reflex of \*s- (including s- from Chadic \*ɸ-).

4. Kotoko \*ɸ- > Logone, Afade ɸ, Gulfey č-, Makari š-, Buduma h-, Kuseri s- (see [TrC]). Note that according to data collected by J.Lukas [Luk], Gulfey has (or some dialect had at that time of J.Lukas) a lateral reflex of Chadic \*ɸ-, namely - ǰ̃ , ( ǰ̃ ist lateral, ǰ̃' ist lateral and ejektiv' [Luk:146] ). The data of Otto Röder and Herzog Adolf Friederich show **th** (i.e., č, like in [TrC]) in the place of ǰ̃ );

5. Chadic \*ɸ may be voiced in the following environments:

**a.** *in contact with -r-, -d-*

Cf. C \*hwurt- 'star' : 7 Mofu wurɣa [BaMof], Gisiga wurɣa [Luk], 4 FJ xùràșu-mùk [Kr], FM xùràșiyà [Kr] 'star'.

C 6 Kola mà-ɣry 'medicine' < \*ɸVrV 'medicine, poison':

C 2 Bana ɣrɔ́ 'écraser (arachides.)" < C \*ɸVr- 'to squash, to crash';

C 6 Daba ɸə̀d 'kind of tree used for brooms; broom' [Lnh], but Daba ɣdad (voicing in contact) 'sweep' [Kr:425].

**b.** *in contact with a nasal prefix or in medial position:*

C 4 Gude **man-ɣə̀ɸa**, Bcm kù-làɸe, Gudu méngi-ɸáabü 'dew' [Kr] < CChadic \*ɸVɸV < Chadic \*ɸ'VɸV.

C 7 Mtk=Mafa nɓó-nɓôr 'root' < Chadic \*ɸVrV.

W 5 Geji cluster mà-ɓàŋ, mǝ-ɸàŋ, mǝ-ɸàŋ, Tule mè-ɓìnǝ, Chari mè-ɸn, Dokshi ye-ɸn Bendas gè-ɓìn 'hair' < Chadic \*ɸVnV 'hair'.

C 9 Mbara mì-ɓer 'star' [TrMba] < \*ɸVr-;

C 7 Mofu maɸapara, maɓaparak 'bandeau sp.';

c. *by assimilation with a voiced consonant in medial position:*

C 2 Margi ɸǝɓǝbǝ 'to learn, to teach' [Hf:118], 3 FK ɓìbìtu? 'learn' [Kr] < \*ɸVb- 'to learn'.

d. *in reduplicated stems: \*ɸVɸVC > ɸVɓVC > ɓVɓVC > ɓVC-* :

Guus ɓyera 'bone' [Cr], C Cuvok ɸàɸar 'bone' [Ndo], Mada mà-ɓàɓár (or < b, cf) 'mollet (de la jambe)' [BaMd]).

6. Words with ɸ in Karekare are usually treated as Ngizim loans. Those given below not always have Ngizim parallels (see NN 45, 98, 249, 285, 308, 357).

**IV. Chadic \*ɸ'- > Kotoko \*ɸ'- > Logone, Afade, Maltam ɸ'-, Makari, Gulfey ɸ, Kusseri ɸ** [TrS]. According to J.Lukas [Luk], Chadic \*ɸ'- yields ejective lateral in Gulfey, namely - ɸ̃'.

It is highly probable, that **Chadic \*ɸ'- > ɓ** in W Chadic Zaar language.

#### V. Chadic \*ɓ

1. C bata gr.: Gude, Bata, Bachama, Gudu reflect Chadic \*ɓ- as l-, the same reflex sporadically show Nbauchi languages;

2. Sbauchi gr.: Dwot and Buli reflect Chadic \*ɸ and \*ɓ as ɸ, Guruntum has lost lateral fricatives;

3. Nothing is said about reflexes of Chadic \*ɓ in [TrC]. Still, it is evident that \*ɓ- > ɓ in Logone. In Makari and Buduma Chadic \*ɓ most probably yields l-;

4. Devoicing of \*ɓ :

a. is typical of Zime Dari (Chadic \*ɓ > ɓ only in roots with secondary voiced plosives, -m- and -r-);

b. may be influenced by medial -f- ( $*\beta Vf-$  >  $fVf-$ ), cf.  $*\beta VvV$  (<  $*\beta VfV$ ) 'mat-fence' and  $*\beta VfV$  'hot (weather)'.

Reconstructing of the lateral system on the HS-level will be out of discussion. Still, it is worth mentioning that:

a. SCushitic  $*sl-$  corresponds to both Chadic non-emphatic laterals: to  $\beta$  and to  $f$ ; the same is true about Semitic  $*\acute{s}$ .

b. In a few entries Hebrew shows a specific correspondence to Chadic  $*\beta$ , namely - š, corresponding to Arabic š. Cf.  $*\beta V$  'to help',  $*\beta V(\beta V)$  'to cry, to speak; a cry',  $*\beta Vb-$  'to weave, cloth',  $*\beta VbVrV$  'kind of corn (millet)',  $*\beta VgV$  'idiot',  $*\beta V\acute{k}-$  'to be eager, to love'). In these and similar cases A.Militarev (cf. [MK, phonology]) reconstructs one more Semitic lateral (in his notation -  $\hat{s}_x$ ).

c. Chadic initial  $*f'$  regularly corresponds to SCush  $*\acute{l}$  and to Semitic  $*\acute{d}$ . For different correspondences between Chadic and South Cushitic lateral fricatives see [TSib 153-157].

## Arrangement of the data

The present issue includes: words with initial lateral fricatives - *ɬ, ɮ, ɮ'* in WCh-B (North Bauchi, South Bauchi, Bade, Ngizim) and in Central Chadic, related words in other Chadic languages and a number of cognates in Semitic, Egyptian and South Cushitic.

Words with "secondary lateral" in Biu-Mandara (like 'name', 'tooth', 'ear', etc.) are not included. In our opinion in all the abovementioned and similar cases a plain sibilant on the Proto-Chadic level (namely, \*s-) should be reconstructed (cf. [StS, forthcoming]). On the other hand, the present volume includes some entries with initial *ɮ*, attested in Biu-Mandara languages only. Theoretically speaking in all such cases the lateral may be of secondary origin. The only way to make the origin of the lateral clear (primary or secondary) is to find cognates in West and/or East Chadic languages. Before it will be done, such words are included into the present volume and do not have any special marking.

A single entry of the Database includes words, semantically identical or very close to each other and, from the point of view of phonology, having one and the same consonantal proto-type (given in the first place under an asterisk). Vowels in asterisked forms are marked by the *V-sign*. Entries attested in a single branch (West, Central or East) or in a single group are also included, hoping that sooner or later some of them will be supported by additional data.

It was intended to make the membership within an entry as undoubted as possible. All kind of derivatives and related words are cited within sub-items (a, b, etc.) or under *Deriv.*, *Cf.* or *Note* (the latter marks a less reliable relation). Semantically identical items may be cross-referenced, in the view of their possible genetic relation.

### **Structure of entries**

The present volume includes 600 entries. The lexical material is organized along the following lines: an asterisked reconstructed form<sup>1</sup>, then its suggested meaning. The lexical data are arranged according to the branches, and within the branches - according to groups. Names of individual languages are written with capital initials, while the names of the respective groups - with small ones. The semantics of an individual gloss may be omitted only if it coincides with the common one. The sources are quoted in square brackets, variants of language-names - in round brackets. After a double slash Semitic, Egyptian and/or SCushitic parallels are given.

The reconstructed nouns have the shape CV(V), CV(V)CV or CVC(V)CV. Polysyllabic verbs have the shape CV(V)C- or CV(V)C(V)C-, monosyllabic - CV(V) (note that the C-shape does not allow us to mark the vowel length of monosyllabic verbs). In case individual languages mostly show CV or

<sup>1</sup> May be preceded by information of the local character of the item (W : attested in the West branch ; C 5 : attested in the wandala group only, cf. classification).

$C_1VC_1V$  (reduplicated) forms, the CV-structure has been reconstructed for Proto-Chadic. In case individual languages show CV, CV?V, CVw(V) or CVy(V)-structures, we preferred to reconstruct a disyllabic verb with a ‘weak’ consonant (‘alef’/ w/ y ) in the  $C_2$  position. Firstly, it reduced the number of CV and CVV verbs. Secondly, Semitic parallels to Chadic CV?/w/y-verbs usually have CHw/y or Cw/yH structure, thus Chadic CV?/w/y-shape for a preliminary reconstruction seems to be reasonable and adequate to the data. Almost all  $C_1VC_2(V)C_3$ -verbs are derived from the corresponding  $C_1VC_2$ -ones, sometimes - from  $C_2VC_3$ -ones. Only a few  $C_1VC_2C_2$ - verbs has been reconstructed.  $C_1VC_2(V)C_3$ -verbs with  $C_1=n$ ,  $C_2= T, K, S$  quite often lose the first vowel (i.e.: \*nVT/G/S(V)C- > nT(V)C- / nK(V)C- / nS(V)C- ) and became mono- or disyllabic.

### **Sequence of the units**

Local units follow more widely spread ones. Monosyllabic and reduplicated items ( $C_1V$ ,  $C_1VC_1V$ ,  $C_1VV$ ) precede polysyllabic ones. Consonantal shape being equal, verbs precede nouns.

### **Phonological remarks**

No attempts to reconstruct vowels (on any level) have been made, in reconstructed forms they are marked by the V-sign. Reconstruction of consonants in the  $C_2$ -position is preliminary. All the collected (the same is true for vowels). Only after that (hopefully) it is possible to establish really regular phonetic correspondences in medial position between Chadic languages. For

the time being the previous experience in Chadic phonological reconstruction has been taken into consideration (see [GCI], [Mo], Nm], [SchV/B], [Shry],[CLR],[SkNB], [Sol], [St], [TAS], [Tr]). Complicated cases - palatalization, voicing /devoicing, etc., in the C<sub>2</sub>-position are supplied with a commentary. Specific reflexes due to morphological elements are also being commented. The most problematic was to reconstruct the medial velar (due to a tendency to assimilation /dissimilation between a lateral in the first place and a medial velar).

### **Conventional signs:**

Glottalization and ejective character is marked by a dot under the character: ɓ̣, ɗ̣, ƙ̣, ɕ̣, ɗ̣y. For the ejective lateral ɬ' - sign was used (instead of ɬ̣).

Palatal sibilant - ʃ, palatal affricate - ɕ, 'hissing' affricate - ɕ (= 'ts'), velar fricatives x (voiceless), ɣ (voiced), laryngeal - h, glottal stop - ʔ, velar nasal - ŋ, semivowels -w, y.

Like in [NKI, p. 4], ɽ̃ is used for the alveolar tap/roll in Hausa.

Long vowels are rendered by a double sign [aa].

Open vowels ɛ and ɔ.

Semitic, Egyptian and Cushitic pharyngeals are rendered by ʕ (voiced, ɕ), and ɸ (voiceless, ɕ), pharyngeals - by ɸ (fricative, ɕ) and ɸ (voiced, ɕ).

The traditional Chadic tonal marking is used: á - high, à - low, ā - middle, â - falling. But: we preserved the personal transcription of the authors, the one given in the publications. Thus, for example, the low tone in Barreteau's data is unmarked ("Le ton moyen est non marqué" [BaMd 18]), etc.

**List of languages** (according to the following classifications: [P.Newman 1977], [D.Barreteau 1984], [H.Jungraithmayr-D.Ibriszimow 1994=CLR], [R.Blench 2003], [R.Gravina 2005]).

**West Chadic.** The position of the Ron gr. seems problematic. In spite of [CLR and R.Blench] Ron is placed on the outskirts of WChadic (probably they were the first who split from the branch).

1. Hausa, Gwandara;
2. sura-angas: Angas, Sura, Mupun, Mushere, Chip, Kofyar, Goemay (Ankwe), Montol, Gerka (Yiwom);
3. bole: Karekare, Gera, Geruma, Kirfi (Giiwo), Galambu, Bolewa, Ngamo, Maha, Bele, Pero, Tangale, Dera;
4. warji (North Bauchi): Diri, Pa'a, Warji, Kariya (Vinahə), Mburku, Miya, Jimbin, Siri, Cagu;
5. South Bauchi: Geji, Zul, Buli, Langas, Polchu, Zeem, Lushi, Wangdai, Dott (Zodi), Zakshi, Guus, Zaar, Tala, Guruntum, Boghom, Kir, Mangas, Jimi;
6. bade gr.: Bade, Ngizim;
7. ron: Bokkos, Daffo-Butura, Sha, Kulere, Fyer.

**Central Chadic.** Lexical similarity within the matakam (Newman, CLR) or Big Mafa group (D.Barreteau, R.Blench) is absolutely evident. Thus, our C 5 includes: Foothills, Maroua, Matakam, and Hurza gr. of R.Gravina. The split of CCh in: Gongola-Higi, Hill and Riverian (CLR) seems adequate to the data, but the position of Laamang gr. (it is treated as a part of the mandara gr., in [R.Blench] and [St]). The problem of the masa gr.: CChadic or a separate branch of the family - still needs a discussion. For the time being masa data is given inside the CChadic. Sukur and Gidar - in the view of poor lexical basis - are included into bigger groups under (a.), mostly to minimize the number of groups.

1. tera gr.: Tera, Pidlimdi, Ga'anda, Gabin, Boga;
2. bura: Bura, Cibak (Cibbuk), Ngwahyi, Kilba, Margi, West Margi, Wamdiu, Hildi ;
3. higi : Bana, Fali Kiriya, Higi Nkafa, Higi Hye, Higi Baza ;
4. bata : Bacama, Bata, Gude, Gudu, Jimijimən, Njanyi (=Nzangi), Tsuvan, Sharwa, Fali of Muchella, Fali of Bagira, Fali of Jilbu ;

5. wandala: Wandala (Mandara), Malgwa, Glavda, Podoko, Gəvoko, Guduf, Gava, Cinene, Dghweḍe,  
5a. Lamang, Hide, Vemgo, Hitkalanci;
6. daba: Daba, Musgoy ;
7. mafa: Mbuko, Ouldeme, Muyang, Mada, Məlokwo, Zəlgwa (Zulgo), Meroy, Gisiga, Mofu, Cuvok, Mafa, Mefeſe;
- 7a. (?) Sukun;
8. yedina: Buduma(Yedina), Kousseri, Logone (Lagwan, Kotoko), Afadə, Gulfey, Makari, Maltam;
9. Musgum (Munjuk), (Vulum), Mbara
- 9a.(?) Gidar (Kada);
10. masa: Masa, Zumaya; Musey (Kraft), Banana (Lukas, Kraft), Zime Dariya, Peve, Zime Batna, Heḍe .

**East Chadic.**

- 1.kera: Kwang (Jg), dial. Mobu, Ngam (Lns), Kera;
2. lele: Lele, Kabalai, Nanchere, Dormo, Gabri, Tobanga = Gabri Nord,
- 3.somray: Somray (Sibine), Tumak, Ndam
4. sokoro: Sokoro, Saba, Ubi, Mawa
- 5 dangla : East Dangaleat, West Dangaleat, Migama, Mabire, Bidiya
6. mokilko: Mokilko
- 7.mubi: Mubi, Birgit, Jegu, Zirenkel, Toram, Masmaje, Kajaksa.

## Abbreviations

Akk - Akkadian, Alg - Alagwa, Arab - Arabic, Bcm - Bachama, Bgh - Boghom, Bnn - Banana, Bur - Burunge, C - Central, Ch - Chadic, Cush - Cushitic, DB - Daffo-Butura, Dng - Dangla, Dghw - Dghwede, E - East, Eg - Egyptian, FB - Fali Bwagira, FG - Fali Gili, FJ - Fali Jilvu, FK - Fali Kirya, FM - Fali Mucella, Glm - Galambu, Gor - Gorowa, Grnt - Guruntum, Hbr - Hebrew, HB - Higi Baza, HF - Higi Futu, HG - Higi Ghye, HN - Higi Nkafa, Hs - Hausa, HS - Hamito-Semitic, Hitk - Hitkalanci, Jmb - Jimbin, Irq - Iraqw, Kap - Kapsiki, Krkr - Karekare, Kwn - Kwang, Lmn - Lamang, Log - Logone, Mhr - Mehri, Mnj - Munjuk, Mok - Mokilko, Mwl - Mwulyen, Nanc - Nanchere, Ngz - Ngizim, Ould - Ouldem, Pol - Polchi, S - South, Sab - Sabaic, Sem - Semitic, Sok - Sokoro, Smr - Somray, Tng - Tangale, Tum - Tumak, W - West, Wnd - Wandala, WM - West Margi, ZB - Zime Batna, ZD - Zime Daria, Zir - Zirenkel.

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- GMr - Gravina, Richard, with the help of Elie Doumok and Alan Boydell. *Merey lexicon*. SIL.
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- TSib --- South Cushitic Sibilant Affricates. In: *SCH*, pp.143-162.
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- TrMnj --- and Hamat Patan. 1991. *Lexique pratique du Munjuk des rizieres: dialecte de Pouss. (Études Tchadiques monographies).* Paris. 1980.
- TrPl --- La formation du plureil en kotoko. *Paper presented on the 2<sup>nd</sup> World Congress of African Linguistics.* Leipzig. 1997.
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- WP - Welbeque, Christophe and Pierre Palayer. *Lexique LÉlé-Francais.* Centre d'études linguistiques. Sahr- Tchad. 1982.
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### **Abbreviations**

AAS - *Egyptian and Semito-Hamitic (Afro-Asiatic) Studies in Memoriam*  
W.Vycichl, G. Takacs ed. , Brill, Leiden, 2004.

AKM - *Abhandlungen für die Kunde des Morgenlandes*.

AM - *Africana Marburgensia*.

AuU - *Afrika und Übersee*.

MSAA - *Marburger Studien zur Afrika- und Asienkunde. Serie A*. Reimer.  
Berlin.

SCH - *Selected Comparative-Historical Afrasian Linguistic Studies* Im  
memory of Igor. M. Diakonoff. M.L.Bender, G.Takacs, D.Appleyard  
eds., Lincom Studies in Afroasiatic Linguistica, 14. Lioncom Europa,  
München, 2003.

SELAF - *Société d'Études Linguistiques et Anhtropologiques de France*.

SIL - *Summer Institute of Linguistics*

SOA - *Sprache und Oralität in Afrika*.

## Введение

*Второй выпуск чадской лексической базы данных содержит корни с латеральными фрикативными \*ɫ, \*ɫ', \*ɮ в начальной позиции.*

*Поскольку первый выпуск включал (наряду с \*n и \*r) корни с начальным \*l, а во многих западно- и восточночадских языках чадские \*l- и \*ɮ- отражаются как l-, выбор фонем для второго выпуска был очевиден.*

*По сравнению с первым выпуском значительно увеличился лексический материал - за счет словарей, списков слов и статей, появившихся за это время на сайте *Web Resources for Chadic Languages*. Пользуясь случаем поблагодарить всех авторов, сотрудничающих с этим сайтом.*

*Кроме чадских языков, латеральные фрикативные есть в семитских, Египетском и Южно-Кушитских, поэтому внешние параллели ограничены лексикой именно этих языков. В работе даются ссылки на чадские, семитские и хамито-семитские этимологии других авторов.*

*Основной задачей настоящего выпуска является: наиболее полно представить в виде этимологических статей лексический материал с латеральными фрикативными в начальной позиции*

*Данный выпуск включает материалы нескольких новых (по сравнению с вып. I) языков: мушере, кофьяр, зар (Западночадские), бана, подоко, зулго, мбуко, мерей, ульдем, муйанг, чувок, макари (Центральночадские), саба, мава, зеринкель, мабире (Восточночадские). Кроме того, более полно представлен материал, собранный Ч. Миком. Классификация центрально-чадских языков несколько изменена (по сравнению с Вып. I.) с учетом последних публикаций в этой области, а именно: [RBlench 2004], [R.Gravina 2005]). Изменения касаются языков Сукун (Сукур) и Гидар, ранее выделяемых в отдельные группы. Теперь они входят как подгруппа в группы мафа и музгу, соответственно (см. стр. 16-17).*

*Как и в первом выпуске, устанавливаются регулярные фонетические соответствия для конкретной серии фонем в начальной позиции (в данном случае - для латеральных фрикативных). Соответствия в интервокальной позиции могут быть окончательно установлены только по завершении всей работы, а до этого мы основываемся на материалах предыдущих исследований (в частности, [Solken], [Mouchet], [Newman], [SkNB], [SchV], [CLR], [TrC], [Shry], [GCI], [TAS], [Stolbova 1996, 2003], [Столбова 1999]). Все отклонения от рефлексов, установленных ранее, отмечаются. Вокализм не реконструируется, гласный в праформах обозначается через V.*

*Принцип организации материала остался прежним, а именно: объединять лексические единицы, которые: а) максимально близки (идентичны) с точки зрения семантики и б) по фонетическим параметрам могут иметь общий источник. Потенциально родственные корни даются под тем же номером с индексом а), б), и т.д. Производные слова даются отдельно. Указывается тип этимологии - общечадская, на уровне ветви, на уровне подгруппы. Отмечаются потенциальные заимствования. Менее очевидные рефлексы даются в рубрике «сравни».*

*Этимологическая статья начинается с реконструированной формы под звездочкой и предполагаемого исходного значения. Рефлексы по языкам упорядочены по ветвям (Западная, Центральная, Восточная), а внутри ветвей - по подгруппам.*

*Названия языков пишутся с заглавной буквы, названия групп - со строчной. Сокращения названий языков см. на стр. 27. После каждой лексической единицы дается значение по источнику и (в большинстве случаев) перевод на английский язык. Ссылки на источники стоят в квадратных скобках. После знака // приводятся внешние параллели, обнаруженные автором самостоятельно, а также и ссылки на работы сравнительного характера (в которых рассматривался, хотя бы частично, чадский материал) с указанием соответствующей этимологии.*

*Реконструируемые именные корни имеют структуру CV(V), CV(V)CV или SVC(V)CV. Многосложные глаголы - CV(V)C- или CV(V)C(V)C-, односложные - CV(V) (поскольку структура C- не позволяет различать между краткой и долгой гласной односложного глагола). Если в языках отмечены формы с кратким гласным, реконструируется праформа CV. Если лексические рефлексы по языкам имеют вид CV, CV'V, CVw(V) или CVy(V), реконструируется двусложная форма со слабым согласным во второй позиции. Почти все глаголы вида C<sub>1</sub>VC<sub>2</sub>(V)C<sub>3</sub>- являются производными от соответствующих C<sub>1</sub>VC<sub>2</sub>-, реже - от C<sub>2</sub>VC<sub>3</sub>-. Реконструировано лишь несколько глаголов и имен «медиа гемината» (вида C<sub>1</sub>VC<sub>2</sub>C<sub>2</sub>-).*

### Условные обозначения:

Глоттализиция и инъективность обозначается точкой под буквой: ḅ, ḍ, ḳ, ɕ, ɖ̣. Исключение (по техническим причинам) сделано для эмфатической латеральной фонемы, обозначаемой как ɸ'.

Палатальность обозначается с помощью гачека - š, ǰ, ž.

Глухой веларный фрикативный обозначается как x, звонкий - ɣ, ларингальный - h, гортанная смычка - ʔ, полугласные - w, y.

Долгие гласные обозначаются как aa, ee, и т.д.

Семитские фарингальные обозначаются: ʕ (звонкий), ħ (глухой).

Для чадских языков традиционным является следующее обозначение тонов: á - высокий, à - низкий, ā - средний (для языков с тремя тонами); á - высокий, à - низкий (для языков с двумя тонами). В наших публикациях используется нотация источников (без перекодировки).

Система латеральных фрикативных в чадских языках включает: звонкую, глухую и эмфатическую фонемы, в то время как в Семитских и Южнокушитских языках отмечены две - глухая и эмфатическая. В литературе по чадским языкам используются следующие обозначения: ɓ - звонкая (в более ранних публикациях - dl, hl, zl, ǰ̃), ɗ - глухая (также tl, sl, e), ɗ' - эмфатическая (также tl', sl', ǰ̃'). В предыдущих публикациях автором использовалась семитская транскрипция

И.М.Дьяконова, единая для всех Семито-Хамитских языков ( $\hat{z}$ ,  $\hat{s}$ ,  $\hat{c}$ ), Однако, она, к сожалению, не была принята ни семитологами (за исключением [МК]), ни - что существенно для данной работы - специалистами по чадским языкам. Поэтому, начиная с настоящего выпуска нами будет использоваться чадская традиция передачи латеральных:  $\mathfrak{z}$  - звонкая фонема,  $\mathfrak{s}$  - глухая,  $\mathfrak{c}$  - эмфатическая. Для нескольких слов с латеральными из Выпуска I нужно заменить:  $\hat{z}$  на  $\mathfrak{z}$ ,  $\hat{s}$  на  $\mathfrak{s}$ ,  $\hat{c}$  на  $\mathfrak{c}$ .

Для Южно Кушитских языков используется транскрипция, принятая в [ММ], а именно:  $s$  - глухая фонема,  $t$  - эмфатическая.

Для семитских языков также выбрана более традиционная транскрипция:  $\acute{s}$  для латерального (типа др.-евр. "сина"),  $\mathfrak{c}$  для эмфатического в Арабском ("ḍad"), но  $\acute{z}$  для эмфатического в Южно-Аравийских языках.

### **Фонетическая реконструкция и соответствия по языкам**

О феномене латеральных фрикативных в чадских языках впервые написал П.Ньюман [Newman 1977]. С тех эти фонемы были исследованы в: [Dolg, DolL], [CLR], [St, StLat, Столбова], [GCl]. Настоящий выпуск не содержит слов со "вторичными латеральными" в центрально-чадских языках (подробнее см. [StS]). Поскольку в этих случаях на прачадском уровне реконструируется \*s-, все слова подобного рода (и

соответствующая дискуссия) будут включены в следующий выпуск ('Сибиланты и сибилантные аффрикаты').

Рефлексы пращадских латеральных фрикативных были установлены еще в [St, стр. 39], и исправить следует только рефлекс звонкой фонемы в группе леле (не s-, а l-, как и во всех восточнощадских языках). Стало возможным уточнить рефлекс эмфатического \*ʃ'- в Мокилко - ɕy- (как и в языках гр. дангла и муби).

Фонологический статус латеральных будет определен позже. Если, как предполагалось в [Столбова 1999], в интервокальной позиции пращадская фонема \*-ʃ- отражается в языках болева как -d-, то фонологически \*ʃ - это аффриката. Тогда, как и предполагал И.М.Дьяконов, пращадская система представляла собой триаду: глухой сибилант, аффриката, эмфатическая аффриката (аналогично свистящим и палатальным сибилантам и аффрикатам). Если же \*-ʃ- отражается в языках болева как -s- (а значит, нет оснований для реконструкции пращадской аффрикаты), то следует принять трактовку А.Долгопольского: звонкий сибилант, глухой сибилант, эмфатическая аффриката.

Регулярные рефлексы щадских латеральных отражены в таблице 1.

Таблица 1. Рефлексы латеральных фрикативных в чадских языках.

	Западно-чадский группы					Центр.-чад. группы		Восточно-чадский группы			
Proto Chad	Hs	2	3, 7	4	5, 6	8 котоко	1-7, 9,10	1-3	4	5,7	6
<b>*ɸ-</b>	<i>s, š</i>	<i>l</i>	<i>s, š</i>	<i>ɸ</i>	<i>ɸ</i>	<b>*ɸ</b>	<i>ɸ</i>	<i>s, š</i>	<i>[*č]</i>	<i>č</i>	<i>s</i>
<b>*ɸ'-</b>	<i>ç</i>	<i>s, š</i>	<i>s, š</i>	<i>ɸ'</i>	<i>ɸ'</i>	<b>*ɸ'</b>	<i>ɸ</i>	<i>s, š</i>	Сокооро <i>s, š</i>	<i>ɸy</i>	<i>ɸy</i>
<b>*ɸ-</b>	<i>z</i>	<i>l</i>	<i>l</i>	<i>ɸ</i>	<i>ɸ</i>	Логоне <i>ɸ</i>	<i>ɸ</i>	<i>l</i>	<i>l</i>	<i>l</i>	<i>l</i>

**Комментарий к таблице.**

I. Как было показано в [StLat], чадский **\*ɸ** в сочетании с ларингалом отражается как сибиллянт, (а не как l-) в языках гр. сура : **\*ɸVH-** > **ɸH-** > *s/š*-, т.е., дает тот же рефлекс, что и эмфатический латеральный **\*ɸ'-**. Возможно следующее развитие: **\*ɸVH-** > **\*ɸH-** > **ɸ'-**. Почти все генетически родственные корни в семитских языках и в египетском имеют ʕ ('айн') в качестве второго согласного.

См. **\*ɸVHVrV** / **ɸVrVH** 'root', **\*HVɸVr-** 'ten', **\*ɸVHVr-** 'friend', **\*ɸV(HV)l-** 'be sticky; to glue, to coat' and **\*ɸV(HwV) > \*ɸHwV** 'guinea corn'.

II. Автор материала по языку Уби, см. [Alio], предполагал, что этот язык входит в группу дангла. Однако В.Блажек [Blž, в печати] убедительно показал, что с лексической точки зрения, Уби ближе к языку Сокооро (и

следовательно, входит в гр. сокоро), Рефлекс пращадского \*ʃ в Уби (щ-, а не s- как в Сокоро и Мава) Блажек считает архаизмом. По его мнению, Уби сохраняет исходный рефлекс пра-сокоро (тот же, что в группах муби и дангла).

### III. Рефлексы \*ʃ- :

1. Основные различия между латеральной фонемой в данной работе и \*ʃ/- в [CLR] - это рефлексы в языках бата (l- в [CLR] ~ ʃ-), и муби (s- в [CLR] ~ щ ), см. [CLR I:XXVIII-XXIX].

2. \*ʃy- > hy-/ху- в языках группы марги,

3. В языках Беле, Будума, Тумак, Ндам h- это регулярный рефлекс \*s- и \*ʃ .

4. Следующие рефлексы в языках группы котоко установлены в [TrC] : котоко \*ʃ- > Логоне, Афаде ʃ, Гульфей, Макари щ-, Будума h-, Кусери s- . Единственное разногласие состоит в рефлексе в языке Гульфей. Материалы, собранные Й.Лукасом указывают на иной рефлекс, а именно латеральный - χ̃ - (в нотации Й.Лукаса) ).

#### 5. \*ʃ- может озвончаться:

а) в контакте с -r-, -d-:

Cf. С \*hwurɫ- 'star': 7 Mofu wurʒa [BaMof], Gisiga wurʒa [Luk], 4 FJ xuraʃu-mùk [Kr], FM xuraʃiya [Kr] 'star';

C 6 Kola mà-ḡry 'medicine' < \*ḡVrV 'medicine, poison';

C 2 Bana ḡrḡ 'écraser (arachides.)' < C \*ḡVr- 'to squash, to crash';

C 6 Daba ḡḡ 'kind of tree used for brooms; broom' [Lnhf], but Daba ḡdad (voicing in contact) 'sweep' [Kr:425].

б) в интервокальной позиции или после назального префикса:

C 9 Mbara mi-ḡer 'star' [TrMba ] < \*ḡVr-;

C 7 Mofu maḡapara, maḡaparak 'bandeau sp.';

C 4 Gude man-ḡḡa, Bcm kù-làḡe, Gudu méngi-ḡaabü 'dew' [Kr] < CChadic \*ḡVḡV < Chadic \*ḡ'VḡV;

C 7 Mtk=Mafa nḡó-nḡôr 'root' < Chadic \*ḡVrV.

W 5 Geji cluster mà-ḡaḡ, mə-ḡaḡ, mè-ḡaḡ, Tule mè-ḡinḡ, Chari mè-ḡn, Dokshi ye-ḡn Badas ge-ḡin 'hair' < Chadic \*ḡVnV 'hair'.

в) по ассимиляции со вторым звонким согласным:

C 2 Margi ḡḡḡḡ 'to learn' [Hf:118], 3 FK ḡḡḡḡtu? 'learn' [Kr] < \*ḡVb-.

г) в редуцированных корнях (см. 2): \*ḡVḡVC > ḡVḡVC > ḡVḡVC > ḡVC- (W 5 Guus ḡyera 'bone' [Cr], C Cuvok ḡḡar 'bone' [Ndo], Mada mà-ḡàḡar 'mollet (de la jambe)' [BaMd]).

6. Слова с ḡ в Kerekere считаются заимствованиями из Ngizim. В следующих корнях, однако, рефлексы в Ngizim отсутствуют (см. NN 45, 98, 249, 285, 308, 357).

IV. Следующие рефлексы для \*ʕ в языках группы котоко установлены в [TrC]: котоко \*ʕ- > Логоне, Афаде, Малтам ʕ-, Гульфей, Макари ʕ, Кусери ʕ [(TrS)]. Материалы, собранные Й.Лукасом опять указывают на иной рефлекс, а именно латеральный эмфатический - ʕ̣.

#### V. Рефлексы \*ɓ

1. Гуде, Бата, Бачама, Гуду (гр. бата) отражают \*ɓ- как l-;
2. Рефлексы \*ɓ в языках группы котоко в [TrC] не установлены. Собранные материалы указывают, что \*ɓ отражается в Логоне как ɓ, в Макари и Будума - как l.
3. Оглушение \*ɓ :
  - a. типично для Маса и Зиме Дари (гр. маса);
  - b. может произойти под влиянием -f- во второй позиции (\*ɓVf-> ʕVf-), см. \*ɓVvV (< \*ɓVfV) 'циновка' и \*ɓ VfV 'жаркая (погода)'.

VI. В нескольких корнях со вторым верярным отмечена диссимилиация/ассимиляция обеих фонем (см. \*ɓVk- > ɓVg-, var. \*ʕVg- 'to sow', \*ʕVk- /\*ɓVk- / ɓVg- 'to laugh at').

Реконструкция исходной семито-хамитской системы латеральных фонем

выходит за рамки настоящей работы, однако можно указать на следующие соответствия:

1) Двум чадским латеральным (\*ʃ и \*ɸ') соответствует Южно-Кушитский \*sl- и Семитский \*ś.

2) В нескольких корнях наблюдается соответствие: Чад. \*ʃ ~ Др.-евр. š (а не ś), см. \*ʃ V 'to help', \*ʃ V(ʃ V) 'to cry, to speak; a cry', \*ʃ Vb- 'to weave, cloth', \*ʃ VbVrV 'kind of corn (millet)', С \*ʃ VgV 'idiot', \*ʃ Vk- 'to be eager, to love', что может свидетельствовать о существовании еще одной латеральной фонемы на прасемитском уровне, как и предполагали А.Милитарев и М.Мепаришвили (см. [МК, т. I]). 3) Существует взаимно-однозначное соответствие: Чад. \*ɸ' ~ Куш. \*tl ~ Сем. \*d (арабский 'dad').

В [TSib 153-157] устанавливается иное соответствие между чадскими и кушитскими латеральными фрикативными.

Список языков и источников см. на стр. 16-28.

**\*ɕ**

1. **\*ɕV 'to cut (off, through), to slaughter'**: 7 Sha šoš 'slaughter; schlachten' (redupl.) [JgR]; C 2 Bura ɕa 'cut up, into pieces' [Ann], Margi ɕə 'cut (with knife)' [HfM:127]; 3 Bana ɕá 'couper, tailler, trancher; cut (off, through)', ɕáɕá 'découper, dépecer' [GLBn], FK ɕa 'cut, trim' [BINd]; 5 Podoko ɕa: 'cut' [JL]; 7 Mbuko ɕā 'cut' Ould ɕì 'couper', -ɕàr 'couper pour qqn' [KOU]; Gisiga ɕ- 'schneiden, schlachten; cut, slaughter' [LkG]; 9 Mulwi ɕì 'trancher, couper; cut (off, through)', Mbara ɕii 'cut' [TrMba, Mlw]; Mnj ea 'to cut' [Mo ea, p. 41] // Eg šʕ 'cut off a body-part of a person /animal, fell trees, harvest, cut in pieces' [EG: 415] (Pyr).  
GCl \*ɕa 'cut'.

1a. **\*ɕV(V) 'to circumcise, to cut'**: W 1 Hs šáa 'circumcise', šàa 'circumcision; cutting out a garment'; C 7 Mofu -ɕ- 'couper, circoncire; to cut, to circumcise' [BaMof].

1b. **\*ɕVy/w- 'to harvest corn (with a sickle)'**: W 2 Mupun lee 'to cut (by taking of slices); to harvest' [FrM]; 5 Zaar ɕaa 'cut, harvest with sickle' [CrZ], Guus ɕaw 'cut, slaughter, harvest (rice, wheat)' [CrG], Dott ɕoo 'cut; harvest rice' [CrD], Pol ɕóo, Zul ɕoyí, Buli ɕóo-dən, Dott ɕuu, Jimi ɕewii 'cut' [Cs N 787]; C 7 Muyang ɕay 'cut with a sickle' [SmM]; 8 Afade,

Maltam *ʃ*áy, Log *ʃ*áy ‘couper (céréales), to cut cereals’ [TrC], Makari *še* ‘cut the ears of corn’ [AIM]; 9 Mnj *ʃ*í ‘faucher (a la faucille); cut with a sickle’, +wile ‘égorger; slaughter’ [TrnMnj]. For Eg ‘to harvest’ see above.

Cf. N 368. **\*ʃV ‘to cut (grass with a sickle); to chop, to cut (with a knife)’**. Note that N 1 and N 368 are attested in W 5 Zaar.

2. **\*ʃV ‘to rain’**: C 7 Cuvok *ʃ*áy ‘rain’ [Ndo]; 8 Makari *šu* ‘to rain’ [AIM]; 9 Mbara *ʃ*ée, Mnj *ʃ*í (*ʃ*á) ‘pleuvoir; to rain’ [TrMba, Mnj].

Note W 3 Bolewa *isá* ‘rainbow’ [IbBl].

2a. **\*ʃV ‘to pour (slowly)’**: W 3 Bolewa *šaa* idf. ‘rushing out smth poured’ [GAB]; C 7 Mofu *ʃ*áy, *ʃ*éy ‘verser de l’eau doucement, to pour water slowly’ [BaMof].

Cf. N 370. **\*ʃV ‘to pour (quickly), to sprinkle’**.

3. **\*ʃV ‘to go, to return’**: W 5 Saya *ʃ*ə ‘go, walk, travel’ [Cs N661, 688], cf. *ʃ*aatú ‘go to meet’ [Cs N 670], Zaar *ʃ*ə ‘go’ [CLR], Jimi *ʃ*éʃée ‘pass by’ [Cs N671]; C 6 Hide *ʃ*a ‘aller/entrer chez soi; to return home’ [Eg]; 7 Mada *áʃ*á ‘s’en aller, venir chez soi, revenir de’ [BaMd]; 10 ZB *ʃ*á ‘repasser; go / come again’ [Sa].

Cf. 369. **\*ʃV ‘go (away)’ > \*ʃVʃV ‘to run’**.

4. **\*ʃV ‘to resemble’**: C 10 ZB *ʃ*é ‘se ressembler, be alike, to resemble’ [Sa]; E 2 Lele *sí* ‘ressembler’ [WP].

5. **\*ʃV ‘to throw’**: C 8 Log *ʃ*é ‘werfen; throw’ [LkL]; E 1 Kera *si* ‘schleudern; hurl; sling’ [Eb].

6. **\*ʃV ‘to beat (a drum), to knock’**: W 2 Sura *lá* ‘Trommel schlagen; to drum’ [JgS]; C 5 Podoko *ʃ*a ‘taper; to pat’ [JL]; 8 Log *ʃ*á, Bud *há* ‘beat (a person)’ [CLR], Log *ʃ*á, *ʃ*aa ‘schlagen, to beat, to strike’ (also ‘losstechen,

beschiessen'),  $\acute{f}a$ -he 'zu Boden schlagen, die Trommel schlagen; to knock down, to drum' [LkL], Log  $\acute{f}a$ -wun 'piquer, donner des coups; to stab, to strike' [AIL].

Note W 3 Tng sasa 'drum' [JgT].

Cf. N 474. C  $\acute{f}Vhw/y$ - 'to strike heavily'.

7.  $\acute{f}V$  'to marry': C 6 Sukun  $\acute{f}a$  (zər) 'to marry (a wife)',  $\acute{f}a\acute{f}a$  'marriage',  $\acute{f}a$ -ma 'carry, take, take in marriage',  $\acute{f}a$  yud 'pregnant (carry belly)' [DS]; 7 Mofu - $\acute{f}$ - 'ravier, épouser (une femme); to marry' [BaMof]; 10 Masa  $\acute{f}i$  'épouser; marry' [CC]; E 7 Mubi  $\acute{c}i$  'to marry' [CJ]; Mabire  $\acute{c}awe$  'marier, épouser; marry' [HJ].

Cf. StI N 4 \*IV 'to get (a thing), to marry (a woman). Note that W 2 Mupun  $l\acute{a}$  'marry' [FrM] may originate from the present root.

8.  $\acute{f}V$  'to grow': W 4 Warji  $\acute{f}a$  'grow' [SkNB]; E 1 Kera  $s\acute{i}$  'aufwachsen, aufziehen; grow up, bring up' [Eb]// SCush Maa  $\acute{I}slu$  'grow (plants)' [Eh 212].

9. C  $\acute{f}V$  'to stretch': 7 Muyang  $\acute{f}i$  'stretching' [SmM]; 8 Log  $\acute{f}a$  'ausstrecken; to stretch; outstretch' [LkL] // ? Eg  $z\acute{s}$  'ausbreiten; to widen' (MR) [EG 482].

Cf. C 7 Mbuko  $\acute{f}o$  'distance mesurée en allongeant les bras a droit et a gauche; distance between stretched arms' [GNT].

10. C  $\acute{f}V$  'to (make, be) smooth, to smear': 5 Podoko  $\acute{f}a$  'lisser, enduire, crepir; make smooth, to smear, to plaster' [JL]; 10 ZD  $\acute{f}\bar{a}$  'rendre lisse; become smooth' [Cpr].

11.  $\acute{f}V(\acute{f}V)$  'to smell, to stink': C 2 Chb  $\acute{f}esu$ , Margi  $\acute{f}\grave{a}$ , Hildi  $\acute{f}\grave{a}rd\grave{i}$ ; 3 FK  $\acute{f}a$  [BINd],  $\acute{f}a$ -tù? 'smell' [Kr:350]; E 1 Kwang  $s\acute{i}isi$  'to smell, to stink' [Eb]// SCush Dah  $slee\acute{f}$ - 'smell' (intr.) [EE:26], Irq  $slee\acute{f}$ -, Gor  $sle\acute{f}$ -.

Note N 388  $\acute{f}VV$  'a good smell'.

12. **\*Vw-** ‘to be enough, to suffice’ > ‘to be able’: W 3 Krkr *ʔaa* ‘reach, be enough’ [GK]; 7 Duwai *ʔawó* ‘suffice’ [Sch]; C 5 Malgwa *ʔe* ‘genügen; be enough, appropriate’ [LrD], Glavda *ʔ-* *with extension -l-* ‘be enough, satisfied, worthy’ [Rp]; Podoko *ʔa* ‘suffice, suffice’ [JL], 7 Mbuko *ʔa* ‘être suffisant, be sufficient’ [GNT], Ould *ʔi* ‘suffire’ [KOu], Muyang *ʔi* ‘suffice’ [SmM], Mada *éʔe* ‘suffire, être suffisant, capable, be enough, capable’ [BaMd], Zulgo *ʔe* ‘suffire, être assez; pouvoir, avoir la faculté; be capable, possible, enough’ [ZIL], Meray *ʔa* ‘suffire’ [GMr]// SCush Irq aslaw ‘able’ [MQK].

13. **\*Vv ~ \*Vʔ/y-** ‘to swell, to become fat’: W 1 Hs *sàayii* ‘excessive fatness’; 5 Guus *ʔii* ‘swell’ [CrG], Zaar *ʔəə* ‘swell’ [CrZ] (cf. Saya *ʔú-s* ‘to swell’ [Cs]); C 3 FK *ʔyi* ‘swell’ [BlNd]; 4 Gude aʔə v.i. ‘swell, puff up, bloat’ [Hs], Sharva *ʔáʔ*, Jimijimən *ʔiʔə* ‘swell’ (? metath. < **\*Vʔ-**) [Bry]; 7 Zulgo *ʔèʔé* ‘s’enfler; to swell (out), to belly out’ (redupl.) [ZIL]; E 1 Kera *sé* ‘anschwellen, vermehren; to swell, to augment’ [Eb]; 2 Tob *sáy* ‘enfler’ [CTC]; 4 Mawa sooyon ‘gonfler; grossir; to swell, to fatten’ [RbM]; 5 Bidiya *čuuʔay* ‘avoir un gros ventre; to have a big stomach’ [JgB]// Hbr *śʔt : nsʔ* ‘erhabene Stelle; swollen spot, swelling’ [KB 913].

14. **\*Vy-** (metath. **\*ʔVʔ-**) ‘to count, to buy’: W 1 Hs *sàyaa* ‘buy’, cf. [SkH 232]; C 5 Daba *ʔa* ‘mesurer, comparer; to measure, compare’ [Lnh]; 5 Malgwa *ʔa* ‘vergleichen, arrangieren, zählen; compare, arrange, count’ [LrD], Podoko *ʔaʔá* ‘calculate; count’ (redupl.) [JL]; 7 Muyang *ʔaʔay* ‘calculate, think’ [SmM]; 9 Mnj *ʔi* ‘acheter en gros; to buy wholesale’ [TrMnj]; E 7 Zir ar-ʔuča, Mubi oč ‘acheter; to buy’ (< **\*ʔVč-** < **\*ʔVʔ-**) [CJ].

15. **\*V(V/y-** ‘to perform, to make’: W 5 Dott *ʔaa* ‘execute’ (*ʔaati sər* ‘dancing’) [CrD]; 7 DB *sáy* ‘tun, to do’ [JgR]; C 2 Bura *ʔa* ‘to perform’ [Ann];

9 Musgu  $\tilde{\chi}$ a ‘machen, tun; make, do’ [LkMsg]// ? Eg š ‘Arbeit, work’ (OK) [EG 399].

16. **\*Vw/y-** ‘to assist, to help’: W 3 Pero čáwù ‘assist’ [FrP]; Bolewa saww- ‘add, help’ [LkB]; C 5 Malgwa  $\acute{f}$ íya ‘Hebamme; повивальная бабка; midwife’ [Lr]// Arab šyʕ ‘aider, assister’ [BK1298].  
Cf. N 373. **\*ʒV** ‘to help, to save’.

17. **\*V(V/w)-** ‘to compel, to dominate’: W 1 Hs sâ ‘cause to do’, cf. [SkH 223]; 2 Angas le ‘force, compel, cause to do’ [Fl] (semantically rather belongs to the present root than originates from Ch \*IV ‘to make’, cf. StI N 3); C 3 Bana  $\acute{f}$ ówá ‘dominer; dominate’ [GLBn].

18. **\*Vw/y-** ‘to deprive, make poor’: W 6 Ngz  $\acute{f}$ á $\acute{f}$ uwà ‘poor, destitute person’ [SchN]; C 5 Malgwa  $\acute{f}$ íya ‘entziehen; to deprive’ [Lr]// Eg šw (Pyr) ‘leer sein; be empty’ > ‘leermachen, entleeren; der nichts hat; to empty, one who has nothing’ [EG 426].  
For Eg ‘be/become empty’ cf. W 1 Hs sóošè (if < \*saw-še) ‘fall out (woman’s hair); shed grain (corn-heads)’ (?‘become empty’) and sóošíyaa ‘heads of guinea-corn in which the corn has not been fertilized or which have been denuded of grain by rats’.

19. **\*Vw/y-**, var. **\*ʔV[ʔ]-** ‘to bathe, to wash’ (intr.): W 5 Tala  $\acute{f}$ au ‘wash’ [Cs], (Saya  $\acute{f}$ aa ‘to swim’ [Cs]); C 9 Gidar  $\acute{f}$ ay ‘se laver, to bathe’ [Mo]; E 5 Migama ʔáččò ‘se laver; wash’ intr. [JgM], WDng če, áčeʔ ‘laver’ [Fd]; 7 Brg ʔáci ‘laver (choses et corps), wash’ (tr., intr.) [JgBr] (both may originate from \*ʔVʔ- (metath.) or from \*ʔVč-); 6 Mok súuyè ‘se laver, baigner; to bathe, to wash oneself’ [JgMk].

19a. **\*ʔah-** ‘to wash’ (tr.), to rinse’: W 7 Fyer so, Bokkos sa ‘wash things’ [JgR]; C 7 Mafa  $\acute{f}$ ah- ‘laver (calebasse) avec un mélange d’eau et de sable; wash a calabash’ [BaMaf]; E 4 Sok sóʔé ‘wash things’ [CLR], Saba soʔe

‘wash’ (tr.) [DMT]// SCush Irq slaw(a)ʃaas ‘to rinse, to clean’ [MQK].

19b. **\*ʃVyVhV** ‘wet’ **adj.**: W 7 Fyer sé ‘nass; wet’; C 8 Afade ʃiöh ‘feucht; wet’ [Sol:345], E 1 Kera sāayɪ ‘feucht, wet’ [Eb].

Cf. E 5 Bidiya čiw [< \*ʃiw / \*čiw ] ‘marecade, swamp’ [JgB] // Eg š (Pyr) ‘Teich, pond’ [EG 397].

20. **\*ʃyV/\*ʃV?** ‘to stand up, to rise’: W 2 Montol laa ‘aufstehen, aufgehen, to stand up, to rise’ [JgC]; 4 NBauchi \*ʃa(u): Warji ʃáu, Kariya, Miya, Mburku, Jmb, Diri ʃa-, Siri ʃu [\*ʃa(u) SkNB], Paa ʃúu *also* ‘to fly’ [MS] (cf. E 2 Tob sáy [CTC], Kaba, Nanc īsəy ‘voler (oiseau)’ [HmK]); 5 SBauchi: Tala cluster \*iʃa; Geji ʃi, Pol ʃi, Buli iʃa, Zeem ʃaa, Dass cluster ʃe/u, Zakshi (Saya cluster) ʃe, Dott ʃe, Zaar of Kai ʃi ‘stand up’ [Sm]; 6 Ngz ʃáú ‘stand up’, ʃàʃáú ‘lift, raise’ [SchN]; Bade ʃáw ‘stand up’ [Kr]; C 1 TP ʒa ‘mount’ [Kr 347]; 2 Bura ʃa-ta ‘to arise, to stand up’ [Ann], Ngwahi gî-xiyèta, Hildi xyaʔadì, Cibak xa-tì, Kilba àhýaʔatù (xya- < \*ʃya) ‘stand up’ [Kr]; 3 FK ʃatə, ʃə ‘wake, stand, rise’ [BINd], ʃa-tù?, HN ʃa-gwà, HB ʃavò ‘stand up’ [Kr 407]; 6 Lmn ʃ- [Luk-CLR], Hide ʃya ‘se lever; to rise, to go up’ [Eg], ʃiʔay ‘get up’ [BrH], Hitk ʃ- ‘aufstehen’ [LkH]; 7 Mada éʃya ‘se lever, poindre (jour); to rise, to begin (day)’ [BaMad]; 8 Log ʃá ‘sich erheben, aufstehen; to rise, go up’ [LkL]; 10 Masa ʃà ‘soulever, to lift (a little)’ [CC], ZD ʃiē ‘prendre qqch par terre; se lever (lune), to raise smth. from the earth; to rise (moon)’ [Cpr], LP ʃe ‘to lift’ [Kr:358]; E 3 Smr swâ ‘se lever’ [JgSib] // Eg šwy (Pyr) ‘sich erheben, to rise’ [EG 431], cf. zšy (Pyr) *neben* ‘emporfliegen (Vogel); to fly up (bird)’ [EG 483], SCush Maa sle ‘rise (sun)’ [Eh 211].

Cf. W 3 Tng sas ‘high, visible’ [JgT].

Cf. N 383. C **\*ʒV?** ‘to wake up’.

21. **\*ʃ(y)V** ‘to hurry’: W 5 Guus ʃyaa ‘hurry’ [CrG]; C 10 ZB ʃé ‘se hâte; to hurry’ [Sa] // cf. Arab šʔy ‘devancer qqn, outstrip, leave behind’; šwʔ

‘devancer’ [BK 1284].

**22. C \*ʃVw/y-** ‘to catch and hold’: 5 Malgwa ʃiya ‘fangen (etw), to catch (smth) abfangen, to unhook’ [LrD]; 7 Muyang ʃaw ‘grasping’ [SmM], Mofu ʃuw- ‘attraper au vol, capture in flight’ [BaMof], 8 Log ʃí ‘ergreifen; to grip’ [LkL]; 10 Masa ʃí ‘prendre en soulevant; take and lift (a stone)’ [CC]// Cf. SCush Irq sleeves ‘select, separate, pick up’ [MQK].

**23. C \*ʃVy-** ‘to leave, to depart’: 5 Gvo ʃiya ‘leave’ [HmG], 6a. Sukun ʃə ‘to leave’ [DS]; 7 Ould -ʃiyó ‘partir, quitter; depart, leave’ [KOu] // SCush Dahalo slaʃ:ay- ‘to leave’ [EE].

Derived from N 3. \*ʃV ‘to go, to return’?

**24. \*ʃVw/y-** ‘to scratch’: W 1 Hs súusà ‘scratching (e.g. the body etc., on account of irritation), preening (bird)’ (<\*sVw-s-) [cf. SkH 235]; 3 Tng suye ‘scrape out contents of a vessel’ [JgT]; 4 Warji ʃaw, Paa ʃawo ‘to scratch’, Jmb ʃaa ‘shave’ (n.) [SkNB].

Note C 4 Gude ʃaaʃá ‘pricky fuzz (on certain plants)’ [Hs].

**25. C \*ʃV(?)-** ‘to find’: 6 Glavda ʃ- ‘to have, get, find, gain, receive, obtain, take (food), be satisfied, enough, happen to smb, become’, (*with extension. -r-*) ‘to find someone’ [Rp]; 8 Log ʃé ‘finden; to find’ [LkL].

Cf. C 2 Margi ʃiya ‘obtain’ [Kr:428], 3 HN ʃeyi/ʃamte, HB ʃandə ‘obtain’ [Kr:428].

**25a. \*ʃV(w)-** ‘to meet’: C 8 Log ʃá ‘treffen, meet’ [LkL]; E 5 Migama ʃáwwo ‘recevoir, accept, meet’ [Jg].

**Cf. \*ʃVʃ-/\*ʃVč-** ‘to search’ (?metath.): E 5 Bidiya ʃiičaw ‘chercher, surveiller; search, pay attention, watch’ [JgB] //Akk šeʔû ‘look for, search’ [CAD 255].

26. C *\*ɬVʔ-* ‘to peel, shell’: 5a Hide ɬuʔay ‘to shell, peel’ [Br]

Noun deriv.: cf. W 1 Hs siyaayè, sayaaye ‘peeled stalks of Indian hemp’; C 7 Zulgo ɬóɬa ‘balle du grain’ [ZIL], Mbuko ɬɔ́ɬé ‘partie exterieur d’un tige de mil’ [SmMb].

27. The word for ‘cow’ - *\*ɬa* - shows irregular voiced reflex (*ɓ*) in a number of Biu-Mandara languages. Most probably, it originates from PChadic *\*nɬa* ‘a head of cattle; Rind’. Original semantics and structure can be found only in Log: *nɬaa*, *nɬaa*, pl. nɬáwèè ‘Rind’, *nɬaa* geném ‘Kuh’ (gənəm ‘Frau, Weib’), *ɸole nɬaa* ‘Kalb’ (ɸole ‘child’) [LkL]. The same semantics is still preserved in Gulfeɪ ɸa, pl. ɸáwê ‘Rind; a head of cattle’ [Lk:150] and in Musgu ɸai, pl. ɸákai ‘Rind’, ɸai na munii ‘Kuh, cow’ pl. ɸákai na falakái ‘cattle’ [LkM:64].

Traces of the prefix in combination with archaic semantics can be seen in Malgwa: ɔ́ɬa ‘Rind(er), Vieh, head of cattle, cattle’, (muksə) ɔ́ɬa ‘cow’ [Lr].

Archaic semantics is still preserved in Makari - ša m. ‘herd of cows’, f. ‘cow’ [AlM], Sukun - ɓə ‘cow; general term for cattle’ [DS], Gisiga ɬa ‘Rind, Kuh’ [LkG], Bud haa ‘(Milch) Kuh, Rind; (milk)cow, a head of cattle’ [LkB]. Thus, we postulate the following semantical development: ‘a head of cattle’ > ‘cattle’ and ‘a head of cattle female’ > ‘cow’. It can not be completely excluded that the original semantic was ‘cattle’ (> ‘a head of cattle’ > ‘a head of cattle female’).

Traces of the pref. in combination with semantical innovation are attested in C 5 Wandala èɬɬá ‘cow’ [Lk:122] and C 7 Mada- aɬɬa ‘vache, boeuf’ [BaMd].

The geminated consonant, obviously, results from assimilation: *\*nɬa* > *ɬɬa* > *Vɬɬa*. It is likely that the prefix accounts for voicing of the lateral in a number of Chadic languages (C 4 bata gr.: *\*-ɬV* > *-ɓV* > Gude, Gudu, Bata, Bachama IV; Mafa *\*-ɬV* > *ɓV*, W Siri ɓáá-tí [Sk-CLR], dhlanski [CLR]). Note that the same reflexes show bata languages and Mafa in words with ‘secondary laterals’ (‘name’, ‘tooth’, ‘ear’, etc.). Meanwhile, it is highly

probable that ‘secondary lateral’ was influenced by a velar body-part prefix. The latter, in its turn, provoked voicing of the lateral in medial position: \*kV-sVCV > kVzVCV > kzVCV > ʒVCV [See Stolbova forthcoming]. Other Chadic languages have no traces of the original phonetics and semantics, namely:

27a. \**nʔa* ‘a head of cattle’ > \**ʔa* ‘cow’: W 1 Hs *sáaniyáa* ‘cow’, *sâ* (? < \*san) ‘ox’, pl. *śánú*, *śánayee* (related to the present root if singular forms in Hausa are derived from *śánú* ‘cattle’ < \**nʔa-nV*); 4 Siri *ʒáa-tí* [Sk-CLR], *dhlanski* [CLR]; 5 Dott *ʔáá* ‘cow, bull, ox’, *ʔáá ləp* ‘buffalo’ [CrD], Buli, Dott *ʔáa* ‘cow’ [Cs N 223], Pol, Jimi, Zul *ʔáa* ‘cow’ [CLR], Tala *ʔaa* ‘cow’ [Cs], Djarim *ʔá* (sg. and pl.) ‘cow’, *gwòmə ʔá* ‘male cow’ [RBI]; 6 Ngz *ʔà* ‘cow’ [SchN]; C 1 Tera *ʒa* ‘cow’ [NmT], Hwona *ʔa-ra*, Gabin *ʔa-ta*, Boga *lə-tə* ‘cow’ [Kr:188], 2 Plain Margi *ʔa* ‘cow’ [Meek]; Bura *ʔa* ‘a cow’ [Ann], Kilba *ʔa* [Meek] ‘cow’; 3 Higi Moda *ʔa*, Higi Hymisi *iʔa*, Fali K *ʔa* [Meek]; 4 Gude la ‘cow’ [Hs]; FB *ʒən* ‘cow’ [SkNB], 5 Glavda *ʔà* [Rp], Dghw *t-ʔà*, Ngweshe *ʔə* ‘cow’ [CLR]; Wnd *èʔʔá* [Lk:122], Malgwa *əʔa* ‘Rind(er), Vieh, head of cattle, cattle’, (muksə) *əʔa* ‘cow’ [Lr]; 5a Hide *ʔa* ‘la vache variété zébu’ [BrH], Hitk *ʔá* [LkH]; 6 Sukun *ʒə* ‘cow; general term for cattle’ [DS], 7 Gisiga *ʔa* ‘Rind, Kuh’ [LkG], Mada *aʔʔa* ‘vache, boeuf’ [BaMad], Mofu *ʔá* ‘bovin, vache’, Mafa *ʒe* ‘boeuf’ [BaMaf], Merey *ʔa* ‘boeuf’ [GMr]; 8 Log *nʔaa*, *nʔaa* pl. *nʔawê* ‘Rind’, *nʔaa* *geném* ‘Kuh’ (*gənəm* ‘Frau, Weib’), *ʔole nʔaa* ‘Kalb’ (*ʔole* ‘child’) [LkL], Gulfei *ʒa*, pl. *ʒawê* ‘Rind; cattle’ [Lk:150], Makari *ša* m. ‘herd of cows’, f. ‘cow’ [AlM], Bud *haa* ‘(Milch)-Kuh, Rind’ [LkB]; 9 Musgu *ʒai*, pl. *ʒákai* ‘Rind’, *ʒai na munii* ‘Kuh’ pl. *ʒákai na falakái* [LkM:64], Mnj *ʔay* ‘vache’, pl. *ʔaakay* [TrMnj]// SCush \**slee* ‘cow’ > Iraqw, Alagwa, Burunge *slee* [Eh]. For Ch - ECush cf. [Dolg N49], note that Paa *ʒa* *harčaka* ‘bull’ does not mean ‘bull-cow’ (as in Dolg.), but ‘son-cow’, cf. Paa *ʒa* ‘boy, son, male child’ [MS 134]. Thus Paa *ʒa* *harčaka* ‘bull’ is not related to the present root.

Ch \**ʔ-* ‘cow’ [CLR I 43A], GCl \**ʔ* a ‘vache, boeuf’.

It is not quite clear, whether E 3 Ndam swi ‘zebu’ [Dik Jg] and Tumak hùì ‘zebu cow’ [CLR] have the same origin. Words for ‘cow’ in other Southern groups phonetically close to that of Ndam-Tumak, namely: E 1 Kera si ‘cow’, 2 Nanc sī ‘vache, boeuf, viande’, Kbl sī ‘vache, boeuf’ [HKb], Gabri sin ‘cow’ [Lk], Dormo, Nanc, Kbl sī ‘ox; Dormo, Nanc sīdi tama, Kbl sī tāma ‘cow’ [Lk], si~tá ta:má ‘cow’ [CLR]. It can not be excluded that South ECh can be reconstructed as \*sa-wi (> \*swi > sii) ‘(zebu-) cow’ (actually, ‘cows’). Pl. form is made with the help of a suffix *-wi*. The latter is still productive as a verbal and nominal pl. marker in Lele: wal, pl. wal-wi ‘to cut’, hindi, pl. hindi-wi ‘to insult’, gira, pl. gar-we ‘dog’, mayo, pl. may-we ‘small’, etc., see [Cope 74-75] for more examples. Note the same (??original) semantics in Hide: *ʔa* ‘la vache variété **zébu**’ [BrH].

The words for ‘meat’ and ‘wild animal’ are derived from ‘cow’.

**27b. \*ʔ(y)VwV ‘meat’:** W 4 Warji *ʔū*-na, Paa *ʔu*wi, Siri *ʔuyi*, Miya *ʔi*wiya, Kariya *ʔi*wi, Cagu *ʔu*-n ‘meat, animal’ [SkNB], 5 Guus *ʔú* ‘flesh, meat’ [Cr 36], *ʔuu* kə ləpə ‘wild animal’ [Cr], Dott *ʔoo* ‘meat’ [CrD], Bgh sau, lau, Mangas *ʔu*, *ʔo* [Cs], Pol *ʔoo* ‘meat, **skewered meat**’ [Cs N 196, 210], Dyarim šaw ‘meat’ [Blench]; Buli *ʔú*, Dott *ʔoo*, Saya *ʔú*, Zul, Geji *ʔuu* ‘meat’ [Cs N196], 6 Ngz *ʔuwá*i, pl. *ʔuwawin* ‘meat; animal (generally wild)’ [SchN]; C 1 Tera *ʔú* ‘meat’ [NmT]; 3 FK *ʔyi* ‘meat’ [BlNd], HF *ʔti* ‘meat’ [Kr 212], *ʔti* wà gamba, Kap *ʔti* yà kwámte, HF *ʔte* kwámtu ‘wild animal’ [Kr:158]; Bana *ʔəm* [GLBn] (? pl.); 4 Jimijimən *ʔiwún*, Gude lùá, Tsuvan *ʔúé*, Sharva lyùé (< \*ʔyue) ‘animal, meat’ [Br], FJ *ʔú*we, FM *ʔiwu* ‘meat’, FM *ʔiyù* bilu ‘wild animal’, Gude ləwá ‘flesh, meat’ [Hs], Zumu (Jimo, Bch. gr) lio ‘meat (animal)’ [Meek], 5 Glavda *ʔu*wa ‘animal, meat, flesh’ [Rp]; Guduf *ʔúwà* ‘meat’ [CLR: 233]; Wnd hyuwa ‘meat (animal)’ [Meek], *ʔúwà* (< \*ʔyuwa) ‘Fleisch’ [Lk:122], Dghw *ʔúwè* ‘meat’ [CLR: 233], *ʔuwe* [HmG], 5a Hitk *ʔúwì* [LkH], Hitk, Hide, Vembo *ʔu*?i [HmG], Lmn *ʔui* ‘meat’ [Meek-CLR], *ʔu*wi [HmG]; 7 Mafa *ʔúwéd* ‘viande, animal’ [BaMaf], Mada oʔʔo ‘viande, chair, gibier’; Mofu (á)*ʔaw* ‘viande,

chaire animal (viande ou poisson)', áƿaw ŋgá léy 'viande de brousse= wild animal' [BaMof], Meréy ƿaw 'viande' [GMr], Mefeŋe (all dial.) ƿaw 'meat' [CfM]; 7a Gidar ƿwa [Mo-CLR] 'meat'; 8 Sao šu, Gulfey ƿu, sū, thūū, Kuseri su, suu, Shoe su, Log ƿu 'Fleisch', Bud hu 'Fleisch, Leib' [Sol:268], Log ƿu 'Fleisch' [LkL], Makari šu 'meat, flesh' [AIM]; 9 Mbara ƿúk 'viande' (? pl.) [TrMba]; 10 Masa ƿiw 'la chair; la viande' [CC], ZD ƿíéw 'viande, animal comestible' [Cpr], ZB ƿēō 'animal; chair, animal sauvage' [Sa]// CLR \*ƿw 'meat' I 116A, Shry \*ƿiw 'meat, flesh'; GCl \*ƿewəɗ 'meat'.

According to [CLR I 22], each of the following words for 'buffalo' has the word for 'cow' as the first part (note, that there are at least three such a compounds), namely:

1. W 4 Warji ƿəkəm-ai, Cagu ƿəkəmə 'roan antelope; bushcow, buffalo' [SkNB] (and possibly, also Dera šáamé 'Gambian oribi' ? < \*shm < \*ƿkm) [NmK];

2. C 8 Kotoko ƿarə́nnà [By-CLR] 'buffalo';

3. C 6 Glavda ƿákyìla, Dghw ƿatgìlé, Wnd sakile [Meek], Malgwa ƿákíla 'bush-cow' [LrD], Lmn ƿatiri [Meek], Hide ƿadəra [BrH] 'buffalo'.

For N 1, cf. Ch \*kVmV 'meat, bush cow, buffalo' (as the second part).

For N 2 cf. Ch \*rVn-dVm 'cow/meat-bush' [StI N 942] and Arab ƿarīn- 'foret / viande' [BK 235-6].

N 3. According to [Rp], Glavda ƿákyìla 'buffalo' = 'moon-cow' (cf. kyìla 'moon'). The same may be true about Lamang: tirri 'moon', ƿa-tiri 'buffalo'. Dghwede ƿatgìlé (if < ƿa-t-kìlé, metath. < ƿa-k-tìlé), may be of similar origin. Cf. Dghw tile 'moon' [CLR]), and EChadic for the prefix: Kera ki-tir, Kwan ki-dir 'moon' [CLR]. It can not be excluded that once the k- pref. was active in CChadic languages also.

In the view of Malgwa təre, Wandala tìrrə, tre 'moon' [CLR], words for 'buffalo' may be accounted for as loans from Glavda (into Malgwa and Wandala).

Note that all the speculations are valid if the initial consonant in the word for 'buffalo' in Dghwede (ƿ) **is not an emphatic lateral** (cf. Dghwede word for

cow - *ʔ*a [CLR]).

28. **\*ʔV** or **\*ɓV** ‘thing’: C 10 Masa *ʔé* (pl.) ‘les choses’ (vana ‘chose’) [CC] // Eg *iš.t* (Pyr) ‘thing’, Arab *šayʔ-* ‘thing, what?’, Mhr *šy(?)* > *šī* ‘thing, any-. something’ [JM 390], Jibbali *šé*, Soq *šī, šíʔ* ‘thing’ [LsSoq].

Given that Masa *ʔ-* may originate from Chadic **\*ɓ-** as well, ECh **\*IV** (< Chad **\*IV** or **ɓV**) ‘thing’ (StI N 32) is worth mentioning (Kaj, Toram *lì* [Alio], Jegu *lì* [JgJ], Brg *lòo-dì*, pl. *lì* [JgBr], Migama *láttá*, pl. *lâwwi* ‘thing’ [JgM], WDng *láálá-r* ‘ma chose’ [Fd]). In case we reconstruct Proto-Chadic **\*ɓV** ‘thing(s)’ (attested in Masa and ECh), Chadic-Semitic comparison will be still valid. The data so far collected, show that MSA *š* corresponds to both Chadic non-emphatic laterals (to **\*ʔ** and to **\*ɓ**). For different opinion (Chadic **\*ɓ** corresponds to MSA *š* only) see [MK].

29. **\*ʔV** ‘excrement’: W 7 Bokkos *šiʔ* ‘Notdurf verrichten; defecate’, *šiši* coll. ‘excrement’, DB *šāš* ‘excrement, Kot’, *šāš* ‘defecate’ [JgR]; C 1 Hwo *ʔê* ‘faeces’ [Kr:78]; 6 Hide *ʔuwi* ‘excrements dans les intestines’ [Eg] // Arab *šaʔw-* [BK 1180] ‘dung of a camel’.

W 6 Ngz *šáu* ‘excrement (animal or human), shit’ (with irregular *š-* instead of *ʔ-*) is rather an Arabic loan.

30. W **\*ʔVw/yV** ‘tribal marks’: 5 Zaar *ʔáayôn vî* (from *ʔaa-kôn*) ‘tribal marks on cheek fanning from the corner of mouth’ [CrZ], Pol *ʔóo-tə*, Saya *ʔáa-kongáa* ‘tribal marks’ [Cs N95]; 4 Miya *aʔau*, Mburku *ʔawə* ‘tattoo’, Kariya *ʔau* ‘to tattoo, to write’ [SkNB], Paa *ʔaò, ʔawíí, ʔawò* ‘scratch, tatoo, write’, *ʔawa* ‘scarifications’ [MS] // SCush Irq *slooʔi* ‘facial tattoos’ [Maghway 134], *slooi* ‘tattoo’ [MQK], [Dolg 454], Bur *slaʔaniya* ‘scar’, Maa *slahaʔe* ‘to tattoo’ [Eh 211].

For W1 Hs *šaušawa, šāššawa* ‘tattooing’ see *šāsšautaa, šāsšabtaa* ‘to tattoo’.

31. **\*ʔVw/yV** ‘kind of pot’: W 2 Mupun *tó-lūa* ‘pot for cooking, boiling’

[Fp], Goem tu-lwa ‘small pot’ [Jg] (< \*tV-lwa < \*tV-*ɸ*wa); 7 DB šya, ša ‘best. Topfart; kind of pot’ [JgR]; C 10 ZD *ɸ*aw ‘soupierer, soup-pot’ [Cpr]; E Ubi če ‘calebasse’ [Alio].

32. *\*ɸVyV* ‘**sorcery, sorcerer**’: C 5 Podoko *ɸ*ayaŋa ‘sorcier; sorcerer; wizard’ [JL]; 5a Hide *ɸ*ayaŋ ‘clairvoyant’ [BrH]; 7 Mafa *ɸ*áyá ‘devin, clairvoyant, prophet’ [BaMaf], E 1 Kera ké-sáy coll. ‘magisches Holz (bâton) am Eingang der Konzession ungepflanzt; magic pole placed at the entrance of a compound’ [Eb]// SCush Irq miislaay ‘magic power’ [MQK].

33. *\*ɸVw/yV* ‘**fork**’: W 2 Mushere ni-liu ‘fork’ [TAS 229]; E 6 Mok ʔóssiyo ‘fourche, pitchfork’ [JgMk] [? pl. : \*SV(y/w) > ?VSSV(w/y)].

34. *\*ɸVwV* ‘**kind of ant**’: E 6 Mok sòwwòwó ‘kind of termite’ [JgMk]. Cf. pl. forms: W 7 DB ʔúšaãš f., pl. ‘black ants’ [JgR]; 5 Zaar *ɸ*wá:s ‘small red ants’ [CrZ].

35. *\*ɸV(HwV) > \*ɸHwV > \*ɸwV* ‘**guinea corn**’: W 2 Angas šwee [Fl], Sura šwaa [JgS], Montol, Gerka sua [Fp], šwaa ‘guinea corn’ [Stl \*swa, Dolg \*šwa, TAS 339 \*šwā] (note that sura gr. s- (not l-) points to a medial laryngeal); 3 Krkr sawá ‘Getreide, cereals’ [LkK]; Tng saų ‘guinea corn’ [JgT]; Gera sawá ‘sorghum’ [SchB]; 4 Siri *ɸ*awi ‘guinea-corn’ [SkNB]; C 2 Bura mfi ‘guinea corn’ [Kr:220]; 6 Wnd éiya, eia/ea, Podoko éia/ea ‘mil’ [Mo], 10 Masa eay tógwoda ‘mais’ [Mo]; E 1 Kera kaa-saw col. ‘Hirse, mil’ gen. [Eb]; 5 (?) Migama čiwá ‘gros mil (sorgho) sp.’ [JgM]// Akk šeʔu ‘barley, grain; pine nut’ [CAD:345], Arab šʕʕ IV ‘se remplir de grains (se dit des epis, des cereales)’ [BK 1234], Tigre säʔaʔ ‘oats’, see Sem \*šVʔVʔ- ‘barley, ear of corn, kind of beans’ [Mlt N5].

Note C 7 Mafa mó<sup>ó</sup>*ɸ*aʔa ‘gôût de mil tendre’ [BaMaf].

36. **\*VwV** ‘weed’: W 5 Zaar *ʔwaa* ‘weed’ [CrZ]; C 3 FK *ʔá-ʔuwa* ‘weed sp.’ [BINd]// SCush Iraqw *slaʔa* ‘bush, wilderness, weeds’ [MQK].

37. **C 10 \*VyV** ‘sour, acide’: Masa *ʔáy* ‘aigre, acide’ [CC], Bnn *ʔoyò*, BnM *ʔaya* ‘sourness’ [Kr:290].

Cf. 7 Muyang *ʔeʔe* ‘k. of plant with bitter tubers’ [SmM].

38. **\*VbV** ‘to cry; to speak’: W 3 Tng *saba* ‘word, speech’ [JgT]; C 4 Gude *ʔəbə* ‘yell out’ [Hs]; E 4 Mawa *səbaŋ* ‘aboyer; to bark’ [RbM].

39. **\*Vb-** ‘to throw down’: C 2 Bura *ʔivi* ‘to throw down’ [Ann]; E 6 Mok *ʔébbè* ‘verser, renverser, vider, jeter par terre; throw to the ground, turn upside down’ [JgMk].

Cf. W 1 Hs *səbaa* ‘lift up wrestling opponent prior to throwing him down’ (or < **\*Vb-** ‘to stand up, to raise’, cf.).

Note possiblr noun deriv.: W 5 Guus *ʔábraŋ* (regressive voicing?) ‘sling’ [Cr:41]; C Gude *màn-ʔabá* ‘sling’ [Hs].

40. **\*Vb-** ‘to stand up, to rise’: W 5 Pol *ʔəp*, Zaar of Lusa (Sigidi cl.) *ʔəp* [Sm] ‘stand up’ (-p < \*-b#); C 5 Wnd *ʔəbbə* [Mirt], 7 Mada *ʔaábà* ‘se lever; to rise, to stand up’ [BaMd] // Arab *šbw* ‘être haut, élevé, grand; be high, elevated, great’ [BK], Mhr *šbb* ‘to climb (fire), grow up’ [JM].

Deriv.: C 7 Mbuko *ʔabək* ‘se lever; to rise’ [GNT].

Deriv.: **\*Vb-T-** ‘to rise and go away’: C 5 Dott *ʔəbət* ‘stand up, migrate’ [CrD]; C 7 Mafa *ʔambaɖ-* ‘se lever pour partir; partir, quitter; soulever, relever’ [BaMaf].

41. **\*Vb-** ‘to fish’: C Bura *ʔiva* ‘to fish by damming up the stream’ [Ann]; E 5 EDng *čabē* ‘fischen’ [Ebb].

42. **\*Vb-** ‘to collect, to gather’: W 4 Paa *ʔibaa* ‘collect odds and ends

temporairement' [MS] // Arab š'ib 'gather' [BK 1232].

Attested mostly in deriv.: W 7 Bokkos siḅūt 'versammeln, sammeln, vereinigen; gather, collect, unit' [JgR], DB saḅūt 'sammeln; gather', suḅūt 'sammeln, versammeln' [JgR]; C 5 Podoko ʃəvəcə 'ramasser vite au hasard; gather quickly' [JL].

**43. \*ʃVb-** 'to wash (smth)': C 8 Kotoko ʃabə 'wash things', ʃabóʃu 'wash body' [By-CLR], Makari šabu 'wash clothes, utensils' [AIM]; E 7 Zir ar-čoba, Mubi čubi 'laver (qqch)' [CJ], Kaj čooba, Msm čupkà 'laver' [Alio].

**43a. \*ʃVb-** 'to immerse, to wet': W 3 Ngamo šəḅkô GY, VN šəḅà 'moisten', šəḅno Y 'wet' [NEH]; C 10 Masa ʃub 'immerger; immerse' [CC].

Cf. Mada ʃaḅ ʃaḅ 'peu profond (liquide, flaque d'eau); not deep (liquide, pool)' [BaMd].

**44. \*ʃV(V)b-** 'sweep': C 4 Gude ʃəba 'sweep' [Hs], FJ ʃuvabì, FB ʃuba, FM ʃibi 'sweep' [Kr:425]; E 3 Tum hab 'sweep' [Cp] // AA 74 \*ĉVb 'to wipe, to sweep, to itch'.

Noun deriv.: W 3 Krkr šabin 'broom' [GK].

Note W 1 Hs šaḅūnaa 'to smear, to wipe'. A derivative?

**45. \*ʃVVb-** 'to pass': W 3 Krkr ʃaabu 'allow to pass, pass through' [GK]; C 4 Gude ʃəbə 'pass out of sight' [Hs].

Note possible deriv.: W 1 Hs šibra (S&Kats.) = šúura 'go away'.

**46. \*ʃV(V)b-** 'to bail out water, to scoop': W 3 Tng saabe 'scoop water with hands to drink' [JgT]; C 5 Podoko ʃəvá 'bail out all water; vider (un liquide)' [JL]; 7 Mafa ʃəv- 'vider une mare d'eau avec une calabasse; to bail out water from a pond with a calabash' [BaMaf].

Cf. N 78 \*ʃVp- 'to dig out; to scoop earth'.

47. **\*ʃVb-** ‘to drink’ > ‘to eat liquid food’: C 7 Mbuko ʃə̀bā ‘manger (la sauce); eat (souce)’ [GNT], Zulgo ʃə̀bā ‘boire, manger a la cuiller; drink, eat boiled food’ [ZIL], Mofu -ʃə̀b- ‘laper, porter a la bouche qqch gluant, avaler; lap, eat smth sticky, swallow’ (contam. with 47a) [BaMof]; E 7 Mok síbè (ʔíibè) ‘boir, absorber; drink, absorb’ [JgMk]// SCush Dah sluuß- ‘to sip, потягивать, прихлебывать’ [EE].

48. **\*ʃVb-** ‘to suck, to lap’ > ‘saliva’: C 7 Ould -ʃə̀b ‘sucer, laper’ [KOu] Noun deriv.: **\*ʃVʃVbV**, **\*ʔVʃVbV**, **\*mV-ʃVbV** ‘saliva’: 7 Muyang eʃib ‘saliva’ [SmM]; Ould əʃə̀b ‘salive’ [KOu], Cuvok ʃéʃéʃ ‘crachat; spittle’ [Ndo], Muktile ʃéʃib ‘saliva’ [CLR], Mada eʃʃéʃ ‘saliva’ (éngle ʃʃéʃ ‘cracher’), Mafa ʃeʃéʃ, Mofu mú-ʃéʃ ‘saliva’ [BaMad, Maf, Mof]; Note C **\*ʒVb-** ‘to spit’: 9 Mulwi ʒibí, Mnj ʒibi ‘cracher; to spit’ [TrMlw, Mnj]. Unexpected voicing (if at all related), possibly, regressive assim. with -b-?

49. **\*ʃVb-** ‘to strike, to kick’: W 1 Hs šíbà ‘kicking’ (cf. šíbrà (S&Kats.) = šíurà ‘kick out with the foot’); C 2 Margi ʃə̀b- ‘to hit’; 9 Mulwi ʃibi ‘frapper’ [TrMlw], Mnj ʃibi (ə) ‘battre, frapper, imprimer (un livre), jouer d’un instrument à percussion ou à cordes pincées; beat, strike, print (a book); play a percussive instrument’ [TrMnj], ʃeb ‘frapper’ [Mo:49]. Cf. N 398. **\*ʒVb-** ‘to hit (with smth.), to pound’ > **\*ʒVb-** ‘to strike (several times)’, N 67. **\*ʃVʃ-** ‘to strike with a stick’, N 308. **\*ʃ’Vb-** ‘to whip, to beat with force’.

50. **\*ʃVb-** ‘to cut grass’: C 9 Mnj ʃibi ‘faucher (a la machette), to mow’ [TrMnj].

**Deriv. in -t-**: W 1 Hs šíbčè ‘sever; cut grass’; 6 Ngz ʃə̀ptú (if < \*ʃab-tu, devoicing in contact with -t-) ‘cut grass, etc. with a sickle’ [SchN].

**Deriv. C 7 Mbuko ʃə̀ved** ‘nettoyer une tige avec une serpe; clean a stalk with a sickle’ [GNT].

51. **\*ƳVb-** ‘to spoil, to destroy’: W 3 Tng sabε ‘to become spoiled’, sabte ‘to spoil’ [JgT]; C 8 Log Ƴaba-l-wun ‘destroy, spoil’ [AIL].

52. **\*ƳVb-** ‘to plait (rope)’ > ‘string, rope’: C 10 ZB Ƴǎǎ ‘commencer a tresser (corde); start plaiting a rope’ [Sa].

Deriv.: C 7 Mofu Ƴǎǎ ‘fil de traverse du tam tam; string across the tam tam’ [BaMof].

Note possible deriv.: C 7 Ould -Ƴǎǎ ‘étrangler; to strangle’ [KOu]; E 1 Mobu sǎǎ ‘tresser (cordes); to plait (ropes)’ [Lns].

Cf. N 94. C **\*ƳVpV** ‘rope (made from grass)’:

53. C **\*ƳVb- > ƳVb- > ƳVb-** ‘to learn’: 2 Margi Ƴǎǎ ‘to learn, to teach’ [HfM:118], 3 FK Ƴǎǎ [BINd] (< \*ƳVb-) ‘to learn’.

54. C 7 **\*ƳVb-ƳVb-** ‘to tremble’: Mada Ƴǎǎ ‘(trembler) de tous ses membres’ [BaMd], Muyang Ƴǎǎ ‘trembling’ [SmM].

55. **\*ƳVbV** ‘sickness, to be ill’: W 2 Angas leb ‘ill’ [Or]; C 4 FJ Ƴuvε ‘sickness’ [Kr:253].

Noun deriv.: **\*ƳVbVr-** ‘fever’: W 3 Tng sǎǎ-sǎǎ ‘sour, feverish’ [JgT]; E 6 Mok sǎǎ ‘paludisme; swamp fever’ [JgMk].

Any connection with **\*ƳVb-** ‘to tremble’?

56. **\*ƳVbV** ‘grass (for mats)’: C 6 Daba Ƴǎǎ ‘kind of grass for mats, hats’ [Lnhr].

Note W 1 Hs sǎǎ, pl. sǎǎ, sǎǎ ‘any thatching gras; grass for mats’ (-bǎ- < \*-fǎ-- or sg./pl. opposition?).

Deriv.: C 7a. Sukun mǎ-Ƴǎǎ ‘mat (used as stiffener over rafters and under thatch)’ [DS].

Cf. N 72. **\*ƳVfV** ‘kind of fodder-grass’.

**56b. \*ʃVbV ‘fence (made of hay, mats)’:** C 9 Mnj eab [ʃab] ‘mur d’enclos’ [Mo], Musgu ʃab ‘Zaun um das Haus oder Mattenwand des Hauses; fence around the house or mat-wall of the house’ [LukMsg]; E 2 Lele s̄abā ‘clôture de paille tressée, fence of plaited hay’ [WP], Kabalai sba ‘fence’ and N 435. \*ʒVbV ‘fence (pricky)’.

**57. \*ʃVbV ‘foam’:** C 5 Podoko ʒába ‘foam’ (voicing due to regressive assim.) [JL]; 7 Sukun mə-ʃəbəc ‘scum (forms when boiling mahogany oil)’ [DS]; E 1 Kera siibó ‘Shaum, Ferment; foam’ [Eb]// Arab šaab-un ‘mousse d’eau; foam’ < šbw [BK], SCush Alg slubari ‘froth’, Iraqw sloro, Bur slubariya [Eh 213], Irq slooroo ‘foam, froth’ [MQK].  
Note W 2 Goemay loor (if < \*lwVr < \*ʃwVr < \*ʃbVr) ‘scum’ [Srl] (for Ch \*-b- > sura gr. -w- see [Stolbova 1996: 102]).

**58. \*ʃVVb-n/r ‘new, young’:** W 1 Hs saábóo ‘new, young’, cf. [SkH 223], cf. Arab. ; 5 Zaar ʃəb̄ər, pl. ʃəb̄ər-sə ‘young man’, ʃəb̄ər-tə ‘youth’ [CrZ]// Arab šbb ‘grandir, devenir jaune homme; to grow, to become a young man’ > šābb-un ‘jeune homme’ [BK:1181].

**59. \*ʃVVbV ‘children’s game’:** W 1 Hs šáábà ‘children’s game’; C 8 Log ʃabaa ‘spielen; to play’ [LkL].

**60. \*ʃV(?V)b- ‘to be, to make flat (surface)’:** W 2 Angas lep saar ‘palm of hand’ (saar ‘hand’), lep shi ‘sole of foot’ [Fl], Sura bə̀-làab sár ‘palm’, bə̀-làab šii ‘sole’ [JgS], Mupun lāap ‘place for threshing grain’, lāap sár ‘palm of hand’ [FrM], Musheré laʔap ‘ground specially made with cow dung for threshing corn’ [TAS 223]; C 2 Bura ʃabʃaberi ‘flats’ [Ann].  
Cf. N 89. \*ʃVpV ‘flat (stone)’, N 444 \*ʒVp- ‘broad and flat (leaf)’.

**61. \*ʃVbV ‘tree leaf’:** C 8 Makari šibi ‘date-tree leaf’ [AIM] // Dah slabune, pl. slabu ‘leaf’ [Eh:208].

**\*ɬV(m)bV-r-(? pl.) 'leaf'**: C 7 Muyang ɬimberi [SmM];

**\*ɬV(m)bV-k/h-(pl.?) 'leaves, crown (of a tree)'**: 5 Podoko ɬəbahə 'feuille' (regressive voicing, cf. **\*ɬVbV 'foam'**) [JL], Gvo ɬəvaka, Dghw lbaɣa [HmG], 7 Zulgo ɬəmbah 'feuille' [ZIL], Moloko aɬəmbah 'leaf'; Mada ɬəbàh (voicing in contact) 'feuilles, foliage, branchage; leaves, crown (of a tree)' [BaMd], Merey ɬəmbah 'feuille' [GMr]; 9 Mbara múʔúʔák 'feuille' [TrMba]. [GCl \*ɬəmax]. Cf. N 88. **\*ɬVpV 'leaf (of a plant)'**.

**62. \*sVɬV? < \*ɬVɬV 'rib'**: W 1 Hs masáɬii 'side bone of a bird'; E 2 Lele k̄ā-sūwā (< \*ka-suba) 'côté; rib' [WP], Kabalai ka-sbã 'rib' [Cp] // Eg šb.tyw (Pyr, OK) 'zwei Rippenstücke (o ä.) als Speise; two ribs as food' [EG 438].

**63. \*ɬVɬV 'meat (on bone)'**: W 1 Hs šáaɬi 'meat from shoulder of ox' (= šaafi); C 5 Gvo ɬəɬo 'meat' [HmG], Ngweshe ɬəɬo 'meat'; Podoko šəba, ɬəba 'viande' [Mo], ɬəba 'meat' [JL]; 7 Muktile ɬəb 'meat' [CLR]// Eg šb 'Fleischstück (als Opfergabe), piece of meat (as an offering)' (18), [EG 437].

Note E 2 Lele k̄ū-sūbā 'wild animal' [WP].

**64. \*ɬVɬV 'big' > 'strong'**: W 1 Hs súɬuu sùɬu 'large'

Deriv.: E 2 Kera səɬagi 'Kraft; strength' [Eb].

C 7 Mofu ɬəbár ɬəbár 'costaud, strong; fort' (hardly < Arab) // Arab šabar 'force' [BK:1183].

Cf. N 415. **\*ɬVb-** 'huge, large'.

**65. \*ɬVVɬV 'a sin, a lie'**: W 1 Hs saáɬi 'wrongdoing', saáɬoo, swaaɬoo 'any heinous sin against God'; 3 Pero čaabà 'falsehood', čábà 'a lie' [FrP], Tng sáɬyɔ 'sinfulness, wrongfulness' [JgT]; C 8 Log ɬába 'betrügen; to deceive' [LkL].

66. *\*sVbV < \*VbV* (cf. Arab) 'rain, rainy season': W 3 Kirfi šábu, Glm sáu, Gera sábu 'rainy season' [SchV], bí-sábu [SchB]; E 6 Mok sèbèiyó 'averse; rainstorm; shower' [JgMk] // Arab šaʔbab- 'shower' [BK] in AA N 82 \*caʔb- 'rain'.

67. *\*Vf-* 'to strike with a stick': C 1 Gaʔanda ʔifənʒi 'hit' [Kr:353]; 3 HN ʔuvunte, HG ʔuvànde 'hit' [Kr 353], Bana ʔòvà 'strike with a stick' [GLBn]; 5 Dghw ʔuvaya 'hit' [Kr:353]; 7 Ould ʔáfʔáf idf. 'geste de tuer un chien avec un bâton; gesture of killing a dog with a stick' [Kou]; E 5 EDng áçpé 'to strike someone' [Ebb].

68. *\*Vf-* 'to rise, to awake': C 5a Hide ʔyaf-ʔya (if partial redupl. < \*ʔyaf-) 'se lever, s'éveiller; s'être levé; to rise, to awake' [Eg].

Deriv.: *\*Vf-l-*: E 5 WDng čòpìlè 'soulever; lever; lift; raise' [Fd], EDng čòpìlè 'aufrichten; to raise, to lift (smb.)' [Ebb]; Migama čìpìlò 'soulever, lift, raise (a little); enlever' [JgM]// cf. SCush Irq sluuf 'to rise, to swell' [MQK].

For Iraqw 'to swell' cf. W 3 Dera šiipe 'to swell' (< Ch *\*Vf-*) [NmK] and Eg šfy/w (Med) 'to swell' > 'swelling' [EG 455].

69. *\*Vf-* 'to run, to hurry': C 8 Kotoko ʔàfà-lè 'courir; run' (imp.) [Ind], Gulfey xefelé 'run' [Lk:147]; E 1 Ndam sàpé 'se dépêcher; to hurry' [Lns].

70. C *\*Vf-* 'to pray (for smth)': C 5 Podoko ʔafa 'pray, prier' [JL], Muyang ʔafay 'wish' [SmM].

Note C 5 Malgwa ʔápála 'bitten; ask for' [LrD], Podoko ʔapála 'prier, demander, beg, demand' [JL], 7 Gisiga ʔəpəl [LkG] 'bitten, ask for'. A loan?

72. *\*VfV* 'kind of fodder-grass': W 2 Gmy loep-toem 'a species of grass (as given to horses)' [TAS]; C 2 Bura ʔafu 'kind of pasture grass' [Ann]; 4 Gude ʔáfá 'type of grass (not strong, not for thatch)' [Hs]; 8 Log ʔivi, ʔiifi

‘grass’ [LkL], Log *ʃivi* ‘grass’, *ʃivi* ‘blade of grass’ [AIL], Gulfey *šefe* [Luk], Bud *háafu*, *háavu* [LBk], Makari *šafu* ‘grass’ [AIM]. Cf. 7 Mofu *ʃáp* *ʃáp* (? -p <\*-f#) ‘grass’ [BaMof].

Cf. N 56. **\*ʃVbV** ‘grass (for mats)’.

**73. \*ʃ(y)VfV** ‘thin (not thick)’: W 2 Gmy *lyaap* ‘to be not thick’, *liaap* ‘thin and flat’ (hardly the same as *par-lâap* [-lɔɔp] ‘something flat and wide’, as in [TAS:224]); 3 Tng *saabe* ‘become thin’ [JgT]; C (redupl.) 4 Gude *ʃyáfóʃyáf* ‘thin’ [Hs], 7 Muyang *ʃepʃep* ‘not particularly thick’ [SmM] // Arab *šff* ‘amaigrir, rendre maigre; become slender’ [BK 1246].

Deriv.: C 2 Bura *ʃifirwa* ‘thin, slender, undernourished’ [Ann].

**73a. \*ʃVVfV** ‘thin (cloth, skin, paper)’: W 1 Hs *šaañi* ‘one surface of a leaf of a book; slight dressing’, cf. [SkH 241]; C 2 Bura *ʃi-ʃafu* ‘epithelium’ [Ann]; E 5 Dng *čëɛp̣ čëɛp̣* ‘fin (feuille de papier); thin (a piece of paper)’ [Fd]// Arab *šff* (i) ‘être transparent’ [BK 1246].

Cf. C 7 Zulgo *ʃapéték* ‘piece d’etoffe; a piece of cloth’ [ZIL]. A compound?

**74. \*ʃVVfV** ‘bodily defect’: W 1 Hs *šaafau* ‘grown up girl without mammary development’; C 2 Bura *ʃiʃafu* ‘a stunted person’ [Ann].

**75. \*ʃVp-** ‘to (ad)join’: W 3 Tng *wupɛ* ‘to connect, join, unite, combine’ [JgT]; C 7 Zulgo *ʃíp* ‘contigu; adjoining’ [ZIL];

Cf. C 10 ZB *ʃípe* ‘arrêtoir (piège); a latch, lock (of a cage) [Sa].

**76. \*ʃVp-** ‘to grow (of plants), to increase’: W 1 Hs *sáfa* ‘increase slightly’; C 8 Log *ʃipa-wun* ‘grow (of plants); grow up’ [AIL]//Arab *šff* (i) ‘augmenter’ [BK 1246].

**77. \*ʃVp(p)-** ‘to cut, to split’: W 3 Pero *čippò* ‘cut’ [FrP]; E 5 Migama *čép-čipò* ‘fendiller; cleave, crack’ [JgM].

Deriv.: W 3 Krkr *ʃ*aaʃaḏu ‘break into pieces, split wood’ [GK]; C 5a Hide *ʃ*əpaḏa ‘axe’ [BrH].

Note possible deriv.: C 7 Mafa ma-*ʃ*pac ‘effiloche, écorchure; a scratch, an abrasion’.

**78. \*ʃVp-** ‘to dig out; to scoop earth’: W 3 Tng *sapə* ‘scoop earth and water from a hole’ [JgT]; C 2 Bura *ʃ*iva ‘to dig out’ [Ann].

Cf. N 45. **\*ʃVb-** ‘to bail out water, to scoop’.

**79. C \*ʃVp-** ‘to eat (sauce, liquid food)’: C 7 Mada *áʃ*pa ‘manger de la sauce (sans boule de mil)’ [BaMd]; Muyang *ʃ*əpay ‘eat (liquid) with the hand’ [SmM].

Cf. N 47. **\*ʃVb-** ‘to drink’ > ‘to eat liquid food’.

**79a. \*ʃ/Vp-** ‘to feed, eat (one’s full)’: W 2 Angas *leep* ‘to feed’ [Fp]; E 1 Kera *səpə* ‘sattigen; eat (one’s full)’ [Eb].

Cf. W 1 Hs *š*aaʃi ‘a meal, food’.

**80. \*ʃVVp-** ‘to stroke, to caress’: W 1 Hs *š*aaʃaa ‘to stroke down, pass hand over, coax, persuade’; C 7 Mofu *-ʃ*áʃəp- ‘caresser; to caress’ (partial redupl.) [BaMof].

Any relation to **\*ʃ/VVp-** ‘to smear, to wipe’?

**81. \*ʃ/VVp-** ‘to smear, to wipe’: W 1 Hs *š*aaʃa ‘smear annoint’, cf. [SkH 240-1]; 2 (cf. Angas *lap* ‘polish, smooth, smear’ in Ch *\*IVb-* ‘to smear’, StI I N 69); 3 Kirfi *š*aaʃ- ‘wipe’ [StI], Tng *wupə* ‘to rub oil on, into skin’ [JgT] // Eg *zšp* ‘Möbel glatten, polieren; to polish furniture; (Brot) glatt streichen’ (AR) [EG 485], Arab *šwf* ‘polir, fourbir, enduire de goudron (un chameau galeux); polish, smear a camel with tar’ [BK 1288], cf. AA 79 *\*ĉVf* ‘oinment’.

Noun deriv.: W 1 Hs *má-š*aaʃi ‘a duster’.

Deriv.: W 3 Krkr *š*aaʃanu ‘touch, rub against’ [GK].

Note C Mbuko *ʃapač* ‘prendre l’écume d’une liquid; take scum off the liquid’ [GNT].

82. *\*ʃ(y)Vp-* ‘to grasp, to dash’: W 7 Bokkos *syap* ‘schnappen, packen; snap, catch, pack’, DB *syap* ‘fangen, schnappen, catch, to snap’ [JgR]; C 5 Glavda *ʃəv* ‘take, dash’ [Hs].

83. *\*ʃVp/f-* ‘to marry; bride’: C 5 Podoko *ʃəvá* ‘fiancé(e); bride(groom)’ [JL]; E 7 Zir ar-čepa ‘se marier; to marry’ [CJ].

84. *\*ʃVHVP-* (> Ch *\*ʃVp̄-* ?) ‘to shed skin (snake)’: W 1 Hs *saabaa* ‘sloughing (snake)’, vide *saḅe*; C 4 Gude *ʃəfwa* ‘shed skin (snake, lizard)’ [Hs].

Identity of semantics speaks in favour of common origin.

85. C *\*ʃVp-* ‘to glue’: C 5 Podoko *ʃəpə* id. ‘coller au mur; glue to the wall’ [JL]; 7 Mofu *ʃəp-* ‘coller, appliquer’ [BaMof]// Arab *šff* ‘être collant’ [BK 1246].

86. *\*ʃVpV* ‘a piece of calabash used to divide food’: W 2 Goemay *kalap* (ka-lap) ‘a round shaped piece of calabash used to divide the cooked *fufu* into balls’ [TAS:200]; cf. Goemai *lip* ‘separate, divide’ [FI]; C 10 ZB *ʃípe* ‘morceau de calebasse’, ZD *ʃípē?* ‘morceau de calebasse servant à partager la boule; piece of calabash used to divide a ball’ [Cpr].

87. *\*ʃVpV* ‘declivity; to incline’: W 2 Gmy *ləp* ‘declivity, slope’ [TAS 229]; C 7 Mbuko *ʃapay* ‘se pencher vers, to bend, incline’ [GNT].

88. *\*ʃVpV* ‘leaf (of a plant)’: W 4 NBauchi *Miya, Kariya ʃipi, Siri ʃaapi* [SkNB]; C 5 Malgwa *ʃápa* ‘leaf’ [Lr], Wnd *ʃapa* ‘leaf’ [Meek]; Lmn *ʃwa*; 10 ZB *ʃápá* [Sa], ZD *ʃāp* ‘feuille d’un plant, leaf of a plant’ [Cpr]; Peve *ʃāp*,

Hede *ʔ*apa, Masa *ʔ*ap-mà, Zumaya *ʔ*ab, Zime *ʔ*ab ‘leaf’ (-b# < -p# ?) [in Shry \**ʔ*ab ‘leaf, foliage’], Bnn *ʔ*àba-nà ‘leaf’ [Kr 131]. Cf. N 60. **\**ʔ*VbV ‘tree leaf’.**

Cf. E 2 Lele sibré (voicing in contact) ‘feuilles de haricot’ [WP]; 5 Migama čópòorè ‘feuille de millet’ [JgM] (an old pl. in -r- ?)

**89. \**ʔ*VpV ‘flat (stone)’:** C 5 Podoko *ʔ*apə *ʔ*apa, -ə ‘plat’ [JL], Zulgo *ʔ*əpát *ʔ*əpát ‘plat’ [ZIL]; 7 Mafa *ʔ*apaʔa ‘plat (pour une rocher); flat (rock)’ [BaMaf].

Deriv.: C 7 Muyang *ʔ*əpat ‘flatten; to make flat’ [SmM].

Cf. N 60. **\**ʔ*V(?V)b- ‘to be, to make flat (surface)’:**

Note W 6 Ngz *ʔ*əpú ‘clap hands, bat at with hand’ (‘to strike with a flat hand?’) [SchN] // Hbr *ʔ*pk ‘clap one’s hands’ [KB 928].

**90. \**ʔ*VpV ‘tail, mane’:** C 8 Kotoko *ʔ*əpáfə [By-CLR] ‘tail’; E 3 Ndam sap ‘tail’ [CLR], 7 Msm sàfiifi-tè ‘mane’ [Alio]// Cf. Arab šāʔfat- ‘mèche de cheveux, tupet, cheveux’ [BK 1 1240].

Note a compound: C 7 Mbuko *ʔ*əpətətè ‘crête ‘du coq; crest (of a cock)’ [GNT].

**91. \**ʔ*VpV ‘lungs’:** W 2 Chip ləp ‘lungs’ [Kr]; 4 Miya *ʔ*ipičəŋ ‘lungs’ [Kr:73]// SCush Dah slafi ‘lungs’ [EE:26].

**92. \**ʔ*VVpV ‘fool’:** W 1 Hs sáfá ‘fool’; E 5 Migama ʔáčaapí ‘sottise, crapulité, stupidity’ [JgM].

Deriv.: C 5 Malgwa *ʔ*ápate ‘wahnsinnig, sinnlos; crazy, senseless’ [LrD].

**93. \**ʔ*VpV ‘apron, skin-belt’:** W 4 Paa *ʔ*ipi ‘(man’s) apron (worn for ceremonial occasions)’ [MS].

Noun deriv.: C 6 Daba *ʔ*ápát ‘la ceinture; belt’ [Lnhr], 7 Muyang ma*ʔ*para ‘wide rope, belt made of skin’ [SmM].

Note W 1 Hs sámfàraa ‘white apron of undressed leather’, sámfèeraa ‘any white leather’. If not < ‘to be white’.

94. C \**VpV* ‘rope (made from grass)’: 7 Zulgo *fépé* ‘corde tressée des herbes; grass-rope’ [ZIL], Mada *áƙapa* ‘corde végétale’ [BaMad], Mbuko *íípe* ‘rope’ [GNT], Merey *ƙepe* ‘nom d’une corde’ [GMr].

94a. \**m-ƙVpV* ‘rope (made from grass)’: 7 Muyang *maƙapa* ‘string made from millet stalks’ [SmM]; Ould *màƙapà* ‘plante, corde’ [KOu].

94b. C \**Vp-* ‘to plait a rope’: 7 Cuvok *mé-ƙéƙèpèy* ‘plait a rope’ [Ndo], Ould *ƙapáy* ‘tisser, tresser’ [KOu], Mbuko *ƙøpe* ‘fabriquer la corde’, *ƙøƙep* ‘faire la corde; make a rope’ [GNT], Mofu *áƙap-* ‘tresser (une corde); plait a rope’; Mada *áƙƙap* ‘tresser (une corde)’ [BaMof, Md].

Deriv.: C 7 Mafa *ƙafaƙ-* ‘tresser de la paille grossièrement, pour s’amuser’ [BaMaf]. Unexpected -f-.

Note that Mofu *-áƙap-* ‘plait (hair, rope)’ [BaMof] may originate from Chadic (and Hamito-Semitic) \**Vp-* and be related to Arabic *ƫƫf* ‘plait hair’.

95. C \**VpV* ‘long, tall’: 3 FK *ƙøpə* ‘tall’ [BlNd], *ƙipù?* ‘long’ [Kr 291].  
Deriv.: C 7 Mada *ƙaplak ƙaplak* ‘allongé, élancé; extended, slim’ [BaMd].

96. W 5 \**V[p]V* ‘house, wall’: 5 Pol *ƙaap* ‘house, hut’ [Cs N149]; Dott *ƙép* ‘stone wall surrounding the compound’ [CrD].

Note W 2 Gmy *ki-lip* ‘kitchen’ [Shr, TAS 230].

97. \**Vd-* ‘to pluck’: W 3 Tng *sede* ‘tear off, pluck’ [JgT]; C 7 cf. Mbuko *ƙāđ* ‘décollé; torn off’ [GNT]; 8 Makari *šadži* ‘pick, pluck (fruit)’ [AIM].

Cf. \**VVt-* ‘to tear (off)’.

98. \**Vd-* ‘to husk, to peel’: W 3 Krkr *ƙiđaa* ‘to peel off, strip off’ [GK]; 5

Saya *ʔyét* (-t# < \*-d#) 'to peel' [Cs]; C 7 Cuvok *mé-ʔéḏèy* 'décortiquer; to husk' [Ndo];

Noun deriv.: C 7 Cuvok *ʔéʔḏòk<sup>w</sup>* 'lamelle d'écorce de tige de mil' [Ndo]. Cf. N120. *\*ʔVtt- ~ \*ʔVVt-* 'to strip (bark, feathers)'.

99. *\*ʔVḏ-* 'to stand up': C 5 Dgh *ʔàdufè, ʔàʔafè* 'stand up' [Kr:407]; 5a Hide *ʔaday* 'to remain standing' [BrH]; 6 Daba *ʔiḏ* 'se lever, démarrer; to rise, to start off' [Lnh]; E 2 Gabri *tā sodi* 'Sonnenaufgang; sunrise' (ta 'sun') [Lk:88] // Arab šwd IV stem 'rise (sun)' [BK 1296].

Deriv.: C 7 Mofu *-ʔəḏk-, -ʔəkḏ-* 'se réveiller, se lever; to awake, to rise', *ʔaḏakw ʔaḏakw* 'pas à pas (saut de crapaud); jumping of a frog' [BaMof].

100. *\*ʔVḏ-* 'to stir': C 7 Ould *-ʔāḏāk* 'bouger les pieds; to stir, move legs' [KOu]; E 3 Smr *syəḏə* 'bouger, pousser' [JgSib].

101. *\*ʔVḏ-* 'to cultivate, to hoe': W 3 cf. Krkr *səuḏu* 'to plow, bank up' [GK], Tng *wude* 'to hoe, farm' [JgT]; 4 Paa *ʔáḏu* 'cultivate, farm, hoe' (v.), *ʔaḏa* 'farming' [MS], Warji, Miya *ʔaḏ-*, Siri *ʔaḏa*, Kariya *ʔeya-ʔēḏə* 'to hoe, to cultivate' [SkNB] // Hbr *sdd* (pi.) 'to harrow, to plough' [KB].

101a. *\*ʔJVḏ-* 'to dig': E 3 Tum *hūd* (<\*sud- < \*ʔud) 'dig out, déterrer; récolter (en détarrant)' [CpT] // Eg *šdy* (AR) 'graben; dig' [EG 563]. Hausa *šaddā* 'pit' // Eg *šd.t* (AE) 'well (n.)' [EG].

102. *\*ʔVḏ- ~ \*ʔJVḏ-* 'to pierce': W 3 Gera *sùudə-mí* 'pierce' [SchB]; C 4 Gude *ʔiḏə* 'pierce skin (of a sliver)' [Hs]; 9 Mulwi *ʔíḏí* 'enfiler (les perles); to string perles' [TrMlw]; E 6 Mok *sìssìḏá* 'tailler de bois pour en faire une brochette, enfiler viande sur la brochette; to make a skewer from a piece of wood (by cutting); to skewer meat' [JgMk]. Note contamination of semantics with *\*ʔVVḏ-* 'to cut (branches, trees)'.

103. *\*ʔVḏ-* 'to sweep; to wipe': W 3 Krkr *səaḏu* 'scrape out, wipe food

with finger' [GK], Gera sàḍ-mí 'wipe' [SchB]; C 5 Gava ʔyèḍìgana, Cinene ʔedaʔeda 'sweep' [Kr:425], Podoko ʔaḍa 'balayer, sweep' [JL], Dghw ʔaḍà [Kr]; 6 Daba ʔəḍ 'kind of tree used for brooms; broom' [Lnhr], cf. Daba ʔdad (voicing in contact) 'sweep' [Kr:425]; 7 Ould -ʔaḍ 'balayer; sweep' [KOU], Muyang ʔəḍ 'clean, sweep' [SmM], Mada áʔaḍ 'balayer, ramasser' [BaMad] // SCush Dah slaḍ- 'sweep yard' [Eh 26].  
 Deriv.: W 1 Hs má-sùḍii 'one who eats up (scrapes up) remains of food'.

**104. \*ʔVVḍ-** 'to cut (branches, trees), to chop': W 5 Buli ʔóodən 'cut' [Cs 787]; C 5 Dghw ʔòḍaya 'chop' [Kr 378]; 5a Hide ʔaḍay 'tailler un arbre; trim a tree' [BrH]; 7 Mafa ʔiḍ- 'élaguer, émonder; to cut branches' [BaMaf]; E 5 WDng čááḍé 'émonder un arbre sur pied' [Fd].  
 Cf. N 448. \*ʔVḍ- 'to cut (vegetables, hair)'

**105. \*ʔVVḍ- ~ \*ʔVʔVḍ-** 'to adorn': C 6 Daba ʔèʔeḍ 'embellir, to adorn' [Lnhr]; E 5 EDng ččéḍé 'einen Baum ausputzen; to adorn a tree' [Ebb].  
 Noun deriv.: E WDng čeḍem 'parure fem., female adornment' [Fd].

**106. \*ʔVVḍ-** 'to faint, to be weak': C 9 Mnj ʔiḍi 's'évanouir; to faint' [TrMnj], E 3 Tum hāad 'être doux, être faible; be tender, weak' [CpT] // Mhr šdd 'to load' > 'to get tired' [JhM 372].

**106a. \*ʔVVḍ-** 'to die, to come to an end': W 1 Hs šiiḍè 'die, come to an end; cease'. If not a loan, cf. Arab šyd V stem 'périr, perish' [BK 1296].  
 Deriv.: C 7 Ould -ʔeḍēk 'à demi-mort; be half alive' idf. [KOU].

**107. \*ʔVVḍ-** (< \*ʔVHVḍ- or \*ʔyVḍ-) 'to suck, to lick': C 10 ZD ʔiḍ 'lécher avec le doigt, to lick' [Cpr], ZB ʔeḍ 'lécher avec le doigt, to lick' [Sa]; E 5 WDng čóóḍé 'sucrer, to suck', čúúḍé 'long kiss' [Fd], Bidiya čuud 'aspirer, sucer; to suck' [JgB] // Eg šdy (Pyr) 'säugen; to feed a suckling' [EG 564] (derived. < 'breast'?).  
 Deriv.: E 6 Mok siḍi-kò, pl. šinḍikagí 'jet de salive, squirt of saliva' [JgMk].

108. **\*V̄V̄d̄-** ‘to make level, smooth, comb hair’, **\*V̄d̄-V̄d̄-** ‘be smooth, combed’: W 1 Hs *sáadà* ‘fill up and make level with surrounding parts’, *sáažè* ‘become level (place) through filling in of holes, gaps or unevenness’; C 4 Gude *ʔaaðə* ‘smooth surface (of pot); comb or smooth hair’ [Hs]; 5a Hide *ʔaḍa*, *ʔaḍa* ‘peigner; to comb’ [Eg]; 7 Mada *ʔwéḍ ʔwéḍ* ‘bien lisse (enduit); be smooth (coat)’, *mèʔéḍ mèʔéḍ* ‘lisse (cheveux), peigné; smooth (hair), combed’ [BaMd], 8 Makari *ša-šaḍi* ‘be slippery; be smooth’ [AlM].

109. W **\*V̄V̄d̄-~\*V̄nd̄-** ‘to scratch’: 4 Cagu *ʔeed-*, Jmb *ʔind-* ‘to scratch’ [SkNB]; 6 Ngz *ʔaaḍú* ‘scratch to reveal an itch; itch; scrape ground slightly’, *ʔaaḍà* ‘itching’ [SchN].

Deriv.: W 6 Ngz *ʔaḍbk* ‘tool with a curved blade used to scrape palp, to shape inside mortar’ [SchN].

Cf. N 103. **\*V̄d̄-** ‘to sweep; to wipe’, N 451. **\*ʒV̄d̄V̄** ‘thorn, to scratch’.

110. W **\*V̄d̄(d̄)-** ‘to bring up (animal, child): W 3 Bolewa *sudḍ-* ‘füttern, to feed, aufziehen, to bring up’ [LkB], Tng *wuḍe* ‘to breed (animal)’ [JgT], Dera *wuḍè* ‘to tend animals’ [NmK]; 6 Ngz *ʔəḍú* ‘raise orphaned child, animal’ [SchN].

111. C **\*V̄d̄-** ‘to whip, to lash’: 5 Podoko *ʔəḍa* ‘gifler; slap in the face’ idf. [JL]; 7 Mofu *ʔəḍ-* ‘fouetter, chicotter, to lash, to whip’ [BaMof].

112. C **\*V̄d̄V̄** ‘cold, (to) cool’: 9 Mulwi *ʔíḍí* ‘refroidir qqch; to cool’ [TrMlw], Mbara *ʔéḍ* ‘fresh’, Mnj *ʔiḍi* ‘refroidir’ [TrMbaMnj]; 10 Masa *ʔēḍ* ‘le froid, froid, (to be) cold’ [CC] (cf.\*snd/smd); E 2 Kabalai, Nanc *səḍələ* ‘cold’ adj. [HKb].

113. **\*V̄d̄V̄** ‘star’, **\*V̄d̄-** ‘to shine’: C 7 Muyang *ʔaḍay* ‘to shine’ [SmM]; E 2 Drm *te-sidáng*, Gabri *te-sidi* ‘star’ [Lk:91,88] (but cf. *Lele tɪsé* [WP],

Kabalai, Nanc tese 'star' [Luk]) // Eg šd (KGr) 'Art Sterne, kind of star' [EG 566].

114. **\*VdV** 'kind of net': C 4 Gude *ʔaḏá* 'fishing net' [Hs]; E 5 Bidiya *čėciḏo* 'filet à rats, a net for rats' [JgB].

115. **\*VdV** 'inhalation, smell': W 1 Hs *šiiḏaa* 'inhale, inhalation'.

Deriv.: C **\*VdVk** 'bad smell': 7 Ould *-ʔiḏikkà* 'smell of fresh fish; bad taste of beer' [Kou], Muyaḡ *ʔeʔiḏik* 'bad smell' [SmM]; Zulgo *ʔeḏikw* *ʔeḏikw* 'sentir mauvais' [ZIL].

116.(?) **\*VdV** 'kind of tree': W 3 Tng *sido* 'kind of tree' [JgT]; 5 **\*ʔind-** <**\*ʔid-nV**: Geji *ʔindi* 'wood' [Sm], Geji *ʔiḏi* [Cs N 352] 'tree'; E 2 Lele *šidí* [WP] (*Ficus clumosa*); 3 Smr *šido* (Tamarinde) [Lk] // Eg *išd.t* (LM) 'tree', *šd* (AR) 'Bauholz für Schiffe; wood for making boats' [EG 566].

117. **\*Vd(d)-** (< **\*Vdd-**, if related to SCush) 'long': C 5 Wnd *ʔəḏè*, Glavda *ʔaḏà*, Cinene *bə-ʔada* 'long' [Kr:291], Malgwa *ʔaḏḏe* 'hoch, lang; tief; high, long, profound' [LrD], Cin, Glavda *ʔaḏá* 'long' [Kim], 7 Mbuko *ʔaḏaḏa* 'long' [GNT] // SCush Iraqw *tlər*, pl. *tleḏaaded* 'long' [MQK], SCush *\*tleed-* 'long': Irq *tlər-*, Bur *tleḏi*, Alg *tlər* [Eh 216 N 17].

117a. **\*Vd(d)-** (< **\*Vd(d)-** < **\*VdVH**, cf. Arab) 'giant, big' > 'high': C 7 Ould *-ʔəḏḏā* 'géant, grand, haut; giant, big, high' (Contamination of **\*Vd-** 'giant, big' and **\*Vd-** 'long'?) // Arab *šadiḥ-* 'large, abundant' [BK 204].

Cf. E 2 Lele *šidé* 'beaucoup' [WP].

Note that NN117 and 117a. may have different origin.

118. C 8 **\*VdV** or **\*V** (> pl. **\*ʔadV**) 'hand': Log *ʔaḏə*, *ʔádē* (pl. *ʔaḏén*, *ʔádiyē*) 'Unterarm, Hand; lower arm, hand' [LkL], Log *ʔaḏī* 'hand' [ALL],

Kotoko *ʃ*ədə ‘main; hand’ + zimi ‘right hand’, + gelan ‘left hand’ [Mo], Afade *ʃ*é, pl *ʃ*éḏé, Maltam *ʃ*è, pl. *ʃ*èḏè ‘main’ [Tr], Makari sé, Gulfey cè, Kuseri séḏə (séḏē Lk) ‘main’ [TrC] // for *\*ʃVḏV* (?< *\*ʃ’VḏV*) cf. Arab ʃad(u/i)d- [BK 2 279] ‘arm’ and C 7 Mada *ʃ*ād (dder) ‘brasée (mesure de longueur des bras étendus)’ [BaMd].

119. C 7 *\*ʃVḏV* ‘kind of (high) grass (used for plaiting)’: Mafa *ʃ*idew ‘POACEE sp.’ [BaMaf], Gisiga *ʃ*idew ‘kind of high grass’ [LkG], Muyang *ʃ*idu ‘grass for mats’ [SmM]; Zulgo *ʃ*idiw ‘grass for plaiting baskets’ [ZIL], Ould -*ʃ*ḏāw ‘plante utilisée dans la confection des paniers, *Imperata cylindrica*; grass used for plaiting baskets’ [KOu]; Mada *ʃ*dew ‘*Imperata* qui sert au rembourrage de la vannerie (avec fibres de palmier rônier) et autre vannerie’ [BaMd].

120. *\*ʃVtt-* ~ *\*ʃVVt-* ‘to strip (bark, feathers)’: 3 Bolewa šatt- ‘mit dem Wurzel ausreissen, to uproot’ [LkB]; pluck feathers; do first weeding of the farm’ [GAB]; 6 Ngz *ʃ*aatú ‘separate one long thing from another; strip bark’ [SchN] //cf. Arab šty ‘ôter la peau’ [BK 1232].  
Cf. N 98. *\*ʃVḏ-* ‘to husk, to peel’.

121. *\*ʃVVt-* ~ *\*ʃVʃVt-* ‘to cut tribal marks’: W 2 Angas liit ‘the cut tribal marks, on the face’ [FI]; C 2 Bura *ʃ*iʃuta ‘to make tribal marks’ [Ann].

122. W *\*ʃVtt-* ‘to carpenter’: W 1 Hs šitta ‘cut’; 3 Bolewa šott- ‘to pare’ [BOLDU]; 5 Guus *ʃ*at ‘carve wood with an adze’ (VN *ʃ*ādī) [CrG], Zaar *ʃ*et ‘do carpentry’ [CrZ] // Arab šḥt ‘slaughter a camel; cut’ [BK 1228].

123. W *\*[ʃ]Vt-* ‘to finish, to cease’: 2 Goemai lat ‘to finish, end’ [Fp], Kfy lat ‘to end, to be finished’ [TAS \*lat 225], 3 Ngamo sot G idf. ‘popping out suddenly’ [NEH], Pero četo ‘to stop’ [FrP].

124.W **\*ʃVt-** ‘to throw’ > ‘a sling’: W 3 Bolewa sotu ‘throw, shoot, bang down, slip away (and fall)’ [GAB]; 5 Dott ʃiit-ʃiitən ‘sling’ n. [CrD]// cf. Arab štt ‘séparer, jeter cà et là’ [BK 1189].

125.W **\*ʃVVt-** ‘to cure, to help’: 3 Ngamo šaat- ‘to help’ [VbN]; 6 Ngz ʃatú ‘to cure’ [SchN] // Sab s<sub>2</sub>t? ‘be cured’ [Oh 308].

126. **\*ʃVVt-~\*ʃVVdV(? \*ʃVVtV)** ‘thin, slender’: W 1 Hs saáčée-saačè (< \*saate) ‘thin and slender’; C 7 Mada ʃédéd ‘mince (papier, metal), thin (paper, metal)’; E 5 WDng ččot ‘mince, frêle, slender, thin, breakable’ [Fd].

127. **\*ʃVV[t]-** ‘adultery’: W 2 Angas ta-liit ‘adultery’ [FI], Mupun tō-léet ‘adultery’ [FrM]; 6 Ngz ʃatú ‘satisfy a need, a desire’ [SchN]; E 6 Mok séeđú ‘marriage’, séeđá ‘saisir, tenir, emprisonner, attraper; épouser; catch, take, marry’ [JgMk] //Gz saṭaya ‘love one another, fit together’ [LsG 538 ], Arab št? ‘cohabiter’ [BK 1229].

128. **\*ʃVh-** ‘to be, make sharp’: W 3 Tng sai ‘sharp’ [JgT]; C 8 Log ʃahee ‘schleifen; to make sharp’ [LkL], Log ʃun he (ʃa he) ‘sharpen (knife)’ [AIL]// Mhr šhḥ ‘sharp’ [JM 376].

129. **\*ʃVh-** ‘to lose the way’: W 2 Angas le ‘wander, lose one’s way’ [Fp]; 3 Bolewa siiy- ‘s verirren, to lose one’s way, to get lost’ [LkB]; C 5 Podoko ʃəha ‘égarer, quitter le chemin; to lose one’s way, to quit the road’.

130. **\*ʃVh-** ‘to be annoyed, to scold’: W 2 Msr lah [lā] ‘angry, annoyed’ [TAS 218]; 5 Zaar ʃii ‘to upset, to make angry, sad’ [CrZ]; C 5 Podoko ʃaha ‘growl, scold’ [JL] //SCush Maa slawa ‘be angry’, mslaha ‘anger’ [Eh 209], Bur slaḥaʔame ‘anger’, Alg slaḥaʔame ‘grief, sorrow’ [Eh 210].

132. **\*ʃVh-** ‘to be loud (voice, instrument) noisy’: W 2 Mupun lā ‘loud’

[FrM]; C 5 Podoko ʔəha ‘crier fort dans la colère, faire beaucoup de bruit, cry loudly because of rage, be noisy’ [JL]; 7 Mafa ʔəh- ‘bien résonner (instrument); chanter plus fort, élever la voix; to sing or speak loudly’ [BaMaf]; E 4 Mawa seya ‘bruit, noise’, seyaŋ ‘faire aïe le bruit; bavarder, tattle’ [Rb].

Cf. Mefele (dial.) ma-ʔawya, ma-ʔawʔaway, ʔawʔaway ‘to sing’ [CfM].

133. **\*ʔVh-** ‘(to be) strong, powerful; to be able’: W 3 Tng sai ‘forceful, powerful’ [JgT]; 5 Zaar ʔyaa ‘be strong, hard, old, reasonable’ [CrZ]; C 7 Ould -ʔahóŋ ‘pouvoir’ [KOu]; Mafa ʔáha ‘pouvoir; be able’ [BaMaf]; E 2 Lele ēswá ‘force’ [WP].

134. **\*ʔVh-** ‘to mix’: 7 Mofu -ʔəh- ‘mélanger deux choses defferentes; to mix two different things’, Mafa ʔəh- ‘mettre à conserver (mélanger avec un produit de conservation); to mix with a special ingredient in order to conserve’ [BaMof, Maf]; cf. 10 Masa ʔew ‘emmêler; to (en)tangle, to mix’ [CC].

W 3 Tng swaaze ‘mix uncooked flour with water’ (redupl. < \*swaase < \*ʔVw-ʔV?) [JgT]// Arab ššš ‘mêler, mélanger; to mix’ [BK 1239].

Cf. N 482. **\*ʔVg-** ‘to stir, to mix’.

135. **\*ʔVhʷ-** ‘to rub’: W 5 Zaar ʔwaa ‘rub’ [CrZ], Saya ʔwa ‘wipe, rub’ [Cs 846] (both may originate from **\*ʔVw** as well); C 6 Hide ʔəhay ‘to rub’ [BrH].

136. **\*ʔVhʷ-** ‘to weed, to tear’: W 5 Pol ʔəx-tu ‘to tear’ [Kr]; C 1 Gaʔanda ʔaha-nʒi, Gabin ʔah-ənçi, Boga ʔaha-ða ‘tear’ [Kr:380]; 2 Bura ʔuwha ‘to tear or rend’ [Ann], 7 Mafa ʔuhw- ‘sarcler pour la deuxième fois; to weed for the second time’ [BaMaf], Cuvok mé-ʔè ʔhèy ‘effeuiller; to tear off leaves, to pluck leaves’ [Ndo].; E 2 Lele sawí ‘déchirer, défaire; to rip, tear’ [WP].

Cf. N 179. C 3 **\*ʔVkʷ-** ‘to tear (off, asunder)’.

138. **\*V(H)- ‘to kill, to crush’**: W 5 Geji-cluster: Migang *ʔoo*, Geeji *ʔoo*, Buu *ʔo* ‘kill’ [Sm], Zul *ʔoo-tine* [Cs N 665]; 4 Siri *ʔú* ‘kill’ [Sk-CLR], C cf. 7 Ould *-ʔàh* ‘écraser; to crush’ [KOu]/ *\*ʔ₂*. ‘to kill’ [CLR I 105 C], cf. SCush Irq *slaahh* ‘hit, beat’ [MM].

Cf. N 149. **\*Vg-** ‘to fight (and kill); a fight’.

139. **C \*Vh-** ‘to fall’: 7 Mbuko *ʔāháy* ‘tomber, to fall’ [GNT]; 9 Mbara *ʔa* ‘to fall’ [TrMba]// SCush Kw *slax-* ‘to drop’ [Eh 209], Iraqw *slaax* ‘drop, pour’ (cf. ‘pour’) [MQK].

Cf. N 372. **\*V** ‘to fall down’.

140. **C 7 \*Vh-** ‘to swallow’: 7 Ould *ʔōh* ‘avalér qqch de dur, to swallow smth. hard’ idf [KOu], MUYANG *ʔəh* idf. ‘swallowing’ [SmM]// cf. Gz *śáśśəʔa* ‘eat much, be greedy’ [LsG 537]. On the other hand, cf. CCh Gude *ʔəʔwa* ‘be selfish, refuse to share’ [Hs].

141. **C \*Vhʷ-** ‘to bury, to dig’: 1 Gabin *ʔòx-wə̀nçi* ‘bury, dig’ [Kr:365, 392], 7 Ould *-ʔuhw* ‘ensevelir, to burry, to shroud’ [KOu], MUYANG *ʔuh* ‘widen a hole’ [SmM]; 8 Makari *šew* ‘to dig’ [AIM]. = N142

142. **C \*Vhʷ-** ‘to bury, to dig’: 1 Gabin *ʔòx-wə̀nçi* ‘bury, dig’ [Kr:365, 392], 7 Ould *-ʔuhw* ‘ensevelir, to burry, to shroud’ [KOu], MUYANG *ʔuh* ‘widen a hole’ [SmM]; 8 Makari *šew* ‘to dig’ [AIM].

143. **\*VHʷV** ‘pot’: W 7 Sha *šwaʔi* ‘Topf für rituelle Zwecke; pot for ritual purposes’ [JgR]; C 5 Podoko *ʔáhwaya* ‘courage, pumpkin’ [JL]// Eg *šʔ* ‘Art Gefäss, kind of vessel’ (AR) [EG 418].

144. **C 7 \*VhV** ‘husk of a stalk’: MUYANG *ʔuh-ʔuh* ‘husk of millet stalks’ [SmM], Zulgo *ʔaʔuh* ‘gaine d’une tige; covering of a stem, husk’ [ZIL] // SCush Dah *slwaaʔ-* ‘to peel’ [EEN], Gz *śəʔəʔa* ‘peel off, scarape’

[LsG:524].

Cf. C 3 FK *ʔəyəl* ‘chaff’ [BINd].

145. C *\*ʔVH<sup>w</sup>V* ‘knife’: 1 Boga *ʔəx-tə*, Gabin, Gaʔanda *ʔû-ta*, Hwo *ʔawu-ra* ‘knife’ [Kr:237] (hardly the same as Tera *ʔùgù* ‘knife’ [NmT]. In the latter case, Mofu and Mokilko are not related); 7 Mofu *ʔuw-eḍ* [BaMof] ‘knife’; E 6 Mok *sùwwó* ‘knife’ [JgMok] // cf. Eg *šʕ.t* (Pyr) ‘knife’ [EG], ECush Kwadza *sleʕo* ‘knife’ [Eh 211].

146. C *\*ʔ(y)VxV* ‘thin, narrow’: 2 Bura *ʔau* ‘long & narrow’ [Ann], *ʔyexa* ‘thin’ [Kr:301], 3 Bana *ʔèxè* ‘maigre, mince’, *ʔyèxè* ‘maigre, mince (lune ou autre chose); skinny, thin (moon or other th.)’ [GLBn], FK *ʔaxè* ‘thin’ [BINd]; 4 Gude *ʔáh* ‘slim, long and thin’ [Hs], FM *ʔyex*, FB *ʔaxà*, FJ, Nzangi lax (no laterals) ‘thin’ [Kr 301]; 5 Gava *ʔyexà* [Kr]; Podoko *ʔehəha* ‘mince, thin’ [JL], 5a Hide *ʔeha* ‘mince, thin’ [Eg], *ʔcha* ‘narrow’ [BrH]; 7 Ould *ʔah* ‘étroit, mince’, *ʔehhà* ‘étroit, narrow’ [KOu] // Gz *śáśśəʕa* ‘be thin’ [LsG 536].

Note Ch *\*ʔy-* > *xy-* in the languages of the bura-margi gr. : C 2 Cibak, Margi *xye-dù*, Kilba *hè-dù* [Kr] ‘thin’.

147. *\*ʔVg-* ‘to bar, to close’: W 1 Hs *sáǵì* ‘temporary fence to close the road’; C 7 Ould *-ʔəǵày* ‘attacher, fermer (une porte); to tie, to close the door’ [KOu].

Deriv.: E 5 Migama *čéegìrò* ‘barrer; to enclose, to bar’ [JgM].

148. *\*ʔVg-* ‘to find out, discover’: C 8 Kotoko *ʔegâ* ‘trouver; to find (out)’ (imp.); E 3 Tum *hāgōm* ‘découvrir, disclose; discover; uncover; trouver’ [CpT].

149. *\*ʔVg-* ‘to fight (and kill); a fight’: W 3 Tng *saage* ‘to fight’ [JgT]; C 2 Tera *ʔaya* (-y- < \*-g-) ‘kill’ [NmT]; 5a Lmn *ʔigo* ‘kill’ [HmG]; C 7

Muyang *ʒigi* (regressive voicing) ‘kill’ [SmM] // Arab *šgg* ‘blesser, casser, briser (tete, crâne)’ [BK 1191].

Deriv.: E 5 WDng *čògìrè* ‘provoquer une bataille; to provoke, to incite a battle’ [Fd].

Noun deriv.: C 5 Podoko *ʔəgəla* ‘lutte; wrestling’ [JL].

150. C 5 *\*ʔVg-* ‘to push’: Guduf, Gava, Cinene, Glavda *ʔəga*, Cikede *ʔəga-ʔəga* [HmG].

Alternatively may originate from N 324. *\*ʔVg-* ‘to press, to stop up’.

151. *\*ʔVgV* ‘avarice’: W 3 Tng *sego* ‘avarice, stinginess, hostility’ [JgT]; C 7 Cuvok *má-ʔəg-dà* ‘avarice’ [Ndo] // Mehri *šəgaʕ* ‘envious’ [JM].

152. *\*ʔVgV* ‘dust (-wind, -devil)’: W 1 Hs *ságóo* ‘dust-devil (goes very high)’ (if not a loan from Somali *sago* ‘whirlwind’, as in [SkH 224]); C 5 Malgwa *ʔəgʔəge* ‘harmattan’ [LrD].

153. [*\*ʔVgV* ‘to prophet; to cure’] > *\*mV-ʔVgV* ‘prophet, magic, medicine’: W 2 Kofyar *mu-lak* ‘magic’, Chip *ngu-mu-lak* ‘native doctor’, Msr *mu-lak* ‘medicine’, Gmy *mua-lak* ‘magic’, mia-lak ‘medicine’ [*\*mwalak* ‘magic, medicine’ TSA 257]; 3 Ngamosoga ‘whitch’, *ùska* G (devoicing in contact) ‘medicine’ [NEH]; C 7 Mafa *mé-ʔége-d* ‘devin, clairvoyant’ [BaMaf].

154. *\*ʔVgVr* ‘palm’: W 5 Dott *ʔakar* ‘deleb palm’ [Cr] (? irregular -k-); E ‘palm’: 5 Bidiya *čəgò* [JgB], WDng *čəgó* ‘palmier-doum’ [Fd], 4 Sokoro *sóger* [Lk:42] // Arab *šagar-at-* ‘tree’, cf. Mhr *šəgēr* ‘plants and trees’ [JM 374].

155. C *\*ʔVg(VI)-* ‘salt’: 5 Gvo *ʔugulum*, Gava, Chikide *ʔəgula* [HmG], 5a. Hide *ʔuyul* ‘sel, natron’ [Eg]; 10 cf. Banana *thég-na* ‘salt’ [Lk:130]. A loan?

156. C 2 \**VgV* 'master': Margi mʔagu, Kilba ʔagu 'master' [Hf:6]. If not < Ch \**ʔV* 'Nomen Agentis', cf.

157. \**Vk(k)*- 'to make incisions': C 6 Daba ʔeč (< \*ʔek-) 'couper avec les ongles, cut with nails' [Lnhr]; E 5 Bidiya čúkkà 'tattoo lips' [JgBid]  
Deriv. in -t-: W 4 Warji, Jmb, Mburku, Kariya ʔəkət- 'to cut, to slaughter' [SkNB].

157a. \**VkV* '(big) knife, sword': W 3 Ngamo sòkì (pl. sòkàkà) 'knife' [NEH], 7 Kul súk, Sha šúk 'knife' (cf. Sha šúk 'rasieren, to shave') [JgR]; C 1 Hwo ʔəkùràrà, Boga ʔox-tə 'sword' [Kr:231]; 7 Mbuko ʔəkā 'knife' [GNT] // Hbr šukkā 'sharp weapon', Arab šikk-at- 'weapon, piece of wood' [BK 1257].

Noun deriv. in -m: W 3 Tng sakâm 'large knife, dagger, sword' [JgT], E 5 WDng čòkòm 'petit fer de houe pour couper les plantes et de racines dures' [Fd].

Note that E 3 Smr ságenu (AF ságunu) [Luk] 'Dolch; dagger', Tum húgòèn [CpT], Ndam sūgān [Cp] 'knife' may originate from Ch \**ʔVk-Vn*- as well. For the latter case cf.: Hbr šakkīn 'knife' [KB] and SCushitic Dahalo slákane 'sharp (knife)' [EE].

158. \**Vk*- 'to pierce, to stab': W 1 Hs sákà 'pierce (to release pus)', sákíyà 'puncturing to let out pus (usually done with a white-hot arrow-head)'; 5 Guus ʔyak 'stab, prick' [CrG]; C 7 Mofu -ʔək- 'piquer, percer; tuer à coup de couteau; semer avec un bâton à four; to stab, to pierce, to strike with a knife and kill, to sow with a digging stick' [BaMof] // Hbr škk 'be pointed' [KB 922], Mhr škk 'to fish, to skewer meat', Jibbali sékk 'skewer' [JM 377], Arab škk [-u-] 'pierce (with a spear)' [BK].

158a. \**Vk<sup>w</sup>V* 'sharp point': W 1 Hs sákwaí-sákwaí 'sharp point'; 3 Ngamo sákà 'large needle used to undo plaited hair or bore holes in a calabash to sew it' [NEH]; C 7 Mafa ʔəkaw 'fer de flèche crochu, à un seul croc; crooked

iron-head of an arrow' ([BaMaf]// Hbr sákkā 'harpoon' [KB 921].  
 Noun deriv. in -m: W 1 Hs sákʷamii 'a wooden-headed arrow'; 4 Miya  
 aʃakwam 'spear' [SkNB].  
 Cf. N 513. \*ʒ Vʔ- 'to prick; a sharp point'.

159. \*ʃ Vʔ- 'to pull (out, down, up)': W 2 Kfr luk 'pull out' [TAS:233]; 5  
 Geji ʃeki 'pull' [Kr:356] (cf. Geji ʒiki 'pull' [Cs N 806]), Buli ʃigən 'pull'  
 [Cs N806]; C 4 Gude ʃəku 'pull down (branch, corn-head); pull up (by the  
 roots)' [Hs]; E 2 Tob sogə 'tires; drag, pull' [CpT].  
 Cf. N 511. \*ʒ Vʔ- 'to pull (off), tear'.

160. \*ʃ Vʔ- 'to hang up': C 5 Daba ʃə̄k 'accrocher, suspendre; to hang (on a  
 hook), to suspend' [Lnhr].  
 Deriv.: E 5 Migama čikilò 'accrocher; to hook, to hang (on a hook)', čàkìlò  
 's'accrocher' [JgM ] and WDng čààlè 'accrocher' (if < \*čkl < \*ʃkl) [Fd].  
 Cf. N 484. \*ʒ Vg- 'to hang' (tr., intr.), 572. W \*ʒ Vnk- 'to hang'.

161. \*ʃ Vʔ- 'to cook, to boil' (attested in deriv. only): W 5 Dyarim ʃiktò 'to  
 boil' [BI]; C 4 Gude ʃəkə̄ə 'to cook until well done (meat only)' [Hs].

162. \*ʃ Vʔ- 'to provoke (a quarrel)': C 5 Podoko ʃəka 'arranger (une  
 querelle), arrange (a quarrel)' [JL]// ECush Dah slak- 'quarrel' [EEN].  
 Deriv.: W 3 Ngamo suktâ G, VN. Sukta 'to instigate, to arouse' [NEH].

163. \*ʃ Vʔ- 'to empty, to scatter': W 1 Hs sákè 'pour out, turn out (contents of  
 vessel)'; C 6 Daba ʃakway 'dispenser, vider; to scatter, to empty' [Lnhr].

164. \*ʃ Vʔ- (possibly \*ʃ Vʔ-, cf. Arab) 'to rise, to stand up' > 'high': W 3 Kir  
 ʃak 'stand up' (but cf. Sbauchi \*ʃV id.) [Sm] C 7 Mada áʃka 'soulever;  
 raise (a little)' [BaMd]; E 3 Ndam hōgâ wál 'to stand up' [JgDik]; 5 WDng  
 čukè 'monter, gravir, se lever (astre); to ascend, to climb, to rise (star)' [Fd],

EDng čóké 'steigen; to ascend, to rise' [Ebb]//Arab škw (u) 'avoir le dessus sur qqn; to be over' >'high, elevated' [BK:1256].

Cf. CLR \*wʔk 'stand, stand up' I 157A.

Deriv.: C 7 Gisiga ʔikiɖ 'to lift; to pick up; to stand up, to arise' [LkG], Mofu -ʔəkɖ- 'se réveiller, se lever; to awake, to get up' [BaMof].

W 3 Tng sakat 'high' [JgT]

165. \*ʔ(y)Vk- 'to go away, to leave (intr.)': C 5a (?) Hide ʔyak-ʔya 'être émigré' (partial redupl.?) [Eg]; 7 Muyang ʔəka 'leave a place' [SmM], Ould -ʔakó 'partir d'une surface' [KOu]; E 3 Tum hǎg 'partir; to leave, to depart, to go away' [Cp]; 4 Mawa suug-uŋ 's'éloigner; to withdraw, to go away' [RbM].

Cf. C 4 Gude ʔəkee 'to send' [Hs].

Deriv.? : W 3 Kirfi šekkit- 'to part, to go in different directions' [Stl].

166. \*ʔVk(k)- 'to jump' >'to fly', 'to dance': W 3 Tng sagi 'to jump over' [JgT]; 5 Jimi ʔekakói [Cs 664], ʔəkà [Cs] 'to jump', ʔekói 'to fly' [Cs N 657], Dott ʔək 'jump, fly' [CrD], ʔik 'to jump' [Cs 664], ʔikka 'to fly' [Cs 657]; E 5 WDng čòokè 'dancer les génies avec flutes et trompettes; dance of ghostes', čákka 'nom d'une dance; name of a dance' [Fd].

Note C 7 Ould ʔəz 'action de sauter; jumping' idf. (if < \*ʔVk) [KOu].

167. \*ʔVkʷ- 'to scratch': W 4 Paa ʔaakaa, ʔaakíi, ʔáákwo 'scratch' [MS], Kariya, Mburku ʔakə, Siri ʔaka [SkNB]; C 3 FK ʔəʔəkə 'to scratch, itch' [BINd]; 7 Mofu ʔákʷ ʔákʷ 'se gratter (démangeaison), scratch oneself (itch)' [BaMof].

Note possible deriv.: E 5 Bidiya čòkóora 'dermatose entraînant la chute des cheveux; dermatoses implying hair fall-out' [JgB].

168. \*ʔVkk- 'to rub': W 3 Pero čakú 'rub' [FrP]; 5 Geji ʔokkà 'rub' [Kr:354]; 8 Log ʔazii 'reiben; to rub' [LkL] (if -zi < \*-ki)

Cf. N 135. **\*Vh<sup>w</sup>-** 'to rub'.

169. **\*VVk-** 'to peel': W 2 Kfr look 'to peel' [TAS:233-6]; E 6 Mok séekè 'se peigner, décortiquer; to comb, to husk, to peel' [JgMk].

Noun deriv.: C 5 Podoko meʔéke 'écorce de tige de mil; bark of millet-stem' [JL].

W 3 Bolewa šakkiro 'husks of baobab seed left after pounding' [GAB]. A pl.in -rV ?

Compound? W 6 Ngz ʔəkwəkùrak 'outer shell of nut, etc.' [SchN].

Note that E 6 Mok séekè 'se peigner, to comb' may be related to C 8 Log ʔixati-wun 'to comb' [AIL], from Ch **\*Vy-**.

170. **\*VVk-** 'to shove in': W 3 Bolewa šeku 'to shove in, to stick in, to stuff in' [GAB]; C 9 Mulwi ʔíki 'fourrer dans une fente; to shove into a cleft' [TrMlw]; 10 ZD ʔūku 'enfonce qqch avec force dans un trou, to stick smh into a hole' [Cpr] // Arab škk 'to get (one thing) completely into (another thing)' [BK:1256], SCush Irq slukaa? 'to fill up an empty space, put in' [MM].

Deriv.: W 1 Hs saakadaa 'push thing through or into a small opening'.

Hardly the same as N158. **\*Vk-** 'to pierce, to stab'.

171. **\*VVk-** 'to turn (over)': W 5 Geji ʔookəlti 'to turn', ʔookəlika 'to twist' [Cs 686, 842]; C 9 Mulwi ʔíki 'ourler; to hem a cloth' [TrMlw].

172. **\*Vk-** 'to obtain, to get': W 7 Kul sùk 'bekommen; find, get' [JgR]; C 5 Glavda ʔakùna ʔugà, Gava ʔkanàna 'obtain' [Kr:428].

173. **W \*Vk-** 'to stand': 3 Dera šaké 'stand firm (in a battle)' [NmK]; 5 Mng (k) ʔəge 'to stand' [Cs]. (Rel. to 'to stand up'?)

174. **W \*(y)Vk-** 'to break': 5 Jimi ʔaki 'to break in pieces' [Cs];

Deriv.: W  $\text{ʃVkVt-}$  ‘to ruin, to smash’: 3 Kirfi  $\text{ʃakkit-}$  ‘to break, to smash’ [Stl]; 6 Ngz  $\text{ʃakàtú}$  ‘become ruined, spoiled’ [SchN].

175. C  $7 *ʃVk-$  ‘to prop up, to back up with a stone’: Mafa  $\text{ʃík-}$  ‘caler avec une pierre, mettre une pierre pour caler (cruche, pierre); to prop up, to back up with a stone, to put a stone to back up smth’ [BaMaf], Mada  $\text{áʃka}$  ‘appuyer, to lean; to prop up, to back up’ [BaMd], Cuvok  $\text{mé-ʃəʃəkèy}$  ‘caler avec une pierre’ [Ndo].

Noun deriv.: C 7 Ould  $\text{fēkēc}$  ‘cale, wedge’ [KOu].

176. C  $*ʃVk-$  ‘to be able, to have power’: C 3 Bana  $\text{ʃkə}$  ‘commander; to command’ [GLBn]; 7 Ould  $\text{-ʃakt}$  ‘pouvoir; AUX; to be able’ [KOu]. Cf. the next root.

Noun deriv.: 7 Mada  $\text{ʃakwar}$  ‘force, courage’ [BaMd].

177. C  $*ʃVk-$  ‘to regulate, to arrange’: 3 Bana  $\text{ʃká}$  ‘regler; regulate’,  $\text{ʃkàʃká}$  ‘se mettre en rang; to rank’ [GLBn], 9 Mulwi  $\text{ʃiki}$  ‘conduire une pirogue, to steer a boat’, Mnj  $\text{ʃiki}$  ‘conduire une pirogue a la perche; to steer a boat with a pole’ [TrMlw, Mnj] // Cf. Min  $\text{ʃs₂k}$  ‘aménagement en terrasses’// ‘organiser le travail’, Kat  $\text{s₁-ʃs₂k}$  ‘cultivate, carry out, complete’. Note that the first meaning in Semitic is ‘to dig, to cultivate’, cf. Sab  $\text{h-ʃs₂k}$  [BI] ‘dig well, cut road, terracing, cultivating land’; Kat  $\text{ʃs₂k}$  ‘excavation, digging up, tilling’. For Semitic  $*ʃs₂k$  see [Oh 236] and W 3 Tng  $\text{suke}$  ‘to till hard ground’ [JgT].

178. C  $*ʃVk-$  ‘to plant’: 2 Bura  $\text{ʃika}$  ‘to plant’ [Ann], Margi  $\text{ʃka}$  [Hff:142] ‘to sow, to plant’; 3 FK  $\text{ʃəkə}$  ‘sow’ [BINd]; 7 Cuvok  $\text{mé-ʃəkèy}$  ‘semer (legumes), plant (vegetable)’ [Ndo].

Var.  $*ʃVg-$  (voicing in medial position?): ‘to sow’ 5a Hide  $\text{ʒga}$  ‘semer, to sow’,  $\text{ʒgu-trus}$  ‘silon’ (voicing in contact) [Eg], Hide  $\text{ʃəgay}$  ‘semer’ [BrH]; 7 Zulgo  $\text{ʃigé}$  ‘semer’ [ZIL], Ould  $\text{-ʃigi}$  ‘semer’ [KOu], Mery  $\text{ʃéga}$  ‘semer’

[RMr].

Cf. C 7 Mofu -ʃək- 'piquer, percer; semer avec un bâton à fourir; to stab, to pierce, to sow with a digging stick' (in N 158. \*ʃVk- 'to pierce, to stab').  
\*ʃVk- 'to plant' may in general originate from 'to pierce'.

Cf. C \*ʃVk/g- 'to sow'.

179. C 3 \*ʃVkʷ- 'to tear (off, asunder)': 3 Bana ʃkwó 'déchirer, tear (asunder)' [GLBn], FK ʃəkh 'tear' [BINd]; 4 FJ ʃkwàbì 'tear' [Kr:380].

Cf. N 136. \*ʃVhʷ- 'to weed, to tear'.

180. \*ʃVkV ' (period of) time : W 2 Angas lok lok ne 'now' (ne 'this') [Fl]; 3 Bolewa šəkè 'time' [GAB]; C 5 Malgwa ʃákʃake 'Erntezeit, harvesting time' [Lr], 7 Mada ʃákà 'temps, époque; times' [BaMd]; E 1 Kera saksaki 'immer; always' [Eb].

Cf. C 6 Glavda ʃúgtì 'before' (< \*ʃuk-ti) [Rp].

Note W 1 Hs šèekarà 'a year' (a pl. in -r-?)

181. \*ʃVkV 'small, light (in weight)': W 3 Bolewa sòkkìtrk, sòkùwum 'light (in weight)' [GAB]; C 2 Bura ʃikčika (< \*ʃikʃika, dissim.) 'small, undernourished, not comely (of a goat)' [Ann]; E 4 Sokoro éške 'small' [Luk:33].

Deriv.: W 1 Hs šákáf 'light (in weight)'; 3 Kirfi šayafu 'light, not heavy' (? < Hausa) [Stl].

Verbal deriv.: W 3 Bolewa sikit- 'herabsetzen (Preis); reduce price' [LkB], Ngamo sikt- 'to reduce, decrease' [VbN].

182. \*ʃVkV 'placenta': W 3 Ngamo šòkšì G, šòšo Y 'placenta' [NEH], Krkr sùkčì 'placenta' [GK]; Bolewa [GAB] suuši (< \*suk-si) 'placenta of animal'; C 7 Zulgo ʃakóla 'placenta' [ZIL].

183. \*ʃVkV 'slippery': C 7 Ould ʃəkāʃəkād 'glissant, lisse; slippery, even,

sleek' [Kou].

**Deriv. \*V̄kV̄l-** 'to slip': W 3 Bolewa sùkùlu 'slip off, slip loose' [GAB]; E 6 Mok sookilè 'glisser; to glide; to slide' [JgMk].

**184. \*V̄kV̄ 'star':** C 10 Masa mítek (if < \*mi-tek) 'l'étoile; star' [CC]; E 1 Modgel (Kwang) tá-suga 'Stern; star' [Luk], Kera se-ská 'Stern; star' [Eb].

**185. \*V̄kV̄ 'a quiver':** W 3 Krkr ʔíkau [GK]; C 1 Tera ʔíger 'quiver' [NmT], TP ʔika 'quiver' [Kr].

**186. \*V̄V̄V̄ 'forked stick':** W 1 Hs šíssikè 'forked post'; C 6 Podoko ʔəʔəkwa 'bois fourchu utilisé quand on coupe des épines; a forked piece of wood used to cut thorns' [JL].

**187. \*V̄kV̄V̄ 'woven beehive':** W 3 Krkr sači (< \*saki) 'beehive' [GK]; C 2 Bura ʔawha 'a hive, a beehive' [Ann]; 4 Gude ʔiká 'woven beehive' [Hs];

**187a. E \*V̄kV̄ or \*čV̄kV̄ 'plaited fishing basket':** 2 Lele sigá (-g < \*-k-) 'panier de capture (pêche); fishing basket' [WP].

Deriv.: 5 WDng čókító 'nasse en tiges d' arbustres; fishing basket made of bush-branches' [Fd]

**187b. \*V̄kV̄ '(badly woven) cloth':** W 1 Hs šákášáká = k<sup>w</sup>ášák<sup>w</sup>ášá 'badly woven cloth'; C 7 Mafa ma-ʔaka 'habit, tissue; cloth' [BaMaf]// Cf. Hbr šak 'loin covering', Gz šakḵ 'sackcloth' [LsG 532].

**188. \*V̄kV̄ 'hard grass, straw':** W 3 Ngamo uska Y 'grass, weeds' [NEH], 7 DB sók 'gras' coll. [JgR]; C 6 Hide ʔka 'paille pour la toiture; tige; straw, stalk' [Eg], ʔəka 'stalk' [BrH].

Cf. C 4 Gude ʔákàrà 'stump of guinea-corn left after harvest' [Hs]; 7 Mafa ʔarac 'chaume, stalk; partie de tige de mil qui reste sur pied après moisson;

stump of a stem left after harvesting' [BaMaf] (? < \* $\text{VrVk}$ , met. < \* $\text{Vkvr}$ , note the identity of semantics in Mafa and Gude).

Note possible derivatives: W 3 Tng siigit (< \*SVg/k-t) 'kind of hard grass' [JgT].

E 3 Tum hēgǝl (< \*SVg/k-l) 'paille; straw' [CpT].

189. \* $\text{V}[\text{k}^w(\text{V})\text{V}$  'sickle': W 5 Tala sugu [Cs]; C 2 Bura  $\text{ʔahù}$ , Cibak  $\text{laxù}$ , Kilba  $\text{ʔákù}$ , WM  $\text{ʔaku}$ , Margi  $\text{ʔagu ʔagū}$  'sickle' [Kr N156], Bura  $\text{ʔahu}$  'a small sickle' [Ann]; 4 Gude  $\text{ʔákwa}$  'sickle' [Hs]; 7 Gisiga  $\text{ʔagoy}$  [LkG]; 9 Gidar  $\text{ʔáhōŋ koy}$  [Mo], 10 ZD  $\text{ʔūkūwāy}$  [Cpr], ZB  $\text{ʔúkuēi}$  [Sa] (cf. Peve  $\text{ʔikwoi}$ , Lame  $\text{ʔokwai}$  [Kr]).

Any relation to 'cut' or to 'knife'? Note that medial -k<sup>w</sup>- / -g- / -h- reflexes may point to a labialized velar in PChadic.

190. \* $\text{V}[\text{k}^w]\text{V}$  'leaf of a cornplant': W 4 Cagu  $\text{ʔagə}$  'leaf, leaf of cornplant' [SkNB]; C 3 Kap  $\text{ʔíkè}$ , HG  $\text{ʔùgəy}$  'leaf' [Kr:131]; 4 Gude  $\text{ʔókwa}$  'leaf of the guinea-corn plant' [Hs]; 6 Hide  $\text{ʔuhwa}$  'feuille', cf.  $\text{ʔuha}$  'bouchon de canari pour la vin, fait de feuilles d'arbre; a plug made of leaves' [Eg], Hide, Vmg  $\text{ʔχ}^w\text{a}$  'leaf' [HmG]; 7 Mefele  $\text{bə-ʔak}$ ,  $\text{ba-ʔak}$ ,  $\text{ba-ʔək}$  (dial.) 'leaf' [CfM].

Note: C 6 Hide  $\text{ma-ʔahwad}$  'dried oca leaves used in sauce' [BrH], Sukun  $\text{ma-ʔax}$  'pumpkin leaves, used for sauce' [DS].

191. \* $\text{VkkV}$  'sour(ness)': W 3 Kirfi  $\text{šókkì}$  'sour' [Stl]; C 5 Podoko  $\text{mə-ʔakaka}$  'acidité; sourness' [JL].

192. ? \* $\text{V}[\text{k}^w]\text{V}(\text{r})$  'kind of fish': W 3 (?) Tng  $\text{səglə}$  (-gl- < \*-kr-) 'fish',  $\text{sugle}$  'to swim' [JgT]; C 4 Gude  $\text{ʔókúra}$  'type of fish (white head, reddish tail)' [Hs]; E 1 Kera  $\text{áská}$  'Fish' [Eb].

Note that -r- may reflect the old pl. marker.

193. C 7 \* $\text{V}[\text{k}^w]\text{V}$  'shield': Muyang  $\text{ʔako}$  [SmM], Zulgo  $\text{ʔákwa}$  [ZIL],

Mada ʔakwa (koŋgòròm) [BaMd].

194. C **\*ʔVKʷ-** ‘to sleep/to carry on the body side/hip’: 7 Mada máʔakwá-ʔakwá ‘sur le côté (coucher); sleep on the body-side’ [BaMd]; 10 ZB ʔák ‘porter sur le côté, sur la hanche; carry on the body-side’ [Sa].  
Any relation to N 199 **\*ʔVKʔV-** ‘hip (bone)’?

195. **\*ʔVVʔ-** ‘to place between’: W 1 Hs sáakà ‘place thing between two other things, pass between two people’; C 7 Zulgo ʔók, ʔíké ‘interposer, placer entre, to place in between’ [ZIL].

196. **\*ʔVʔ-** ‘to push (away), to drive away’: W 1 Hs sàasuḳà ‘drive away’; C 7 Mada áʔka ‘pousser, to push’ [BaMd], Ould ʔāk ‘action de bousculer; to push (away)’ idf. [KOu].

198. **\*ʔVVʔV** ‘friend(ship)’: W 1 Hs sàaku ‘to be in very close acquaintanceship with’, sàakuwaa ‘very close acquaintanceship’; C 5 Malgwa ʔákate (if not < ʔa-kate) ‘friend’ [LrD]; 7 Muyang ma-ʔka ‘companion’ [SmM].

Not the same as Hausa šaḳīḳi ‘full brother’ < Arab šaqīq [SkH 241].

199. **\*ʔVKV(= \*ʔVKʔV, cf. Sem)** ‘hip (bone)’: W 5 Zaar ʔəyŋ (from ʔəkn) ‘hip’ [CrZ]; C 7 Zulgo ʔékid ‘péroné; fibula’ [ZIL] // Arab šikḳ- ‘moitié, fesse, cul, fesses; thigh’ [BK 1252], Akk sīḳu ‘lap, thigh’ MA (irreg. s- instead of š-) [AHW 1049] [CAD s 305]; Ug šḳ ‘thigh’ [Gordon 488].

200. **\*ʔVI-** ‘to lose the way’: C 5 Podoko ʔəla ‘mislead, égarer, quitter le chemin’ [JL]; E 5 Bidiya čal ‘se perdre; s’égarer; to lose the way’ [JgB].  
Cf. E 5 WDng čóle ‘délaisser, épargner; to abandon’.

201. **\*ʔVVI-** ‘to husk, to peel; husk’: W 1 Hs sáalè, (Kats.) swale

‘desquamate, peel off (of skin as result of burn, scald, etc.), abrade’; C 5a Hide *ʃiʃila* ‘millet husk’ [BrH]; E 4 Mawa *sêlaŋ* ‘éplucher; to husk’ [RbM], 7 Msm *čelli* ‘éplucher’ [Alio] //cf. Arab *šlʕ* ‘dépouiller, ôter les habits; to skin, to bark’ [BK 1263].

Deriv.: W 1 Hs *sáaluḅee* ‘peel off (skin after a burn or scald)’.

W 1 Hs *sàlkaa* ‘complete desquamation after small-pox’.

Cf. N 249. **\*ʃVr-** ‘to tear to pieces’.

**202. \*ʃVI- ~ \*ʃVʃVI-** ‘to burn’: C 2 Bura *ʃila* ‘burn (clay) pots’ [Ann]; E 5 EDng *òčìlē* ‘brennen; to burn’ [Ebb], WDng *àčìlē* [Fd] // Arab *šʕl* ‘allumer (feu)’ [BK 1240].

Note W 3 Tng *salákì* ‘flame’ [JgT]; E 2 Kabalai *kužələ* (< \*ku-Sələ), Nanc *ku-sələərə* ‘braise’ n. [HmK]. May be derived from \*ʃVI- ‘to burn’ or from Ch \*sVI- ‘to burn’.

**203. \*ʃVI-** ‘to wash’ (attested mostly in deriv.): W Hs *sál* ‘emphasizes whiteness, good washing’, *sáltée* (S) ‘washing (of clothes), laundry work’, *súluf* ‘well washed’; C 7 Muyang *ʃilik* ‘private washing-place’ [SmM] //SCush Kwadza *slalat-* ‘to wash’ [Eh 208].

**204. \*ʃV(w/y)l-** ‘to build’: W 3 Bolewa *sol-* ‘build’ [LkB], Ngamo *sal-* [NgVb]; C 7 Muyang *ʃuwul* ‘mould’ [SmM]; E 7 Brg *čìilí* ‘construire, build’ [CLR] //Arab *šll* (u) ‘bâtir, coudre, build, sew’ [BK].

For Arabic ‘to sew’ cf. W 7 Fyer *sool* ‘to sew’ [JgR].

**205. \*ʃʃVI-** ‘to loose taste’: W 1 Hs *sáláb* ‘tastelessness, insipidity’; E 5 Bid *čal* ‘perdre sa saveur, lose taste’ [JgB].

**206. \*ʃVIV** ‘striped, multi-coloured’: W 1 Hs *súlài* ‘red-brown ox with white patches’; C 5 Podoko *ʃelíya* ‘rayé, striped’ [JL].

207. **\*VIV** 'spear': W 3 Pero čálo 'lance' [FrP], 5 Jimi ʃaalo 'spear' [Cs]  
Cf. W 1 Hs súlúlii, súlúluu 'a handleless knife'// Arab šlʿ > 'sabre' [BK  
1263].

Note C 7 Mada áʃal 'se percer, être percé, éclore (insecte volant); to pierce'  
[BaMd] (if not from N 351. **\*ʃ** 'Vr- 'to pierce (through), to impale'.

208. **\*VVIV** 'ficus': C 5 Wnd ʃúli (lita) 'Ficus syringifolia' [Luk]; E 5  
WDng čáalo 'arbre (Ficus), tronc blanc; kind of ficus with white trunk' [Fd]  
// cf. Eg šn (Amarna) 'Baum; tree' [EG 498].

Note E 5 Bidiya čeela 'arbre sp' [JgB].

209. **\*ʃ(V)wVI** 'salt': C 7 Mada ʃwal 'sel, engrais chimique' [BaMd];  
Zulgo ʃuwul 'sel' [ZIL]; E 4 Sok súluḡ 'salt' [Luk].

210. **\*VIVhV** 'wooden bed, chair': W 3 Bolewa saala 'throne for a judge or  
leader' [GAB]; C 7 Mada ʃlah 'bed (planche tailler dans un tronc)  
[BaMd], Muyang ʃalah 'plank bed' [SmM]; Zulgo ʃəlah 'wooden bed'  
[ZIL], Ould ʃəlah 'bed made from a tree-trunk' [KOu]; E 2 Kabalai ka-səlo  
'lit, bed' [HKb]. Derived from 'tree'?

211. **\*VIVkV** 'chin, jaw': W 3 Tng sileḡóle 'jaw, cheek' [JgT], Bolewa  
šakulkutum (metath.) 'jaw' [GAB]; C 7 Muyang ʃilikiḡ 'part of the jaw that  
joins to the skull' [SmM]; E 5 WDng čəlkumə 'chin' [Fd], 7 Jegu čolkom,  
Mubi žəlgám 'chin' [CLR], Kaj čəlgom 'jaw' [Alio].

212. **\*ʃ/sVIV** 'acacia': E 4 Mawa sule 'acacia' [RbM], Sok súlē 'Acacia  
siberiana', súllē 'Acacia Seyal' [Lk:41], 6 Mok šililē 'kind of acacia' [JgMk]  
// Eg šnž (if -n- < \*-l-) (Pyr) 'die (Dorn-)Akazie' [EG].

According to [BaMof:186], C 7 Merey, Mofu ma-ʃalam 'thorn' are loans.

Cf. W 3 Dera šálo 'kind of tree' (Hausa farin ɓaya) [NmK]. Probably, 'a  
pricky tree =acacia'.

213. W **\*VIV** 'dry': 3 Dera šél 'dried' [NmK]; 5 Geji *ʔeel* 'dry season' [Cs N 370]// Arab šll (a) 'be dry' [BK1262].

Cf. C 2 Bura *ʔili* [Ann], Cibak *ʔiʔey*, WM *ʔayi* 'thirst' [Kr:260].

214. C **\*VIV** 'village': 5 Malgwa *ʔála* 'Stelle, Ortsviertel; place', *ʔálawe* 'Reich; world' [Lr], Podoko *ʔala* 'quartier' [JL]; 7 Muyang *ʔala* 'village' [SmM], Gisiga *ʔala* 'vilage' [LkG], Mofu *ʔala* 'village, quartier' [BaMof]. Any relation to **\*VI-** 'build'?

Note W 5 WDng *čaalól* 'village Tyala' [Fd].

215. **\*Vm-** 'to take and carry': W 3 Tng *šimę* 'take, carry in the teeth' [JgT]; C 6 Sukun *ʔámátshâ* 'carry (load)' [CLR], *ʔama* 'carry' [Wolff], *ʔa-ma*, *ʔa-va* [DS]; E 4 Mawa *səməŋ* 'prendre; porter (fardeau); take, carry (load); choisir, choose, soulever, lift' [RbM]; 5 Migama *čimmó* 'enlever; take from, away, off' [JgM], Ubi *čómín* 'soulever, porter; lift, carry' [Alio].

216. **\*VVm-** 'to harvest, to gather': C 4 Gude *ʔaamə* 'harvest guinea-corn by hand (when plant dries up before reaching maturity)' [Hs] // cf. Arab *šmr* 'cueillir, ramasser (dates...); pluck, gather (dates...)' [BK].

Deriv.: W 3 Ngamo *šəmđâ* G 'collect together' [NEH].

217. **\*V(?V)m- ~ ?VʔVm-** 'to yawn': C 8 Log *ʔuʔam*, Bud osam 'to yawn' [LkL, B]; E 1 Kwan *sóome* [Jg], Mobu soome, Ngam soomé 'bâiller (de sommeil); to yawn' [CTC].

218. **\*VHVm-** 'to be silent, quiet, to rest': W 1 Hs *súmúmú* 'in silence, quietly', *šimii*, *sùmii* 'being silent through fear, not knowing what to say', *šāamòomòo* 'being quiet, pensive, whether because of loss, vexation, being unwell'; C 5 Podoko *ʔaməma* 'rester silencieux (pour réfléchir), be silent (so as to rest)' [JL]; 8 Gulfey *χama χama* 'leise; quietly' [Lk:147]// Arab *šʕm*

‘reconcilier, mettre en paix entre les gen; calm down, make peace between’ [BK].

219. W 4 *\*ʃVm-* ‘to shave’: Paa áʃim, aʃin ‘to shave’ [MS], Warji ʃimiy-, Miya aʃim, Mburku, Kariya ʃim ‘to shave’ [SkNB].

Note Paa aʃima ‘knife’ [MS].

220. W 5 *\*ʃVm-* ‘to stand up’: Zul ʃiyáami ‘arise, stand up’ [Cs N642, 681], Zeem cluster: Tule ʃaamò, Chaari ʃâm, Dokshi ʃam ‘stand up’ [Sm] (if not the same as *\*ʃV* id., cf.) // SCush *\*slem-* ‘to rise’ [DolL 17], Arab šmw ‘be high, elevated’ [BK 1274].

Cf. W 1 Hs šaamuwaa ‘mounting a tree to espy and ascertain numbers of approaching enemy’.

Cf. N 338. *\*ʃVVm-* ‘to lift smth.’ Note that both words have reflexes in Hausa.

221. W *\*ʃVmV* ‘dried leaves’: 1 Hs sámò ‘dried leaves’; 6 Ngz ʃáʃamáawa ‘dried leaves of guinea corn’ [SchN].

Note E 2 Lele sómrò ‘saison seche’.

222. *\*ʃVVmV* ‘dried grass’: E 6 Mok sèemí, pl. sèmbà mí ‘foin, hay’ [JgMk].

Note : C 7 Muyang maʃam ‘secco straw’ [SmM].

223. W *\*ʃVmV* ‘marrow’: 3 Kirfī šomo ‘bone marrow’ [Stl]; 5 Buli ʃiim-ən, Dott ʃum-gáam ‘brain’ [Cs N 50]. Note Guus ʒwààbm, pl. ʒwààpsə ‘marrow’, ʒwààbm kə gaam ‘brain’ (gaam ‘head’) [CrG], Dott ʃoom ‘marrow’ [CrD].

Guus ʒwàabm may represent old (and lexicalized) plural, for the same model (without a metath.) see: E Mokilko sèemí, pl. sèmbà mí ‘hay’ [JgMkk].

224. C *\*ʃVmV* ‘place’: 7 Ould àʃam ‘endroit, sol, place, land’ [KOu], Mada áʃam ‘lieu, endroit, place’ [BaMd], Cuvok ʃam ‘endroit; place’ [Ndo]. Related to ‘to set in order, to arrange’? (‘place’ > ‘to set in place’?)

224a. C *\*ʃVm-lʃ* ‘to set in order, to arrange’ > ‘to repair’: 7 Ould ʃéméj ‘réparer, préserver; préparer; arranger’ [KOu], Muyang ʃamalay ‘repair, prepare’ [SmM], Mada éʃem-éj ‘mettre en place, arranger, réparer, améliorer, put in place, arrange, repair’ [BaMd] // Gz sým ‘set in order, put, appoint (to an office), ordain, charge, establish, promote’ [LsG 539], Arab šāma ‘put into, introduce’, SAR s<sub>2</sub>ym ‘set up’ [Bl 540], Hbr sým ‘put, place, set, fix’, Akk šāmu ‘fix, determine’, šāmu ‘to allot power, establish, appoint’ [CAD 356], etc. [Oh 319].

225. C *\*ʃVmV ~ \*ʃV(ʒ)ʒamV* (? < *\*ʒVʒVmV* < *\*ʃVʒVmV*), voicing in medial position or after a vocalic preffix) ‘five’: 5 Podoko ʒama [JL], Sukun ʃáam [CLR], Sukun ʒam [DS], Gvoko ʃaʔo (< \*ʃawo < \*ʃamo) [HmG]; 7 Muyang ʒam [SmM], Mada ʒʒám, Mafa ʒám, Gisiga ʒom, Mofu ʒám, Zulgo əʒəm, Merey ʒam [GCI]; 9 Musgu ʒim, sim, thim, ʃim, šem [Lk:140]; Mnj eim [ʃim] [Mo], ʃim [TrMnj] ‘five’, C 5 Malgwa ʃóma ‘Freitag; Friday’ [LrD].

226. C *\*ʃVmV* ‘fetish shrine’: 4 Gude ʃóma ‘fetish shrine’ [LkG]// Katab s<sub>2</sub>mr-y ‘votive object?’ [Oh 288]. Note possible deriv.: 7 Mada maʃam (not *malam!*) ‘chef religieux de tel culte; prêtre, chef des cultures, de Dieu, du boeuf’ [BaMd].

227. C 8 *\*ʃVmV* ‘young, little’: Gulfey ʒímé ‘Jungfrau, vestal’ [Lk:150], Makari šime ‘little’, šime-sin ‘youth’ [AIM].

228. *\*ʃVn-* ‘to tear, to pluck’: W 5 Brm ʃəne ‘tear’ [Kr:380]; Mng (m) ʃan, (k) tənə ‘tear’ [Cs]; E 7 Birgit čěnní ‘cueillir; pluck’ [JgB]. Deriv.?: W 2 Sura luj ‘jäten; to weed’ [JgS].

229. **\*ʎ Vn-** ‘to tie, to string’: W 1 Hs *śánańá* ‘tying the upper lip of a horse (e.g. when about to give medicine)’; 4 Paa *ʎin* ‘to tie’ [MS]; C 8 Log *ʎina-wun* ‘to string, to thread (beads)’ [AIL] // Eg *śnw MR* ‘Strick, string’ [EG 509].

Noe possible deriv.: W 1 Hs *śánkaá* ‘bunch of tobacco leaves’.

230. **\*ʎ Vn-** (> **\*ʎ Vng-**) ‘to listen, to hear’ > ‘to understand’: C 4 Gudu *ʎin* ‘hear’ [CLR], 8 Gulfey *χ̃eŋge* ‘hear’ [Lk:150], Log *ʎóna, ʎóna* ‘hören, hear’ [LkL], *ʎəŋgə* [By-CLR] ‘hear’, Bud *hangé* ‘hear’ [LkB]; 9 Musgu *χ̃éna* ‘hear, understand’ (cf. [LkM]), Mulwi *ʎíńí* ‘entendre; to hear’, Mbara *ʎíńí*, Mnj *ʎini* ‘entendre, hear’ [TrMba, Mnj, Mlw]; E 5 Ubi *čogin* ‘écouter; listen’ [Alio]// Mhr *śny* ‘to see, to consider’ [JM 381].

Cf. Mnj *ena* ‘entendre, sentir; to hear, to smell’ [Mo en, p.33, p. 38]. Contamination with CCh Biu-Mandara **\*ʎ Vn-** < Ch **\*çin-** ‘to smell, to hear’ (with a secondary lateral).

230a. W **\*ʎ Vn-** ‘to remember’: 2 Chip *len gwe* ‘to remember’ [Kr]; 3 Dera *śení* ‘remember, remind’ [NmK].

230b. **\*ʎ Vŋ-** (?< **\*ʎ Vn-H-**) ‘to think (over)’: W 2 Angas *läng, leang* ‘to meditate’ [Fl], *leep* ‘denken, überlegen’ [JgA], C 7 Ould *-ʎeʎeŋ* ‘réfléchir’ [KOu], Zulgo *βána* ‘penser, réfléchir’ (irregular voicing, probably < *-(ʎe)βeŋ*) [ZIL].

NN 230a,b are not necessarily related to N 230.

231. **\*ʎ Vn-** ‘to push’: W 1 Hs *śánaa* ‘push with a finger in a game; press finger to a painful place’; E 2 Tob *əśíny* ‘pousser’ [CTC], Lele *ùśína* ‘pousser, push’ [WP].

Deriv.: C **\*ʎ Vŋ/ŋgʷ-** ‘to push violently’: 5a Hide *ʎiŋgwa* ‘pousser’ [Eg, HmG]; 7 Mofu *-ʎaŋ-* ‘faire claquer violent (porte), to make slam violently (a door)’ [BaMof].

Note W 3 Tng sige 'to press' [JgT].

232. **\*ɬ(y)Vn-** 'to be exhausted' C 4 Gude ɬyánwá? 'emaciated, exhausted' [Hs]; C 8 Log ɬáni 'moribund, dying person' // Arab šnn IV stem 'be old, used' [BK 1274].

Deriv.: E 1 Kera sépré 'abmagern, to lose flesh' [Eb].

(?) 232a **\*ɬVngV** 'be paralyzed, be disabled': W 3 Bolewa sàngiyu 'be paralyzed, go astray' [GAB]; C 7 Mafa ɬanga'a 'raide, paralisé (membre)' [BaMaf].

233. **\*ɬ(y)Vn-** 'to pierce, to bite': C 7 Mofu -ɬən- 'percer, transpercer' [BaMof]; 8 Log (Kotoko) ɬúnɬún 'mordre; to bite' [Mo].

Cf. C 5a Hide ɬingla 'percer, pierce', ɬigla 'percer, pique (avec le couteau)' [Eg].

234. **C \*ɬ(y)Vn-** 'to send': C 6 Daba β̄ən 'envoyer' (irreg. voicing) [Lnhr]; 7 Mbuko ɬan 'envoyer' [MbL]; Gis ɬan 'send a person' [LkG], Gis S ɬin [GCl]; 6 Log ɬi ni (? < \*ɬV) 'send (sth. to s.o; s.o. to do sth.)' [ALL], ɬón, ɬen 'senden, to send' [LkL], Mulwi ɬíni 'envoyer', Mnj ɬini 'envoyer' [TrMlw, Mnj]

Note 7 Meray ma-ɬej 'messenger, messenger' (if not < English).

Deriv.? C 2 Bura ɬanta (*preferably* hyenta) 'to send, to cause to go' [Ann];

Cf. 7 Mafa β̄ingd- (caus.) 'envoyer' [BaMaf].

Note that **\*ɬ-** in CChadic may be of secondary origin, cf. WCh 5 Dott šin 'send' [CrD], Geji šín-ti [Cs N 819].

Cf. N 254. **\*ɬVr-** 'to send (person)'.

235. **\*ɬVnV** 'adze, axe': W 3 Ngamo š̀unuu G 'adze' [NEH], Dera š́iná 'adze' [NmK]; C 8 Kotoko m-ɬ́enni, Log mi-ɬ́ini (?) 'axe' [ALL]; E cf. 2 Lele sány 'mineral de fer' [WP].

?Deriv.: W 3 Bolewa šunki 'adze for shaping wood into handle, mortar' [GAB].

236. \**VnV* 'magic': W 5 Zul ʔoòné 'ghost' [Cr N 465]; C 8 Log ʔána 'Fetisch' [LkL]; E 1 Kwn sóné 'fetish' [Lns]; 4 Sok sune 'magic, medicine' [Lk:43]// Cf. Eg šn.w (NE) 'sorcerer' [EG].

Deriv.: E 5 Bidiya čóŋŋà 'sorcier; sorcerer' [JgB].

Note possible deriv.: W 3 Bol sinkau 'spirit' [GAB].

237. \**VnV* 'hair': 5 Geji cluster mà-βàŋ, mə-ʔàŋ, mè-ʔàŋ, Tule mè-βinè, Chari mè-ʔn, Dokshi ye-ʔn, Bandas gè-βin 'hair' (voicing in medial position) [Sm]; E 5 Bidiya čononke coll. 'sourcils, brows' [JgB] // Eg šny (Pyr) 'das Haar; hair' [EG 499].

238. \**VnV* > \**VɔV* (? < \**VnVH-*) 'morning' > 'early': W 2 Montol bit lung-lung 'early' (*bit* 'day') [Fl], Goemay lin 'anbrechen (Tag); to dawn' [TAS:230]; 5 Pol ʔiʔin 'morning' [Kr:121]; E 3 Smr sājā 'tomorrow' [Lk].

239. W \**Vn-(tV)* 'mud': 2 Gmy lan 'mud, mire' [TAS 220] (cf. Msr luun 'to plaster (floor) [TAS 237]); 3 Tng wundu 'granary made of mud' [JgT]; 5 Zaar ʔô:tn 'mud found in ponds and marshy areas' [CrZ]. A plural form with a metath., like in N 223. W \**VmV* 'marrow'.

240. W \**VwVnV* 'spider': 3 Krkr saawana, sâunaa 'spider' [GK]; 5 Guus ʔuun 'spider' [CrG].

Note W1 Hs šānsāanii 'a centipede with long flat body, whose sting is said to be more painful than that of a scorpion'.

241. C \**Vɔ-* (? < \**an-H-*) 'to jump on one leg': 5 Podoko ʔeŋəŋe 'sauter à cloche-pied' [JL].

**Deriv.:** C 7 *\*fVngV* ‘one-legged, lame’: 7 Mafa *f*anga’a ‘d’un seul pied, d’une seul main’ [BaMaf]; Mbuko *f*anga-lan (compound or partial redupl.) ‘man with one leg’ [GNT].

**242. *\*fVng-*** ‘(to throw) a spear’: W 1 Hs *súngà* ‘throw a spear’, *súngaa* ‘wound with a spear’; 2 Gerka long ‘spear’ [Fp].

**Deriv.:** C 9 Mulwi *f*ing-kì ‘jeter, lancer’ [TrMlw].

**243. *\*fVng-*** ‘to hang’: 2 Sura *laj* [JgS], Angas *lang* [Fl], Goemai *laj* [Hff] [Stl 87, TAS ], 4 Warji, Diri *f*ang- ‘to hang’ [SkNB]; (W 7 Fyer *laj* ‘to hang’ < sura gr.).

**Deriv.:** C 9 Mnj *f*ǝŋǝla ‘hangen’ [TrMnj].

**Cf. N 572. W *\*fVnk-*** ‘to hang’.

**244. W *\*fVng/nH-*** ‘to sew’: W 4 Warji *f*ang-, Mburku *f*anh- ‘to sew’ [SkNB]; 5 Tala *f*uj-far ‘to sew’ [Cs].

**245. *\*fVngV*** ‘friend, lover’: W 3 Pero *čàngà* ‘lover’ [FrP]; C 5 Podoko *f*əŋʒa (< *\*fVng-*) ‘friend’ [JL]//Sab *s*<sub>2</sub>nk ‘?associated community// affiliated group’ [ Oh 292].

**246. *\*fV[ng]*** ‘calebash’:- W 2 Angas *dà-lóŋ*, Chip *dà-loŋ* ‘quiver’ [TAS:234]; C 7 Mada *f*əŋ-*f*əŋ (Chadic CVng# > sura, Mada CVŋ#) ‘calebasse sphérique avec 1’ouverture, pour transporter les poussins a champ; round calabash used to carry chicken’ [BaMd].

**Cf. W *\*saŋ-gV*** (if < *\*faŋ-gV*): 3 Krkr *sànǝ̀ǝ̀*, Bolewa *šònǝ̀ǝ̀*, Ngamo *čànǝ̀ǝ̀*, Dera *yáangú* ‘pumpkin’ [SchV].

**247. W *\*[f]Vng-*** ‘hoe, to hoe’: W 2 Sura *luj* ‘hacken (mit kleiner Hacke)’ [JgS], 3 Ngamo *šingr*, *šingo* ‘long- handled planting hoe’ [NEH]; E 6 cf. Mok *séngé* ‘défricher un champ’ [JgMk].

Note 1 Hs sùngu-mii 'long-handled hoe'.

248. W **\*ʃVnk-** 'to shut, to cover': 1 Hs sínkàaḱee 'to cover, shut up'; 5 Guus ʃyang 'shut, close' [CrG] // ? Eg šnʃ.w (MR) 'Hinderung, hiding place' [EG 506].

249. **\*ʃVr-** 'to tear to pieces': W 3 Krkr ʃiraa 'tear' [GK], Tng sjiɾe 'rend, rip, tear (cloth)' [JgT]; C 4 FJ ʃir 'tear' [Kr:380], 5 Glavda ʃil (-l < \*-r#) 'tear, make burst' [Rp]; 6 Daba ʃèr 'déchirer' [Lnhr], E 2 Tum hērē 'déchirer' [CpT]; 4 Mawa serɛŋ 'déchirer' [Rob]; 5 EDng ɕirē 'zerreißen; tear in pieces' [Ebb].

Deriv. in -t/-ḍ- (? -t-, cf. Akk): C 6 Daba ʃərat 'déchirer' [Lnhr]; E 5 WDng ɕérḍé 'déchirer un tissu' [Fd] // Akk šarātu 'tear to pieces' [CAD 931].

Not the same as N 357. **\*ʃVVr-** 'to rip, to tear away' (note different Karekare glosses and *č* (< \*ʃ'-) ~ *ɖy-* (< \*ʃ'-) in EChadic).

249a. **\*ʃVr-** 'to peel (bark, husks)': W 6 Ngz ʃəʃəru 'peel away, strip away a flat thing from surface' [SchN]// Mhr sry 'to skin a cow' [JM 386].

Deriv. : C 10 ZB ʃiréd 'éplucher, peler' [Sa].

Noun deriv.: **\*ʃVrVN** (? pl.) 'bark, husks': W 6 Bade ʃáʃəran [Kr:132] 'bark', Ngz ʃáram 'dry husks on the outside of guinea corn stalks' [SchN].

cf. N 201. **\*ʃVVI-** 'to husk, to peel; husk'.

250. **\*ʃVr-** 'to strip off leaves': C 2 Bura ʃara/i 'strip off leaves' [Ann].

Deriv. in -b- (?): C 4 Gude ʃəɾəbə 'strip leaves off a stalk' [Hs]; E 2 Lele sōrbī 'arracher (feuilles)' [Lnhr].

Deriv. in -ḍ-: Cf. C 5 Podoko ʃəɾəḍá 'take off leaves' [JL].

Cf. N 285. **\*ʃ(y)VrV** 'leaf'.

251. **\*ʃVr-** 'to raise, to climb': W 5 Dott ʃir, Geji ʃil-ti 'raise' [CsN 810], C

7 Mada *ʃʃr* ‘façon de grimper dans un arbre’ [BaMd] // Gz *śaraqa* ‘rise’ > ‘begin, spring’ [LsG 524].

Noun deriv.: E 5 Migama *čŕmó* ‘cime, sommet; summit’ [JgMk]

Ccf. C 7 Zulgo *ʃúwùr* ‘sauter dessus d’un bond, jump over’ [ZIL]

Note C 7 *\*ʃ Vr-* ‘to appear (planet)’: C 7 Mbuko *ʃar* ‘apparaître (soleil)’ [GNT] and Zulgo *ʃála* ‘appear; se montrer tout a coup; appear (suddenly)’ [ZIL]. (-l- in Zulgo is regular enough).

252. *\*ʃ Vr-* ‘to cut (off)’: W 6 Ngz *ʃəʃəru* ‘cut a piece off or cut into pieces’ [SchN]; E 2 Lele *sīr* ‘couper, abattre; cut’ [WP] // Arab *šrḥ* ‘couper, fendre’ > ‘couper un cadavre’ [BK 1212].

Cf. W 5 Tala *ʃawuru* ‘split, divide’ [Cs].

252a. *\*ʃ Vr-* ‘to whittle, to carve’: C 7 Mada *éʃle* ‘élaguer, trim (trees), tailler, carve; ébrancher’ [BaMd], Gisiga *ʃar* ‘hobeln, whittle’ [LkG] // Arab *w/yšr* ‘to saw’ [BK 638].

Deriv.: W 1 Hs *śarḥa* ‘slash with sword, whip’, *śarḥaa* ‘cut down (unripe corn, green wood); E 2 Lele *sorbi* ‘raser, to shave’ [WP].

Deriv.: C 10 ZD *ʃəreḍ* ‘tailler, éplucher avec un instrument, whittle’ [Cpr].

Cf. N 360. W *\*ʃ Vr-* ‘to split (wood)’.

253. *\*ʃ Vr-* ‘to multiply, to be pregnant’: W cf. 3 Pero *čŕi* ‘afterbirth’ [FrP]; C 7 Ould *-ʃər* ‘être enceinte; pregnant’ [Kou]; 10 ZD *ʃir* ‘se multiplier (animal), pondre; to multiply (animals), to lay eggs’ [Sa] // Akk *šerru* ‘child’, Eg *šr(y)* (Pyr) ‘child’ [EG].

For C ZD ‘pondre’ cf. E 2 Kabalai *kə-sərəy*, Nanc *kə-sər* ‘egg’ [KbH].

Note E 5 Bidiya *čérčər* ‘fleurir, poindre (sein); to blossom, to grow (breast)’ [JgB].

254. *\*ʃ Vr-* ‘to send (person)’: W 3 Ngamo *sar-* ‘to send’ [VNg]; Pero *čŕu* ‘send’ [FrP]; 6 Ngz *ʃəru* ‘wean; send person away; take person from home’

[SchN]; C 7 Ould -ʃər 'envoyer, send' [KOu], Mofu ʃər- 'envoyer qqn, charger d'une comission, rendre service; to send (person)', Mada áʃal 'envoyer; to send' [BaMof, Mad]; Muyang ʃər 'send' [SmM], Cuv meβərɛy 'envoyer' [Ndo], Mefele (dial.) me-ʃərə, eβəraka, aβəda 'send' (? voicing in medial position) [CfM] // cf. SCush Irq slaweer 'to leave forever' [MQK].  
 Deriv.: W 3 Bolewa sern- 'schicken (Menschen); send (a person)' [LkB]; sèrnu 'send', sèrni 'message, smth sent' [GAB].

Cf. N234. C **\*ʃ(y)Vn-** 'to send'. Note that mafa languages have no \*-n- > -r- change (like the glavda gr., cf. \*sVnV 'tooth' or \*sVn- 'to know' in [CLR]).  
 For different opinion see R.Gravina [GCl \*ʃən 'send; envoyer'].

255. **\*ʃVr-** 'to sew': W cf. 1 Hs širi 'threading beads'; 4 Cagu ʃir-t- 'sew' [SkNB]; E 1 Kwan sē:ré [CLR]; Mobu se:re, Ngam se:ré 'coudre; to sew' [CTC].

Deriv.: 2 Bura ʃilta (-lt- < \*-rt-) 'to tie or sew a grass roof' [Ann].

256. **\*ʃVr-** 'to shove, to penetrate': E 2 Lele sər 'pénétrer dans' [WP].

The verb attested mostly in deriv.: \*ʃVr-d/t-: C 7 Mafa ʃərɔ- 'coincer, fourrer (dans la paille d'un toit, dans une fourche d'arbre); to poke, to shove' [BaMaf]; 5 Podoko ʃərətə 'get stuck (in the throat, between teeth)' [JL].

Deriv. \*ʃVr-k-: C 7 Mafa ʃərɔ- 'fourrer dans un trou, dans la fente d'un rocher; to poke into a hole, into a cleft in a rock' [BaMaf].

Noun deriv.: C 7 Mafa ʃərɔc 'fente, espace entre deux maisons, arbres; cleft, space between two huts' [BaMf], Mada ʃlek 'fente, crevasse entre rochers; crevice, cleft between rocks' [BaMd], Zulgo ʃəlak 'caverne, crevasse; cave, cleft' [ZIL].

257. **\*ʃVr-** 'to blow nose': C 7 Mofu ʃər- 'se moucher, to blow nose', Mafa ʃər- madama ('morve') 'se moucher' [BaMof, Maf], Muyang ʃel 'blow the nose' [SmM], Ould -ʃəl 'se moucher' [KOu]; E 2 Lele sər 'se

moucher' [WP] //Eg šr.t 'nose' [EG 523].

**257a. \*ʃ/ʒ Vr-** 'to snore': W 5 Zaar ʒər-ndó 'snore' [CrZ], Guus ʒər-geet 'to snore' [Cr:42]; 4 Warji ʃərmə, Diri ʃərma 'to snore', Paa ʒur-guna [NmNB]; C 3 Bana ʒərx(ə) 'ronflement' [GLBn], 4 Gude lərəhə (<\*ʒVrVh-) 'snore, purr' [Hs]; 7 Muyang ʒərway 'snore' (irregular voicing); 10 ZB ʃír 'ronfler' [Sa].

Deriv.: W Hs mín-šáǎí 'snoring', also nín-sǎrii, hán-sǎrii.

**258. \*ʃ VVr-** 'to go down quickly, to fall': W 1 cf. Hs sùr emphasizes rapid vertical descent, e.g. down a wall without the aid of a ladder; 3 Bolewa soor- '(nieder)fallen, hineinfallen; untergehen (Sonne); go down (sun), fall down' [LkB], Krkr sùráa 'herabstürzen (Vogel); go down quickly (bird) (? a Hausa loan) [LkK]; C 2 Bura ʃaru idf. *describes sound of an object striking into leaves* [Ann], 7 Muyang ʃur 'putting', ʃərət idf. 'putting down' [SmM] // Eg šhr 'throw down' (Pyr) [EG].

Deriv. C 7 Mofu -ʃərɓ- 'recolter un objet cassé; se coucher, gather pieces of a broken object, lie down' [BaMof].

Note W 1 Hs sùuraa 'to swoop down on and take; the swoop of a hawk', sùurè 'swoop down on and seize; snatch up and steal'. (If not < \*sVCr-).

**259. \*ʃ VVr-** 'to scrape, to sweep': W 1 Hs šáǎrà 'to sweep a thing on to another thing', šáǎrè 'to sweep', šáǎraa 'to sweep partly', šáǎrar hanya 'cleaning and repairing of roads', cf. [SkH 242]; C 2 Bura ʃara/i 'to clean mush from the spoon with the hand; any similar act', ʃarwa 'to scrape off a little into a container' [Ann]; 7 Mofu -ʃər- 'rɔcler; scrape, scratch' [BaMof]; Gisiga ʃar 'zusammenscharren; to rake up' [LkG]; E 5 Dng čééré 'outil à fine lame de fer recourbée pour évider les calabasses; a tool with curved iron lame for hollowing out calabashes' [Fd] // cf. Maa msla?are 'calabash cleaning stick' [Eh 210], cf. Hbr srt 'tattoo, make incisions, scratch' [BK].

Noun deriv.: W 1 Hs má-šáǎí 'a rake, a kind of broom'

259a. \***Vr-** ‘to comb’ [attested only in deriv., possibly the original semantics was ‘to sweep’]: W 1 Hs sárċè, śárċè ‘to comb out (hair, beard, mane)’; C 10 Masa řirak ‘peigne (cheveux); comb hair’ [CC].

Note E 5 Dng ċerpeè ‘peigner’ [Fd] (if not derived from a word for ‘hair’).

260. \***Vr-** ‘to go’: W 1 Hs šĩrii (v. invar.) ‘to go’.

? Deriv.: **VwVr-** ‘to go across’: C 7 Mofu -řúwr- ‘marcher de travers’ [BaMo], Mbuko řarwad ‘être de travers’ [GNT]; E 5 Bidiya čoor ‘traverser’ [JgB].

Cf. N 579. \***VrV** ‘across’ (prep.).

261. \***Vr-** ‘to tell a lie’: C 7 Gis řar ‘tell a lie’ [LkG] // Gz řeraya ‘to form a conspiracy, to plot’ [LsG 536].

Deriv.: W 1 Hs sáreefaa ‘a lie’, sářfaa ‘to wheedle, to cajole’.

262. \***Vr-(h)-** ‘to swallow’: C 7 Muyang řarəh ‘swallowing whole’ idf. [SmM],

Deriv.: C 9 Mulwi řirří ‘avalér de travers’ [TrMlw]; E 5 Bidiya čirəb ‘avalér de travers’ [JgB].

263. \***VrVb-** ‘to sip’ > redupl. ‘to sob’: W 1 Hs řarřaa ‘take into the mouth with a loud suckling noise *tuwo* which has on it a large amount of *miya* or *miya* alone’, sūrřaa ‘to sip, a sip’, cf. [SKH 238]; C 5 Podoko řarəřa řarəřa ‘sobbing’ idf. [JL]; E 6 Mok sərřířè ‘siroter; drink in little gulps’ [JgMk] // Arab řrb ‘boire, avoir soif’ [BK 1209], Gz řarabâ ‘drink, absorb, sip’ [LsG 533].

264. W \***Vr-** ‘to winnow corn’: W 1 Hs sūrāřē ‘winnow corn’; 6 Ngz řariyú ‘winnow chaff from grain by pouring from one calabash to another, letting wind take chaff’ [SchN]. Any connection with ‘wind’, cf.?

265. W **\*ɸVr-** 'to swell': 1 Hs sàsùr 'emphasizes fullness; swollenness'; 4 Paa ɸur ' (scrotial) elephantiasis' [MS]; 6 Ngz ɸaaɸàrú 'swell up' [SchN].

266. W **\*ɸVVr-** 'to break (off)': 1 Hs sáàrà 'hack off (branch, limb); break off pieces from stick of honey- or shugar-sweet, etc.'; 6 Ngz ɸèɸòrú 'break a piece off' [SchN]. Cf. 575. **\*ɸVr-** 'to break pot'.  
Note possible deriv.: E 2 Tum sàrəb 'break pot' [CLR].

267. W **\*ɸVrk-** 'to interwine': W 1 Hs sárkà, sálkà 'interwine; interlace chain; creeping grass'.  
Deriv.: 6 Ngz ɸərgìdú 'interlace tightly' [SchN].

268. W 5 **\*wVɸVr-** 'to fry': 5 Zaar wuɸir [CLR], wuɸár [CrZ], Saya wùɸár [Cs], Grnt wàsàrì [Jag], Dwot wúɸer, Buli wuɸəɾən [Cs N873]// Eg ɸšr (Pyr) 'roast' [EG].

269. W 4 **\*ɸɸVwVr-** 'be angry': Miya ɸuwar, Kariya ɸiwər 'angry, be' [SkNB]// Hbr sʀh (Arab šry) 'grow angry' [KB 930].

270. **\*ɸVrV** 'green': W 1 Hs šár 'emphasizes greenness', cf. [SkH 241]; 3 Krkr ɸirit idf. 'green' (< Ngizim) [GK]; 6 Ngz ɸórət idf. 'green in colour; not ripe, not fully cooked' [SchN], Bade ɸorta 'green' [Kr:275], C 5 Malgwa ɸərəkə 'green' [Lr], 8 Gulfey thrégé 'green' [Lk:147], Makari širgì 'be green' [AlM]// Cf. Tigre saɸarsaɸaro 'green', sàɸar 'grass, hay'.

271. **\*ɸVrV** 'spider': C 6 Daba ɸər-bən 'araignée; spider'; E 5 Ubi ćúlma (if -lm- < \*-rm-) 'araignée' [Alio], Migama čòró-kumɪ, ćùruuya [JgM], Dng čér-kímɛmɛ 'araignée' [Fd]// Gz sàret 'spider' [LsG 536].

272. **\*ɸVrV** 'rope': W 5 Dott, Pol ɸér, Saya ɸórəŋ 'rope' [CsN 162], Buli ɸir [Kr:238] 'rope', Dott ɸər [CrD]; Zaar ɸórəŋ 'rope' [CrZ]; C Cuvok

ma-*ḥ*ar 'fronde' [Ndo], 7 Ould *ḥ*arāw idf. 'He tied a bull with a rope' [KOu], E 6 Mokilko *ṣ*ēr 'ceinture' (probably < Arab) [JgMkk], 5 WDng *ḥ*ērē 'band, rang, fil, lanier' [Fd] // Arab *ṣ*rḥ 'to untie a rope', *ṣ*irāḥ-un- 'corde de l'arc' [BK 1217].

Deriv. **\**ḥ*VrVpV 'girdle, strap'**: W 3 Bolewa *ṣ*oroopā, *ṣ*uroopā 'cinch strap of a saddle' [GAB]; C 7 Mada *ḥ*arḥā 'ceinture de cuir, courroie; leather belt' [BaMd].

Deriv. **\**ḥ*VrVb-**: W 1 Hs *ṣ*arḥē 'lasso, catch with lasso', (Kats) 'commit suicide by hanging'; C 5 Podoko *ḥ*arəba 'ceinture; belt' [JL], Mafa *ḥ*arəba 'ceinture faite avec des racines tressées à huit brins' (less probably derived from 'root', cf.) [BaMaf] // Cf. Hbr *ṣ*e/ərok- 'sandal thong' [KB 930].

Cf. N 602. **\**ḥ*VrV 'rope', 'to make a knot'**.

273. **\**ḥ*Vr-** 'unnoticed': W 1 Hs *ṣ*ūrāāree 'to slip away quietly (e.g. person from meeting)', *ṣ*ūrūrū (*ya fīta s.* 'He went out without any one seeing him going out'); E 5 Bidiya *ḥ*oḥor 'inaperçu; unnoticed' (passe in.) [JgB].

Deriv.: C 7 Muyang *ḥ*əraḥ 'hiding' [SmM].

274. **\**ḥ*VrV 'straw'**: C 3 Bana *ḥ*irə 'kind of straw for mats' [GlBn] // Mehri *ṣ*ēr 'straw' [JM], Jibbali *ṣ*āḥər 'dry grass, straw' [JJ 244].

Deriv.: C 7 Mafa *ḥ*arac 'chaume; a single straw; partie de tige de mil qui reste sur pied après moisson; part of a mil-stalk left after harvesting' [BaMaf].

275. **\**ḥ*VrV 'black > blue'**: C 2 Bura *ḥ*iritu 'very (modifies 'black')' [Ann]; 5 Wnd *ḥ*urke 'blue' [Kr:277]; Podoko *ḥ*ərəkā 'black' [JL]; E 2 Kera *ki-ṣ*ir-*k*ī 'black' [Eb].

275. **\**ḥ*VrV 'be clever'**: W 3 Kirfi *ba ṣ*ira 'clever' (ba - Nomen Agentis, m.) [Stl]; C 4 Gude *ḥ*arəwā (if not < **\**ḥ*a-rəwā**) 'one accomplished in a skill' [Hs]; E 5 Bidiya *ḥ*ir, pl. *ḥ*iraw 'dépasser, exceller' [JgB], Bidiya *ḥ*ərloolō 'savoir, connaissance' [JgB]; Ubi *ḥ*iri 'cervelle' [Alio]. A French loan? //Hbr

ṣ́r 'know' [KB 927], Arab ṣ̌r [BK 1236], Sab s<sub>2</sub>r 'be aware, to know' [Oh 269].

277. C 7 \**VrVmV* 'flute': Mofu *ʃ*əlam 'flûte a quatre trous' [BaMof]; Mbuko *ʃ*ólém 'pipe, flute' [GNT], Muyang *ʃ*elim 'flute' [SmM], Zulgo *ʃ*ílím [ZIL], Cuvok *ʃ*ərēm 'flute' [Ndo], Merey *ʃ*elem 'siffle' [GMr]. Secondary lateral? Cf. C 6 Daba ṣeṛeṛe 'flûte' [Lnh]; E Mok ṣiṛaṛo 'flûte' [JgMk], Dng ṣuṛaṛe 'petite flute en bambou' [Fd], all < \*sVrVr-.

278. \**VʃVrV* '(cold) wind': W 1 Hs ṣaṛaṛa 'cold wind of the harmattan season'; C 7 Mafa *ʃ*áʃar- 'faire larmoyer (vent); to cause tears (wind)' [BaMaf]// Hbr ṣaʃar, ṣəʃarā 'storm', ṣaru 'wind' [KB].

279. \**VʃVrV* > \**VʃVrV* > \**VʃVrV* 'bone': W 5 Zaar of Kai (Sigidi gr.) *ʃ*eṛa 'bone' [Sm], Guus *ʃ*yera 'bone' [Cr], *ʃ*era [CrG]; C 7 Cuvok *ʃ*àʃar 'bone' [Ndo], Mefele *ʃ*aʃar (all dial.) [CfM].

Deriv. : C 7 Mada ṃa-*ʃ*àʃar 'mollet (de la jambe), calf (of a leg)' [BaMd]. Note the following compounds:

\**VrV-fito* 'bone-hand' > 'nail': W [\*sar-fito] > 3 Ngamo ṣ̌aptiṛo G 'fingernail' [NEH];

\**VrV-ba* 'bone-hand' > 'nail, claw': C 5 Malgwa *ʃ*əṛba 'finger, feet nail' [Lr], Wnd sirba 'finger nail' [Meek], Wnd *ʃ*irba 'ongle' [Mo], *ʃ*erba, pl. *ʃ*erba-ha [Lk:119].

Note *ʃ* / *ʃ* variants in W 5 and in Mada.

280. \**VVrV* 'medicine, poison': W 3 Krkr sóoṛum [LkK], Dera ẉoṛín 'medicine, poison' [NmK], Kirfi ṣ̌ara-ḍi 'medicine' [Stl]; C 6 Kola ṃa-*ʃ*ry 'medicine' (voicing in a cluster) [CLR], 7 Gisiga *ʃ*alak 'medicine' [CLR], Mofu *ʃ*alàk 'médicament' [BaMof]; 10 ZB *ʃ*ór [Sa], ZD *ʃ*or 'venin, poison' [Cpr]; E 2 Lele ḳā-ṣiṛe [CLR]; 3 Smr ṣ̌arẉā [CLR], sỵarẉa [JgSib], Tum ḥaṛaw [Cp]; 7 Mubi č̣ooṛur, 5 Migama č̣a:ru [CLR] 'medicine'// CLR

\**ʔ*<sub>2</sub>r- ‘medicine (charm)’ I 117A, Gz *śaraya*, *śarraya* ‘to cure, give medicine’ [LsG 536], cf. also: Arab *šry* ‘protector’, Sab *s<sub>2</sub>ry* ‘save, protect’ [Oh 305].

281. \**VVrV* ‘(to grow) tall, high (of a tree)’: W 3 Tng *soori* ‘height, depth, length, high, tall (tree)’ [JgT]; 5 Grnt *səri* ‘high, tall’ [Sm]; C 4 Gude *ʔəra* ‘grow tall and straight (of trees only)’ [Hs] // SCush *Maa sleru* ‘grow up’ [Eh], Gz *śarara* ‘high, tall’ [LsG 534].

282. \**Vw/yVrV* ‘loin-cloth’: W 5 Mng *ʔoorà* ‘loin-cloth’ [Cs], 7 DB *ma-šîir* ‘weiches Schamutuch der Frauen (aus Fieber); fine women loin-cloth’ [JgR]// Gz *śirāy* ‘fine cloth, garment’ [LsGz 536].

Compound? E 1 Kera *ke-ser-đəj* ‘Lendenschurz für Frauen; women loin-cloth’ [Eb].

Deriv. \**VrVh/t* ‘to wind around (cloth)’: C 2 Bura *ʔurha* ‘to tie a thing by wrapping around many times’, *ʔurta* ‘to wind around’ [Ann].

283. \**ʔ/sVr-* ‘to be, become healthy’: W 1 Hs *šēēraa* ‘good appearance’; E 1 Kera *śééré* ‘Gesund werden; become healthy’ [Eb] // Arab *šwr* ‘be healthy, fat (animals)’ [BK 1284].

284. \**ʔ/VrV* ‘thin’: W 1 Hs *šîiriirîi* ‘thin’, cf. [SkH 233]; 2 Angas *liir* ‘a very thin membrane (of an egg)’ [Fl]; E 5 Ubi *čîrà* ‘grêle’ thin’ (if not ‘hail’) [Alio]. Any relation to N 285. \**ʔ(y)VrV* ‘leaf’?

285. \**ʔ(y)VrV* ‘leaf’: W 3 Krkr *ʔaram* ‘leaves of guinea corn (fresh/dry)’ (? pl. in *-m*) [GK]; 4 Diri *aʔirka* ‘leaf, leaf of cornplant’ [SkNB]; C 2 Wamdiu *xyeli*, Kilba *hyéli*, Margi *iʔali*, Cibak *ʔali*, WM *ʔali*, *ʔari*, Ngwahi *ʔara* ‘leaf’ [Kr:131], Bura *ʔali* ‘a leaf’ [Ann]; E 5 Bidiya *čèwééra* ‘feuille d’arbre sèche, feuille de papier’ [JgB].

Note *ʔy-* > *xy-* in the bura group.

Cf. N 269. \**VrV* ‘green’.

286. *\*ɸ(y)VrV* ‘long’: W 3 Maha soro ‘long’ [NmM]; 5 Zul *ɸaali*, Polci cluster *ɸari*, *ɸaari*, *ɸar*, *ɸaarɔp* [Sm]; Buli *ɸaari*, Geji *ɸaali* ‘long’ [Cs N 508]; C 4 Gude *ɸyár* ‘long and thin (such as a rope)’ [Hs]; 5a Hide *nda ɸra* ‘long’, *ɸraku* ‘longueur’ [Eg]; E3 Smr *sērē* ‘long’ [Jg], *syar* [JSib], Ndam *swár* ‘long’ [Jg]; 6 Mok *soʔurú* ‘long’ [JgMk].

287. *\*ɸVHVrV ~ ɸVrVHV* ‘root’: W 1 Hs *saiwá* (-Hr- > -y-), cf. [SkH 225]; 2 Gerka *thuar* [CLR], Mush *seer* (< *\*ɸHVr*) ‘root’ [TAS 319]; 3 Ngamo *čoori*, Kirfi *sóoriyó*, GIm *sùryà*, Gera *sùurəná* [SchV], Geruma *sūra* [ShB], Bolewa *sori-n*, Krkr *sírín* [CLR 276], Tng *yaara* [JgT], Maha *sorom* [NmM], Pero *čorin* [FrP]; 4 Paa *ɸári* [MS], Miya *ɸerwa*, Siri *ɸūra*, Mburku *ɸar-nani*, Jmb *ɸera* [SkNb]; 5 Guus *ɸur-tó* [CrG]; Dott *ɸérkəŋ* ‘root’ [CrD] (cf. ‘rope’), Saya *ɸətər*, Mangas *ɸəri* [Cs], Zaar *ɸətər*, var. *ɸerti* (< *\*ɸVr-t*) ‘root’ [CrZ], Geji *ɸel-ki* [CLR: 276], Tala *ɸer ki*: [CLR], Buli *ɸir* [CLR], Kir *ɸeri* [CLR], Grnt *so:ri* [Ja]; 7 DB *súre* [JgR]; C 4 Gude *ɸər-gin* [CLR], Jimijimən *ɸer-gín*, Tsuvan *ɸere*, Sharwa *ɸerégé* [Br]; 5 Malgwa *ɸáɸawe* [Lr], Guduf *ɸila* [CLR], Glavda *ɸali* [Rp], Dghw *ɸólə* [CLR: 277], 5a Hide *ɸrəŋ* [Eg], *ɸərəŋ* [BrH]; 6 Buwal *ɸaɸalay* [GCl]; 7 Mbuko *ɸóláy* [GNT], Muyang *ɸiri* [SmM], Mada *ɸre* [BaMd], Gisiga *ɸaɸalak*, Mofu *ɸaɸalay* [BMof], Guvok *ɸaɸalay* [Ndo], 7a Sukun *ɸli*, 10 ZB *ɸór* [Sa]; E 1 Kera *kó-sár* ‘root, vein’ [Eb], Kwan *kà-sár* ‘root’ [MobuJ]; 2 Kabalai *harà saar* [Cp], sari, Nach *da-sari* ‘root’ [HKb], Lele *sārā* ‘root, vein’ [WP], 3 Smr *sarbə* ‘root’ [CLR], Tum *hərāw* ‘root, vein’ [Cpr], 4 Saba *sərəu* [DMT]; 5 Bidiya *čaara* [JgB], Dng *čaarɪ* [Fd], 7 Brg *čaaró* [JgBr], Mubi *čaaró* ‘root’ [CLR], Toram *šaari* [Alio] ‘root, vein’// CLR\**ɸ<sub>2</sub>rw* ‘root’ [I 140 A]; Sem *\*sVrVs-* (but Hbr *šōrās*, Gz *šərəw*, Arab *širš-* ‘root’). Cf. also Soq *šeraḥ* (pl.) ‘racine’, *šerḥ* ‘deraciner’ [LS 433]. Biu-Mandara GCl *\*ɸəxəray* ‘root’.

According to CLR, in a few of EChadic languages we can distinguish

between reflexes of semantically and phonetically similar HS words - *\*V(HV)rV* 'root' and *\*Vrw/?-* 'vein', for the latter see: 1 Kwan ká-sār 'vein' [MobuJ], 2 Kabalai saarra 'vein' [Cp], 3 Smr šáwré 'vein' [CLR]// Akk šerʔānu (širʔānu) 'sinew, tendon, muscle' OA, OB on [CAD š2 308], [AHw 1216], Gz s̄orw, s̄ur, s̄or 'sinew, tendon, nerve, muscle' [LGz 535] etc. cf. [MK]. Note that in other ECh languages reflexes of HS words for 'root' and 'vein' merged.

288. *\*VHVrV* 'friend': W 1 Hausa ɕááráá (< *\*VHara*) 'equal in age, position or wealth', 2 Sura šaar, Angas šeer, Mupun siar [šaar] [FrM], Montol čai-na (< *\*čar-na*) [Fp], Gmy šar, Kfy šaar, Mushere šyar [St 1977, 1988, 1996; TAS 343] 'friend', 3 Dera šéerò, pl. šéeriyáŋ 'friend', Tng seero 'friend, companion' [JgT], Kirfi šoro [Stl], Glm čòr- [SchB]; C 5 Malgwa ʔóriya 'Nachbar, Nachbarn' [LrD]; (?) Podoko me-ʔira/ə 'cousine ou tante maternelle' [JL]; 7 Glavda ʔəyarā 'friend, neighbour' [Rp]//Arab ʔašir-, šašir- 'friend' [BK].

A long vowel in most of Chadic languages points to contraction after the loss of the laryngal: *\*VHVr-* > *\*VVr-* > *sVVr-*.

289. *\*VrV* / *\*HVrV* 'star': W 5 Boot ʔaar, Tule ʔaaʔúr, also Zakshi čaaʔur, Buu tyaaʔer (both < *\*ta-ʔyVr-*, ta- fem. pref. ?) 'star' [Sm], Guus ʔyaàr 'star' [CrG], 9 Mbara mi-β̄er 'star' [TrMba] // Arab šahr- 'new moon' [BK].

Cf. C *\*hwur-* (if met. < *\*VHVr-*) 'star' : 4 FJ xùraʔu-mùk [Kr], FM xùraʔiya [Kr] 'star'; 7 Mofu wurβ̄a [BaMof], Gisiga wurβ̄a [Luk],

290. W 2 *\*saar* (possibly < *\*HVrV*) 'ten': 2 Mupun saar [FrM], Angas sār [Fl], Gerka tóra [JgC] (t- < *\*s-* is regular), Goem saar [JgA], šar [HfA], Chip sār [JgC], Montol sai [JgC], [Stl *\*sar*, Dlg *\*šar*, GT *\*šār* in: TAS 334]. Most probably Chadic is related to Arab ʔāšir- 'ten' [BK] and Eg ʔš̄ (< *\*ʔš̄r*) [ME] 'many; multitude; crowd' [EG].

If the original semantics was 'many' (as in Egyptian) it is worth mentioning

CChadic **\*ʃVrV** ‘six’: Mnj ʃ́ára ‘six’, Gidar ʃirre, širi [Mo], Musgu ʃ́ára, ʃ́ára, saára ‘six’ [LkM]. Both, W and CChadic may be derived from Chadic **\*HVʃVr- / \*ʃVHVr-**.

291. W **\*ʃVrV** ‘cold’ n., adj.: W 1 Hs súrè ‘to cool down’, 3 Tng yuryur ‘bitterly cold’ [jgT], 4 Siri ʃ́aaʃar-ní ‘cold’ [Sk-CLR], 5 Dott ʃaar ‘to shiver’ [CrD], 7 Sha šyah ‘Hagel’ (if < \*syar-) [JgR].  
 Deriv. W 1 Hs súraačee ‘to cool down’, súrka ‘add cold water to hot’.  
 ?Compound: W3 Krkr sirkaači ‘ice, hail, snow’ [GK].

292. (?) C **\*ʃVrV** ‘kind of fish’: 9 Mbara ʃ́urúm fish *Hydrocyon* (*Characidae*), ʃ́irday fish *Alestes dentex et baremose* (*Characidae*) [TrMba]; 10 ZD ʃ́èrè fish *Hemichromus fasciatus* [Cpr].

293. **\*ʃVr-** ‘be sleek, slippery, to slide’: W 2 Angas loor ‘a slug’ [Fl]; C 4 Gude ʃ́əraʔi ‘be sleek and slippery; slip on a slick spot’ [Hs]; 7 Mofu ʃ́ə- ‘glisser; to slide’ [BaMof]; Muyang ʃ́aray ‘slip, slide’ [SmM], Cuvok mé-ʃ́ərey ‘glisser, to slide’ [Ndo].

Deriv. in -t/-d-: W 1 Hs sardoo ‘sliding down a rock’; C 3 FK mə-ʃ́iraðə (voicing in medial position) ‘slippery’ [BIND]; 6 Daba ʃ́ərat ‘glisser; to slide’ [Lnhr], .

Deriv.: **\*ʃVr-n-** ‘to slide’: W 3 Bolewa s̄irnu ‘slide, slip’ [GAB], compound.: C 7 Mbuko ʃ́érn-dàláv ‘glisser à terre’ [GNT].

Cf. N 589. **\*ʃVr-** ‘to slide (out)’ (note that both roots are attested in Hausa).

294. C **\*ʃVr-** ‘smooth’: 6 Daba ʃ́ərwən ‘lisse; smooth’ [Lnhr], 7 Muyang ʃ́əway ‘smooth, level’ [SmM].

Deriv.: **\*ʃVrɸV** ‘to smooth (a plastering)’: 7 Mafa ʃ́urbɸ- ‘lisser (mur, sol); to smooth out’ [BaMaf], 9 Mnj ʃ́irɸi (ə) ‘lisser (un crépi), aplanir; make level (a plastering)’ [TrMnj].

Note C 5 Malgwa ʃərba 'Lehm, caolin' [Lr]

295. (?) \*ʃVrVm- 'kind of tree' : W 7 Mafa ʃarəma 'Balanites aegyptiaca' [SkNB]; 6 Daba ʃarmə 'soap-tree' [Lnhr].

**\*ɸ'**

297. **\*ɸ'Vy/w-** 'to wring, to squeeze out': W 4 Paa ɸ'ei 'wring' [MS], Siri ɸ'eya, Miya ɸiy- [SkNB]; E 1 Ngam sow 'squeeze out pus' [Lns]; 5 Bidiya ɸyaaw, Migama ɸyúwáw 'to milk' [JgB, JgM].  
Note possible verbal deriv.: W 1 Hs taa-ɸaa 'to milk'.

298. **\*ɸ'Vw-** 'to split': W 2 Central Margi ɸ<sup>wa</sup> 'to cut in two'; E 3 Smr sàw 'cut' [CLR]; 7 Tor ɸyèw 'fendre' [Alio].  
Cf. W 1 Hs ɸaaɸaa (in: *an caaca shi da wuɸa* 'he has been slashed with a knife').

299. **\*ɸ'VV/w-** 'to offend, to slander': W 1 Hs ɸàwaaɸawaa 'a serious offence'; C 6 Daba ɸàɸaw (partial redupl.) 'imiter, calomnier; calumniate, slander' [Lnh]; E 5 cf. Bidiya ɸyaa 'to hate' [JgB]// SCush Dah tlaɸ:- 'slander' [EE].  
Cf. redupl.: W 1 Hs ɸíyáaɸiyàa 'mutual recrimination'.

300. **\*ɸ'VV(ɸ'VV)** 'to suck': W 5 'to suck': Guus ɸuu [CrG], Dott ɸoo [CrD], Saya ɸúù, Dott ɸu, ɸoo [Cs N753], Zaar ɸuu [CrZ]; E 7 Kaj ɸyuuɸyù 'sucer'

[Alio], Zir -dyuḍya, Mubi ḍyuḍyi 'sucer' [CJ].

Note that in this very case (in the view of semantics) a mere coincidence (not regular correspondence) can not be excluded.

**301. \*ʃ'VV 'to push (in a crowd)'**: C 5 Glavda ʃ- 'to push, press, row' [Rp] (contamination with \*ʃ'V(w)- 'to be limited in space'), 5a Lmn ʃu 'push' [HmG]// SCush Irq tliwii 'push' [MQK].

Deriv.: W 1 Hs taa-ḍuucuu 'the crowding together and pushing of a number of people'.

Note that Lamang and Glavda reflect Ch \*ʃ and Ch \*ʃ' as ʃ. Hausa and a SCush parallel point to initial \*ʃ'.

**301a. C \*ʃ'V(w)- 'to get crowded'**: C 5 Glavda ʃ- 'to throng (about), толпиться' [Rp], 8 Makari ɕewɕew (<\*ʃ'ewʃ'ew) 'limited in space' [AIM]// SCush Irq tlaahh 'get crowded' [MQK].

**302. \*ʃV(? \*ʃ'V) 'Nomen Agentis'**: Mouchet: "Nom d'Agent in Mandara ei et ee" [Mo:9]: 5 Podoko ʃə-didi, Wnd ea-katu (if <\*ea-katu) 'ami' [Mo], Wnd ei-kse, Podoko eu-wandala (?) 'chef (de village)' [Mo 51].

This marker is attested in Malgwa: ʃó- 'Nomen Agentis; Besitzer, jemand' [Lr]. The same origin have: Podoko ʃa-ə 'personne; person' [JL], Ould àʃà 'personne', pl. ʃàl 'gens' [KOu].

What follows, in our opinion, have the same marker as the first syllable, namely:

Malgwa ʃó-mtsá 'corpse' < mtsa 'to die', ʃá-káte 'friend', etc. [Lr].

Podoko ʃə-ḍabá 'suisant, compagnon, escorte' < ḍaba 'follow, accompany' [JL].

Ngz ʃə-mtú 'deceased, the late X' < \*mtu 'to die' [SchN].

Wnd ʃé-fáge-hè 'Töpfer', ʃé-ksá-kèlfè 'fisherman' [Lk:120], (ʃ < ʃ before a front vowel)

Gude ʃándá 'master' (old word, only 'master of the house; Lord') < ʃa + əndə [Hs].

Wnd *ʃ*a-kati 'friend' [Meek], *ʃ*i-kse [Meek] 'chief' (? ékse 'Stand' [Lk:120]), Glavda *ʃ*ə̀-ksa [Rp] 'chief'.

Gaʔanda *ʃ*i-kulàta 'native doctor' [Kr:94].

Gidar *ʃ*áy-būna 'cloud', būna 'rain' [Mo].

It is likely that the same marker (in postposition) can be found in Nbauchi languages (West branch), namely: Diri *gur-ʃ*'a 'knee' (gur 'leg') and Mburku *mur-ʃ*'a, Jmb *amir--ʃ*'u 'ring' (mur 'iron'). In postposition the marker under discussion rather means 'person' ('knee (of a) person' (not of an animal), 'iron (of a) person' > 'ring').

Of special interest is Mushere *sa*-likim 'somebody who has calmed down in a terrible situation' [TAS 230]. Note that Chadic *\*ʃ*'- > sura gr. *s-*, *š-*.

**303. *\*ʃ*'VV '(cooked) grain food':** W 1 Hs *ç*áawáa 'the food *farsa* (made of flour)'; C 8 Log *k̃*'aa [=ʃ'aa] 'Speise, food' [LkL], Affade *t*lâ 'Küchen, cake' [Sol:286], E 1 Kera *s*ò 'gekochte Hirse, Nahrung; cooked corn; food', *w*éde *s*ò 'Hirse zubereiten' [Eb].

**304. *\*ʃ*'VwV 'red':** Masa *e*áw 'red' [Mo], *ʃ*āw 'rouge' [CC], Bnn *ʃ*awi, Mesme *ʃ*eo 'red' [Kr:274], ZD *ʃ*īēw 'rouge' [Cpr].  
Redupl. W 1 Hs *ç*áaça 'rust'.

**305. W *\*ʃ*'VV 'worm, caterpillar':** 1 Hs *ç*áaço 'earwig', cf. [SkH 276]; 4 Miya *aʃ*'i-pepir, Kariya *ʃ*'i-firfira 'butterfly', Mburku *ʃ*'i 'worm' [SkNB]. Note W 2 Sura *nd*ù-šuu 'Raupe, caterpillar' [JgS], Mupun *nd*ò-šú 'caterpillar' [Fr]. Presumably, *ndu* is a pl. marker, the same one regularly marks pl. in Kirfi (West Chadic, bolewa gr.), for example: *ž*áwá 'stick' ~ *nd*ù *ž*áwá 'sticks'.

**306. *\*ʃ*'JVb- > *\*ʃ*'Vb- 'to glue, to attach':** C 4 Gude *ʃ*áb 'being close against smth larger (lizard on the wall)' [Hs]; 8 Log (Kotoko) *ʃ*óḃá 'collar, to stick, to glue' [index:242]; 10 ZB *ʃ*óḃá [Sa], ZD *ʃ*óḃà 'collar' v. [Cpr]; E 6

Mok síbè (ʔiìbè) 'se collar, attacher tres fort; to glue, to tie (to, together), to attach' [JgMk]// Arab ḍbʔ 's'attacher, se collar', ḍbb 'être attaché, collé' [BK].

307. \*ʔVVb- 'to pluck, to gather (fruit)': C 7 Zulgo ʔəv 'cueillir tout; to pluck all' [ZIL]; E 5 Bidiya ḍyeeb 'cueillir des fruits de brousse; to pluck fruit' [JgB].

308. \*ʔVb- 'to whip, to beat with force': W 3 Krkr ʔaabaa 'hit, strike, bang into' [GK]; 4 Paa ʔ'abu-du 'whip' [MS], 7 Kul sob 'peitschen, to whip; to flog', ašišib 'whip' [JgR]; C 4 Gude ʔəbə 'beat with force; place hand in hole or in water' [Hs].

309. \*ʔJVbV > \*ʔVbV 'dew': C 1 Tera ʔə̀̀bi [NmT], Hwona ʔiʔibura, Gabin či-ʔip-ta 'dew' [Kr:108]; 4 FJ mà-ʔà̀bi, FM mà-ʔə̀̀bi, Bcm kù-là̀̀be, Gudu méngi-ʔaabü 'dew' [Kr], Gude mán-ʔábá [Hs], Jimjimən mán-ʔá̀̀bin, Cuvan kú-ʔì̀bin, Sharwa ʔiʔbē-tē 'dew' [Bry]// ?? Arab ḍbb 'être couvrir de moiteur; be covered with perspiration' [BK].

310. \*ʔJVbV 'abundance': W 1 Hs ɕábábáa emph. 'abundance, expensiveness'; Tng saabrək 'abundance of things' idf. [JgT]; E 1 Kera sə̀̀baʔi 'ganz; the whole of' [Eb].

310a. \*ʔVVb- 'to pile up': E 5 EDng ḍyúúbé 'anhäufen, to accumulate, pile up' [Ebb]// Arab ḍbb 'être nombreux; be numerous' [BK 33].

311. \*ʔV(m)bVH- 'be thin, narrow': W 1 Hs ɕáábáagè 'long thin sticks of firewood', ɕábga 'any long, slender stick used in making the purlins of a roof frame'; C 8 Log ʔ'imbahe 'be narrow' [ALL].

312. \*ʔVF- 'to talk': W 1 Hs ɕátɕáfáa (< \*ɕafɕafa) 'chatter'; 2 Mupun šáp 'talk; play' [FrM]; 3 Pero ɕóppò 'announce' [FrP], Tng sə̀̀pe 'tell, talk, speak'

[JgT]; C 7 Cuvok mɛ-ʔfɛy ‘annoncer’ [Ndo], Mafa ʔəf- ‘parler en bien de qqn en son absence (se qui provoque la hoquet)’ [BaMaf]; 8 Log ʔav-an (-v- < \*-f-) ‘speak at a distance’ [AIL].

313. **W 4 \*ʔ’VF-** ‘to shoot’: Paa ʔ’ífaà ‘to shoot’ [MS], Siri ʔ’əfu, Jimbin ʔ’uw- [SkNB]// Arab wɖf ‘to hurl stones by a sling’ [Bk 1558], Geez wɖf ‘hurl by a sling’, Akk (w)aʃpu ‘sling’ [LsG 606].

314. **\*ʔ’VfV > \*ʔ’VfVrV** (pl.?) ‘dung, dirt’: W 3 Tng supo ‘dung’ [JgT]; C 8 Affade, Maltam ʔ’əfàrày, Kuseri nʃàvərəy, Makari ɕàfàrày ‘ordures, ordure’ [TrC]// Sem \*ɖpʕ ‘dung’ [KB 1048], [LGz 148], SCush Alg tlufa ‘mud’ [Eh 328], Mhr zʃɛ ‘to step in wet cow dung’ [JM 473]. For Sem - SCush see [Dolg N 87].

316. **\*ʔ’Vp** ‘all, completely; to gather’: W 1 Hs ɕáf ‘in full’; 2 Goem šip ‘entirely’ [TAS 348]; C 1 Boga ʔuf ‘all’ [Kr:284]; 7 Mofu -ʔəp- ‘rassembler, se mettre avec qqn’ [BaMof]; 10 ZB ʔíp ‘complètement; in full’ [Sa], ZD ʔip ‘plein, complètement’ [Cpr]// Arab ɖff ‘rassembler; foule’ [BK 27], SCush Irq tlaf ‘to abound’ [MQK].

Note possible deriv.: E 6 Mok ɖyoppót adj. ‘au complet, intact; completely’ [JgMk].

317. **\*ʔ’Vp(p)-** ‘to sew’: C 5 Cinene ʔapa-nʔapa ‘to sew’ [Kr:420]; E 6 Mok ɖyéppè ‘coudre’ [JgMk].

Noun deriv.: C 5 Glavda na-ʔapa ‘braided work’ [Rp].

319. **\*ʔ’VVp-** ‘to be silent, quiet, to lurk’: W 2 Mushere sip-sip ‘motionless, quietly’ [TAS:321]; Paa ʔ’aapàà ‘to hide, lurk’; E 5 Bid ɖyaap [JgB], Migama ɖyáapó ‘se taire; be silent’, ɖyáapên-tà ‘calme’ [JgM].

320. **\*ʔ’VpV** ‘husk, bark’: W 3 Bolewa n-ʔep-ku ‘bark’ [KI], Tng sibo-k

‘chaff’ [JgT]; C 7 Mofu *ʔáʔápay* ‘écorce’ [BaMof], Gisiga *ʔaʔapay* ‘bark’ [CLR].

**320a. \*ʔ’VpVrV ‘husk, bark’** (an old pl.?, cf. \*ʔ’VfV > \*ʔ’VfVrV ‘dung, dirt’): W 4 Warji *ʔ’áparaí* ‘bark’ [Sk]; C 7 Mafa *ʔeper* ‘glume de mil avant mûrissement; seed-cover’ [BaMaf].

Note C 3 FK *ʔapal* ‘husk’ (? \*ʔ’- > ʔ-).

**320b. C \*ʔ’Vp-** (< \*ʔ’Vp-) ‘to remove shell’: 4 Gude *ʔəpə* ‘remove shell (from ground-nut, bean, etc.)’ [Hs]; 6 Daba *ʔāp* ‘décortiquer; to bark, husk’ [Lnh].

**321. \*ʔ’VpV ‘stranger, friend’:** W 2 Gerka *me-dap* (< \*me-tap, t- < \*s- is regular), Montol *me-zep* ‘stranger’ [Fp], Angas *mu-sap* ‘stranger’ [Or], maan-zap ‘bride’ [Fl], Sura *mi-zəp* ‘stranger, guest’ [JgS], Mupun *mə-zəp* ‘visitor, guest, stranger’ [FrM]; 3 Krkr *ʔapa* ‘friend’ [Kl], Pero *mi-ʔiva* ‘guest’ [Kr]; C 2 Margi *mə-ʔəpí* ‘guest, foreigner’ [HfM:58], Cibak *mì-ʔìbì*, Margi *mì-ʔìpì*, Hildi, Wamdiu *mì-ʔìpì* ‘guest’ [Kr:96], 5 Podoko *ʔəvā* ‘fiancé(e)’ [JL], 7 Ould *áʔəvā* ‘ami’ [KOu], Mada *ʔba* (voicing in contact) ‘camarade, copain (de même âge)’ [BaMd] // Arab *ḏyf* ‘be a guest’, *ḏayf* ‘guest’ [BK].

C 5a Hide *ʔəvda* ‘neighbour’ [BrH] rather < \*ʔə-vda, cf. \*ʔ’V (? < \*ʔ’V) ‘Nomen Agentis’.

In the sura gr. the first componet originates from \*mVs ‘male, husband’ or from \*man ‘woman’ Cf. Angas *mus* ‘male’ + *sap* > *musap*, Sura *miš-sVp* > *mizəp* ‘stranger’, Angas *maan-zap* ‘bride’, etc. Voicing in medial position is regular ( Ch -\*ʔ’- > sura gr. \*-s- > -z-). [\*mis-sap Stolbova 1987, \*mizəp TAS 249]. For Chadic \*mVs ‘man, husband’ cf. Stolbova 1996 and CLR.

**322. \*ʔ’VpV ‘upper arm’:** W 1 Hs *çufaakayaa* ‘elbow’ (a compound?); C 5 Mnd *áxépéxépe* [Lk:119], Cinene *ʔapa* ‘shoulder’ [Kr:52].

Cf. C 7a Sukun *ʔəf* [ʔuf] ‘armpit’ [DS].

323. **\*ɸ'VH-** 'to laugh': W 4 Siri ɣàɸ'í 'laugh' n. (metath. ?) [SkNB]; C 8 Affade ɸ'à, Maltam ɸ'àhà, Log ɸ'áhó, Kuseri ɣáw, Makari, Gulfey ɕà 'rire; to laugh' [TrC], Makari ɕa 'to laugh', ɕey 'laughter' [AIM], Log ɸ'ihí [AIL], cf. Log káhò 'laugh' [LkL]; E 2 Lele āswí 'rire' [WP] // Akk šiāhu, šâhu, OB on [CAD § 64] [AHw 1096]. Akkadian is treated by semitologists as an irregular reflex of Sem \*ḏḥq 'to laugh' (loss of \*-k due to incompatibility of two "emphatics"). In the view of Chadic parallel, Akkadian rather goes back to another Sem root (not to Sem \*ḏḥq). It is worth mentioning that Akk-Chadic parallel may also originate from H-S **\*ɸ'Vḥ** (> Sem **\*ḏVḥ** > Akk šâhu) not from Sem **\*ɸ'Vḥ** (> Sem **\*ḏVḥ**). For Sem-Ch var. **\*ɸ'Vḥ-** 'to jeer at, to mock at' cf. also: W 1 Hs ɕiigaa 'to jeer at person'. For Sem \*ḏḥq see below N 334 **\*ɸ'VVḥ-** / **\*ɸ'Vḥ-** 'to mock, to laugh'.

324. **\*ɸ'Vg-** 'to press, to stop up': W 1 Hs ɕatɕàgaa 'compress, ram down; beat ground'; C 8 Makari ɕagi 'stop up' [AIM] // Arab ɖɛɛ 'serrer en pousant; press, push' [BK 29].

325. **\*ɸ'VVg-** 'to cut, to stab': W 1 Hs ɕaaga 'cut, lance, make incision; rip, split', cf. [SkH 266]; C 5a Hide ɸigə-lay 'to stab' [BrH]

326. **\*ɸ'VVgV/\*ɸwVgV** '(be) full': W 1 Hs ɕwaaɕè 'be full', ɕatɕàgèe 'fill oneself to repletion'; 3 Tng sɛɛgɛ 'to fill a container' [JgT]; C 7 Ould -ɸègè [KOu] 'se remplir, to fill' intr.

327. **\*ɸ'VgVI** 'small': W 1 Hs ɕígíllà 'epithet applied to smth small'; E 5 Bidiya ɕyígíla 'petit haricot trus dur; small beans, very hard' [JgB].

328. **\*ɸ'Vḥ-** 'to hide' > **\*ɸ'VḥVn** 'a hiding place': W 4 Paa ɸ'akwána 'cave' [MS]; E 5 EDng ɕyóké 'sich verstecken, to hide oneself' [Ebb]. Cf. C 4 Gude ənɸàká, uuɸaka (< \*n- **\*ɸ'Vḥ-**) 'mouse's nest' [Hs].

329. **\*[ʔ]VK-** ‘to filter, to pour little by little’: W 2 Angas šak ‘to strain, to filter’ [Fl]; E 6 Mok dyékke ‘pour water little by little’ [JgMkk].

330. **\*ʔVKV** ‘middle’: W 1 Hs çaka ‘middle’, çakaanin (prep.) ‘between’, çaka-çaka ‘half-way’, cf. [SkH 267]; 5 Zaar βək ‘in the middle of’ [CrZ]// SCush Iraqw tlaqi ‘half’ [MQK].

331. W **\*ʔVKV ~ \*ç/cVKV** ‘siftings; deposits’: 1 Hs çakii ‘coarse part of flour; siftings; soiled part of butter’; 3 Ngamo šòkšòk G ‘coarse flour (remains after sifting pounded baobab-seeds)’ [NEH] // SCush Iraqw tlootlok ‘deposits in a liquid’ [MQK]

W Chadic data itself do not allow us to distinguish between PChadic **ʔ**, **\*ç** and **\*c** in anlaut.

332. **\*ʔVVKV** ‘seed’: W 1 Hs çiiika, çiiika, çiiiga ‘a spiky seed of grass’ (if not < ‘sharp’); E 3 Smr swà:gā ‘seed’ [CLR], sóogoo ‘seed of a flower’ [Luk]

Cf. C 4 Gude ʔikórónə ‘seed’ [Hs], FJ ʔkiriŋ, FM ʔikuru, FB ʔikirin, Nzangi ləkiri [Kr:133]. A pl. in -r or a compound.

333. **\*ʔVKV** ‘big calabash/calebasse’: C 6 Kola wàʔák ‘calebasse’, Daba kà-ʔák ‘grand calebasse’ [Lnh]; E 5 Migama dyèekú ‘grand calebasse’ [JgM].

334. **\*ʔVVk- ~ \*ʔVK-** ‘to mock, to laugh at, to make fun of smb’: W 3 Goemay swak ‘excite, irritate, entice’ [Srl TAS 325]; 4 Cagu kaaʔ’a-n ‘laugh’ n., (metath. < \*ʔ’aak-), long vowel points to contraction after loss of a laryngeal: **\*ʔ’aak-** < **\*ʔ’aHaḵ-**; C 6 Daba ʔək ʔək ‘taquiner; to tease at’ [Lnh] (may originate from Ch **\*ʔVK-** and from Ch **\*ʔVK**)// Sem **\*dḥq** and **\*šḥq** ‘rire’: Hbr ṣḥq and šḥq, Aram. šḥq ‘to laugh, smile kindly on s.o.’,

Arab ḏḥq (-a-), Gz šaḥaqa, šəḥqa, etc., [LGz 528], MSA źḥk ‘to laugh’ [JJ, JM, LsS]. Numerous and diverse phonetic changes in Semitic are usually accounted for by various degree of incompatibility (in individual languages) of the given trio of radicals.

Note C 7 Ould -ḫ̀ukw (voicing of \*ḫ-) ‘taquiner, to tease at’ [KOu] and redupl.: Mofu-ḫ̀aḫg-, ḫ̀aḫok- ‘refuse de donner, berner (qqn), refuse to give smth. (to smbd.), to jeer at, scoff at’ [BaMof].

**335. \*ḫ’V(V)l- ‘to go (together)’:** W 2 Sura səl ‘verabschieden, begleiten; accompany’ [JgS], Gmy šial ‘to accompany’ [Srl, TAS \*syal 328]; 3 Pero çàlù ‘go from place to place’ [FrP]; E 5 Migama ḏyilò ‘depasser; outrun, pass ahead’ (? but. also ‘se terminer, passer’) [JgM].

**335a. \*ḫ’Vl- ‘to run, to be quick’:** W 1 Hs çálaalaa ‘run away’ (also çáncalaa); E 6 Mok ḏyèlów ‘promptement, rapidement, quickly’ [JgMk].

**336. \*ḫ’VIV ‘early morning’:** C 6 Daba ḫ̀alay ‘tôt le matin avant que le soleil se leve; early, before the sunrise’ [Lnhr]; E 7 Tor ḏyolom ‘la matin; morning’ [Alio]; 5 Bidiya ḏyolog ‘aube, matin; dawn, morning’ [JgB].

**337. \*ḫ’Vmm- ‘to send’:** C 8 Log ḫ̀im ‘to send someone to do smth’ [ALL], Makari çam ‘to send’ [AIM]; E 4 Saba ?ising ‘send’ [DMT].

**338. \*ḫ’VVm- ‘to lift smth.’:** W 1 Hs çáamaa ‘to pick from water’; 3 Tng sami ‘to lift smth up with both hands’ [JgT]; C 10 Bnn ḫ̀amwa, Masa thum ‘lift’ [Kr N 358].

**339. \*ḫ’Vmm- ~ \*ḫ’Vmb- ‘to sew’:** W 4 Paa ḫ̀imbàa ‘to sew’ [MS], Siri ḫ̀imu, Jmb ḫ̀im- [SkNB]; 5 Geji ḫ̀imvi, Buli ḫ̀imu [Kr]; Zul ḫ̀imi, ḫ̀imká ‘sew’ [Cs N 820]; E 6 Migama ḏyimmó [Jg], Kajakse ḏyam-kú [Alio].  
Verbal deriv.: E 7 Mubi ḏyeméḡe ‘to sew’ [CLR].  
Noun deriv.: C 8 Gulfey má-ḫ̀`emba ‘Spinne; spider’ [Lk:150].

340. \*ʃ'VVmV ~ \*ʃ'VmmV 'bitter': W 4 Paa ʃ'amumáá 'bitter' [MS], Paa ʃ'amma, Siri ʃ'amāmi, Cagu ʃ'emama 'bitter' [SkNB]; E 7 Brg ɖyɛemá 'amer' [JgBr].

Note W 2 Sura nʒaam [JgS], Angas žam [FI] 'gall (of the intestines)'. A specific reflex of s- (< PCh ʃ') in contact with n-?

341. \*ʃ'VmV 'cold, winter': W 5 Bgh sóom 'cold' [Cs], C 8 Gulfey ʒ'āma 'winter' [Lk:150], (c'amay) çamày 'cold' [By-CLR].

342. W \*ʃ'wVn- ~ \*ʃ'VH<sup>w</sup>Vn- 'to scrape; to peel': W 2 Goem swan 'to peel; chip off, cut off with knife' [TAS 325]; 3 Tng sanj 'to clear (place by felling trees), to clean, to separate (guinea corn from chaff)' [JgT]; 5 Guus ʃwoj 'scrape (clean)' [Cr]. Note that ʃ in Guus rather points to Chadic \*ʃ'VH<sup>w</sup>Vn-.

343. \*ʃ'VnV 'strength': W 4 Paa ʃ'in 'strength' [MS]; 2 Goem s'hèn 'ability, skilfulness' (hardly related to sura \*sheen 'clever' as in [TAS 332]) // Arab ɖyn 'fort, robuste' [BK]; SCush Dahalo tlin- 'get well' [Eh 217].

344. \*ʃ'VnV 'cricket': W 1 Hs çányà 'cricket', cf. [SkH 269]; E 5 Migama ɖyéenà 'cigale, cicada' [JgM].

345. \*ʃ'VnV 'deep (ditch)': W 1 Hs çányà 'deep, wide ditch'; 5 Buli ʃyaanə, Geji ʃun-titi, Bogh. šáanáya 'deepness' [Cs N485] // Cf. Arab ɖn? 'disparaître sous terre, se cacher dans la terre; disappear in the earth, hide' [BK 41].

346. \*ʃ'VVnV 'light, bright': W 2 Goem saan 'to be light, 3 Tng saŋŋ 'bright, clear'; 6 Ngz ʃanú 'become light, enlightened' [SchN].

cf. W 1 Hs taa-çúunìyaa 'a star, a white pitch on a horse's forehead' (ta- is a fem. marker, or < \*çib/mniya).

Deriv.: C 7a Sukun məʃyan 'white' [DS]; 9 Gidar míʃán 'white' [CLR].

347. {W \*ʃ'VVnV 'ghost, spirit'}: W 5 Zul ʃoòné 'ghost' [Cr N 465] ;2 Sura šón 'Geist, Gespenst [JgS], Mupun šón 'evil spirit' [FrM], Gmy tang suun 'ghost, spirit' [\*sūn ~ \*šon 'spirit' TAS:323]. Alternatively: Zul may belong to N 236, sura-angas may originate from \*swn.

348. \*[ʃ']VngV > \*sVngV 'mist, darkness, night': W 3 Pero ćungù 'mist' [FrP], E 3 Smr šàngā 'night' [CLR] // SCush Iraqw tlangi 'mist, fog, darkness' [MQK].

349. \*ʃ'Vr- 'to suck': C 5 Podoko ʃə̀rə̀wa 'sucer avec du bruit; to suck noisily' [JL]; E 5 Dng miđyíré 'saugen; to suck' [Ebb], miđyire, WDng mi?ire 'sucer; to suck' [CJ] (any relation to N 366. \*ʃ'VrV 'blood-sucker'?).

349a. \*ʃ'Vr-t/n- 'to spit, to expectorate' (derived < 'to pour' or < 'to suck'?) W 1 Hs ɕárta 'spit out, expectorate in long thin stream', ɕárçè 'defile with expectoration'; E 5 Bidiya ɕyiranyè 'projection de salive (involontaire); jet of saliva' [Fd].

350. \*ʃ'Vr- 'to be hostile, to be stubborn, to fight': W 1 Hs ɕírĩ (alt. Kats.) 'ostracizing a person; doing things contrary to usual custom or practice'; 2 Angas siir 'one who refuses to do what is told' [FI]; 6 Ngz ʃə̀rĩ 'fighting; fight' [SchN] // Sem \*qrr- 'be hostile, enemy, to harm' [LsG 152]. Deriv.: W 6 Ngz ʃarđú 'become entangled, engaged in combat' [SchN]. Cf.N 601 \*ʒ'VrV 'fight, war'.

351. \*ʃ'Vr- 'to pierce (through), to spit': W 1 Hs ɕíĩrã 'spit meat on skewer', ɕíĩrẽ 'spit meat on skewer; pierce'; C C 2 Bura ʃil 'to pierce or impale' [Ann]; 5 Glavda ʃil- 'to pierce' [Kr:395], 5a Hide ʃra 'percer' [Eg]; E 3 Tum hār 'transpercer' [Cp]. Deriv.: E 2 Tob suróbé 'transpercer' [CTC].

Cf. C 5 Malgwa ʃaare ‘sharp’ [Lr] and Mefele ʃaʃar ‘horn’ [CfM].

Cf. 578. \*ʒ Vr- (var. \*ʒ VI-) ‘to pierce a hole’.

352. \*ʃ Vr- ‘to germinate’: W 1 Hs ɕĩraa ‘germinate’, ɕĩrò ‘germinating of any seed; sprouting of tubers’; C 7 Zulgo ʃól ‘germer, commencer a pousser; germinate’ [ZIL].

Noun deriv.: 1 Hs má-ɕĩraa ‘the place from which a thing sprouts, appears, begins’.

Note N 600. \*ʒ VrV ‘sprout’.

353. \*ʃ VVr- ‘to expose to view’: W 1 Hs ɕĩraĩci ‘the state of being exposed to view (of a person, of the interior of a compound), ɕĩraĩtaa ‘bare, expose; strip a person of clothes’; E 5 Bidiya ɖyir ‘exhiber; mettre en vente, exhibit’ [JgB].

Cf. Hs ɕĩraara ‘be naked’.

354. \*ʃ V(V)r- ‘to rinse, to (be/become) clean, pure’: W 3 Tng saare ‘to rinse; to clean’ [JgT]; C 8 Log ʃ’iren ‘(be) clean, (être) propre, propreté’ [AIL].

Deriv.: W 1 Hs ɕãrkakà ‘become clean’, ɕãrkakee ‘to purify, to make clean’, ɕãrkíi ‘ceremonial cleanliness; purity, holiness’, cf. [SkH 270], ɕatɕãkaa (< \*ɕar-ɕar-kaa) ‘pure, clean, a pure, clean thing’.

Noun deriv.: W 1 Hs má-ɕãrkakii ‘clean, pure, holy person or thing’.

355. \*ʃ VVr- ‘to love’: W 1 Hs ɕaaraa ‘a paramour’, cf. [SkH 269]; E 5 Bidiya ɖyoor ‘aimer’ [JgB]// Arab ɖrw 2<sup>nd</sup> stem ‘exciter dans qqn un desir’, ɖrw ‘aimer qqch’ [BK 25].

356. \*ʃ VVr- ‘to warm oneself near the fire’: C (a compound?) 5 Podoko ʃəɾənda ‘scorch; brûler (le corps)’ [JL]; E 5 Migama ɖyéero ‘chauffer prus du feu; to warm oneself near the fire’ [JgM]// Arab ɖrm ‘brûler’ [BK

24].

357. \*ʃ'VVr- 'to rip, to tear away': W 3 Krkr ʃaru 'wrest away' [GK], 4 Siri ʃ'ara, Cagu ʃ'aar 'rip, tear' [SkNB], Paa ʃ'ar 'rip'.

up' [MS]; E 7 Kayakse d̄yarwi 'déchiré; be torn' [Alio].

Cf. N 249. \*ʃVr- 'to tear to pieces' (note reflexes of Karekre in both roots).

358. \*ʃ'(w)Vr- 'to strike, to slap': W 2 Mupun swér 'to slap' [FrM]; C 10 ZB ʃír 'frapper très fort' [Sa], 5a Hide ʃru 'forger; to forge' [Eg// Arab d̄rb 'frapper, battre' [BK 16].

Deriv.: C 2 Bura ʃarta 'to hit with a whip or switch' [Ann].

Note: C 7 \*ʃVr-[t̄]-, possibly < \*ʃ'VVr-t̄- 'to crush (grain, ground nuts)': Mofu -ʃərt- 'écraser des graines huileuses' [BaMof], Mada áʃráð 'écraser, réduire en pâte (arachides, souchet)' [BaMd].

359. \*ʃ'JVr- 'to coat, to smear, to glue': W 2 Mupun s̄ór 'to paint' [FrM], Goemay ser 'adhere, stick, fasten (paper against wall with glue), apply oil' [TAS 318]; C 7 Mbuko ʃūráy 'crépir (faire le crépissage), to plaster, to coat' [GNT]; 10 ZB ʃór 'crépir' [Sa].

Deriv. \*ʃ'JVr-b 'to glue, to be sticky': C 6 Daba ʃəráp 'coller, crepir; to glue, to coat, to plaster' [LnHr]; 7 Gisiga ʃrab, ʃərb 'zu-, fest-kleben, to glue' [LkG], Mofu ʃəl̄baw 'gluant, sticky' [BaMof], Ould -ʃə̀l̄ab 'crépir; to plaster, to coat' [KOu] (-l- < \*-r-).

? Compound.: \*ʃ'JVr-d̄V̄k- 'sticky, gluey, smooth': C 5 Podoko ʃə̀ɔ̀d̄akə idf 'lisse, gluant, smooth, sticky' [JL], Ould ʃə̀ɔ̀d̄ekkà 'bien gluant sauce bien liée' [KOu].

360. W \*ʃ'Vr- 'to split (wood)': W 1 Hs ɕá̃̀rà 'cut, lance'; 4 Paa ʃ'ar 'split (wood)' (contamination with 'to rip, to tear') [MS]; 5 Guus ʒaar 'chop wood', ʒà̃̀r kyəŋ 'facial marking' [Cr:41], Zaar ʒar, var. ʒalár 'split calabash, open up belly' [CrZ], Dott ʃar 'split, chop (wood into pieces)'

[CrD].

Deriv.: W 1 Hs çárgè 'to slit' // Arab đrg 'fendre; lancer' [BK 19].

Cf. N251. \***ʃ** *Vr-* 'to cut (off)'.

**361. \***ʃ**'VrV 'liquid', \***ʃ**'Vr- 'to pour'**: W 1 Hs çáráróo 'any liquid that has been over diluted', çáarii 'water in which bruised corn has been washed'; C 8 Log ʃ'arʃ'ar 'thick (liquid)' [ALL]; E 5 WDng đyar idf. de / đyírgé /, see below [Fd]; 6 Mok đyèrré 'verser doucement' [JgMk] //Soq, Shh dé'èr 'verser' [LsG 363], Arab đrw 'saigner (plaie), couler; to bleed (wound), to pour, flow' [BK].

Cf. C 7 Mefele (dial.) ʃoʃor, ʃoʃar 'stream' [CfM].

Deriv.: E 5 Bidiya đyìràg 'distiller, filtrer; to filter' [JgB], WDng đyírgé 'verser (sur la mains, sur une passoire; verser lentement (l'eau du riz); pour water' [Fd] //cf. SCush Iraqw tlarooq 'pour out' [MQK].

Cf. N 573. \***ʒ** *Vr-* 'to pour water'.

**362. \***ʒ**'VVrV 'river bank'**: W 5 Zaar ʒari 'side of the river, valley of town' [CrZ]; E 5 Migama đyiiró 'rivière, sable, river, sand' [JgM] // cf. Arab đrr 'bord d'une vallee, rivage d'un fleuve; river-bank' [BK 15].

**363. \***ʒ**'V(V)rV 'bitter'**: W 6 Bade ʒəra 'bitterness' [Kr:289]; E 5 Migama đyáram-tà 'aigre (nourriture); bitter (food)' [JgM].

**364. \***ʒ**'VVrV 'a hole'**: W1 Hs çááíi 'a hole under a clay bed for makin' fire' = çáariyaa.

Compound: E 5 Migama đyúr-gúl 'cavite d'un arbre; hollow' [JgM], Bidiya đyùr-gúl 'cavite dans un tronc d'arbre' [JgB].

**365. \***ʒ**'VrV 'pus'**: C cf. 5 Malgwa ʒiyiire 'sweat' [Lr]; E 5 Bidiya đyìrà 'pus' [JgB]// Arab ھاđیر-t- 'pus de la plaie' [BK].

Noun deriv.: W 3 Tng wuɾuk 'pus' (w- < s- < \***ʒ**- before -u-) [JgT].

366. C 8 \*~~ʃ~~'VrV 'blood-sucker, leech': Log ʃ'are 'leech, sangsue' [ALL],  
Makari čal 'leech, sangsue' [Tr].

## \*ʒ

**368. \*ʒV ‘to cut (grass with a sickle)’:** W 2 Angas li ‘cut (grass with a sickle)’; 3 Pero la ‘cut grass’ [FrP]; C 1 Tera ʒaw ‘sickle’ [NmT]; 7 Mafa ʒa ‘couper (les herbes, de la paille); to cut (grass, hay)’ [BaMaf],  
Not the same as N 1b. \*ʒVy/w - ‘to harvest corn (with a sickle)’.

**368a. \*ʒV ‘to chop, to cut (with a knife)’:** W 5 Zaar ʒa ‘cut, chop’ [CLR]; C 1 Tera ʒa ‘cut (with a knife)’ [NmT]; Gude la ‘cut’ [Hs] (cf. FB ʒεʒεgur ‘chop’, FM ʒabi ‘cut’, FJ ʒabi ‘cut, chop’ [Kr 378-9] all < \*ʒa-); 5a Lmn ʒ- ‘cut, chop’ [CLR], 7 Merey ʒay ‘égorger, to slaughter’ [GMr], Zulgo ʒe ‘couper, faire une incision; cut, tatoo’ [ZIL]; 7a. Sukun ʒə ‘cut’ [DS].  
Cf. N 1. \*ʒV ‘to cut (off, through)’. \*hla ‘cut’ [NmC].

**368b.W \*IVyV (< \*ʒVyV) ‘tribal marks’:** 2 Angas lii-n-gwa ‘eight strokes on cheeks’ [FI], Sura tu lee ‘tattoo woman’s breast’ [JgS]; 3 Ngamo lei ‘tribal marks’ [NEH], Dera lálálálá ‘scratches’ [NmK].  
Note W 3 Krkr leeli ‘razor’ [GK] and C 4 Gudu luta (if < \*lu-ta) ‘knife’ [Meek]//Cf. SCush Kwadza sleʔo ‘knife’ [Eh 211].

368c. **Deriv. C 7 \*ʒ Vh-** ‘to cut (throat), to slaughter’: C 7 Mafa ʒáh- ‘égorger; to cut throat’, Mada áʒàhà ‘égorger, opérer, saigner, dépecer, dépouiller’ [BaMaf,Md]; Muyang ʒey idf. ‘cutting’ [SmM:98].

369. **\*ʒ V ‘go (away)’ > \*ʒ Vʒ V ‘to run’**: W 4 Paa ʒaʒù [MS], Kariya ʒiʒi ‘run’ [SkNB]; C 5 Wnd ʒu ‘aller, partir’ [Mo], ʒal-a [Mi-CLR], 7 Mbuko ʒā [GNT] ‘go’ // Soq séʒe ‘courir; run’ [LesS]. Not the same as Cf. N 3 \*ʒ V ‘to go, to return’ (both roots are attested in W 4 Paa, cf.).

369a. **\*ʒ VwV ‘to abandon, abandoned place’**: W 3 Krkr lawi ‘abandoned place’ [GK]; C 7 Mbuko ʒawa ‘quitter; abandon’ [GNT].  
Cf. N 23. C \*ʒ Vy- ‘to leave, to depart’.

370. **\*ʒ V ‘to pour (quickly), to sprinkle’**: W 5 Saya ʒaa ‘sprinkle’ [Cs N881]; C 7 Mafa ʒóʒoʒa ‘à grand débit, à grand flot (l’eau d’une rivière); in a big stream (water in a river)’ [BaMaf], Mofu ʒáy ‘verser rapidement; to flow quickly’ [BaMof].  
Note C 7 Mada ʒèèéh ‘(larmes) qui coulent; running (tears)’ [BaMd].  
Cf. N 2 \*ʒ V ‘to pour (slowly)’.

371. **\*ʒ V ‘to sing, to speak’ > \*ʒ Vʒ V ‘cry’**: C 7 Mbuko ʒiyʒoy ‘cri (des femmes); cry (of women)’ [GNT], Zulgo ʒaaʒa ‘cri’ [ZIL], Gisiga ʒe ‘sing’ [LkG], 7a Sukun ʒa ‘speak’ [DS] // cf. Hbr šwʕ (pi) ‘um Hilfe rufen; cry for help’.  
Redupl.: W 1 Hs ziiizà (zuzuza) ‘hum or buzz of voices’.

372. **\*ʒ V ‘to fall down’**: C 2 Margi ʒà [HfM], Kilba, Hildi, Wamdiu, Margi ʒà [Kr], Central Margi ʒà ‘fall’; 3 HB ʒà ‘fall’ [Kr:388], 5 Glavda ʒ, nʒ- ‘to fall down, to destroy’ (contam. with \*ʒ Vw/y- ‘to demolish’) [Rp]; 5a Hitkalanchi ʒ- ‘fallen’ [LkH] //cf. ECush Maa (in Dolg 33): Maa slu ‘to fall’, sluku ‘to drop’.

Deriv.? C 7a Sukun *ʒuw*-ma ‘throw’ [DS].

Cf. N 139. C **\*ʒVh-** ‘to fall’.

Note St1 N 7 \*IV(V) ‘to put down (several objects, to sit (down))’ (in all the W and ECh languages attested, l- may originate from Ch \*l- and from Ch \*ʒ-): W 2 Sura *lè* ‘legen, setzen, to lie (down), to sit’ [JgS], Montol *laa* ‘setzen’ [JgC], Mupun *lé* ‘put on (the surface)’ pl. (sev. obj.) [FrM], Angas *le* ‘to place’ [FI]; 3 Pero *lu* ‘put’ [Fr], Tng *liye* ‘to put, to place’ [JgT]; E 5 EDng *lè la* ‘poser’ (pl. choses), WDng *lé* ‘mettre, poser (pl. choses)’ [VM:190].

372a. C **\*ʒVw/y-** ‘to demolish’ (derived from ‘to fall’?): C 3 FK *ʒwa* ‘demolish’ [BINd]; 5a Hide *ʒay* ‘demolish, collapse’ [BrH]// Gz *śyʔ* ‘destroy, annihilate’. Accord. to Leslau, related to Hbr *šōʔā* ‘deslocation’, cf. [LsG 539].

373. **\*ʒV** ‘to help, to save’: W 2 Angas *lah* ‘help’ [Or], *la ke ni* ‘help him’ [Or]; C 2 Hildi *ʒùwàà* ‘help’ [Kr:387]; 4 FJ *nʒùwatuč* ‘help’ [Kr:387]; 5 Podoko *ʒá* ‘help, défendre’ [JL]; 7 Muyang *ʒi* ‘save’ [SmM] // Sab h-w<sub>2</sub>ʔ ‘grant favour to s-o’ > ‘seek favour from’, ‘favour//strength’; Kat ws-ʔn ‘help, favour’ [Oh 323]; Hbr *yšʔ* (hip) ‘help, save’, Akk *usātu, ušatu* ‘Hilfe, help’ [AHw 1222].

Note W 1 Hs *zayayee* ‘an alien’.

Cf. N 16. **\*ʒVV/y-** ‘to assist, to help’.

Cf. W 6 Ngz *ʒàʒiyú* ‘beseech, seek blessing’ [SchN] // SCush Mao -slawi ‘ask, beg for, pray for’ [Eh 214], cf. Sabaic ‘to seek favour from’.

374. **\*ʒVw/?- > \*ʒVʒV** ‘to fear; fear’: C 5 Podoko *ʒiʒəwe* ‘peur, fear’ [JL], Gvoko *ʒuʒu* ‘be afraid’ [HmG]; 5a Hide *ʒəŋ* ‘fear’ n. [BrH], Lmn tu-*ʒuwij*, Hide *ʒəŋ*, Vemgo *ʒuʔin* ‘be afraid’ [HmG]; 7 Mafa *ʒáw* ‘peur, fear’ [BaMaf], Mada *áʒaw-əl* (ex. -al) ‘respecter, craindre; to respect, to be afraid’ [BaMd]; E 4 Mawa *leclu* ‘fear’ [RbM].

Deriv.: W 1 Hs *zawuuta* ‘become terrified’.

Note C 5 Glavda *ʒəʒawura* ‘fear’ [Rp]. A pl. in-r?

**375. \*ʒ Vw/y-** ‘to shine’: 5 Podoko *ʒayə* ‘briller, shine’ [JL]; 6 Daba *ʒaw* ‘briller, brûler; shine, burn’ (contam. with the next root) [Lnhr]; 7 Mada *awʒá* ‘luire, briller, to shine’ [BaMd], Mafa *ʒáʒáy* ‘briller (pour un corps), être luisant; be shining’ [BaMaf] // Eg šw (ME) ‘das Licht, die Sonnelight, air, sun-shine’ [EG 431]. Cf. OS N 2340.

Noun deriv.: W 6 Ngz *áʒiyáʒiyá* ‘mid-afternoon’ [SchN]; C 6 Daba *àʒəw* ‘lightning’ [Kr: N 115].

**376. \*ʒ V(w)-** ‘to burn; furnace’: W 3 note Pero *laalò* ‘burn’ [FrP] (if not < Ch *\*IV(w)-* as in St1 N 22]; C 5 Dghw *ʒuwaya* ‘burn’ [Kr:368]; 6 Daba *ʒaw* ‘brûler’ [Lnhr] (contam. with ‘to shine’); 7a Sukun *ʒya* ‘furnace, forge fire-box’ [DS], *ʒya day* ‘forge’.

**377. \*ʒ VV/y-** ‘to open, to release’: W 4 Paa, Diri *ʒa* ‘open, untie’ [SkNB]; C 5a Hide *ʒaay* ‘to release’ [BrH] // Arab šhy (a) ‘to be open’ [BK], SCush Maa -sle ‘to open’ [Ehret 215, N12].

**378. \*ʒ VV/w** ‘to sow’: W 5 Guus *ʒaa* ‘sow (hungry rice)’ [CrG], Zaar *ʒaa* ‘sow, scatter’ [CrZ] // Maa -sla ‘sow’ [Eh 209] (cf. C *\*ʒ Vʔ-* ‘to sow’). Add Ch *\*IV[h]-* ‘to sow, to plant’ [StI N 144].

**379. C \*ʒ Vʔ(ʒ V)** ‘to belch, to cough’: 2 Margi *ʒaʔwí* ‘to belch’ [HfM 118]; 3 Bana *ʒí* ‘éructer, rôter, to belch’ [GLBn], 7 Zulgo *ʒeʒe* ‘rôter, to belch’ [ZIL], Mbuko *ʒəʒe* ‘toux, cough’ [GNT].

**380. C \*ʒ V** ‘to get, to receive’: 2 Bura *ʒu* ‘to receive at the hand of another’ [Ann]; 3 FK *ʒu* ‘receive’ [BINd]; 4 Gude luu ‘obtain, receive, get’ [Hs] (<Ch *\*IV* ‘to get, to marry’ [St1 N4])//SCush *\*slaw-* ‘to get’: Iraqw, Bur *slaw-*, Alg *sloom-* ‘to get’, Maa -slawé ‘accept, receive’ [Ehret 211, N23].

380a. C **\*ɓ V?** 'to take (away) by force': 3 FK *ɓyi* 'resque, take by force' [BINd]; 5 Malgwa *ɓiya* 'wegnehmen, ergreifen, take away, seize' [LrD], 5a Hide *ɓuʔay* 'take away by force' [BrH], 7 Zulgo *ɓá* 'prendre, saisir, tenir' [ZIL], Meroy *ɓa* 'prendre' [GMr] //? Maa -sliʔu 'to borrow' [EH211]  
Cf. W 3 Pero *lávwo* 'to seize, to get by force' [FrP] (semantically closer to the present root, than to St1 N 4a. *\*IVw-* 'to take, to get', cf.).

381. C 5 **\*ɓ V(ɓ V)** 'to finish': Wnd *ɓoɓè* 'finish' [Kr:415], Malgwa *ɓə* '(be)enden', *ɓa* 'finishing' [Lr], Podoko *ɓa* 'finish' [JL]// Maa *sle* 'cease' [Eh 209].

382. C **\*ɓ V(ɓ V)** 'to build': 3 Bana *ɓi* 'arranger les pierres pour faire une barrière' [GLBn]; 7 Zulgo *ɓaɓ* 'construire' [ZIL].

383. C **\*ɓ V?** 'to wake up': 9 Mulwi *ɓiyí* 's'éveiller, ressusciter, to wake up', Mnj *ɓiyi* 'éveiller, se' [TrMlwMnj]; 10 ZB *ɓaʔà* '(se) réveiller, wake up' [Sa], Masa *ɓii* '(se) réveiller, ressusciter' [CC].  
Cf. N 20. **\*ɓ V~ \*ɓ V?** 'to stand up, to rise'.

384. C **\*ɓ V?** 'to dance, to jump': 3 Bana *ɓi* 'sauter, bondir; hop, jump' [GLBn]; 8 Log *ɓaʔà* 'to dance' [index:242]; 10 ZB *ɓaʔà* 'voler (oiseau), dancier, dance' [Sa], ZD *ʔàʔ* (ʔ- <\*ɓ-) 'dancer, voler' [CC] //Akk *šāʔu* 'fly about, flutter, to circle (said of birds)' [OB, SB 243], Gz *śáśśəʔa* 'dance' [LsG]; SCush Dah *slew-* 'dance' [EEN].

385. **\*ɓ V-hʷ/kʷV** 'leaf': W 4 Paa *ɓukwiti* 'leaf' [MS]; C 3 Bana *ɓiya* 'feuille de papier, billet d'argent, lettre, sheet of paper' [GLBn], 5 Cuvok *ɓahà ta daw* [Ndo], Podoko *ɓiha* 'feuille de mil, corn-leaf' [JL]; 7 Ould *ɓuwak* 'feuille de mil' [KOu].  
Cf. N 190. **\*ɓ V[kʷ]V** 'leaf of a cornplant'.

386. \***ʒ** V ‘child’ > ‘sprout’: W 4 Paa ʒa, pl. vurân ‘boy, son, male child’, ʒà-ama-ti ‘brother’ (son-mother-rel.) [MS], ʒa ‘child’ [CLR], ʒà, pl. vórân ‘child’ [Jg], Siri uhlina ‘child’ [Grg-CLR]; C 5 Podoko ʒaʒá (redupl.) ‘surgeon de mil, sprout’ [JL]; 7 Cuvok ʒà ‘placenta humain’ [Ndo].

Compound? C 7 Mada ʒʒáwmaʔ ‘sorte d’esprit causant un gros ventre chez les enfants, kind of spirit (causes big belly among children)’ (if < \*ʒa- ‘child’) [BaMd].

Cf. C 5 Podoko ʒa ‘féconder’ [JL].

387. \***ʒ** V(**ʒ** V) ‘oil, fat’: W 4 Paa ʒíʒù ‘cooking oil, butter’ [MS]; C 7 Mada éʒè ‘gras, huileux, taché de gras; fat, oily’ [BaMd]// SCush Kwadza aslito [Ehret 285, N31], Dah ʔasli ‘oil’ [EEN 20]; Mhr ʒʒy > ʒʒyēt ‘fat around the kidneys’ [JM 386].

388. \***ʒ** VV ‘a (good) smell’: W 2 Msr lee, ku-lee ‘smell’ [TAS]; 5 Zaar ʒii ‘smell’ [CrZ]; E 5 (redupl.) Bidiya lulwà ‘bonne odeur, good smell’ [JgB] (less probably, related to Ch \*IV ‘good taste’, St1 N 31).

389. \***ʒ** V(?) ‘many’ > (redupl.) ‘eight’: W \***ʒ** Vʒ V ‘eight’: 4 Warji ʒaʒa, Kariya ʒaaʒaa, Mburku, Cagu ʒaaʒa [SkNB]; C 4 FM ʒá ‘large’, FB ʒaʔ ‘many, all’ [Kr:281, 283, 284].

390. \***ʒ** VʔV ‘war’: W 5 Dira ʒeyè ‘war’ [Kr:248]; C 2 Kilba ʒàʔá ‘war’ [Kr:248].

391. \***ʒ** V(y) ‘skin’: W 5 Buli hli, Geji dhli ‘skin’ [Gow-CLR]; C 7 Mbuko ʒày ‘peau (non tanée); not tanned skin’ [GNT].

Note W 5 Zaar ʒuu ‘be tight, tighten (skin of drum)’ [CrZ].

392. \***ʒ** VwV ‘kind of fish’ (?): W 1 Hs záawò, (Kats.) zawa, (S.) zawai ‘a kind of fish’; C 7 Mafa ʒúwáy fish *Alestes macrolepidotus* [BaMaf], Mofu

áɓaway, ɓaway 'sardine' [BaMof].

393. \*ɓ V(y) 'be sure, be just': C 5 Podoko ɓaya 'be just, customary' [JL], ɓaya 'justice, vérité' [JL]; E 2 Lele làã 'certes; for sure' [WP].

394. \*ɓ Vw/yV 'straw rope': W 3 Tng lei 'straw sp. and rope made there of' [JgT]; C 7 Mada ɓewɓéw 'fronde en corde' [BaMd].  
Redupl. : W 4 Paa ɓiɓá 'woven straw fence or mat' [MS].

395. W 5 \*ɓ V 'stick': Buli ɓoo (ɓ- < \*ɓ- is regular) 'stick' [Cs N 170], Zul ɓoo [Cs N170], Dira ɓɔ 'stick' [Kr:229].

396. C \*ɓ V 'be happy, loving': 5 Podoko ɓa 'rejoice' [JL], 7 Mbuko ɓé 'bien' [GNT], Muyang ɓayay 'like (actions of others)' [SmM]; 9 Mbara ɓà 'cher (affection); darling' [TrMba]// SCush \*sla- 'love, like': Bur, Alg sla?-, Kwd sla?as-, Asa sla?at [Eh 208], Iraw slaa? 'love, want' [Maghway 129], Dah slaw- 'love' [EEN].

397. C 10 \*ɓ V '(to make) dirty': ZB ɓi 'sale, dirty' [Sa], ɓi 'noircir, to dirty'; ZD ɓi 'salir, noircir' [Cpr] (ɓ < \*ɓ-).

398. \*ɓ Vb- 'to hit (with smth.), to pound' > \*ɓ Vɓ- 'to strike (several times)': C 1 Tera ɓaɓi 'beat (more than once)' [NmT]; 2 Bura ɓabu 'to kill; to beat', ɓabwa/i 'to spank, beat with a soft thing; to hit, beat, strike; wash by beating on the rocks' (cf. ɓaf id. 'sound of smth soft (mud) striking a person or thing' (?devoicing at the very end)) [Ann]; 7 Mbuko ɓāb 'battre (mil), piler (sur un rocher); to thresh corn' [GNT], Ould -ɓāb 'battre; piler; frapper' [KOU]; Muyang ɓəb 'pound, beat' [SmM]; Zulgo ɓəv 'frapper contre un être vivant' [ZIL]; Mada áɓɓāb 'battre qqn, frapper' [BaMd], Mofu -ɓəv- 'frapper la nuque' [BaMof], Mofu -ɓəv- 'frapper la nuque'

[BaMof], Muktile *ḡabái* 'beat; battre' [CLR], 8 Makari *laḡa* 'crush, pound' [AlM]; 9 Musgu *ḡába* 'schlagen, klopfen; beat, knock' [LkMsg], Mnj *ḡába* 'frapper' [Mo:49] // Ch *\*ḡbɔ* 'beat' CLR I 7B, *\*hlVb* [NmC].

Noun deriv.: W 3 Bolewa *laḡḡo* 'a welt from beating' [GAB].

Verbal deriv.: W 4 Paa *ḡáabuḡu* 'hit with heavy stick', Kariya *ḡabəḡa* 'beat, pound' [SkNB], Kariya, Warji *ḡabəḡ-* 'beat' [CLR].

W 1 Hs *záb-čè* 'demolish wall, bite off/break of a portion, partially collapse'. Cf. W 6 Ngz *ḡəbgənú* 'become spoiled, ruined' (A compound?, cf. *gənú* 'take; fit') [SchN].

Cf. N 48. *\*ḡVb-* 'to strike, to kick'.

**399. *\*ḡVb-* 'to split (wood), to chop':** C 4 Bch *lúbâ, lúbá* 'cut, chop' [Sk-CLR]; 9 Musgu *ḡába* 'fallow trees' (contamination with 'to beat' [LkM]).

Verbal deriv.: W 1 Hs *zábga* 'to stab'.

W 6 Ngz *ḡàbèrú* 'split wood (for fire)' [SchN].

**399a. *\*ḡVbV* 'axe, hoe':** W 1 Hausa *zaabii* 'kind of axe'; C 7 Mada *áḡabá* 'hache' [BaMd], Muyang *ḡaba* 'axe' [SmM], Ould *ḡābà* 'hache; axe' [Kou], Zulgo *ḡába* 'hache' [ZIL]; Cuvok *ḡabà* 'hoe' [Ndo] // Arab *ḡaba-at-* (<\*šbw) 'blade of a sword' in AA N 66 *\*šVb*, OS 2317.

**399b. C *\*ḡVmbV* 'axe':** 3 HB *ḡumbu* 'axe', HN *ḡimbwe* [Kr N 155]; 7 Mofu *ḡambá* 'hache' [BaMof]; 9 Gidar *ḡimbe* [Mo].

**400. *\*ḡVb-* 'to weave', 'cloth'** W 1 Hs *zúbì* 'arranging the warp for weaving', *zaaboo* 'kind of cloth', Bolewa *laḡḡu* 'weave mat' [LkB], C 2 Bura *ḡibwa* 'raised scar tissue' [Ann].

Noun deriv.: W 1 Hs *zambaagii* 'kind of cloth'; 3 Bolewa *lambaažè* 'gusset joining 2 pieces of cloth' [GAB].

Note Hbr *šbš* 'to weave', Arab *šbb* 'bind, tie' [BK] in AA, OS 2321.

401. \***ʒ Vbb/b-** ‘to snatch, to tear away’: W 3 Kirfi l`abbey ‘to snatch away’ [Stl]; C 5 Glavda ʒab ‘tear away from’ [Rp].

402. \***ʒ Vb-** ‘to praise’: C 7 Mafa ʒ`aba ‘louer, chanter les louanges; to praise’, ʒab- (+‘mil’, ‘maison, house’) ‘protéger par différents rites (avant de le faucher; avant de la construire), to protect the house’ [BaMaf]; Mada áʒbà ‘louer, glorifier, vanter; to praise’ [BaMaf, Md], Muyang ʒ`abay ‘praise, honour’ [SmM]; Zulgo ʒ`əb (d`ar) ‘honoré’, ʒəb (áaká) ‘protéger du vol par magie, protect against theft’ [ZIL].

Verbal deriv.: W 6 Ngz g`ə-ʒbú ‘to praise’ [SchN].

402a. \***ʒ Vb-** ‘to please, to like’: W 3 Dera ləw ‘like’, Tng lobi ‘to like’ [JgT]; C 10 ZB ʒab [Sa], ZD ʒāb ‘plaire’ [Cpr].

403. \***ʒ Vb-> C \*ʒ Vv-** ‘to shake off (fruit from a tree with a stick)’: C 7 Gisiga ʒov ‘herabschlagen (Frucht from Baum) [LkG], Mada áʒav ‘gauler, abbatre des fruits avec une baton’ ([BaMd], Mofu -ʒəv- ‘gauler (fruits)’ [BaMof].  
Deriv.: W 1 Hs z`abgè ‘fall from tree (many fruits); knock down, strip from stalk, pull off many fruits from the tree’.

C 7 Muyang ʒ`əbač ‘shake off the dirt from smth’ [SmM]

Any relation to \***ʒ Vb-** ‘to fall’?

404. \***ʒ Vb-** ‘to fall, to get down’: W 3 Dera l`eəb`e/-w- ‘get down’ [NmK]; 6 Ngz ʒəp (p < \*-b#) ‘downward’ [SchN]; 5 Zulgo ʒ`iv ‘tomber a terre par maladresse; fall down’ [ZIL], Mada ʒʒ`ev ‘a bout, a fond; on the bottom’ [BaMd].

404a. \***ʒ VmbV** ‘to fall’: 5a Hitk ʒ`əmb- ‘fall’ [LkH], Hide ʒ`umbawʒ`umba ‘être tombé et parti’ [Eg], Lmn ʒ`əmb- ‘fall’ [CLR], ʒəʒ`umba [HmG] ‘fall’// SCush Irq slubux idf. ‘sound of somebody falling with heavy clothes on’ [MQK].

Verbal deriv. (?): C 7 Mbuko *ǰāmbál* ‘lancer (bâton)’ [GNT]

Cf. 5 Gvo *iʃimbəde* ‘fall’ [HmG].

Verbal deriv.: ‘to sling, to throw’: C 2 Bura *ǰafta* (if < \**ǰab-ta*) ‘to sling a child (gun) over the shoulder onto one’s back’ [Ann].

Cf. N 39. \**ǰVb-* ‘to throw down’.

405. \**ǰVb-* ‘to refuse’: C 7 Muyang *ǰaḅu* NEG [SmM]; E 2 Lele *libè* ‘refuse’ [WP].

Verbal deriv.: C 3 Bana *ǰəḅama* ‘refuser, contester argue’ [GLBn].

406. \**ǰVb-* ‘to sit’ W 6 Ngz *ǰaḅau* ‘sit’ (also: ‘stay, remain; be, become’) [SchN]; C 5 Podoko *ǰəḅa* ‘place horizontally’ [JL].

407. \**ǰVb-* ‘be, become wide’: W 3 Bolewa *laḅ-* ‘ausbreiten, to weiden’ [LkB]; C 2 Bura *ǰabu* ‘wide’ [Ann], Cibak *ǰaḅu*, Ngwahi *ǰaḅū*, Hildi *ǰaḅū*, Kilba *ǰabú*, Margi *ǰaḅo* ‘wideness’ [Kr:297]// Arab *šbh* ‘étendre une peau à l’aide de deux pieux fichés en terre, étendre ses 2 bras, s’allonger; to stretch a piece of skin, stretch arms’ [BK 1182], Soq *šbaḅ* ‘étendre (des pieds), stretch legs’ [LsS] (? < Arab).

408. \**ǰVb-* ‘to plaster, to smear (smth. sticky)’: 9 Mnj *ǰiḅi* ‘crepir, plaster’ [TrMnj].

Verbal deriv.: W 1 Hs *zabče* (< *zabt* < \**ǰVbt-*) ‘re-roofing a portion of a mud roof’; C 10 ZD *ǰubùt* ‘enduire grossièrement; smear’ [CC], cf. ZB *lúbút* ‘enduire grossièrement’ [Sa].

408a. \**ǰVbV* ‘(be) sticky (like honey)’: W 3 Kirfi *leḅu leḅu* ‘sticky’ [Stl], Tng *libon-libon* ‘sticky (honey)’ [JgT], Bolewa *laḅu* ‘stick onto, adhere, stick to’ [GAB], Krkr *liḅu* ‘stick on, place smth sticky on’ [GK]; C 7 Mafa *ǰab-ǰaḅḅa’a* ‘gluant comme du miel; sticky (like honey)’ [BaMaf]; 8 Cf.

Makari laḅi go ‘glue, collar’ [AIM]//Arab šbš ‘se collar, s’attacher; to stick (intr.), to attach (intr.)’ [BK].

Verbal deriv.: W 3 Ngamo laḅkô G, VN laḅše ‘to patch, to stick on’ [NEH].

**409. \*Ḷ Vḅ-** ‘to cling to make close to’: W 4 Paa Ḷḷḷiya ‘next to’ [MS]; C 2 Bura Ḷiba(ha) ‘to fasten; to affix’ [Ann]; 5 Podoko Ḷaḅa ‘interlock (with each other)’ [JL], 7 Mafa Ḷḷḷ- ‘boire ensemble a la même calabasse; se collar jeue contre jeue; drink together from one calabash, cling cheek to cheek’ [BaMaf]; Cuvok mē-Ḷḷḷey ‘drink together from one calabase’ [Ndo] // Cf. Arab šbš ‘se collar, s’attacher; to stick (intr.), to attach (intr.)’ [BK].

**410. \*Ḷ Vḅ-** ‘to cover, to overlap’: W cf. 1 Hs zoḷḷa (if < \*Ḷ Vḅ Vḅ-) ‘overlap (eg. edges of book-cover)’; 3 Bolewa liḅḅ- ‘bedecken; to cover’ [LkB]; C 3 FK Ḷyavə ‘to cover; case, wrapper’ [BINd]; 10 ZB Ḷuḅ ‘couvrir, recouvrir; cover; overlay’ [Sa].

Noun deriv.: C 7 Zulgo Ḷimbi ‘couverture pour le calabasse-panier, a calabash-covering’ [ZIL].

Verbal deriv.: C 2 Bura ḶiḶubila ‘cover entirely’ [Ann].

**411. \*Ḷ Vḅ- ~ \*Ḷ Vmb-** ‘to mix, to knead’: W 4 Paa Ḷaḅāā ‘knead’, Warji, Kariya laḅ-, Siri Ḷaḅa (irreg. Ḷ) ‘mix, knead’ [Sk]; 3 Bolewa lomb- ‘vermischen, to mix’ [LkB], Ngamo lambâ ‘grind a wet mixture, blend, mix’ [NEH]; C 10 ZB Ḷap (-p < \*-b# is regular) ‘mélanger de façon homogène’ [Sa]//Arab šʔb ‘mêler, mélanger’ [BK 1284], Sab s<sub>2</sub>wb-n ‘mixed (of) various kind’ [OH 313], Eg šby (18) ‘mischen, mix’, šb<sub>3</sub> (OK) ‘zusammenmischen; commingle’ [EG 436] in AA N 69 \*šab ‘mix’, OS 2315.

Noten possible deriv.: W 2 Mushere ku-lup ‘mix’, Goemay Ḷu-lup ‘mix’ [TAS:207] (if not pl. in -p).

Note E 1 Kera hálḷé ‘kneten; knead’ (if < \*ha-ḶVb- ) [Eb].

**412. \*Ḷ Vmb-** ‘to beat’: W 4 Jimbin Ḷamb- ‘beat’ [SkNB]; C 5a Hide

ʒəmbay ‘to knock down’ [BrH], 6 Daba ʒambay ‘le fleau pour battre le mil, a flail’ [Lnhf].

Noun deriv.: W 5 Zaar ʒambar ‘whip’ [CrZ]

Verbal deriv.: C Mafa ʒómbát- ‘taper sur un objet pour l’aplatir; to flatten an object’ [BaMaf]. Alternatively may be related to W 4 Warji ʒambu, Diri ʒamba ‘thin, become thin’ [SkNB]

413. C \*ʒ Vb- ‘to have buds, sprouts’: 10 Masa ʒìb ‘avoir des boutons’ [CC]; Noun deriv.: 7 Ould ʒimber ‘rejeton, bourgeon, a sprout’ [KOu]. A pl. form? Cf. ‘leaf’.

414. \*ʒ VbV ‘a small hut’: W 3 Tng lubo ‘straw hut in the farm’ [JgT]; 4 Cagu ʒabi ‘entrance hut’ [SkNB]; C 7 Mbuko ʒəben ‘couloir entre le grenier et le mur de la concession; corridor’ [GNT]; E 2 Lele lubú ‘petite case dans les champ; small hut in the fields’ [WP].

Note possible deriv.: C \*mV-ʒ VbV ‘roof, shed’: 4 Gude mà-làbá ‘storage rack for corn stalks which serves as an awning over the door of a woman’s hut’ [Hs]; 7a Sukun mə-ʒəba ‘roof over court yard’ [DS].

415. \*ʒ Vb- ‘huge, large’: W 1 Hs záb-géegè ‘huge’; 3 Krkr ʒabà-dčà ‘huge’ [GK]; C 2 Bura ʒibu-tu ‘large and long and wide (person)’ [Ann], 7 Mbuko ʒəbà-dám ‘large’ [GNT], Zulgo ʒabà-túm ‘large’ [ZIL]; E 2 Lele libé ‘trop grand’ [WP].

415a. C 7 \*ʒ VmbVr- ‘to (make) fat, to swell’: Mofu -ʒáʒəmbər- ‘(faire) grossir, enfler, to (make) fat, to swell’ [BaMof]; Mbuko ʒambar ‘gonfler, to swell’ [GNT].

Derived from \*ʒ Vb- ‘huge, large’

Cf. N 64. \*ʒ VbV ‘big’ > ‘strong’.

416. \*ʒ VbV ‘kind of flying insect’: W 4 Warji ʒəb-ai ‘butterfly’ [SkNB]; C 4 Gude álabá ‘kind of fly’ [Hs]; 7 Mafa ʒəba ‘insecte volant sp., kind of

flying insect' [BaMf]// Cf. ECush Bur slubi 'dragon fly'.

417. \***ʒ VbV** 'skin': C 7 Muktele ʒáp (-p# < \*-b-) 'skin' [CLR]; E 2 Lele kī-lābá 'skin' [CLR].

418. \***ʒ VbV** 'bird of prey (kite, eagle)': W 7 DB lef (<\*leb#) 'kleiner Falkenart' [JgR]; C 5 Podoko ʒába 'big bird' [JL]; 7 Mbuko ʒə̀ba 'aigle; eagle' [GNT].

419. C \***ʒ VbV** 'wing': 5 Guduf, Gava, Cikede ku-ʒə̀ba 'wing' [HmG] (Note Glavda ʒə̀bá nʒuura 'palm branch' [Rp]) // cf. Arab šuʿb- 'branch' [BK 1235].

419a. \***ʒ VbVdV** 'wing, shoulder, armpit': W 4 Miya ʒə̀bədi 'shoulder' [Kr:52], ʒə̀bədi, Warji ʒabàdái, Kariyaiya ʒábàdó [SkNB] 'wing, shoulder' [SkNB]; E 1 Kera alə́bədì 'Achselhöhle, (creux de l') aisselle; armpit' [Eb].

421. \***ʒ VbVrV** 'kind of corn (millet)': W 1 Hausa zábráá 'millet'; C 5 Wnd ʒéberè 'ocra' [LK: 122], Malgwa ʒə̀bərə 'ocra' [Lr]; 7a Sukun ʒyabər 'maize' [DS], xlabir [Meek]// Hbr šeber 'roughly broken grains' [BK].

422. \***ʒ VbV** 'pricky fence': C 7 Mofu -ʒə̀b- 'cloturer (avec les épines, avec des nattes); entourer; to fence with pricky branches, with mats', me-ʒə̀bey 'clôture faite avec des épines, pricky fence' [BaMof]; 9 Mbara ʒə̀bá 'fence', Mnj ʒə̀b 'parc à bétail; cattle pen' [TrMba, Mnj]; E 1 Kera laḅi coll. 'mit Dornen umlegter Platz zur Aufbewahrung der Ernte; clôture des épines pour mettre les récoltes; pricky fence' [Eb] // Gz sábsaba 'interwine, be fenced in, encircled by leaves' [LsG 526 ], ? Mhr s̄bk 'to link, to make a fence' [JM 371].

Note C 9 Mnj ʒup, Masa ʒap 'cloture d'épineux; pricky fence' [Mo]. Most probably, the same as \***ʒ VbV** (-b# > -p).

Cf. N 56b. *\*VbV* 'fence made of hay, mats'.

423. *\*VbV* 'fear, danger, disaster' [attested mostly in deriv.]: W 1 Hs zùḥwìiniyaa 'feeling of fear'; 3 Ngamo àlòbà 'disaster' [NEH]; C 7 Mofu maa-ḡáb 'danger' [BaMof].

424. *\*Vb-* 'all, also': W 4 Paa ḡìḥu 'all' (quant) [MS]; C 5 Glavda ḡàḡa 'too, also, again' [Rp], Malgwa ḡáḡe 'auch, also' [LrD].

424a. *\*Vb-* 'to pile; a pile': W 1 Hs zúbò 'a pile'; C 6 Daba ḡàḡ 'ajouter au-dessus, to add above' [Lnhr]; 10 ZB ḡùḡ 'mettre en tas; to pile' [Sa].  
Verbal deriv.: W 3 Ngamo làḡkô G (VN làḡà) 'to pile things, grass' [NEH].

C 7 Mofu -ḡámá- 'mettre l'une sur l'autre; put one thing on the other' [BaMof].

Note C 2 Bura ḡafta 'to gather 'sukwar' onto the 'diva' in one's fingers' [Ann]. ? -ft- < \*-bt-, regressive devoicing.

Note *\*VmbVHV* 'pile of grass': W 1 Hs zúmbúgè 'pile of grass, weeds'; C 7 Mofu ḡámahw 'tas de tiges de mil' [BaMof]. If not the pl. form of the word for 'grass'.

Cf. N 42. *\*Vb-* 'to collect, gather', note that both roots are attested in Paa.

425. *\*VbV* 'sorrel': C 10 ZB ḡèḡè 'oseille de Guinée' [Sa], ZD ḡièḡ 'oseille; sorrel' [Cpr].

Deriv. (?pl.): W 5 Dott ḡambər 'red sorrel, Hibiscus' [CrD].

426.C *\*VbV* 'green': 5 Glavda ḡàḡàḡ-ḡàḡàḡ, Dghw yo-liḡacà 'green' [Kr:275], Cinene, Guduf ḡábàḡ-ḡábàḡà [Kim]; 7 Gisiga ḡàḡḡuḡor 'grün, blau; green, blue' [LkG]; 8 Log ḡébaa 'grün, green' [LkL].

The same as 'leaves' ?

427. \***ʒ VbVh-** ~ \***ʒ VmbV** ‘leaves (of a plant)’ (only different pl. forms and derivatives are attested): C 2 Bura *ʒambu* ‘tobacco leaves’ [Ann]; 7 Mafa *ʒambay* ‘feuille de mil’ [BaMaf]// SCush Dah slav- ‘leaf’, slavv ‘leaves’, Alagea *slaba* ‘bush, thick undergrowth’ [Eh 208], OS 2318.

427a. Deriv. ( from old pl.?): C 5a Hide *ʒambga* ‘blatte’ [BrH], 7 Mofu *ʒémbérék* ‘feuille de plant sp.’ [BaMof].

427b. W \***ʒ VmbV** ‘food wrapped in leaves’: 1 Hs *zàḅu*, *zambu* ‘kind of food’, *zàmbuu* ‘sort of blancmanger (wrapped in leaves)’, 3 Bolewa *làmbà* ‘food made from beans and wrapped in leaves’ [GAB], Ngamo *làmbà G* ‘steamed cakes wrapped in leaves’ [NEH].

Note some plant names originating from Ch \***ʒ VbV** (not necessarily of the same origin):

W 1 Hs *zàbiibi* ‘plant yielding yellow dye’;

W 6 Ngz *ʒàbùwàk* ‘Castor oil plant’ [SchN];

C 3 Bana *ʒəwbà* ‘kind of tabac’ [GLBn].

428. W \***ʒ VbVdV** ‘cold’: 2 Sura *laapíit* (of not \**laa-pit*) ‘Kälte, cold’ (n.) [JgS]; 4 Paa *ʒíbiqaa* ‘cool (of sun)’ [MS].

429. C \***ʒ V[b]-** ‘white, cloudy’: 3 FK *ʒwàvə* ‘cloud’ [BINd], Kap *ʒàvu* ‘white’ [Kr:272], 7 Muyang *ʒivʒiv* ‘cloudy’ [SmM].

429a. C \***ʒ VmbV** ‘cloud’: C 2 Bura *ʒamba* ‘cloud’ [Ann], *ʒambà*, *ʒimbaru* (also ‘storm’), Cibak *ʒəmba* (cf. Hildi *ʒamā*, Wamdiu *ʒamà*) ‘cloud’ [Kr:105]; 10 ZD *ʒūmbūr* ‘nuage’ [Cpr].

Note C 7 Mefele (dial.) *ʒava* ‘sky’ [CfM].

Cf. StI NN77-79 \***IVbV** ‘cloud, cotton, white’.

430. C 7 \***ʒ Vb-** ‘to be exhausted’: 7 Mbuko *ʒév* ‘mort, sans reaction; dead’ [GNT], Mada *ʒʒév* ‘tired (work) too much’ [BaMd].

Verbal deriv.: 7 Mada áǵbàč ‘faire revenir le principe vital (rites en agitant des feuilles)’ [BaMd].

431. C \*ǵVbV ‘empty’: 5 Glavda ǵiba ‘empty’ [Rp], 7 Muyang ǵav ‘empty (water)’ [SmM].

432. C \*ǵVbV ‘left’: 3 HF ǵæḫəw, HB wà ǵùpa ‘left’ (wà ḏafa ‘right’) [Kr:330,329], Bana ǵèḫi [GLBn].

[GCl \*ǵaḫa ] ‘left (direction): Bana ǵèḫi, Parkwa ǵaḫa, Sukur ǵabay, Hide ǵaḫa [BrH].

‘left hand’: C 5 Mnd ǵrvə žāḫa, Podoko ḫar žāḫa, 9 Gidar vo ǵāḫay, 10 Mus ḡḡor ǵāḫay [Mo].

432a. Note C \*ǵVbV ‘right (direction)’: 6 Daba ǵāḫāy ‘à gauche, to the right’ [Lnhr]; 5 Podoko ǵāḫa ‘main gauche, gaucher, right hand, to the right’ [JL].

Note that CCh \*ǵVbV ‘five’, most probably, has the same origin as WChadic \*bVɤ’V and will be under discussion elsewhere.

433. C \*ǵVv- ‘to filter, to strain’: 1 Boga ǵiv-zi ‘pour’ [Kr:424]; 4 Gude ləvə ‘strain, leek through, bleed’ [Hs]; 6 Daba ǵəv ‘filtrer’ [Lnhr]; 7 Ould -ǵav ‘filtrer’ [KOu].

434. C \*ǵVbVv- ‘to swim’: 5 Podoko ǵǵava ‘swim’ [JL], 7 Mafa nǵǵov- ‘nager, swim’ [BaMaf], Mbuko ǵǵov ‘se baigner dans le péché’ [GNT].

435. \*ǵVvV ‘mat, mat-fence’: 5 Glavda ǵàvə ‘weaving; mat’ [Kr:100, 233], Gava ǵəvə, Zgh ǵàvə ‘mat’ [Kr], 5a Hide ǵavak ‘grass mat used as a wall’ [BrH], ‘clôture en paille; fence made of hay’ [Eg]; 6 Daba ǵàvə ‘la clôture faite avec des nattes’ [Lnhr]; 7a Sukun ǵava ‘mat, zana’ [DS]; 7

Mofu *ʒ*ava ‘natte de clôture très longue’ [BaMaf]. Probably a borrowing.  
 Cf. W (redupl.): 1 Hs záu záu (? < zafzaf# < \**ʒaf-ʒafV* ‘entrance hut (made of grass mats)’).

436. W \**ʒ/Vf*- ‘to farm’: W 1 Hs záfà ‘the farm preparation *kauti* (turning over the soil preparatory to planting)’ 3 Tng lablap ‘farming a the end of the rainy season’ [JgT].

437. \**ʒ VV*- ‘hot (weather)’: W 1 Hs záfíi ‘heat’, zàzzaafaa ‘hot’, zúffa ‘hot weather’, záfàfaa ‘heat up, make hot’, cf. [SkHs 293]; C 7 Oul *fif fif* (regressive devoicing?) ‘chaud’ idf. [KOu] // Ugar špš ‘sun’ in AA N 63 \**šVp-* ‘hot weather’

Note possible deriv.: W 1 Hs zàuzau-tà (< \*zaf-zaf-ta, see [NmKL]) ‘become hot (sun), become severe (pain)’.

437a. W \**ʒ/Vf*- ‘to burn, to heat up’: 2 Angas lap lap ‘the ascending of a flame’ [Fl], lap ‘to burn’, Tal laph ‘to burn’ tr. [CLR, TAS:223] // Mhr šff ‘to put (meat) on to roast’ [JM 372].

438. \**ʒ Vp-* ‘to desire, to love’: W 2 Goemay k<sup>w</sup>a-lap ‘a man or woman indulging in lewdness’ [TAS:212]; C 7 Mofu *ʒ*əv- ‘chasser l’adultère’ [BaMof]; 10 ZB *ʒ*ap ‘désirer, to want, to desire’ [Sa]; E 5 Bidiya lap ‘avoir des relations sexuelles’ [JgB] // Arab ššf ‘occupy completely (love)’ [BK 1240], Mhr šff ‘to like so, smth’, Arabic (Yem) šaff- ‘to have an affection for’ [Oh N312].

Cf. W Dera lambé ‘to court or seek a woman’ [NmK].

439 \**ʒ(y)VP-* ‘to search’: W 2 Angas lap ‘to look for, investigate, search’ [Fl], lap ‘suchen’ [JgA], Sura lyap ‘beaufsichtigen’ [JgS], Kofyar lyap ‘to look for’ (accord. to TAS:238, also Mupun yāp (< \*lyap) ‘to look for smth that is missing, search’ [FrM]; C 10 ZB *ʒ*ap ‘rechercher; to search, to investigate’ [Sa].

440. **\*ʒ Vp-** ‘to cry, to answer’: W 2 Sura láp ‘answer’ [JgS], Mupun láp ‘answer a call’ [FrM], Angas lap [Fl, Jg], lab (< \*lap) [Or] ‘answer’, Goem lap [Fp]; 3 Ngamo lap [VbNg], Bolewa low- [LkB] [Stl N 113. **\*IVp-/ʒ Vp-** ‘to answer’]; C 4 Bana ʒàpó ‘crier, appeler, cry, call’ [GLBn]; 6 Daba ʒap ‘s’écrier’ [Lnh]; 7 Muyang ʒapay ‘speak’ [SmM].  
Cf. a deriv.: W 3 Krkr t̄ə-lfu-sù ‘answer’ [Kr].

441. **\*ʒ Vp-** ‘to wear clothes’: W 2 Angas lip ‘to dress’ [Kr], Mupun lep ‘to wear, to put on’ [FrM], Sura lep ‘sich anziehen; to put on’ [JgS]; C 10 Peve ʒap ‘wear’ [Vn].  
Deriv.: W 5 Zaar ʒápm ‘to cover’ [CrZ].

442. **\*ʒ(w)Vp-** ‘to boast, to be arrogant’: W 2 Gmy lubbp ‘to show off’ [TAS:237]; C 7 Mbuko ʒāpáy ‘orgueil; arrogance’ [GNT], Mofu ʒap- ‘se vanter, boast, se montrer; to pose’ [BaMof], Zulgo ʒapá ‘vantard, boastful’ [ZIL].

443. **W \*ʒ Vp-** ‘to pierce’: W 2 Angas lap, lep ‘to insert’, lab as ‘pierce’ [Fl]; 3 Pero lépè ‘spear with a wide blade’ [FrP], 5 Saya ʒop ‘stab, pierce’ [Cs, Cs N830]; Zaar ʒop ‘prick’ [CrZ], Dott t̄ep (only a voiceless lateral) ‘prick, pierce, stab’ [CrD]; 6 Ngz ʒapú ‘pierce, stab’ [SchN] // Mhr s̄fw ‘sew leather with an awl’ [JM 373], SCush Dah dlapanað ‘to prick, to stab’ [EEN]. Note voiced fricative lateral in Dahalo.  
Cf. a noun deriv.: C 7 Mada óʒʒòv (if -v# < \*-p) ‘hole made by insect, catapillar’ [BaMd].

444. **\*ʒ Vp-** ‘broad and flat (leaf)’: W 2 Gmy par-lâap [lɔɔp] ‘something flat and wide’ (not the same as liaap ‘thin and flat’, as in [TAS:224]); 3 Tng lollob, pl. lollob-lolop ‘broad and flat (leaf, etc.)’ [JgT]; C 7 Mafa ʒópa’a ‘large et plat (feuille, morceau de fer.); big and flat (leaf, piece of iron)’

[BaMaf].

Cf. N 60. **\*#V(?V)b-** ‘to be, to make flat (surface)’.

**445. C** **\*ɓip/b-** ‘pocket, sack’ (? a loan): 3 Bana ɓipà ‘poche’ [GLBn]; 5 Malgwa ɓiba ‘pocket’ [Lr], Podoko ɓiba ‘poche’ [JL], 5a Hide ɓibi ‘sac’ [BrH], 8 Mak libu ‘pocket’ [AIM]; 9 Mnj ɓubu ‘poche’ [TrMnj].

Cf. 7 Mada ɓiybá ‘poche d’habit’ (**empr. mand.**) [BaMd].

**446. \*ɓVd-** ‘to pull (out)’: W 1 Hs zazzaḍoo ‘pull, draw out’; C 9 Mulwi ɓìdí ‘tirer d’un coup sec’, ɓàt adv. [TrMlw], Mbara ɓát (-\*t# < -\*d#) ‘tirer d’un coup sec; pull by a start’ [TrMba] // Akk šadādu ‘draw, drag’, Eg šdy ‘aufziehen’ (Pyr) [EG 564], OS 2322.

**447. \*ɓVVd-** ‘to remove’ (> ‘to postpone?’): W 3 Bolewa laad- ‘aufschieben, to move aside, to postpone’ [LkB] (cf. Tng laade ‘to postpone’ [JgT]; C 5 Podoko ɓəḍa ‘push around’ [JL]; 7 Mofu ɓəḍak<sup>w</sup>- ɓəḍak<sup>w</sup> ‘se déplacer lentement en dodelinant, to remove’ [BaMof]; E 1 Mobu le:ḍe ‘pousser, se déplacer’ [Lns], 6 ? Mok líḍḍè, léḍḍè ‘(s’) éloigner, to move away’ [JgMk] // cf. Arab šd? ‘make go ahead (camels)’ [BK 1206].

**448. \*ɓVd-** ‘to cut (vegetables, hair)’: W 3 Dera laḍ- ‘cut’ [CLR]; C 6 (redupl.) Daba ɓəḍāḍ ‘débrousser la champ’ [Lnhr] (cf. Daba ɓda ‘cut’ [CLR], can not be found in [Lnhr]); 7 Cuvok mé-ɓəḍəy ‘couper (legumes); cut (vegetables)’ [Ndo]; Muyang ɓeḍey ‘shave edges of hair to make a level’ [SmM];

**448a. \*ɓVd-** ‘to cut through’: W 6 Ngz ɓəḍú ‘split open, break open; cut through, pass through’ [SchN]; 7a Sukun ɓəḍa ‘to slaughter’ [DS].

Cf. N 104. **\*#VVd-** ‘to cut (branches, trees), to chop’.

**450. C 7 \*ɓVd-** ‘to scatter’: 7 Gisiga (ɓəḍ) ‘sich zerstreuen, to scatter’ (?)

[LkG]; Mada áǂǂàǂà 'être éparpilé, étalé, dispersé; to be scattered',  
éǂǂèǂéǂ 'éparpilér, étaler, disperser' [BaMd].

451. \*ǂVǂV 'thorn, to scratch': W 3 Tng ledo 'thorn' [JgT]; C 7 Mada  
éǂǂé 'érafler, égratigner, écorcher; to scratch'; éǂǂé 'kind of a small  
thorny bush' [BaMd].

Note W 5 Zaar ǂyaat (if < \*ǂyaad) 'to write' [CrZ].

Cf. N 109. W \*ǂVVǂ- ~ \*ǂVǂǂ- 'to scratch'.

452. \*ǂVǂ- 'to be, become big, tall': W 1 Hs zád/dò 'a tall, well made  
person'; C 7 Mada ǂǂǂǂ 'gros, plain à bloc' [BaMd], Muyang ǂǂǂ  
'huge' [SmM], cf. Ould -ǂūwūǂ 'grandir sans difficulté; grow without  
difficulty' idf. [KOU] // Arab šadiḥ- 'large, abondant' [Bk1204]. Cf. N 464  
W \*ǂVǂV 'big, fat'.

Deriv.: C 7 Ould ǂǂǂǂǂǂ 'gros' idf. [KOU].

W cf. 1 Hs zaadaaraa (Tas) 'a biggish youth whose strength is not  
commensurate with his size'.

453. \*ǂVǂV 'valley, canyon': W 2 Mupun léet 'canyon, valley' [FrM]; C 7  
Muyang ǂǂǂǂ 'pass, valley, gap' [SmM].

Less probably, Mupun is related to C 7 Mada *Ida* 'borde (de ravin, de rivière)',  
as in StI N 131: \*ǂVǂV '(border of a) ravin', cf.).

Note W 1 Hs zúǂúm 'emph. depth'.

454. \*ǂVwǂǂ- 'convulsions': W 1 Hs zóǂǂ (if < \*zwd) 'wriggle along the  
ground (child)'; C 7 Mafa ǂǂǂǂ 'convulsions (chez le nourrissons)' [BaMd].

455. W 4 \*ǂVǂV 'nape': W Warji ǂǂǂ-ai, Miya lūǂǂ, Mburku lūǂǂ,  
Kariya lūǂǂ 'nape' [SkNB]. (Note W 4 \*ǂVIVǂV 'lion' with the same  
\*ǂ- > l- shift).

456. (?) C \***ʒ Vd-** ‘ocra’: 3 HN *ʒdìyàwà*, HB *ʒdyè*, HF *ʒdyèwà*, FK *nʒōw*, HG *ʒtèywa*, FK *ngù-ʒdyàʔwu* ‘ocra’ [Kr 219]; 5 Podoko *ʒáɖava* ‘esp. de mil’ [JL].

457. C \***ʒ Vd-** ‘be dangerous, difficult’: 5 Glavda *ʒáɖà* ‘trouble, percecusion’ [Rp]; Podoko *ʒáɖa* ‘souffrance; hardship [JL], 7 Mada *ʒáʒáɖá* ‘difficile, dangereux’ [BaMd], Ould *ʒáɖay* ‘être piquant, redoutable, dangerous’ [KOU], *ʒáʒáɖá* ‘difficile’ [KOU], Muyang *ʒáɖà* ‘hardship’ (< Mandara) [SmM].

Cf. 7 Gisiga *ʒada* ‘Verfolgung; pursuit’ [LkG].

458. C \***ʒ Vʒ Vd-** ‘be expensive’: 5 Malgwa *ʒáʒáɖe* ‘expensive’ [Lr], 7 Ould *ʒáʒáɖá* ‘difficile; cher; difficult; expensive’ [KOU], Mada *ʒáʒáɖá* ‘cher (prix)’ [BaMd]. Note contamination with ‘be dangerous, difficult’.

459. C \***ʒ VdV** ‘light, morning’: C 3 HG *tì-ʒìʒdì* ‘white, light’ [Kr: 272, 275], HF *bìr-ʒìʒde* ‘light’ [Kr]; 5 Glavda *ʒədùrà* ‘morning’ [Kr:121], *ʒádùrà* [Rp].

460. \***ʒ VVt-** ‘to tear (off)’: W 5 Zaar *ʒaató* ‘tear, be torn’ [CrZ], Buli *ʒáadən* (*t-* < \**ʒ-* is regular) ‘tear’ (tr.) [Cs N838]; C 3 FK *ʒtikèvù* (regressive devoicing in contact: \**ʒt-* > *t-*) ‘tear’ [Kr:380]; 10 ZB *ʒat* ‘arracher; tear off’ [Sa], ZD *ʒat* (< \**ʒat*) ‘tirer avec force, arracher’ [Cpr] //Gz *ʒaʒaʒa* ‘tear apart, split, rend’ [LsG 538].

461. \***ʒ Vt-** ‘to stretch’: W 2 Angas *lweet* ‘stretching capacity of rubber’ [Fl] (Note Sura *léet* ‘ohnmächtig werden’ [JgS]. ? = ‘to stretch dead’, *muut* ‘to die’); C 7 Mada *ʒʒat* ‘étirer’ [BaMd]; E 5 Bidiya *liit* ‘étirer, tendre; stretch’ [JgB], E 6 Mok *liite*, *léete* ‘tendre la corde d’un arc; strech a bow-string’ [JgMk]// cf. Sab *m-s₂wḥt-t* ‘linear measurement=5 cubits//span (or larger) [Oh 28 ].

461a. \***ʒ VtV** ‘long (and pointed)’: W 1 Hs zéetée ‘being long and pointed’; C 2 Bura ʒitu ‘long’ [Ann].

462. \***ʒ Vt-** ‘to plait, to sew’: W 7 Bokkos lat ‘spinnen, erben, flechten; to spin, to weave’ [JgR]; C 9 Musgu ʒiǎéti ‘nähen, to sew’ [LkM].  
Cf. E 5 Dng littiya ‘cobweb’ [Fd].

462a. C \***ʒ VtV** ‘mat’: 10 Masa ʒāt ‘la natte’ [CC].  
Deriv.? (< \***ʒ Vt-**) C 7 Mofu éʒed, ʒed ‘vestibule, veranda recouverte en nattes; veranda covered with mats’ [BaMof].

463. \***ʒ VVt-** ‘much’: W 2 Mushere lot ‘plenty, much; sufficient’ [TAS:234]; C 2 Bura aʒat ‘much (of shelled corn in gourd)’ [Ann].

464. W \***ʒ VVtV** ‘big, fat’: 1 Hs zaaṭi, zaači ‘height, greatness, size’; 5 Zaar ʒót ‘describes a fat person’ idf. [CrZ] // Arab štt > šatt- ‘grand’ [BK 1229].

465. W \***ʒ VttV** ‘squirrel’: W 3 Kirfi latta ‘flying squirrel’ [SchB]; 5 Guus ʒāci, pl. ʒətaay [CrG], Pol ʒətaal ‘squirrel’ [Cs N 280].

466. \***ʒ Vt/d-** (< Ch \***ʒ Vt-**?) ‘to dig’: W 4 Jmb ʒót- (-t- < Ch \*-t-, Chadic \*-t- more often yields Jimbin -y-) ‘dig’ [Sk-CLR]; C 7 Mofu ʒəḍ- (-ḍ- < \*-t-) ‘creuser (terre, trou); dig (earth, pit)’ [BaMof].

467. \***ʒ Vt/d-** (< Ch \***ʒ Vt-**) ‘to break, beat (heavily), to demolish’: C 5 Zaar ʒut ‘demolish, cause (house) to fall down’, ʒut ʒut ‘noise of pounding’ idf. [CrZ]; C 2 Bura ʒit ‘sound of cane hitting a person’ [Ann], 3 HG ʒtunde ‘break in pieces’ [Kr:431], 5 Malgwa ʒəḍa ‘beat strong thing like metal’ [Lr] // Arab šḥt ‘détruire, destroy’ [BK 1228].

468. C \***ʒ Vt/d-** (< Ch \***ʒ Vt-**) ‘(to) flame’: 2 Bura ʒuta ‘to be ablaze’ [Ann];

7 Ould  $\beta\acute{e}d$  'petite flamme' idf. [KOU] // Arab  $\acute{s}wt$  II 'brûler, gâter (froid); to burn (cold) > flame' [BK 1287],  $\acute{s}y\acute{t}$  'brûler, consume par le feu' [BK1291], Mhr  $\acute{s}wt$  'fire' [JM 388].

Note C 3 HB  $\beta\acute{d}ira$  'ashes' [Kr:128]. (pl. in -r ?).

469. C  $\beta Vt\acute{d}V$  (< Ch  $\beta V\acute{t}V$ ) 'kind of fly': 1 Tera  $\beta i\beta it$  (def. form  $\beta i\beta it\grave{o}$ ) 'tse-tse fly' [NmT]; C 12 ZB  $\beta i\acute{d}i$  'taon' [Sa].

470.  $\beta Vh-$  'to pity, to regret': C 7 Mbuko  $\beta\bar{a}h$  'plaindre, to feel sorry, pity' [GNT]; E 6 Mok lay- 'regretter, to regret' [JgMk].

471.  $\beta Vh-$  'to dip out': W 6 Ngz  $\beta\check{a}u$  'dip out' [SchN]; C 5 Podoko  $\beta aha$  'take out (honey)' [JL].

472. C 5  $\beta Vh-$  'to treat badly, to curse': Podoko  $\beta ehwe$  'brimer, maltraiter, to treat badly' [JL]; Malgwa  $\beta a\beta e$  'abuse, curse' [Lr].  
Noun deriv.: Malgwa  $\beta a\beta \acute{o}r\acute{e}$  'Fluch, a curse' [LrD].

473. C  $\beta Vh-$  'to cry': 7 Ould  $-\beta\bar{a}h\bar{a}y$  'annoncer, crier, aboyer' [KOU]; Mada  $\acute{a}\beta ah$  'crier, chanter (coq); cry, sing (cock)'; Mbuko  $\beta\bar{a}h$  'crier' [GNT], Muyang  $\beta ah$  'cry out' [SmM], Mofu  $-\beta a\beta ah$  'ronfler'; (fig.) parler fort, gronder' [BaMof].

Cf. 5a Hide  $\beta \acute{o}yay$  'answer' [BrH].

Cf. N 371.  $\beta V$  'to sing, to speak' >  $\beta V\beta V$  'cry'.

474. C  $\beta Vhw/y-$  'to strike heavily': 2 Bura  $\beta au$  'the sound of a cane or stick striking an object' [Ann]; C 5 Podoko  $\beta \acute{o}ha$  'cogner, bousculer; knock over' [JL]/ 7 Mofu  $\beta \acute{a}y$  'frapper; strike' [BaMof]; 7a. Sukun  $\beta yi$  'to beat, crush',  $\beta yiy$  'to thresh' [DS]; 10 ZB  $\beta \acute{e}$  'frapper très fort, damer; strike heavily' [Sa].  
Cf. N 6.  $\beta V$  'to beat (a drum), to knock'.

475. \***ʒ Vh<sup>w</sup>V** ‘lion’: W 3 Krkr čága-**ʒ**áú ‘lion’ [LkK] (a loan from Ngizim?); 6 Ngz žága-**ʒ**áú ‘lion’ [SchN] (for the first part of the compound cf. W 3 Kirfī šagga ‘wild animal’ [Stl]); C 2 Bura n**ʒ**yèwi ‘cat’ [Kr:199], nhyèwi (< hy <\***ʒ**y-) ‘the cat’ [Ann]; 7 Oul mà-**ʒ**òh-pò ‘lion’ [KOu] 10 Masa **ʒ**ó ‘lion’ (**ʒ**a-na ‘he lion’, **ʒ**o-ta lioness’) [CC].

The same lexical unit in Masa was rendered by Mouchet with a voiceless lateral, namely **eóna** ‘lion’.

Note W 4 \***ʒVIVtV** lion’: Warji liliti-na [Gow], **ʒ**ələtə-na, Diri azələtu, Miya ləntə (<\***ʒ**ə-IVtV, compound?) [SkNB]).

475a. \***ʒ VhVk<sup>w</sup>V** (? \***ʒ Vh-k<sup>w</sup>V**) ‘lion’: W 1 Hs záaki ‘lion’, 7 Mada má-**ʒ**ahkwa ‘lion, Panthera leo’ [BaMd], Muyang ma-**ʒ**axk<sup>w</sup>o ‘lion’ [SmM].

476. \***ʒ VHVrV** ‘kind of bush’: W 2 Mupun lahór shrub *Carissa edulis*, lóor ‘shrub sp.’ [FrM]; C 5 Malgwa **ʒ**óra ‘kind of bush’ [Lr].

477. C \***ʒ Vh-** ‘difficult, scarcely’: 7 Mada **ʒ**ah **ʒ**ah ‘a grand peine, with difficulties’ [BaMd], Muyang **ʒ**ah scarcely’ [SmM], Ould **ʒ**àh**ʒ**ah ‘a grand peine, with difficulty’ [KOu], 7a Sukun **ʒ**ax ‘difficult’ [DS].

478. C 5 \***ʒ VyV** ‘to be hot (sun)’: Cinene **ʒ**əyà, Glavda **ʒ**iyà, Guduf **ʒ**iyè ‘hot (sun)’ [Kim], Glavda **ʒ**ùyà, Gava **ʒ**óyè, Cinene **ʒ**iyè ‘hotness’ [Kr:306]//cf. SCush \*slaḥ- ‘to burn smth’: Dah slaḥ- Maa -slahá [Ehret 210, N 18].

479. \***ʒ Vx-** ‘to scratch; to clear a farm’: W 3 Ngamo lawà ‘clearing land for planting’ [NEH], Krkr lawaa ‘clear farm’ [GK]; C 3 Bana **ʒ**ixó ‘gratter; to scratch’ [GLBn].

480. \***ʒ Vy-** ‘to eat, to swallow’: C 7 Ould **ʒ**əy ‘avalér; swallow’ idf. [KOu]; E 2 Lele leé ‘manger qqch dur’, láá ‘manger; eat’ [WP].

Note W 1 Hs zùgadi 'a gluton'.

481. \***ʒ Vg-** 'to shake, to tremble': W 1 Hs zázagaa (< zag-zaga< \***ʒ Vg-ʒ Vg-**) 'shake (out)' > 'clouds'; E 1 Mobu lage 'trembler; tremble' [Lns]; 4 Mawa suguj 'bouger, to move' [RbM] // Cf. Arab ššš 'remuer, agiter' [BK 1244].

Note C 7 Muyang ʒəgəč 'to frighten'. Caus ? 'to make tremble' = 'to frighten'.

Noun deriv. \***ʒ V(gV)-ʒ VgV** 'malaria, fever': C 5 Wnd ʒùg-ʒùgi 'fever' [Kr:255], Malgwa ʒáʒáge 'Fieber, Malaria; fever, malaria' [Lr].

482. \***ʒ Vg-** 'to stir, to mix': C 9 Mulwi ʒùʒùgi 'préparer (sauce, bouillie oubrevage épais); prepare souce' [TrMlw]// Arab šgg 'mêler' [BK 1191].

Deriv.: W 1 Hs zágámaa 'stirring (dye-pit)'.  
Note W 2 Angas wuluk, wulk (-k# < \*-g#) 'stir smth out of a hole with a stick' [TAS 407].

Cf. N 134. \***ʒ Vh-** 'to mix'.

483. \***ʒ VVg/y-** 'to strip off (leaves by hand)': W 1 Hs zaagaa 'strip off (leaves, millet from stalk), draw up water'; 2 Gmy luk 'strip off, tear off' [TAS 233]; C 2 WM ʒùgwùmdà, nʒùgomðu 'tear' [Kr:380], 3 Bana ʒywe 'arracher de la main de qqn' [GLBn].

Deriv.: C 7 Ould -ʒəgal 'arracher' [KOu].

484. \***ʒ Vg-** 'to hang' (tr., intr.): W 3 Tng looge, pl. looguke, loke 'to hang, suspend' [JgT], 6 Ngz ʒəgú 'sling over shoulder, under arm' [SchN]; E 5 EDng àlgiyē 'hängen; to hang' [Ebb] // Gz ságara 'entangle' [LsG 527].

Cf. C 7 Mada ʒəgləŋ '(accrocher qqch) qui ballotte' [BaMd]. ?Compound Cf. N 160. \***ʒ Vk-** 'to hang up'.

485. W \***ʒ Vg-** 'to putrefy, to spoil' (attested in derivatives, originated from

'dirt' ?): 1 Hs zágwányee 'putrefy (meat, fish)'; 6 Ngz ʒəgwàdú 'putrefy, go rancid, smell putrid' [SchN].

**486. W \*ʒ VVg-** 'go around': W 1 Hs záagà 'go round (to) a place', cf. [SkH 294].

Deriv.: 6 Ngz ʒàgdú 'move off road, go round, detour' [SchN].

Noun deriv.: W 1 Hs má-záagà 'a way round'.

**487. W \*ʒ Vg-** 'to beat, pound' (attested in deriv. only): W 3 Tng lagze 'beat and kill' =laaze [JgT]; 4 Mburku ʒəgəd- 'beat, pound' [Sk-CLR].

**488. C 7 \*ʒ Vg-** 'to be lost': Mofu -ʒəg- 'errer, vagabonder, se perdre, aller sans but, to error, go without aim', Mafa ʒəgóm-ʒəgómmaʔa 'sans savoir où il va, complètement perdu, to be lost' [BaMof, Maf].

**489. \*ʒ VgV** 'a string, snare': W Hs zága 'drum-string', máa-zágii 'a trouser-string'; C Ould ʒəgə̀dà 'lacet, piège, snare' [KOu].

Deriv.: C Mulwi ʒugùdí 'être difficile à délier; (be) difficult to untie' [TrMlw].

**490. \*ʒ VgV** 'sharp tooth': W 1 Hausa zága 'canine tooth', 2 Mushere da-ka-lak 'molar' [TAS:163]; C 7 Mafa ʒagaw 'croc d'animal' [BaMaf], Mada ʒyoč (if -č < \*-k) 'mâchoire' [BaMd]. Cf. 'harpoon'.

**491. \*ʒ VgV** 'harpoon, to pierce': W 1 Hausa zágóó 'harpoon (for crocodiles)' C 7 Gisiga ʒəge 'stechen, stossen' [LkG], 'pierce' [SkNB] // Arab nšr 'pierce with a spear' [BK].

Note: C 7 Mada áʒaŋglà (<\*ʒVng-l-) 'embrocher pour suspendre ou faire cuire; to spit' [BaMd].

Cf. C8 Makari lagan 'horn' [AlM].

492. \***ʒ VgV** ‘nest, hiding place’: W 3 Pero lúugò ‘nest’ [FrP]; C 5 Podoko ʒógwa ‘coverture, hiding place’ [JL].

Note W 5 Guus ʒuugí ‘keep quiet’ [CrG].

493. \***ʒ VgV** ‘fire-wood’: W 1 Hs zágábúu ‘logs of wood used in iron-smelting’; C 7 Mada áʒàk ‘kind of tree, used for fire-wood’ (-k# < \*-g-) [BaMd].

Note: C 7 Mofu ʒéʒegév ‘enveloppe sèche de tige (utilisée pour allumer le feu); dry covering of a stalk used to blow up fire’ [BaMof].

494. \***ʒ VgVn** ‘branch’: W 5 Guus ʒaŋ ‘branch’ [CrG], Zaar ʒyaŋdi ‘branch’ [CrZ]; E 3 Tum linʒè [CpT], 5 Ubi laaginyá [Alio], WDng léègè [Fd], Jegu liŋ-ne [JgJ] (if not related to \*IVgVn ‘basket’, cf. StI N 181).

495. C \***ʒ VgV** ‘forked (stick)’: 7 Zulgo ʒəga ‘épieu (pour creuser le tombeau); boar-spear’ [ZIL], 7a Sukun ʒegaw ‘forked’ [DS];

Deriv.: 7 Mafa ʒógám ‘fourche d’arbre’ [BaMaf]; 7a Sukun ʒagam ‘three-lined path’ [DS].

496. C \***ʒ VgV** ‘idiot’: 5 Glavda ʒáagà ‘foolishness’ [Rp], 7 Mafa ʒógólómáʔa, ʒógólóm-lómmaʔa ‘brachycéphale, aplati, plat (crâne)’ [Maf]// Hbr šgʕ (pu., hitp.) ‘to behave like a madman’, Judaic šgʕ (pa.) ‘to become insane’, Akk šegû ‘to rage, to be rabid’, Arab šaʒʕ-at- ‘faible d’esprit’, mašʒaʕ- ‘tout a fou, achevé’ [MK N 67], Hbr məšuggāʕ ‘mad’ [Barth 45].

Cf. C 5 Ould ʒàguzàr ‘démarche du fou’ [KOu]. Compound?

497. C 5 \***ʒogbV** ‘axe’: Wnd ʒógbà [Mo], ʒógbà [Lk:122] ‘axe’; Malgwa ʒogba ‘machet with sharp edges at both ends’ [LrD]. A loan?

498. C \***ʒ VgV-m** ‘wall, part of a hut’: 5 Podoko ʒágama ‘stone wall’ [JL];

Zulgo ʒígi-dìŋ ‘chambre du fils’, ʒìgìt ‘étage d’une maison’, ʒagam ‘muraille, wall’ [ZIL]; 9 Mnj ʒaga ‘mur d’enceinte’, Mbara ʒàgámáy ‘enclosing wall’ [TrMba, Mnj].

499. W 5 \*ʒ VgV ‘blind man’: Bade àʒgîn [Kr:309] ‘blind’, Ngz ʒògàyú ‘become blind’, ʒògíd ‘blind person’ [SchN]. Any relation to N 496 \*ʒ VgV ‘idiot’?

500. \*ʒ V[k]- ‘to build, to work’: W 3 Pero ʒigu, ʒiko ‘build’ [Kr N381]; E 2 Kabalai ba-ləgwiyə, Nanc ba-lugwiyə ‘travailler’ [CH].

Cf. E 6 Mok loókè ‘aller cultiver chez un paysan riche’ [JgMk]// SCush Irq slaqwe ‘ordering for communal work’, ‘slaqwas ‘make smth communal’ [MQK].

501. \*ʒ Vʔ- ‘to plait’: W 2 Angas lok ‘plait (string, hair)’ [FI] (see StI N196 \*IVk-/\*ʒVʔ-); [TAS 233]; 3 Tng ləkə ‘to sew, plait’; knit, knot’ [JgT], C 3 Bana ʒékʷ(ə) ‘filet; net’ [GLBn] //cf. Arab šwḵ ‘attacher une corde a un pieu’ [BK 1288], škw ‘lier, attacher; to tie’ [BK 1259].

Cf. Bolewa ləkku ‘be entangled’ [GAB].

Note possible deriv.: ‘cobweb’: E 2 Lele lāgrā (-gr- < \*-kr-) ‘toile d’araignee; cobweb’ [WP], 6 Mok ləkūdyū ‘toile d’araignee dans le mil vieux’ [JgMk].

502. C 7 \*ʒ Vʔ- ‘to help’: Muyang ʒakay ‘help’ [SmM], Zulgo ʒàk ‘aider; help’ [ZIL], Mada áʒàkà ‘aider, seconder; to help, to assist’ [BaMd].

503. C \*ʒ Vʔ/g- ‘to sow’: 4 Bch lùgáśé- ‘sow’ [Sk]; 5 Podoko ʒóga ‘semer’ (voicing in medial position, cf. ‘feather’) [JL]; 6 Daba ʒòkà ‘semer’ [Lnh]; 7 Gisiga A ʒeg (regressive voicing) ‘sow, plant’, Gisiga Mj ʒik ‘plant’ [LkG], Mafa ʒòka ‘semer’ [BaMaf], Mada éʒgè ‘semer du mil (au plantoir)’ [BaMd], Muyang ʒigi ‘sow, throw’ [SmM].

Note that 'to sow' may be derived from or related to 'to throw' (and thus, be of different origin than N 178 **\*V<sub>k</sub>-** 'to plant, to sow').

**504. \**ʒ* V<sub>k</sub>(k)V** 'big, to be bigger': W 1 Hs *zákkà* 'one who exceeds his companions'; C 7 Mbuko *ʒèk* 'big' [GNT]; Cuvok *má-ʒákává* 'grand' [Ndo].

Cf. a compound.: W 3 Tng *lòkdòm* 'abnormal growth (6th finger, twin gland-like growth on a sheep's neck)' [JgT].

Cf. C 7 Mofu *ʒakačaká* 'grand, gros (ventre)', *ʒákáča* 'big basket, plaited of gras' [BaMof].

**505. \**ʒ* V<sub>k</sub><sup>w</sup>/y<sup>w</sup>V** 'feather': 5 Cinene, Glavda *ʒákwa*, Guduf *ʒákwe* 'feather' [Kim], Cikede *ʒak<sup>w</sup>a* [HmG], Glavda *ʒáakwa* [Rp], Malgwa *ʒakwa* 'feather' [LrD], Podoko *ʒágwa* 'plume, coque' [JL]; 5a Hide *ʒuzúk* 'plume' [Eg], *ʒu-ʒuk* [BrH], Lmn *ʒəyana*, Vembo *ʒaʒan* 'feather' [HmG]; 7 Mafa *ʒoʒokw* 'collier en plumes de poulet et en fibre de haricot' [BaMaf]. Cf. W 1 Hs *zakuura* 'white ostrich feathers' (old pl.?)

**506. \**ʒ* V<sub>k</sub>VtV** 'forest': W 2 Angas *liit* 'a thicket' [Fl], Sura *ləgət* 'Wald' [JgS], Mupun *ləyət* 'forest' [FrM]; C 5 Glavda *ʒəkəta* 'forest' [Kr:146]. Note W 3 Tng *lagdo* 'locust-bean tree' [JgT] W 2 Mupun *lùgút* 'dry-zone mahogany' [FrM].

**508. 7 C \**ʒ* V<sub>k</sub>-*ʒ* V<sub>k</sub>V** 'flying ant': Mbuko *ʒəkʒak* 'termite aux ailes' [GNT], Zulgo *ʒəkʒək* 'termite ailée' [ZIL]

**509. C \**ʒ* V<sub>k</sub>V** 'chicken-basket': 7 Mofu *ʒákar* 'panier a poules' [JgMof]; 7a Sukun *ʒyikw* 'chicken coop (a hole or usually a large pot built into a bench' [DS].

510. \***ʒ Vḵ-** ‘to be eager, to love’: W 1 Hs zàḵu ‘be eager to get smth’, 2 Goemay ka-lak ‘eagerness, to be eager’ [TAS:163]; 3 Tng loko ‘love, want’ [JgT], Pero lálák ‘lust’ [FrP], 6 Ngz ʒàkwái ‘desire for’ [SchN] // Arab šwq ‘remplir qqn du désir de qq chose, exciter qqn (l’amour)’ [BK], Hbr tšōqat ‘to wish, to demand’ [KB:1043], tašūkā ‘Begierde, Sehnen’ [Barth 46], Mehri ʕāsōḵ ‘to like so., smth’ [JhM 32].

511. \***ʒ Vḵ-** ‘to pull (off), tear’: W 4 Paa ʒiḵaa ‘pull off’ [MS], 5 Guus ʒaktó ‘tear’ [CrG]; C 10 Masa ʒák ‘arracher (brutalement)’ [CC].  
Cf. N 159. \***ʕ Vḵ-** ‘to pull (out, down, up)’.

512. \***ʒ Vḵ-** ‘to strike’: W 1 Hs zàḵaa ‘to strike’; C 5 Podoko ʒəku ‘cogner; strike’ ifd. [JL]; 7 Mada áʒḵač (if -č# < \*-k) ‘battre, frapper; hit, strike’ [BaMd].

512a. \***ʒ Vḵ-** ‘to attack, to wrestle’: W 1 Hs zàḵaa ‘pounce on’; 3 Bolewa lìilìku ‘to wrestle with, struggle with’ [GAB].  
Noun deriv.: W 6 Ngz ʒəgìd ‘wrestling’ [SchN].  
Verbal deriv.: C 5 Malgwa ʒákála ‘ringen; fighting’ [Lr].

513. \***ʒ Vḵ-** ‘to prick; a sharp point’: C 7 Ould -ʒākḵāy ‘prendre qqch à l’aide d’une tige; déboucher à l’aide d’une tige; to prick with a stalk and take’; E 7 Tor lùkak ‘eperon’ [Vyc] // Gz šaqsaqa ‘bore, perforate’ [LsG 532].  
Deriv.: W 4 Kariya ʒəkəf-, Warji ʒəkəf- ‘stab, pierce’ [SkNB].  
Note possible deriv.: W 1 Hs zàḵáala ‘poke a stick into a hole to induce rodent, etc. to come out’.  
Cf. N 158. \***ʕ Vḵ-** ‘to pierce, to stab’.

514. W \***ʒ VVḵ-** ‘to breathe; to suck into’: 1 Hs zuḵaa (if not < \*zVC-k-) ‘draw tobacco smoke into the mouth; suck or draw water through a narrow channel’; 5 Guus ʒək ‘breathe’ [Cr] // SCush Dah slik- ‘suck in air to stop

crying' [EEN], cf. Hbr nšḵ 'küsste, to kiss', Arab nšḵ 'an etw reichen' [Barth 46].

515. C \*Ḷ V(~~k~~ʷ)V 'span, space': C 5 Podoko Ḷákwaḍa (note that \*-k- > Podoko -g-) 'espace entre la grenier et la case' [JL]; 7 Mafa Ḷekwa 'espace entre la cuisine et le grenier (trou dans la mur...); space between kitchen and barn (hole un the wall) [BaMaf].

516. C 7 \*Ḷ VI(Vhʷ-) 'to cross (legs)': Mofu -Ḷólw- '(se) croiser (le jambes, les bracer), s'accoupler; join' [Ba Mof]; Cuvok mé-Ḷòlèhèy 'croiser' [Ndo].

517. \*Ḷ VI- 'length': W 1 Hs záláu emph. length'.  
Deriv.: C 7 Ould ḶìlìḶ 'allongé' [KOU].

518. \*Ḷ VIV 'property, wealth': C 7 Gisiga Ḷile 'Besitz, property; Reichtum, wealth' [LkG], Mbuko Ḷílé 'richesse' [GNT]; Mofu Ḷeley 'richesse, économies' [BaMof]; Cuvok Ḷélèy 'richesse' [Ndo], Merey Ḷele 'richesse' [GMr]; E 6 Mok láalè 'richesse, riche' [JgMk]

Cf. 7 Muyang maḶawla 'field belonging to women and children (not to hauseholder), worked during free time' [SMu].

519. C \*Ḷ VIV 'sack made of fibre, net': 7 Mafa Ḷele 'sac en fibre', Mada Ḷàlá 'grand filet a calebasses' [BaMaf, Md]; Ould Ḷàláy 'sac' [KOU]; Mbuko ḶòḶìlé 'sac fait de la corde', Zulgo Ḷàla 'small sac' [ZIL] // Eg sšn 'spinnen' > 'Seile; to spin > 'rope' (AR) [EG 293], šnw 'net' (BD). The comparison is valid if Eg n originates from HS \*1. Eg verbs of the sšVC-shape are usually treated as Causatives.

520. \*Ḷ Vm- 'to be able, to have power': W 3 Bolewa lom- 'erreichen

(Stelle); to reach a position' [LkB]; 6 Ngz *ḡámú* 'make, do; be possible' [SchN]; C 7 Muyang *ḡam* 'have results' [SmM]; 8 Log *ḡóm, ḡim* 'können, genügen; can' [LkL]// SCush Asa *slam* 'allow' [Eh 208], Eg *sšm* (Pyr) (Kaus?) 'führen, leiten; to lead, to manage', *sšm.w* (Pyr) 'Führer, Leiter; chief', *sšm* (MR) 'Weisung; instructions, order' [EG 283, 288, 290].  
 Note W 1 Hs *záamé* 'rein in a horse'.

521. *\*ḡVm-* 'to pursue, to hunt': 9 Mulwi *ḡimi* 'poursuivre, chasser; pursue, hunt', Mbara *ḡim*, Mnj *ḡimi* 'chasser' [Tr Mnj,Mba,Mlw]; cf. 7 Mada *áḡam* 'se refugier; escape' [BaMd]; E 6 Mok *?ilmi* 'poursuivre; pursue, chase' [JgMk].  
 Cf. C 4 Gudu *laməcu* 'hunting' (in Stl N 257 *\*IVm-* 'to drive away, to hunt'). May originate from the present root as well.

522. *\*ḡVm-* 'to be, to happen' > 'things': W 1 Hs *záamá* 'be, become, happen, keep on doing', cf. [SkH 295]; C 7 Mada *ḡḡám* (sing. eḡe) 'choses, affaires, animaux, bad things' [BaMd], Muyang *ḡam* 'things in general' [SmM].

523. *\*ḡVm-* 'to narrate': W 5 Geji *ḡimi* 'say', *ḡəm-ti* 'tell' [Cs 704-8], Dokshi (Zeem cl.) *ḡam* 'say' [Sm]; E 1 Mobu *lómé* 'dire' [CTC].

524. *\*ḡ(y)Vm-* 'to shut, to plug': W 2 Gerka *lum* 'shut' [Fp]; 3 Bolewa *lum* 'plug hole' [GAB]; 5 Saya *ḡóm* 'close' [Cs], C 7 Mada *áḡḡám* 'couvrir (une surface); cover (a surface)' [BaMd] (a derivative?); 7a Sukun *ḡyama* 'close!' [DS] // Arab *šym* 'cacher, enfoncer, ficher, to hide, to stick into' [BK 1300].

525. *\*ḡVm-* 'to dodge; to be sly': W 3 Krkr *límā* 'to duck, to dodge' [GK]; C 7 Mbuko *ḡám* 'esquiver, to dodge' [GNT]; E 2 Lele *lúmá* 'etre malin, sly, cunning' [WP] // Sab *s<sub>2</sub>mt* 'malice; cunning, slyness' [Oh].

526. \***ʒ VVm-** ‘to pull (out)’: W 1 Hs *záamè* ‘draw out, slip out’; 4 Mburku *ʒam-* ‘pull, pull out’ [SkNB], C 10 ZB *ʒám* ‘tirer’ [Sa].

527. \***ʒ VVm-** ‘to love, to wish’: W 2 Gerka *luum* ‘to love’ [Fp]; C 2 Bura *ʒami* ‘to wish for smth’ [Ann] //note SCush Irq *sliʔim* ‘oversexed, sleep with a stranger’ [MQK].

Note possibl deriv.: W 1 Hs *sumuðii* ‘excessively keen, eager, expectancy’.

528. \***ʒ VVm-** ‘to count’: 1 Hausa *záamè* ‘deduct the sum a person owes from a payment one is making to him’; 5 Pol *ʒim*, Zul *ʒimi*, Geji *ʒemi*, Buli *ʒimən* ‘count’ [Cs N696].

Cf. C 7a Sukun *ʒəm*, *ʒəmara* ‘to buy’ [DS] // Gz *śemata*, *śaymata* ‘deal in grain’, Akk *šāmu* ‘buy’ [LsGz 531], Sab *s₂ʔm* ‘buy purchase’ [Oh 263], Mhr *śōm*, Jibbali *śem* ‘sell’ [JM,JJ], cf. [Oh 312].

529. \***ʒ Vm-** ‘to strike, to slap’: C 7 Mafa *ʒáma* ‘a ’gifler plusieurs fois; to slap in the face several times’ [BaMaf] //Mhr *śhm* ‘to hit’ [JM 376].

Deriv. W 6 Ngz *ʒəmtú* ‘to ruin, to spoil’ [SchN].

530.W \***ʒ Vm-** ‘to walk’: W 3 Krkr *lamu* ‘meet, come across’ [GK]; 4 Cagu *ʒāman* ‘journey’ [SkNB]; 5 Zaar *ʒyāam* ‘stroll’ [CrZ], *ʒám* ‘return from’ [CrD].

531. C 10 \***ʒ Vm-** ‘to mix’: ZD *ʒūm* ‘melanger (homogene); to mix’, ZB *ʒúm* ‘mélanger’ [Sa]//Arab *šmg* ‘mêler, mélanger’ [BK1266 ].

532. \***ʒ VmV** ‘enclosure, hut (for cattle)’: W 4 Siri *dhlímí* ‘hut’ [Gow-CLR]; C 2 Margi *ʒómá* ‘hut for goats, sheep, stable’ [Hf:23], Bura *ʒima* ‘a fold for sheep, goats’ [Ann], 3 FK *ʒòmà* ‘hut made for livestock’ [BINd]; 5 Podoko *ʒóma* ‘enclos pour les bêtes, enclosure for animals’ [JL], 7a

Sukun *ʒəma ʒə* ‘bull’s stall’ [DS]// Eg *šm* (Gr) ‘Mauer; wall’ [EG 467].  
Note SCush Irq *sluma*, pl. *slumoo* ‘hedge around the house, cycle of houses’ [MQK].

Cf. W 1 Hs *zúumà* (if not < \*zVCma) ‘a very large booth or shelter made of mats’.

533. \**ʒVmV* ‘kind of palm’: C 5a Hide *ʒi-ʒam* ‘palm tree’ [BrH]; 7a Sukun *ʒyiʒyim* ‘borassus palm’ [DS].

Redupl. W 6 Ngz *ʒámʒám* ‘forest’ [SchN].

534. \**ʒVm-* ‘happyness, to be happy’: W 1 Hs *záama* ‘good luck’; C 7a Sukun *ʒama* ‘happy’ [DS] // cf. Gz *śamra* ‘delight, be pleased’ [LsG 530].

535. C 10 \**ʒVmV* ‘sledge-hammer’: C 10 ZB *ʒám* ‘masse de forgeron, sledge-hammer’ [Sa], ZD *ʒām* ‘masse tranchant de forgeron’ [Cpr].

Note possible verbal deriv.: W sura \**k<sup>w</sup>V-IVm* ‘to forge’: Angas *kwo-lm* [FI], Sura *kù-lòm*, Msh *kə-lom*, Goem *k<sup>w</sup>a-lam* [TAS 212\**k<sup>w</sup>VIVm*] (if not < \**k<sup>w</sup>Vm*, with an internal -l-).

536. C 7 \*(*?V*)*ʒVmV* ‘hawk’: Gisiga *?aʒam* ‘Falke, falcon, hawk’ [LkG], Mofu *aʒam, ʒam* ‘epervier, hawk’ [BaMof]// Gz *śamarmar* ‘kind of eagle’ [LsG 530], cf. Eg *šm* ‘Name eines Vogels, name of a bird’ (22) [EG 462], OS 2326.

537. C \**ʒVmV* ‘group of people’: 2 Bura *ʒama* ‘crowd, group’ [Ann]; 5 Malgwa *ʒama* ‘society’ [LrD].

Note W 3 Tng *lilim* ‘assembly for special occasions (drink, hunt, etc.)’ [JgT] (if not from Ch \**IVm(m)-* ‘to gather’ [StI N 265]).

538. C \**ʒVmV* ‘sorrel’: 7 Cuvok *ʒəmétéʒ* (compound) ‘oseille, sorrel’

[Ndo]; 9 Mnj *eʒem* ‘Hibiscus, Oseille de Guinee’ [TrMnj], 10 Masa *ʒém* ‘la plant sp’ (? Hibiscus ) [CC].

Note some more words of similar shape denoting plants:

C 2 Bura *ʒamʒam* ‘species of grass or weed’ [Ann];

C 10 ZB *ʒimē* ‘herbe sp’, ZD *ʒimē* ‘herbe sp.’ [Cpr];

C 7 Mada *aʒmá* ‘plante rampante, a creeping plant’ [BaMd].

539. C *\*ʒVmV* ‘feather’: 10 Masa *ʒímit* ‘la plume, les plumes’ [CC].

A compound? C *\*ʒVmbVk/tr* ‘feather, wing’: 5 Malgwa *ʒámábáke* ‘feather, wing’ [Lr], *ʒámábáke* [LrD], Wnd *ʒámábakè* [Lk:122]; Gvo *ʒambat*, Cinene, Glavda *ʒəmbaka*; 5a Hide *ʒambak*, Vembo *ʒambar* ‘wing’ [HmG], Hdi *ʒimbir* ‘aisselle’ [Eg], ‘armpit’ [Br].

540. C 10 *\*ʒVmV* ‘germinated millet’: ZD *ʒūm* ‘mil germé (pour préparation de la biere de mil), germinated millet (used for preparing beer)’, ZB *ʒūm* ‘mil germé’ [Sa].

541. *\*ʒVn-* ‘to pester, bother’: W 1 Hs *zúnaaya* ‘pester’; C 9 Mulwi *ʒìni* ‘partir mendier en periode de famine’, Mnj *ʒini* ‘mendier en period de famine, to beg’ [TrMnj, Mlw].

542. C *\*ʒVn(g)-* ‘to cross, to traverse’: 6 Daba *ʒàn* ‘traverser’ [Lnh]; 7 Cuvok *mé-ʒəngəy* ‘traverser’ [Ndo], Mofu *ʒəng-* ‘enjamber, traverser, sauter par dessus’ [BaMof].

543. *\*ʒVn-* (> *\*ʒVn-g-*) ‘a look’: W cf. 1 Hs *zónái* ‘steadfast look, stare’; C 7 Mafa *ʒéng’e* ‘attentif, prêt, concentre, attentive, concentrated’ [BaMaf]; Muyang *ʒij* ‘a significant look’ [BaMaf]; E 5 WDng *lénnyè* ‘voir, to look, to see’ [Fd]// Soq *śini* ‘voir’, Mhr, Shh [LsS 431] (but [JM 381 ‘to see, to consider’, contam. with ‘to hear, to understand’).

544. \***ʒ VnV** ‘fence, to fence’: W 2 Gmy lien ‘the large sized mat around the compound’, lyen ‘fence’ [Hlw in TAS 238]; E 3 Tum lùŋ ‘cloturer; to fence’ [CpT]// Eg šn ‘der Ring’ > ‘Umgebung, surroundings’ (MR) [EG 488].

Deriv.? \***ʒ Vng-** ‘to surround’: C 7 Ould -ʒàŋàŋ ‘faire la tour’ [KOu]; E 2 Lele lóngé ‘entourer’ [WP] (less probably < StI 298. \***IVŋ** ‘to lead, to drive (and surround)’, cf.).

545. \***ʒ VnV** ‘fight, attack’, \***ʒ Vn(g)V** ‘war’: W 2 Gerka k-lang (?? kl= lateral) ‘fight, war’ [Fp]; 5 Pol ʒaŋ, Buli ʒan, Geji ʒan-ti ‘fight’ [CsN655], Mngs k.hʃəŋ ‘war’ [Cs]; C 10 Mm ʒing ‘war’ [Kr 248]// Eg šny ‘streiten, to quarrel’ (AR) [EG 494], Eg šnč (Pyr) ‘streiten, argue, quarrel’ > ‘die Feinde, enemy’ [EG 519].

Deriv.? W Buli máʃən ‘attack’ [Cs N 643].

546. \***ʒ VnV** > \***ʒ VngV** ‘wealth’ > ‘domestic cattle’(?): W 2 Angas [Fp] long ‘possessions, wealth’, long ma (pl.) ‘plenty of cattle’, Mupun lóng ‘domestic cattle’, lōŋ ‘wealth’ [FrM], Sura lōŋ ‘Besitz; Haustiere; property,

domestic animals’ [JgS]; E 5 Bidiya lōŋoy ‘wealth’, loŋoy ‘s’enrichir’ [JgB].

Deriv.: W 1 Hs zungur ‘emphasizes fullness, great quantity’; 4 Miya, Mburku, Kariya ʒaŋgir ‘animal, domestic’, Paa ʒaŋgir ‘wealth’ [SkNB]. Plural in -r?

Noun deriv. W 2 \*g<sup>w</sup>V-IVŋ > IVŋ ‘chief’ (g<sup>w</sup>o ‘man’): Angas gwo-long [FI], Chip, Montol lōŋ ‘chief’ [JgC].

547. W \***ʒ VnV** ‘mat, bed’: 1 Hs zánaáa ‘mat or screen made of reeds or coarse grass’; 2 Angas len ‘a mat of any kind’ [FI]; 4 Warji ʒan-ai, Kariya ʒan ‘bed’ [SkNB].

548. W \***ʒ Vn-gV** ‘brain’: 5 Saya ʒuoonga, ʒōŋga ‘brain’ [Cs], Saya ʒōŋgâ

[Kr:37]; 6 Ngz ʒánâk, pl. ʒananin ‘brains’ [SchN].

549. C 7 \*ʒ Vn-kV ‘nail, claw’: Mofu ʒélek ‘ongle, griffe’ [BaMof], Gisiga ʒelek, ʒenek ‘Fingernagel, Kralle; nail, claw’ [LkG].

550. \*ʒ Vnŋ- ‘to refuse’: W 2 Angas leang, läng ‘deny, refuse’ [Fl]; 1 TP ʒəŋŋa [Kr]; 2 Margi ʒunàta ‘refuse’ [Kr:376].

551. \*ʒ Vng- ‘to jump, run’: W 1 Hs zángayaa ‘to run hard’; 2 Angas lang ‘to proceed by heaps (as a horse galloping)’ [Fl], Mupun laŋ ‘to jump’ [FrM], Sura, Mupun laŋ ‘to ride a horse’ [JgS, FrM]; 7 Kul laŋ ‘aufstehen, springen; stand up, jump’ [JgR];

Note possible deriv.: W 2 Goemay ka-langa ‘boy’s game consisting in hopping about on one leg’ [TAS:163], ka-long ‘to arise’ [Fp].

552. \*ʒ Vng- ‘to place, put’: W 2 Goem lang ‘to place, put’ [TAS 220]; C 5 Podoko ʒóŋa ‘place (horizontally), barrer’ [JL]; E 5 EDng lēŋ ‘legen, setzen; put, place’ [Ebb].

553. \*ʒ Vng- ‘to swim’: W 2 Mupun lúŋ [FrM], Angas lung [Fl], Sura čin lúŋ [JgS] (less probably < \*IVŋ, cf. StI 296); C 7 Zulgo ʒəʒəŋ ‘nage, swimming’ [ZIL].

554. \*ʒ VŋV ‘a bird of prey’: sura gr. \*kV-IVŋ ‘falcon, hawk’ (Angas ka-lüŋ ‘hawk’ [Fl], Sura ŋkəlŋ ‘Falke, falcon’ [JgS], Mupun nkəlŋ ‘kite, hawk’ [FrM], Msr kəlŋ ‘hawk’ [\*kəlŋ TAS 171]); C 3 Kap ʒuŋa ‘vulture’ [Kr:203], Bana ʒəŋà ‘charognard (vulture)’ [GLBn].

555. \*ʒ VŋV ‘passage, free space’: C 5 Podoko ʒiŋə ʒiŋə ‘space between 2 things’ [JL]; 7 Muyang ʒiŋ ʒiŋ ‘passage, valley’ [SmM].

Note poss. deriv.: W 2 Mupun tə-léŋ [FrM], Sura tə-ləŋ [JgS] ‘outside’.

556. \***ʒ VŋV** ‘loud sounds’: W 5 Pol *ʒaŋ* ‘uproar’ [Cr 439]; C 7 Zulgo *ʒaŋŋa* ‘avoir une voix de rogomme’ [ZIL]; Ould *ʒaŋà* ‘resonnant’ [KOu].

Cf. W 2 Mushere liyang (< Ch \**ʒyang-* ‘to sing’) [TAS 238].

557. C \***ʒ VŋV** ‘stone’: 1 Tera *ʒeŋ* [NmT], TP *ʒeŋdi* ‘mountain’ [Kr:140], 5 Podoko *ʒaŋwa* ‘pierre creusée’ [JL], 7a Sukun *ʒyang* ‘hill, boulder strewn’ [DS].

558. C 5 \***ʒ VŋV** ‘load’: Glavda *kə-ʒaŋà*, Dgh *kə-ʒaŋgà*, Mnd *kə-ʒəŋà* ‘load’ [Kr]// Arab *šħn* ‘être chargé’, Mhr *šħn* ‘to load, load’ [MJ 376].

Cf. C 7 Mery *ʒaŋgaca* ‘bagages, luggage’ [GMr] ? a compound.

559. \***ʒ VŋV-** ‘swollen’ ( ?< Ch \**ʒunḵ<sup>w</sup>*): C 5 Podoko *ʒiŋə ʒiŋə* ‘gonflé, swollen’ idf. [JL]; 7 Mofu *-ʒaŋw ʒaŋw* ‘gonflé (poche), gros (pigeon), gras (termite)’ [BaMof].

Any relation to W 1 Hs *zunḵwii* ‘a big abdomen’ ?

560. \***ʒ VŋgV** ‘hut, town’: W 1 Hs *zàngò* ‘camp place, baribari village’ (accord.to [SkH 296] a loan < Kanuri *zuno*, jongo ‘travellers camp, resthouse’); 4 Paa *ʒáŋgá* ‘town’ [MS]; C 9 Musgu *χiŋ* ‘Haus’ [LkMsg].

Deriv.: C 7 Mofu *ʒeŋger* ‘muraille de pierres, rempart; mur de pierres entre deux cases; wall’ [BaMof]. Plural in -r ?

Note W 2 Angas *-ka-lang* ‘woman’s hut’ [FI].

561. \***ʒ VŋgV** ‘deep hole, cave’: W 2 Angas *kwa-lang* ‘a deep cave’ [FI]; C 3 Bana *ʒəŋw ʔʒəŋ* ‘deep horizontal hole’ [GLBn].

Deriv.: C 3 FK *ʒəŋwól* ‘hole (in a tree)’ [BINd]; 5 Malgwa *ʒaŋgware* (? plural in -r) ‘cave, cavern, Höhle’ [LrD].

**562. W \*ǂ Vnk- 'to hang':** 3 Bolewa lonk- [LkB], Krkr loŋk- [LkK] 'to hang', Ngamo G lònká 'hang' [NEH], Bolewa lònku 'hang up' [GAB] (l- < \*ǂ-) // Arab šnk 'to hang smb by the neck till he dies', MSA \*šnk > Mrh šnk 'to hang', etc. [JM 381] and Hbr PB šnk 'to strangle, choke' [Oh].  
 Deriv.: W 1 Hs zúnkuḏaa (< \*ǂúnkuḏaa) 'hitch up load, child (on back)'.  
 Cf. C 5 Malgwa ǂǂǂǂ 'hängen, hang' [LrD].  
 Cf. N 160. \*ǂ Vǂ- 'to hang up', N 243. \*ǂ Vng- 'to hang'.

**563. \*ǂ Vr- 'to pour water':** W 1 Hs zúraãraa 'pour water', 4 Paa ǂǂǂ 'pour in, draw water' [MS], ǂur 'pour' [SkNB]; C 2 Bura ǂir 'to strain (through a cloth)'; 7 Mofu ǂǂǂ- 'transvaser, vider (d'un recipient), prendre de l'eau dans la bouche, decant, pour from a vessel' [BaMof], Zulgo ǂáá (note -l- < \*-r-) 'couler, to flow' [ZIL], Muyang ǂir 'a lot (of fluids)' [SmM] // Arab šrr (-i/u/a-) 'pour' [BK].  
 Cf. N 361. \*ǂ'VrV 'liquid', \*ǂ'Vr- 'to pour'.

**563a. C \*(ǂ V)ǂ VrV 'a stream, a (small) river':** C 3 Higi Moda ǂirre, Higi Humsi ǂirre (ǂirre) 'river' [Meek]; 5 Glavda ǂara 'river' [Kr:106]; 5a Lmn ǂirwi 'stream' [HmG], Hitk ǂǂǂ 'river' [LkH] (cf. Hide ǂǂǂ 'hippo' ? ǂa-ǂra 'animal-river' [Eg]); 7 Mafa ǂǂǂ 'ruisseau, petite rivière; stream', Mofu ǂǂǂ 'ruisseau' [BaMaf, Mof], Gisiga ǂǂǂ 'Bauch, See, small river, sea' [LkG]; Cuvok ǂǂǂ ta yam 'course d'eau' (yam 'water') [Ndo] // Sab s<sub>2</sub>rg-hwm 'watercourse' [Oh 297], Gz ǂǂǂ 'canal, stream' [LsZ 553].

Noun deriv.: C 5 Malgwa ǂǂǂ 'jahreszeitlich bedingt fliessender Fluss, seasonal river' [LrD].  
 W 1 Hs zǂrmóo 'channel of a stream' // Sab ǂ-ǂ<sub>2</sub>rm -[t]-n ? 'outlet//? channel; gutters' [Oh 302], Gz ǂǂǂ 'become a swamp, be deep, sink, flood' [LsG 534].

**564. \*ǂ Vr- 'to hunt':** W 4 Miya, Mburku ǂar 'hunt' (n.) [Sk-CLR]; C 2

Ngwahi *ɓira* ‘hunting’ [Kr:99]; 9 Mnj *ɓiri* ‘chasser (du gibier)’, *ɗif zi ɓar* ‘hunter’ = ‘man of hunt’ [TrMnj] cf. 7 Mada *ɓla* ‘trappe (pour le gibier), a trap’ [BaMd] // W 4 *ɓar-* ‘to hunt’ [CLR I 97 E].

Note W 1 Hs *zarɓi* ‘a decoction to make a person an expert hunter’.

**565. \*ɓ Vr-** ‘to break (pot)’: W 5 Zaar *ɓaar* ‘break a pot’ [Sm-CLR], Dott *ɗar* (Dott has no *ɓ*) ‘break (a pot)’ [CrD]; Saya *ɓar* ‘break in pieces’ [Kr:431]

**565a. \*ɓ Vr-** ‘to beat, to pound’: C 2 Bura *ɓiri* ‘pound, beat’, *ɓaɓira* ‘to grind coarsely’ [Ann], 3 Bana *ɓró* ‘écraser (arachides.); to squash, to crash’ [GLBn]; 7 Mada *éɓlè* ‘tasser, taper pour égaliser’, *áɓal* ‘donner un coup, cogner’ (contam. with the next root) [BaMaf, Md].

Deriv.: W 1 Hs *zúrɓè*, *zurto* ‘pound unwetted corn a second time/dried corn to remove bran’, *zúrɗa* ‘pound to flour’.

Note W 5 Guus *ɓərgə* ‘squeeze, wring out’ [Cz].

**565b. C \*ɓ Vr-** ‘to kick, to trample’: 7 Mafa *ɓər-* ‘donner un coup de pied; to kick’ [BaMaf], Mbuko *ɓəɓar* ‘donner un coup de pied’, *ɓəṛāɗ* ‘tourner, malaxer, fouler avec les pieds, trample on’ [GNT], Cuvok *mé-ɓəṛəy* ‘botter du pied’ [Ndo].

**566. \*ɓ Vr-** ‘to cry’: W 4 Paa *ɓór* ‘cry’ [MS]; 5 Saya *ɓaarvi* ‘shout’ [CsN 705].

Deriv./compound: C 5a. Hide *ɓərɗay* ‘to discuss’ [BrH].

Note possible deriv.: W 6 Ngz *ɓəram-ɓəram* ‘hoarsely’ [SchN].

**567. \*ɓ Vr-** ‘to open’: W 4 Cagu *ɓaar-*, Mburku *ɓir* ‘open, untie’ [SkNB]; C 6 Musgoy *ɓir-* [Mo], Kola *ɓîr* [CLR], Daba *ɓər* ‘ouvrir’ [Lnhr]// CLR *ɓr* ‘open’ I 132D, Arab *šḥr* [-a-] ‘be open, open (mouth)’ [BK], OS 2334.

Deriv.: 7 Mada *ɓratát* ‘tout ouvert, étiré, déployé, opened completely’ [BaMd]; Mofu *-ɓáɓərɗ-* ‘élargir (un sac, la bouche); ouvrir; open’ [BaMof].

568. \*ǂ Vr- (var. \*ǂ VI-) 'to pierce a hole': C 5 Malgwa ǂəra 'making a hole gradually on smth (wood, wall), pierce gradually' [LrD], 7 Mbuko ǂar 'pierce a hole in smth' (cf. ǂəray 'sortir d'une trou (animal), go out of a hole (animal)') [GNT]. Related to C \*ǂ VrV 'kind of spear'?  
 Deriv.: W 1 Hs zárta 'bore through'.

Vretrbal deriv.: \*ǂ Vr-v- 'to pierce, to cross' (contam. with \*ǂ VrV 'across'): C 7 Mada áǂláv 'traverser, transpercer; to cross, to pierce' [BaMd], Muyang ǂərov 'appear, go through, pierce' [SmM].

578a. C \*ǂ VI- 'to make a hole, to pierce' > 'hole': 5 Podoko ǂóla 'percer, make a hole' [JL], Glavda ǂíla 'anus, rectum' [Rp]; 7 Ould -ǂəl 'be pierced' [KOu].

Noun deriv.: C 5 Podoko ǂalaja 'grenier avec une orifice en bas; barn with an entrance below' [JL].

Cf. N 351. \*ǂ' Vr- 'to pierce (through), to spit'.

569. \*ǂ VrV 'across': W 5 Guus ǂar 'across' (prep.) [Cr:41], Zaar ǂar 'help across' [CrZ]. Cf. \*ǂ Vw(V)r- 'to go across'.

Deriv.: \*ǂ VrV-k-: W 4 Paa ǂirkí 'path, road, way'; C 7 Mada ǂrač 'en travers, across' [BsMd].

Deriv.: C 9 Mulwi ǂirdí 'passer (pour qqch, qui était coincé dans la gorge); to pass (smth that has stuck in the throat)' [TrMlw].

Note C 7 Cuvok mé-ǂələwəy 'traverses, crossbar' [Ndo]

570. \*ǂ Vr- 'to snatch away': W 1 Hs zāraa 'to snatch up, snatch away a thing, grab and remove'. Any relation to CCh \*ǂ VrV 'hand', cf.

Deriv.: W 6 Ngz ǂərdú 'snap off several (peppers, ocra)' [SchN]; C 5 Podoko ǂərada 'déplacer' [JL].

Note W 1 Ha zartaa 'deprive person of his proper share'.

570a. C 7 \***ʒ** VI- (? < \***ʒ** Vr-) ‘to steal’: Muyang ʒəɫ ‘steal from’ [SmM]; Mada áʒal ‘voler, piller; to steal’ [BaMd].

571. \*(**ʒ** V)**ʒ** Vr- ‘to disturb, to bother’: W 1 Hs zàazàrà ‘pester, bother’; C 10 ZB ʒar ‘provoquer le destin; to provoke the fate’ [Sa].  
Noun deriv.: W 1 Hs zárnii ‘petulance, asperity’.  
W 6 Ngz ʒəraatú ‘disturb, fluster’ [SchN].

572. \***ʒ** Vr- ‘to deceive’: W 1 Hs zírée ‘a form of cheating’.  
Verbal deriv.: C 5 Malgwa ʒórma ‘Geld erbetteln, beg for money’, ʒormə ‘asking for too much things, telling lies when collecting’ [LrD]; 7 Zulgo ʒórma ‘fraudeur, a liar’ [ZIL].

573. \***ʒ** Vr- ‘to divide, to be separated’: W 4 Paa ʒəraa ‘divide’ [MS]; C 7 Mada ʒarrá ‘espacé, clairsemé, avec intervalles, separated, with intervals’ [BaMd].  
Note a compound.: C 5 Podoko ʒəragáma ‘fourche, pitchfork’ [JL].

574. \***ʒ** Vr- ‘to creep, to spread (plants)’: W 3 Tng laarə ‘to creep’ [Jg].  
Verbal deriv.: C 5 Malgwa ʒərba ‘any creeping plant; act of spreading of plants’ [LrD], Podoko ʒərəba ‘s’étendre (plants); to spread (plants)’ [JL].

575. \***ʒ** Vr- ‘to mix, to knead’: C 7 (deriv.) Zulgo ʒərəð ‘remuer en mélangeant la farine avec l’eau, to mix flour with water’ [ZIL]; E 2 Lele lór ‘malaxer, pétrir; mix, knead’ [WP] // Arab šrg ‘mêler, mélanger’ [BK 1211].

576. \***ʒ** Vr- ‘to work with a rasp, to scratch’ (attested mostly in derivatives):  
W 4 Diri ʒira ‘to scratch’ [SkNB].  
Noun deriv.: W 1 Hs zartò ‘a saw; rasp’; C 7 Ould ʒərgà ‘lime, râpe; file, grater’ [Kou]; Mada ʒèrgè ‘lime, râpe’ [BaMd].  
Verbal deriv.: 6 Ngz ʒardú ‘scrape, abrade’ [SchN].

Cf. N 259. **\*VVR-** 'to scrape, to sweep'.

577. **\*ɓ Vr-** 'to gather, to meet' > 'to pile': W 5 Zaar ɓur 'pile up, gather' [CrZ]; C 2 Bura ɓir 'many people'; 7 Gisiga ɓar 'zusammentreffen', ɓir 'treffen; meet' [LkG].

578. **\*ɓ VVR-** 'to dig; hoe': W 1 Hs zuuraa 'hoe, bigger than fartanya' (? if not < \*zumra): C 5 Malgwa ɓəra 'remove sand to dig out smth' [LrD], Podoko ɓəla 'piocher; to hoe' [JL]; 7 Cuvok mɛ-ɓə̀lɛy 'creuser; dig' [Ndo], Muyang ɓuray 'carve a gully' [SmM], 10 ZB ɓàr 'creuser' [Sa] (Mesme ɓar 'dig' [Kr:392]).

**Verbal deriv./compound:** W 4 Paa ɓər̀kàátu 'hollow out' [MS].

Note possible deriv.: C 6 Daba ɓàrgú 'houe' [Lnhr] if not a Mande loan.

579. **\*ɓ Vr-** 'to slide (out)': W 1 Hs zúraãree 'slip out of pocket', zúraãree 'a game of sliding down a rock' (any relation to 'pour?'); C 7 Cuv mɛ-ɓə̀rɛy 'glisser' [Ndo]; 8 Log ɓir 'glisser' [ALL].

Cf. W 3 Kirfi la[r]aš 'smooth' [Stl].

Cf. N 293. **\*Vr-** 'be sleek, slippery, to slide'.

581. **\*ɓ Vr-** 'to sow > disperse, to scatter': W 4 Cagu ɓir 'sow' [SkNB]; 7 Muyang ɓələk ɓələk 'scattered on the ground' [SmM]; 9 Mnj ɓiri 'dispercer, se dispercer' [TrMnj], Mulwi ɓiri 's'éparpiller, to scatter' intr. [TrMlw] // Arab nšr 'dispercer' [BK].

582. **\*ɓ Vr-** 'to be afraid' > **\*ɓ V-ɓ Vr-** 'to tremble, shiver': W 5 Zaar ɓàɓar 'shiver (with cold)' [CrZ]; C 7 Mbuko ɓarɓar 'tremblant' [GNT]; Mofu -ɓər̀w-, -ɓúr- 'be afraid' [BaMof].

583. **\*ɓ Vr-ɓ-** 'to cover, to envelop': 5 Podoko ɓər̀ə̀ɓa 'couvrir d'une couche

( *layer*) d'argile' [JL], 7 Mada ʒròp (-p#< \*-b#) '(tissu) assez grand pour s'envelopper dedans; cloth big enough to envelop oneself completely' [BaMd].

Cf. W 1 Hs zóòbà (if < \*zVr̀bà) 'overlap (eg. edges of book-cover)';

Note C 7 Mofu -ʒl̀ng- (if < \*ʒ Vr-ŋg-) 'envelopper (le mort) dans une peau; to wrap a dead person into leather' [BaMof].

**584. W 5 \*ʒ Vr-** 'to stand (in place)': Guus ʒeer 'stand, stop' [Cr], Saya ʒóór 'stand' [Cs], Buli, Dott ʒer, Pol ʒér, Saya ʒər-ni, Zul ʒiri 'stand, stop' [Cs N 682]; 2 Bura ʒar 'stationary; firm' [Ann].

**585. W \*ʒ Vr-** 'to dance': 5 Saya ʒaar, Zul ʒare 'dance' [Cs N649], Geji ʒalti 'dance' [Cs N 649].

Cf. W1 Hs zállò 'any kind of jumping', zállii' k of dance'.

**587. C \*ʒ Vr-** 'to help': 1 TP ʒər tindi , Gabin ʒərtaʔançi 'to help' [Kr:387]; 2 Bura ʒar 'to help, to give assist' [Ann]// Sab s₂ry 'save, protect' [Oh 536], SCush Maa -slaʔari 'help, support' [Eh 210].

**588. C \*ʒ Vr-** 'to begin': C 5a Hide ʒra 'commencer, begin' [Eg]; ʒoray 'begin' [BrH]; 7 Mafa ʒar- 'commencer, faire pour la première fois; begin' [BaMaf], Muyang ʒiri 'begin', ma-ʒara 'now' [SMu] //Arab šrʕ 'commencer un affaire' [BK1217].

**589. C \*ʒ Vr-** 'to surround': 7 Mofu -ʒáʒər- 'entourer complètement, réunir, relier; to surround completely, to unit' [BaMof].

Verbal deriv.: C 2 Bura ʒarha 'to make a circuit, inspection; to encircle' [Ann].

**590. \*ʒ VrV** 'sprout': C 7 Mada áʒʒàr 'pousse (de plante); vitalité, fécondité (force magique); sprout, fertility'; E 2 Lele làrè 'pousse, sprout', làr 'pousser

(veget.)' [WP]// Gz saraša 'to germinate, blossom, sprout' [LsG 535].

Deriv.: C 7 Mada áǵláv (-ǵl- < \*-ǵr- by assim.) 'lever, pousser (grain); to sprout, to grow (grain)' [BaMd].

Note W 1 Hs zàrbaa 'a sprig of dates'.

W 3 Krkr maa-ǵaaraa 'newly sprouted baobab leaves (for sauce)' [GK] (if not related to C 2 Bura ǵara 'leaves used for 'sukwar' [Ann]).

Cf. W 3 Tng laara 'new' [JgT].

Cf. N 352. \*ǵ'Vr- 'to germinate'.

591 \*ǵ VrV 'fight, war': W 3 Krkr ǵíraa 'fighting' [GK]; 6 Ngz ǵèrá 'warlike, belligerent' [SchN]; C 2 Ngwahi ǵíra 'war' [Kr:248], Bura ǵir 'to make war', ǵira 'war' [Ann].

Note possible noun deriv.: C 5 Podoko ǵəmə́ 'méchanceté; malice, rage' [JL]. On the other hand, cf. Arab šrr 'be evil' [BK 1209].

Cf. N 350. \*ǵ'Vr- 'to be hostile, to be stubborn, to fight'.

592. \*ǵ VrV 'rope', 'to make a knot': W 1 Hs zàaraarà 'long rope'; C 10 Masa ǵár 'faire un noeud coulant (a la corde); make a knot on a rope' [CC]. Verbal deriv.: W 1 Hs zǎrgè 'attach noose to' // Soq srfi 'to suspendre' [LsG 433].

C 7 Mulwi ǵirbì '(se) prendre dans un noeud coulant', Mnj ǵirbì (ə) 'serrer une noeud, étrangler; to tie a knot, entangle' [TrMlw, Mnj].

592a. C \*ǵ VrV 'a net': 6 Daba ǵə-ǵár 'le filet, a net' [Lnhr]; 7 Mada ǵalá 'grand filet a calebasses' [BaMd].

Cf. N 272. \*ǵ VrV 'rope'. Note that both roots are attested in Hausa.

593. \*ǵ VrV 'musical horn, flute': W 3 Tng líjira 'flute' [JgT].

Noun deriv.: C 5 Malgwa ǵərma 'Horn (instrument), musical horn' [LrD];

C 7 Ould mèǵèlèj 'corne ou trompette fait d'une corne de buffle ou antilope,

musical horn made from buffalo or antelope horn' [KOu]

C 7 Mada *ʒ*erek 'sifflet en corne, a whistle made from horn' [BaMd].

594. \**ʒ* *Vr-* 'hot (weather)': W 6 Bade *ʒ*əra 'hotness' [Kr:306], C 3 HN *ʒ*uwre 'south' [Kr 332], 5 Malgwa *ʒ*iyire 'heatness of weather' [LrD]// ?Arab šrr 'to keep in the sun' [BK].

537a. \**ʒ* *Vr-* 'to burn': E 2 Lele lor 'brûler, to burn' [WP].

C 7 Zulgo *ʒ*irkwa 'braise, ember' [ZIL]// Mhr śərrāt 'spark' [JM 382].

595. \**ʒ* *VrV* 'thorn': C 7 Mafa *ʒaʒar* 'haie d'épines; prickly fence' [BaMaf], E 2 Lele *súlō-dú* 'épine; thorn' [WP]. Note -d- as possible marker of singularity.

Cf. a noun deriv. : 'a tree with thorns': C 7 Mofu *ʒeʒerek* 'kind of acacia' [BaMof].

596. \**ʒ* *VrV* 'salt(y)': W 1 Hs *zawaṛā* 'a lump of salt'; C 1 Tera *ʒeru* 'salt' [NmT].

Deriv.: W 1 Hs *zárçii, zárçii* 'brackishness'.

597. C \**ʒ* *VrV* 'kind of bird': 7 Mada *ʒra* 'aigle sp.' [BaMd]; Zulgo *ʒəra* 'kind of bird' [ZIL].

597a. \**ʒ* *VrV* 'ostrich': W 1 Hs *zàroodo* 'a cock ostrich'; C 7 Mofu *ʒərkeče* 'autruche' [Ba, Mof].

597b. W \**ʒ* *VrVrV* 'chicken': W 4 Paa *ʒurkiya* 'chicken' [MS], Warji *ʒərkəy-ai*, Siri *ʒərkayi*, Miya, Kariya *ʒirki* 'chicken, fowl' [SkNB].

598. \**ʒ* *VrVbV* 'mud, to smear' (derived < \**ʒ* *Vr-* ?) : W 4 Paa *ʒarbe* 'mud' [MS]; C 3 FK *ʒirbə* 'to plaster' [BInD]; 7 Mada *ʒəlláb ʒəlláb* (-l- < \*-r-) 'gluant, filant' [BaMd].

599. W \***ʒ VrV** 'a mat, a bed': 4 Diri aʒaara, Miya, Mburku ʒar, Cagu lāren 'bed' [SkNB]; 6 Ngz ʒáaráu 'kind of mat' [SchN].

Cf. N 210. \***ʒ VIVhV** 'wooden bed, chair'.

600. W \***ʒ VVrV** 'internal pain': 1 Hs zùũraa (in: ruwa yā zure šī "the water which he drank, gave him a pain"); 6 Ngz ʒèrá 'internal bodily pain, ache'.

601. C \***ʒ VrV** 'kind of spear': 5a Hide ʒər-zi 'assagai with many barbs' [BrH]// cf. Arab šarfī- 'lame, point' [BK 1213].

Noun deriv.: C Podoko ʒərama 'dent de la lance; jag of a spear' [JL]; 7 Mada ʒlem 'sorte de lance, kind of spear' [BaMd]; 9 Mnj ʒəram 'barbillon de fleche; notch, jag of an arrow' [TrMnj].

Derived from N 605. \***ʒ VrV** 'thorn'?

602. C \***ʒ VrV** 'gombo': 6 Daba ʒulú 'le gombo' [Lnhr]; 7 Mafa ʒíléw 'gombo' [BaMaf]; Mada ʒlò 'gombo pilé' [BaMd], Zulgo ʒulwá 'gombo' [ZIL]; Ould ʒəlo 'gombo' [KOu], 10 ZB ʒor [Sa], ZD ʒor [Cpr] 'gombo'.

603. C \***ʒ VrV** 'a crab': 3 Bana ʒrà 'crab brun, utilisé pour devination' [GLBn], 7 Mafa ʒəra 'kind of crab' [BaMaf].

604. C \***ʒ VrV** 'hand' > 'trunk': 5 Wnd ʒərva vwa (vwa 'body') 'bras' [Mo], 6 Daba ʒərə 'hand, arm, paw' [Lnhr], 9 Mbara ʔáʒór 'trunk of an elephant' [TrMba]; 10 Masa ʒōr 'la trompe (de l'elephant)' [CC].

605. C 7 \***ʒ VrV** 'feather' (related to 'hand'?): Mofu ʒára 'plume, élytre' [BaMof], Gisiga ʒara 'feather' [LkG].

606. C 5 \***ʒ VrV** 'cleared farmland': Podoko ʒóra 'new field, nouveau champ (gagné de la brousse)' [JL], Malgwa ʒəra 'farmland, clearing of the

new' [LrD]

607. \***ʒ** VrVv 'kind of corn (?wild sorgho)': 6 Daba ʒòrū 'var. de mil blanc; kind of white corn' [Lnhr]; 7 Mofu ʒaraway 'sorgho jaune sp', Mofu ʒóráv 'sorgho sauvage, wild sorgho' [BaMof], Cuvok ʒèrèv 'mil sauvage' [Ndo].

608. C \***ʒ** VrV 'kind of a fly': 5a Hdi ʒaʒəra 'mouche piquant, kind of mouche, (horse) fly' [Br]; 5 Podoko ʒóra 'esp.de mouche' [JL].

609. C \***ʒ** VrV 'loud sound (thunder, shooting)': 2 Bura ʒira 'to thunder' [Ann]; 5 Podoko ʒórəda 'to fire (a gun)' (Le fusil éclate) [JL].

## Part II

### Semitic, Egyptian, South Cushitic parallels to isolated Chadic words

#### Proto-Chadic \*ʔ-

1. C 7 Mafa ʔa 'mûrir (pour le céréales), to ripen (cereals)', ʔaya'a 'blanc laiteux' (< 'mûrir') (note Ould ʔayyā 'tout blanc; all white' [KOu])//Gz ʔaway 'ripen (grain)' [LsG 539].
2. E 4 Sok sèʔé [Sx], Saba soʔe 'leaf' [DMT] //SCush Irq slooʔi 'leaf of maize cob, paper to roll cigarettes, loose piece of skin' [MQK].  
Cf. Dera ʔáaná 'leaves' [NmK]. Pl. in -n ?
3. C 10 ZB ʔá 'frir; to fry' [Sa] //SCush \*slaḥ- Irq sloohh 'raze with fire; roast not enough', SCush Dah slaḥ- 'burn up' [Eh 210 N 18].
4. W 7 Fyer ʔfo 'feather' [JgR] // Eg šw.t (Pyr) 'die Feder der Federschmuck; feathers of an adornment' [EG 423].
5. W 4 Diri ʔəḃu 'fat' (v., adj.) [SkNB] (? C 7 Ould ʔūvō 'corps; body' [KOu]) // Gz ʔəbḥ 'fat (n.); fatness, obesity'; ʔəbḥa, sabḥa 'to be, grow fat' [LGz 525], Shr ʔəbḥ 'fat meat, corpulence' = Jibbali ʔəbḥ 'fat on meat; corpulence' [JJ 245].
6. C 7 Zulgo ʔívé 'pousser, faire des branches, to sprout' [ZIL]// Akk ešēbu 'sprout' [CAD 739].  
Note W 1 Hs sookoo (if < \*sVb-k-) 'break into bud (tree), sprout and appear above ground of any seeds, etc.'.
7. C 7 Muyang eʔiḥ 'to curse' [SmM]// Gz ʔəʔba 'to soil (tr.), to dishonour' [LsG 524].
8. C 7 Mofu -ʔəf- 'compter; lire; count, read' [BaMof], Gisiga ʔof 'count' (also 'read') [LkG]// CLR \*ʔof 'count' I 42H; Bilin šef 'calculation' in AA 71 \*ĉVp 'measure, calculation, sharing'.
9. E 5 Dng čáapè 'resplendir, éclater et blancheur (lune, planete); to shine, to

flare and shine (moon, planet)' [Fd] // Arab šfw 'apparaître (new moon), être pres du coucher (soleil)' [BK 1251], Sab s<sub>2</sub>f 'appear, break (dawn)' [Oh 315].

10. C 7 Zulgo řuhhwá 'épais et long; thick and long' [ZIL]//Arab šayh > Mhr řyx 'big old senior' [JM 391].

11. C 5a Hide řəgema 'branch' [Eg] //cf. Soq řigef 'rejeton, branches' [LsS 425].

12. W 3 Krkr řukùm 'a fool' [GK] //Mhr řkk 'to be mad' [JM 377].

13. C 7 Mofu -řák<sup>w</sup>t- '(se) brûler; to burn (oneself)' [BaMof] // Hbr nřk 'make fire' [KB 638], Mhr řwř 'to light, to burn' [JM 386].

14. C 7 Muyang řakay 'attach, fold' [SmM] //Arab řkk 'se coller, attacher; to attach to, to glue' (intr.), řkw 'lier, attacher' [BK 1259], řwř 'attacher une corde à un pieu, to tie, to attach a rope to a pole' [BK:1288].

15. C 7 Mbuko řákál 'méchanceté; malice' [GNT] // Arab řř 'être vilain, to be evil' [BK].

16. C 7 Gisiga řařalay 'Hagel, hail' [LkG] // Eg řny.t (pyr) 'hail' [EG], if -n- renders -l-. OS N 537.

17. W 1 Hs řáloo 'fashion; pattern'; 3 Bolewa řilàđi 'attractive shape, structure' [GAB] // Gz řařala 'form, shape, carve' [LsG 524]. For 'to carve' cf. C Podoko řala 'cut off branches', řalá 'tailler' [JL].

18. ? E 2 Lele řilàgá fish *Hydroc<sup>o</sup>on forscali* [WP] //Arab řilk- 'silure' [BK 1264].

Cf. C 7 Mada řelémke 'sorte de poisson sec plat' [BaMd], Ould řelémkē 'poisson sec, ouvert' [KOu].

19. C 4 Gude řámá 'feast, banquet' [Hs] (note W 1 Hs řúumúdí 'an uninvited guest at a feast')//Hbr řmħ 'sich freuen, be glad' [KB 924], Arab řmř 'badiner, jouer, plaisanter; to joke' [Bk 1270].

20. C 2 Bura řim-řim 'a looking glass' [Ann] //Gz řym 'uncover, show' [LsG 540], Arab řym 'observer; to observe' [BK 1300].

21. W 1 Hs řumúryà 'suddenly become angry' //SCush Dah sluum- 'be angry' [EEN].

22.W 3 Dera řáaná 'leaves' [NmK] (if not a pl. in -n , cf. N 2) // Eg řšn

'Lotusblüme; lotus leaves' MR [EG 485].

23. W 1 Hs sããraa 'found (a town)'// Sab srʼ 'erect, construct, provide (building with smth)' [SD Oh 295], Arab šrʼ 'rendre évident, établir; commencer un affaire' [BK 1217], Gz šaraʼa 'set (forth, establish)' [LsGz 532]

24. W 1 Hs sãrgaa 'cesspit' // Arab šarg- 'fente, crevasse; cleft' [BK 1211].

**Proto-Chadic \*ʃ'**

25. E 5 Bidiya ɖyíwa-ɖyíwaŋ 'personne élancée; thin person' [JgB]// Arab ɖʔy 'avoir le corps maigre et chetif', ɖwy 'être mince, affaiblir' [BK].
26. W 1 Hausa ɕáawò 'three-ply rope'//SCush Irq tlatlawi 'three-ply rope' [MQK].
27. C 7 Mada ʃáwwá (cf. sáwwá) 'droit (perche, bâton), straight (stick)' [BaMd] // SCush Dah tlaʔ- 'put smth straight up' [EE].
28. E 5 Bidiya ɖyiib 'make fire' [JgB] // Arab ḥḍḅ 'faire flamber (le feu)' [BK].
29. C 2 WM ʃafù 'lake' [Kr:107] // SCush Irq tlapaa, pl. tlapu 'small valley, drift, land depression, flat land pool' [MQK].
30. C 9 Mnj ʃipi (a) 'entasser branches; to pile branches' [TrMnj] // SCush Irq tlufuuʔ 'heaped up, swollen' [MQK].
31. W 1 Hs ɕáafà 'squeeze oneself into a small space'// Arab ɖff 'se presser en foule' [BK].
32. W 1 Hs ɕáttɕáfaa 'cakes' //SCush Irq tlaatlafoo 'badly cooked porridge' [MQK].
33. E 5 Migama ɖyékkó 'aimer; to love' [JgM] // Arab ɖwk 'couvrir la femelle (cheval)' [BK 45].
34. C Log ʃ'eki-wun 'throb with pain' [AIL] // Arab ɖwk 'se battre' [BK 45].
35. W 1 Hs ɕáakãaa 'take&give person a small portion; contribution' // SCush Dah tl'ak'eed- 'to distribute' [EEN].
36. C 7 Ould -ʃōnāh 's'incliner, pencher; to incline' idf. [KOu]// SCush Irq tlintiiʔ 'lean on' [MQK].
37. W 1 Hs ɕáráa 'middle of the back from the neck to coccyx', cf. [SkH 269] //Soq ɖuhr 'midi', Arab ɖuhr- [LsS 361].

**Proto-Chadic \*ɓ-**

- 38.C 5a Hitkalanchi ɓ- 'nicht wollen; not want' [LkH] //Irq slaʔay 'no' [MM 209]
39. C 5 Podoko ɓawə 'fermer; close' [JL] //Eg šw (Pyr) 'Schirm, Schutz; protection' [EG 432].
- 40.C 6 Daba ɓāy 'oublier; to forget' [Lnhf]// Akk šāʔu 'to forget' OB, SB [CAD 243].
41. C 6 Daba ɓēb 'aider; help' [Lnhf]// Arab šbw IV 'donner, give presents' [BK].
42. C 6 Daba ɓəb 'manger la nourriture; eat food' [Lnhf]// ?Hbr sābaʔ 'to eat one's fill' [KB 1303].
43. C 7 Muyang maɓaɗuwa 'sweet scum on wine, given to children' [SMu] //Eg šdh 'ein dem Wein verwandtes Getränk, süß und berauschend; als Opfer; kind of sweet drink (resembling wine), used as an offering' [EG 568].
44. C 7 Mafa ɓaɓaɗ 'côte; river bank' [BaMaf] //Arab šutt-un- 'bord, rivage (fleuve), fleuve' [BK 1229 ].
45. C 7 Podoko ɓəgəga idf. 'costaud, fort' [JL]//Arab šgʔ 'être brave, courageux' [BK 1194].
46. C 7 Muyang ɓək 'to open' [SmM] // Arab škw [BK 1256] 'open mouth'.
47. W 6 Ngz ɓák-wák 'rake for clearing farm'[SchN]// Mhr šxk (?= šfík) 'scrape, skin, scratch' [JM 389 ].
48. W 5 Guus ɓəmtə 'fear' [CrG] //Arab šhm 'to frighten' [BK 1283].
49. W 3 Tng laame 'north' [JgT] //Sab s₂ʔm 'march/turn to the north, to the left' [Oh, SD, Bl]
50. C 7a Sukun ɓan 'river, stream' [DS] // Eg šn (if -n- renders HS \*-n-) 'bezeichnung eines Meeres, designation of some sea' (Pyr) [EG 493].
- 51.W 1 Hs zíriri 'weaving, cloth'// Arab šiʔār- 'clothes, underwear' [BK 1238].

