

## G|ui ideophones: work in progress<sup>1</sup>

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In spite of the recent revision of the Khoisan linguistic view on the ideophone, substantiated researches of this word class in Khoisan languages have not yet been conducted. This article presents an up-to-date description of this word class in G|ui, the southwestern Kalahari Khoe, the Khoe-Kwadi (Central Khoisan) family, by outlining phonological and grammatical features of the ideophones, and providing a list of 172 ideophonic roots with their semantic features and illustrative examples.

**Keywords:** ideophone, Khoisan, G|ui, Khoe, mimetic

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### 1. Introduction

Some researchers claimed that Khoisan languages lack the word class of ideophones unlike other African languages (Samarin 1971, Shimizu 1988, Childs 1994), and in accord with this claim, the word class of ideophone was not traditionally used in Khoisan linguistics.

With a recent progress of Khoisan linguistic documentations, however, this view has gradually been revised (Childs 2003, Kilian-Hatz 2001, 2008, Nakagawa 2010), and the term ideophone for a word class is getting in use in Khoisan linguistic descriptions. Thus, relatively up-to-date dictionaries of Khoisan languages tend to employ this label as a word category, e.g., 13 ideophones are recorded in Dickens (1994), 17 in Haacke and Eiseb (2002), 76 in Kilian-Hatz (2003) and one in König and Heine (2008).

Despite this revision, Khoisan ideophones have not yet been sufficiently dealt with in Khoisan linguistics. For example, in the latest publication of a Khoisan linguistic survey, Vossen (2013), the class of ideophones is not described or discussed in any articles. We

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still lack a substantiated documentation of this word class in any specific Khoisan languages.

This paper aims to describe all 172 ideophonic roots that have so far been identified in G|ui (the G|ana-G|ui group, the Southwestern Kalahari Khoe branch, the Khoe-Kwadi family) spoken by approximately 700 to 800 former hunter-gatherers in the Ganzi district in Botswana, and to outline their generalizations that can be made at the present stage.

As correctly pointed out by Dingemans (2012: 654), ideophones are “easy to identify but difficult to define”. He introduces a general definition of ideophones as “marked words that depict sensory imagery (p. 655)” for the purpose of cross-linguistic investigation of this word class. This definition can apply to G|ui ideophones to some extent, but is not sufficient to distinguish ideophones from the other word classes. In order to define the word class of ideophones in G|ui grammar, we need phonological and grammatical criteria. First, G|ui ideophones can be analyzed into ideophonic roots, which are characterized by a set of four prosodic forms that I present in section 2 as four template types. Second, all ideophonic roots are free forms, but they never occur as single utterances, and always occur in certain syntactic, morphological, or morphophonological contexts. In this respect, ideophonic roots are different from interjections. Third, ideophonic roots on their own do not fall into any syntactic categories of G|ui, i.e. noun, verb/adjective, adverb, postposition, tense/aspect/mood particle, person-gender-number particle and conjunction. By these criteria ideophonic roots can be distinguished from all the other word classes and their roots.

## 2. Phonology

G|ui ideophonic roots have different phonotactic and prosodic features from ordinary (i.e. non-ideophonic and non-borrowing) lexical roots and grammatical morphemes. Virtually all G|ui roots, whether ordinary or ideophonic, fall into one of the four templates listed in Table 1.

**Table 1. G|ui root templates.** O represents the root-onset where occur all consonants and consonant complexes except /r n/ shown in tables in Appendix 2. C stands for a consonant /b r m n j (w)<sup>2</sup>/, N for a nasal coda /m n/, and P for a stop coda /p t/.

	Template	example of ordinary roots	example of ideophonic roots
(1)a	OV1CV2	!Ábá ‘to wear on the head’	g úrà ‘manner of heavy steps’
(1)b	OV1V2	!hÁē ‘to stab’	!q’Áè ‘manner of jumping out’
(2)	OV1N	kÚm ‘hear’	!Áñ ‘manner of giraffe walking’
(3)	OV1P	—	!òp ‘sound of ladling water’

<sup>2</sup> /w/ is attested in C of a small number of ordinary roots, but is unattested in ideophonic roots.

Templates (1a, b) and (2) are shared by ordinary (see Nakagawa 2006 and 2010) and ideophonic roots, but Template (3) is only used by ideophonic roots. Note that V1 and Vi have different phonemic inventories. Unlike V1 in (1a, b) and (2) which contrasts only in [ $\pm$  round] and [ $\pm$  pharyngeal] (Nakagawa 2010), Vi contrasts in vowel height, as well as lip rounding and pharyngealization. Therefore, the inventory for V1 is /A U  $\underset{\sim}{A}$   $\underset{\sim}{U}$ <sup>3</sup> (/A U/ are unrounded and rounded plain vowels, and / $\underset{\sim}{A}$   $\underset{\sim}{U}$ / are unrounded and rounded pharyngealized<sup>4</sup> vowels, respectively), and the inventory for Vi is /i a o u  $\underset{\sim}{a}$   $\underset{\sim}{u}$ /.

Regarding tones, in contrast to ordinary roots, which distinguish six tonal melodies for HH, HM, HL, MM, LL and LM (Nakagawa 2006), ideophonic roots of (1a, b) and (2) only have the following five melodies, HH, HM, HL, LL, LM, there being a gap in MM and an extremely low frequency in HM (in only two ideophonic roots).

Ideophonic roots of type (3) are monomoraic, and have a two-way contrast, i.e. H and L, like monomoraic grammatical morphemes of the CV type (Nakagawa 2006, 2009).

### 3. Morphology

As is the case with ideophones in general, G|ui ideophonic roots do not occur as constituents of a sentence on their own. They always occur in highly constrained morphological and syntactic contexts.

Most of the ideophonic roots may occur on their own in the quotative construction if immediately followed by a quotative particle (i.e. *cà*), and therefore they are regarded as free forms. There are small number of ideophonic roots which occur only as a part of a derived word; at this stage, the following five roots are confirmed to be such bound forms: !q'árà-, !q'úbù-, †Gáà-, gùñ-, hábù-, which all more or less relate to meaning of movement manner.

Morphological devices which derive other word categories from ideophonic roots are suffixes and reduplications, as sketched below.

#### 3.1. Suffix

There are three suffixes dedicated to ideophones in G|ui. Two of them, i.e. *-ká* and *-ts'í*, derive verbs (Nakagawa 2010), and the other, i.e. *-χò?òrò*, derives adverbs. Table 2 presents the approximate semantic effects of these suffixes with examples.

The historical origin of *-ká* is not clear, but that of *-ts'í* is a loan element from !Xóǿ (Nakagawa 2010). The suffix *-χò?òrò*, can be etymologically analyzed into two elements *χò* (i.e. 'thing, place, matter') and *?òrò* (< ?o 'inside'), but synchronically this etymology is not clear to native speakers.

<sup>3</sup> These four abstract phonemes will below be represented in the broad phonetic transcription.

<sup>4</sup> Following a Khoisan linguistic convention, I use the diacritic of /V/ for pharyngealization in this paper. In the IPA definition, it is for creaky voice.

**Table 2. Three suffixes for ideophones in G|ui  
(X stands for an ideophonic root)**

X-ká	<p>‘to move (cyclic action, repetition, oscillation) in the manner involving X’: e.g. !qúà ‘the symmetric manner’ &gt; !qúà-ká ‘to open and close symmetrically (of butterfly, legs, etc.)’.</p> <p><b>ciècibè bì ci !qúà-ká.</b></p> <p>butterfly PGN PRG<sup>5</sup> ideophone-suffix</p> <p>‘A butterfly is opening and closing (its wings) repeatedly.’</p>
X-ts’í	<p>‘to make the sound of X’, ‘to do something with the sound of X’: e.g. bábú ‘a big sound of pounding with an old mortar’ &gt; bábú-ts’í ‘to pound with a big sound with using an old mortar’.</p> <p><b>?ésì cì g  óró sà bábú-ts’í.</b></p> <p>she PRG old_mortar PGN ideophone-suffix</p> <p>‘She is pounding with an old mortar with a big noise.’</p>
X-χò?òrò	<p>‘in an X-ish way’:  <sup>h</sup>óp ‘the sound of falling down of a light object’ &gt;  <sup>h</sup>óp-χò?òrò ‘lightly with a small sound’.</p> <p><b> úã bì  <sup>h</sup>óp-χò?òrò  qχ’áé.</b></p> <p>child PGN ideophone-suffix fall_down</p> <p>‘A child falls down lightly without big noise.’</p>

### 3.2. Reduplication

There are two types of reduplication that involve ideophones. Type 1 is has the template of complete reduplication of the ideophonic root with the tone melody. Its semantic effect is ‘to be of X’s nature’ as exemplified below:

glóró sì ts’óò è bábú-bábú.

old\_mortar PGN sound subjective ideophone(reduplication1)

‘The sound of the old mortar is of “babu” in nature.’

Type 2 derives the food texture verbs. This derived verb class was described and discussed in Nakagawa (2006, 2010, 2012), therefore, I do not repeat it here.

<sup>5</sup> PGN is person gender number marker. PRG is progressive.

#### 4. Syntax

There is a syntactic device which makes an ideophonic root occur on its own in a sentence, namely the quotative construction, which can be illustrated below

	[ideophonic root]	[quotative particle]	[dummy verb]
(1)	ʔési	l̩p	cà mĩ
	It	ideophone	QUOT say
	‘It (a spear) says l̩p (it pierces the sand surface with the sound l̩p).’		
(2)	ʔési	l’úà	cà mĩ
	It	ideophone	QUOT say
	‘It (an animal) says l’úà (it is killed and falls instantly)’		

In this construction, the ideophonic root is followed by the quotative particle *cà*, and the predicate verb is a dummy verb which often lose its concrete semantic meaning, as exemplified by (2), in which the ideophonic root indicates a manner, and it cannot be “said” in even a metaphorical sense. At this stage, ten dummy verbs are attested, namely, *mĩ* ‘say’, *cíé* ‘stand’, *ŋʔúũ* ‘sit’, *ŋʔũã-χò* ‘cause to sit’, *||óé* ‘lie’, *||óē-χò* ‘lay’, *ʔãã* ‘enter’, *ʔqχ’úã* ‘go out’, *ʔπ* ‘seem’ and *hĩ* ‘do’.

#### 5. List of ideophonic roots

This section provides all the 172 ideophonic roots that are attested so far. They are listed in the following order:

l, !, †, ll, p, b, p<sup>h</sup>, m, t, t<sup>h</sup>, tqχ’, tχ, dz, ts<sup>h</sup>, tsqχ’, tsχ, r, n, c, c<sup>h</sup>, c’, cqχ’, cχ, k, g, k<sup>h</sup>, ŋ, q, g, q<sup>h</sup>, qχ’, s, χ, h, ʔ, a, ɢ, ã, e, i, ĩ, o, u, u, ũ, j, w, (tones are ordered in high, mid, and low).

If suffixed forms, reduplication, and the quotative construction are confirmed to be ill-formed, they are recorded with \* at the end of the entry.

- l̩p a sound with which a heavy spear pierces the sandy ground. qχ’áo s̩ l̩p cà mĩ. ‘A spear says l̩p (a spear pierces the sand surface with the sound l̩p)’. k<sup>h</sup>òè bì qχ’áo s̩ l̩p-ts’í. ‘A man makes the sound l̩p (by stabbing the sandy ground) with a spear’.
- lóp [[lóp] the manner in which fire is going out. l’éē s̩ lóp cà mĩ. ‘Fire says lóp (it goes out with the sound)’. lóp-ká (to move around to go out fire and make the sound)’.
- l̩p [[l̩p] the sound with which the stopper of the ostrich eggshell water container is pulled out. k<sup>h</sup>òè bì !<sup>h</sup>ábī ì kà l̩p cà mĩ. ‘A man says to the ostrich eggshell water container l̩p (he pulls out the stopper from the container and makes the sound)’.
- g|ébà (1) the manner in which muddy (cloudy) water becomes limpid (clear). bĩ s̩ g|ébà cà mĩ. ‘*Raphionacme burkei* says g|ébà (water taken from *Raphionacme burkei* has become clear, e.g., by using leaves of *Silver terminalia*)’. g|áà s̩ bĩ

- sì kà g|ébà cà míí. ‘Silver terminalia says to *Raphionacme burkei* g|ébà (water from *Raphionacme burkei* becomes clear by Silver terminalia)’. bī sì há cì g|ébà-ká ‘*Raphionacme burkei* becomes clean in many places (repeatedly)’. (2) the manner in which meat becomes sufficiently cooked with the gravy coming from it. |χāā sì g|ébà cà míí. ‘The meat says g|ébà (the meat has become cooked sufficiently)’. (\*-χò?òrò, \*redup.).
- g|úrà the manner in which one walks with heavy steps. g|úrà-ká ‘to walk heavily’.
- l<sup>h</sup>ábù the manner of a hyena’s running. l<sup>h</sup>ábù-ká ‘to run of a hyena’.
- l<sup>h</sup>óp [l<sup>h</sup>óp] the sound with which something light falls down; the texture of fibrous herb or fatless small caterpillar. (> l<sup>h</sup>úm-l<sup>h</sup>úm [food texture verb]). |qχ’áré lúã bì l<sup>h</sup>óp cà míí. ‘A baby says l<sup>h</sup>óp (the baby falls down lightly)’. |qχ’áré lúã bì l<sup>h</sup>óp-kārā-|qχ’áé; |qχ’áré lúã bì l<sup>h</sup>óp-χò?òrò |qχ’áé. ‘A baby falls lightly’. (\*-ts’í).
- l<sup>h</sup>úbù a sound with which an animal jumps into bush. gl’áí-ò bì l<sup>h</sup>úbù cà fāā já tsāā. ‘A small steenbok jumps in with the sound of l<sup>h</sup>úbù and disappears’.
- l’úa the manner in which a game animal is killed instantly and falls. qχ’óōχò bì l’úa cà míí. ‘The animal says l’úa (the animal is killed and falls instantly)’. qχ’óōχò bì l’úa-χò?òrò ||?óó. ‘The animal died instantly (being killed)’. qχ’óōχò bì l’úa|l’úa-sí ||?óó. ‘The animal died instantly (being killed).’ (l’úa-ká)
- ŋ|áp the manner in which a long rain eventually stops. cúú bì ŋ|áp cà míí. ‘The rain says ŋ|áp (it stops eventually)’.
- ŋ|òrē the manner in which one dodges quickly. ?àbì ŋ|òrē cà míí. ‘He says ŋ|òrē (he has dodged quickly)’. ?àbì cì ŋ|òrē-ká. ‘He is stepping and dodging quickly.’ ?àbì ŋ|òrē-kārā-ŋ||āā. ‘He stepped aside dodging quickly’.
- |qánú the manner of something small entering a larger hole. (|qánú cà míí; ŋ|óē bì |qánú cà míí/fāā; ŋ|óē bì |qánú-χò?òrò fāā; ‘A porcupine enters a much larger hole than its size’. |qánú-|qánú-sí fēnā-ŋfũ. ‘to enter a much larger hole and stay there’. (\*-ts’í, \*-ká).
- |q<sup>h</sup>ábà the ideophone only used for the final stage of the female initiation ceremony. cīā||ú sì lúã sì kà |q<sup>h</sup>ábà cà míí, lúã sì já |q<sup>h</sup>áà-χò?òrò !?úú kà χòò dzì mùū. ‘The aunt (her mother’s elder sister) says to the girl the magic word |q<sup>h</sup>ábà, and then the girl on the following day easily finds the things’. (cf. |q<sup>h</sup>ábà, sá qχ’ó cì mùū qχ’áò-kò bì ?í.) (\*-ts’í, \*-ká, \*redup.)
- |q<sup>h</sup>áà the manner of someone finally finding something after a long search. ?àbì júù m kà |q<sup>h</sup>áà cà míí. ‘He says to an eland |q<sup>h</sup>áà (he eventually finds an eland)’. cìrē júù mà |q<sup>h</sup>áà-χò?òrò mùū ‘Eventually I unexpectedly found an eland’. ?àbì |q<sup>h</sup>áà-|q<sup>h</sup>áà-sí qχ’óō-χò mà mùū. ‘He suddenly finds an animal through’. |q<sup>h</sup>áà-ká ‘to find suddenly repeatedly’.
- |q<sup>h</sup>ûū the sound with which something quickly enters a tree with dry leaves (e.g. a bird, animal). (|q<sup>h</sup>ûū cà fāā) (|q<sup>h</sup>ûū-ts’í) (|q<sup>h</sup>ûū-ká ‘to walk into with noise’). (\*redup., \*-χò?òrò).

- |q'ábū the sound of something falling into water with a splash. η||úá sɪ |q'ábū cə mĩ. 'A stone says |q'ábū (it makes the sound when it falls into water)'. η||úá sɪ ts<sup>h</sup>áā sɪ wà |q'ábū cə †āā. 'A stone falls into the water with the sound of |q'ábū'. |q'ábū-ká 'to walk in water with noise'. ?àbì kùà |q'ábū-kārā-!úū. 'He is walking in water with sound'. η|| sɪ |χáā sɪ |q'ábū-|q'ábū. 'This meat is juicy-juicy (of juicy meat, which makes a similar sound when bitten.). |q'ábū-ts'í 'to make the sound of something falling into water'. (\*-χò?òrò).
- |q'áè the manner of something suddenly jumping out (e.g. the manner in which a snake jumps out of a hole in a tree). |qχ'áo bì |q'áè cə †qχ'úā; |qχ'áo bì |q'áè-χò?òrò †qχ'úā. 'A snake jumps out suddenly'. |qχ'áo bì cì |q'áè-ká. 'A snake jumps out repeatedly'. |qχ'áo m̄ kà †qχ'úā-qχ'ām̄ sɪ |q'áè-|q'áè. 'A snake will jump out'. (\*-ts'í)
- |qχ'āū the texture of raisin, currant, ant etc.; the sound made in the mouth when one is chewing raisins, currants, or edible ants. ?àbì |<sup>h</sup>āā dzì kà |qχ'āū cə mĩ. 'He says to ants |qχ'āū (he chews ants with the sound in the mouth)'. ?àbì |<sup>h</sup>āā dzì |qχ'āū-ká. 'He moves around making the sound by chewing ants'. ?àbì |<sup>h</sup>āā dzì |qχ'āū-χò?òrò ||áē. 'He chews ants by making the sound in the mouth'. (|qχ'āū-|qχ'āū [food texture verb]). (\*-ts'í)
- |qχ'óp [|qχ'óp] the manner in which one finishes a song. g||āē-kò dzì |fĩ sɪ kà |qχ'óp cə mĩ. 'Women say to the song |qχ'óp (they stop the song)'. g||āē-kò dzì |fĩ sà |qχ'óp-χò?òrò k<sup>h</sup>úā. 'Women suddenly stop the song'.
- |qχ'òp [|qχ'òp] a sound with which dry grasses (or straws) are broken. ?àbì g|āā m̄ kà |qχ'òp cə mĩ. 'He says to the grass |qχ'òp (he breaks a grass with the sound)'. |qχ'òp-ts'í 'to make the sound of |qχ'òp repeatedly'. ?àbì cì g|āā dzì |qχ'úm̄, ?édzi já cì |qχ'òp cə mĩ. 'He breaks grasses, and the grasses say (i.e. make the sound of) |qχ'òp'. ?àbì cì g|āā dzì |qχ'òp-kārā-k<sup>h</sup>úā. ?àbì cì g|āā dzì |qχ'òp-χò?òrò k<sup>h</sup>úā. 'He is breaking grasses (straws) with the sound of |qχ'òp'.
- |χàrà the sound with which a porcupine walks. η!óē bì |χàrà cə mĩ. 'A porcupine says |χàrà (it makes the sound)'. η!óē bì kùà |χàrà-ts'í. 'The porcupine is making the sound of |χàrà'.
- |χàà the sound of seeds being tossed repeatedly on a vessel. |χúrí dzì |χàà cə mĩ. 'Seeds say |χàà (they make the noise)'. ?àbì |χúrí dzì cì |χàà-ts'í. 'He is making the sound of |χàà by tossing seeds'.
- |χóp [||χóp] a sound with which one bites or chews a sandy food. ||úū dzì χúm̄-χà sɪ |χāā sɪ |χàè |χóp cə cíé. 'The teeth stop |χóp (the teeth make the sound of a sandy food)'. k<sup>h</sup>óè m̄ ||úū è |χāā sɪ |χàè |χóp-ká. (\*-ts'í, \*-χò?òrò, \*-kārā-||áē).
- |hòp [|hòp] the texture of dried meat cooked with insufficient water; the sound with which a digging stick sticks in (the sand). η||è sɪ χúm̄ sɪ kà |hòp cə mĩ. 'A digging stick says to the sand |hòp (it sticks in the sand with the sound)'. k<sup>h</sup>óè bì χúm̄ sà η||è sɪ kà |hòp-ts'í. 'A man makes the sound of |hòp stabbing the sand with a digging stick'. k<sup>h</sup>óè bì χúm̄ sà η||è sɪ kà |hòp-kārā-ts<sup>h</sup>áo. 'A man digs the sand around with a digging stick with the sound of |hòp'. (\*-χò?òrò).

- !àn a manner of the giraffe's walking. !àn-ká 'to walk of a giraffe'.
- !áni a state of extreme tallness, typically giraffes' height. !áni-!áni 'to be tall (typically of a giraffe) in nature'. (\*cà mĩ, \*-ts'í, \*-ká, \*-χòʔòrò).
- !áã a sound which the tendons of the eland's front legs make. júù bì kùà !áã cà mĩ. 'An eland is saying !áã (it is making the sound of !áã)'. júù bì kùà !áã-ká. 'An eland is walking with the sound of !áã'.
- !áũ a sound that is made when a piece of steel is hit. ?àbì lánù sì kà !áũ cà mĩ. 'He says to the steel !áũ (he makes the sound of !áũ with a piece of steel)'. ?àbì lánù sà !áũ-ts'í. 'He makes the sound of !áũ with a piece of steel repeatedly'.
- !óp [l'ó<sup>o</sup>p] the texture of small insufficiently parched caterpillar. (> !úm-!úm [food texture verb]). η!òō bì cì !óp cà mĩ. 'A caterpillar says !óp (the caterpillar has the texture of !óp, which is felt in the mouth when it is eaten)'. ?àbì η!òō mà !óp-ts'í. 'He chews a caterpillar feeling its texture and the sound it makes'. ?àbì η!òō mà !óp-kārā-||áē. 'He moves around chewing a caterpillar and feeling its texture in the mouth'. (\*-χòʔòrò).
- !òp [l'ò<sup>o</sup>p] a sound with which water is ladled. ?àbì ts<sup>h</sup>áã sì kà !òp cà mĩ. 'He says to water !òp (he ladles water with the sound of !òp)'. !òp-ts'í. 'to make the sound of !òp repeatedly in ladling water'.
- !óó a manner of the giraffe's walking with the sound of footsteps. !óó-ká 'to walk (with the sound of footsteps) of a giraffe'.
- !úú a sound with which a small amount of food is pounded in a mortar. ?àbì ì-qχ'ò sì kà !úú cà mĩ. 'He says to the mortar !úú (he makes the sound in pounding with the mortar)'. ì-qχ'ò sì !úú cà mĩ. 'The mortar says !úú'. k<sup>h</sup>òè sì ì-qχ'ò sà !úú-ts'í. 'A woman makes the sound of !úú repeatedly by pounding with a mortar'.
- !úù a dull thud (sound) which an old axe makes. !úù-ts'í 'to make the sound of !úù'. !úù-ká 'to walk around while making the sound of !úù' (e.g. axing around in a woodland). η!ì sì bóó sì cì !úù cà mĩ 'this axe makes the sound of !úù'. ?àbì há cì !?éē dzì !úù-ká. 'He is doing the firewood by repeating the same movement and making the sound of !úù'. !úù cà cé. 'to be stuck and stand vertically by making the sound of !úù'. (cf. !úù-!úù 'to be big or thick', non-derivative of the ideophone !úù.)
- !úra [l'ú<sup>o</sup>là] a sound of rain. !úra-ká 'for rain to move with a noisy sound'. !úra-ts'í 'to make the sound of !úra (of a heavy rain)'.
- g!ánù the manner in which one walks indignantly. g!ánù-ká 'to walk indignantly'.
- g!òt [g!ò<sup>o</sup>t] a sound with which something is swallowed. k<sup>h</sup>òè bì ts<sup>h</sup>áã sì kà g!òt cà mĩ. 'A man says to water g!òt (a man swallowed water with the sound)'. ?àbì ts<sup>h</sup>áã sà g!òt-ts'í. 'He makes the sound of g!òt in swallowing water'. ?àbì ts<sup>h</sup>áã sà há cì g!òt-kārā-qχ'áà. 'He is repeatedly drinking water with the sound of g!òt'.
- !hábù the manner in which a propeller toy starts spinning; a manner in which one



- awakes suddenly in a good mood. dzinì sì cì !<sup>h</sup>ábù cà míí ‘A propeller toy says !<sup>h</sup>ábù (i.e. the toy starts spinning).’ The player says to the toy “!<sup>h</sup>ábù k<sup>h</sup>òè dzinì è.” ?àbì ||?ūmā-há já !<sup>h</sup>ábù-χò?òrò †χáí. ‘He has slept and wakes up in the !<sup>h</sup>ábù manner.’ ?àbì !<sup>h</sup>ábù cà míí. ‘He says !<sup>h</sup>ábù.’ ?àbì !<sup>h</sup>ábù-!<sup>h</sup>ábù ‘He will awake suddenly in a good mood (just like a propeller toy which will abruptly start to spin)’.
- !<sup>h</sup>áà the sound with which one hits something. k<sup>h</sup>òè bì g!áí ì kà !<sup>h</sup>áà cà míí. ‘A man says to a steenbok !<sup>h</sup>áà (he hits a steenbok with the sound of !<sup>h</sup>áà). k<sup>h</sup>òè bì g!áí mà !<sup>h</sup>áà-χò?òrò ||qχ’ám. ‘A man hits a steenbok with the !<sup>h</sup>áà beat’. !<sup>h</sup>áà-ts’í ‘to make the sound of !<sup>h</sup>áà’. !<sup>h</sup>áà-ká ‘to move with the sound of !<sup>h</sup>áà’. (cf. !<sup>h</sup>áà-!<sup>h</sup>áà is an unrelated word, meaning ‘very cold’). (\*redup.)
- !<sup>h</sup>òp [!<sup>h</sup>òp] a sound of whip-cracking. !<sup>h</sup>òp cà míí. ‘to say !<sup>h</sup>òp (to make the sound)’.
- !<sup>h</sup>úri a sound with which a thin animal is walking. g!áí ì |?úá è !<sup>h</sup>úri cà míí. ‘a steenbok’s bone says !<sup>h</sup>úri’. g!áí-ò bì cì !<sup>h</sup>úri-ká. ‘a small steenbok is walking with the sound of !<sup>h</sup>úri’. g!áí bì !<sup>h</sup>úri-!<sup>h</sup>úri. ‘a steenbok makes the sound of !<sup>h</sup>úri in its nature.’
- !<sup>h</sup>úru a sound which is made by shaking an empty tin can with small things inside. ?àbì tòò sì kà !<sup>h</sup>úru cà míí. ‘He says to a tin can !<sup>h</sup>úru (he makes the sound with a tin can)’. ?àbì tòò sà !<sup>h</sup>úru-ts’í. ‘He makes the sound of !<sup>h</sup>úru repeatedly by using a tin can’.
- !<sup>h</sup>úi the texture of a juicy fruit; the manner in which something juicy is cut and its juice comes out (or the human body is wounded and is bleeding). ||hámì sì k<sup>h</sup>òè ì kà !<sup>h</sup>úi cà míí. ‘A whip says to a man !<sup>h</sup>úi (it wounds his body)’. ||hámì sì k<sup>h</sup>òè mà !<sup>h</sup>úi-ts’í. ‘A whip makes a sound in wounding a man’. ||hámì sì ?àmà !<sup>h</sup>úi-ká. ‘A whip moves wounding him around’. k<sup>h</sup>òè bì ?àmà !<sup>h</sup>úi-χò?òrò |qáí. ‘A man whips him in the way his body is wounded and bleeds’. (> !<sup>h</sup>úi-!<sup>h</sup>úi [food texture verb]).
- !’árù the texture of a hard food, e.g. acacia gum, an undercooked tuber of *Cucumis kalahariensis*, (the texture is associated with the sound with which one bites or chews the food. !?ūm-|?è kà qχ’ūá sì cì !’árù cà míí. ‘A raw *Cucumis kalahariensis* tuber has a texture which makes the sound of !’árù when it is chewed’. ?àbì ?ésà !’árù-ts’í. ‘He makes the sound with it’. ?àbì ?ésà !’árù-kà. ‘He moves making the sound with it’. ?àbì ?ésà !’árù-χò?òrò χāū. ‘He bites it with the sound’. (> !’árù-!’árù [food texture verb]).
- η!àbù a sound with which something falls down (the whole thing, with a thud). g!áí bì η!àbù cà míí. ‘A steenbok makes the sound of η!àbù (e.g. when it tries to run away from a trap in vain). g!áí bì η!àbù-χò?òrò |qχ’áé. η!àbù-ts’í. ‘to make the sound of η!àbù’. η!àbù-ká. ‘to move making the sound of η!àbù’. (\*redup.).
- η!ùri a dull sound with which a heavy thing falls on the earth. (= †quū) g|úá sì (or g|èrō-†?úbì sì, or η||úá sì) η!ùri cà míí/cíé. ‘A monkey orange (or an ostrich egg, or a stone) says/stands η!ùri’. (\*k<sup>h</sup>òè bì η||úá sì kà η!ùri cà míí.). g|úá sì η!ùri-χò?òrò †<sup>h</sup>ēē. ‘A monkey orange falls in the manner of η!ùri.’ g|úá dzi †<sup>h</sup>ēē ts’òó dzi η!ùri-η!ùri. ‘The sound of monkey oranges’ falling is η!ùri-η!ùri’. |χóé

- dzi cì ɲ!ùrì-ts'í 'Hails are falling with the sound of ɲ!ùrì'. ɲ!ùrì-ká 'to move with the sound ɲ!ùrì (when a strong wind blows oranges down repeatedly)'.
- !qàè the way of something falls down and breaks into two pieces; to split open. !ʔúã tsèrà cì !qàè cà mĩ 'The leges splits open.' !qàè-ká 'for many things to fall down and break into pieces in a wide range of area.' k<sup>h</sup>úú-ts'í sì ʒúm sì kà !qàè cà mĩ. 'A Kalahari truffle says to the sand !qàè. (the truffle fruits out of the sand.)' cìãgà sì !qàè-χòʔòrò !qárá-sì. cìãgà sì !qàè cà mĩ (\*redup. \*!qàè-ts'í).
- !qúm̄ the texture of foods like baked potato. (> !qúm̄-!qúm̄ [food texture verb]). !ʔòrē bì cì !qúm̄ cà mĩ. 'Brachystelma sp. says !qúm̄ (it has the texture of !qúm̄)'. k<sup>h</sup>óè bì !ʔòrē mà !qúm̄-ká. 'The man walks around eating Brachystelma sp. feeling its texture'. k<sup>h</sup>óè bì !ʔòrē mà !qúm̄-!qūmā-ʔúú'. 'The man eats Brachystelma sp. feeling its texture'.
- !qúà the manner in which something symmetry opens or splits (e.g., butterfly). !ʔúã tsèrà !qúà-χòʔòrò !'úà-kú. 'The legs spread out symmetrically'. !ʔúã tsèrà !qúà cà mĩ. 'The legs say !qúà'. !qúà-ká 'to open something symmetrically repeatedly'. (\*redup. \*!qúà-ts'í).
- !Gàbù a sound with which a long thing falls down. !áò n̄ k<sup>h</sup>óè bì !Gàbù-χòʔòrò |qχ'áé. 'A tall person falls with the sound of !Gàbù'. ì bì |qχ'áé já !Gàbù cà mĩ. 'A tree falls down and says !Gàbù'. !Gàbù-!Gàbù-sí |qχ'áé 'to fall down with the sound of !Gàbù'. (!Gàbù-ts'í 'to make the sound of !Gàbù'; !Gàbù-ká 'to move by repeating to make the sound of !Gàbù').
- !Gúí the manner in which an animal (particularly dog) starts running by noticing something. !ābā bì !Gúí-χòʔòrò !árū. 'The dog starts to run in the manner of !Gúí'. !ābā bì !Gúí cà mĩ 'The dog says !Gúí'. !Gúí-ká. 'to start running by noticing something'. (\*redup. \*!Gúí-ts'í).
- !q<sup>h</sup>ájà a sound with which one breaks a tree with one's hands, a sound which a moving thunder storm makes. ɲ!ùnī bì !q<sup>h</sup>ájà-χòʔòrò k<sup>h</sup>úã. 'A Shepherd's tree breaks with the sound of !q<sup>h</sup>ájà'. ɲ!ùnī bì !q<sup>h</sup>ájà cà mĩ. 'A Shepherd's tree says !q<sup>h</sup>ájà'. ɲ!ùnī bì !q<sup>h</sup>ájà-!q<sup>h</sup>ájà 'The Sheperd's tree will make the sound of !q<sup>h</sup>ájà by its nature'. !q<sup>h</sup>ájà-ká-kàχó 'for a person to break a tree with the noise of !q<sup>h</sup>ájà'. !q<sup>h</sup>ájà-ts'í. 'to make the sound of !q<sup>h</sup>ájà'.
- !q<sup>h</sup>òp [!q<sup>h</sup>ò<sup>ɔ</sup>p] a sound with which an old and whitish tamma mellon was stabbed. k<sup>h</sup>óè bì ɲ!ǎñ s̄ kà !q<sup>h</sup>òp cà mĩ. 'A man says to a tamma melon !q<sup>h</sup>òp (he stabs a tamma melon and makes the sound of !q<sup>h</sup>òp)'. k<sup>h</sup>óè bì ɲ!ǎñ s̄ !q<sup>h</sup>òp-ts'í. 'A man makes the sound of !q<sup>h</sup>òp repeatedly in stabbing old whitish tamma melons'.
- !q'árà the manner in which a lot of foot prints are left. !q'árà-ts'í '(of a game for trap hunting) to leave a lot of footprints'. (\*cà mĩ, \*-ká, \*-χòʔòrò).
- !q'ári the manner that one (especially a woman) walks slowly and elegantly. !q'ári-ká 'to walk elegantly (of a woman)'.
- !q'árù the manner in which something appears suddenly (e.g. out of a hole/from behind a tree). qχ'óòχò bì !q'árù cà mĩ/!qχ'úã. 'An animal says/goes out !q'árù'.

- qχ'óōχò bì !q'árù-ká. 'An animal walks out suddenly'. qχ'óōχò bì !q'árù-χò?òrò †qχ'úā 'An animal goes out suddenly'. (\*redup., \*-ts'í).
- !q'āñ the way one ties a belt tightly around the waist. ?àbì ?àm qχ'ùù kà !q'āñ cā mĩ. 'He says to his waist !q'āñ (he ties his waist tightly).' ?àbì †qāì m kà ?àm qχ'ùù kà !q'āñ-χò?òrò !áé. 'He ties his waist with a belt in the !q'āñ manner (tightly).' !q'āñ-!q'āñ-sí !áé. 'to tie tightly'. !q'āñ-ká. 'to move with one's waist tied tightly'. (\*-ts'í).
- !q'óó the manner in which something long is pulled out abruptly; the manner in which the inner wood of acacia root is pulled out. !q'óó cā míí. 'to say !q'óó (to be pulled out abruptly)'. g!ũũ m kà !qχ'áí sì !q'óó cā †qχ'úā. !q'óó-kā-rā-!<sup>h</sup>úbī. 'to pull out something in walking around repeatedly' !q'óó-χò?òrò !<sup>h</sup>úbī. '(for someone) to pull out abruptly'. g!ũũ-!qχ'áí bì !q'óó-!q'óó. g!ũũ m !qχ'áí è ||q'óó cā mĩ/g!ũũ m !qχ'áí è ||q'óó cā †qχ'úā. 'The acacia root says/comes out abruptly'. g!ũũ m !qχ'áí è ||q'óó-χò?òrò †qχ'úā. 'The acacia root says/comes out abruptly'. (\*-ts'í)
- !q'úbù the low-pitched and obscure sound. ?àrì cì !q'úbù-ts'í. 'They speak in a low and obscure voice'; !q'úbù-ts'í 'to be loose (of the clothes which seems to make a sound when the person in the clothes is moving)'. (cf. !q'úbù-!q'úbù 'to be soft (of leather)'. k<sup>h</sup>óó sì !q'úbù-!q'úbù. 'Leather is soft'. k<sup>h</sup>òè bì k<sup>h</sup>óó sà !q'úbù-!q'úbù-kā-χó. 'A man makes leather soft'.) (\*cā mĩ).
- !q'úbū a sound which water in a container (e.g. of an ostrich egg shell) makes. k<sup>h</sup>òè bì g|èrō-†?úbī sà !q'úbū-ts'í. 'to make sound of !q'úbū'. g|èrō-†?úbī sì !q'úbū cā mĩ. 'An ostrich egg says !q'úbū'.
- !?ùrù the manner in which animals start running together. béē dzì !?ùrù cā mĩ. 'Horses say !?ùrù (they start running)'. béē dzì kùà !?ùrù-kārā-!àrò. 'Horses are starting to run'.
- !?ūū a sound with which a person bumps into someone. !?ūū cā mĩ/cíé. 'to bump into someone with the sound of !?ūū'.
- !hòp [!hò<sup>o</sup>p] a sound with which an arrow is stuck at a bird. ?àbì dzérá m kà !hòp cā mĩ. 'He says to a bird !hòp (he shoots a bird and the arrow sticks at it with the sound of !hòp)'. \*dzérá bì !hòp cā mĩ. (\*-ts'í).
- !hóó a manner in which the wind is calm and silent. †?āā sì !hóó cā mĩ/cíé. 'The wind says/stands !hóó'. †?āā sì !hóó-χò?òrò cíé. 'The wind stops silently'. (\*-ká, \*-ts'í, \*redup.)
- †áp the sound with which thick and sticky food is served in a plate/bowl. k<sup>h</sup>òè bì !χáí kà g|éè sì kà †áp cā mĩ. 'A person says †áp to the thick and sticky porridge (he serves the porridge with the sound)'. g|éè sì χò sà †áp-ts'í. 'to make the sound of †áp repeatedly in serving a thick and sticky food'.
- †àp the sound with which sticky thing falls onto the ground. !χáí sì †àp cā mĩ. 'Porridge says †àp'.
- †ám the texture of a juicy root with hard surface. †?úbī sì †ám cā mĩ. 'An egg says

- †ám (an egg breaks and its slimy liquid comes out). k<sup>h</sup>òè bì †?úbī mà †ám-ts'í.  
 'A man makes a noise in breaking an egg'. k<sup>h</sup>òè bì †?úbī mà †ám-ká. 'A man  
 moves to break an egg'. k<sup>h</sup>òè bì †?úbī mà †ám-χò?òrò  
 †qχ'ámā-?òè/†qχ'ámā-!qárā. 'A man hits and crashes an egg with its liquid  
 out/crashes an egg into pieces'. (> †ám-†ám [food texture verb].)
- †íp the manner in which a hole gets stopped up. ?àbì kùm sì kà †íp cà mī. 'He says  
 to a hole †íp (he stops a hole up)'. (cf. \*kùm sì †íp cà mī.) †úã m̄ †éé è †íp cà  
 mī. 'The child's ear says †íp (the child will not listen)'. (\*-ts'í)
- †ìp the sound of a heavy object falls onto the sandy ground surface. lúrn sì χò sì †ìp  
 cà mī. 'A heavy thing says †ìp (it makes the sound on falling onto the sandy  
 ground)'.
- †úp [†úp] the sound with which leaking rain water is dripping. cúú bì †úp cà mī.  
 'The rain says †úp (the rain water leaks and drips with the sound)'. †úp-ts'í 'to  
 drip and make the sound repeatedly (of leaking rain water)'.
- g†ìbì the manner of person's running. g†ìbì-ká 'to run of a person'.
- g†ùp [g†ùp] the sound with which a leather strap breaks. †qàì bì g†ùp cà mī. 'A  
 leather belt says g†ùp (it breaks and makes the sound)'.
- †<sup>h</sup>ìní the manner of a hyena's running. †<sup>h</sup>ìní-ká 'to run of a hyena'.
- †<sup>h</sup>óp [†<sup>h</sup>úp] the manner in which dirt is cleaned off. ?ãã-χò sì †<sup>h</sup>óp cà mī. 'The  
 clothes say †<sup>h</sup>óp (the clothes becomes clean)'. (\*-ts'í)
- †ùbī the manner of fullness. !òò sì †ùbī cà mī. 'A water pit says †ùbī (the pit is full  
 of water)'. !òò sì †ùbī-χò?òrò †qχ'òé (†qχ'òé-há). 'A water pit is filled with  
 water fully'.
- †úù the manner of making a good landing after jumping. †úù-ká 'to run and jump  
 repeatedly'. k<sup>h</sup>òè bì †úù já †úù cà mī/cíé. 'A man jumps and says/stands †úù.'  
 k<sup>h</sup>òè bì †úù-χò?òrò †<sup>h</sup>éé. 'A man lands (onto the ground) in successful manner.'
- †ùp [†ùp] the sound of whip. †hámì bì †ùp cà mī. 'A whip says †ùp (it makes the  
 sound)'. †ùp-ts'í 'to make the †ùp sound repeatedly'.
- †úp [†úp] the sound with which one pulls out an edible tuber (of *Cucumis  
 kalahariensis*). !?ũm̄-|è m̄ kà †úp cà mī. 'to say to *Cucumis kalahariensis* †úp  
 (to pull out the tuber)'. ?àbì kùà †úp-ká 'He moves around pulling out the  
 tuber making the sound'. (\*-ts'í)
- †qáp the manner in which one stops while walking slowly. †qáp cà cíé. 'to stop  
 †qáp.'; the manner in which something becomes flat. (> †qám-†qám [food  
 texture verb]). †qáp-ká 'to walk slowly sometimes stopping to watch out'. †'òrē  
 sì †?án já †χũ já †qáp cà mī. '*Brachystelma* sp. is boiled, becomes soft and  
 says †qáp (becomes flat)'. ?àbì cì †qáp cà †óé (mí). 'He lies (says) †qáp (he lies  
 flat)'. ?àbì †qáp-ká. 'He lies flat repeatedly'. †qáp-χò?òrò †óé. 'to lie flat'.  
 †qáp-χò?òrò †χũ. 'to become soft and flat'. (\*-ts'í)
- †qàbà the manner of softness and sliminess (of e.g. excreta or porridge). !χáí sì cì

- ‡qàbà cǎ mǐ. ‘Porridge is saying ‡qàbà (it is soft and slimy)’. !χárí sǐ cǐ ‡qàbà cǎ η!áá sǐ wà η‡úú. ‘Porridge, soft and slimy, is in the ball’.
- ‡qábù the sound with which one serves soft food. k<sup>h</sup>óè bì |χárí sǐ kǎ ‡qábù cǎ mǐ. ‘A man says to porridge ‡qábù (he serves porridge with the sound)’. k<sup>h</sup>óè bì ‡qábù-kārā-χárò. ‘A man serves around.’.
- ‡qáná the sound that a small amount of water makes. ts<sup>h</sup>áá sǐ ‡qáná cǎ mǐ. ‘Water says ‡qáná (a small amount of water makes the sound)’. k<sup>h</sup>óè bì kùà ts<sup>h</sup>áá sǎ ‡qáná-ts’í. ‘A man makes the sound of ‡qáná (by shaking the container with a small amount of water)’.
- ‡qánú the sound of something falling into the water (in a deep hole) with a splash; the sound that a small amount of water makes. ts<sup>h</sup>áá sǐ ‡qánú cǎ ‡āā (mǐí). ‘Water enters (says) ‡qánú’. ?àbì η!áá sǐ wà ts<sup>h</sup>áá sǎ ‡qánú cǎ ‡āā. ‘He pours water into a container with the sound of ‡qánú.’ ?àbì ts<sup>h</sup>áá sǎ ‡qánú-χò?òrò ‡āā. ‘He pours water into a container with the sound of ‡qánú.’ ts<sup>h</sup>áá-lùà dzì ‡qánú-‡qánú. ‘A small quantity of water makes the sound of ‡qánú’.
- ‡qǎā the softness of something when you pushed or stepped on it. ?àbì tsùù sǎ íjǎ jǎ ?ésì kǎ ‡qǎā cǎ mǐ. ‘He steps on an excreta and says to it ‡qǎā. tsùù sǐ ‡qǎā-‡qǎā. ‘Dung is soft.’ ?àbì tsùù sǐ wà ‡qǎā cǎ ‡āā. ‘He steps (onto dung) ‡qǎā.’
- ‡qúrú the sound of dripping. ‡qúrú-ts’í ‘to drip making a sound (of water).
- ‡qùũ a sound (a thump) with which a heavy thing falls down. (= η!ùrì). ì-ǧ||ò sǐ ‡<sup>h</sup>ēē jǎ ‡qùũ cǎ mǐ. ‘A big log falls and says ‡qùũ.’ ì-ǧ||ò sǐ ‡qùũ-χò?òrò ‡<sup>h</sup>ēē. ‘A big log falls with a thump of ‡qùũ.’ (NB: reduplication involves irregular tonal alternation. ‡qũũ-‡qũũ ‘to be heavy’ ì-ǧ||ò sǐ ‡qũũ-‡qũũ. ‘A big log makes thumps of ‡qũũ.’)
- ‡Gàbì the sound with which a long object falls down. η!ābē bì |qχ’áé jǎ ‡Gàbì cǎ mǐ. ‘A giraffe falls down and says ‡Gàbì (it makes the sound)’. ‡Gàbì-ts’í ‘to make the sound repeatedly’.
- ‡Gàrà the sound with which a heavy rain starts. ‡Gàrà-ts’í ‘to start with a noisy sound (of a heavy rain).
- ‡Gáà the manner of slow movement. ‡Gáà-ts’í ‘to walk slowly’. ‡Gáà-ká ‘to walk slowly’. (\*cǎ mǐ, \*-χò?òrò).
- ‡Gàà a sound of snoring. (‡Gàà cǎ mǐ. ‘to say ‡Gàà (to make the sound of ‡Gàà)’. ‡Gàà-ts’í ‘to snore’ (= ‡Gùrù-ts’í). (\*-ká, \*-χò?òrò). ‡Gàā a sound of snoring. ‡Gàā-ts’í. ‘to snore’ (= ‡Gàà-ts’í, ‡Gùrù-ts’í).
- ‡Gùrù a sound of snoring. ‡Gùrù-ts’í ‘to snore’ (= ‡Gàà-ts’í).
- ‡q<sup>h</sup>ábì the sound with which a razor is sharpened. |?ũ-χò sǐ ‡q<sup>h</sup>ábì cǎ mǐ. ‘A razor says ‡q<sup>h</sup>ábì.’ |?ũ-χò sǐ ‡q<sup>h</sup>ái-‡q<sup>h</sup>ábì. ‘The razor is so thin that it makes the sound of ‡q<sup>h</sup>ábì.’
- ‡q<sup>h</sup>áà the manner of lying flat on one's stomach. ‡q<sup>h</sup>áà-ká ‘to crawl with one’s stomach touching the ground repeatedly.’

- ‡q<sup>h</sup>áá the high-pitched "ting" sound of cracking of something. g|èrō m̄ kà ‡?úbī s̄i kà ?àbì ‡q<sup>h</sup>áá cà m̄í. 'He says to an ostritch egg ‡q<sup>h</sup>áá. (he makes the sound with the egg shell).' g|èrō m̄ kà ‡?úbī s̄i ‡q<sup>h</sup>áá-‡q<sup>h</sup>áá 'An ostritch egg shell will make the sound of ‡q<sup>h</sup>áá. (\*g|èrō m̄ kà ‡?úbī s̄i ‡q<sup>h</sup>áá cà m̄í [ungrammatical]). ‡q<sup>h</sup>áá-ts'í. 'to make the sound of ‡q<sup>h</sup>áá'. ‡q<sup>h</sup>áá-ká. 'to move making the sound of ‡q<sup>h</sup>áá'.
- ‡q<sup>h</sup>áù the manner of breaking arms and legs of an animal by hitting or throwing something against it. k<sup>h</sup>óè b̄i qχ'óòχò m̄ |?úá kà ‡q<sup>h</sup>áù cà m̄í. 'A man says to a animal's child ‡q<sup>h</sup>áù. (he hits and breaks the animal's child with the sound.)'. ?àbì íi m̄ kà ‡q<sup>h</sup>áù cà m̄í. 'He says to a tree ‡q<sup>h</sup>áù (he breaks the tree with the noise).' g|áí-|ò m̄ |?úá è ‡q<sup>h</sup>áù-‡q<sup>h</sup>áù. 'A young steenbok will make the sound of ‡q<sup>h</sup>áù (implying its bones are weak and easily broken with the sound.)'. ?àbì ‡q<sup>h</sup>áù-χò?òrò qχ'óòχò m̄ ||qχ'ámā-k<sup>h</sup>úá. 'He hits and breaks an animal's bone in the way that the bone makes the sound.'
- ‡q<sup>h</sup>áũ the sound with which one eats a broiled crispy skin. (> ‡q<sup>h</sup>áũ-‡q<sup>h</sup>áũ [food texture verb]). η|ábē k<sup>h</sup>óò s̄i c̄i ‡q<sup>h</sup>áũ cà m̄í. 'Giraffe skin says ‡q<sup>h</sup>áũ (the skin crisps when it is bitten)'. η|ábē k<sup>h</sup>óò s̄à ‡q<sup>h</sup>áũ-‡q<sup>h</sup>áwā-χâũ. 'to chew the giraffe skin feeling a crispy texture'. (\*-χò?òrò, \*-ts'í, \*-ká).
- ‡q<sup>h</sup>òp [‡q<sup>h</sup>ò<sup>p</sup>] the sound with which an awl sticks into a soft thing. (= !χòp). ?àbì g|áà m̄ kà pírí m̄ kà ‡q<sup>h</sup>òp cà m̄í. 'He says to a goat ‡q<sup>h</sup>òp with an awl (he sticks the goat with an awl with the sound)'.
- ‡q'áñ the manner in which something soft and sticky is stepped onto. c̄irè η||áñ s̄i kà ‡q'áñ cà m̄í. 'I say to a tsamma melon ‡q'áñ (I step onto it)'. c̄irè η||áñ s̄à ‡q'áñ-ts'í. 'I step onto a tsamma melon'. c̄irè η||áñ s̄à ‡q'áñ-ká. 'I move around stepping onto a tsamma melon'. η||áñ s̄à ‡q'áñ-kārā-||áé. 'to walk around chewing a tsamma melon'. (> ‡q'áñ-‡q'áñ [food texture verb] 'to feel a sticky texture of a food in the mouth'.) (\*-χò?òrò).
- ‡q'áñ the manner of walking slowly and quietly. ‡q'áñ-ká 'to walk slowly being tired'. k<sup>h</sup>óè b̄i ‡q'áñ cà m̄í j̄á η?úũ. 'A man says ‡q'áñ and sits (without making sounds and without being noticed)'. (\*-tsí, \*-χò?òrò).
- ‡q'áà the softness and stickiness which one feels when stepping onto something, e.g. feces. ?àbì !χárí s̄i kà ‡q'áà cà m̄í. 'He says to porridge ‡q'áà (when he steps onto porridge)'. ?àbì !χárí s̄i wà ‡q'áà-χò?òrò ‡áá. 'He steps onto porridge in the way of ‡q'áà.' ‡q'áà-ts'í 'to make a noise by stepping a sticky thing repeatedly'. ‡q'áà-ká 'to walk stepping onto a sticky thing and making a noise.' ?àbì ‡q'áà-χò?òrò !χárí s̄à (or ‡qòò s̄à) íj̄á. 'He softly steps onto porridge (or mud).'
- ‡?áũ the manner of being silent. ‡?áũ cà m̄í 'to say ‡?áũ (to stand silently)'. ‡?áũ-ká 'to walk silently'
- ‡?ébù the manner in which plants suddenly wither because it gets cold. !q<sup>h</sup>áī s̄i c̄iàgà-||?úá d̄zi kà ‡?ébù cà m̄í. 'The cold says to vines of melons ‡?ébù. (vines of melons suddenly wither)'. c̄iàgà d̄zi ||?úá è ‡?ébù cà m̄í. 'Vines of melons say ‡?ébù (vines of melons suddenly wither)'. c̄iàgà-||?úá d̄zi ‡?ébù-ká. 'Melon vines' withering expands'.

- ‡ʔùrù the manner in which one digs a hole through abruptly. ʔàbì ‡ʔùrù cà háé sà η‡úã-χò. ‘He digs a hole through (to a springhare nest tunnel).’ ʔàbì háé sì kà ‡ʔùrù cà mĩ. ‘He says to a hole ‡ʔùrù. (He digs a hole though to the springhare nest).’
- ‡héù the manner of throwing something at a weak animal (e.g. steenbok) to kill it. ʔàbì g!áĩ-ò m kà ‡héù cà mĩ. ‘He says to a steenbok ‡héù (he throw something at a steenbok to kill it).’
- ‡hòp [‡hò<sup>o</sup>p] the sound of an arrow falling after hitting an animal (but not sticking in it). |χòò m |χàè qχ’áo sì ‡hòp cà mĩ. ‘An arrow on a gemsbok says ‡hòp (it falls off from the gemsbok with the sound)’. ‡hòp-ts’í ‘to fall from an animal with the sound repeatedly’.
- ‡áã the way someone has gone away. k<sup>h</sup>òè bì ‡áã cà mĩ. ‘The man says ‡áã (the man has completely gone).’ k<sup>h</sup>òè bì ‡áã-χòʔòrò !úũ. ‘The man has gone away completely.’ (\*-ká)
- ‡áú the way something is straight. ‡áú cà mĩ. ‘Say ‡áú (say straight, i.e. say in the correct way)’. ‡áú c<sup>h</sup>ānā !úũ. ‘Walk ‡áú (walk straight).’ ‡áú cà ʔĩ. ‘to look straight, to be straight’. ‡áú cà hĩ. ‘to do straight (to do correctly)’. (\*-χòʔòrò).
- ‡áũ the manner of hartebeest’s running. ‡áũ-ká ‘to run of a hartebeest’.
- ‡úró the sound made by a falling quiver which has arrows inside of it. ‡úró cà mĩ. ‘to say ‡úró (to make the sound)’. ‡úró cà ‡óē-χò. ‘to lay (with the sound of) ‡úró (to lay something and make the sound)’. !ūmā sì cì ‡úró-ts’í. ‘A quiver falls down making a sound’.
- g‡ábù the manner in which a flying feather is falling down shaking. dzìnì sì g‡ábù cà mĩ. ‘The flying feather says g‡ábù (the feather is falling down shaking).’ A player of the flying feather says to the feather “g‡ábù cà mĩ” when he is playing. (\*-ká, \*-ts’í, \*redup.).
- ‡āã the manner in which a person has gone away and will never return. ‡āã-kà ‘to go away’. ‡āã cà míĩ. ‘to have gone away’. (= ‡áã). (\*-χòʔòrò).
- η‡àbù the manner in which a person grasps something abruptly. η‡àbù-ká. ‘to move grasping something abruptly’. η‡àbù-χòʔòrò. ‘abruptly’. ʔàbì !áo-χò sì kà η‡àbù cà mĩ. ‘He says to a knife η‡àbù (he grasps the knife abruptly).’ ʔàbì !áo-χò sà η‡àbù-χòʔòrò !χóó. ‘He grasps the knife in the η‡àbù manner’. (\*-ts’í, \*redup.).
- η‡ùp [η‡ù<sup>o</sup>p] the sound made by a large bird falling on the ground (e.g. after being shot). g‡éú bì η‡ùp cà mĩ. ‘A kori says η‡ùp (it makes the sound on falling down)’. g‡éú bì η‡ùp-ts’í. ‘A kori falls down struggling and making the sound’.
- η‡úró the sound with which a quiver falls on the ground. η‡úró cà mĩ. ‘to say η‡úró (to make the sound falling on the ground)’. η‡úró cà ‡óé. ‘to fall and lie on the ground with the sound’. η‡úró-ká. ‘to move around falling and making the sound’. η‡úró-ts’í. ‘to make the sound falling onto the ground’.
- ‡qáã the manner in which someone stays silent or keeps still like an apparent death of a beetle; the manner in which a place is very quiet. η!áē-‡àmā sì ‡qáã cà mĩ.

- ‘An apparent-death-beetle says ||qáã’. k<sup>h</sup>óè bì ||qáã cà mĩ. ‘The man says ||qáã. (he stops talking and suddenly falls asleep.)’. ||qáã-χò?òrò ||?ùm ‘to stop talking and suddenly fall asleep’.
- ||qâũ the slow and careful way of an animal’s climbing of a tree by using the claws. ||qâũ-ká, ||qâũ-kārā-!ʔábò/-íjà ‘to climb up carefully by using the claws’. !ʔóè bì ||qâũ cà cíé ‘A leopard climbs down and lands smoothly by using the claws.’ !ʔóè bì ||qâũ-χò?òrò †<sup>h</sup>ēē ‘A leopard lands smoothly by using the claws.’ ||qâũ-||qâũ ‘to feel the thorny texture with hands’.
- ||Gàbà the manner of aadvarik’s walking with a sound of the footsteps; the manner of raining with a sound similar to that of aadvarik’s footsteps. ||Gàbà-ká ‘to walk (of an aadvarik)’. cúú bì cì ||Gàbà-ts’í ‘The rain is raining and making the sound of ||Gàbà.’ ||Gàbā-||Gàbà-sí †úū. ‘to rain with the sound of ||Gàbā’. ||Gàbà cà mĩ. ‘to say ||Gàbà (to make the sound of aadvarik’s walking or rain)’
- ||q’át the manner in which a snake jumps out. |qχ’áō bì ||q’át cà mĩ. ‘A snake says ||q’át (it jumps out suddenly)’. |qχ’áō bì cì ||q’át-ká. ‘A snake jumps out suddenly’. |qχ’áō bì cì ||q’át-χò?òrò †qχ’úā. ‘A snake jumps out suddenly’. (\*||q’át-ts’í).
- ||q’òp [||q’òp] the sound of someone biting at meat. ?àbì |χáá sì kà ||q’òp cà mĩ. ‘He says to meat ||q’òp (he bites at meat making the sound of ||q’òp)’. ?àbì há cì |χáá sà ||q’òp-ts’í. ‘He bites at meat making the sound repeatedly’.
- ||qχ’ùrù the sound made by a rat/mouse moving inside something. η†úní bì η!áà sì wà ||qχ’ùrù cà mĩ. ‘A rat says ||qχ’ùrù (it makes the sound of ||qχ’ùrù)’. η†úní bì cì η!áà dzì wà †āā já cì ||qχ’ùrù-ts’í. ‘A rat enters a container and make the sound of ||qχ’ùrù’.
- ||χáú the sound with which something (e.g. an animal) touches a dried tree or enters a thicket of dried trees, such as gláà (Silver terminalia. *Terminalia seicea* Burch. Ex DC.). qχ’óōχò bì ||χáú cà †āā. ‘An animal enters (with the sound of) ||χáú.’ ?àbì kùà ||χáú-ts’í. ‘He is making the sound of ||χáú’. ?àbì kùà ||χáú-ká. ‘He is moving with (the sound of) ||χáú’.
- ||χòp [||χòp] the sound with which a spear sticks into the body of a game animal. ?àbì qχ’áō-ī m kà qχ’óō-χò m ka ||χòp cà mĩ. ‘He says to an animal ||χòp with a spear (he shoots at an animal and the spear sticks into the animal body with the sound of ||χòp)’. ||χòp-ts’í ‘to stab with a spear repeatedly with the sound of ||χòp’.
- póó a manner of giraffe’s walking with the sound of footsteps. póó-ká ‘to walk of a giraffe with the sound of footsteps’. (Rare).
- bábú a big sound of pounding with an old mortar. k<sup>h</sup>óè sì (ī-qχ’ò-)||g||óró sì kà bábú cà mĩ. ‘A woman says to an old mortar bábú (the mortar makes the sound).’ g||óró sì ts’óō è bábú-bábú. ‘The old mortar’s sound is bábú. g||àē-kò sì cì g||óró sà bábú-ts’í. ‘A woman is making the sound in using an old mortar’. g||àē-kò sì cì g||óró sà bábú-ts’í-kàχó. g||àē-kò sì cì g||óró sà bábú-kārā cíó. ‘A woman is pounding with an old mortar with the sound’. (\*-χò?òrò)



- báã the manner in which one bores a hole into a large hollow; the manner in which a flask made of eggshells was emptied of all the water. ?àbì ñ!óē m̄ kà háé s̄ kà báã cà m̄í. ‘He says to a porcupine nest (tunnel) báã (he has bored a hole to the nest)’. ?àbì háé sà báã-χò?òrò !<sup>h</sup>úí. ‘He bores a hole to a larger hollow.’ háé s̄ báã-báã. ‘A hole will be bored.’ (\*-ts’í, \*-ká)
- p<sup>h</sup>òð the manner in which a person/insect jumps into fire all of a sudden. |úã bì |qχ’áé já |?éē s̄ wà p<sup>h</sup>òð cà †ãã. ‘A child falls and enters the fire all of a sudden’. p<sup>h</sup>òð-ká ‘to move into fire’. |úã bì p<sup>h</sup>òð cà m̄í. ‘A child says p<sup>h</sup>òð (a child jumps into fire)’. |úã bì |?éē s̄ wà p<sup>h</sup>òð-χò?òrò |qχ’áé ‘A child falls into fire suddenly’. |?éē s̄ p<sup>h</sup>òð-p<sup>h</sup>òð. ‘The fire draws people (e.g. the fire is so large that a child likely falls into it).’ (\*-ts’í).
- p<sup>h</sup>úrù the manner in which one walks sticking in the sand. p<sup>h</sup>úrù-ká ‘to walk sticking in the sand’.
- tìì a sound with which a heavy object falls; the similar sound which kori makes with its throat swollen. ñ||úá s̄ tìì cà m̄í. ‘A stone says tìì (it falls and makes the sound)’. g†éú bì tìì cà m̄í. ‘Kori says tìì’.
- tíĩ the manner in which something springs out. dzérá bì tíĩ cà m̄í. ‘A bird says tíĩ (it comes out suddenly)’. dzérá bì tíĩ-χò?òrò pēē. ‘A bird flies suddenly’. dzérá bì tíĩ-χò?òrò ?àm kà ñ!úú s̄ wà †qχúã. ‘A bird comes out of its nest suddenly’. ?àm kà †qχ’úã-qχ’ám s̄ tíĩtíĩ. dzérá dzì cì tíĩ-ká. (\*-ts’í).
- túú the way someone/something become silent/quiet. k̄ cì qχ’úí m̄ k<sup>h</sup>òè bì túú cà m̄í. ‘A man who has kept talking says túú (he becomes silent)’. cúú bì túú cà m̄í. ‘The thunder becomes silent.’ cúú bì túú-χò?òrò ñ!óō. ‘The rain becomes quiet.’ cúú/k<sup>h</sup>òè bì túú-túú. ‘The rain/man is silent.’ (\*-ts’í, \*-ká)
- tùù the manner in which a group of people suddenly stand up; the manner and sound of many birds’ suddenly starting to fly. k<sup>h</sup>òè χàrì tùù cà m̄í. ‘People say tùù (they stand up suddenly)’. dzérá dzì tùù cà m̄í. ‘Birds say tùù (they fly away suddenly)’.
- tùp [tù<sup>o</sup>p] the manner of squatting with the heels raised up. k<sup>h</sup>òè bì tùp cà m̄í. ‘A man says tùp (he squats with his heels raised up)’.
- t<sup>h</sup>ábù the manner of walking slowly and unstably. t<sup>h</sup>ábù-ká ‘to walk slowly and unstably’.
- tqχ’áp the manner in which one is/becomes blind (loses sight); the manner in which a hole is stopped up; the manner in which clouds cover the sun. cúú-k<sup>h</sup>òō dzì |ám s̄ kà tqχ’áp cà m̄í. ‘Clouds say to the sun tqχ’áp (the clouds completely cover the sun.)’. cúú-k<sup>h</sup>òō dzì |ám sà tqχ’áp-ká. ‘Clouds move and cover the sun.’ (\*tqχ’áp-ts’í, \*tqχ’áp-χò?òrò)
- tqχ’àp the sound of stepping into mud. tqχ’àp cà m̄í. ‘to say (i.e. make the sound of) tqχ’àp’
- tqχ’ûã the manner in which an animal, such as leopard or wildcat, jumps away quietly. tqχ’ûã-ká ‘to walk stealthily (of a wildcat etc.)’.

- tqχ'újã the manner in which an animal, such as leopard or wildcat, jumps away quietly. (tqχ'újã cà míí 'to say tqχ'újã (jump away quietly)'). tqχ'újã-ká. 'to move quietly.' !?òè bì tqχ'újã-χò?òrò cèñ. 'A leopard gets up silently'. (\*tqχ'újã-ts'í).
- tχòp [tχò<sup>o</sup>p] a sound with which the animal neck is stabbed. !áò-χò sì tχòp cà míí. 'A knife says tχòp (it makes the sound when it pierces an animal's neck)'. k<sup>h</sup>òè bì pírí m kà tχòp cà míí. 'A man says to a goat tχòp (he stabs the neck of the goat with the sound)'. k<sup>h</sup>òè bì pírí mà !áò-χò sì kà tχòp-ts'í. 'A man stabs a goat (neck) repeatedly with a knife with the sound of tχòp'.
- tsábū the manner in which a trap comes off. g!úí bì tsábū cà míí. 'A trap says tsábū (the trap comes off)'. g!úí bì tsábū-ká. g!úí bì tsábū-ts'í. g!úí bì tsábū-χò?òrò cèñ. 'A snare comes off'.
- dzã ĩ the sound with which trees scrape each other; the sound which a zip fastener makes when it is abruptly fastened. ĩ tsèrà cì dzã ĩ cà míí. 'A pair of trees are saying dzã ĩ. (the trees make the sound of dzã ĩ)'. k<sup>h</sup>òè bì dzíípè m kà dzã ĩ cà míí. 'A man says to a zipper dzã ĩ (the zipper makes the sound when it is used by the man)'. dzã ĩ-ts'í 'to make the sound of dzã ĩ repeatedly'. ?étsèrà ĩ tsèrà òè-|ám k<sup>h</sup>á (?áó-sí) cì dzã ĩ-ts'í. 'The two trees always (for a long time) make the sound of dzã ĩ'.
- ts<sup>h</sup>àn the tender texture (of meat). (> ts<sup>h</sup>àn-ts<sup>h</sup>àn [food texture verb]). |χáã sì ts<sup>h</sup>àn cà míí. 'The meat says ts<sup>h</sup>àn (it is tender)'. !áò-χò sì cì |χáã sì kà ts<sup>h</sup>àn cà míí. 'A knife says to meat ts<sup>h</sup>àn (the knife smoothly cuts the meat, which is tender)'. k<sup>h</sup>òè bì |χáã sà ts<sup>h</sup>àn-ká. 'A man moves around cutting smoothly the tender meat'. k<sup>h</sup>òè bì ts<sup>h</sup>àn-χò?òrò |χáã sà χáò. (\*-ts'í)
- tsqχ'ábã a sound with which juicy meat is pounded with a bladed-mallet. (tsqχ'ábã-ts'í 'to make the sound of tsqχ'ába'. tsqχ'ábã-ká 'to walk on the wet sand with the sound of tsqχ'ábã'. k<sup>h</sup>òè bì |χáã sà cíó ?ési já tsqχ'ábã cà míí. 'A man pounds meat and the meat says tsqχ'ábã.' k<sup>h</sup>òè bì |χáã sì kà tsqχ'ábã cà míí. 'A man says to meat tsqχ'ábã (the meat makes the sound)'. k<sup>h</sup>òè bì |χáã sà tsqχ'ábã-ts'í. 'A man makes the sound with meat'. k<sup>h</sup>òè bì |χáã sà tsqχ'ábã-kā-rā- cíó. 'A man pounds meat with the sound of tsqχ'ábã'. |χáã sì cíó ?ò è tsqχ'ábã-tsqχ'ábã. |χáã sì tsqχ'ábã-tsqχ'ábã à cíó ?ò. 'The meat is of making tsqχ'ábã-tsqχ'ábã sound in pounding it.'
- tχòp [tsχò<sup>o</sup>p] the manner in which one snatches something or catch a small animal (e.g. a young steenbok) quickly. ?àbì g!áí-|ò m kà tχòp cà míí. 'He says to a young steenbok tχòp (he catches it quickly)'. (\*tχòp-ts'í, \*g!áí-|ò bì tχòp cà míí).
- cúri the manner in which an animal (such as a snake) quickly jumps/moves away. cúri-ká. 'to jump away'. íjà-dá bì cúri cà ||óé. 'black mamba lies quickly.' |qχ'áò bì cúri cà míí. 'A snake says cúri (it jumps away quickly.)'. |qχ'áò bì cúri-χò?òrò !árú. 'A snake rushes away.' (\*-ts'í, \*redup).
- c<sup>h</sup>ãũ the manner of walking silently. c<sup>h</sup>ãũ-ká 'to walk silently'.
- c<sup>h</sup>ébè the manner of lightning of thunder. cúú bì c<sup>h</sup>ébè cà míí. 'The rain says c<sup>h</sup>ébè (it

- lightens).’ cúú bì c<sup>h</sup>ébé-χò?òrò cíbè. ‘The rain flushes the lightning.’ cúú bì c<sup>h</sup>ébé-ká. ‘The rain moves with lightning’. η|ì m̄ cúú bì c<sup>h</sup>ébé-c<sup>h</sup>ébé ‘This rain has lightning.’ (\*-ts’í)
- c’íbà (~ c’ībā) the sound with which a soft thing is stabbed by accident. c’íbà cà m̄í. ‘to be stabbed with the sound’. c’íbà-ka. ‘to be stabbed around (of a soft thing)’.
- kùà the sound (and the manner) with which (in which) the skull is broken. k<sup>h</sup>òè bì ?ésì mǎǎ kà kùà cà m̄í. ‘The man says to its head kùà (the man broke its head bone with the sound).’ cí mǎǎ è kùà cà m̄í. ‘My head says kùà (it aches terribly).’ kùà-ts’í ‘to make the sound of kùà’. kùà-ká ‘to move around making the sound’. mǎǎ s̄ kùà-kùà. ‘The head is broken.’
- gúǎ the manner of unsteady movement. gúǎ-ká ‘to walk unsteadily’.
- gùñ [gùñ] the manner of caterpillar’s moving. gùñ-ts’í, gùñ-ká ‘to move (of a caterpillar)’; ‘to walk slowly (of a donkey)’. (\*cà m̄í, \*-χò?òrò).
- k<sup>h</sup>án the texture of nuts. (> k<sup>h</sup>án-k<sup>h</sup>án [food texture verb]). |χúí s̄ cì k<sup>h</sup>án cà m̄í. ‘A gemsbok bean says k<sup>h</sup>án (the bean has the texture)’. k<sup>h</sup>òè bì |χúí sà k<sup>h</sup>án-ts’í. ‘A man eats the bean making a sound’. k<sup>h</sup>òè bì |χúí sà k<sup>h</sup>án-ká. ‘The man eating a gemsbok bean around, feeling its texture’. (\*-χò?òrò).
- k<sup>h</sup>āũ the manner of walking silently. k<sup>h</sup>āũ-ká ‘to walk silently’.
- ηúǎ (~ wúǎ) the way in which something inside (e.g. the inner wood of acacia root) is pulled out slowly. g!ũũ-!qχ’ái bì ηúǎ cà m̄í. ‘The acacia root says ηúǎ (it is pulled out with the sound.)’. g!ũũ-!qχ’ái bì cì ηúǎ-χò?òrò †qχ’úǎ. g!ũũ-!qχ’ái bì ηúǎ-kārā-†qχ’úǎ. (\*redup. \*ηúǎ-ts’í).
- qái a cry which a dog emits when it is beaten. ?ābā bì qái cà m̄í. ‘A dog says qái.’ ?ābā bì cì qái-ts’í. ‘A dog is crying (making a qái sound).’ ?ābā bì cì qái-ká. ‘A dog is moving with repeated cries.’ (\*-χò?òrò, \*redup.).
- qúà the way in which a soft tsamma melon or an edible root breaks in two. η||ǎñ s̄ qúà cà m̄í. ‘A tsamma melon says qúà (the melon breaks).’ η||ǎñ s̄ qúà-χò?òrò !qārā-s̄. ‘A tsamma melon breaks.’ η|ì s̄ η||ǎñ s̄ qúà-qúà. ‘The tsamma melon is soft and breakbale.’ (> qúà-ts’í, qúà-ká).
- q<sup>h</sup>ǎǎ the way a smell starts to waft; the way some smell comes along. ||qχ’ǎũ s̄ q<sup>h</sup>ǎǎ cà m̄í. ‘The smell says q<sup>h</sup>ǎǎ (something starts smell)’. ||qχ’ǎũ s̄ q<sup>h</sup>ǎǎ-χò?òrò m̄m̄. ‘The smell starts to smell.’ η|ì m̄ qχ’óō-χò m̄ ts’óró ||qχ’ǎũ è cì q<sup>h</sup>ǎǎ-ká. ‘This animal’s rotten smell is moving.’ η|ì m̄ qχ’óō-χò m̄ ts’óró ||qχ’ǎũ è q<sup>h</sup>ǎǎ-q<sup>h</sup>ǎǎ. (\*-ts’í).
- q<sup>h</sup>ún the way one trembles with fear and gets pale; the way one is frightened. cí †áo è q<sup>h</sup>ún cà m̄í. ‘My heart says q<sup>h</sup>ún (I am frightened).’ (> q<sup>h</sup>ún-ts’í, q<sup>h</sup>ún-ká). (\*-χò?òrò, \*redup.).
- qχ’ábù the manner in which clouds suddenly rise. cúú bì qχ’ábù cà m̄í. ‘The rain says qχ’ábù (the rain suddenly rise)’. cúú bì qχ’ábù-χò?òrò ?ābā-χó. ‘The rain suddenly prepares to start.’ cúú bì qχ’ábù-qχ’ábù-s̄ ?ābā-χó. ‘The rain suddenly prepares to start.’ (\*-ts’í, \*-ká).

- qχ'òp [qχ'òp] the sound with which an edible root (e.g. *Cucumis kalahariensis*) is broken while it is being digged. !?ũm-|?è sì qχ'òp cà mĩ. 'Cucumis kalahariensis root breaks with the sound of qχ'òp'. k<sup>h</sup>òè bì |ã sì kà qχ'òp cà mĩ. 'A man says to *Coccinia rehmannii* qχ'òp (he breaks it with the sound while he is digging it out'. qχ'òp-ts'í 'to make the sound of qχ'òp repeatedly and monotonously'.
- sãĩ the scratching sound (e.g. of nails against the tent cloth). ?ãã-χò sì sãĩ cà mĩ já tsãrã. 'The clothes say sãĩ and tear.' ?ãã-χò sì sãĩ-sãĩ. 'The clothes make the sound of sãĩ.' ?ãã-χò sì cì sãĩ-ts'í 'The clothes make the sound'. ?ãã-χò sì cì sãĩ-ká. (\*-χò?òrò).
- súri a funny manner in which an animal, such as a wild cat, comes rushing out with surprise. !qúru bì súri cà †qχ'úã. 'A wildcat comes out in a funny way.' súri-ká 'to move going out in a funny way.' (= tíi cà mĩ). qχ'òõ-χò-lò bì súri-χò?òrò !árũ. 'A young animal runs coming out in a fanny way.' |qχ'ãã η†ãñ-†è sì súri-súri já †qχ'úã-?ò. 'A soft pea jumps out and misses (the mouth, when one is trying to eat it).' súri-ká 'to run and go out repeatedly. (\*-ts'í).
- súa the manner in which rain stops shortly. súa cà mĩ ò. 'Say súa! (A shout toward the rain, to stop it)'. súa-ká 'to walk in light steps'. cúu bì súa cà mĩ. 'The rain says súa (the rain stops)'. cúu bì súa-χò?òrò η!áé. 'The rain stops shortly and goes away.' súa-ká. 'to stop and start raining repeatedly'. (\*redup. \*-ts'í)
- χáu the sound with which something jumps in (or is thrown in). k<sup>h</sup>òè bì cì ìi sì wà †ãã já χáu cà mĩ. 'A man enters a bush and says χáu (he enters and makes the sound)'. χáu-ts'í 'to make the sound of χáu'. χáu-ká 'to move and make the sound of χáu'.
- χárũ the sound (and texture) with which one bites a fresh tsamma melon. (> χárũ-χárũ [food texture verb]). η||ãñ sì χárũ cà mĩ. 'A tsamma melon says χárũ (it has the texture of χárũ)'. k<sup>h</sup>òè bì cì η||ãñ sà χárũ-ts'í. 'A man makes the sound in eating a tsamma melon'. k<sup>h</sup>òè bì cì η||ãñ sà χárũ-kãrã-qχ'áã. 'A man walks around eating a tsamma melon'. (\*-χò?òrò).
- χóp [χó'p] the sound with which one eats dried berry. (> χúm-χúm [food texture verb]). ||qáni dzi χóp cà mĩ. dánà dzi χóp cà mĩ. '(dry) leaves say χóp (leaves make the sound)'. k<sup>h</sup>òè bì dánà dzi χóp-ts'í. 'A man makes the sound in crashing (dry) leaves'. k<sup>h</sup>òè bì dánà dzi χóp-kãrã-lũũ. k<sup>h</sup>òè bì dánà dzi χóp-χò?òrò íjà. 'A man steps on (dry) leaves and makes the sound'.
- χòp [χò'p] the sound with which a person or animal walks on dry grass. k<sup>h</sup>òè bì glãã dzi kà χòp cà mĩ. 'A man says to grass χòp (he makes the sound of χòp in walking on the grass)'. k<sup>h</sup>òè bì glãã dzi χòp-ts'í. 'The man makes the sound repeatedly'.
- hábu a manner of fast walking with long strides. hábu-ká 'to walk quickly with long strides (often when it is hot)'. (\*cà mĩ, \*-ts'í, \*-χò?òrò).
- hĩĩ crying or sobbing voice. |úã bì híĩ cà mĩ. 'A child says híĩ'. |úã bì híĩ-hĩĩ. |úã bì cì híĩ-ts'í. |úã bì cì híĩ-ká. (\*-χò?òrò).

- ʔúú      the manner and/or voice of animals' threatening. ɣám bì ʔúú cà mĩ. 'A lion says ʔúú (the lion is threatening by roaring).' ʔúú-ká. 'to move around roaring'. (\*-ɣòʔòrò, \*redup. \*-ts'í)
- ʔúp      [ʔúp] the manner in which clouds become dense and cover the sun so that they make shadow. cúú-k<sup>h</sup>óò dzi |ám sì kà ʔúp cà mĩ. 'Clouds says to the sun ʔúp'.
- úú      the sound which a tree makes with a wind. úú-ká 'to make a noise (of a tree) because of wind'.
- ùù      the sound with which a bevy of birds fly together. gènā-té ||ù ùù cà mĩ. 'Amadina erythrocephala or Pytilia melba say ùù (the birds fly together with the sound)'. ʔé||ù cì ùù-ts'í. 'They are making the sound of ùù in flying together'. ʔé||ù cì ùù-kārā-pēē. 'They are flying with the sound of ùù'.
- ùp      [ùp] a sound which an aadvarik makes. g'óò bì ùp cà mĩ. 'An aadvarik says ùp'.

## Appendix

### A1. Order of entries of the list

|, !, †, ||, p, b, p<sup>h</sup>, m, t, t<sup>h</sup>, tqɣ', tɣ, dz, ts<sup>h</sup>, tsqɣ', tsɣ, r, n, c, c<sup>h</sup>, c', k, g, k<sup>h</sup>, ŋ, q, ɠ, q<sup>h</sup>, qɣ', s, ɣ, h, ʔ, a, Ɂ, ā, e, i, ī, o, u, y, ũ, j, w

First, the four click types are ordered in |, !, †, and ||, following the IPA convention. Within each click type, the thirteen series are ordered in C, gC, C<sup>h</sup>, C', ŋC, Cq, Cɠ, Cq<sup>h</sup>, Cq', Cqɣ', Cɣ, Cʔ, and Ch (here C represents click symbols). The thirteen series of clicks are followed by non-click sounds in the order of p, b, p<sup>h</sup>, m, t, (d,) t<sup>h</sup>, (t') tqɣ', tɣ, dz, ts<sup>h</sup>, ts', tsqɣ', tsɣ, r, n, c, j, c<sup>h</sup>, c', (cqɣ', cɣ,) k, g, k<sup>h</sup>, (k') ŋ, q, ɠ, q<sup>h</sup>, (q') qɣ', s, ɣ, h, and ʔ, which are followed by vowels and semivowels, in order of a, Ɂ, ā, e, i, ī, o, u, y, ũ, j and w. The tones are ordered in high, mid, and low.

The order of the non-click sounds above requires justification. They are broadly ordered in terms of (i) manner, (i.e. stop/nasal precedes fricative), (ii) place of articulation (i.e. labial, dental/alveolar, palatal, velar, uvular, and glottal), and (iii) phonation and ejection, and (iv) simplicity (simple segments precede complex segments, i.e. tqɣ', tɣ, tsqɣ', tsɣ, cqɣ', cɣ). The exceptions are r, which is ordered immediately before n because of their regular alternation, and ʔ, which is before vowels for convenience of comparison between ʔV and V in the word-initial position.

## A2. G|ui consonants and consonant complexes

Click consonants and consonant complexes occurring in the root-onset.

Series		Laminal		Apical	
		Dental	Palatal	Alveolar	Lateral
Stops	plain		‡	!	
	voiced	g	g‡	g!	g
	aspirated	<sup>h</sup>	‡ <sup>h</sup>	! <sup>h</sup>	<sup>h</sup>
	ejective	'	‡'	!'	'
	plain + /χ/	χ	‡χ	!χ	χ
	plain + /qχ'/	qχ'	‡qχ'	!qχ'	qχ'
	plain + /q/	q	‡q	!q	q
	plain + /G/	G	‡G	!G	G
	plain + /q <sup>h</sup> /	q <sup>h</sup>	‡q <sup>h</sup>	!q <sup>h</sup>	q <sup>h</sup>
	plain + /q'/	q'	‡q'	!q'	q'
plain + /ʔ/	ʔ	‡ʔ	!ʔ	ʔ	
plain + /h/	h	‡h	!h	h	
Nasals		ŋ	ŋ‡	ŋ!	ŋ

Non-click consonants and consonant complexes

(n r/ occur in C2. /cχ cqχ'/ are variants of /tχ tqχ'/.)

		labial	denti-alveolar	palatal	velar	uvular	glottal
Stops	plain	p	t ts	c	k	q	ʔ
	voiced	b	d dz	j	g	G	
	aspirated	p <sup>h</sup>	t <sup>h</sup> ts <sup>h</sup>	c <sup>h</sup>	k <sup>h</sup>	q <sup>h</sup>	
	ejective		t' ts'	c'	k'	q' qχ'	
	plain + /χ/ plain + /qχ'/		tχ tsχ tqχ' tsqχ'	(cχ) (cqχ')			
Nasals	m	(n)					
Fricatives		s			χ	h	
Non-nasal sonorants	w	(r)		j			

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