

Grammatical Overview

Grammar Sketch

The basic phoneme inventory of Bertha is shown in the alphabet table (see pp. 10-12). The orthography, which was revised and standardized in 2010, is largely based on phonemes, and aims to be as close to pronunciation as possible, as this creates the least difficulties for the writer. However, in several instances, preference is given to a morphological writing instead of a purely phonemic one. The reasoning behind this is to make reading words easier by keeping their shape as original as possible, without writing pronunciation adaptation. In this sketch, I put // to show the pronunciation rather than the orthographical spelling, where they differ from each other.

Phonological and Morphophonemic Rules

Tone

Bertha is a tonal language with two tones, high tone and low tone. In a few instances there is a falling tone, and even less often a rising one. These contours can be explained as a combination of high and low tone together on one tone carrier.

Tone differentiates both lexical and grammatical meaning.

Lexical difference:

<i>dáára</i> - <i>daara</i>	<i>iisqú</i> <i>íisqu</i>
‘burn’ - ‘remain’	‘bowl’ ‘star’

Grammatical difference:

Valence of verb:

<i>dáára alú</i>	<i>dáára álu</i>
‘burn s.th.’	‘burn’ (e.g. ‘grass burns’)

Subject marker:

<i>Aa-shapqúth-óó</i>	<i>bele.</i>
1.SG.ABS-hit-PAST	stone. ABS
‘I hit a stone.’	

<i>Aa-shapqúth-óó</i>	<i>béle.</i>
1.SG. ABS -hit- PAST	stone.NOM
‘A stone hit me.’	

Tense difference:

Dáá-lí-ñgó-í.

give.PFCV-1.SG.NOM-2.SG.ABS-it
'I gave it (once) to you.'

Daa-lí-ñgó-í.

give.PRES-1.SG.NOM-2.SG.ABS-it
'I will give it to you.'

Vowel deletion at morpheme boundaries

Two vowels:

When two vowels meet at morpheme boundaries, the second one gets deleted if the vowels are followed by two consonants. The only examples found for this kind of assimilation so far are with the first vowel being /i/ and the second being /a/.

<i>shúli</i>	+ <i>abbá</i>	= /shúlibba/
'house'	+ 'father'	= 'father's house'

With only one consonant following, and the second vowel being an /a/, it is the first vowel that gets deleted. The resulting vowel /a/ can then receive some compensatory lengthening, or it can remain short.

<i>kqolo</i>	+ <i>are</i>	= /kqolaare/ or /kqolare/
'lower leg'	+ 'face'	= 'shin'

However, vowel deletion only takes place when there is no glottal stop [ʔ] in between them. As this sound is NOT written word-initially, assimilation cannot be deducted from looking at written words only as both these examples are written as two words according to the new orthography.

shúli abbá
kqolo are

/i/ at the end of a morpheme¹

A low tone /-i/ at the end of a morpheme with a preceding /l/ or /r/, is very weak and often deleted except at the end of the phrase:

gali 'dog'

/Gali dírsh-i./
dog sleep-TENSE.MARKER
'The dog is sleeping.'

¹ compare with Andersen (1993a) p.52

/Gál dîrshí shún-í./
 dog sleep be.bad-TENSE.MARKER
 'The sleeping dog is bad.'

Consonant followed by vowel:

Consonants sensitive to the place of articulation (nasals, velar plosives) adapt to the place of articulation of the following vowel.

<i>thiñ-í</i> [ɲ]	<i>thiñ-óó</i> [ŋ]
eat-PRES	eat-PAST
'he is eating'	'he ate'

Consonant clusters:

Only /l/ and nasals seem to adapt to other consonants. These assimilations are not written in the orthography!

l>r	<i>fîr-lo</i> water-that	<i>/fîrro/</i> 'that water'
ñ>l	<i>thiñ-lí</i> eat.PRES-I	<i>/thilli/</i> 'I am eating'
ñ>N	<i>thiñ-né</i> eat.PRES-he	<i>/thinné/</i> 'he is eating'
ñ>Plos	<i>gíñ buush-ú</i> thing hair-GEN	<i>/gímbuushú/</i> 'animal'
n>Plos	<i>bun-buni-ñí</i> REP.-run-HABIT	<i>/bumbuniñí/</i> 'used to run'

Tone Assimilation

A low tone that becomes surrounded by high tones through change of grammatical tone or through compounding, will most of the times change into a high tone itself.

shapqútha 'hit' (basic tones):

Aa-shapqúth-óó-ñgó.
 1.SG.-hit-PAST-2.SG
 'I hit you.'

Ñgó shápqúth-óó-gi.
 2.SG-hit-PAST-1.SG.OBJ
 'You hit me.'

Exceptions are the tone on a long vowel or if there are more than one consonant separating the tones. In those cases, the low tone does not adapt².

Orthography Rules

The first edition of the dictionary was based on rules established for the time being, based on our experiences in writing Bertha and from observing Bertha speakers writing their own language.

As Bertha has been taught in school now for a few years, and more people have gained experience in writing it, the orthography rules have been revised in October 2010. Here are a few basic rules:

- Lexical words are written separately.
- Compounds of a noun with an adjective or verb, as well as compounds of a noun with another noun in the same case are generally written as two separate words:

maaba + *ágarraña* = *maabá ágarraña*
'man' + 'make.study' = 'teacher'

shúli + *neera* = *shúli ñeera* (spoken /*shúlñeera*/)
'house'+ 'grass' = 'grasshouse'

Exceptions to this rule are those compounds that derive at a new, not deductable meaning through the compounding.

iyú + *kqaasqí* = *iyúkqaasqí*
'belly' + 'be.bitter' = 'intestines'

- Genitive constructions are written as two separate words:

misqé + *bush* = *misqá buushú*
'bird' + 'hair' = 'feather'

ir + *niñé* = *irá niño*
'milk' + 'woman' = 'breast'

Exception to this is a compound with 'gíñ', where the meaning of the compound is not deductable from its components:

gíñ + *bush* = *gíñbuushú*
'thing' + 'hair' = 'animal'

² Andersen (1993a) p. 71 ff

- Words that have reduplicated syllables will keep the letters of the root in writing, even if pronounced differently. Writing should not adapt the nasals to the succeeding letter:

bana 'hide' - *banbaniña* (**bambaniña*) 'used to hide'

- Nasals often adapt to the succeeding consonant in spoken language, but this will not show in writing. For example, the question word *náñ* 'what', the noun *giñ* 'thing' and the verb *thiñ* 'eat'.

náñ: *Náñ kqalñó?* *Náñ mufané?* *Náñ daané?* *Náñ giiñó?*

giñ: *giñmañ*, *giñbuushú*, *giñle*

thiña: *thiñli*, *thiññó*, *thinñé*

- Modifiers and Possessive Pronouns are attached as affixes to the noun:

possessives: *-kqedqe*, *-máre*, *-qa*

determiners: *-ñgúnuñ*, *-mamánáñ*, *-máñ*

- In a noun phrase construction with the preposition *thá* 'at' and body part lexemes, all components are written separately:

thá *sqisqía* *alú*
at tree head

'on the tree' (at the tree top)

Exception to this rule is the morpheme *-yú*, which has derived from the body part lexeme *iyú* 'belly', meaning now 'inside'. As it is not the full word any more, it is considered an affix and thus attached to the noun.

thá *sqisqía-yú*
at tree-belly
'in the tree'

- Personal pronouns, whether subject or object or in other cases, are independent words, written separately.

Exception is 1.sg's shortened subject pronoun (*aa-*) and all 1.sg pronouns in different cases (*-lí*, *-gi*, *-gé*)

- Body part lexemes modifying a verb's grammatical valence or lexical meaning, are written separately.

haala ndu 'hear'

Aa-haal-óó *misqé* *shorú* *ndu.*
1.SG.-hear-PAST chicken.MOD sky.GEN mouth
'I heard the birds.'

Morphology

Verbs

Inflection for person

Verbs are inflected for tense and aspect. If the independent pronominal is used to refer to a participant, there will be no inflection for person on the verb. Otherwise the pronoun is pre- or suffixed to the verb, depending on the sentence structure (see also “Personal Pronouns”).

Inflection for tense and aspect

Tense and Aspect are shown by adding the following suffixes:

non-past/pres:	-í, -i, -∅
past:	-óó (H)
perfective:	-a (polar tone) ³
imperative sg:	-a (L)
imperative pl, suffixed sg.imp.:	-tha (polar tone)
intransitive marker:	-í/-qí

Habitual aspect is formed by reduplication of the first CV(CVN) syllable of the root, sometimes adding length to the vowel and/or the syllable -iñ:

<i>hib-á</i> ‘fear’	<i>aa-hii-hib-iñ-i-ñgó</i> 1.SG-REDUPL-fear-REPET-TENSE-2.SG ‘I used to be afraid of you.’	
<i>thiñ-a</i> ‘eat’	<i>aa-thiñ-thiñ-∅</i> <i>ñonshó</i> 1.SG-REDUPL-eat-TENSE honey ‘I used to eat honey.’	
<i>dirsh-a</i> ‘sleep’	<i>aa-dirsh-iñ-∅</i> <i>thuutha</i> 1.SG-sleep-REPET-TENSE outside ‘I used to sleep outside.’	
<i>shapqúth-a</i> ‘hit’	<i>aa-shaa-shapquth-iñ-i</i> <i>ñgó</i> 1.SG-REDUPL-hit-REPET-TENSE 2.SG ‘I used to hit you.’	
<i>ad-á</i> ‘go’	<i>Ali adíd-iñ-∅-í</i> <i>tha súúgú.</i> 1.SG.-REDUPL-go-REPET.-TENSE-INTR to market ‘I used to go to the market.’	

³ Tone opposite of previous one (Andersen 1993, p. 106,-107)

Plural in verbs

Some Bertha verbs distinguish singular or plural subject or object by having two verb stems, one for singular, one for plural. In transitive verbs, the plural stem denotes a plural object, while in an intransitive verb, the plural stem is for a plural subject:

intansitive	singular	plural
go	<i>adá</i>	<i>záá</i>
run	<i>buuna</i>	<i>thulá</i>
exist	<i>zíí</i>	<i>hólí</i>
transitive		
hit	<i>fia</i>	<i>basha</i>
pluck	<i>bukqútha</i>	<i>fuura</i>
chase	<i>gagá</i>	<i>haara</i>

Nouns

Inflection

A noun can be inflected for different cases:

Absolutive (ABS) is the basic form, the citing form of an isolated noun.

Dative-Benefactive (DAB):

Some verbs require a second object which is marked with the DAB case as object. It signifies the recipient, benefactor (a) or direction (b) of an action.

Usually an *-é* is suffixed to the noun.

Daa *háñgir* *Áli-é.*
give.IMP knife.ABS Ali.DAB
'Give the knife to Ali.'

Dqoosh-a *shiñír thá sqísqí-é!*
tie-IMP donkey to tree-DAB
'Tie the donkey to the tree!'

Nominative (NOM) case is indicated by a tone change only, showing a postverbal subject.

Any noun starting with an L in absolutive case will have the nominative case start with one H followed by Ls only. If, in absolutive case, the noun starts with H, no matter the following tones, in nominative case it will have Ls with a final H on the last syllable.

Absolutive	Nominative	Gloss
<i>maaba</i> (LL)	<i>máaba</i> (HL)	‘man’
<i>mia</i> (LL)	<i>mía</i> (HL)	‘goat’
<i>marú</i> (LH)	<i>máru</i> (HL)	‘cat’
<i>idé</i> (LH)	<i>íde</i> (HL)	‘husband’
<i>kquria</i> (LLL)	<i>kqúria</i> (HL)	‘snake’
<i>assatûr</i> (LLF)	<i>ássatur</i> (HLL)	‘machete’
<i>daburú</i> (LLH)	<i>dáburu</i> (HLL)	‘alligator’
<i>asqísqi</i> (LHL)	<i>ásqisqi</i> (HLL)	‘guest’
<i>almaharûg</i> (LLLF)	<i>álmaharug</i> (HLLL)	‘hip’
<i>bába</i> (HL)	<i>babá</i> (LH)	‘sister’
<i>íisqu</i> (HL)	<i>íisqú</i> (LH)	‘star’
<i>pqípqiyó</i> (HHH)	<i>pqipqiyó</i> (LLH)	‘chicks’
<i>hódodó</i> (HLH)	<i>hododó</i> (LLH)	‘tortoise’

Modified Case (MOD). When a noun phrase is modified, either with an adjective, a genitive noun, or a relative clause, it will be marked with the Modified Form. If a noun is ending in a vowel (a), this vowel will receive a high tone. If the vowel already has a high tone, the marking does not show. If a noun is ending in a consonant, the suffix *-á* will be added to the end of the noun, as seen in sentence (b).

a) *maaba* ‘man’

Maabá *dqááñí* *dîrsh-í.*
man.MOD be.old.PRTC sleep-PRES
‘The old man is sleeping.’

b) *bush* ‘hair’

Ñiné *gídi* *buush-á* *squruñ-í.*
3.SG have.PRES hair-MOD be.long-PRES
‘She has long hair.’

Genitive case

- Noun ending in a consonant: *-ú* is suffixed.

shiñír ‘donkey’
maabá shiñírú ‘the donkey’s owner’

- Noun ending in *-u*: only the tone changes.

dabarú ‘monitor lizard’

ndú dabaru ‘monitor lizard's mouth’

- Noun ending in vowel other than *-u*: the vowel changes to /o/ with the opposite tone of the previous vowel. Sometimes, the final vowel may not be deleted, though. It is not clear yet when this is the case.

kquria ‘snake’

assímá kqurió ‘snake's poison’

shegé ‘sugar cane’

sqaabá shego ‘taste of sugar cane’

agorthé ‘thief’

dqaañá agortheó ‘the thief's size’

Plural:

For most verbs there is no specific plural. However, there are few other ways to denote plural.

- the clitic *-gú* is added at the end of the NP or even at the end of the clause to signify a plural component of the phrase.
- for a few nouns there is a plural suffix *-í*, which is sometimes accompanied with lengthening of the root vowel:

Singular	Plural	
<i>maaba</i>	<i>maabí</i>	‘man’
<i>or</i>	<i>oorí</i>	‘cloth’
<i>musháñ</i>	<i>musháñí</i>	‘girl’
<i>boñgór</i>	<i>boñgóri</i>	‘boy’

- few word have a different stem in plural:

Singular	Plural	
<i>niñé</i>	<i>míhi</i>	‘woman’
<i>maaba idelé</i>	<i>maaba faalé</i>	‘man, male’

Pronouns

Personal Pronouns

Independent pronouns (absolute case), with exception 1sg. Preceding the verb they are the subjects, following the verb, they denote the object:

1.sg	<i>Ali</i> <i>aa-</i>	<i>Ali adí thá súúgú.</i> 'I am going to the market.' <i>Aashibilóó mia.</i> 'I bought a goat.'
2.sg	<i>ñgó</i>	<i>Ñgó thiñóóneá?</i> 'Have you eaten it?'
3.sg	<i>ñine / ø</i>	<i>Ñine fióó Áli. / ø fióó Áli.</i> 'He beat Ali.'
1.pl	<i>hatháñ</i>	<i>Hatháñ mathí thayú.</i> 'We will return home.'
2.pl	<i>hathú</i>	<i>Hathú záo assaba!</i> 'You should come tomorrow!'
3.pl	<i>maré</i>	<i>Maré thiñóó uqûñ.</i> 'They ate meat.'

NOM case suffix: These are the counterparts of the free subject pronouns, they are suffixed to the verb (except if their form is NOT reduced):

1.sg	<i>-lí</i>	<i>Thiñóólí.</i> 'I have eaten.'
2.sg	<i>-ñó</i>	<i>Hibiñóó?</i> 'Do you fear him?'
3.sg	<i>ø / -né</i>	<i>Hibiné.</i> 'He is afraid.'
1.pl	<i>-ña</i>	<i>Ñgó haalóóña-yú.</i> 'We heard you.'
2.pl	<i>-thú, -há, háthú</i>	<i>Daóóthúgé.</i> 'You gave it to me.' <i>Thiñhá.</i> 'You will eat it.'
3.pl	<i>-gú, maré</i>	<i>Hiba hathúgú.</i> 'They were scared of you.'

Postverbal, object:

1.sg	-gí	<i>Ñgó haalóogí-yú!</i> 'You heard me!'
2.sg	ñgó	<i>Hibí ñgó.</i> 'He is afraid of you.'
3.sg	ø / -ne	<i>Fiilí.</i> 'I will hit him.'
1.pl	hatháñ	<i>Fía hatháñ.</i> 'He hit us.'
2.pl	hathú	<i>Shapqúthi hathú.</i> 'He will hit you.'
3.pl	maré, -gú	<i>Fióóñagúá?</i> 'Did we hit them?'

Dative-Benefactive case:

1.sg	-gé	<i>Mádiña-gé-qí!</i> 'Show it to me!'
2.sg	ñgó	<i>Aamadiñ ngóqí.</i> 'I see you.'
3.sg	ø / -né	<i>Dáálinéqí.</i> 'I gave it to him.'
1.pl	hatháñé	<i>Adi thá hatháñé.</i> 'Come to us.'
2.pl	hathúé	<i>Dááli hathúéqí.</i> 'I gave it to you.'
3.pl	maré, -gú	<i>Fióóñagúá?</i> 'Did we hit them?'

Possessive Pronouns

There are different sets of pronouns. One set is used for things:

1.SG	-ñkqo	‘my’
2.SG	-qa	‘your’
3.SG	-kqedqe	‘his/her’
1.PL	-ñkqa	‘our’
2.PL	-ñgáma	‘your’
3.PL	-máre	‘their’

Another set is used for family relations, which you inherit by birth (they are not used for wife, husband or children):

	SG. POSS.	PL. POSS. ⁴
1.SG	----	-yathá
2.SG	-ñó	-ñóathá
3.SG	-né	-néathá
1.PL	-ñkqa	-yathá
2.PL	-ñóñgama	-ñóathá
3.PL	-némáre	-néathá

Demonstratives

Bertha distinguishes three distances in demonstrative pronouns. The second one, *-lo*, is often used in stories, in the sense of a definite article:

<i>-lé</i>	‘this’	close to speaker
<i>-lo</i>	‘that’	close to addressee
<i>-thí</i>	‘that over there’	far from both speaker and addressee, may not even be visible

These suffixes can be added to a noun or an NP. Also the relative pronoun *mbá* and the particle *thá* ‘at’ can receive the demonstrative suffixes:

<i>mbáthí</i>	‘that one over there’
<i>thále</i>	‘here’
<i>thálo</i>	‘there’

⁴ If the relation is in plural, the suffix *-athá* will be added to the singular suffix. In spoken language, the L of /a/ in *-athá* will rise to an H and the preceding vowel will adapt to the /a/ in place of articulation. There is no difference between sg and pl possessor to be seen.

Syntax

Phrase Structure

In usual phrase structure, the head comes first:

Noun Phrase:

Maabá dqááñí mbá dírsh-í abbá-nné.
man.MOD big REL.PRON sleep-PRES my.father-3.SG.COP
'The old man who is sleeping is my father.'

Verb Phrases:

Ammá adí-shé tha súúg-ú gíídí.
mother go-PAST to market-GEN yesterday
'My mother went to the market yesterday.'

Rotha-gé tharáha.
talk.IMP-1.sg.DAB slowly.
'Talk slowly to me!'

Prepositional Phrases:

mín tha súúg-ú
from at market-GEN
'from the market'

thá shúli gundi
at house back
'behind the house'

Clauses and Sentences

The default structure of a declarative clause is:

(Topic) V (S) (Obj) (Adv)

This structure holds if the topic is different from the subject. Otherwise the subject is the default topic.

Clause Combinations

In a *subordinate clause*, the conjunction is in first place followed by the verb. Thus, in a subordinate clause, the subject or topic is always postverbal, in nominative case.

Shambá dqáfár-á-né, áné hulu are thá mamánañle.
 after travel.PFCV-**he** TOPIC meet.RECIP with someone
 ‘After he had traveled some distance, he met someone.’

Clauses can be combined with the connectors:

u ‘and’

lakín ‘but’

wálla ‘or’

However, connectors do not always have to be overt in places where it would be necessary in English. So for example, /*u*/ is used not equivalently to the English word ‘and’ in discourse.

Also, sentences may have several verbs in a row (serial verbs), where the first one defines tense and the following are in subjunctive/imperative form:

<i>Mbá</i>	<i>adó</i>	<i>darú</i>	<i>né</i>	<i>geera</i>	<i>ñine</i>	
REL	come.PFCV	buffalo.NOM	TOPIC	greet.IMP	3.SG	
<i>alú</i>	<i>né</i>	<i>fia</i>	<i>né</i>	<i>musha,</i>	<i>né</i>	<i>kqola.</i>
head	TOPIC	beat.IMP	TOPIC	die.IMP	TOPIC	eat.IMP

‘When the buffalo came to greet him, he (the lion) beat him so he (buffalo) died, he (lion) ate.’

Negation

In declarative sentences negation is achieved by using the particle *walá*, which appears before the verb, either after or before the topic of the sentence.

a) *Gadi badq-óó-qi.*
 child.ABS be.sick-PAST-INTR
 ‘The child was sick.’

b) *Gadi walá badq-óó-qi.*
 child.ABS NEG be.sick-PAST-INTR
 ‘The child was not sick.’

c) *Walá gadi thiñ-óó almánga, lakín almoziñ*
 NEG child.ABS eat-PAST mango, but banana.ABS
thiñ-óó-né.
 eat.PAST-3.SG.NOM
 ‘The child did not eat a mango, he ate a banana.’

For negation in questions and commands, see the respective paragraphs.

Questions

Questions use either a question word or the question particle *-á*.

Questions with question words

The question word is placed in the NP preceding the verb:

Ndá *mush-é-qí?*
who die-PFCV-INTR
'Who died?'

Gadí **ndále** *mmaa-ñó?*
child.MOD whose be.PRES-2.SG.NOM
'Whose child are you?'

Wááne *ada-ñó?*
Where go.PRES-2.SG.NOM
'Where are you going?'

Náñ *gii-ñó?*
what do.PRES-2.SG.NOM
'What are you doing?'

Náñ *adó-ga-ñó?*
What come.PAST-DAB-2.SG.NOM
'Why have you come?'

Awuné *ada-né?*
when go.PRES-3.SG.NOM
'When will she leave?'

Shúlindú **kámmu** *gárra-ñó?*
school.grade how.many study.PRES-2.SG.NOM
'Which grade are you in?'

Kámmu *ol-óó-ñó* *geedí?*
How.many give.birth-PAST-2.SG.NOM child.PL
'How many children do you have?' (Lit: 'How often did you give birth?')

Negation in questions with question words:

The negation particle *walá* is placed in front of the verb.

Náñ *walá* *adi-ga-ñó* *thá alile* *assabá?*
what NEG go.PRES-DAB-2.SG.NOM with me tomorrow
'Why will you not come with me tomorrow?'

Polar questions:

The suffix *-á* is the last constituent of a polar question sentence, (i.e. a yes-or-no-question). It is suffixed to a declarative sentence.

Gadi badq-óó-qí-á?
child.ABS be.sick-PAST-INTR-QUEST.PART
'Was the child sick?'

Negation in polar questions:

The negation particle *walá* is placed sentence initially.

Ñgó thiña mañga-yá?
2.SG eat.PFCV mango-QUEST.PART
'Did you eat a mango?'

Walá ñgó thiña almañga-yá?
NEG 2.SG eat.PFCV mango-QUEST.PART
'Did you not eat the mango?'

Commands

Imperative for 2nd person uses the imperative form of the verb (with the plural suffix *-tha* if for plural). The subject is not overt.

Adô!
'Come!'

Kqísq-a-thá oorí!
wash-IMP-PL cloths
'Wash(pl) the clothes.'

Subjunctive has an overt subject (prefix) preceding the imperative form of the verb.

Áá-méér-a!
1.SG.SUBJ-drink-IMP
'Let me drink!'

Né thiñ-a!
3.SG.SUBJ-eat-IMP
'He may/should eat!'

Háthú geer-a-thá maabí ma pqish-í!
you(PL) greet-IMP-PL people COP be.good-PRES
'You should greet people properly!'

Subjunctive pronouns:

	sg	pl
1.person	<i>áá-</i>	<i>añ</i>
2.person	<i>ñgó</i>	<i>háthú</i>
3.person	<i>né</i>	<i>némáré</i>

Negation with imperative

For negative imperative, the word *bakqá* is used, the subject pronoun is suffixed (NOM) to the verb in present tense:

Bakqá *rooth-i-ñó-qí* *hássa!*
NEG speak-PRES-2.SG.NOM-INTR now
'Don't talk to me now!'

Appendixes

Numbers

In the Mayu dialect of Bertha, all numbers except for 1 and 2 have been replaced by Arabic numbers, while some other dialects do still have them. Here is a list of the numbers in the different dialects:

	Mayu	Fadqashi	Undulu	Beleje Gonfoye
1	<i>dqukqúnúñ</i>	<i>manañkqu</i>	<i>manañkqu</i>	<i>manañkqu</i>
2	<i>holoñoñiñ</i>	<i>maholañ</i>	<i>mahoole</i>	<i>mahoole</i>
3	<i>talata</i>	<i>mohote</i>	<i>moothe</i>	<i>mohote</i>
4	<i>arbaqa</i>	<i>mannamu</i>	<i>mannamu</i>	<i>mannamu</i>
5	<i>hamsa</i>	<i>mokqosu</i>	<i>mokqoshu</i>	<i>mokqosu</i>
6	<i>sitta</i>	<i>makqera</i>	<i>makqera</i>	<i>makqera</i>
7	<i>sabaqa</i>	<i>labohoole</i>	<i>thaboohoole</i>	<i>makqera maqolo manañkqu</i>
8	<i>tamania</i>	<i>labohote</i>	<i>thaboothe</i>	<i>makqera maqolo mahole</i>
9	<i>tisaqa</i>	<i>labamannamu</i>	<i>thabamannamu</i>	<i>makqera maqolo mohote</i>
10	<i>ashara</i>	<i>matuma</i>	<i>matuma</i>	<i>matuma</i>
12	<i>idnashir</i>	<i>matuma ma zi olo maholañ</i>	<i>matuma zii olo mahoole</i>	<i>matuma maqolo mahole</i>
20	<i>ishirin</i>	<i>kqisqiri</i>	<i>kqisqiri</i>	<i>matuma mahola</i>
100	<i>mía</i>	<i>matuma zii matuma</i>	<i>kqisqiro makqoshu</i>	<i>kqishiri</i>

Traditional Measurements

so far known to us:

- *buáandu* (lit: arm-mouth) or *dura* = elbow-length, about half a meter
- *hú* 'foot'= one step-length

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