RUNNING HEAD: DECIPHERING THE VERBAL MORPHOLOGY OF THE

Deciphering the Verbal Morphology of the Mahale Language

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Abstract

A project entitled **Preservation of Endangered Languages of Bangladesh**, funded by Independent University, Bangladesh (IUB), focuses on the preservation, protection and promotion of indigenous languages which require literature collection, compilation of a dictionary and a description of the grammatical systems of a language as indispensible prerequisites. After substantial work in documenting and analyzing Mahale Literature (rhymes, songs, poems and short stories), the current paper ventures into the territory of Mahale grammar which firstly may be analyzed by documenting the different paradigms. The onomasiological elicitations collected through intensive interviews of two educated Mahale persons have been analyzed and compared to describe the various grammatical systems - nominal, pronominal, adjectival, adverbial and verbal. As one major area of this study is the verbal system, the different tenses and aspects have been looked into in this paper.

Keywords: Endangered Language, Preservation, Linguistics, Morphology

Introduction

In this study, we take a look at the verbal paradigms of verbs, including transitive and intransitive verbs. The entire pronominal paradigms of the simple present tense have been presented, followed by an exploratory analysis of the salient features of the tenseaspect system. Although there was no written language of the Mahale community in the past, the Mahale language was transcribed, using the Bangla script. As the language was not standardized, the outcome was, therefore, an inconsistent spelling system. However, in 2006, with the help of the Summer Institute of Linguistics (SIL), a script based on the Roman script, was developed for a formal and standardized writing system for the Mahale language (Hemrom 2006). This paper has used the Mahale script based on the Roman script developed by SIL. In addition, the Mahale people felt the need for preserving their written script and literature. To pursue that goal, a workshop was held with the concerned Mahale group (also known as Raj Mahale) of the community at Damkura Haat in Rajshahi from April 5 to 12, 2006, and in collaboration with the Summer Institute of Linguistics (SIL), an alphabet system was developed (Hemrom 2006). According to the informants, there are at least three dialects of the Mahale community. These are as follows: one dialect is spoken mainly in Rajshahi; another one is spoken in Dinajpur, Joypurhat, Naogaon, Rangpur and Thakurgaon. The Mahalis living in Chapainawabgonj (Nachole Upazilla) speak another dialect which has some relationship with Shadri / Nagri.

Methodology

Using an onomasiological approach, verbal paradigms were obtained from two informants from the villages. This method of elicitation is particularly helpful in collecting structured sets of language samples quickly. It allows for obtaining context-free samples and determining patterns (Nakayama 8). This is in contrast to the semasiological approach which was extensively used in recording and analyzing the Mahali literature (songs, rhymes and poems) in our previous work (Haroonuzzaman et. al. 2017).

For the onomasiological method, the elicitations were collected from two principal informants -- Mr. Santosh Hemrom of Belpukur (Surshunipara), Kakonhat, Godagari, Rajshahi and Mr. Michael Marandy of Kolimnagar (Koyerdara), Boalia, Rajshahi.

Literature Review

According to Ethnologue, Mahali (an alternate spelling) is a language spoken in India and Bangladesh with a total ethnic population of 278,000 in 2007. It indicates that the total number of users of the language is 36,000 in all countries. The Mahali population in Bangladesh is reported to be 3000 by SIL (2010 estimate). The status is reported to be 6b (Threatened) in India and 6a (Vigorous) in Bangladesh. Ethnologue further indicates that Mahali is a possible dialect of Santali with a lexical similarity of 68% to 93%. There is 69% to 87% similarity between varieties of Mahali. It asserts that there is a lexical similarity with yet another language called Mundari (53% to 59%).

However, the limited number of words cited in this paper to illustrate the various paradigms, and some of the tense-aspect verb categories were matched in the Santali dictionary (Campbell 1899). There is total lexical similarity vis-a-vis the words used in this paper (see Appendix).

It may be noted here that this total similarity with regard to these few words does not necessarily mean that Mahale is a dialect of Santali. Further description of the grammar will illustrate whether Mahale is a dialect of Santali or a separate language altogether.

Scope and Limitations

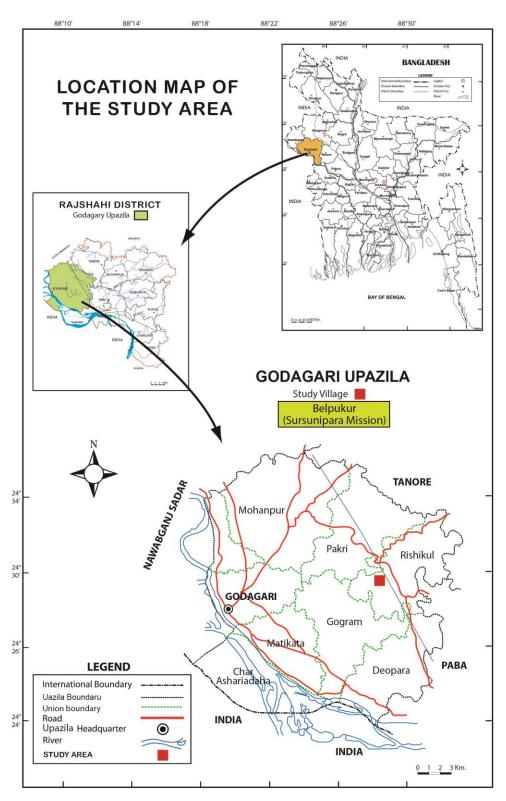
Identifying the lexical similarities and differences among Mahale, Santali and Mundari is beyond the scope of this study. Despite having time and resource constraints, the team claims this research to be limited and analytical in nature. Indeed, the in-depth inquiry into the morphological study of the Mahale language will provide an insight in furthering the work in this field in future. Our study focuses only on the dialect spoken in Rajshahi (Bhelpukur and Pochondor). Although the team collected data for core vocabulary, the analysis in this paper will, however, contain selected lexical items.

Project sites

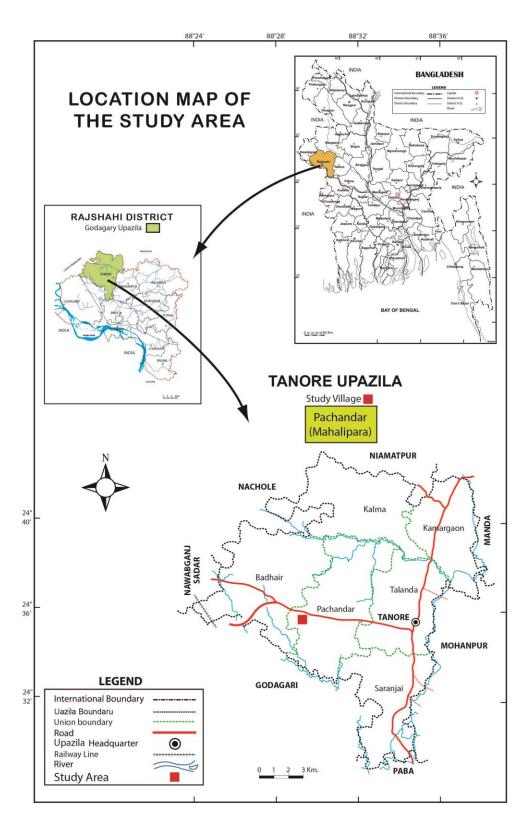
The project sites are in Rajshahi District (Rajshahi division) which has an area of 2407.01 sq km, and a large area is covered by Barind Tract, Diara and *Char* lands. The main rivers are Padma (Ganges), Mahananda, Baral and Barnai. The first project site is Belpukur, Sursunipara in Godagari Upazila (Rajshahi district) with an area of 472.13 sq km. The second project site is called Pachandar, Mahalipara in Tanore which has an area of 295.39 sq km. The following maps (map 1 and 2) show the project sites in Godagari

and Tanore respectively.

The Mahale speaking community, a marginalized community, spreads over Rajshahi, Rangpur, Sylhet, Khulna and Chittagong Divisions of Bangladesh. According to 'Santals of Bangladesh', the population of the community is 25,000 (Ali, 2008), but Mahle Adibashi Artho-Shamajik Unnoyon Shongstha (MAASAUS), an NGO, sources say that there are 45,000 Mahales all over Bangladesh (Dumri, 2013). However, unofficial reckoning indicates that around 60,000 Mahalis are currently living in Bangladesh.



Map of Project Site 1 (Source: Bangladesh Bureau of Statistics, 1989).



Map of Project Site 2 (Source: Bangladesh Bureau of Statistics, 1989).

Morphology

Morphology is one of the five components of the grammar of a language. The other four components are phonetics, phonology, syntax and semantics. Morphology is the study of words and their structures (O'Grady 4). The smallest component of word structure is the morpheme. It contains information about meaning and function. Besides cataloguing the morphemes, the study presents some verbal paradigms of the Mahale language. Throughout the paper, the core vocabulary has been used (see Appendix). Firstly, we present the following personal pronouns:

*Table 1*The Pronominal Paradigm

	Singular	Plural
1st person	Iń / Ińdo (I)	Ale / Aledo (we)
2 nd person	Am (you; singular)	Ape (you; plural)
3 rd person	Unido (he / she)	Uṅku / Uṅkodo (they)

The Verbal Paradigms – Tense

Tense is a change in the form of the verb to mark the time of an event or situation (Crystal 432). Inflectional verbal suffixes are used to contrast number and person in Mahale. The following sentences illustrate the different suffixes. The verb in this first verbal paradigm is *jom* meaning "to eat". The word for "rice" is *daka*. The verbal paradigm of the Simple Present Tense of Indicative Mood is as follows:

Table 2
The Simple Present paradigm of the verb jom "to eat"

•	Singular	Plural
1st person	Ińdo daka jomiń	Ale / Aledo daka jomale
	I eat rice	We eat rice
2 nd person	Am daka jomam	Ape daka jomape
	You eat rice	You (pl) eat rice
3 rd person	Unido daka jome	Uńku / Uńkodo daka jomaku
	He / She eats rice	They eat rice

Thus, the inflectional suffixes marking the various numbers and persons are as follows:

Table 3
Inflectional verbal suffixes marking number and person

	Singular	Plural	
1 st person	-iń	-ale	
2 nd person	-am	-ape	
3 rd person	-e	-aku	

From the Simple Present Tense, we can now proceed to the Simple Past Tense. After analyzing the data that has been collected, we are able to present the verbal paradigm of the Simple Past Tense of the Indicative Mood.

Table 4
The Simple Past paradigm of the verb jom "to eat"

	Singular	Plural
1 st person	Iń daka jomlidiń	Ale daka jomlidale
	I ate rice	We ate rice
2 nd person	Am daka jomlidam	Ape daka jomlidape
	You ate rice	You (pl) ate rice
3 rd person	Uni daka jomlide	Uńku / Uńkodo daka jomlidaku
	He / She ate rice	They ate rice

By comparing the paradigms of the Simple Present Tense and the Simple Past tense, a clear pattern is evident. The morpheme "lid" is an inflectional suffix and marks the past tense. It is a suffix which is attached to the main word or base to form the stem. The inflectional verbal suffixes marking number and person are then attached to this stem.

The next logical paradigm is the Simple Future Tense which is presented below:

*Table 5*The Simple Future paradigm of the verb <u>jom</u> "to eat"

	Singular	Plural
1 st person	Iń daka jomiń	Ale / Aledo daka jomale
	I will eat rice	We will eat rice
2 nd person	Am daka jomam	Ape daka jompe
	You will eat rice	You (pl) will eat rice
3 rd person	Uni daka jome	Uńku / Uńkodo daka jomaku
	He / She will eat rice	They will eat rice

This paradigm is identical to the Simple Present Tense paradigm. Further, by comparing the Simple Present Tense and the Simple future tense of other verbs, we can safely claim that speakers of Mahale do not distinguish these two tenses morphologically. That is to say that there is no distinct marking on the Simple Present Tense to distinguish it from the Simple Future Tense. This is not uncommon in the world's languages, e.g. English, Japanese. Therefore, we can say that Mahale has a two-tense verbal system: past and non-past. The future is indicated not through overt morphological marking but by semantics and context. Thus, the following table shows all the suffixes marking the tenses:

Table 6 Suffixes marking the tenses

Tense		
Past Non-past (Present and Future)		
-lid	Ø	

The Verbal Paradigms – Aspect

Aspect is the duration of an action denoted by a verb. It indicates the completion or non-completion of an action (Crystal 415). The perfective aspect indicates the completion of an action. In English grammar, this includes Present Perfect Tense, Past Perfect Tense and Future Perfect Tense. The imperfective aspect indicates the non-completion of an action. In English grammar, this includes Present Continuous Tense, Past Continuous Tense and Future Continuous Tense. From the data that we have collected, we are able to identify the verbal paradigms which mark two perfective aspects in Mahale, namely, the perfective aspect and the future perfective aspect. In addition, the verbal paradigms mark three imperfective aspects in Mahale, namely, present, past and future. Thus, we are able to state that Mahale has at least five aspects. Each of these verbal paradigms is presented below starting with the three Imperfective aspects followed by the two perfective aspects. In each case, the equivalent term from English grammar is given in brackets for comparison. The verbal paradigm of the Present Imperfective Aspect is as follows (Present Continuous Tense):

*Table 7*The Present Imperfective Aspect paradigm of the verb <u>jom</u> "to eat" (Present Continuous Tense)

Tonsey		
	Singular	Plural
1 st person	Iń daka jomdiń	Ale daka jomdale
	I am eating rice	We are eating rice
2 nd person	Am daka jomdam	Ape daka jomdape
	You are eating rice	You (pl) are eating
3 rd person	Uni daka jomde	Uńkodo / Uńku daka jomdaku
	He / She is eating rice	They are eating rice

This table shows that the Present Imperfective Aspect is marked by the suffix "d". The morpheme "d" is an inflectional suffix. It is a suffix which is attached to the main word or base to form the stem. The inflectional verbal suffixes marking number and person are then attached to this stem.

The verbal paradigm of the Past Imperfective Aspect is as follows (Past Continuous Tense):

Table 8
The Past Imperfective Aspect paradigm of the verb jom "to eat" (Past Continuous Tense)

	Singular	Plural
1st person	Iń daka jomhaniń	Ale daka jomhanale

	Singular	Plural
	I was eating rice	We were eating rice
2 nd person	Am daka jomhanam	Ape daka jomhanape
	You were eating rice	You (pl) were eating rice
3 rd person	Uni daka jomhane	Uńku / Uńkodo daka jomhanaku
	He / She was eating rice	They were eating rice

This table (8) shows that the Past Imperfective Aspect is marked by the suffix "han". The morpheme "han" is an inflectional suffix. It is a suffix which is attached to the main word or base to form the stem. The inflectional verbal suffixes marking number and person are then attached to this stem.

The verbal paradigm of the Future Imperfective Aspect is as follows (Future Continuous Tense):

Table 9
The Future Imperfective Aspect paradigm of the verb jom "to eat" (Future Continuous Tense)

	Singular	Plural
1 st person	Iń daka jomhatariń	Ale daka jomhatarale
	I will be eating rice	We will be eating rice
2 nd person	Am daka jomhataram	Ape daka jomhatarape
	You will be eating rice	You (pl) will be eating rice
3 rd person	Uni daka jomhatare	Uńku / Uńkodo daka jomhataraku
	He / She will be eating rice	They will be eating rice

This table (9) shows that the Future Imperfective Aspect is marked by the suffix "hatar". The morpheme "hatar" is an inflectional suffix. It is a suffix which is attached to the main word or base to form the stem. The inflectional verbal suffixes marking number and person are then attached to this stem.

Thus, the following table shows all the suffixes marking the imperfective aspects:

Table 10 Imperfective aspect suffixes

Imperfective Aspect		
Past	Present	Future
-han	-d	-hatar

The verbal paradigm of the Perfective Aspect is as follows (Present Perfect Tense):

Table 11
The Perfective Aspect paradigm of the verb jom "to eat" (Present Perfect Tense)

	Singular	Plural
1 st person	Iń daka jomkidiń	Ale daka jomkidale

	Singular	Plural	
	I have eaten rice	We have eaten rice	
2 nd person	Am daka jomkidam	Ape daka jomkidape	
	You have eaten rice	You (pl) have eaten rice	
3 rd person	Uni daka jomkide	Uṅku / Uṅkodo daka jomkidaku	
	He / She has eaten rice	They have eaten rice	

This table (11) shows that the Perfective Aspect is marked by the suffix "kid". The morpheme "kid" is an inflectional suffix. It is a suffix which is attached to the main word or base to form the stem. The inflectional verbal suffixes marking number and person are then attached to this stem.

The verbal paradigm of the Future Perfective Aspect is as follows (Future Perfect Tense):

Table 12
The Future Perfective Aspect paradigm of the verb jom "to eat" (Future Perfect Tense)

	Singular	Plural
1 st person	Ińak daka jomhoyoktińa	Aleak daka jomhoyoktaleya
	I will have eaten rice	We will have eaten rice
2 nd person	Ama daka jomhoyoktama	Apeak daka jomhoyoktapeya
	You will have eaten rice	You (pl) will have eaten rice
3 rd person	Uniak daka jomhoyoktaya	Uṅkoak daka jomhoyoktakua
	He / She will have eaten	They will have eaten rice
	rice	

This table (12) shows that the Future Perfective Aspect is marked by the suffix "hoyokt" and an additional suffix "-a" or "-ya". The morpheme "hoyokt" is an inflectional suffix. It is a suffix which is attached to the main word or base to form the stem. The inflectional verbal suffixes marking number and person are then attached to this stem. The additional suffix "-a" or "-ya" is then attached at the end.

Thus, the following table shows all the suffixes marking the perfective aspects:

Table 13
Perfective aspect suffixes

Perfective Aspect	Future Perfective Aspect	
-kid	-hoyokt(-a / -ya)	

The Imperative Mood

The imperative mood is marked by the suffixes "-me" and "-pe". The following table illustrates this:

Table 14

The Imperative Mood

Singular	Plural
Daka jomme!	Daka jompe!
Eat (sg) rice!	Eat (pl) rice!

Two types of verbs

The tables above show the paradigms of the verb jom "to eat". Paradigms of the Simple Present Tense (Table 2), the Simple Past Tense (Table 4), Present Imperfective Aspect (Table 7), Past Imperfective Aspect (Table 8), Future Imperfective Aspect (Table 9), Perfective Aspect (Table 11), Future Perfective Aspect (Table 12) and the Imperative Mood (Table 14) give a clear picture of the Tense-Aspect system. However, it cannot be claimed at this point that the picture is complete. More evidence is needed to complete this study. What we can confirm at this point is that other verbs such as landa "to laugh" and rak "to cry" have the same paradigms with the same suffixes or morphemes.

The Simple Past Tense of these verbs is marked with the suffix -lid. This is distinct from how the Simple Past Tense of nir "to run" and calak "to go" is marked. These verbs take the suffix -lin. The following table illustrates this difference: Table 15

Comparison of the Simple Past Tense Paradigms of jom "to eat" and calak "to go"

-	Singular	Plural
1st person	Iń daka jom lid iń	Ale daka jom lid ale
	I ate rice	We ate rice
2 nd person	Am daka jom lid am	Ape daka jom lid ape
	You ate rice	You (pl) ate rice
3 rd person	Uni daka jom lid e	Uńku / Uńkodo daka jom lid aku
	He / She ate rice	They ate rice
1 st person	Iń calao liń iń	Ale calao lin ale
	I went	We went
2 nd person	Am calao lin am	Ape calaolinape
	You went	You (pl) went
3 rd person	Uni calao lin e	Uńku / Uńkodo calao lin aku
	He / She went	They went

The two types of suffixes are in bold in the table. The *calak* vs *calao* alternation is due to morphophonemic variation and is beyond the scope of this paper. However, it may be pointed out here that they have the same root.

In addition to the different Simple Past suffixes, the *lid*-verbs and *lin*-verbs have different morphemes for the Present Imperfective Aspect and the Perfective Aspect. The Present Imperfective Aspect of the *lid*-verbs is marked by the suffix -*d* (Table 7) while that of the *lin*-verbs is marked by -*kan*. This is illustrated by the following table:

Table 16
Comparison of the Present Imperfective Aspect Paradigms of jom and calak

	Singular	Plural
1 st person	Iń daka jom d iń	Ale daka jom d ale
	I am eating rice	We are eating rice
2 nd person	Am daka jom d am	Ape daka jom d ape
	You are eating rice	You (pl) are eating
3 rd person	Uni daka jom d e	Uńkodo / Uńku daka jom d aku
	He / She is eating rice	They are eating rice
1 st person	Iń calak kań iń	Ale calak kan ale
	I am going	We are going
2 nd person	Am calak kan am	Ape calak kan ape
	You are going	You (pl) are going
3 rd person	Uni calak kan e	Uńku / Uńkodo calak kan aku
	He / She is going	They are going

The Perfective Aspect of the *lid*-verbs is marked by the suffix *-kid* (Table 11) while that of the *lin*-verbs is marked by *-kan*. This is illustrated by the following table:

Table 17
Comparison of the Perfective Aspect Paradigms of jom and calak

	Singular	Plural
1st person	Iń daka jom kid iń	Ale daka jom kid ale
	I have eaten rice	We have eaten rice
2 nd person	Am daka jom kid am	Ape daka jom kid ape
	You have eaten rice	You (pl) have eaten rice
3 rd person	Uni daka jom kid e	Uṅku / Uṅkodo daka jom kid aku
	He / She has eaten rice	They have eaten rice
1 st person	Iń calao kań iń	Ale calao kan ale
	I have gone	We have gone
2 nd person	Am calao kan am	Ape calao kan ape
	You have gone	You (pl) have gone
3 rd person	Uni calao kan e	Uṅku / Uṅkodo calao kan aku
	He / She has gone	They have gone

Although the same suffix -kan is used to mark both the Present Imperfective Aspect and the Perfective Aspect, the Present Imperfective Aspect Paradigm has the $cala\acute{k}$ variant while the Perfective Aspect paradigm has the calao variant. This is because of morphophonemic variation, a discussion of which is in order, but this is beyond the scope of the paper.

In continuation of the morphology of the two types of verbs shown above, the following table contains the morphemes marking the various tenses and aspects of *lid*-

verbs and *lin*-verbs:

*Table 18*Morphemes marking the various tenses and aspects of <u>lid</u>-verbs and <u>lin</u>-verbs

Tense				
Past		Non-Past		
-lid			Ø	
-lin			Ø	
Imperfective Aspect				
Past	Present		Future	
-han	-(d	-hatar	
	-ka			
Perfective Aspect		Future Perfective Aspect		
-kid			-hoyokt(-a / -ya)	
-kan				

Morphophonemic variations

There is some variation in the roots of some of the words. This variation may be explained by a morphophonemic analysis. However, the data that is available at this time has proven to be insufficient to make a complete analysis. So, the roots of the words have been shown in the various tenses and aspects in the following tables. These two tables may be used in future for comparison, having more data available to complete the analysis.

Table 19

Variation within the Verbal Paradigm of some <u>lid</u>-verbs

Tense			
Past		Non-Past	
jom		jom	
landa		landai	
rak		rag	
	Imperfect	tive Aspect	
Past	Present		Future
jom	jom		jom
landai	landai		landa
rag	rak		rak
Perfective Aspect		Future Perfective Aspect	
jom		jom	
landa		landa	
rak		rak	

Table 20 Variation within the Verbal Paradigm of some lin-verbs

Tense				
Past		Non-Past		
ńir		ńirok	ńirok	
calao		calak	calak	
Imperfective Aspect				
Past	Present		Future	
ńirok	ńirok		ńir_ok	
calak	alak calak		calao	
Perfective Aspect		Future Per	Future Perfective Aspect	
ńira		ńir		
calao		calak		

Conclusion

The process of describing the complete morphology of the Mahale language is a long and arduous task. In this paper, we have presented some of the data collected and attempted to analyze and describe the verbal morphology. The analysis is by no means complete. Based on the data that we have collected from the two villages, a pattern has emerged which allows us to assert that there are morphological markings for at least two tenses and two aspects in the Mahale language. Mahale distinguishes the Past and Non-past tenses. The future tense is not morphologically marked. In terms of aspect, we find morphological markings for two aspects, namely, Perfective and Imperfective. The Imperfective aspect has a three-way marking system namely, Present Imperfective, Past Imperfective and Future Imperfective. The Perfective aspect has a two-way distinction namely, the Perfective and the Future Perfective. Clear morphological markings for the aforementioned tense—aspect categories have been found and presented. There may be more. In order to complete this study, more data and analysis are necessary. We hope to improve upon the analysis in our future works.

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Appendix

Mahale wordlist: alphabetical list of Mahale words used in this paper

Mahale	Grammatica	English	Example
Word	l Category	meaning	-
ale / aledo	pronoun	we	Ale daka jomlidale (We ate rice)
am	pronoun	you, sg.	Am daka jomam (You eat rice)
ape	pronoun	you, pl.	Ape daka jompe (You (pl) will eat rice)
calak	verb	to go	Iń calakiń (I go)
daka	noun	rice	Ińdo daka jomiń (I eat rice)
jom	verb	to eat	Ińdo daka jomiń (I eat rice)
iń / ińdo	pronoun	Ι	Iń calakkańiń (I am going)
landa	verb	to laugh	Iń landaiń (I laugh)
ńir	verb	to run	Ińdo ńirokiń (I run)
rak	verb	to cry	Iń raklidiń (I cried)
uni / unido	pronoun	he / she	Unido daka jome (He / She eats rice)
uńku / uńkodo	pronoun	they	Uńku / Uńkodo daka jomaku (They eat rice)