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A PHONOLOGICAL STUDY OF AKHA  
IN PA-KHA-SUK-JAI VILLAGE , TAMBOL MAE-SA-LONG-NOK ,  
KING AMPHUR MAE-FA-LUANG , CHIANG RAI PROVINCE

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วิทยานิพนธ์ฉบับนี้ เป็นการศึกษาาระบบเสียงภาษาอาข่า ซึ่งจัดอยู่ในตระกูลภาษาทิเบต-พม่า สาขาโลโล พุด ที่หมู่บ้านป่าคาสุขใจ ตำบลแม่สะลองนอก กิ่งอำเภอแม่ฟ้าหลวง จังหวัดเชียงราย

เนื้อหาของวิทยานิพนธ์แบ่งออกเป็น 6 บท คือ บทที่ 1 บทนำ บทที่ 2 ทำนองเสียง บทที่ 3 คำและการเน้นเสียง บทที่ 4 พยางค์ บทที่ 5 หน่วยเสียง บทที่ 6 บทสรุปและข้อเสนอแนะ และ ภาคผนวก ได้เสนอ คำศัพท์พื้นฐานในภาษาอาข่า ที่พุดที่หมู่บ้านป่าคาสุขใจ จำนวน 1,650 คำ

จากการศึกษา พบว่า ระบบเสียงภาษาอาข่า ที่หมู่บ้านป่าคาสุขใจนี้ มีหน่วยเสียงพยัญชนะทั้งหมด 28 หน่วยเสียง หน่วยเสียงสระ 13 หน่วยเสียง และหน่วยเสียงวรรณยุกต์ 5 หน่วยเสียง ทำนองเสียงมี 2 ชนิด การเน้นเสียงมี 4 แบบ โครงสร้างพยางค์มี 1 ชนิด

ผลการศึกษาพบว่า ภาษาอาข่าที่พุดที่หมู่บ้านป่าคาสุขใจนี้ มีความสัมพันธ์สอดคล้องกับลักษณะโดยทั่วไปของภาษาในตระกูลทิเบต-พม่า กล่าวคือ เป็นภาษาที่ไม่มีเสียงพยัญชนะท้าย มีพยัญชนะควบกล้ำ 1 ตัว คือ ย / j / เป็นภาษาที่มีเสียงวรรณยุกต์เป็นลักษณะสำคัญ และเมื่อศึกษาเปรียบเทียบกับระบบเสียงภาษาอาข่า ที่ศึกษาโดย พอล ลูวิส ที่หมู่บ้านปูลี แล้ว พบว่า ภาษาอาข่าทั้งสองถิ่นนี้ มีลักษณะที่ใกล้เคียงกัน หากแต่มีการวิเคราะห์ระบบเสียงแตกต่างกัน ดังแสดงไว้ในบทที่ 6

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#### ABSTRACT

This thesis is an attempt to present a phonological analysis of Akha, a Tibeto-Burman language as spoken in Pa-kha-suk-jai village, Tambol Mae-Sa-Long-Nok, King Amphur Mae-Fa-Luang, Chiangrai Province.

The thesis is divided into 6 chapters. The first chapter is an introduction. The second chapter analyzes the intonation group. The third chapter analyzes the phonological word. The fourth chapter analyzes syllable. The fifth chapter analyzes phonemes. And the sixth chapter is the conclusion and suggestions for further study. Moreover, there is one appendix that presents 1,646 word lists of Akha in Pa-kha-suk-jai village

From the study, there are 28 consonants, 13 vowels, 5 tones, 2 types of intonation, 4 types of word structure and 1 type of syllable structure.

In addition, this study shows that Akha language in Pa-kha-suk-jai village is similar to other languages of Tibeto-Burman as : there is no final consonant, /j/ is a cluster consonant and tone is the significant characteristic of this language.

In comparison of two dialects, Pu-li and Pa-kha-suk-jai, shows that they are very similar as present in chapter 6.



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## LIST OF ABBREVIATIONS AND SYMBOLS

B.C.		Before Christ
B.E.		Buddhist Era
C	:	Consonant
e.g.	·	for example
et al.		and others
etc.		et cetera. and the rest, and so on
f.p.	:	final particle
i.e.	:	that is
I.P.A.	:	The International Phonetic Alphabet
n.	:	noun
No.	:	Number
n.p.	:	negative particle
p.	:	page
q.p.	:	question particle
T		Tone
V		Vowel
v.		verb
vd.		voiced
vl.		voiceless
v.p.		verb particle
vol.		volume

## SYMBOLS

.	colon
;	semi-colon
[.....]	phonetic brackets
/...../	phonemic brackets
----->	become

Figure 1 : Akha House

Figure 2 : Pa-Kha-Suk-Jai village.

Figure 3: Main Informant.

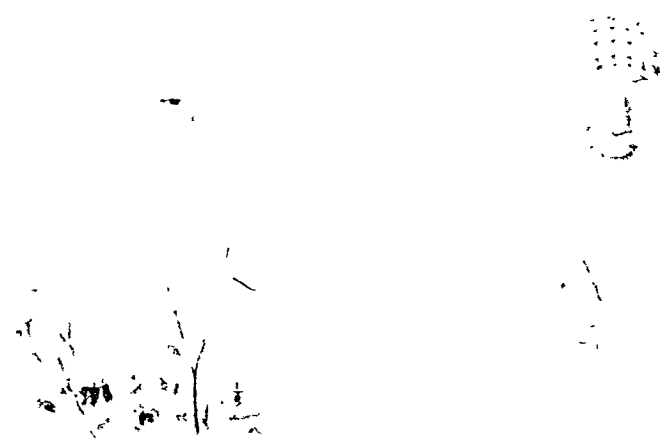


Figure 4 : Main informant and his sister.





Figure 5 : The villagers are building the new village gate.



Figure 6 : Wooden figures placed  
by village gate.

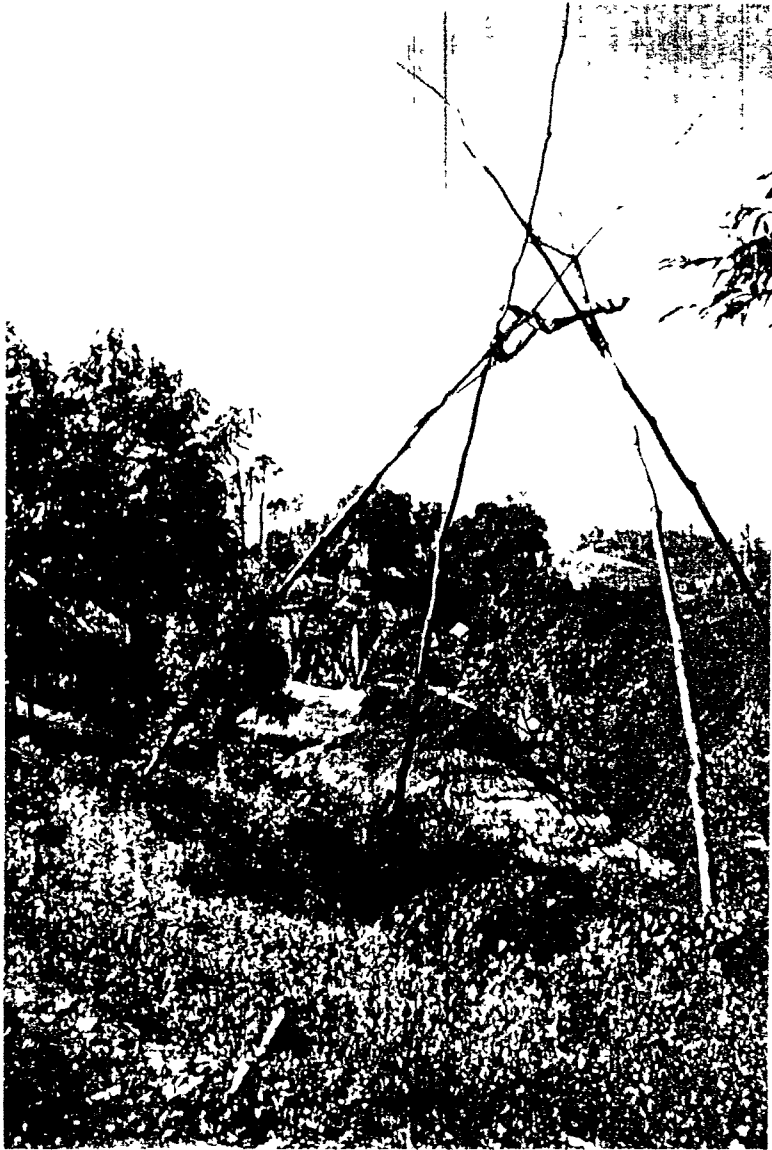


Figure 7 : A village swing.

Figure 8 : Akha family.

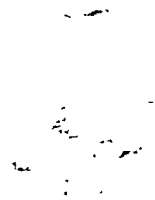


Figure 9 : An Akha man is pounding sticky rice.

7  
3

Figure 10 : Akha women are dancing.



Figure 11 : Akha girl and the writer.

## CHAPTER I

### INTRODUCTION

#### 1.1 General Information about Akha

##### 1.1.1 Names of Group

The Akha, because they are a widespread group, are known by a variety of names in various locations. They call themselves "Akha", "Akho", or "Ako", a nomenclature apparently universal among members of the group throughout Southeast Asia. (Bernatzik 1966:12, Embree et al. 1950 :69).

In Myanmar, where they are most numerous, the Akha are referred to by many different terms, several of which were undoubtedly introduced by the British during their administration of Myanmar. "Kaw", "Hka-kaw", "Ikaw", "Kao", "Ko", and "Khan Kaw" are names used by the Burmese and British. Kaw and Ko are also often used by the French, Chinese, and Thai. (Embree et al. 1950: 12,69). Other names applied to the Akha in Myanmar are Kao (another spelling of Kaw), Ekaw, I-Kaw, Angka, Kha-kaw and Tanae. Tai Loi is a Shan name for the Akha that is used only occasionally in Shan area. (Grierson 1927:427,456,463).

The Akha of China are also known by a variety of names, The terms most frequently used are Aka, Akha-jen, Akha, Akho, and Kaw Ko. The term "Ako" is used by the Chinese to refer to those individuals of mixed Akha and Chinese ancestry. Another term, "Wo-ni", which is sometimes applied to the Akha in China, actually refers to the various Lolo (Tibeto-Burman) speaking groups of southern Yunnan. (Geldern 1967:736, Embree et al. 1950:12-13, 69, Lebar 1964:34). The Akha of Laos and the few in North Vietnam are known by only two names: "Kaw" and "Kha Ko". (Embree et al. 1950:99). In China and Vietnam they are included in the group referred to as 'Hani' (a name which may derive from the term 'Za Nyi' which they call themselves in their poetic and ceremonial language)although this designation may include other Yi (Lolo) groups. (Lewis 1985: 204 ).

It has been suggested that the Akha are found in three separate and distinct tribes in the areas of Thailand, Myanmar, Laos, Vietnam, and possibly southern Yunnan. Apparently the tribes, the Akha Tyaitso, Akha Puli and Akha Akho (known as Tao Sa Mi, Pu-Li and Na-Li in Myanmar) differ mainly in dress. (Bernatzik vol. II 1966: 456-572).

Reliable sources have also suggested that the Akha have seven, possibly nine subgroups. One source enumerates nine such groups (Lehleubo, Jeu Gwe, Jaujaw, Jo Byawn, Leh Nyi, Che Mui, Apyo Hos, Zeu Zi, and Hteu La), while two other sources list only seven. In Laos the seven are given as the Nu-quay, O-Pa or Chop Pra, O-ma, Mue Chi, Pu-sang, Pu-Li, and La-Ma, (Embree et al. 1950:99) and in the Upper Myanmar region the Suli, Chi-cho, Sat-do, Chi-ma, Mota, Luwei and Puchel. (Bernatzik vol.II 1966:457).

### 1.1.2 Language

The Language of the Akha belongs to the Tibeto-Burman branch of the Sino-Tibetan language family. Their linguistic tradition, like their cultural patterns, shows a stronger Burmese influence than a Chinese one. Within the Tibeto-Burman linguistic group, the language of the Akha has been classified in the Lisu subgroup, (Bernatzik vol.II 1966:447, Embree et al. 1950:12, 68, 99). This subgroup is identical to the Lolo group of languages.

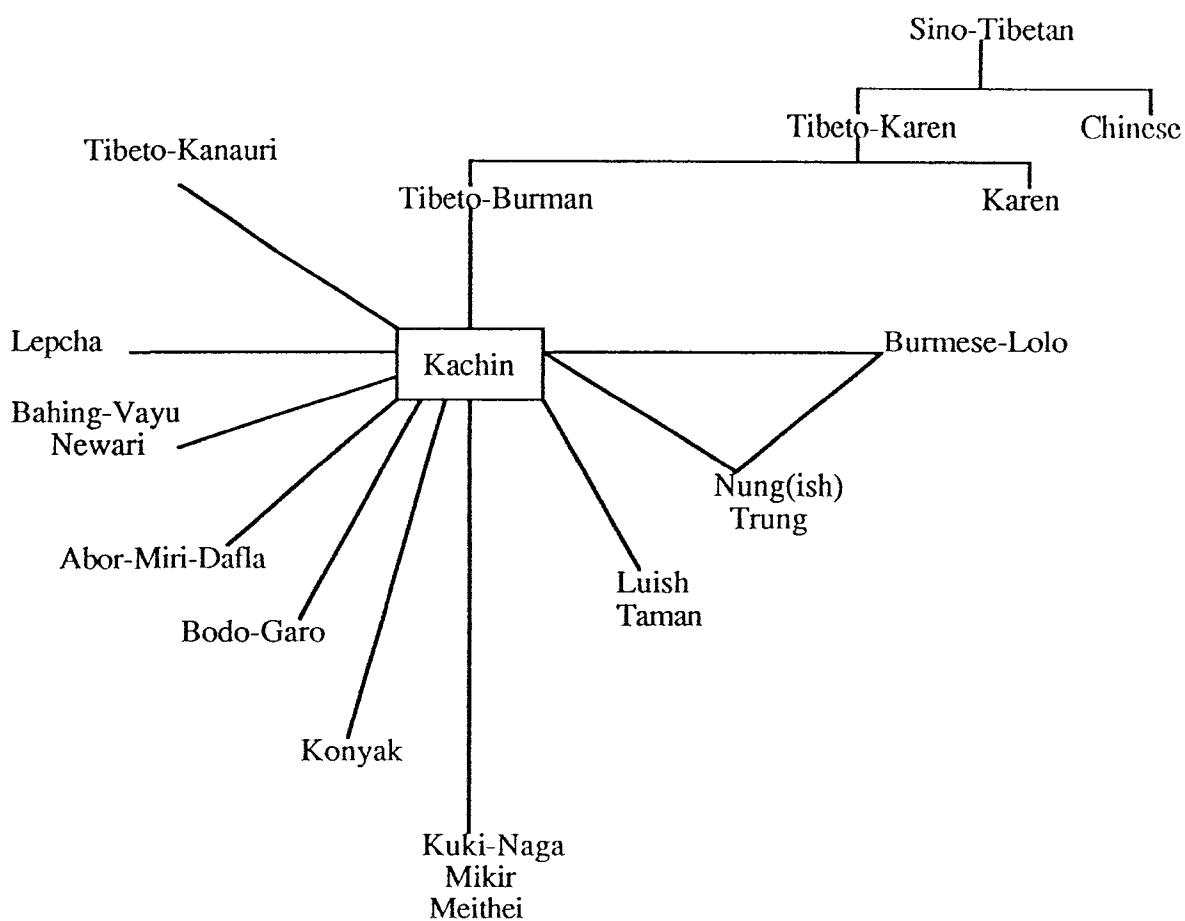


Figure 12 : Schematic Chart of Sino-Tibetan Groups

Source : Benedict, Paul K., Sino-Tibetan a Conspectus, 1972:6



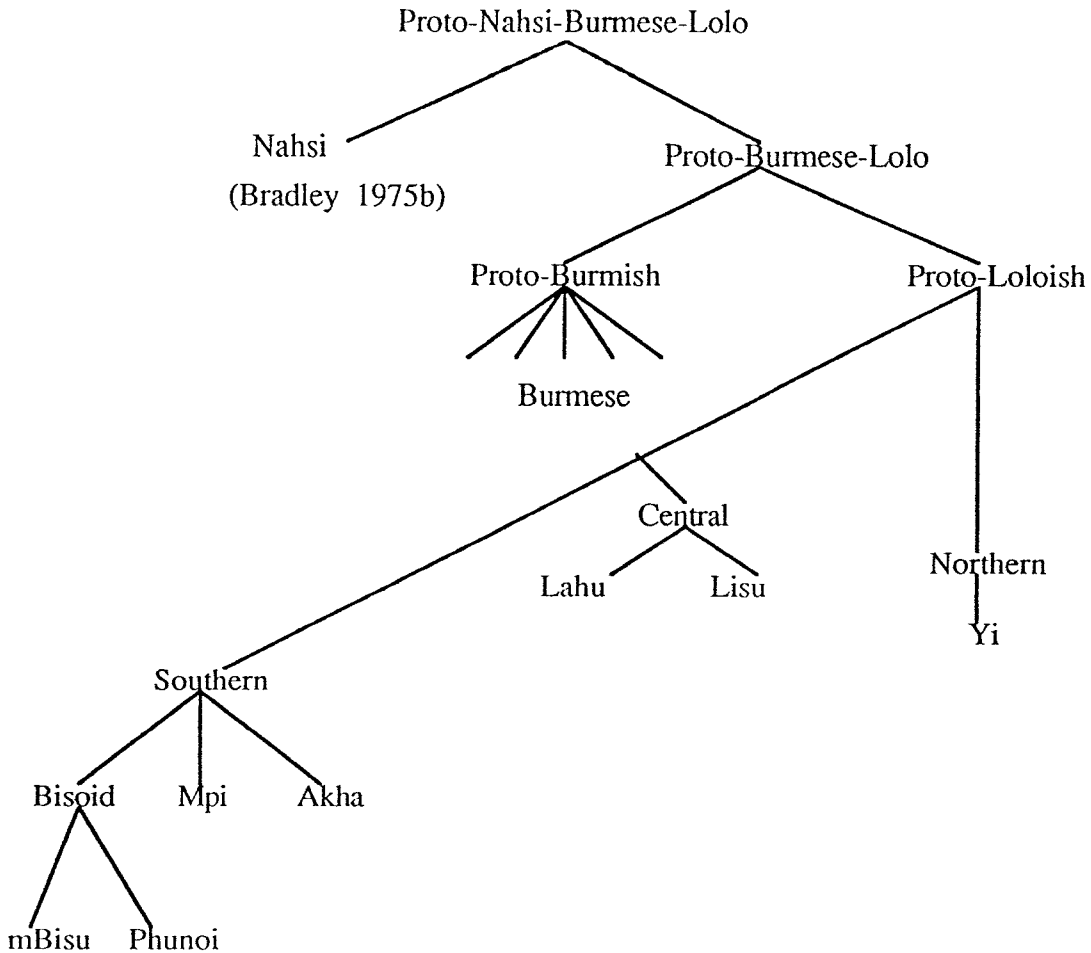


Figure 13 : Schematic Chart of Burmese-Lolo

Source : Bradley, David., "Proto-Loloish"

(Oriental Monograph series No.23),

Australian National University, Canberra, 1979: 285

There are a number of dialects within the Akha language, the development of which have been attributed by some to the wide dispersion of the Akha tribes. The main Akha dialect, spoken by the Akha in parts of Kengtung, southern Yunnan and the northwestern section of Laos, has remained remarkably free of outside influences. (Bernatzik vol. II 1966:448).

The Akha have no script of their own, although in Myanmar there are missionary derived scripts. The Akha are considered to be excellent linguists; those living in Thailand are often fluent in Yunnanese, Lahu, Shan, and a

modified Thai dialect. This adaptability is evident in the Akha peoples' successful adoption of final consonants in spoken Shan language, which do not appear in their own language. (Young 1962:1,2).

### 1.1.3 History

#### 1.1.3.1 Legendary History

The Akha are not rich in tribal folklore. There is little or no indication of a creation story in their legendary history. One myth that may be indirectly tied to various creation stories is their moon myth. This story relays the terror caused among the Akha people during an eclipse of the moon, because it is believed that such a phenomenon is an indication that the moon is about to be consumed by a dog. To ward off this tragedy, the tribesmen fire guns and crossbows into the sky. (Bernatzik vol.I 1966:196).

One Akha myth refers to a former home as the region between the Shan states in Myanmar and the Ho country (extreme north of Laos). According to this legend, about 700 years ago, the Akha, armed only with crossbows, fought the Ho and victoriously secured their homes. In contrast though another legend relates how the Akha, immediately after destroying giant wasps that were about to exterminate the tribe, escaped slavery under the Ho by migrating to their present habitat. (Seidenfaden 1956: 145).

The Akha, like the Karen, have a legend about a lost book, which is often compared to the Bible. (Marshall 1922:10). It is said that the Akha originally had books which were given to them by a creator-god, but the books were eaten because they were too heavy to carry around; some of the Akha say the books were eaten by their dogs. Another version of the tale relates that the Akha at one time possessed an alphabet written on buffalo hide, but because the hide was considered a delicacy, the Akha ate it and thus lost forever their knowledge of writing. They were, however, endowed with a highly developed appreciation for good food, according to the legend. (Seidenfaden 1956: 146-147).

Although the Akha have no written history, a rich heritage of legends, proverbs, and rituals gives them a sense of who they are and what *being an Akha* means. Like some other Tibeto-Burman groups, the Akha are able to recite the names of all their ancestors in the male line back to the 'beginning'. They feel these ancestors are their source of life and have provided them with the knowledge to cope with the daily situations. Seeing themselves as a link in this claim of life, the Akha are sustained in their hour of need, and challenged to play their role in ancestor worship now, so that later, others will take care of them as an ancestor as they have cared for those that came before them. (Lewis 1985:204).

### 1.1.3.2 Factual History

It is believed by some that the Akha are descendants of the ancient Lolo (or No-su) people who entered Kweichow and Yunnan Provinces in southwest China from Tibet around the second and first millennia B.C. (Young 1962:1). The Akha, along with the Meo, Yao and Khmer, followed a north-south migration path from the Tibetan-Chinese border, usually traveling along the mountain ranges into the Southeast Asian peninsula. The Akha and the other Tibeto-Burman tribal groups moved southward very slowly, and their migration was in most cases caused by political or military unrest in their former homelands.

## 1.2 Akha in Thailand

According to written sources, the first Akha village in Thailand was probably established in 1903 in the Phayaphai region of Hin-Taek, near the Myanmar border. Other villages followed, but according to the source there were probably not more than 2,500 Akha living in Thailand by the end of World War II. In 1964 there were approximately 7,000 and mid-1983 they numbered 24,000, which means their population has more than doubled three times in 38 years. Some of this is from migration, but approximately 3% a year is from births in the Akha community.

At first, the Akha in Thailand only lived north of the Mae Kok river in Chiangrai province. By mid-1983 about 7% of them lived in three other

provinces; and of the 93% were still living in Chiangrai province. At this time only 15% were located south of the Mae Kok river. (Lewis 1985:204)

Bernatzik comments on the relatively large size of Akha villages in northern Thailand and say that villages may contain up to 200 houses, with an average of 10 to 20 persons per house. (Lebar et al. 1964:35).

In Thailand there are three major styles of dress for the Akha:

1. [ ʔu<sup>21</sup> lo<sup>55</sup> ] This group, which literally means 'pointed headdress' [ ʔu<sup>21</sup> ] is from [ ʔu<sup>21</sup> du<sup>21</sup> ] which means 'head' and [ lo<sup>55</sup> ] means 'pointed'. Therefore, this group is called by the word [ ʔu<sup>21</sup> lo<sup>55</sup> ]. The two villages of this group which firstly immigrated to Thailand were Ban-Saen-Jai (บ้านแสนใจ), Tambol Mae-Sa-Long-Nai, King Amphur Mae-Fa-Luang, and Ban Doi-Sa-Ngo (บ้านดอยสะงอ), Tambol Tri-Don-Mul, Amphur Chiangsaen, Chiangrai province. This group of Akha people immigrated to Thailand more than 77 years ago. There was approximate population of this group not less than 15,000 in Thailand.

2. [ lo<sup>33</sup> mi<sup>33</sup> ] This group is named after a large mountain in Keng Tung state, Myanmar. From which many of these people come, called [ lo<sup>33</sup> mi<sup>33</sup> ] mountain (Doi-Mi (ดอยหมี่) or the bear area). This group is sometimes called [ ʔu<sup>21</sup> bja<sup>21</sup> ] "flat headdress Akha" by other groups of Akha people who lives in Thailand. The village which firstly immigrated to Thailand was Ban-Phaya-Phrai (บ้านพญาไพร), Tambol Therd-Thai, King Amphur Mae-Fa-Luang, Chiangrai province. There was approximate population of this group about 10,000 in Thailand.

3. [ pha<sup>21</sup> mi<sup>21</sup> ] This group is named after one village in Thailand, although it is not limited to that village. This style is worn primarily by women of the [ mo<sup>21</sup> po<sup>33</sup> ] clan, whether in China, Myanmar or Thailand, and is the one dress style which tends to be used by a single clan or two. The dialect spoken by these Akha is virtually the same as what the Chinese call 'Aini Akha'.

The village which firstly immigrated to Thailand was Ban Pha-Mi (บ้านพามิ), Tambol Wiang-Phang-Kham, Amphur Mae-Sai, Chiangrai province. There is approximately 10,000 peoples in Chiangrai as in follows:

Ban Pha-Mi, Tambol Wiang-Phang-Kham, Amphur Mae-Sai, Chiangrai.

(บ้านพามิ ต.เวียงพางคำ อ.แม่สาย จ.เชียงราย)

Ban Pha-Hi, Tambol Pong-Ngam, Amphur Mae-Sai, Chiangrai.

(บ้านผาศี ต.โป่งงาม อ.แม่สาย จ.เชียงราย)

Ban Keuw-Sa-Tai, Tambol Pa-Tung, Amphur Mae-Chan, Chiangrai.

(บ้านแก้วสะโต ต.ป่าตึง อ.แม่จัน จ.เชียงราย)

Ban Mae-Chan-Tai, Tambol Tha-kaw, Amphur Mae-Sruay, Chiangrai.

(บ้านแม่จันใต้ ต.ท่าก้อ อ.แม่สรวย จ.เชียงราย)

Mr. Athu Bawchae (นายอาหู่ บอฉ่ง), An officer of Akha Association For Education and Culture told me that there are some groups of Akha who have recently migrated from Myanmar to Chiangrai province. He observed that these Akha immigrants have different dress styles from three main groups in Thailand, but this is still informal information. However, he classified the new immigrants into four main groups resulting from his survey :

1. [ ʔa<sup>33</sup> kʰə<sup>55</sup> ] This group originated in southeast of China close to Myanmar border. They immigrated to Myanmar for 15 years ago, then immigrated to Thailand around 1978, and established their village at Doi-tung area in Chiangrai province. They called themselves [ kɔ<sup>33</sup> kʰu<sup>55</sup> ] or [ ʔə<sup>21</sup> ne<sup>33</sup> ɔ<sup>33</sup> ]. After they immigrated to Thailand, they were called [ ʔa<sup>33</sup> kʰə<sup>55</sup> ] by other groups. there are approximate population about 20 households, 107 persons in 1 village at Ban Mae-Nam-Khun (บ้านแม่บ้านขุน), Tambol Tha-Kaw, Amphur Mae-Sruay, Chiangrai.

2. [ na<sup>21</sup> kʰa<sup>55</sup> ] This group originated in China, then immigrated to Myanmar before immigrating to Thailand. They call themselves as [ na<sup>21</sup> kʰa<sup>55</sup> ]. It was the name of their village when they lived in China. The dressing style of this group is very similar to [ pʰa<sup>21</sup> mi<sup>21</sup> ] Akha. There are approximately 70 persons, 12 households in one village at Ban Pha-Na-Se-Ri (บ้านพนาเสร์) Moo 4, Tambol Tha-Kaw, Amphur Mae-Sruay, Chiangrai.

3. [ pja '33 ] This group originated in Myanmar, and then immigrated to Thailand in the region of Amphur Mae-Chan, Chiangrai. [ pja '33 ] means "leaders". Since this group are governed by [ pja '33 ], so other groups of Akha called them as [ pja '33 ] Akha also. The dressing style of this group is very similar to [ ʔu 21 lo 55 ] Akha. Most distribution of this group is in Amphur Mae-Chan and King Amphur Mae-Fa-Luang as the following villages :

Ban Pha-Ya-Phrai-Lee-Thu (บ้านพญาไพรลีตุ), Ban Pong-Hai (บ้านโป่งไฮ) and Ban Huay-Yuak (บ้านห้วยหยวก), King Amphur Mae-Fa-Luang, Chiangrai province. There are approximately 300 persons, 55 households at Ban-Huay-Yuak and approximately 6,000 persons in Chiangrai.

4. [ ʔu 21 pɰi 33 ] This group originated in Keng-Tung state in Myanmar, then immigrated to Thailand at the area of Ban Pa-Sang-Sung (บ้านป่าซางสูง), Tambol Therd-Thai, King Amphur Mae-Fa-Luang, Chiangrai. At first, there were population about 300 persons, 75 households but most of them moved back to Myanmar. Therefore, there are only 30-50 persons who still live in Thailand at Ban Therd-Thai (บ้านเทอดไทย) Moo 4, Tambol Therd-Thai, King Amphur Mae-Fa-Luang, Chiangrai province. At present, they don't wear their traditional dressing because they assimilate themselves to Thai culture.

### 1.2.1 Houses

Traditional Akha houses are made with wooden house posts, and thatched roofs. Almost everything else is constructed from bamboo. Akha houses have no windows, and the roof is constructed in such a way that the eaves come down very low on both sides and the ends. This construction results in a dark interior, but keeps out the wind and rain, and provides a small covered work space outside under the eaves.

There are two main sections in the house, one for the men the another for the women, with a shoulder-high partition between the sections extending as far as the central house beam. One area is for sleeping, the other for work and various activities. The ancestral altar is hung on the women's side of the partition.

Each house has two open fireplaces for cooking. The one on the men's side is used primarily for cooking meat and brewing tea, while rice and vegetables are cooked on the the women's hearth. Usually there is a third fireplace on the women's side where pig's food is cooked. (Lewis 1985: 220 )

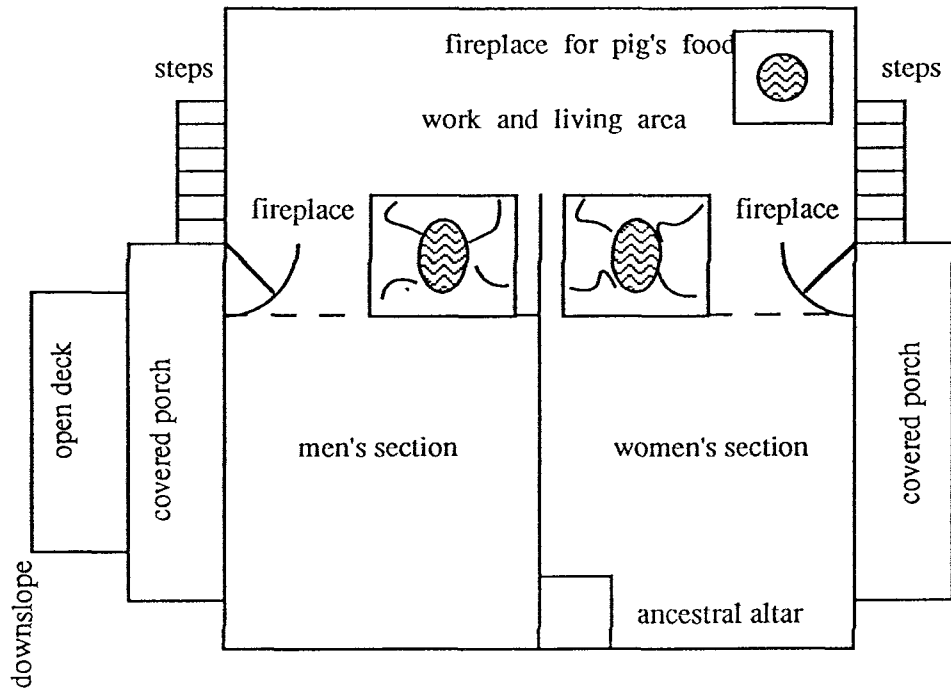


Figure 14 : Akha house plan

Source : Lewis, Paul., Six Tribes of Tribal People, Chiangmai , 1985,p. 220.

During this study, I observed that some Akha families in Pa-kha suk-jai village adapted their houses from the traditional style to a more modern style which has two sets of stairs, a separate bedroom, and does not include a fireplace in the men's side or the women's side. However, the ancestral altar is still located on the women's place.

### 1.2.2 Village gate

Although formal aspects of Akha customs are based primarily on the Akha's relationship with their ancestors, in everyday life they are also continually concerned with unseen spirit forces. According to Akha myth, human beings and these 'spirits' originally lived together in an idyllic relationship. All animals, wild and domesticated, also lived together in perfect

harmony. Human beings tilled their fields in the daytime, and spirits tilled their field at night. Trouble broke out, however, when spirits began to steal chicken eggs from people, and people began stealing cucumbers from spirits. As the conflict grew it was finally decided they should separate - people living in villages and spirits in the jungle. In order to provide a clear demarcation between the human and spirits realms, it was decided that 'village gates' should be erected at the upper and lower ends of an Akha village.

The main gate is usually located on the path at the upper part of the village. The primary function of the gate and the wooden figures associated with it is to 'protect the village from hawks and wildcats, leopards, and tigers, illness and plague, leprosy and epileps, vampires and weretigers, and all other bad and wicked things'.

The village gates are renewed each year under the direction of the village priest. (Lewis 1985:224)

### 1.3 Akha in Pa-kha-suk-jai village

#### 1.3.1 History

Pa-kha-suk-jai village (บ้านป่าคาสุกใจ) was founded about 16 years ago (in 1977). The Akha people of this village are “๒<sup>33</sup> mi<sup>33</sup>” Akha. They migrated from Myanmar, due to increasing military unrest in the border area. Pa-kha-suk-jai village was in the area of Phayaphrai (พญาไพร), Hua-Mac-Kham (หัวแม่คำ), Doi -tung (ดอยตุง), Mae-Maw (แม่เมว) and Mae-Sa-Long (แม่สะลอง). At first there were only 18 households, but today there are 70 households.

The old name of Pa-kha-suk-jai village was the Chinese name, “Mao-chao-ling” (เหมาเช่าหลิง) which means “cogon grass”. The elders said that at first the land of this village was very dry and there was only cogon grass. They had to walk two hours to find the bamboo tree for building. But now the villagers of Pa-kha-suk-jai in cooperation with the Hill Area Development Foundation campaign are working to recover this degraded area of forest around the village. They are working on approximately 1,000 rai of land using



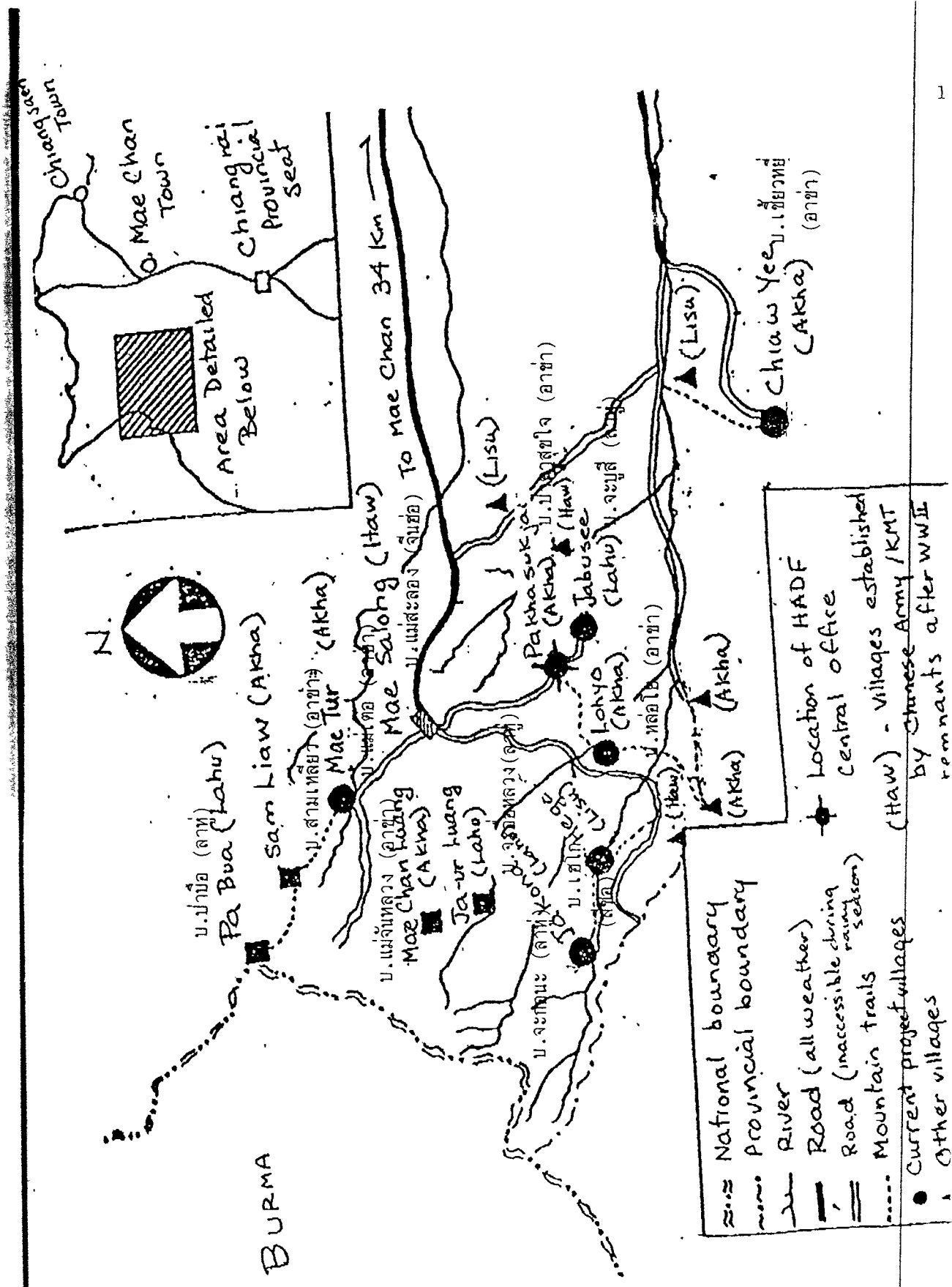


Figure 15 : Pa-Kha-Suk-Jai Map.

Source : Documentary section of Hill Area Development Foundation.

sustainable agriculture techniques to grow trees and decrease slash and burn agricultural methods.

The size of the Pa-kha-suk-jai village itself is about 10 rai. It is located 1,120 metres above sea level at point NC. 667260. (Report of Hill Area Development Foundation : 5).

### 1.3.2 Population

At the time of the study there were 373 inhabitants of the village, 200 males, 173 females.

Pa-kha-suk-jai village is composed of both nuclear families and extended families. Nuclear families are about 70.59% of the population and extended family comprise the remaining 29.41%. ( Report of Hill Area Development Foundation : 11)

### 1.3.3 Education

Since 1986, one of non-governmental organizations, the "Hill Area Development Foundation" was allowed by Hill Tribe Peoples' Committee of Chiangrai province to work in Pa-kha-suk-jai village to teach Thai language and other subjects, likely reforestration. This was accomplished by co-ordinating with the non-formal education department and using the Education Center For Communities in Mountain Area's specially developed curriculum.

75.14% of the Akha people in this village can not speak Thai . And only about 24.86% of the people can speak, read and write Thai.

Thai language ability	Male	Female	Total
can speak,read and write	22.06	5.17	14.28
only speaking	13.24	7.47	10.58
can not speak,read or write	64.71	87.36	75.14

Table 1 : Thai language ability

Source : Report "General information of Pa-kha-suk-jai village, Hill Area Development Foundation, 1989:16

#### 1.4 Background Study

During 1986-1988, I had an opportunity to work in a small development project with the Akha people in Pa-kha-suk-jai village. During that time, I became more interested in groups of minority people in Thailand. I wanted to study more about their way of life, language and culture. So, I decided to go back to Pa-kha-suk-jai village to visit some people whom I had taught Thai language and conduct this study with them.

#### 1.5 Details about the informants

All of Akha language data in this study are elicited from 2 Akha informants. Both of them moved from Myanmar to Thailand about 15 years ago. My main informant was my student when I worked there. His Thai language ability is fairly good. And, of course, he also speaks Akha everyday in the village. Another informant is a student of Chiangrai agricultural college who grew up in Pa-kha-suk-jai village.

1. Name : Mr. Lee-hu Wui-yue-ku (main informant)
- Age : 26
- Education : Prathom 6
2. Name : Mr. A-do Ye-biang-ku
- Age : 24
- Education : Third year of Chiangrai agricultural college.

## 1.6 Criteria for choosing informants

In this village, the people who can understand Thai are mostly the young people that are used to study and some children who are studying Thai now. This group is comprised mostly of males, because Akha customs insure that women are very busy work in the house and field. But only a few of young people know Thai well enough to be an informant. So, I used the following criteria for choosing informants.

First, they must be able to understand Thai very well. And, if they do not understand the meaning of some words, they will ask to check for correctness.

Second, the informant must have perfect articulation so that the language they produce will be reliable.

Third, they must have enough free time and are willing to give the language data to me.

Fourth, the informant must be Akha and must have lived in Pa-kha-suk-jai village not less than 5 years.

Fifth, the informant must be more than 15 years of age.

## 1.7 Objective of the study

The objective of this study is analyse the phonological system of Akha language in Pa-kha-suk-jai village.

## 1.8 Scope of the study

The study deals with the phonological system of Akha language in Pa-kha-suk-jai village, Tambol Mae-Sa-Long-Nok, King Amphur Mae-Fa-Luang, Chiangrai province.

## 1.9 Methodology

1.9.1 First a literature survey was undertaken, of both published and unpublished documents about the Akha language, to further develop on understanding of the language and the research which has already been done.

1.9.2 Gathering of data : The data on which this study is based consists of 1,650 vocabulary items, most of which were transcribed from the type-recorded vocabulary collected during discussions with the informants. This vocabulary was transcribed according to the International Phonetic Alphabet.

In my field work, the following documents have been adopted for collecting data :

1.9.2.1 The prepared word list by Morris Swadesh, The Swadesh South East Asian word list (revised), Mahidol University, 1982.

1.9.2.2 The International Phonetic Alphabet (I.P.A.) by the International Phonetic Alphabet Association (Revised to 1979).

1.9.2.3 List of Akha verbs, by Inga Lill Hansson.

1.9.2.4 Categories outlining the methods of word collecting in the appendix of Field Method of Linguistics, by Sujaritlak Deepladung, 1990.

## CHAPTER II

### THE INTONATION GROUP

#### 2.1 Definition

The intonation group is the highest rank in the hierarchy and has no storable function. Its structure is stated in terms of the stress group.

#### 2.2 Types of Intonation

Intonation of Akha language is non-phonemic since it is predictable. The pitch movement is determined by the tone inherent in each word constituting the sentence. However, two types of intonation occur at the end of utterance. They are ;

Falling contour

Rising-falling contour

##### 2.2.1 Falling contour

The pitch of falling contour may be phonetically characterized by a falling pitch occurring at the end of the utterance. It is used in affirmative, imperative, negative imperative and interrogative sentences. It is marked by the straight line with falling curve at the end.

().

##### 2.2.1.1 Affirmative Sentence

The pitch of an affirmative sentence may be phonetically characterized by the pitch falling down slightly at the end of the utterance.

For example :

1)  $\overline{\eta a \ 5 \quad ja \ 5 \ \eta e \ 2 \quad j o \ 1 \ n \tilde{a} \ 2 \ n \tilde{a} \ 2 \quad \eta i \ 5 \ ma \ 2 \ }^{\curvearrowright}$   
I        the field                    everyday                    to go

“I go to the field everyday.”

2)  $\overline{\text{za } 3 \quad \text{ʔa } 1 \quad \text{bo } 5 \quad \text{jo } 1 \quad \text{mja } 3 \quad \text{mja } 3 \quad \text{k}^h\text{a } 1 \quad \text{mo } 3}$   
 the children tree many to grow to want  
 "The children want to grow a lot of trees."

3)  $\overline{\text{ja } 5 \quad \text{sa } 3 \quad \text{ʔa } 1 \quad \text{dzi } 5 \quad \text{jo } 1 \quad \text{mja } 3 \quad \text{dzo } 5 \quad \text{ʔa } 1}$   
 the forest the bird many to have v.p.  
 "There are a lot of birds in the forest."

### 2.2.1.2 Negative Sentence

1)  $\overline{\text{ʔa } 3 \quad \text{p}^h\text{ɔ } 3 \quad \text{ja } 1 \quad \text{p}^h\text{i } 5 \quad \text{ma } 3 \quad \text{do } 5 \quad \text{mo } 3}$   
 He opium not to smoke to want  
 "He doesn't want to smoke opium."

2)  $\overline{\text{ɲa } 5 \quad \text{ma } 3 \quad \text{dzɔ } 5 \quad \text{mo } 3 \quad \text{pa } 2}$   
 I not to do to want n.p.  
 "I don't want to do."

3)  $\overline{\text{ɲa } 5 \quad \text{ma } 3 \quad \text{ʔi } 5 \quad \text{mo } 3 \quad \text{pa } 2}$   
 I not to go to want n.p.  
 "I don't want to go."

4)  $\overline{\text{ɲa } 5 \quad \text{ma } 3 \quad \text{dzɔ } 5 \quad \text{pa } 2 \quad \text{pa } 2}$   
 I not to do can n.p.  
 "I can not do."

### 2.2.1.3 Negative Imperative Sentence

There is a word / $t^h\text{a}^3$ / "do not" which functions as pre-verb of the negative imperative marker. It occurs before the word which was negated.

For example:

1)  $\overline{\text{ja } 3 \quad \text{p}^h\text{i } 5 \quad \text{t}^h\text{a } 3 \quad \text{do } 5}$   
 opium don't to smoke  
 "Don't smoke opium!"

2)  $\overline{\text{ʔa 3 bu 5} \quad \text{ʔɔ 5} \quad \text{tʰa 3} \quad \text{ɣa 2}}$   
 woman to have don't to visit  
 "Don't go to visit the prostitute!"

3)  $\overline{\text{ʔa 1 bɔ 5} \quad \text{tʰa 3} \quad \text{tʰu 5}}$   
 tree don't to chop  
 "Don't chop the tree!"

4)  $\overline{\text{ʔa 1 dʒi 5} \quad \text{tʰa 3} \quad \text{bɔ 2}}$   
 bird don't to shoot  
 "Don't shoot the birds!"

#### 2.2.1.4 Interrogative Sentence

The content question particle /le1/ is placed at the end of a sentence.

For example:

1)  $\overline{\text{nɔ 5} \quad \text{tsʰɔ 1 mjā 5} \quad \text{ʔa 3 dʒɛ 3} \quad \text{lɛ 5} \quad \text{kʰu 5} \quad \text{le 1}}$   
 you name what - \* to call q.p.  
 "What is your name?"

2)  $\overline{\text{nɔ 5} \quad \text{ʔa 5 mjā 1} \quad \text{xo 4} \quad \text{kʰɔ 1 la 5} \quad \text{le 1}}$   
 you How much year - \* q.p.  
 "How old are you?"

3)  $\overline{\text{ʔa 1 su 5 ga 3} \quad \text{bu 1 sɛ 5} \quad \text{gə 4} \quad \text{le 1}}$   
 who headman to get q.p.  
 "Who is the headman?"

4)  $\overline{\text{nɔ 5} \quad \text{ʔa 3 ga 5} \quad \text{ʔi 5} \quad \text{le 1}}$   
 you where to go q.p.  
 "Where do you go?"

\* lɛ 5 is an elaborative particle whose meaning cannot be determined.

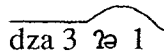
\* kʰɔ 1 la 5 is also an elaborative particle whose meaning cannot be determined.

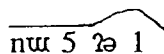


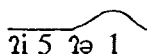
### 2.2.2 Rising falling contour

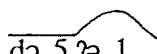
The pitch of rising-falling contour is phonetically characterized by the rising-falling pitch which occurs at the end of the utterance. Rising-falling contour only occurs on the imperative sentence.

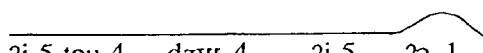
For example:

1)   
 1) dza 3 ʔə 1  
 eat  
 'Eat !'

2)   
 2) nu 5 ʔə 1  
 sit  
 'Sit !'

3)   
 3) ʔi 5 ʔə 1  
 go  
 'Go !'

4)   
 4) do 5 ʔə 1  
 drink  
 'Drink !'

5)   
 5) ʔi 5 ʔu 4 dzu 4 ʔi 5 ʔə 1  
 water to wash to go  
 "Go to take a bath !"

The intonation group patterns are predictable from the sentence structure, especially from the final particles.

## CHAPTER III

### THE PHONOLOGICAL WORD

#### 3.1 General Definition

The phonological word is defined as the rank which function as the unit of the intonation group and whose structure is stated in terms of syllable.

#### 3.2 Structure

In term of stress, the stress group in this language can be divided into 4 types:

##### 3.2.1 Type 1 Monosyllabic word

A monosyllabic word is a word with only one syllable. The strong stress usually occurs on that syllable. Its structure is [s]

Examples:

[dʒɔ̃ <sup>55</sup> ]	'to do'
[je <sup>21</sup> ]	'eight'
[lo <sup>21</sup> ]	'boat'
[ŋa <sup>55</sup> ]	'I'
[tʰo <sup>21</sup> ]	'friend'

##### 3.2.2 Type 2 Disyllabic word

A disyllabic word is a word with two syllables. The weak stress falls on the first syllable and the strong stress is on the last syllable. Its structure is [w 's].

For example:

[,dʒi. <sup>55</sup> 'ba <sup>21</sup> ]	'liquor'
[,ba <sup>21</sup> 'p <sup>h</sup> u <sup>'33</sup> ]	'shoulder'

[ , di <sup>21</sup> 'p <sup>h</sup> u <sup>21</sup> ]	'hammer'
[ ,sa <sup>21</sup> 'də <sup>?</sup> 21 ]	'salt'
[ ,sa <sup>21</sup> 'p <sup>h</sup> i <sup>55</sup> ]	'chilli'

It should be noted that a large number of disyllabic words found in the data have [ ʔa<sup>21</sup> ] or [ ʔa<sup>55</sup> ] or [ jɔ<sup>33</sup> ] as the first syllable as shown in following examples:

[ ,ʔa <sup>21</sup> 'da <sup>33</sup> ]	'father'
[ ,ʔa <sup>21</sup> 'ma <sup>33</sup> ]	'mother'
[ ,ʔa <sup>21</sup> 'li <sup>33</sup> ]	'son'
[ ,ʔa <sup>21</sup> 'la <sup>?</sup> 21 ]	'hand'
[ ,ʔa <sup>21</sup> 't <sup>h</sup> ɔ <sup>21</sup> ]	'singular first person'
[ ,ʔa <sup>55</sup> 'mjo <sup>?</sup> 21 ]	'monkey'
[ ,ʔa <sup>55</sup> 'do <sup>33</sup> ]	'older brother'
[ ,ʔa <sup>55</sup> 'xo <sup>?</sup> 21 ]	'year'
[ ,ʔa <sup>55</sup> 'nu <sup>33</sup> ]	'seed'
[ ,ʔa <sup>55</sup> 'p <sup>h</sup> ɔ <sup>21</sup> ]	'price'

Most of animal names have [ ʔa<sup>21</sup> ] as the first syllable as follows:

[ ,ʔa <sup>21</sup> 'dʒi <sup>55</sup> ]	'bird'
[ ,ʔa <sup>21</sup> 'zi <sup>21</sup> ]	'termite'
[ ,ʔa <sup>21</sup> 'gɔ <sup>33</sup> ]	'bedbug'
[ ,ʔa <sup>21</sup> 'no <sup>21</sup> ]	'buffalo'
[ ,ʔa <sup>21</sup> 'dʒe <sup>21</sup> ]	'cicada'
[ ,ʔa <sup>21</sup> 'no <sup>33</sup> ]	'periwinkle, shell'
[ ,ʔa <sup>21</sup> 'k <sup>h</sup> u <sup>21</sup> ]	'dog'

[ jɔ<sup>33</sup> ] always occur on the first syllable of adjective as follows:

[ ,jɔ <sup>33</sup> 'go <sup>55</sup> ]	'tall'
[ ,jɔ <sup>33</sup> 'ku <sup>33</sup> ]	'to be wrinkled'
[ ,jɔ <sup>33</sup> 'p <sup>h</sup> ə <sup>21</sup> ]	'to be rotten'
[ ,jɔ <sup>33</sup> 'p <sup>h</sup> u <sup>55</sup> ]	'blue'
[ ,jɔ <sup>33</sup> 'ʔa <sup>21</sup> ]	'wet'

### 3.2.3 Type 3 Trisyllabic word

A trisyllabic word is a word with three syllables. There is one pattern in trisyllabic words.

3.2.3.1 The weak stress falls on the first and the second syllables and the strong stress falls on the last syllable. Its structure is [ ,w ,w 's ]

For example:

[ ,na <sup>33</sup> ,me <sup>55</sup> 'bɔ̃ <sup>21</sup> ]	'nose'
[ ,za <sup>21</sup> ,mi <sup>21</sup> 'za <sup>21</sup> ]	'wife'
[ ,sa <sup>21</sup> ,la <sup>33</sup> 'p <sup>h</sup> a <sup>21</sup> ]	'resthouse'
[ ,se <sup>21</sup> ,le <sup>33</sup> 'p <sup>h</sup> e <sup>21</sup> ]	'big bowl'
[ ,ʔa <sup>55</sup> ,be <sup>'33</sup> 't <sup>h</sup> e <sup>55</sup> ]	'tamarind'
[ ,jo <sup>33</sup> ,dzu <sup>21</sup> 'dzu <sup>21</sup> ]	'to shake''
[ ,jo <sup>33</sup> ,dzɯ <sup>33</sup> 'dzɯ <sup>33</sup> ]	'itchy'
[ ,nu <sup>33</sup> ,nø <sup>21</sup> 'nø <sup>21</sup> ]	'to think'
[ ,mja <sup>33</sup> ,te <sup>33</sup> 'te <sup>33</sup> ]	'to wink'
[ ,tʃ <sup>h</sup> a <sup>21</sup> ,dɔ̃ <sup>55</sup> 'dɔ̃ <sup>55</sup> ]	'to be shy'

### 3.2.4 Type 4 Tetrasyllabic word

A tetrasyllabic word is a word with four syllables. The weak stress fall on the first, the second and the third syllable. The strong stress is on the last syllable. Its structure is [ ,w ,w ,w 's ].

For example:

[ ,si <sup>21</sup> ,k <sup>h</sup> o <sup>33</sup> ,lo <sup>55</sup> 'k <sup>h</sup> a <sup>21</sup> ]	'bitter gourd'
[ ,sɔ̃ <sup>21</sup> ,bo <sup>33</sup> ,da <sup>33</sup> 'du <sup>55</sup> ]	'pencil'
[ ,ʔa <sup>33</sup> ,dʒi <sup>55</sup> ,pa <sup>ʔ21</sup> 'dɔ̃ <sup>'33</sup> ]	'mint'
[ ,ʔa <sup>21</sup> ,ʔo <sup>21</sup> ,lo <sup>55</sup> 'ma <sup>'33</sup> ]	'spider'
[ ,dɔ̃ <sup>55</sup> ,ta <sup>33</sup> ,ʔa <sup>55</sup> 'k <sup>h</sup> a <sup>'33</sup> ]	'scorpion'
[ ,ne <sup>33</sup> ,dzɔ̃ <sup>55</sup> ,ŋa <sup>33</sup> 'be <sup>'33</sup> ]	'papaya'

### 3.3 Compound word.

Compound is a term used widely in descriptive linguistic studies to refer to a linguistic unit which is composed of two distinct elements, that function independently in other circumstances of particular currency are the notions of compounding found in 'compound words' (consisting of two or more free morpheme). (Crystal 1991:70)

There are 3 patterns in compound word according to its stress pattern.

3.3.1 Compound word which is comprised of disyllabic word and monosyllabic word. Its pattern is ,w ,w 's.

For example:

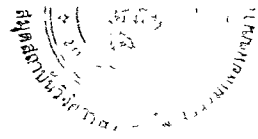
[ ,sa <sup>21</sup> 'dǎ <sup>21</sup> ]	+ [ 'tʰø <sup>55</sup> ]	→	[ ,sa <sup>21</sup> ,dǎ <sup>21</sup> 'tʰø <sup>55</sup> ]
'salt'	'sweet'		'sugar'
[ ,kʰa <sup>21</sup> 'lo <sup>33</sup> ]	+ [ 'bø <sup>33</sup> ]	→	[ ,kʰa <sup>21</sup> ,lo <sup>33</sup> 'bø <sup>33</sup> ]
'rock'	'hole'		'cave'
[ ,nu <sup>33</sup> 'ma <sup>33</sup> ]	+ [ 'pʰɛ <sup>55</sup> ]	→	[ ,nu <sup>33</sup> ,ma <sup>33</sup> 'pʰɛ <sup>55</sup> ]
'heart'	'angry'		'to be angry'

3.3.2 Compound word which is comprised of disyllabic word and disyllabic word. Its pattern is ,w ,w ,w 's.

For example:

[ ,nu <sup>33</sup> 'ma <sup>33</sup> ]	+ [ jɔ <sup>33</sup> 'mu <sup>21</sup> ]	→	[ ,nu <sup>33</sup> ,ma <sup>33</sup> jɔ <sup>33</sup> 'mu <sup>21</sup> ]
'heart'	'good'		'to be nice'
[ ,sa <sup>21</sup> 'pʰi <sup>55</sup> ]	+ [ ,tsʰɔ <sup>55</sup> ʔu <sup>21</sup> ]	→	[ ,sa <sup>21</sup> ,pʰi <sup>55</sup> ,tsʰɔ <sup>55</sup> ʔu <sup>21</sup> ]
'chilli'	'mad'		'bell pepper'

3.3.3 Compound word which is comprised of two disyllabic words. The last disyllabic word has its first syllable reduplicating the first or the second syllable of the first disyllabic word. Its pattern is ,w ,w ,w 's.



For example:

[ ,mja<sup>33</sup> 'nu<sup>33</sup> ] + [ ,jɔ<sup>33</sup> 'tʃh'e<sup>33</sup> ] → [ ,mja<sup>33</sup> ,nu<sup>33</sup> ,mja<sup>33</sup> 'tʃh'e<sup>33</sup> ]  
 'eye' 'to have a pointed of edge' 'eyebrows'

[ ,mã<sup>33</sup> 'ne<sup>55</sup> ] + [ ,ʔa<sup>21</sup> 'ma<sup>33</sup> ] → [ ,mã<sup>33</sup> ,ne<sup>55</sup> ,mã<sup>55</sup> 'ma<sup>33</sup> ]  
 'cow' 'mother' 'cows'

[ ,ʔa<sup>33</sup> 'mi<sup>55</sup> ] + [ ,ʔa<sup>21</sup> 'ma<sup>33</sup> ] → [ ,ʔa<sup>33</sup> ,mi<sup>55</sup> ,mi<sup>55</sup> 'ma<sup>33</sup> ]  
 'cat' 'mother' 'female cat'

[ ,ʔa<sup>21</sup> 'k<sup>h</sup>u<sup>21</sup> ] + [ ,ʔa<sup>21</sup> 'ma<sup>33</sup> ] → [ ,ʔa<sup>21</sup> ,k<sup>h</sup>u<sup>21</sup> ,k<sup>h</sup>u<sup>21</sup> 'ma<sup>33</sup> ]  
 'dog' 'mother' 'female dog'

## CHAPTER IV

### SYLLABLE

#### 4.1 General Definition

The syllable is defined as the rank whose unit functions in the stress group (phonological word) and whose structure is stated in terms of phonemes.

#### 4.2 Structure

In this language, due to the non-occurrence of the final consonants, the types of the syllables presented in this study are stated only in terms of open syllables which are segments consisting of a vowel and usually a toneme and one or two consonants as peripherals.

##### 4.2.1 Types of syllables

There are two types of syllables in Akha language: the major syllable and the minor syllable.

###### 4.2.1.1 Major syllable

A major syllable consists of a single consonant or a consonant cluster, a vowel (either oral or nasal) and a tone. It always takes a strong stress. The structure of the major syllable in Akha is C(C)VT.

/ <u>bo</u> 1 ɤ 1 /	[ 'bo <sup>33</sup> ɤ <sup>33</sup> ]	'to blow'
/ <u>mo</u> 5 ɤ 1 /	[ 'mo <sup>55</sup> ɤ <sup>33</sup> ]	'to see'
/ <u>ni</u> 5 ɤ 1 /	[ 'ni <sup>55</sup> ɤ <sup>33</sup> ]	'to go'
/ <u>ho</u> 3 /	[ 'ho <sup>21</sup> ]	'cooked rice'
/ <u>do</u> 4 /	[ 'do <sup>221</sup> ]	'poison'
/ p <sup>h</sup> <u>iu</u> 5 /	[ 'p <sup>h</sup> iu <sup>55</sup> ]	'silver, money'
/ <u>bia</u> 3 /	[ 'bia <sup>21</sup> ]	'bee'

/ <u>mja</u> 4 ʔə 1 /	[ 'mja <sup>21</sup> ʔə <sup>33</sup> ]	'to lick'
/ <u>nu</u> 5 /	[ 'nu <sup>55</sup> ]	'now,house'
/ <u>la</u> 3 /	[ 'la <sup>21</sup> ]	'rabbit'
/ <u>dʒɔ</u> 5 ʔə 1 /	[ 'dʒɔ <sup>55</sup> ʔə <sup>33</sup> ]	'to do'
/ <u>ʒhɔ</u> 5 ʔə 1 /	[ 'ʒhɔ <sup>55</sup> ʔə <sup>33</sup> ]	'to hug''
/ <u>sū</u> 5 /	[ 'sū <sup>55</sup> ]	'three'
/ <u>bjū</u> 5 ʔə 1 /	[ 'bjū <sup>55</sup> ʔə <sup>33</sup> ]	'to pile up'
/ <u>xɔ</u> 3 /	[ 'xɔ <sup>21</sup> ]	'chest'

#### 4.2.1.2 Minor syllable

A minor syllable consists of a single consonant or a consonant cluster, a vowel (either oral or nasal) and a tone. It takes weak stress. The structure of the minor syllable in Akha is C(C)VT.

For examples:

/ <u>la</u> 3 be 3 /	'ring'
/ <u>lū</u> 3 bjū 5 /	'cemetery'
/ <u>ne</u> 1 bɔ 5 /	'grasshopper'
/ <u>na</u> 3 bɔ 3 /	'deaf person'
/ <u>mja</u> 1 nu 2 /	'eye'
/ <u>ʔa</u> 3 ɣɔ 4 /	'needle'

It should be noted that the pronunciation of verb particle [ ʔə<sup>33</sup> ] will be continual sound or moderately tight sound depends on the front syllable.



vowel consonant	i	e	ɛ	a	ə	ʊ	u	ɔ	o	ø	ã	õ	ũ
ʔ	x	o	o	x	o	x	x	x	x	x	o	x	x
b	x	o	x	x	x	x	x	x	x	x	o	x	o
d	x	x	x	x	x	x	x	x	x	x	o	x	x
g	o	o	x	x	x	x	x	x	x	o	o	x	x
h	o	o	x	x	o	x	o	x	x	o	x	o	x
j	o	o	x	x	o	o	o	x	x	x	o	o	o
k	o	o	o	x	x	o	x	x	x	o	o	o	o
k <sup>h</sup>	o	o	o	x	x	x	x	x	x	x	o	x	x
l	x	x	x	x	x	o	x	x	x	x	o	x	x
m	x	o	x	x	x	x	x	x	x	o	x	x	o
n	x	x	x	x	o	x	x	x	x	x	x	x	x
p	x	o	x	x	o	o	o	x	x	x	o	o	x
ŋ	o	o	x	x	o	o	o	o	o	o	o	o	o
p	x	o	x	x	o	o	x	x	o	x	o	o	o
p <sup>h</sup>	x	o	x	x	x	x	x	o	o	x	o	x	o
s	x	o	x	x	x	o	x	x	o	o	o	x	x
t	x	o	x	x	x	o	x	x	x	o	o	o	o
t <sup>h</sup>	o	x	x	x	o	o	x	x	o	o	o	x	x
x	o	o	x	x	o	o	o	x	x	x	o	x	x
y	o	o	x	x	x	o	o	x	o	o	o	x	o
z	x	o	o	x	x	x	o	x	x	o	o	o	x
dz	x	x	x	x	o	o	o	x	o	o	o	x	o
ts	o	o	x	x	x	x	o	o	x	o	o	o	o
ts <sup>h</sup>	x	x	o	x	o	o	x	o	o	x	o	x	o
tʃ	x	o	x	x	x	o	x	o	o	x	o	o	o
tʃ <sup>h</sup>	x	x	x	x	x	x	x	x	x	x	o	o	o
tʃ <sup>h</sup>	x	o	x	x	o	x	x	x	o	o	o	x	x
dʒ	x	x	x	x	x	x	x	x	x	x	o	x	x

Table 2 : The co-occurrence of vowels and consonants of major syllable.

x : occurring , o : non-occurring

From table 2 it could be seen that :

1. All consonant phonemes can occur initially in major syllable.
2. All vowel phonemes can occur in major syllable.
3. / a / is the vowel phoneme that has widest distribution in major syllable.
4. / ā / is the vowel phoneme that has narrowest distribution in major syllable.
5. All vowel phonemes except / ə / can occur with / n /.
6. / ā / never occur with / d / and / dʒ /.
7. There are only 2 vowel phonemes / ε /, / a / which can occur with / ŋ /.
8. Nasalised vowel never occur with / tʰ /.

vowel consonant	i	e	ɛ	a	ə	ɯ	u	ɔ	o	ø	ã	õ	ũ
ʔ	x	o	x	x	o	x	x	x	x	x	o	x	x
b	x	o	x	x	x	x	x	x	x	x	o	x	o
d	x	x	x	x	x	x	x	x	x	o	x	x	x
g	o	o	o	x	x	x	x	x	x	o	o	x	o
h	o	o	x	o	x	x	x	x	x	o	o	o	x
j	x	x	x	x	x	x	x	x	x	x	o	o	x
k	o	o	o	x	x	x	x	x	x	o	o	x	o
k <sup>h</sup>	o	o	x	x	x	x	x	x	x	x	o	x	o
l	x	x	x	x	x	o	x	x	x	o	x	x	x
m	x	x	x	x	x	o	x	x	x	o	x	o	o
n	x	o	x	x	o	x	x	x	o	x	x	x	o
ɲ	x	o	x	x	o	o	o	o	x	o	o	o	x
ŋ	o	o	x	x	x	o	o	x	o	x	o	o	o
p	o	o	x	x	o	x	x	x	x	o	o	o	o
p <sup>h</sup>	x	o	x	x	o	x	x	x	x	o	o	x	o
s	x	o	x	x	x	o	o	x	o	o	o	x	x
t	o	o	x	x	x	o	x	o	o	o	o	o	o
t <sup>h</sup>	x	x	x	x	o	o	x	x	o	x	x	x	o
x	o	o	o	x	o	o	o	x	x	x	o	x	o
y	o	o	x	x	x	o	x	x	o	x	o	x	o
z	x	o	o	x	x	o	o	x	o	o	o	x	x
dz	x	o	x	x	x	x	x	x	o	o	o	x	o
ts	o	o	x	o	x	x	o	x	x	o	o	o	o
ts <sup>h</sup>	x	x	x	x	o	o	o	x	o	o	o	x	o
tʃ	x	x	x	x	o	x	x	x	o	x	o	o	o
tʃ <sup>h</sup>	x	o	x	x	x	o	x	x	x	x	o	x	x
tʃ <sup>h</sup>	x	o	x	x	x	x	o	x	o	x	o	x	x
dʒ	x	x	x	x	x	x	x	x	o	x	o	x	o

Table 3 : The co-occurrence of vowels and consonants in minor syllable.

x : occurring , o : non-occurring

From table 3 it could be seen that :

1. All consonant phonemes can be the initial of minor syllable.
2. All vowel phonemes can occur in minor syllable.
3. Vowel phonemes which have the widest distribution in minor syllable are / a / and / ɔ /.
4. Vowel phonemes which have the narrowest distribution in minor syllable is / ǣ /.
5. All vowel phonemes except / ø / occur with / d /.

vowel \ consonant	i	e	ɛ	a	ə	ʌ	u	ɔ	o	ø	ǣ	õ	ũ
bj	o	o	x	x	o	o	o	o	o	o	x	o	x
mj	o	o	o	x	x	o	o	o	x	o	x	o	o
pj	o	o	x	x	o	o	o	o	o	o	o	o	o
p <sup>h</sup> j	o	o	x	o	o	o	x	o	o	o	o	o	o

Table 4 : The co-occurrence of vowels and consonant clusters in minor syllable.

x : occurring

o : non-occurring

From table 4 it could be seen that :

1. Vowel phonemes which have the widest distribution with consonant cluster in minor syllable are / a / and / ɛ /.
2. There are only 7 vowel phonemes that can occur with consonant cluster in minor syllable, they are / ɛ, a, ə, u, o, ǣ, ũ /.
3. There are 6 vowel phonemes / i, e, ʌ, ɔ, ø, õ / that never occur with consonant cluster in minor syllable.
4. / ə / only occurs with / mj /.
5. / u / only occurs with / p<sup>h</sup>j /.
6. / o / only occurs with / mj /.
7. / ũ / only occurs with / bj /.

vowel \ consonant	i	e	ɛ	a	ə	ʊ	u	ɔ	o	ø	ã	õ	ũ
bj	o	o	x	x	o	o	o	x	o	x	x	o	x
mj	o	o	x	x	o	o	o	x	x	o	x	o	o
pj	o	o	x	x	o	o	o	o	o	o	o	o	o
p <sup>h</sup> j	o	o	x	x	o	o	x	x	o	o	o	o	x

Table 5 : The co-occurrence of vowels and consonant clusters in major syllable.

x : occurring

o : non-occurring

From table 5 it could be seen that :

1. Vowel phonemes which have the widest distribution with consonant cluster in major syllable are / ɛ / and / a /.
2. There are 8 vowel phonemes that can occur with consonant cluster in major syllable, they are : / ɛ, a, u, ɔ, o, ø, ã, ã /.
3. / i, e, ə, ʊ, õ / never occur with consonant cluster in major syllable.
4. / u / only occurs with / p<sup>h</sup>j /.
5. / o / only occurs with / mj /.
6. / ø / only occurs with / bj /.

## CHAPTER V

### PHONEMES

#### 5.1 General definition

The phoneme is defined as the rank whose units function in the syllable. It is the lowest rank of the hierarchy and therefore it has no stable structure, but the phonetic forms of phonemes may be described.

#### 5.2 Phonemes in Akha language

There are both segmental and suprasegmental phonemes in Akha language. In this study, a segmental phoneme is stated in terms of consonant and vowel and suprasegmental phoneme is stated in terms of tone. Therefore, on the basis of their function in the syllable, there are 3 classes of phonemes; consonant, vowel and tone.

#### 5.3 Consonant Phonemes

##### 5.3.1 General definition

Consonants are sounds made by a closure or narrowing in the vocal tract so that the airflow is either completely blocked, or so restricted that audible friction is produced. Consonant articulations are relatively easy to feel, and as a result are most conveniently described in terms of Place and Manner of articulation. In addition, a routine phonetic description of consonants would involve information about the mode of vibration of the vocal cords, and it is often necessary to specify the duration of the sound, the airstream mechanism involved and the direction of airflow. From a phonological point of view, consonants are those units which function at the margins of syllables, either singly or in clusters. (Crystal 1991:74).

Akha consonant phonemes function as a syllable periphery. There is no contrast between short and long consonants. Therefore the length of consonants is

not phonemic.

### 5.3.2 Consonant Chart

There are 28 consonant phonemes in the Akha language (spoken in Pa-kha-suk-jai village) All of which only occur initially in a syllable, except /j/ which can occur as the second member of the CC.

In the following chart, each of them will be grouped according to their manners and points of articulation. They are divided into 6 groups; plosive, fricative, affricate, nasal, lateral and approximant.

Point of Articulation  Manner of Articulation		Bilabial	Alveolar	Palato- alveolar	Palatal	Velar	Glottal
		Plosives	vl. unasp.	p	t		
vl. asp.	p <sup>h</sup>		t <sup>h</sup>			k <sup>h</sup>	
vd.	b		d			g	
Fricatives	vl.		s			x	h
	vd.		z			ɣ	
Affricates	vl. unasp.		ts		tʃ		
	vl. asp.		tʃ <sup>h</sup>	tʃ <sup>h</sup>	tʃ <sup>h</sup>		
	vd.		dz	dʒ			
Nasals	vd.	m	n		ɲ	ŋ	
Laterals	vd.		l				
Approxi- mant	vd.				j		

Table 6 : Consonant Chart

### 5.3.3 Formational Statement

#### 5.3.3.1 Plosives

Plosive is a term used in the phonetic classification of consonant sounds on the basis of their manner of articulation: it refers to a sound made when a complete closure in the vocal tract is suddenly released, the air pressure which had build up behind the closure rushes out with an explosive sound, hence the term.(Crystal 1991:266).

/ p / is a voiceless unaspirated bilabial plosive which is realised as follows:

[ p ] a voiceless unaspirated bilabial plosive.

For example:

/ pɔ 3 pi 5 /	[ ,pɔ 21 'pi 55 ]	'lemon grass'
/ pu 3 ʔə 1 /	[ 'pu 21 ʔə 33 ]	'to boil'
/ po 1 ʔə 1 /	[ 'po 33 ʔə 33 ]	'to look for'

/ p<sup>h</sup> / is a voiceless aspirated bilabial plosive which is realised as follows :

[ p<sup>h</sup> ] a voiceless aspirated bilabial plosive.

For example:

/ p <sup>h</sup> u 3 ʔə 1 /	[ 'p <sup>h</sup> u 21 ʔə 33 ]	'to be born (animal)'
/ p <sup>h</sup> a 5 ʔə 1 /	[ 'p <sup>h</sup> a 55 ʔə 33 ]	'to exchange'
/ p <sup>h</sup> ɛ 5 xɔ̃ 3 /	[ ,p <sup>h</sup> ɛ 55 'xɔ̃ 21 ]	'shirt'
/ p <sup>h</sup> i 3 t <sup>h</sup> ɛ 3 /	[ ,p <sup>h</sup> i 21 't <sup>h</sup> ɛ 21 ]	'to close'

/ b / is a voiced bilabial plosive which is realised as follows:

[ b ] a voiced bilabial plosive.

For example:

/ ba 3 ʔə 1 /	[ 'ba 21 ʔə 33 ]	'to carry'
/ bɔ 1 ʔə 1 /	[ 'bɔ 33 ʔə 33 ]	'to blow'
/ ba 1 la 2 /	[ ,ba 33 'la '33 ]	'moon'



/ ba 3 ba 2 / [ ,ba 21 'ba'33 ] 'cheek'

/ t / is a voiceless unaspirated alveolar plosive which is realised as follows:

[ t ] a voiceless unaspirated alveolar plosive.

For example:

/ tɛ 1 ʔə 1 /	[ 'tɛ 33 ʔə 33 ]	'to forge'
/ ta 4 /	[ 'ta'21 ]	'classifier for one piece of paper'
/ tɛ 1 ma 2 /	[ ,tɛ 33 'ma'33 ]	'guava'
/ tɛ 1 ko 1 ʔə 1 /	[ ,tɛ 33 'ko 33 ʔə 33 ]	'to dry in sun and smoke'

/ tʰ / is a voiceless aspirated alveolar plosive which is realised as follows:

[ tʰ ] a voiceless aspirated alveolar plosive.

For example:

/ tʰi 4 /	[ 'tʰi 21 ]	'one'
/ tʰɕ 3 /	[ 'tʰɕ 21 ]	'drum, to pound the unhashed rice'
/ tʰa 3 /	[ 'tʰa 21 ]	'don't'
/ tʰɔ 5 bu 4 /	[ ,tʰɔ 55 'bu 21 ]	'a type of Acacia'

/ d / is a voiced alveolar plosive which is realised as follows

[ d ] a voiced alveolar plosive.

For example:

/ dɔ 5 ʔə 1 /	[ 'dɔ 55 ʔə 33 ]	'to drink'
/ du 3 ʔə 1 /	[ 'du 21 ʔə 33 ]	'to dig'
/ də 1 ha 3 /	[ ,də 33 'ha 21 ]	'axe'
/ dɔ 3 dɕ 3 /	[ ,dɔ 21 'dɕ 21 ]	'bottom'

/ k / is a voiceless unaspirated velar plosive which is realised as follows:

[k] a voiceless unaspirated velar plosive.

For example:

/kɔ 1 ʔə 1 /	[ 'kɔ <sup>33</sup> ʔə <sup>33</sup> ]	'to row,to stir'
/kɔ 4 ʔə 1 /	[ 'kɔ <sup>21</sup> ʔə <sup>33</sup> ]	'to bite'
/ko 4 /	[ 'ko <sup>21</sup> ]	'six'
/ka 1 p <sup>h</sup> ə 2 /	[ ,ka <sup>33</sup> 'p <sup>h</sup> ə <sup>33</sup> ]	'coffee'

/k<sup>h</sup>/ is a voiceless aspirated velar plosive which is realised as follows:

[k<sup>h</sup>] a voiceless aspirated velar plosive.

For example:

/k <sup>h</sup> u 5 ʔə 1 /	[ 'k <sup>h</sup> u <sup>55</sup> ʔə <sup>33</sup> ]	'to call'
/k <sup>h</sup> o 1 p <sup>h</sup> u 5 /	[ ,k <sup>h</sup> o <sup>33</sup> 'p <sup>h</sup> u <sup>55</sup> ]	'porcupine'
/k <sup>h</sup> o 1 p <sup>h</sup> i 3 /	[ ,k <sup>h</sup> o <sup>33</sup> 'p <sup>h</sup> i <sup>21</sup> ]	'bamboo rat'
/k <sup>h</sup> a 3 hũ 5 /	[ ,k <sup>h</sup> a <sup>21</sup> 'hũ <sup>55</sup> ]	'bear'

/g/ is a voiced velar plosive which is realised as follows:

[g] a voiced velar plosive.

For example:

/gu 1 ʔə 1 /	[ 'gu <sup>33</sup> ʔə <sup>33</sup> ]	'to fear'
/gɯ 1 ʔə 1 /	[ 'gɯ <sup>33</sup> ʔə <sup>33</sup> ]	'to count'
/gɔ 3 gu 5 /	[ ,gɔ <sup>21</sup> 'gu <sup>55</sup> ]	'goose'
/gɔ 3 p <sup>h</sup> u 2 /	[ ,gɔ <sup>21</sup> 'p <sup>h</sup> u <sup>33</sup> ]	'bamboo mat'

/ʔ/ is a voiceless glottal plosive which is realised as follows:

[ʔ] a voiceless glottal plosive.

For example:

/ʔɔ 5 ʔə 1 /	[ 'ʔɔ <sup>55</sup> ʔə <sup>33</sup> ]	'to have,to exist'
/ʔi 5 ʔə 1 /	[ 'ʔi <sup>55</sup> ʔə <sup>33</sup> ]	'to go'
/ʔa 5 jɛ 2 /	[ ,ʔa <sup>55</sup> 'jɛ <sup>33</sup> ]	'lower'
/ʔu 3 jɛ 5 /	[ ,ʔu <sup>21</sup> 'jɛ <sup>55</sup> ]	'rain'

### 5.3.3.2 Fricatives

Fricative is a term used in the phonetic classification of consonant sounds on the basis of their manner of articulation: also sometimes called sibilant, it refers to sounds made when two organs come so close together that the air moving between them produces audible friction. There is no complete closure between the organs (in which case a plosive articulation would be produced); there is only a stricture. (Crystal 1991:143).

/s/ is a voiceless alveolar fricative which is realised as follows:

[s] a voiceless alveolar fricative.

For example:

/sə 3/	[ 'sə 21 ]	'teeth'
/sũ 5/	[ 'sũ 55 ]	'three'
/sɛ 1 p <sup>h</sup> u 5/	[ ,sɛ 33 'p <sup>h</sup> u 55 ]	'garlic'

/z/ is a voiced alveolar fricative phoneme. It has two allophones which are realised as follows:

[ð] a voiced interdental alveolar fricative. It can occur only with low central vowel; /a/.  
[z] a voiced alveolar fricative. It can occur elsewhere

For example:

/za 1 ni 3/	[ ,ða 33 'ni 21 ]	'jungle owl'
/za 1 hɛ 5 ʔə 1/	[ ,ða 33 'hɛ 55 ʔə 33 ]	'to get'
/za 3 ʔə 1/	[ 'ða 21 ʔə 33 ]	'to wear'
/za 1 ʔu 2/	[ ,ða 33 'ʔu 33 ]	'egg'

[z] a voiced alveolar fricative. It can occur elsewhere

For example:

/zi 5 dzi 5 ʔə 1/	[ ,zi 55 'dzi 55 ʔə 33 ]	'a corner'
/zɔ 1 ʔə 1/	[ 'zɔ 33 ʔə 33 ]	'to fly'
/zɔ̃ 3 le 5 ʔə 1/	[ ,zɔ̃ 21 'le 55 ʔə 33 ]	'to be puzzled'
/zə 5 ʔə 1/	[ 'zə 55 ʔə 33 ]	'to buy'

/x/ is a voiceless velar fricative which is realised as follows.

[x] a voiceless velar fricative.

For example:

/	/ xo 4 /	[ 'xo <sup>21</sup> ]	'year'
	/ xa 1 ʔə 1 /	[ 'xa <sup>33</sup> ʔə <sup>33</sup> ]	'to spit'
	/ x̃ 3 /	[ 'x̃ <sup>21</sup> ]	'chest'
	/ xo 3 ʔə 1 /	[ 'xo <sup>21</sup> ʔə <sup>33</sup> ]	'to spread out'

/ɣ/ is a voiced velar fricative which is realised as follows:

[ɣ] a voiced velar fricative.

For example:

/	/ ɣo 3 ʔə 1 /	[ 'ɣo <sup>21</sup> ʔə <sup>33</sup> ]	'to separate'
	/ ɣa 1 ʔə 1 /	[ 'ɣa <sup>33</sup> ʔə <sup>33</sup> ]	'to float'
	/ ɣo 5 ʔə 1 /	[ 'ɣo <sup>55</sup> ʔə <sup>33</sup> ]	'to weed'
	/ ɣ̃ 5 da 3 /	[ ,ɣ̃ <sup>55</sup> 'da <sup>21</sup> ]	'ring finger'

/h/ is a voiceless glottal fricative which is realised as follows:

[h] a voiceless glottal fricative.

For example:

/	/ ho 3 /	[ 'ho <sup>21</sup> ]	'cooked rice'
	/ ho 1 ʔə 1 /	[ 'ho <sup>33</sup> ʔə <sup>33</sup> ]	'to look at'
	/ hu 3 la 5 ʔə 1 /	[ ,hu <sup>21</sup> 'la <sup>55</sup> ʔə <sup>33</sup> ]	'to grow up'
	/ ho 3 bu 2 /	[ ,ho <sup>21</sup> 'bu <sup>33</sup> ]	'daiken radish'

### 5.3.3.3 Affricates

Affricate is a term used in the classification of consonant sounds on the basis of their manner of articulation. It refers to a sound made when the air-pressure behind a complete closure in the vocal tract is gradually released; the initial release produces a plosive, but the separation which follows is sufficiently slow to produce audible friction, and there is thus a fricative element in the sound also. However, the duration of the friction is usually not as long as would be the case of an independent fricative sound. (Crystal 1991:12)

There are 7 affricate phonemes in Akha language.

/tʃ/ is a voiceless alveolar affricate which is realised as follows:

[ ts ] a voiceless alveolar affricate.

For example:

/ tsɛ 3 ɲ 1 /	[ 'tsɛ 21 ɲ 33 ]	'to bark'
/ tsə 1 ɲ 1 /	[ 'tsə 33 ɲ 33 ]	'to pluck'
/ tso 2 ɲ 1 /	[ 'tso 33 ɲ 33 ]	'to build'
/ tsɯ 4 jɛ 5 /	[ ,tsɯ 21 'jɛ 55 ]	'cousin'

/ ts<sup>h</sup> / is a voiceless aspirated alveolar affricate which is realised as follows:

[ ts<sup>h</sup> ] a voiceless aspirated alveolar affricate.

For example:

/ ts <sup>h</sup> i 1 da 5 /	[ ,ts <sup>h</sup> i 33 'da 55 ]	'chopstick'
/ ts <sup>h</sup> ɔ 5 ha 3 /	[ ,ts <sup>h</sup> ɔ 55 'ha 21 ]	'person'
/ ts <sup>h</sup> ɔ 3 tsɯ 4 /	[ ,ts <sup>h</sup> ɔ 21 'tsɯ 21 ]	'ginger'
/ ts <sup>h</sup> ɔ 3 /	[ 'ts <sup>h</sup> ɔ 21 ]	'waterfall'

/ dz / is a voiced alveolar affricate which is realised as follows:

[ dz ] a voiced alveolar affricate.

For example:

/ dzi 3 ɲ 1 /	[ 'dzi 21 ɲ 33 ]	'to ride'
/ dze 3 ɲ 1 /	[ 'dze 21 ɲ 33 ]	'to abort, to miscarry'
/ dzɔ̄ 5 /	[ 'dzɔ̄ 55 ]	'a bunch of banana'
/ dzə 5 si 3 /	[ ,dzə 55 'si 21 ]	'last month'

/ tʃ / is a voiceless palatal affricate which is realised as follows:

[ tʃ ] a voiceless palatal affricate.

For example:

/ tʃɛ 3 ɲ 1 /	[ 'tʃɛ 21 ɲ 33 ]	'to rub the nose'
/ tʃu 3 ɲ 1 /	[ 'tʃu 21 ɲ 33 ]	'to kiss'
/ tʃa 1 /	[ 'tʃa 33 ]	'machine'

/ tʃ<sup>h</sup> / is a voiceless aspirated palatal affricate which is realised as follows:

[ tʃ<sup>h</sup> ] a voiceless aspirated palatal affricate.

For example:

/ tʰi 1 ʔə 1 /	[ 'tʰi 33 ʔə 33 ]	'to hang up, to lift'
/ tʰɛ 5 ʔə 1 /	[ 'tʰɛ 55 ʔə 33 ]	'to pickle'
/ tʰi 5 ha 3 /	[ ,tʰi 55 'ha 21 ]	'barking deer'
/ tʰɔ̃ 3 /	[ 'tʰɔ̃ 21 ]	'a top'

/ tʰ / is a voiceless aspirated palato-alveolar affricate phoneme which is realised as follows:

[ tʰ ] a voiceless aspirated palato-alveolar affricate.

For example:

/ tʰi 1 ʔə 1 /	[ 'tʰi 33 ʔə 33 ]	'to urinate'
/ tʰa 3 ʔə 1 /	[ 'tʰa 21 ʔə 33 ]	'true'
/ tʰũ 5 /	[ 'tʰũ 55 ]	'iron'
/ tʰa 3 ku 3 /	[ ,tʰa 21 'ku 21 ]	'blood line'

/ dʒ / is a voiced palato-alveolar affricate phoneme which is realised as follows:

[ dʒ ] a voiced palato-alveolar affricate.

For example:

/ dʒi 5 ʔə 1 /	[ 'dʒi 55 ʔə 33 ]	'to finish'
/ dʒi 5 ba 3 /	[ ,dʒi 55 'ba 21 ]	'liquor'
/ dʒa 1 bo 3 /	[ ,dʒa 33 'bo 21 ]	'hair'
/ dʒa 5 ʔə 3 /	[ ,dʒa 55 'ʔə 21 ]	'a spinet'

#### 5.3.3.4 Nasals

Nasal is a term used in the phonetic classification of speech sounds on the basis of manner of articulation: it refers to sounds produced while the soft palate is lowered to allow an audible escape of air through the nose. Both consonants and vowels may be articulated in this way. Nasal consonants occur when there is a complete closure in the mouth, and all the air thus escapes through the nose. (Crystal 1991:229).

/ m / is a voiced bilabial nasal which is realised as follows:

[ m ] a voiced bilabial nasal.

For example:

/ mɔ 5 ʔə 1 /	[ 'mɔ <sup>55</sup> ʔə <sup>33</sup> ]	'to see'
/ ma 5 mi 3 /	[ ,ma <sup>55</sup> 'mi <sup>21</sup> ]	'jackfruit'
/ me 1 p <sup>hi</sup> 5 /	[ ,me <sup>33</sup> 'p <sup>hi</sup> <sup>55</sup> ]	'galingale'
/ mi 3 dza 3 /	[ ,mi <sup>21</sup> 'dza <sup>21</sup> ]	'fire, firewood'

/ n / is a voiced alveolar nasal which is realised as follows:

[ n ] a voiced alveolar nasal.

For example:

/ nɔ 5 /	[ 'nɔ <sup>55</sup> ]	'2 <sup>nd</sup> singular person pronoun'
/ ne 4 /	[ 'ne <sup>21</sup> ]	'spirit'
/ na 5 ʔə 1 /	[ 'na <sup>55</sup> ʔə <sup>33</sup> ]	'to hurt'
/ ni 1 t <sup>hɔ</sup> 3 /	[ ,ni <sup>33</sup> 't <sup>hɔ</sup> <sup>21</sup> ]	'tomorrow'
/ na 3 bɔ 5 /	[ ,na <sup>21</sup> 'bɔ <sup>55</sup> ]	'ear'

/ ɲ / is a voiced palatal nasal which is realised as follows:

[ ɲ ] a voiced palatal nasal.

For example:

/ ɲi 4 /	[ 'ɲi <sup>21</sup> ]	'two'
/ ɲe 4 ʔə 1 /	[ 'ɲe <sup>21</sup> ʔə <sup>33</sup> ]	'to catch'
/ ɲe 1 b <sup>ɔ̃</sup> 5 /	[ ɲe <sup>33</sup> 'b <sup>ɔ̃</sup> <sup>55</sup> ]	'grasshopper'
/ ɲo 3 ʔi 3 /	[ ɲo <sup>21</sup> 'ʔi <sup>21</sup> ]	'cricket'

/ ŋ / is a voiced velar nasal which is realised as follows:

[ ŋ ] a voiced velar nasal.

For example:

/ ŋe 5 ʔə 1 /	[ 'ŋe <sup>55</sup> ʔə <sup>33</sup> ]	'to forget'
/ ŋa 5 /	[ 'ŋa <sup>55</sup> ]	'1 <sup>st</sup> person pronoun'
/ ŋa 1 be 2 /	[ ,ŋa <sup>33</sup> 'be <sup>33</sup> ]	'banana'
/ ŋa 3 /	[ 'ŋa <sup>21</sup> ]	'five'

### 5.3.3.5 Lateral

Lateral is a term used in the phonetic classification of consonant sounds the basis of their manner of articulation : it refers to any sound where the air escapes around one or both sides of a closure made in the mouth, as in the various types of 'l' sound in English. Air released around only one side of the tongue produces unilateral sounds; around both sides bilateral sounds (Crystal 1991:195).

/l/ is a voiced alveolar lateral which is realised as follows:

[l] a voiced alveolar lateral.

For example:

/lɔ 3 /	[ 'lɔ <sup>21</sup> ]	'boat'
/li 4 /	[ 'li <sup>21</sup> ]	'python'
/lɔ̃ 3 /	[ 'lɔ̃ <sup>21</sup> ]	'rabbit'
/lu 5 ə 1 /	[ 'lu <sup>55</sup> ə <sup>33</sup> ]	'to fly'

### 5.3.3.6 Approximant

Approximant is a general term used by some phoneticians in the classification of speech sounds on the basis of their manner of articulation, and corresponding to what in order approaches would be called frictionless continuants, and all vowels. The term is based on the articulations involved, in that one articulator approaches another, but the degree of narrowing involved does not produce audible friction. (Crystal 1991:23).

/j/ is a voiced palatal approximant which is realised as follows:

[j] a voiced palatal approximant. It can occur not only as the first element of initial position in the syllable but also as the second element in the consonant cluster.

For example:

/je 4 /	[ 'je <sup>21</sup> ]	'eight'
/jɔ 1 ja 4 /	[ jɔ <sup>33</sup> ja <sup>21</sup> ]	'to be ripe'
/je 3 ə 1 /	[ 'je <sup>21</sup> ə <sup>33</sup> ]	'to drunk'
/ja 5 ɲe 2 /	[ ja <sup>55</sup> 'ɲe <sup>33</sup> ]	'dry-rice field'
/p <sup>h</sup> ju 5 /	[ 'p <sup>h</sup> ju <sup>55</sup> ]	'money'



/ mja 1 p<sup>h</sup>ɔ 3 / [ ,mja<sup>33</sup> 'p<sup>h</sup>ɔ 21 ] 'forehead'

### 5.3.4 Consonant Phoneme Contrast

All consonants described above are phonemically contrastive in Akha. The suspect pairs of consonants which are contrastive in identical environments (IE) are shown below together with some examples:

<u>Consonant Phonemics</u>	<u>Example</u>	
/ p / - / p <sup>h</sup> /	/ pu 3 ɲə 1 /	'to boil'
	/ p <sup>h</sup> u 3 ɲə 1 /	'to be born'(animal)
/ p / - / b /	/ pə 3 ɲə 1 /	'to tie'
	/ bə 3 ɲə 1 /	'to carry'
	/ po 1 ɲə 1 /	'to look for'
	/ bo 1 ɲə 1 /	'to write'
/ b / - / p <sup>h</sup> /	/ bi 5 ɲə 1 /	'to share'
	/ p <sup>h</sup> i 5 ɲə 1 /	'hot of taste'
/ t / - / d /	/ ɲa 3 tu 5 /	'artificial'
	/ ɲa 3 du 5 /	'brother-sister's child'
	/ tɛ 1 ma 2 /	'guava'
	/ dɛ 1 ma 2 /	'wet-rice field'
/ t / - / t <sup>h</sup> /	/ tɛ 1 ɲə 1 /	'to forge the iron'
	/ t <sup>h</sup> ɛ 1 ɲə 1 /	'to chase'
/ d / - / t <sup>h</sup> /	/ dɛ 3 ɲə 1 /	'to use abusive language'
	/ t <sup>h</sup> ɛ 3 ɲə 1 /	'to cut'
/ p / - / m /	/ ɲa 1 pi 5 /	'whistle'
	/ ɲa 1 mi 5 /	'cat'

/ b / - / m /	/ ʔa 1 bɔ 5 /	'tree'
	/ ʔa 1 mɔ 5 /	'insect'
/ k / - / k <sup>h</sup> /	/ ka 1 ʔə 1 /	'to comb'
	/ k <sup>h</sup> a 1 ʔə 1 /	'to grow'
/ k <sup>h</sup> / - / g /	/ k <sup>h</sup> u 5 ʔə 1 /	'to call'
	/ gu 5 ʔə 1 /	'to shout'
	/ k <sup>h</sup> ɔ̃ 3 /	'classifier for 1 bamboo tree'
	/ gɔ̃ 3 /	'a spear, a sword'
/ k / - / x /	/ ko 4 /	'six'
	/ xo 4 /	'year, age'
/ g / - / γ /	/ ga 3 ʔə 1 /	'to love'
	/ γa 3 /	'classifier for ʔəŋkɔ̃'
/ x / - / γ /	/ xa 1 ʔə 1 /	'to spit'
	/ γa 1 ʔə 1 /	'to float'
	/ xɔ 1 ʔə 1 /	'to spread out'
	/ γɔ 1 ʔə 1 /	'to divorce, to separate'
/ k <sup>h</sup> / - / x /	/ k <sup>h</sup> ɔ̃ 3 /	'classifier for 1 bamboo tree'
	/ xɔ̃ 3 /	'chest'
	/ k <sup>h</sup> a 1 ʔə 1 /	'to grow'
	/ xa 1 ʔə 1 /	'to spit'
/ ʔ / - / h / - / k /	/ ʔɔ 1 ʔə 1 /	'to sneak away'
	/ hɔ 1 ʔə 1 /	'to look at'
	/ kɔ 1 ʔə 1 /	'to stir, to be smart, to row'

/ s / - / z /	/ sa 3 ʔə 1 /	'to steam'
	/ za 3 ʔə 1 /	'to weave'
	/ so 1 ʔə 1 /	'to smear'
	/ zo 1 ʔə 1 /	'to fly'
/ m / - / n /	/ mo 5 /	'classifier for animal, car, bicycle, radio, television'
	/ no 5 /	'2 <sup>nd</sup> person pronoun'
/ n / - / p /	/ nɛ 4 /	'spirit'
	/ nɛ 4 ʔə 1 /	'to catch'
/ n / - / ŋ /	/ na 3 ʔə 1 /	'to break, to rest'
	/ ŋa 3 ʔə 1 /	'to borrow'
/ p / - / ŋ /	/ pɛ 3 ʔə 1 /	'to massage'
	/ ŋɛ 3 ʔə 1 /	'to say, to speak'
/ n / - / j /	/ jɔ 1 ja 2 /	'difficult'
	/ jɔ 1 na 2 /	'black'
	/ jɔ 1 ja 4 /	'to be ripe'
	/ jɔ 1 na 4 /	'deep'
/ p / - / j /	/ pɛ 3 ʔə 1 /	'to massage'
	/ jɛ 3 ʔə 1 /	'to be drunk'
	/ pɛ 4 ʔə 1 /	'to catch'
	/ jɛ 4 ʔə 1 /	'to reap'
/ p / - / l /	/ pi 4 /	'two'
	/ li 4 /	'python'
	/ pɛ 3 ʔə 1 /	'to massage'
	/ le 3 ʔə 1 /	'to smear'

/ d / - / l /	/ dɛ 3 ʔə 1 /	'to use abusive language'
	/ lɛ 3 ʔə 1 /	'to smear'
	/ dɔ 3 ʔə 1 /	'to cling'
	/ lɔ 3 ʔə 1 /	'to dry in sun'
	\	
/ tʃ <sup>h</sup> / - / dʒ /	/ tʃ <sup>h</sup> i 5 ʔə 1 /	'to die'
	/ dʒi 5 ʔə 1 /	'to finish'
	/ tʃ <sup>h</sup> ɛ 1 ʔə 1 /	'to pour'
	/ dʒɛ 1 ʔə 1 /	'to shave, to scrape'
/ tʂ / - / tʂ <sup>h</sup> /	/ tʂɛ 3 ʔə 1 /	“to bark”
	/ tʂ <sup>h</sup> ɛ 3 ʔə 1 /	“to plow”
/ tʂ / - / dz /	/ tʂw 4 ʔə 1 /	'to peel the fruit (by knife)'
	/ dzw 4 ʔə 1 /	'to wash, to take a bath'
/ tʂ / - / tʂ /	/ tʂɛ 1 ʔə 1 /	'to bark'
	/ tʂɛ 1 ʔə 1 /	'to run'
/ dz / - / dʒ /	/ dzə 3 ʔə 1 /	'to weave a basket'
	/ dʒə 3 ʔə 1 /	'to be pregnant'
	/ dzɛ 1 ʔə 1 /	'to abort, to miscarry'
	/ dʒɛ 1 ʔə 1 /	'to shave, to scrape'
/ tʂ / - / tʂ <sup>h</sup> /	/ tʂɛ 1 ʔə 1 /	'to run'
	/ tʂ <sup>h</sup> ɛ 1 ʔə 1 /	'to fight each other'
	/ tʂu 1 ʔə 1 /	'to suck, to beset, to plague'

	/ tʰu 1 ʔə 1 /	'to raise the animals'
/ tʰ / - / tʰ /	/ tʰo 3 /	'friend'
	/ tʰo 3 /	'waterfall'
/ tʰ / - / tʰ /	/ tʰa3 ʔə 1 /	'to guess'
	/ tʰa 3 ʔə 1 /	'true'
/ tʰ / - / tʰ /	/ tʰi 1 ʔə 1 /	'to hang up to lift'
	/ tʰi 1 ʔə 1 /	'to urinate'

### 5.3.5 Classification of consonants

Consonant phoneme in Akha language may be divided into 2 sub-classes according to their distributions of occurrence in the syllable as follows.

#### 5.3.5.1 Consonant sub-class C<sub>1</sub>

The consonant phonemes which occur only at the initial position of the syllables. Their symbolization in the syllable pattern is C<sub>1</sub>. They are / ʔ, b, d, g, h, k, kʰ, l, m, n, ɲ, p, pʰ, s, t, tʰ, x, ɣ, z, dz, ts, tʰ, tʰ, tʰ, dʒ /.

For examples:

/ ʔi 5 ʔə 1 /	'to go'
/ ba 3 ba 2 /	'cheek'
/ do 4 /	'poison'
/ gɔ̃ 3 /	'a spear, a sword'
/ ho 3 /	'cooked rice'
/ ko 4 /	'six'
/ kʰo 2 kʰa 5 /	'the knuckles of the hand'
/ le 2 /	'market'
/ mā 3 /	'horse'
/ ne 4 /	'spirit'
/ pi 4 /	'two'
/ ɲa 3 /	'five'
/ po 3 pi 5 /	'lemongrass'

/ p <sup>h</sup> u 2 /	'village'
/ sɛ 3 /	'the reed of a loom'
/ ta 4 /	'classifier for 1 piece of paper'
/ t <sup>h</sup> ɔ̃ 3 /	'drum'
/ xo 4 /	'year,age'
/ ɣø 3 /	'nine'
/ zə 1 ʔə 1 /	'to twist'
/ dzu 4 /	'a pair of shoes'
/ tso 2 ʔə 1 /	'to build'
/ t <sup>h</sup> e 5 /	'ten'
/ tɕa 1 /	'machine'
/ t <sup>h</sup> ɔ̃ 3 /	'a top'
/ tʃ <sup>h</sup> i 4 /	'seven'
/ dʒu 5 /	'cuspid'

### 5.3.5.2 Consonant sub-class C<sub>2</sub>

The consonant phoneme which can occur both initially and as **the** second element of the consonant cluster. Its symbolization in the syllable pattern **is** C<sub>2</sub>. There is only one phoneme and it is /j/.

#### 5.3.5.2.1 Occurs initially

For examples:

/ ja 3 /	'a mountain goat'
/ je 5 /	'soldier'
/ je 4 /	'eight'
/ jɔ 1 ja 5 /	'cheap'
/ jɔ 1 jɔ 4 /	'dirty'

#### 5.3.5.2.2 Occurs as the second element in the consonant cluster.

For examples:

/ bja 3 /	'bee'
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/ bjũ 5 ʔə 1 /	'to pile up'
/ mjə 4 ʔə 1 /	'to lick'
/ p <sup>h</sup> ju 5 /	'silver,money'
/ pje 3 ʔə 1 /	'a pig-tail,a tassel'

5.3.6 The Consonant Cluster

Cluster is a term used in the analysis of connected ~~speech~~ to refer to any sequence of adjacent consonants occurring initially or finally in a syllable. (Crystal 1991:58).

In this language, the consonant cluster always occur ~~only~~ at the initial position of the syllable. Only bilabial consonant / p /, / p<sup>h</sup> /, / b /, / m / can occur as the first element of consonant cluster.

For examples:

/ pje 3 ʔə 1 ʔ /	'a pig-tail,a tassel'
/ pja 1 ʔə 1 /	'to claw,to scratch,to dem <del>on</del> ish'
/ bja 3 ʔu 4 ʔu 4 ʔə 1 /	'to fondle'
/ bjũ 5 ʔə 1 /	'to pile up'
/ bja 3 /	'bee'
/ p <sup>h</sup> je 3 ʔə 1 /	'to untie'
/ p <sup>h</sup> ju 5 /	'silver,money'
/ mja 1 to 2 /	'eye-glasses'
/ mjə 4 ʔə 1 /	'to lick'

5.4 Vowel Phonemes

Akha language vowel phonemes function as the syllable nucleus. There are 13 vowel phonemes: / i, e, ɛ, a, ɔ, o, u, ʊ, ə, ø, ǣ, ũ, ɔ̃ /. The length of vowels is not contrastive. All vowel phonemes can be separated by the place of articulation into two sub-classes ; oral vowels and nasal vowels as follows :

i	e	ɛ	a	u	o	ɔ	ʊ	ǣ	ũ	ɔ̃	ɔ̃	ʌ
								ɔ̃	ũ			(ɔ̃)

5.4.1 Oral vowel

There are 10 oral vowels : / i, e, ε, a, ɔ, o, u, ʊ, ə, ø /.

#### 5.4.2 Nasal vowel

There are 3 nasal vowels : / ã, õ, ù /.

#### 5.5 Vowel Phonemes Chart

Vowels are sounds articulated without a complete closure in the mouth or a degree of narrowing which would produce audible friction; the air escapes evenly over the centre of the tongue. If air escapes solely through the mouth, the vowels are said to be oral; if some air is simultaneously released through the nose, the vowels are nasal. In addition to this, in a phonetic classification of vowels, references would generally be made to two variables, the first of which is easily describable, the second much less so (a) the position of the lips - whether rounded, spread or neutral; (b) the part of the tongue raised, and the height to which it moves. From a phonological point of view, vowels are those units which function at the centre of syllables. (Crystal 1991:377).

All 13 vowel phonemes, arranged according to tongue position ; are shown in the table.

Tongue position \ Tongue Height	Front		Central	Back	
	unrounded	rounded		unrounded	rounded
Closed	i			ʊ	u
Half-closed	e	ø	ə		o
Half-open	ε				ɔ
Open			a		
Nasal vowels			ã		õ ù

Table 7 : Akha vowel phonemes.



## 5.5.1 Formational statement.

/i/ is a closed front unrounded vowel which is realised as follows:

[i] a closed front unrounded vowel. It occurs in a syllable with all tones.

For example:

/ ʔi 5 ʔə 1 /	[ 'ʔi <sup>55</sup> ʔə <sup>33</sup> ]	'to go'
/ bi 2 ʔə 1 /	[ 'bi <sup>33</sup> ʔə <sup>33</sup> ]	'to give'
/ di 1 ʔə 1 /	[ 'di <sup>33</sup> ʔə <sup>33</sup> ]	'to beat'
/ li 4 /	[ 'li <sup>21</sup> ]	'python'
/ ɲi 4 /	[ 'ɲi <sup>21</sup> ]	'two'

/e/ is a half-closed front unrounded vowel which is realised as follows:

[e] a half-closed front unrounded vowel.

For example:

/ t <sup>h</sup> e 5 ʔə 1 /	[ 't <sup>h</sup> e <sup>55</sup> ʔə <sup>33</sup> ]	'to pound sticky rice'
/ t <sup>h</sup> e 5 /	[ 't <sup>h</sup> e <sup>55</sup> ]	'ten'
/ t <sup>h</sup> e 3 ʔə 1 /	[ 't <sup>h</sup> e <sup>21</sup> ʔə <sup>33</sup> ]	'to rub the nose'
/ le 1 da 2 ʔə 1 /	[ ,le <sup>33</sup> ,da <sup>33</sup> ʔə <sup>33</sup> ]	'to go up'
/ jɔ 1 ne 5 /	[ ,jɔ <sup>33</sup> ,ne <sup>55</sup> ]	'red'

/ø/ is a half-closed front rounded vowel which is realised as follows:

[ø] a half-closed front rounded vowel.

For example:

/ t <sup>h</sup> ø 3 ʔə 1 /	[ 't <sup>h</sup> ø <sup>21</sup> ʔə <sup>33</sup> ]	'to point'
/ γø 3 ʔə 1 /	[ 'γø <sup>21</sup> ʔə <sup>33</sup> ]	'nine'
/ jø 5 ʔə 1 /	[ 'jø <sup>55</sup> ʔə <sup>33</sup> ]	'to flow'
/ jɔ 1 dø 5 /	[ ,jɔ <sup>33</sup> ,dø <sup>55</sup> ]	'lazy'

/ɛ/ is a half-open front unrounded vowel which is realised as follows:

[ɛ] a half-open front unrounded vowel.

For example:

/lɛ 2/	[ 'lɛ <sup>33</sup> ]	'market'
/mɛ 3 li 5/	[ ,mɛ <sup>21</sup> 'li <sup>55</sup> ]	'mouth organ'
/nɛ 4/	[ 'nɛ <sup>221</sup> ]	'spirit'
/sɛ 4/	[ 'sɛ <sup>221</sup> ]	'the reed of a loom'
/t <sup>h</sup> ɛ 3 ʔ 1/	[ 't <sup>h</sup> ɛ <sup>21</sup> ʔ <sup>33</sup> ]	'to cut'

/a/ is an open central vowel which is realised as follows:

[a] an open central vowel.

For example:

/ʔa 3 la 4/	[ ,ʔa <sup>21</sup> 'la <sup>221</sup> ]	'hand'
/ʔa 5 ja 3/	[ ,ʔa <sup>55</sup> 'ja <sup>21</sup> ]	'time,chance'
/k <sup>h</sup> a 3 na 2/	[ ,k <sup>h</sup> a <sup>21</sup> 'na <sup>33</sup> ]	'soot,lampblack'
/la 3 tʃ <sup>h</sup> a 4/	[ ,la <sup>21</sup> 'tʃ <sup>h</sup> a <sup>221</sup> ]	'a brassiere'
/sa 3 la 5/	[ ,sa <sup>21</sup> 'la <sup>55</sup> ]	'soul'

/ã/ is an open central nasal vowel which is realised as follows:

[ã] an open central nasal vowel.

For example:

/t <sup>h</sup> ã 3 xo 3/	[ ,t <sup>h</sup> ã <sup>21</sup> 'xo <sup>21</sup> ]	'the wax guard'
/nã 5 ma 2/	[ ,nã <sup>55</sup> 'ma <sup>33</sup> ]	'sun'
/mã 3/	[ 'mã <sup>21</sup> ]	'horse'
/lã 3/	[ 'lã <sup>21</sup> ]	'rabbit'

/ɔ/ is a half-open back rounded vowel which is realised as follows:

[ɔ] a half-open back rounded vowel.

For example:

/jɔ 1 tʃ <sup>h</sup> ɔ 5/	[ ,jɔ <sup>33</sup> 'tʃ <sup>h</sup> ɔ <sup>55</sup> ]	'clean'
/b 3/	[ 'b <sup>21</sup> ]	'boat'
/b 1 mɔ 5/	[ ,b <sup>33</sup> 'mɔ <sup>55</sup> ]	'a mill'
/mɔ 3 t <sup>h</sup> ɔ 3/	[ ,mɔ <sup>21</sup> 't <sup>h</sup> ɔ <sup>21</sup> ]	'motorcycle'
/ɲɔ 3 ʔ 1/	[ 'ɲɔ <sup>21</sup> ʔ <sup>33</sup> ]	'to shake something'

/ɔ̃/ is a half-open back rounded nasal vowel which is realised as follows:

[ɔ̃] a half-open back rounded nasal vowel.

For example:

/ dzɔ̃ 5 /	[ 'dzɔ̃ <sup>55</sup> ]	'æ bunch of banana'
/ jɔ̃ 1 nɔ̃ 3 /	[ ,jɔ̃ <sup>33</sup> 'nɔ̃ <sup>21</sup> ]	'young'
/ dɔ̃ 3 dɔ̃ 3 /	[ ,dɔ̃ <sup>21</sup> 'dɔ̃ <sup>21</sup> ]	'bottom'
/ bɔ̃ 3 ʔə 1 /	[ 'bɔ̃ <sup>21</sup> ʔə <sup>33</sup> ]	'false'
/ ʔɔ̃ 5 ʔə 1 /	[ 'ʔɔ̃ <sup>55</sup> ʔə <sup>33</sup> ]	'to have, to exist'

/o/ is a half-closed back rounded vowel which is realised as follows:

[o] a half-closed back rounded vowel.

For example:

/ do 4 /	[ 'do <sup>21</sup> ]	'poison'
/ ho 1 bi 5 /	[ ,ho <sup>33</sup> 'bi <sup>55</sup> ]	'aeroplane'
/ k <sup>h</sup> o 1 p <sup>h</sup> u 5 /	[ ,k <sup>h</sup> o <sup>33</sup> 'p <sup>h</sup> u <sup>55</sup> ]	'porcupin'
/ lo 1 tso 2 /	[ ,lo <sup>33</sup> 'tso <sup>33</sup> ]	'a stove made from three rocks put together'
/ mo 5 t <sup>h</sup> e 2 /	[ ,mo <sup>55</sup> 't <sup>h</sup> e <sup>33</sup> ]	'small teapot'

/u/ is a closed back rounded vowel which is realised as follows:

[u] a closed back rounded vowel

For example:

/ k <sup>h</sup> u 5 ʔə 1 /	[ 'k <sup>h</sup> u <sup>55</sup> ʔə <sup>33</sup> ]	'to call'
/ ju 3 du 3 /	[ ,ju <sup>21</sup> 'du <sup>21</sup> ]	'a room'
/ du 3 k <sup>h</sup> a 3 /	[ ,du <sup>21</sup> 'k <sup>h</sup> a <sup>21</sup> ]	'saliva'
/ bu 3 sa 2 /	[ ,bu <sup>21</sup> 'sa <sup>33</sup> ]	'fly'
/ ba 3 p <sup>h</sup> u 2 /	[ ,ba <sup>21</sup> 'p <sup>h</sup> u <sup>33</sup> ]	'shoulder'

/ũ/ is a closed back rounded nasal vowel which is realised as follows:

[ ũ ] a closed back rounded nasal vowel.

For example:

/ mɔ 5 dũ 3 /	[ ,mɔ <sup>55</sup> dũ <sup>21</sup> ]	'a coffin'
/ ɲũ 5 /	[ 'ɲũ <sup>55</sup> ]	'house,now'
/ sũ 5 /	[ 'sũ <sup>55</sup> ]	'three'
/ ja 1 k <sup>h</sup> ũ 5 /	[ ,ja <sup>33</sup> k <sup>h</sup> ũ <sup>55</sup> ]	'fence'
/ dũ 3 /	[ 'dũ <sup>21</sup> ]	'classifier for a book'

/ ʊ / is a closed back unrounded vowel which is realised as follows:

/ ʊ / a closed back unrounded nasal vowel.

For examples:

/ ɲʊ 5 tʊ 1 tʊ 1 ʔ 1 /	[ ,ɲʊ <sup>55</sup> tʊ <sup>33</sup> tʊ <sup>33</sup> ʔ <sup>33</sup> ]	'to hiccup'
/ k <sup>h</sup> ʊ 5 nʊ 4 /	[ ,k <sup>h</sup> ʊ <sup>55</sup> nʊ <sup>21</sup> ]	'ankle bone'
/ p <sup>h</sup> ʊ 1 ʔ 1 /	[ 'p <sup>h</sup> ʊ <sup>33</sup> ʔ <sup>33</sup> ]	'to scorch'
/ dʒʊ 5 /	[ 'dʒʊ <sup>55</sup> ]	'cuspid'
/ tʃ <sup>h</sup> ʊ 5 /	[ 'tʃ <sup>h</sup> ʊ <sup>55</sup> ]	'gold'

/ ə / is a half-closed central vowel which is realised as follows:

[ ə ] a half-closed central vowel.

For example:

/ jə 3 ʔ 1 /	[ 'jə <sup>21</sup> ʔ <sup>33</sup> ]	'to pinch'
/ k <sup>h</sup> ə 1 ʔ 1 /	[ 'k <sup>h</sup> ə <sup>33</sup> ʔ <sup>33</sup> ]	'to burn'
/ ɲə 5 /	[ 'ɲə <sup>55</sup> ]	'yes'
/ tə 3 ʔ 1 /	[ 'tə <sup>21</sup> ʔ <sup>33</sup> ]	'to gnaw'
/ sə 3 /	[ 'sə <sup>21</sup> ]	'tooth'

### 5.5.2 Vowel Phoneme Contrast.

All vowels described above are **phonemically contrastive** in Akha. The suspect pairs of vowels which are contrastive in identical environments (IE) are shown below together with some examples:

<u>Vowel phonemes</u>	<u>Examples</u>
/ i / - / e /	/ tʃ <sup>h</sup> i 5 / 'fat,oil'

	/ tʰe 5 /	'ten'
/ i / - / ε /	/ tʰi 1 ʔə 1 /	'to hang up, to lift'
	/ tʰε 1 ʔə 1 /	'to fight each other'
/ i / - / a /	/ mε 3 li 5 /	'mouth organ'
	/ mε 3 la 5 /	'tongue'
/ i / - / w /	/ ʔi 5 ʔə 1 /	'to go'
	/ ʔw 5 ʔə 1 /	'to laugh'
/ i / - / ε / - / a /	/ si 3 ʔə 1 /	'to sharpen'
	/ sε 3 ʔə 1 /	'to scatter'
	/ sa 3 ʔə 1 /	'to steam'
/ e / - / ε /	/ dʒe 1 ʔə 1 /	'to blow the nose'
	/ dʒε 1 ʔə 1 /	'to shave, to scrape'
/ a / - / ə /	/ ʔa 1 ʔə 1 /	'to float'
	/ ʔə 1 ʔə 1 /	'to crank the machine'
/ a / - / ɔ /	/ kʰa 3 da 3 /	'a trap'
	/ kʰɔ 3 da 3 /	'a mattress'
/ o / - / ɔ /	/ tʰo 3 ʔə 1 /	'to stagger, to reel'
	/ tʰɔ 3 ʔə 1 /	'to persuade'
/ ε / - / ɔ / - / o / - / ə / - / u /	/ lε 3 ʔə 1 /	'to smear'
	/ lo 3 ʔə 1 /	'to dry in sun'
	/ lo 3 ʔə 1 /	'enough'
	/ lə 3 ʔə 1 /	'to peel (fruit) by hand'
	/ lu 3 ʔə 1 /	'to grab'

/ u / - / w /	/ gu 1 ʔə 1 /	'to fear'
	/ gw 1 ʔə 1 /	'to count'
/ u / - / ø /	/ ʔu 3 ma 2 /	'belly'
	/ ʔø 3 ma 2 /	'grand child'
/ ɔ / - / ø /	/ jɔ 1 dɔ 5 /	'straight'
	/ jɔ 1 dø 5 /	'lazy'
/ e / - / ø /	/ dʒe 1 ʔə 1 /	'to blow the nose'
	/ dʒø 1 ʔə 1 /	'to crawl (snake)'
/ ɛ / - / ø /	/ tʰɛ 5 ʔə 1 /	'to pickle'
	/ tʰø 5 ʔə 1 /	'to be able to'
/ a / - / ã /	/ ma 3 /	'not'
	/ mã 3 /	'horse'
/ ɔ / - / ɔ̃ /	/ tʰɔ 3 /	'friend'
	/ tʰɔ̃ 3 /	'a top'
/ u / - / ù /	/ du 3 ʔə 1 /	'to dig'
	/ dũ 3 /	'classifier for book'
/ ã / - / ù /	/ ʔa 1 hã 5 /	'leopard cat'
	/ ʔa 1 hũ 5 /	'mushroom'

### 5.6 Suprasegmental phoneme.

Suprasegmental is a term used in Phonetics and Phonology to refer to a vocal effect which extends over more than one sound segment in an utterance, such as a pitch, stress or juncture pattern. (Crystal 1991:337).

It can be defined that the tonal system in Akha language has phonemically distinctive features. And in final conclusion, there are five contrastive tonemes in Akha language spoken in Pa-kha-suk-jai village. Akha tones function, together with vowels, as the syllable-nucleus.






Phonemic Notation	Description	Tone Stick	Phonetic Transcription
/ 1 1 /	mid-level		[ <sup>33</sup> ]
/ 2 1 /	creaky mid-level		[ <sup>'33</sup> ]
/ 3 1 /	mid-low falling		[ <sup>21</sup> ]
/ 4 1 /	glottalized mid-low falling		[ <sup>ʔ21</sup> ]
/ 5 1 /	high-level		[ <sup>55</sup> ]

Table 8 : Akha tonemes.

### 5.6.1 Formational statement

/ 1 1 / [<sup>33</sup>] a mid-level tone. Its tonal figure starts from mid-level, and continues and ends at the same range.

Examples:

/ la 1 li 1 ɲə 1 /	[ ,la <sup>33</sup> 'li <sup>33</sup> ɲə <sup>33</sup> ]	'to wag the tail'
/ k <sup>h</sup> a 1 ɲə 1 /	[ 'k <sup>h</sup> a <sup>33</sup> ɲə <sup>33</sup> ]	'to grow'
/ ho 1 ɲə 1 /	[ 'ho <sup>33</sup> ɲə <sup>33</sup> ]	'to look at'
/ t <sup>h</sup> ɕ 1 ɲə 1 /	[ 't <sup>h</sup> ɕ <sup>33</sup> ɲə <sup>33</sup> ]	'to walk'
/ tʃ <sup>h</sup> ə 1 /	[ 'tʃ <sup>h</sup> ə <sup>33</sup> ]	'a log, timber'

/ 2 1 / [<sup>'33</sup>] a creaky mid level tone. Its tonal figure starts from mid level and stays at the same range. At the end of the tone, there is a creaky constriction. The vowel length is shorter than / 1 1 /.

Examples:

/ jo 2 ɲə 1 /	[ 'jo <sup>'33</sup> ɲə <sup>'33</sup> ]	'to shake'
/ ka 2 /	[ 'ka <sup>'33</sup> ]	'crossbow'
/ le 2 /	[ 'le <sup>'33</sup> ]	'market'
/ lo 2 /	[ 'lo <sup>'33</sup> ]	'classifier for light-bulb'

All five tonemes are contrastive in identical environment (IE) as shown below:

<u>Tonemes</u>	<u>Examples</u>	
/ 1 / - / 4 / - / 5 /	/ gu 1 ʔə 1 /	'to fear'
	/ gu 4 ʔə 1 /	'to sew'
	/ gu 5 ʔə 1 /	'to shout'
/ 3 / - / 4 / - / 5 /	/ je 3 ʔə 1 /	'to be drunk'
	/ je 4 ʔə 1 /	'to reap'
	/ je 5 /	'soldier'
/ 2 / - / 3 / - / 5 /	/ bi 2 ʔə 1 /	'to give'
	/ bi 3 ʔə 1 /	'to throw'
	/ bi 5 ʔə 1 /	'to share'
/ 2 / - / 3 /	/ ʔa 3 ɲo 2 /	'periwinkle, shell'
	/ ʔa 3 ɲo 3 /	'buffalo'
	/ do 3 p <sup>h</sup> e 2 /	'near, close to'
	/ do 3 p <sup>h</sup> e 3 /	'the bole of a tree'
/ 4 / - / 5 /	/ jo 1 tʃ <sup>h</sup> u 4 /	'new'
	/ jo 1 tʃ <sup>h</sup> u 5 /	'yellow'
	/ jo 1 dʒu 4 /	'to shrivel'
	/ jo 1 dʒu 5 /	'muddy'
/ 3 / - / 5 /	/ bø 3 ha 3 /	'intestinal worm'
	/ bø 5 ha 3 /	'bat'
	/ mo 3 ʔə 1 /	'to want'
	/ mo 5 ʔə 1 /	'to see'
/ 2 / - / 4 /	/ jo 1 na 2 /	'black'
	/ jo 1 na 4 /	'deep'
	/ jo 1 ja 2 /	'difficult'
	/ jo 1 ja 4 /	'to be ripe'



	/ na 3 pa 2 /	'a label,a sign'
	/ na 3 pa 4 /	'ear'
/ 3 / - / 4 /	/ tʃ <sup>hi</sup> 3 /	'blood'
	/ tʃ <sup>hi</sup> 4 /	'seven'
	/ ʔa 3 za 3 /	'son-in-law'
	/ ʔa 3 za 4 /	'pig'
/ 1 / - / 3 /	/ pa 1 ʔ 1 /	'to split,to hew'
	/ pa 3 ʔ 1 /	'to tie'
	/ da 1 ʔ 1 /	'to owe'
	/ da 3 ʔ 1 /	'to play cards'
/ 1 / - / 4 /	/ de 1 ʔ 1 /	'to thrash'
	/ de 4 ʔ 1 /	'to press down'
	/ ko 1 ʔ 1 /	'to stir,to be smart,to row'
	/ ko 4 ʔ 1 /	'to bite'
/ 1 / - / 5 /	/ k <sup>h</sup> a 1 ʔ 1 /	'to grow'
	/ k <sup>h</sup> a 5 ʔ 1 /	'to drive'
	/ lu 1 ʔ 1 /	'to grab'
	/ lu 5 ʔ 1 /	'to fry'
/ 1 / - / 2 /	/ jo 1 ʔ 1 /	'to roll'
	/ jo 2 ʔ 1 /	'to shake'

## CHAPTER VI

### CONCLUSION AND SUGGESTIONS

#### FOR FURTHER STUDIES

##### 6.1 Conclusion of Pa-kha-suk-jai dialect.

There are 28 consonant phonemes : / p, t, k, ʔ, b, d, g, p<sup>h</sup>, t<sup>h</sup>, k<sup>h</sup>, h, s, z, m, n, ŋ, ɲ, l, tʃ<sup>h</sup>, dʒ, tʃ<sup>h</sup>, tʃ<sup>h</sup>, tʃ<sup>h</sup>, dz, x, ɣ, j /, 13 single vowels : 10 oral vowels / i, e, ε, a, ɔ, o, u, w, ø, ə / and 3 nasalized vowel / ã, õ, õ̃ / no diphthongs. There are 5 tonemes :

- / 1 / - mid - level tone
- / 2 / - creaky mid - level tone
- / 3 / - mid - low falling tone
- / 4 / - glottalized low falling tone
- / 5 / - high level tone

##### 6.2 Comparison with a former study

The reference data of another dialect used in this chapter were taken from "Akha Phonology" in Anthropological Linguistics, vol. 10, No. 2, 1968. by Paul Lewis, University of Colorado. This dialect is the Pu-li dialect, as spoken in central and central eastern of Keng Tung state.

The phonological data on Pa-kha-suk-jai dialect is from the writer's own analysis presented in chapter 2 to chapter 5.

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Consonant phonemes	Bilabial	Alveolar	Alveo palatal	Velar	Glottal
Stop vl.	p	t		k	ʔ
Stop vd.	b	d		g	
Affricate vl.		ts	c		
Affricate vd.		dz	j		
Fricative vl.		s	ʃ (sh)	x (k')	h
Fricative vd.		z	y	g (g')	
Nasal	m	n		ŋ (ng)	
Lateral		l			
Palatalized vl.	py				
Palatalized vd.	by				
Palatalized nasal	my	ny			

Table 9 : Consonant phonemes chart of Pu-li dialect by Paul Lewis  
 Source : Lewis, Paul. "Akha Phonology" in Anthropological Linguistics,  
 vol.10, No.2, 1968, p. 8

Vowel phonemes	front		central	back	
	unrounded	rounded		unrounded	rounded
high	i	ü		i	u
higher-mid	e	ö		ë	o
lower-mid	ɛ		a		ɔ
low	-m			ɸ	

Table 10 : Vowel phonemes chart of Pu-li dialect by Paul Lewis  
 Source : Lewis, Paul. "Akha Phonology" in Anthropological Linguistics,  
 vol.10, No.2, 1968, p. 10

There are 3 diphthongs that occur in certain words borrowed from Sha. They are / ao /, / ai / and / am /.

#### Tonemes

There are 5 tonemes : 3 tonemes are level tone which occur with oral vowels, 2 tonemes are level tone which occur with laryngealized vowels. They are :

- / ˘ / - a high tone
- / / - a mid tone
- / ˘ / - a low tone
- / ^ / - a mid tone
- / ^ / - a low tone

The phonological comparison of Pa-kha-suk-jai dialect and Pu-li dialect reflects the characteristics of the two dialects as follows :

In Intonation group : It is non-phonemic since it is predictable. Paul Lewis didn't mention about it. However, in Pa-kha-suk-jai dialect there are 2 types of intonation.

In Stress group : there are 4 types in both dialects. They are monosyllabic, disyllabic, trisyllabic and tetrasyllabic.

The syllable structure of both dialects are similar. It is CV(T). However in Pu-li dialect there are diphthongs so in some cases it has CVV(T).

Phonemes : regarding consonant phonemes, vowel phonemes and tonemes.

#### Consonant phonemes :

There are 28 consonant phonemes in Pa-kha-suk-jai dialect but 26 consonant phonemes in Pu-li dialect.

Evident differences are as follow :

1. There are no voiceless aspirated stop /p<sup>h</sup>,t<sup>h</sup>,k<sup>h</sup>/ in Pu-li dialect but occur in Pa-kha-suk-jai dialect

2. There are consonant cluster /Cj/ which only occur with bilabial consonants in Pa-kha-suk-jai dialect but Paul Lewis interpreted those as palatalized consonants ; / py /, / by /, / my /, / ny /.

3. There are voiced and voiceless alveo-palatal fricative [ ʃ ], [ y ] in Pu-li dialect but none in Pa-kha-suk-jai dialect.

4. There are voiceless and voiceless aspirated alveo-palatal affricates [ tʃ ], [ tʃ<sup>h</sup> ] in Pa-kha-suk-jai village but none in Pu-li dialect.

Vowel phonemes :

There are 10 oral vowels and 3 nasalized vowels in Pa-kha-suk-jai dialect but in Pu-li dialect, there are 9 vowel phonemes occur as either oral or laryngealized vowels ; / i, ε, ö, a, u, o, ɔ, i̇, ė /, and 4 occur only as oral vowels ; / e, -m, ü, q /.

There are syllabic -m occur in Pu-li dialect but never in Pa-kha-suk-jai dialect.

There are 3 diphthongs in Pu-li dialect but never in Pa-kha-suk-jai dialect.

Tonemes :

There are 5 tonemes in both dialects. In Pu-li dialect, there are 3 tones that occur with oral vowels and there are 2 tones that occur with laryngealized vowels, but in Pa-kha-suk-jai dialect never occur as in Pu-li dialect.

Suggestions for Further Studies

### Suggestions for Further Studies

1. There are various Akha dialects in Chiangrai ~~provinces~~. It would be interesting to compare all of them.

2. Besides The Phonological Study, other topics ~~would be~~ of interest e.g. ; Akha Orthography, Sociolinguistic Study, Akha Classifiers, ~~etc~~

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# APPENDIX

## APPENDIX

The following Akha lexical items from Pa-kha-suk-jai village are presented in this list with their general meanings. The entries are arranged in the following order.

1. The order of the initial consonant of words is given in accordance with the alphabetical system.

Thus, the order of the initial consonant of words is / ʔ, b, d, g, h, j, k, k<sup>h</sup>, l, m, n, ɲ, ɳ, p, p<sup>h</sup>, s, t, t<sup>h</sup>, x, ɣ, z, dz, ʈ, ʈ<sup>h</sup>, ʡ, ʡ<sup>h</sup>, tʃ<sup>h</sup>, dʒ /.

2. The order of the vowels is / i, e, ε, a, ā, ɔ, ɔ̃, o, u, ũ, ɯ, ə, ø /.

3. The order of tone is / 1,2,3,4,5 /.

## / 2 /

/ ʔi 1 tʃhũ 5 /	'otter'	'นาก'
/ ʔi 3 ba 5 ku 3 le 5 ʔə 1 /	'to be wicked'	'ชั่วร้าย'
/ ʔi 3 ma 1 la 1 tʃha 2 /	'lake'	'บึง,หนองน้ำ'
/ ʔi 3 nɔ̄ 2 /	'today'	'วันนี้'
/ ʔi 5 ʔə 1 /	'to go'	'ไป'
/ ʔi 5 du 3 du 3 ʔə 1 /	'to swim'	'ว่ายน้ำ' ✓
/ ʔi 5 k <sup>h</sup> a 1 ʔə 1 /	'to go down'	'ลงไป'
/ ʔi 5 la 3 /	'bamboo drain'	'รางไม้ไผ่ส่งน้ำ'
/ ʔi 5 ne 5 /	'turbid water'	'น้ำขุ่น'
/ ʔi 5 nũ 3 ma 3 mu 3 ʔə 1 /	'to be dull (of mind), to be thick headed' ✓	'สมองทึบ'
/ ʔi 5 nu 4 /	'brain'	'สมอง' ✓
/ ʔi 5 p <sup>h</sup> u 3 /	'bottle gourd'	'น้ำเต้าในน้ำ'
/ ʔi 5 yɔ̄ 3 ʔə 1 /	'to leave'	'ไป, จากไป'
/ ʔi 5 dza 4 ʔə 1 /	'to drop'	'หยด'
/ ʔi 5 tʃhi 1 bo 1 du 5 /	'bladder'	'กระเพาะปัสสาวะ'
/ ʔi 5 tɕu 4 /	'water'	'น้ำ' ✓
/ ʔi 5 tɕu 4 ʔi 5 bɔ̄ 2 /	'a natural fountain'	'ตาน้ำ'
/ ʔi 5 tɕu 4 ʔi 5 tɕo 1 do 5 tɕo 1 ʔə 1 /	'to choke'	'สำลักน้ำ'
/ ʔi 5 tɕu 4 ʔa 1 lo 1 lo 1 jɔ̄ 5 ʔə 1 /	'(liquid) to flow slowly'	'ไหลช้า'
/ ʔi 5 tɕu 4 dɔ̄ 3 bjã 1 ʔə 1 /	'to flood'	'น้ำท่วม'
/ ʔi 5 tʃhi 1 tʃhi 1 k <sup>h</sup> ũ 3 k <sup>h</sup> ũ 3 ʔə 1 /	'to feel a necessity, to urinate'	'ปัสสาวะ'
/ ʔe 5 dɔ̄ 5 ne 3 ʔə 1 /	'to jeer'	'เยาะเย้ย'
/ ʔe 5 ne 3 ʔə 1 /	'to warn'	'เตือน'
/ ʔa 1 ʔu 5 ja 1 la 1 la 1 /	'a tale, a fable'	'นิทาน, เรื่องเล่า'
/ ʔa 1 ba 5 /	'shadow'	'เงา'
/ ʔa 1 bo 5 /	'tree'	'ต้นไม้' ✓
/ ʔa 1 bo 5 du 3 tʃhi 5 /	'root of tree'	'รากต้นไม้'
/ ʔa 1 bo 5 t <sup>h</sup> u 5 ʔə 1 /	'to chop'	'ตัดโค่นต้นไม้ด้วยขวาน'
/ ʔa 1 dɔ̄ 5 lɔ̄ 5 k <sup>h</sup> ɔ̄ 1 /	'rainbow'	'รุ้งกินน้ำ' ✓
/ ʔa 1 hã 5 /	'leopard cat'	'แมวป่า'
/ ʔa 1 hũ 5 /	'mushroom'	'เห็ด'
/ ʔa 1 hũ 2 /	'to exclaim when surprised'	'เสียงอุทานเมื่อแปลกใจ'
/ ʔa 1 ju 4 ʔa 3 pi 5 /	'a relative'	'ญาติพี่น้อง'

/ ʔa 1 k <sup>h</sup> u 5 p <sup>h</sup> e 3 za 5 /	'footprint'	'รอยเท้า'
/ ʔa 1 lo 1 lo 1 ʔe 5 /	'slow'	'ช้า'
/ ʔa 1 lo 5 /	'snake'	'งู'
/ ʔa 1 lo 5 ʔa 5 be 2 /	'the snake loufah gourd'	'บวบงู, ถั่วงู'
/ ʔa 1 lo 5 do 4 /	'snake's poisonous'	'พิษงู'
/ ʔa 1 mi 5 sə 3 je 5 /	'roselle'	'กระเจี๊ยบแดง'
/ ʔa 1 ma 5 p <sup>h</sup> o 2 /	'to turn right'	'เลี้ยวขวา'
/ ʔa 1 mi 5 /	'cat'	'แมว'
/ ʔa 1 mi 5 ma 2 /	'female cat'	'แมวตัวเมีย'
/ ʔa 1 mo 5 /	'insect'	'แมลง'
/ ʔa 1 mo 5 bə 1 se 4 dʒa 1 ga 3 /	'powder insecticide'	'ยาฆ่าแมลง'
/ ʔa 1 mo 5 t <sup>h</sup> e 1 ʔə 1 /	'to chase'	'ไล่(สัตว์)'
/ ʔa 1 mu 1 dʒa 3 pi 3 /	'fire fly'	'หิ่งห้อย'
/ ʔa 1 pi 5 /	'whistle'	'ผิวปาก'
/ ʔa 1 p <sup>h</sup> ja 5 lu 5 za 2 /	'a cockroach'	'แมลงสาบ'
/ ʔa 1 su 5 ga 3 /	'who?'	'ใคร?'
/ ʔa 1 t <sup>h</sup> a 5 /	'millet, sorghum'	'เมล็ดเด็ดย'
/ ʔa 1 t <sup>h</sup> a 5 p <sup>h</sup> o 2 /	'to turn left'	'เลี้ยวซ้าย'
/ ʔa 1 dʒi 5 /	'bird'	'นก'
/ ʔa 1 dʒi 5 bɔ̄ 3 /	'a nest'	'รังนก'
/ ʔa 1 dʒi 5 do 3 ʔə 1 /	'to perch'	'(นก) เกาะ'
/ ʔa 1 dʒi 5 dɔ̄ 5 di 3 di 3 ʔə 1 /	'to flutter the wings'	'กระพือปีก'
/ ʔa 1 dʒi 5 k <sup>h</sup> a 1 lo 5 /	'a mew, a cage'	'กรงนก'
/ ʔa 1 dʒi 5 pa 4 do 2 /	'mint'	'ใบสะระแหน่'
/ ʔa 3 ʔi 3 /	'termite'	'ปลวก'
/ ʔa 3 ʔi 3 ma 2 /	'a tussock moth'	'แมงเม่า'
/ ʔa 3 ʔo 3 lo 5 ma 2 /	'spider'	'แมงมุม'
/ ʔa 3 ʔo 3 lo 5 ma 2 ʔa 3 k <sup>h</sup> ɔ̄ 5 /	'spider thread'	'ใยแมงมุม'
/ ʔa 3 ʔu 3 /	'mother's elder sister'	'ป้า(พี่สาวของแม่)'
/ ʔa 3 be 4 /	'female sexual organ'	'อวัยวะเพศหญิง'
/ ʔa 3 bo 5 dzɔ̄ 3 ma 2 /	'religious headman'	'ผู้นำทางพิธีกรรม(ชาย)'
/ ʔa 3 bu 5 /	'daughter'	'ลูกสาว'
/ ʔa 3 bu 5 ʔa 3 bjǎ 3 /	'dumb woman'	'หญิงโง่'
/ ʔa 3 bjǎ 3 /	'tadpole'	'ลูกอ๊อด'
/ ʔa 3 da 2 /	'father'	'พ่อ'
/ ʔa 3 da 2 ʔu 3 /	'uncle (both maternal and paternal)'	'ลุง'

/ ʔa 3 da 2 mo 3 /	'grand father'	'ปู่,ตา'
/ ʔa 3 dɔ̃ 5 /	'wing'	'ปีก' /
/ ʔa 3 du 5 /	'brother / sister's child'	'หลาน(ลูกของพี่-น้อง)'
/ ʔa 3 du 1 ma 4 /	'singular third person (the one who stays in our village"	'สรรพนามบุรุษที่ 3 (อยู่หมู่บ้านอื่น)'
/ ʔa 3 ga 5 /	'where?'	'ที่ไหน?'
/ ʔa 3 go 2 /	'bedbug'	'ตัวหมัด'
/ ʔa 3 gõ 1 /	'thorn'	'หนาม'
/ ʔa 3 gu 5 /	'star'	'ดวงดาว'
/ ʔa 3 ha 3 ha 5 ʔ 1 /	'to yawn'	'หาว'
/ ʔa 3 je 4 /	'leech'	'ทาก'
/ ʔa 3 jo 3 ma 4 /	'plural second person'	'สรรพนามบุรุษที่ 2 (พหูพจน์)'
/ ʔa 3 k <sup>h</sup> u 3 /	'dog'	'หมา'
/ ʔa 3 k <sup>h</sup> u 3 ma 2 /	'female dog'	'หมาตัวเมีย'
/ ʔa 3 k <sup>h</sup> u 5 /	'leg'	'ขา'
/ ʔa 3 k <sup>h</sup> u 5 jo 1 ɬo 2 /	'a lame man'	'ชายขาพิการ'
/ ʔa 3 k <sup>h</sup> u 5 p <sup>h</sup> e 3 za 3 /	'the sole' ✓	'ฝ่าเท้า'
/ ʔa 3 k <sup>h</sup> u 5 p <sup>h</sup> o 3 ɬu 4 /	'knees'	'หัวเข่า'
/ ʔa 3 li 2 /	'son'	'ลูกชาย'
/ ʔa 3 li 2 ʔa 3 pi 5 /	'younger brother'	'น้องชาย'
/ ʔa 3 la 4 /	'hand'	'มือ'
/ ʔa 3 ma 2 /	'mother'	'แม่'
/ ʔa 3 ma 1 mo 3 /	'grand mother'	'ย่า,ยาย'
/ ʔa 3 mã 5 ʔa 3 da 2 k <sup>h</sup> ɔ̃ 5 dzo 5 se 4 ʔ 1 /	'old spinster'	'สาวแก่ที่ไม่ได้แต่งงาน'
/ ʔa 3 mo 3 /	'wife's parents'	'พ่อตา-แม่ยาย'
/ ʔa 3 mu 1 mu 1 ʔ 1 /	'to play'	'เล่น'
/ ʔa 3 mu 2 /	'younger brother's wife,mother's younger sister'	'น้องสะใภ้,น้อง'
/ ʔa 3 mjã 1 /	'when?'	'เมื่อไร?'
/ ʔa 3 na 1 p <sup>h</sup> o 2 /	'right side'	'ด้านขวา'
/ ʔa 3 nai 5 /	'to exclaim when hurt'	'เสียงอุทานเมื่อเจ็บปวด'
/ ʔa 3 no 3 /	'buffalo'	'ควาย'
/ ʔa 3 no 3 ʔu 3 ɬ <sup>h</sup> ɔ̃ 5 /	'buffalo horn'	'เขาคควาย'
/ ʔa 3 no 2 /	'periwinkle,shell'	'หอย,หอยขม'
/ ʔa 3 ɲa 3 ɲa 3 ʔ 1 /	'to help each other in harvesting'	'ลงแขกเกี่ยวข้าว'
/ ʔa 3 p <sup>h</sup> i 3 na 3 tʃ <sup>h</sup> i 5 /	'a millipede'	'กิ้งกือ'

/ ʔa 3 p <sup>h</sup> ɔ̄ 3 /	'great grand parents'	'คุณทวด'
/ ʔa 3 p <sup>h</sup> ɔ̄ 3 mi 3 je 5 /	'God'	'เทพเจ้า'
/ ʔa 3 tu 5 /	'artificial'	'ของปลอม'
/ ʔa 3 xo 3 /	'father's sister'	'อาผู้หญิง'
/ ʔa 3 ɥɔ̄ 1 p <sup>h</sup> ɛ 5 tɔ̄ 4 /	'a brooch' ✓	'เข็มกลัด'
/ ʔa 3 ɥɔ̄ 2 /	'needle'	'เข็มเย็บผ้า'
/ ʔa 3 ɥɛ 3 ʔa 1 bɔ̄ 5 /	'Sakura tree'	'ต้นซากุระ'
/ ʔa 3 zɔ̄ 5 /	'father's younger brother'	'อาผู้ชาย'
/ ʔa 3 za 3 /	'son-in-law'	'ลูกเขย'
/ ʔa 3 za 4 /	'pig'	'หมู'
/ ʔa 3 dzɔ̄ 3 /	'dumb man'	'ผู้ชายโง่'
/ ʔa 3 t <sup>h</sup> u 2 /	'elder brother's wife'	'พี่สะใภ้'
/ ʔa 3 t <sup>h</sup> i 5 t <sup>h</sup> u 2 /	'quiet!'	'เสียง!
/ ʔa 3 t <sup>h</sup> i 5 t <sup>h</sup> u 1 ni 1 ʔe 5 ʔa 1 /	'to whisper' ✓	'กระซิบ'
/ ʔa 3 t <sup>h</sup> a 1 p <sup>h</sup> ɔ̄ 2 /	'left side'	'ด้านซ้าย'
/ ʔa 3 t <sup>h</sup> ɔ̄ 1 ʔa 5 dzɛ 3 gə 4 mo 3 ʔa 1 /	'to be ambitious'	'พยายามทะเยอทะยาน'
/ ʔa 3 t <sup>h</sup> ɔ̄ 3 /	'singular third person pronoun (the one who stays outside our village).'	'สรรพนามบุรุษที่ 3 (อยู่ที่อื่น)'
/ ʔa 3 t <sup>h</sup> ɔ̄ 5 /	'breast'	'นม, หน้าอก'
/ ʔa 3 t <sup>h</sup> ɔ̄ 5 da 5 t <sup>h</sup> ɔ̄ 3 /	'breast milk'	'นมแม่'
/ ʔa 3 t <sup>h</sup> i 3 /	'dry pounded soybean mixed with chilli and salt'	'ถั่วเน่า'
/ ʔa 3 t <sup>h</sup> ɔ̄ 3 /	'the husband of one's elder sister'	'พี่เขย'
/ ʔa 3 dzi 5 t <sup>h</sup> i 4 ma 4 /	'a covey of birds'	'ฝูงนก'
/ ʔa 3 dzɛ 3 /	'cicada'	'จิ้งจั่น'
/ ʔa 3 dzɔ̄ 3 /	'a plant worm'	'หนอนที่กินพืชผัก'
/ ʔa 3 dzɔ̄ 5 ʔe 5 /	'How?'	'อย่างไร?'
/ ʔa 3 dzu 3 t <sup>h</sup> i 5 mi 2 /	'dragonfly'	'แมลงปอ'
/ ʔa 5 be 1 t <sup>h</sup> ɛ 5 /	'tamarind'	'มะขาม'
/ ʔa 5 be 2 /	'bean'	'ถั่ว'
/ ʔa 5 bu 1 k <sup>h</sup> ɔ̄ 3 da 1 hū 3 /	'a bed-sheet'	'ผ้าปูที่นอน'
/ ʔa 5 bu 2 /	'blanket'	'ผ้าห่ม'
/ ʔa 5 bə 2 /	'the fruit of the snuffbox bean'	'ลูกสะบ้า'
/ ʔa 5 bjɔ̄ 4 /	'bamboo shoot'	'หน่อไม้'
/ ʔa 5 de 3 de 3 la 5 ʔa 1 /	'to feel ticklish'	'จิกจี้'
/ ʔa 5 do 2 /	'elder brother'	'พี่ชาย'



/ ʔa 5 du 2 /	'corn'	'ข้าวโพด'
/ ʔa 5 du 2 me 3 mā 3 /	'corn hair'	'ซังข้าวโพด'
/ ʔa 5 ho 2 /	'ant'	'มด'
/ ʔa 5 je 2 /	'flower'	'ดอกไม้'
/ ʔa 5 je 2 he 5 ʔə 1 /	'to have menstruation'	'มีประจำเดือน'
/ ʔa 5 ja 3 /	'time / chance'	'เวลา/โอกาส'
/ ʔa 5 ja 3 ja 2 ʔə 1 /	'leisure'	'มีเวลาว่าง'
/ ʔa 5 ja 3 ne 5 ni 5 ʔə 1 /	'to be in time'	'ทันเวลา'
/ ʔa 5 ja 3 ne 5 tʰa 3 ʔə 1 /	'to be on time, punctual'	'ตรงเวลา'
/ ʔa 5 jø 3 /	'seed'	'เมล็ดพืช'
/ ʔa 5 kʰa 2 /	'crab'	'ปู'
/ ʔa 5 kʰi 3 /	'a stem of the tree'	'ลำต้นไม้ไผ่'
/ ʔa 5 la 3 dʒa 3 tʰi 5 /	'lion'	'สิงโต'
/ ʔa 5 lo 2 /	'to exclaim when frightened'	'เสียงอุทานเมื่อตกใจ'
/ ʔa 5 lu 1 /	'butterfly'	'ผีเสื้อ'
/ ʔa 5 mjo 4 /	'monkey'	'ลิง'
/ ʔa 5 mjã 1 /	'How many?'	'มากเท่าไร?'
/ ʔa 5 ne 3 /	'bamboo strap'	'ตอกไม้ไผ่'
/ ʔa 5 ne 3 ne 3 ʔə 1 /	'to make the bamboo strap'	'จักตอก'
/ ʔa 5 ne 3 dzĩ 3 ʔə 1 /	'to tie (a the bamboo strap)'	'มัดด้วยตอกไม้ไผ่'
/ ʔa 5 nuw 1 ne 5 /	'red bean'	'ถั่วแดง'
/ ʔa 5 nuw 2 /	'seed'	'เมล็ด'
/ ʔa 5 pa 4 /	'leaf'	'ใบไม้'
/ ʔa 5 pa 4 pʰa 5 ʔə 1 /	'to fall ( of leaves )'	'ใบไม้ร่วง'
/ ʔa 5 pʰø 3 /	'price'	'ราคา'
/ ʔa 5 pʰja 3 /	'branch of the tree'	'กิ่งไม้'
/ ʔa 5 pʰɔ 1 kʰa 3 /	'Buddleja asiatica Lour' ( Dok Ra-cha-wa-dee )	'ดอกราชวดี'
/ ʔa 5 si 3 /	'fruit'	'ผลไม้'
/ ʔa 5 si 3 ʔa 1 bo 5 ja 1 kʰi 5 /	'orchard'	'กล้วยไม้'
/ ʔa 5 si 3 tɕɔ 2 ʔə 1 /	'to inoculate'	'ปลูกผี, ฉีดวัคซีน'
/ ʔa 5 sa 1 yɔ 1 /	'one type of beetle (in cow's dung)'	'แมลงปีกแข็งชนิดหนึ่งชอบหากินในมูลวัว'
/ ʔa 5 xo 4 /	'year, age'	'ปี, อายุ'
/ ʔa 5 tɕə 3 /	'tribe'	'เผ่า, ภาเขา'
/ ʔa 5 tɕa 2 /	'rope'	'เชือก'

/ ʔ 1 ʔ 1 /	'to sneak away'	'ตีบ'
/ ʔ 1 ʔ a 4 /	'crow'	'นกกา'
/ ʔ 3 bu 1 ma 2 /	'a horned owl'	'นกเค้าแมว'
/ ʔ 3 dɔ̃ 5 dɔ̃ 5 ʔ 1 /	'to be tired'	'เหนื่อย'
/ ʔ 3 mjã 5 k <sup>h</sup> ɔ̃ 1 la 5 mɛ 1 /	'long time ago'	'นานมาแล้ว'
/ ʔ 3 mja 1 /	'many'	'มาก'
/ ʔ 3 na 3 na 3 ʔ 1 /	'to stop'	'หยุด'
/ ʔ 3 ɲɔ̃ 5 /	'food,vegetables'	'อาหาร,ผัก'
/ ʔ 3 pa 1 ʔ 3 p <sup>h</sup> u 5 /	'mustard plant (green)'	'ผักกาดเขียว'
/ ʔ 3 pa 1 ʔ 3 p <sup>h</sup> ju 5 /	'nappa cabbage'	'ผักกาดขาว'
/ ʔ 3 pa 1 ʔ 3 k <sup>h</sup> a 3 /	'mustard plant (bitter)'	'ผักกาดขม'
/ ʔ 3 pa 1 ʔ 3 si 1 ʔ a 5 je 2 /	'cauliflower'	'ดอกกะหล่ำ'
/ ʔ 3 pa 1 ʔ 3 si 3 /	'cabbage'	'กะหล่ำปลี'
/ ʔ 3 pa 1 ʔ 3 sɔ̃ 3 /	'lettuce'	'ผักกาดหอม'
/ ʔ 3 si 3 /	'kidney'	'ไต'
/ ʔ 3 ɲɔ̃ 5 ɲɔ̃ 5 ʔ 1 /	'to feel sorry (about something lost),to deplore, to regret'	'รู้สึกเสียดาย'
/ ʔ 3 ɲ <sup>h</sup> a 3 ga 3 ʔ 1 /	'cute'	'น่ารัก'
/ ʔ 5 ʔ 1 /	'to sell'	'ขาย'
/ ʔ 5 ʔ 1 /	'to have,to exist'	'มี,อยู่'
/ ʔ 1 do 3 ʔ 1 /	'to start a fire'	'ก่อไฟ,จุดไฟ'
/ ʔ 1 jɔ̃ 3 /	'straw'	'ฟางข้าว'
/ ʔ 1 jɔ̃ 3 kə 2 /	'a stack of straw'	'กองฟาง'
/ ʔ 3 la 5 ʔ 1 /	'to comeback'	'กลับมาก'
/ ʔ 3 zi 5 ho 1 ʔ 1 /	'to bare one's teeth,to grin'	'ยื่นฟัน'
/ ʔ 3 de 3 /	'bald'	'หัวล้าน'
/ ʔ 3 du 3 /	'head'	'หัว'
/ ʔ 3 du 3 bu 1 ʔ 1 /	'to wash the hair'	'สระผม'
/ ʔ 3 du 3 ka 1 dʒu 5 /	'the castor oil plant'	'ต้นสะอึก'
/ ʔ 3 du 3 mo 3 ʔ 1 /	'to be dizzy'	'งง,เวียนหัว'
/ ʔ 3 du 3 na 5 ʔ 1 /	'to have a headache'	'ปวดหัว'
/ ʔ 3 du 3 t <sup>h</sup> ɔ̃ 3 ʔ 1 /	'to tilt,to nod'	'ไหว้,ก้มหัว'
/ ʔ 3 du 3 ɲ <sup>h</sup> i 3 dʒɛ 3 /	'shampoo'	'แชมพูสระผม'
/ ʔ 3 du 3 ɲ <sup>h</sup> i 3 dʒɛ 3 bɔ̃ 5 ɔ̃ 5 /	'shampoo's bubble'	'ฟองแชมพู'
/ ʔ 3 dũ 5 /	'cloud'	'เมฆ'
/ ʔ 3 gũ 3 /	'pillow'	'หมอน'

/ ʔu 3 je 5 /	'rain'	'ฝน' /
/ ʔu 3 je 5 je 5 ja 3 /	'rainy season'	'ฤดูฝน'
/ ʔu 3 jɔ̄ 5 ɲə 5 ʔə 1 /	'to drowse'	'ง่วง, โงกแงก'
/ ʔu 3 k <sup>h</sup> a 3 p <sup>h</sup> je 3 /	'to fart'	'ตด'
/ ʔu 3 ma 1 ma 1 ʔə 1 /	'to dream'	'ฝัน'
/ ʔu 3 ma 1 na 5 ʔə 1 /	'to have a stomachache'	'ปวดท้อง'
/ ʔu 3 ma 2 /	'belly'	'ช่องท้อง'
/ ʔu 3 mo 2 /	'the cellar'	'ใต้ดิน'
/ ʔu 3 ɲɔ 3 /	'scurf, dandruff' ✓	'รังแค'
/ ʔu 3 xo 2 /	'hat'	'หมวก'
/ ʔu 3 dzɔ̄ 3 /	'turban'	'ผ้าโพกศีรษะสำหรับผู้ชาย'
/ ʔu 3 ɲi 4 /	'night time'	'กลางคืน'
/ ʔu 3 ɲi 4 se 1 gɔ̄ 5 /	'mid night time'	'เที่ยงคืน'
/ ʔu 3 ɲ <sup>h</sup> a 5 /	'sunny'	'แสงแดด'
/ ʔu 3 ɲi 4 t <sup>h</sup> ɔ̄ 1 /	'dusk'	'ตอนเย็น, ตอนค่ำ'
/ ʔu 3 ɲ <sup>h</sup> ɔ̄ 5 /	'horn'	'เขา(สัตว์)'
/ ʔu 3 t <sup>h</sup> ɔ̄ 3 /	'morning time'	'ตอนเช้า'
/ ʔu 3 t <sup>h</sup> ɔ̄ 3 jɔ 1 na 4 /	'early morning'	'ตอนเช้าตรู่'
/ ʔu 3 t <sup>h</sup> u 1 /	'to exclaim when tired'	'เสียงอุทานเมื่อรู้สึกเหนื่อย'
/ ʔu 3 dzɔ̄ 5 /	'the lalang, cogon'	'หญ้าคา'
/ ʔu 3 dzɔ̄ 5 t <sup>h</sup> e 3 /	'a thatch of lalang'	'หญ้าคา 1 โฟ'
/ ʔu 3 dzɔ̄ 5 t <sup>h</sup> e 3 ʔə 1 /	'to make a thatch of lalang'	'โฟหญ้าคา'
/ ʔu 4 pe 3 pe 3 ʔə 1 /	'to vomit'	'อาเจียน'
/ ʔu 1 gu 5 ho 1 ʔə 1 /	'to stare out of fear'	'เผชิญกับความกลัว'
/ ʔu 3 /	'sky'	'ท้องฟ้า'
/ ʔu 3 jɔ 1 sɔ̄ 5 /	'cloudy sky'	'ท้องฟ้าที่มีเมฆมาก'
/ ʔu 3 gu 1 gu 1 ja 4 /	'to have a drought'	'แล้ง'
/ ʔu 3 gu 1 gu 1 ja 3 /	'dry season'	'ฤดูแล้ง'
/ ʔu 3 mjo 3 mjo 3 ʔə 1 /	'lightening'	'ฟ้าแลบ'
/ ʔu 3 dzɛ 3 dzɛ 3 ʔə 1 /	'to thunder'	'ฟ้าร้อง'
/ ʔu 5 bja 3 la 5 ʔə 1 /	'the extended hood of a cobra'	'แม่เบี้ยของงูเห่า'
/ ʔu 5 la 5 ʔə 1 /	'to raise, to lift up one's face'	'ยกหน้า'
/ ʔu 5 mjo 3 /	'things'	'สิ่งของ'
/ ʔu 5 mjo 3 ʔa 3 mu 3 mu 3 dzɛ 3 /	'toys'	'ของเล่น'
/ ʔu 5 mjo 3 ʔɔ̄ 3 ʔə 1 /	'grocery'	'ร้านขายของชำ'
/ ʔu 5 mjo 3 ʔɔ̄ 3 du 3 /	'shop'	'ร้านค้า'

/ ɲi 5 ɲɔ 3 bi 3 ne 3 ɲə 1 /	'to compensate'	'ชอบแทน'
/ ɲi 5 dza 3 ɲi 5 ɲə 1 /	'to get married' (female)	'(ผู้หญิง.)แต่งงาน'
/ ɲi 5 xo 4 ɲə 1 /	'to stop'	'หยุด'
/ ɲu 1 zɔ 5 /	'the monitor lizard'	'ตัวแลน,ตะกวด'
/ ɲu 1 ɲu 1 te 4 /	'a few,a little'	'นิดหน่อย,เล็กน้อย'
/ ɲu 1 ɲu 1 te 4 dɔ 5 ɲə 1 /	'to sip,to take a little bit at a time'	'ซั้วดรุ่หนึ่ง'
/ ɲu 5 ɲə 1 /	'to laugh'	'หัวเราะ'
/ ɲu 5 tu 1 tu 1 ɲə 1 /	'to hiccup'	'สะอึก'
/ ɲɔ 1 ɲə 1 /	'to come'	'มา'
/ ɲɔ 1 do 1 ɲə 1 /	'to come out'	'ออกมา'
/ ɲɔ 1 k <sup>h</sup> a 1 ɲə 1 /	'to come down'	'ลงมา'
/ ɲɔ 3 /	'four'	'สี่'
/ ɲɔ 3 lɔ̃ 3 /	'soup pot'	'หม้อแกง'
/ ɲɔ 3 ma 2 /	'grand child'	'หลาน (ลูกของลูก)'
/ ɲɔ 3 ne 5 /	'a boiled pot'	'หม้อต้ม'
/ ɲɔ 3 sɔ̃ 2 tsə 5 tsə 2 /	'just now'	'เมื่อทีนี้'
/ ɲɔ 3 ts <sup>h</sup> e 5 /	'forty'	'สี่สิบ'
/ ɲɔ 3 ts <sup>h</sup> e 5 ɲa 3 /	'forty-five'	'สี่สิบห้า'
/ ɲɔ 3 ts <sup>h</sup> e 5 ti 4 /	'forty-one'	'สี่สิบเอ็ด'

## / b /

/ bi 1 hi 5 ju 3 ɲə 1 /	'to lie on one side'	'นอนตะแคง'
/ bi 2 ɲə 1 /	'to give'	'ให้'
/ bi 3 ɲə 1 /	'to throw'	'ขว้าง,ปา'
/ bi 5 ɲə 1 /	'to share'	'แบ่งให้'
/ bi 5 jɔ 4 /	'to be inclined,tilted'	'เอียง,กระดก'
/ be 1 ɲə 1 /	'to shove away with the foot,to win'	'ถีบ,ชนะ'
/ be 3 le 5 ɲə 1 /	'to win'	'ชนะ'
/ be 3 la 3 ɲə 1 /	'to smell'	'ดม'
/ be 3 la 3 /	'bad smell'	'กลิ่นเหม็น'
/ be 5 ba 2 /	'sponge gourd'	'บวบ'
/ be 5 je 2 /	'a rib'	'กระดูกซี่โครง'
/ ba 1 ɲə 1 /	'to grill,to toast'	'ปิ้ง,ย่าง'
/ ba 1 la 2 /	'moon'	'ดวงจันทร์'

/ ba 1 la 2 la 1 da 2 /	'the waxing moon'	'เดือนหงาย'
/ ba 1 la 2 la 1 dʒi 5 /	'the wanning moon'	'เดือนมืด'
/ ba 1 la 2 mi 5 nĩ 2 nĩ 2 si 3 /	'last month'	'เดือนที่แล้ว'
/ ba 3 ʔ 1 /	'to carry'	'แบก'
/ ba 3 ba 2 /	'cheek'	'แก้ม'
/ ba 3 ba 2 ba 3 to 2 /	'a jaw'	'เหงือก'
/ ba 3 ba 2 jo 1 tʰu 5 /	'chubby cheek'	'แก้มอู๋ย'
/ ba 3 ba 2 kʰo 4 ni 5 ʔ 1 /	'a dimple' ✓	'ลักยิ้ม'
/ ba 3 ga 2 /	'the hillside'	'ไหล่เขา'
/ ba 3 pʰu 2 /	'shoulder'	'ไหล่,บ่า'
/ ba 4 sə 5 ʔ 1 /	'ticket' ✓	'ตั๋ว'
/ ba 1 za 3 /	'maskmelon'	'แตงไทย'
/ ba 3 tʰe 1 tʰe 1 lĩ 5 /	'beard'	'หนวด,เครา'
/ ba 3 dʒa 3 /	'powder'	'แป้ง'
/ ba 4 pʰu 5 /	'to explode,burst'	'ระเบิด'
/ bo 1 ʔ 1 /	'to blow'	'พัด,เป่า'
/ bo 1 ʔu 5 /	'intestines'	'ไส้'
/ bo 1 ʔu 5 bo 1 ma 2 /	'internal body organs'	'เครื่องใน'
/ bo 1 ʔu 5 ma 2 /	'big intestine'	'ไส้ใหญ่'
/ bo 1 ʔu 5 za 3 /	'small intestine'	'ไส้เล็ก'
/ bo 1 di 5 ʔ 1 /	'to flutter'	'กระพือปีก'
/ bo 1 du 2 /	'bush,a grove of trees'	'ป่าละเมาะเล็ก ๆ'
/ bo 1 du 5 /	'football,a toy balloon'	'ฟุตบอล'
/ bo 1 ma 2 /	'stomach'	'กระเพาะอาหาร,ท้อง'
/ bo 1 sə 2 /	'fan'	'พัด'
/ bo 1 xo 2 /	'skin'	'ผิวหนัง'
/ bo 1 dze 1 ʔ 1 /	'to be blown away'	'ถูกพัดปลิวไป'
/ bo 3 gə 2 /	'a kerosine can'	'ถังน้ำมัน'
/ bo 3 lo 2 /	'flute'	'ขลุ่ย'
/ bo 3 tʰĩ 2 /	'a stem of bamboo use for dancing'	
	'กระบอกจากไม้ไผ่ใช้เคาะเป็นจังหวะในการเต้นรำ'	
/ bo 3 dza 3 ʔ 1 /	'to have a meeting'	'ประชุม'
/ bo 3 ʔ 1 /	'false'	'ผิด'
/ bo 1 ʔ 1 /	'to write'	'เขียน'
/ bo 1 na 3 /	'water bucket'	'ถังตักน้ำ'
/ bu 3 ni 5 ʔ 1 /	'to be putrescent'	'บูด,เน่า'

/ bu 3 sa 1 t <sup>h</sup> e 3 /	'the excretion of a fly'	'ขี้แมลงวัน'
/ bu 3 sa 1 t <sup>h</sup> e 1 jɔ 3 ʔ 1 /	'to brush away'	'ปัด'
/ bu 3 sa 2 /	'a fly'	'แมลงวัน'
/ bu 3 dʒu 1 k <sup>h</sup> a 1 lo 5 /	'a bamboo basket put on bamboo weaving which hang over the fireplace'	
	'ตะกร้าไม้ไผ่ที่แขวนไว้เหนือเตาไฟ'	
/ bu 3 dʒø 2 /	'a chrysalis'	'ด้วง'
/ bu 5 k <sup>h</sup> a 2 /	'umbrella'	'ร่ม'
/ bə 1 lə 2 /	'male sexual organ'	'อวัยวะเพศชาย'
/ bø 1 lø 2 /	'a gong'	'ฆ้อง'
/ bø 1 dø 5 /	'intestinal worm'	'พยาธิ'
/ bø 2 /	'a hornet hole'	'รูของตัวต่อ'
/ bø 3 ʔ 1 /	'to nudge' (when a horse or pig uses the nose to nudge)	'ดันด้วยจมูก'
/ bø 3 ha 3 /	'intestinal worm'	'พยาธิ'
/ bø 3 ku 2 /	'a turtle'	'เต่า'
/ bø 3 ʔ 1 mo 5 /	'a weevil'	'แมงเม่า'
/ bø 3 ma 2 /	'taro'	'เผือก'
/ bø 3 mo 3 /	'the Akha man who contacts a spirit'	'ทอมผี'
/ bø 5 ha 3 /	'bat'	'ค้างคาว'
/ bø 3 t <sup>h</sup> ɔ 3 t <sup>h</sup> ɔ 3 ʔ 1 /	'a chrysalis, a worm'	'หนอน'
/ bø 3 xa 3 /	'beetle'	'แมลงทับ, ด้วงปีกแข็ง,
/ bø 3 t <sup>h</sup> ɔ 5 dza 3 ʔ 1 /	'a bad tooth'	'ฟันผุ'
/ bø 3 t <sup>h</sup> ɔ 3 /	'Shan people'	'ชาวไทยใหญ่'
/ bø 5 ba 2 /	'the luffa or dish - cloth gourd'	
	'ไม้บวบที่ใช้ถูตัวหรือล้างจาน'	

## / bj /

/ bje 1 ʔ 1 /	'to excrete'	'อุจจาระ'
/ bja 1 ʔ 1 /	'to fold'	'พับ, ห่อ'
/ bja 1 bja 3 ʔ 5 /	'honey'	'น้ำผึ้ง'
/ bja 3 /	'bee'	'ผึ้ง'
/ bja 3 ʔ 3 /	'a sting of a bee'	'เหล็กในของผึ้ง'

/ bja 3 ɲɔ̃ 3 lɔ̃ 3 ma 2 /	'a hornet'	'ตัวต่อ'
/ bja 3 de 3 ɲə 1 /	'to sting' (of bee)	'เหล็กในของผึ้ง'
/ bja 3 kɔ̃ 3 /	'a hornet which has red, black and yellow colors'	
	'ตัวต่อที่มีสีแดง, เหลืองและดำ'	
/ bja 3 k <sup>h</sup> u 3 t <sup>h</sup> u 2 /	'a bee hive'	'รังผึ้ง'
/ bja 3 t <sup>h</sup> e 3 /	'bee wax'	'ขี้ผึ้ง'
/ bja 3 tɕu 4 tɕu 4 ɲə 1 /	'to fondle'	'กอดรัด'
/ bja 5 tɕu 4 t <sup>h</sup> a 3 ɲə 1 /	'to embrace'	'กอด'
/ bjã 1 ɲə 1 /	'to be full' (of water or things)	'อิ่มเต็ม'
/ bjũ 5 ɲə 1 /	'to pile up'	'กองขึ้น'

## / d /

/ di 1 ɲə 1 /	'to beat'	'ตี(ข้าว,เหล็ก)'
/ di 3 p <sup>h</sup> u 3 /	'hammer'	'น้อน'
/ di 5 lu 3 bu 5 /	'yam bean'	'มันแกว'
/ de 5 lo 2 /	'a fish trap made of bamboo'	'ไซดักปลา'
/ de 1 ɲə 1 /	'to thrash'	'นวดข้าว'
/ de 1 ka 2 /	'grassland, pasture'	'ทุ่งหญ้า'
/ de 1 le 5 ɲə /	'to knock at'	'เคาะ'
/ de 1 ma 2 /	'wet rice field'	'นาข้าว'
/ de 1 ma 2 ɲũ 5 ɲə 1 /	'to work paddy'	'ทำนา'
/ de 1 ma 2 t <sup>h</sup> e 5 /	'wet rice'	'ข้าวนา'
/ de 1 na 3 /	'watermelon'	'แตงโม'
/ de 1 xɔ̃ 3 /	'a courtyard'	'ลานสวนกอด'
/ de 3 ɲə 1 /	'to use abusive language'	'ด่า'
/ de 3 da 2 ɲə 1 /	'to push up'	'ดันขึ้น'
/ de 3 le 1 ɲə 1 /	'to be born' (human, tree)	'เกิด'
/ de 3 la 5 ɲə 1 /	'to sprout'	'งอก'
/ de 3 lu 1 ne 3 ɲə 1 /	'to feed'	'ให้อาหาร'
/ de 3 tɕe 1 ɲə 1 /	'to push'	'ผลัก'
/ de 4 ɲə 1 /	'to press down'	'กดลง'
/ da 1 ɲə 1 /	'to owe'	'เป็นหนี้'

/ dɛ 1 lɛ 5 /	'a device-shaped like Solomon's seal and made of strips of bamboo, serving as a sign that a thing is for conservation'	'ตะแคง'
/ da 1 tʰw 5 /	'a rod, a stick'	'กิ่งไม้, แขนงไม้'
/ da 2 lɛ 5 ʔ 1 /	'to climb'	'ปีน'
/ da 3 ʔ 1 /	'to play cards'	'เล่นไพ่'
/ da 3 ga 2 /	'first piece of a horse trap'	'เครื่องขาม้าชิ้นที่หนึ่ง'
/ da 3 no 3 /	'policeman'	'ตำรวจ'
/ da 5 bo 3 ʔa 5 ta 4 /	'a photograph'	'รูปภาพ'
/ da 5 bo 3 dɛ 1 ʔ 1 /	'to take a photo'	'ถ่ายรูป'
/ da 5 bo 3 dɛ 1 tʰa 2 /	'a camera'	'กล้องถ่ายรูป'
/ da 5 kʰɔ 4 mo 3 tʰɔ 5 /	'casava' ✓	'มันสำปะหลัง'
/ da 5 nɛ 3 ʔ 1 /	'to pawn'	'จำนำ'
/ da 5 pja 2 /	'fern'	'ต้นเฟิร์น'
/ da 5 ta 4 /	'stake'	'เสากลัก'
/ da 5 tʰw 4 /	'spine'	'กระดูกสันหลัง, หลัง'
/ da 5 tʰw 4 na 5 ʔ 1 /	'to have a backache'	'ปวดหลัง'
/ dā 2 /	'one type of instrument'	'เครื่องมือชนิดหนึ่งของช่างไม้'
/ dɔ 1 dɯ 1 ʔ 1 /	'to immerse'	'จุ่มน้ำ'
/ dɔ 3 ʔ 1 /	'to cling'	'เกาะติด'
/ dɔ 3 dɔ̄ 2 ʔ 3 du 3 /	'a brothel, a bawdy house'	'ห้องโสเภณี'
/ dɔ 3 dɔ̄ 3 /	'bottom'	'ก้น, ส่วนท้าย'
/ dɔ 3 ga 3 ga 3 ʔ 1 /	'to crawl'	'คาน'
/ dɔ 3 mi 3 /	'tail'	'หาง'
/ dɔ 3 pʰɛ 2 /	'near, close to'	'ใกล้, ติดกับ'
/ dɔ 3 pʰɛ 3 /	'the base of tree'	'โคนต้นไม้'
/ dɔ 3 tʰɛ 3 /	'excrement'	'อุจจาระ'
/ dɔ 3 tʰɛ 3 tʰɛ 3 ʔ 1 /	'to evacuate the bowels'	'ปวดอุจจาระ'
/ dɔ 3 tʰɛ 3 tʰɛ 3 kʰi 3 kʰi 3 ʔ 1 /	'to feel a necessity to evacuate the bowels'	'ปวดอุจจาระมากๆ'
/ dɔ 3 tʰa 5 /	'a song'	'เพลง'
/ dɔ 3 tʰa 5 tʰa 5 ʔ 1 /	'to sing'	'ร้องเพลง'
/ dɔ 3 tʰhi 3 tʰhi 3 ʔ 1 /	'to urinate'	'ปัสสาวะ'
/ dɔ 3 dʒi 2 /	'ladder'	'บันได'



/ dɔ 3 dʒũ 3 /	'bridge'	'สะพาน'
/ dɔ 3 dʒu 5 dʒu 5 ʔ 1 /	'to sit on one's heels' ✓	'นั่งยองๆ'
/ dɔ 5 ʔ 1 /	'to drink'	'ดื่ม'
/ dɔ 5 ʔ 5 ʔ 1 /	'to insert'	'ใส่'
/ dɔ 5 hɔ 1 ʔ 1 /	'to sip' ✓	'ดื่มจิบๆ'
/ dɔ 5 ɲa 3 ʔ 1 /	'to choke' ✓	'สำลักพูดไม่ออก'
/ dɔ 5 ta 1 ʔa 5 k <sup>h</sup> a 2 /	'scorpion'	'แมงป่อง'
/ dɔ 5 ta 1 t <sup>h</sup> e 5 /	'dry rice'	'ข้าวไร่'
/ do 4 /	'prison'	'คุก'
/ du 3 ʔ 1 /	'to dig'	'ขุด'
/ du 3 k <sup>h</sup> a 3 /	'saliva' ✓	'น้ำลาย'
/ du 3 p <sup>h</sup> ɔ 3 /	'to bury'	'ฝัง'
/ du 3 xɔ 3 /	'hole'	'รู'
/ du 3 xɔ 4 /	'depression in the ground'	'หลุมที่พื้นดิน'
/ du 3 t <sup>h</sup> i 5 /	'a section of bamboo stem into the ground'	'ส่วนของต้นไผ่ที่อยู่ในดิน'
/ du 4 ʔ 1 /	'to wear a bracelet' ✓	'สวมใส่สร้อยข้อมือ, กำไล'
/ dũ 1 ʔ 1 /	'to wear' ✓	'สวมใส่(เสื้อผ้า)'
/ dũ 3 /	'classifier for a book'	'เล่ม(ลักษณนามของหนังสือ)'
/ dũ 3 ʔi 5 ʔ 1 /	'to be blunt'	'ทื่อ, ไม่เฉียบแหลม'
/ dũ 5 ma 2 /	'younger sister'	'น้องสาว'
/ dɯ 1 ʔ 1 /	'to soak'	'แช่'
/ də 1 ha 3 /	'axe'	'ขวาน'

## / ɣ /

/ ɣa 1 k <sup>h</sup> a 1 ʔ 1 /	'to fall'	'หล่น, ตก'
/ ɣa 1 mɔ 5 /	'far'	'ไกล'
/ ɣa 1 p <sup>h</sup> ɔ 5 p <sup>h</sup> ɔ 5 ʔ 1 /	'to overtake'	'ไล่ตามทัน'
/ ɣa 3 ʔ 1 /	'to love'	'รัก'
/ ɣa 3 la 5 /	'to hear'	'ได้ยิน'
/ ɣa 3 lɔ 3 /	'valley'	'หุบเขา'
/ ɣa 3 mɛ 1 /	'enough'	'เพียงพอ'
/ ɣa 3 mɔ 5 mɔ 5 ʔ 1 /	'to hire, to employ'	'จ้าง'

/ ga 5 ɲĩ 5 ɲə 1 /	'to work'	'ทำงาน'
/ ga 5 kɔ 2 /	'small path in the forest'	'ทางเดินเล็กๆในป่า'
/ ga 5 ma 1 /	'path'	'ทาง'
/ ga 5 ɲe 1 ɲe 1 ɲə 1 /	'to dance'	'เต้นรำ'
/ gɔ 1 bi 2 p <sup>h</sup> ɔ 2 /	'the south'	'ทิศใต้'
/ gɔ 3 gu 5 /	'goose'	'เป็ด'
/ gɔ 3 p <sup>h</sup> u 2 /	'bamboo mat'	'เสื่อไม้ไผ่'
/ gɔ 5 lu 3 /	'bamboo pipe for man'	'กลองยาวของผู้ชาย'
/ gɔ 5 ɬu 4 /	'bamboo pipe for woman'	'กลองยาวของผู้หญิง'
/ gɔĩ 1 la 5 ɲə 1 /	'to have a cramp'	'เป็นตะคริว'
/ gɔĩ 3 /	'a spear, a sword'	'ดาบ'
/ gɔĩ 5 da 3 /	'ring finger'	'นิ้วนาง'
/ gɔĩ 5 ɲo 2 /	'the core'	'แก่น'
/ gɔĩ 5 t <sup>h</sup> e 2 /	'middle'	'ตรงกลาง'
/ go 3 hɔ 1 ɲə 1 /	'to inspect'	'ตรวจตรา'
/ gu 1 ɲə 1 /	'to fear'	'กลัว'
/ gu 4 ɲə 1 /	'to sew'	'เย็บผ้า'
/ gu 5 ɲə 1 /	'to shout'	'ตะโกน'
/ gu 1 ɲə 1 /	'to count'	'นับ'
/ gu 1 ma 2 /	'the ceiling'	'เพดาน'
/ gu 3 tso 4 /	'a pot'	'กาต้มน้ำ'
/ gu 3 t <sup>h</sup> u 5 /	'brass'	'ทองเหลือง'
/ gu 5 ɲi 5 ɲə 1 /	'to melt'	'ละลาย'
/ gu 5 la 4 /	'shelf'	'ชั้นวางของ'
/ gə 4 mɔ 2 /	'to comply'	'ยอมตาม, ไม่ขัดขืน'

## / h /

/ he 5 ge 1 ɲə 1 /	'to take'	'เอาไป'
/ hɔ 1 ɲə 1 /	'to look at'	'มองดู'
/ hɔ 1 dɔ 5 ɲə 1 /	'to look down'	'ดูถูก'
/ hɔ 1 p <sup>h</sup> ɔ 5 ɲe 5 ɲə 1 /	'to look back'	'หันกลับไปมอง'
/ hɔ 1 dzɔ 5 ɲe 5 ɲə 1 /	'to look over'	'มองข้ามออกไป'
/ ho 1 tɔ 1 le 3 ɲə 1 /	'to stare'	'จ้องดู'

/ hɔ 3 /	'cooked rice'	'ข้าวสุก'
/ hɔ 3 ba 2 /	'small bamboo basket for keeping sewing tools'	'ตะกร้าไม้ไผ่เล็ก ๆ สำหรับเก็บอุปกรณ์เย็บปักผ้า'
/ hɔ 3 bɔ̃ 3 /	'a steamed wooden pot'	'หม้อต้ม'
/ hɔ 3 bu 2 /	'daiken radish'	'หัวไชเท้า'
/ hɔ 3 bə 3 ʔə 1 /	'to use one's fingers to eat rice'	'ใช้มือเปิบข้าว'
/ hɔ 3 ɲɔ 3 /	'a pounded sticky rice,always eat in the new year time'	'ข้าวปึก'
/ hɔ 3 ɲɔ 3 na 2 /	'black sticky rice'	'ข้าวเหนียวดำ'
/ hɔ 3 ɲɔ 3 tʰe 5 si 3 /	'a mortar for pounding sticky rice'	'ครกตำข้าวเหนียว'
/ hɔ 3 ɲɔ̃ 5 /	'vegetables,food'	'ผัก/อาหาร'
/ hɔ 3 ʔɔ 2 /	'bamboo basket for rice'	'ตะกร้าไม้ไผ่ใช้ใส่ข้าวสุก'
/ hɔ 3 dʒe 2 /	'table,a tray on a pedestal'	'โตกข้าว/โต๊ะไม้'
/ hɔ 5 ne 2 /	'with,and'	'กับ,และ'
/ ho 1 bi 5 /	'aeroplane'	'เครื่องบิน'
/ ho 1 bi 5 da 5 zə 2 /	'helicopter'	'เฮลิคอปเตอร์'
/ ho 1 ja 5 /	'hospital'	'โรงพยาบาล'
/ ho 2 tʰi 4 xo 4 /	'a rat year'	'ปีหนู'
/ hu 3 tɕi 4 /	'the night before last'	'เมื่อคืนวาน'
/ hũ 3 /	'classifier for a thing'	'อัน(ลักษณนามของสิ่งของ)'
/ hu 4 nɔ̃ 1 /	'day before yesterday'	'เมื่อวานขึ้น'
/ hu 5 lo 1 ʔa 5 si 3 /	'hail'	'ลูกเห็บ'
/ hu 5 si 3 /	'cowrie'	'หอย'
/ huɹ 3 la 5 /	'to grow'	'ปลูก'
/ hə 1 də 3 /	'these'	'สิ่งเหล่านี้'
/ hə 1 ga 5 /	'here'	'ที่นี่'
/ hə 1 na 5 ta 4 /	'next time'	'ครั้งต่อไป'
/ hə 1 si 3 /	'this month'	'เดือนนี้'
/ hə 1 tɕa 5 /	'machine boat'	'เรือยนต์'
/ hə 1 dʒe 3 /	'like this'	'อย่างนี้'

## / j /

/ ji 5 ba 3 sa 4 ʔə 1 /	'to distill the liquor'	'ต้มเหล้า'
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/ je 3 hu 1 p <sup>h</sup> ɔ 2 /	'the first time'	'ครั้งแรก'
/ je 3 ka 1 t <sup>h</sup> ɔ 5 ha 3 /	'merchant'	'พ่อค้า'
/ je 3 ma 2 /	'a saw'	'เลื่อย'
/ je 3 nɔ̄ 1 p <sup>h</sup> ɔ 5 dʒi 5 k <sup>h</sup> o 3 ʔ 1 /	'to go backwards'	'หันหลังกลับ'
/ je 3 nɔ̄ 3 /	'slow'	'ช้า'
/ je 3 za 3 /	'animals'	'สัตว์'
/ je 3 t <sup>h</sup> i 5 k <sup>h</sup> a 3 dʒɔ̄ 5 ma 2 /	'a vulture'	'แร้ง'
/ je 1 gɔ̄ 5 ja 3 /	'rainy season'	'ฤดูฝน'
/ je 3 ʔ 1 /	'to be drunk'	'เมา'
/ je 3 bɔ 3 tɔ̄ 5 /	'to destroy'	'ทำลาย'
/ je 3 bɔ̄ 3 dʒɔ̄ 5 t <sup>h</sup> ɔ 5 ha 3 /	'greedy, selfish'	'คนเห็นแก่ตัว'
/ je 3 xo 4 /	'a sickle'	'เคียวเกี่ยวข้าว'
/ je 4 ʔ 1 /	'to reap'	'เกี่ยวข้าว'
/ je 4 /	'eight'	'แปด'
/ je 4 ne 5 /	'the larvae of mosquitoes'	'ลูกน้ำ'
/ je 5 /	'soldier'	'ทหาร'
/ ja 1 bɔ 3 jɔ 1 t <sup>h</sup> ɔ 3 /	'straight hair'	'ผมเหยียดตรง'
/ ja 1 bja 2 /	'bright'	'สว่าง'
/ ja 1 gɔ 5 /	'pipe'	'กล้องสูบบุหรี่'
/ ja 1 jw 1 bɔ 1 ʔ 5 /	'rubber tube'	'ท่อ, สายยาง'
/ ja 1 kə 1 lə 2 /	'Karen people'	'คนกะเหรี่ยง (ปากกระพุง)'
/ ja 1 k <sup>h</sup> ɔ 3 /	'tobacco'	'ยาสูบ'
/ ja 1 k <sup>h</sup> ɔ 4 /	'pipe tobacco smoking mixture'	'บ้องสูบบุหรี่'
/ ja 1 k <sup>h</sup> ɔ 4 bɔ 3 lɔ 2 /	'a cut off a section of bamboo'	'บ้องสูบบุหรี่ไม้'
/ ja 1 k <sup>h</sup> ɔ 4 dɔ 5 mɔ 3 ʔ 1 /	'to crave'	'อยากสูบบุหรี่'
/ ja 1 k <sup>h</sup> ɔ 4 dɔ 3 dzo 2 /	'cigarette ashes'	'ขี้บุหรี่'
/ ja 1 k <sup>h</sup> ɔ̄ 5 /	'fence'	'รั้ว'
/ ja 1 lə 3 /	'male elephant'	'ช้างตัวผู้'
/ ja 1 ma 2 /	'female elephant'	'ช้างตัวเมีย'
/ ja 1 ma 2 nã 5 po 4 /	'trunk of elephant'	'วงช้าง'
/ ja 1 ma 2 t <sup>h</sup> i 4 ma 4 /	'a herd of elephants'	'โขลงช้าง'
/ ja 1 ma 2 dʒw 5 /	'ivory'	'งาช้าง'
/ ja 1 mjã 3 mjã 3 ʔ 1 /	'tricky'	'โกหก, หลอกหลวง, เจ้าเล่ห์'
/ ja 1 p <sup>h</sup> i 5 /	'opium'	'ฝิ่น'

/ ja 1 p <sup>h</sup> i 5 t <sup>h</sup> i 4 ja 2 /	'1 unit of opium"(about 100 baht)	
	ฝิ่นดิบ 1 ก้อน (ราคาประมาณ 100 บาท)	
/ ja 1 p <sup>h</sup> i 5 t <sup>h</sup> i 4 k <sup>h</sup> a 5 /	'1 unit of opium' (about 1,000 baht)	
	ฝิ่นดิบ 1 ก้อน (ราคาประมาณ 1,000 บาท)	
/ ja 1 p <sup>h</sup> ja 5 lu 5 za 2 /	'a cockroach'	'แมลงสาป'
/ ja 1 p <sup>h</sup> ɔ̃ 5 /	'a broom'	'ไม้กวาด'
/ ja 1 ɔ̃ 5 /	'coriander'	'ดอกไม้ที่มีกลิ่นหอม'
/ ja 1 t <sup>h</sup> ɔ̃ 5 /	'a hut in the field'	'กระท่อมในไร่'
/ ja 3 /	'a mountain goat'	'แพะภูเขา'
/ ja 3 ɔ̃ 5 ɔ̃ 1 /	'to stay overnight'	'พักค้างคืน'
/ ja 3 le 5 /	'wind'	'ลม'
/ ja 5 k <sup>h</sup> a 3 da 5 ɔ̃ 1 /	'to judge'	'พิจารณาคัดสิน'
/ ja 5 mo 4 /	'grass'	'ต้นหญ้า'
/ ja 5 mo 4 je 1 bɔ̃ 5 /	'a stack of grass'	'กองหญ้า'
/ ja 5 mo 4 mja 3 ɔ̃ 1 /	'to weed'	'ถางหญ้า'
/ ja 5 mja 3 ɔ̃ 1 /	'to clear the field'	'ถางไร่'
/ ja 5 ɔ̃ 2 /	'dry rice field'	'ไร่ข้าว'
/ ja 5 ɔ̃ 3 /	'the forest'	'ป่า'
/ ja 5 ɔ̃ 3 ɔ̃ 5 ɔ̃ 1 /	'to go to evacuate the bowels'	'ไปดูจาระในป่า'
/ ja 5 ɔ̃ 3 ɔ̃ 3 k <sup>h</sup> ɔ̃ 3 /	'wolf'	'หมาป่า'
/ ja 5 ɔ̃ 3 bje 2 /	'the scrub'	'ป่าละเมาะ'
/ ja 5 ɔ̃ 3 mi 3 dza 3 /	'wild-fire'	'ไฟป่า'
/ ɔ̃ 1 ɔ̃ 3 /	'wet'	'เปียก'
/ ɔ̃ 1 ɔ̃ 2 /	'low,short'	'สั้น,เตี้ย'
/ ɔ̃ 1 ɔ̃ 3 /	'easy'	'ง่าย'
/ ɔ̃ 1 ɔ̃ 5 /	'old'	'แก่,เก่า'
/ ɔ̃ 1 ba 3 /	'thin'	'ผอม'
/ ɔ̃ 1 bɔ̃ 3 ɔ̃ 1 di 2 /	'curly hair'	'ผมหยิก'
/ ɔ̃ 1 bɔ̃ 3 ɔ̃ 1 gu 2 /	'curly hair'	'ผมหยิก'
/ ɔ̃ 1 bu 3 /	'to be rotten'	'เน่า,ยุ'
/ ɔ̃ 1 bje 2 /	'soft'	'นุ่มนิ่ม'
/ ɔ̃ 1 bja 2 /	'moonlight,bright'	'เดือนที่แจ่มสว่าง'
/ ɔ̃ 1 bja 2 ɔ̃ 1 t <sup>h</sup> e 3 /	'to tar ( the face)'	'ทาหน้า'
/ ɔ̃ 1 bja 3 /	'to be flat in taste,to be insipid'	'จืด,ไม่มีรสชาติ'

/ jɔ 1 bɔɔ 3 /	'to be enjoyable'	'สนุก'
/ jɔ 1 bɔɔ 3 gu 5 ʔə 1 /	'to hoop'	'ร้อยไหมตะโกน'
/ jɔ 1 bɔɔ 2 /	'deligent'	'ขยัน, ฉลาด'
/ jɔ 1 dɔ 2 /	'circle, round'	'วงกลม, รอบ'
/ jɔ 1 dɔ 5 /	'straight'	'ตรง'
/ jɔ 1 dɔ 5 /	'lazy'	'ขี้เกียจ'
/ jɔ 1 ga 1 ga 1 ʔə 1 /	'to feel cold'	'หนาว' ✓
/ jɔ 1 ga 1 ga 1 ja 3 /	'winter'	'ฤดูหนาว'
/ jɔ 1 ga 1 ga 1 ka 5 dũ 2 ʔə 1 /	'a woolen coat'	'เสื้อกันหนาว'
/ jɔ 1 ga 1 ga 1 p <sup>h</sup> ja 3 p <sup>h</sup> ja 3 ʔə 1 /	'to shiver from fever'	'สั่นเพราะเป็นไข้'
/ jɔ 1 ga 1 ga 1 dʒu 3 dʒu 3 ʔə 1 /	'to shiver from cold'	'สั่นเพราะหนาวเย็น'
/ jɔ 1 gɔ 3 /	'to be crooked'	'โค้งงอ'
/ jɔ 1 gɔ 3 p <sup>h</sup> ɔ 2 /	'to turn'	'เลี้ยว, หัน'
/ jɔ 1 go 5 /	'tall'	'สูง'
/ jɔ 1 gw 2 /	'dry'	'แห้ง'
/ jɔ 1 hu 3 /	'big'	'ใหญ่'
/ jɔ 1 jɛ 2 /	'scurf'	'ขี้รังแค'
/ jɔ 1 ja 2 /	'difficult'	'ยาก'
/ jɔ 1 ja 4 /	'to be ripe'	'สุก'
/ jɔ 1 ja 5 /	'cheap'	'ราคาถูก'
/ jɔ 1 jɔ 3 jɔ 3 ʔi 5 ʔə 1 /	'to blot the paper'	'เช็ดไป'
/ jɔ 1 jɔ 4 /	'dirty'	'สกปรก'
/ jɔ 1 ju 1 se 3 no 2 /	'tennis shoes'	'รองเท้ายาง'
/ jɔ 1 ku 2 /	'to be crumpled'	'ยับยู่ยี่'
/ jɔ 1 k <sup>h</sup> a 3 /	'bitter'	'ขม'
/ jɔ 1 k <sup>h</sup> ɔ 5 /	'fast'	'เร็ว'
/ jɔ 1 k <sup>h</sup> ɔ 5 k <sup>h</sup> ɔ 5 /	'quick! quick! '	'เร็ว! เร็ว!'
/ jɔ 1 k <sup>h</sup> ɔ 2 /	'heavy'	'หนัก'
/ jɔ 1 k <sup>h</sup> u 3 k <sup>h</sup> u 5 ɣe 2 /	'to be rough (of a surface)'	'ผิวขรุขระ'
/ jɔ 1 k <sup>h</sup> w 5 /	'delicious'	'อร่อย'
/ jɔ 1 lɔ 5 /	'hot ( water, body)''	'ตัวร้อน, น้ำร้อน'
/ jɔ 1 lũ 5 /	'warm'	'อบอุ่น'
/ jɔ 1 lə 3 /	'pink'	'สีชมพู'
/ jɔ 1 mi 5 na 1 lo 2 /	'everynight'	'ทุกคืน'

/ jɔ̌ 1 mɔ̌ 5 /	'long'	'ยาว'
/ jɔ̌ 1 muw 3 /	'good,beautiful'	'ดี,สวย'
/ jɔ̌ 1 mja 3 mja 3 /	'many,a lot'	'มากมาย'
/ jɔ̌ 1 ne 5 /	'red'	'สีแดง'
/ jɔ̌ 1 na 2 /	'black'	'สีดำ'
/ jɔ̌ 1 na 4 /	'deep'	'ลึก'
/ jɔ̌ 1 nɔ̌ 1 na 1 lo 2 /	'everyday'	'ทุกวัน'
/ jɔ̌ 1 nɔ̌ 3 /	'young'	'เด็ก,อ่อน'
/ jɔ̌ 1 p̄u 5 /	'short'	'เตี้ย'
/ jɔ̌ 1 p̄ɔ̌ 3 /	'to shrivel (leaves)''	'เหี่ยวแห้ง'
/ jɔ̌ 1 p̄ɔ̌ 5 /	'green'	'สีเขียว'
/ jɔ̌ 1 p̄o 4 /	'to be curve,to bend'	'โค้งงอ'
/ jɔ̌ 1 pe 4 /	'to leak'	'รั่ว'
/ jɔ̌ 1 p <sup>h</sup> i 5 /	'the taste of something which is not properly ripe'	'รสชาติที่ยังไม่สุก'
/ jɔ̌ 1 pje 2 /	'humid'	'ชื้นแฉะ'
/ jɔ̌ 1 p <sup>h</sup> e 5 /	'astringent (of taste)''	'ฝาด,ขื่น'
/ jɔ̌ 1 p <sup>h</sup> ɔ̌ 3 /	'to be stained,soiled'	'เปรอะเปื้อน'
/ jɔ̌ 1 p <sup>h</sup> w 5 /	'blue'	'สีฟ้า'
/ jɔ̌ 1 p <sup>h</sup> ə 3 /	'to be rotten'	'ผุ,เน่า'
/ jɔ̌ 1 p <sup>h</sup> ɔ̌ 3 /	'expensive'	'แพง'
/ jɔ̌ 1 p <sup>h</sup> je 3 /	'to be torn'	'ฉีกขาด'
/ jɔ̌ 1 p <sup>h</sup> ju 5 /	'white'	'สีขาว'
/ jɔ̌ 1 sa 4 be 3 la 4 ɔ̌ 1 /	'to stink,smell of raw meat,blood,fish'	'กลิ่นคาว'
/ jɔ̌ 1 sɔ̌ 2 /	'good smell'	'กลิ่นหอม'
/ jɔ̌ 1 su 4 /	'narrow'	'แคบ'
/ jɔ̌ 1 sə 2 /	'to be punctilious, meticulous'	'คนมีระเบียบ,พิถีพิถัน'
/ jɔ̌ 1 ta 2 /	'salty,sharp'	'เค็ม,คม'
/ jɔ̌ 1 t <sup>h</sup> e 3 /	'to be in a hurry'	'เร่งรีบ'
/ jɔ̌ 1 t <sup>h</sup> ɔ̌ 2 /	'to tighten'	'ตึง'
/ jɔ̌ 1 t <sup>h</sup> u 5 /	'thick'	'หนา'
/ jɔ̌ 1 t <sup>h</sup> u 5 na 1 lo 2 /	'everywhere'	'ทุกที่'
/ jɔ̌ 1 xa 2 /	'strong'	'แข็งแรง'
/ jɔ̌ 1 xa 3 /	'fierce'	'ดุร้าย'

/ jɔ 1 ɣa 2 ɳu 5 jɔ̃ 5 ɳə 1 /	'to mock'	'หัวเราะเยาะ'
/ jɔ 1 ɣa 3 na 1 lo 2 /	'everyone'	'ทุกคน'
/ jɔ 1 ɣɔ̃ 5 /	'to be stout,clever,hard'	'ฉลาด,ยาก'
/ jɔ 1 zi 4 /	'to endure'	'ทนทาน,คงทน'
/ jɔ 1 zɔ 5 /	'dark'	'มืด,ดำ'
/ jɔ 1 za 3 /	'small'	'เล็ก'
/ jɔ 1 za 3 tɔ̃ 3 /	'a dwarf'	'คนระแกว'
/ jɔ 1 dzu 3 dzu 3 ɳə 1 /	'to shake'	'สั่น'
/ jɔ 1 dzw 1 dzw 1 ɳə 1 /	'to be itchy'	'คัน'
/ jɔ 1 tɕe 4 /	'cool'	'เย็น'
/ jɔ 1 tɕʰi 3 /	'to save'	'ประหยัด'
/ jɔ 1 tɕʰu 5 /	'fat'	'อ้วน'
/ jɔ 1 tɕe 1 tɕe 5 tɕʰɔ̃ 1 ɳə 1 /	'to parade,to march in line'	'เข้าแถว'
/ jɔ 1 tɕo 4 tɕo 4 dzɔ 5 ɳə 1 /	'to pacify'	'อยู่อย่างสงบ'
/ jɔ 1 tɕʰe 2 /	'to have a pointed of edge'	'มีขอบริม'
/ jɔ 1 tɕʰɔ̃ 5 /	'sweet'	'หวาน'
/ jɔ 1 tɕʰa 3 /	'poor, the cliff'	'ยากจน,หน้าผา'
/ jɔ 1 tɕʰɔ̃ 5 /	'clean'	'สะอาด'
/ jɔ 1 tɕʰu 4 /	'new'	'ใหม่'
/ jɔ 1 tɕʰu 5 /	'yellow'	'สีเหลือง'
/ jɔ 1 dzɛ 1 ma 1 dzɛ 3 /	'to suppose'	'สมมุติ,สมมุติว่า'
/ jɔ 1 dzɔ 5 /	'muddy'	'เป็นโคลนเลน'
/ jɔ 1 dzɔ̃ 3 /	'raw'	'ดิบ'
/ jɔ 3 ɳə 1 /	'to stand'	'ยืน'
/ jɔ 3 mɔ̃ 3 mɔ̃ 3 /	'tricky,fraudulent'	'โกหก,เจ้าเล่ห์'
/ jɔ 3 dzɔ̃ 5 jɔ 3 ka 2 /	'a kind of bird which nests in the roof of an Akha house'	'นกที่มาทำรังที่หลังคาบ้านต้นใน'
/ jɔ 3 dzɔ̃ 5 na 1 lo 2 /	'often'	'บ่อยๆ'
/ jɔ 5 tʰi 4 xo 4 /	'a goat year'	'ปีแพะ'
/ jɔ 1 ɳə 1 /	'to roll'	'ม้วน,หมุน'
/ jɔ 1 ɳi 5 ɳə 1 /	'to be nicked,chipped'	'ลัดเลี่ยน'
/ jɔ 1 nã 1 nã 1 /	'everyday'	'ทุกวัน'
/ jɔ 2 ɳə 1 /	'to shake'	'สั่น'
/ jɔ 3 pa 4 /	'belt'	'เข็มขัด'



/ jo 4 /	'waist'	'เอว'
/ ju 3 du 3 /	'a room'	'ห้อง'
/ ju 3 ɰ 5 la 5 ɲ 1 /	'drowsy'	'่วง, สลึมทงก'
/ ju 3 xa 2 ɲ 1 /	'to sleep'	'นอนหลับ'
/ ju 3 tse 5 ju 3 ta 3 ɲ 1 /	'to have sexual intercourse'	'ร่วมเพศ'
/ ju 5 ɲ 1 /	'to hold with thumb and index finger'	'หยิบโดยใช้นิ้วโป้งและนิ้วชี้'
/ ju 5 sa 3 /	'small beads'	'ลูกปัด'
/ ju 5 t <sup>h</sup> a 3 ɲ 1 /	'to put'	'ใส่, วาง'
/ ju 5 za 1 ɲ 1 /	'to get'	'ได้รับ'
/ ju 5 za 3 ɲ 1 /	'to hide'	'ซ่อน'
/ ju 5 t <sup>h</sup> a 2 /	'dice'	'ลูกเต๋า'
/ jũ 5 le 5 ɲ 1 /	'to shrink'	'หด'
/ ju 4 ɲ 1 /	'to crack'	'แตก, หวด'
/ ju 4 dʒe 1 ɲ 1 /	'to whip out'	'สลัดออกไป'
/ jə 3 ɲ 1 /	'to pinch'	'หยิบ'
/ jɰ 5 ɲ 1 /	'to flow'	'ไหล'
/ jɰ 5 do 2 le 1 ɲ 1 /	'to leak'	'รั่ว'
/ jɰ 5 k <sup>h</sup> a 5 ɲi 5 ɲ 1 /	'to spill over, to be filled to overflowing'	'น้ำไหล'

## / k /

/ ka 1 ɲ 1 /	'to comb'	'หวีผม'
/ ka 1 pu 3 ɲ 1 /	'to sink'	'จม'
/ ka 1 p <sup>h</sup> ə 2 /	'coffee'	'กาแฟ'
/ ka 1 dze 5 /	'side'	'ด้านข้าง'
/ ka 2 /	'crossbow'	'ท่อน้ำไม้'
/ ka 2 mja 1 b̃ 3 /	'an arrow container made from bamboo'	'กระบอกไม้ไผ่สำหรับใส่ลูกดอก'
/ ka 3 da 1 jo 1 na 2 /	'a blackboard'	'กระดานดำ'
/ ka 3 la 3 ba 1 la 2 /	'calendar'	'ปฏิทิน'
/ ka 3 l̃ 5 /	'the hollow of the valley'	'หุบเขา'
/ ka 4 lĩ 3 /	'Karen people'	'ชาวกะเหรี่ยง, ปกาเกอญอ'

/ ka 5 ko 1 ɔ 1 ɔ 1 /	'to strive'	'พยายาม,ต่อสู้'
/ ka 5 ma 2 /	'path'	'ทางเดิน'
/ ka 5 mja 1 /	'arrow'	'ลูกดอก'
/ ko 1 ɔ 1 /	'to stir the food or soup,to be smart, to row a boat'	'คนอาหาร,แสบ,พายเรือ'
/ ko 1 lo 2 /	'Northern Thai people'	'ชาวไทยเหนือ'
/ ko 3 jɔ 3 /	'a walking stick'	'ไม้เท้า'
/ ko 3 dɔ 3 /	'mountain'	'ภูเขา' ✓
/ ko 3 tɔ 1 ɔ 3 du 2 /	'top of the mountain'	'ยอดเขา'
/ ko 4 ɔ 1 /	'to bite'	'กัด'
/ kɔ̃ 1 tʰe 5 /	'spade'	'เสียม'
/ ko 1 ko 5 mɔ̃ 5 ɔ 1 /	'to be crisp,to be brittle'	'กรอบ'
/ ko 4 /	'six'	'6'
/ ko 4 tʰe 5 /	'sixty'	'60'
/ ko 4 tʰe 5 ɲa 3 /	'sixty-five'	'65'
/ ko 4 tʰe 5 ti 4 /	'sixty-one'	'61'
/ ku 1 lo 2 /	'small room in the granary'	'ห้องนอนเล็ก'ในยุ้งข้าว'
/ ku 3 pʰje 3 ɔ 1 /	'to fly a kite'	'เล่นว่าว'
/ ku 5 lu 5 mɛ 3 tʰa 3 /	'an edible ground lizard'	'นัย'
/ kw 3 lɔ̃ 3 /	'merit'	'บุญคุณ,สิ่งที่นับถือ'
/ kw 3 lɔ̃ 3 tʰa 5 ɔ 1 /	'to ask for merit'	'ขอพรตามความเชื่อ'
/ kw 3 tso 4 /	'a kettle'	'กาต้มน้ำ'
/ kə 1 la 5 mo 3 /	'almost'	'เกือบ'
/ klə 1 /	'the sound of thunder'	'เสียงฟ้าร้อง'

## / kʰ /

/ kʰe 3 tʰɔ 3 /	'one type of the flower'	'ดอกไม้ป่าชนิดหนึ่ง'
/ kʰa 1 ɔ 1 /	'to grow'	'ปลูก'
/ kʰa 1 da 4 /	'the plant that grows at the fence of the house'	'ต้นเทียนหยด'
/ kʰa 1 pʰjo 5 /	'bamboo basket'	'ตะกร้าไม้ไผ่'
/ kʰa 3 bɔ 3 /	'a partition,a wall dividing a room in the house'	'ผนังกั้นห้องชาย/หญิงในบ้านชาวเขา'

/k <sup>h</sup> a 3 da 3 /	'a trap'	'เครื่องขามัก'
/k <sup>h</sup> a 3 hũ 5 /	'a bear'	'หมี'
/k <sup>h</sup> a 3 ɛ 5 /	'dust'	'ฝุ่น' /
/k <sup>h</sup> a 3 la 1 la 3 zɯ 3 /	'leopard'	'เสือตาว'
/k <sup>h</sup> a 3 la 3 /	'tiger'	'เสือ'
/k <sup>h</sup> a 3 la 3 t <sup>h</sup> i 4 xo 4 /	'a tiger year'	'ปีเสือ'
/k <sup>h</sup> a 3 lo 1 bø 1 /	'cave'	'ถ้ำ'
/k <sup>h</sup> a 3 lo 1 k <sup>h</sup> ɔ̃ 3 /	'cave'	'ถ้ำ'
/k <sup>h</sup> a 3 lo 2 /	'big bamboo basket with no cover, or stone, rock'	'ตะกร้าไม้ไผ่แบบไม่มีฝาปิด'
/k <sup>h</sup> a 3 mɛ 1 t <sup>h</sup> ɛ 5 ʔə 1 /	'to have an acid taste in the mouth'	'เปรี้ยวปาก'
/k <sup>h</sup> a 3 mɛ 2 /	'mouth'	'ปาก' /
/k <sup>h</sup> a 3 na 2 /	'soot, lampblack'	'เขม่าควันตะเกียง'
/k <sup>h</sup> a 3 tɛ 4 /	'the pine-apple plant'	'สับปะรด'
/k <sup>h</sup> a 3 sɔ 1 ko 2 /	'chowmein'	'ก๋วยเตี๋ยวแห้ง'
/k <sup>h</sup> a 3 sɔ 1 t <sup>h</sup> ɯ 5 /	'chowmein'	'ข้าวซอย'
/k <sup>h</sup> a 3 ɣə 3 /	'charcoal'	'ถ่าน'
/k <sup>h</sup> a 3 zɔ 5 bɛ 5 dʒɛ 5 /	'lizard'	'จิ้งจก'
/k <sup>h</sup> a 3 zɯ 3 /	'leopard'	'เสือตาว'
/k <sup>h</sup> a 3 dze 5 /	'a hawk'	'เหยี่ยว'
/k <sup>h</sup> a 3 tɛ 2 /	'sambar deer'	'กวาง'
/k <sup>h</sup> a 5 ʔə 1 /	'to drive'	'ขับ, ี่'
/k <sup>h</sup> a 5 ja 1 /	'jute bag'	'ย่ามที่ทำจากป่าน/ใยถัณฐา'
/k <sup>h</sup> a 5 p <sup>h</sup> u 1 /	'a bamboo basket for keeping the unhusked rice'	'ตะกร้าไม้ไผ่ใช้เก็บข้าวเปลือก'
/k <sup>h</sup> a 5 t <sup>h</sup> ɯ 4 /	'sand'	'ทราย'
/k <sup>h</sup> a 3 dʒi 5 za 3 /	'husband'	'สามี'
/k <sup>h</sup> ɔ̃ 1 tɔ 1 za 3 /	'mirror'	'กระจก'
/k <sup>h</sup> ɔ̃ 1 zə 5 /	'a post, a pole, a pillar'	'เสา'
/k <sup>h</sup> ɔ̃ 3 /	'one plot of the field'	'ไร่ 1 แปลง'
/k <sup>h</sup> ɔ̃ 3 da 3 /	'a mattress'	'ที่นอน'
/k <sup>h</sup> ɔ̃ 3 du 5 /	'a clothesline'	'ราวตากผ้า'
/k <sup>h</sup> ɔ̃ 3 lɔ̃ 5 /	'neck'	'คอ' /
/k <sup>h</sup> ɔ̃ 3 lɔ̃ 5 tɯ 4 /	'Adam's apple'	'ลูกกระเดือก'

/ k <sup>h</sup> ɔ̌ 3 p <sup>h</sup> jǔ 3 /	'a cone-shaped cover made of bamboo for keeping food away from flies'	'ฝาชีไม้ไผ่'
/ k <sup>h</sup> ɔ̌ 3 ta 2 /	'a bamboo weaving to hang over the fire-place to conserve food'	'ตะแกรงไม้ไผ่ที่ใช้เก็บอาหารเหนือเตาไฟ'
/ k <sup>h</sup> ɔ̌ 3 /	'classifier for 1 bamboo tree'	'ไม้ไผ่ 1 ลำ'
/ k <sup>h</sup> ɔ̌ 5 to 1 to 1 t <sup>h</sup> ɛ 3 ɲə 1 /	'to prop up'	'ตั้งยันให้สูงขึ้น'
/ k <sup>h</sup> ɔ̌ 5 lo 3 /	'a trough to hold water or food for domestic animals'	'รางไม้ใส่อาหาร/น้ำให้สัตว์'
/ k <sup>h</sup> ɔ̌ 5 /	'classifier of pants or shirts'	'.....ตัว'
/ k <sup>h</sup> o 1 di 3 k <sup>h</sup> o 1 də 5 /	'the longan' (fruit)	'ลำไย'
/ k <sup>h</sup> o 1 p <sup>h</sup> i 3 /	'a bamboo rat'	'ฉับ'
/ k <sup>h</sup> o 1 p <sup>h</sup> u 5 /	'porcupine'	'ม่น'
/ k <sup>h</sup> o 1 tɕa 4 /	'rat'	'หนู'
/ k <sup>h</sup> o 1 tɕa 4 k <sup>h</sup> o 1 dɔ̌ 5 /	'squirrel'	'กระรอก'
/ k <sup>h</sup> o 1 tɕa 4 p <sup>h</sup> ja 3 tɕɔ̌ 3 /	'an animal of the squirrel kind, a chipmunk'	'กระแต'
/ k <sup>h</sup> o 2 k <sup>h</sup> a 5 /	'the knuckle of the hand'	'ข้อมือ'
/ k <sup>h</sup> u 3 bjǎ 3 /	'throat'	'คอ'
/ k <sup>h</sup> u 3 bjǎ 3 tɕɔ̌ 5 pɛ 3 ɲə 1 /	'to strangle'	'บีบคอ'
/ k <sup>h</sup> u 3 p <sup>h</sup> ju 5 /	'sweat'	'เหงื่อ'
/ k <sup>h</sup> u 3 ma 3 /	'a cup, a small bowl'	'ถ้วยเล็ก'
/ k <sup>h</sup> u 3 ma 3 sɛ 1 bje 5 /	'dish'	'จาน'
/ k <sup>h</sup> u 3 tɕa 4 /	'spoon'	'ช้อน'
/ k <sup>h</sup> u 3 tɕa 4 ma 2 /	'a ladle'	'ทัพพี'
/ k <sup>h</sup> u 3 tɕa 4 bja 3 /	'a flipper'	'รองเท้านตะ'
/ k <sup>h</sup> u 4 tɕɔ̌ 5 ɲə 1 /	'to dip into'	'เทใส่เข้าไป'
/ k <sup>h</sup> u 5 ɲə 1 /	'to call'	'เรียกร'
/ k <sup>h</sup> u 5 nɔ̌ 3 ɲə 1 /	'to wake someone up'	'ปลุก'
/ k <sup>h</sup> u 3 k <sup>h</sup> o 1 t <sup>h</sup> ɔ̌ 1 ɲə 1 /	'sign to show that a lot of domestic animal died'	'ไม้ไผ่สานเป็นแถวติดไว้ที่ทางเข้าหมู่บ้านเพื่อบอกว่าที่หมู่บ้านนี้มีสัตว์เป็นโรคตายมาก'
/ k <sup>h</sup> u 3 ma 2 /	'daughter-in-law'	'ลูกสะใภ้'
/ k <sup>h</sup> u 3 t <sup>h</sup> i 4 xo 4 /	'a dog year'	'ปีหมา'
/ k <sup>h</sup> u 3 t <sup>h</sup> ɛ 5 /	'a flea'	'หมัด,เห็บ'

/ k <sup>h</sup> u 5 b <sup>5</sup> 3 /	'leg-wear' (for women)	'ปลอกผ้าที่ผู้หญิงสวมใส่บริเวณน่อง'
/ k <sup>h</sup> u 5 du 4 /	'calves of leg'	'น่อง'
/ k <sup>h</sup> u 5 l <sup>5</sup> 5 /	'ankle'	'ข้อเท้า'
/ k <sup>h</sup> u 5 ma 2 /	'the big toe'	'นิ้วโป้งเท้า'
/ k <sup>h</sup> u 5 ne 5 /	'toe'	'นิ้วเท้า'
/ k <sup>h</sup> u 5 nu 4 /	'ankle bone'	'กระดูกข้อเท้า'
/ k <sup>h</sup> u 5 t <sup>h</sup> a 3 /	'the little toe'	'นิ้วก้อยเท้า'
/ k <sup>h</sup> u 5 to 4 t <sup>h</sup> i 1 ɲə 1 /	'to step'	'ข้าม, ก้าว, ย่าง'
/ k <sup>h</sup> ə 1 ɲə 1 /	'to burn'	'เผา'
/ k <sup>h</sup> ø 3 t <sup>h</sup> o 1 ho 1 ɲə 1 /	'to be inquisitive, curious, meddling'	'อยากรู้อยากเห็น'
/ k <sup>h</sup> ø 5 dʒe 3 /	'like that'	'อย่างนั้น'

## / 1 /

/ li 3 ma 3 /	'letter'	'จดหมาย'
/ li 3 so 5 /	'Lisu people'	'คนลีซอ'
/ li 4 /	'python'	'งูเห่าพิษ'
/ li 5 je 3 za 3 /	'bicycle'	'รถจักรยาน'
/ li 5 je 3 /	'bicycle'	'รถจักรยาน'
/ li 5 pa 3 ɲi 1 hæ 1 dʒo 2 /	'this week'	'สัปดาห์นี้'
/ li 5 pa 3 ɲi 5 k <sup>h</sup> a 5 na 5 dʒo 2 /	'next week'	'สัปดาห์หน้า'
/ li 5 pa 3 ɲi 5 mi 5 n <sup>5</sup> 2 n <sup>5</sup> 2 dʒo 2 /	'last week'	'สัปดาห์ที่แล้ว'
/ li 5 pa 3 ɲi 5 pi 4 dʒo 2 /	'two weeks'	'2 สัปดาห์'
/ li 5 t <sup>h</sup> i 3 /	'lichee'	'ลิ้นจี่'
/ le 1 da 2 ɲə 1 /	'to go up'	'ขึ้นไป'
/ le 1 t <sup>h</sup> a 5 /	'dust'	'ฝุ่น'
/ le 2 /	'market'	'ตลาด'
/ le 3 ɲə 1 /	'to smear'	'ละเลง'
/ le 3 h <sup>h</sup> u 3 t <sup>h</sup> a 3 ɲə 1 /	'to prepare'	'เตรียม'
/ le 3 k <sup>h</sup> u 5 le 3 nu 5 /	'excretions from the armpits'	'กลิ่นรักแร้'
/ le 3 t <sup>h</sup> i 3 ɲə 1 /	'to wash the clothes'	'ซักเสื้อผ้า'
/ le 5 mə 3 /	'ashes'	'ขี้เถ้า'
/ la 1 ɲu 3 ɲə 5 /	'to concentrate'	'รวมกัน'
/ la 1 da 2 /	'the waxing moon'	'ข้างขึ้น-เดือนหงาย'

/ la 1 k <sup>h</sup> ə 3 ʔə 1 /	'to mix'	'ผสม'
/ la 1 li 1 ʔə 1 /	'to wag the tail'	'กระดกหาง'
/ la 1 ɲø 3 ʔə 1 /	'to cook briefly,to parboil (vegetables)'	'รอก'
/ la 1 sa 2 ʔə 1 /	'to keep,to curve'	'เก็บ,โค้ง'
/ la 1 xũ 3 ʔə 1 /	'to force someone to do'	'บังคับให้ทำ'
/ la 1 tɕe 2 /	'the wanning moon'	'ข้างแรม-เดือนมืด'
/ la 3 tʃ <sup>h</sup> e 3 /	'to pour the water over something'	'ราดน้ำใส่'
/ la 3 ʔo 4 la 3 t <sup>h</sup> ɔ̄ 5 /	'armpit'	'รักนริ'
/ la 3 be 3 /	'ring'	'แหวน'
/ la 3 bu 3 /	'Chinese Yunnanese people'	'คนจีนฮ่อ'
/ la 3 bu 1 mo 3 tʃ <sup>h</sup> ø 5 /	'potato'	'มันฝรั่ง'
/ la 3 bu 1 mi 5 xɔ̄ 3 /	'China'	'ประเทศจีน'
/ la 3 di 2 /	'pants'	'กางเกง'
/ la 3 di 2 la 3 də 2 /	'underwear'	'กางเกงใน'
/ la 3 di 2 p <sup>h</sup> e 5 t <sup>h</sup> ɔ̄ 5 do 2 ʔə 1 /	'to mend pants'	'ปะกางเกง'
/ la 3 du 2 /	'arm'	'แขน'
/ la 3 du 4 /	'bracelet'	'กำไลข้อมือ'
/ la 3 ga 3 /	'a skirt like dress,formerly worn by Northern Thai woman'	'ผ้าซิ่น,ผ้าถุง'
/ la 3 ko 2 /	'fingerprint, the lines on the palm'	'เส้นลายมือ'
/ la 3 k <sup>h</sup> a 3 t <sup>h</sup> e 5 /	'to be happy'	'มีความสุข'
/ la 3 lɔ̄ 5 /	'wrist'	'ข้อมือ'
/ la 3 ma 1 ʔu 1 tʃ <sup>h</sup> e 5 /	'a centipede'	'ตะขาบ'
/ la 3 ma 2 /	'the thumb'	'วงช้าง'
/ la 3 nø 5 /	'finger'	'นิ้วมือ'
/ la 3 ɔ̄ 3 /	'finger nail'	'เล็บนิ้วมือ'
/ la 3 ta 2 /	'upstair'	'ชั้นบน'
/ la 3 xo 2 /	'the palm of a hand'	'ฝ่ามือ' /
/ la 3 xo 2 te 3 ʔə 1 /	'to clap the hands'	'ปรบมือ'
/ la 3 xo 4 /	'crippled'	'คนพิการ'
/ la 3 za 3 /	'the palm of a hand'	'ฝ่ามือ'
/ la 3 tɕu 4 /	'elbow'	'ข้อศอก' /
/ la 3 t <sup>h</sup> ə 3 /	'swing'	'ชิงช้า'
/ la 3 tɕu 1 tɕu 1 t <sup>h</sup> e 3 ʔə 1 /	'to clench the hand'	'กำมือ'

/ la 3 tʰa 4 /	'a brassiere'	'เสื้อชั้นในของผู้หญิง'
/ la 3 tʰu̯ 5 /	'mortar'	'ครก'
/ la 3 dʒe 3 /	'gourd reed organ'	'แคนไม้เข้'
/ la 3 dʒe 5 /	'pestle'	'ไม้ตำน้ำพริก'
/ la 4 kʰɔ 2 /	'a branch of a branch'	'กิ่งไม้, ก้านไม้'
/ la 4 sɔ 1 sɔ 1 ʔə 1 /	'to grope'	'คลำ'
/ la 4 tʰɔ̯ 5 /	'corner'	'มุม'
/ la 5 ʔə 2 /	'a window'	'หน้าต่าง'
/ la 5 du 3 bə 3 ʔə 1 /	'to do the ceremony to call back the protecting spirit'	'ทำพิธีเรียกขวัญ'
/ la 5 kə 2 /	'to arrive'	'มาถึง'
/ la 5 kʰu 5 kʰu 5 ʔə 1 /	'to call back the protecting spirit'	'เรียกขวัญ'
/ la 5 ɲa 4 /	'to stammer, to stutter'	'ติดอ่าง'
/ lã 3 /	'rabbit'	'กระต่าย'
/ lã 3 tʰi 4 xo 4 /	'a rabbit year'	'ปีกระต่าย'
/ lo 1 bɛ 5 /	'a goitre'	'คอพอก'
/ lo 1 bjũ 5 /	'kapok'	'ปุ่น'
/ lo 2 /	'classifier of light-bulb' (หลอดไฟ).....หลอด	
/ lo 3 /	'boat'	'เรือ'
/ lo 3 ʔə 1 /	'to dry in the sun'	'ตากแห้ง'
/ lo 3 ga 1 ʔə 1 /	'loud'	'เสียงดัง'
/ lo 3 li 3 /	'car'	'รถยนต์'
/ lo 3 li 3 ʔa 5 bə 1 /	'wheel'	'ล้อรถ'
/ lo 3 li 3 na 3 ʔə 1 /	'to park'	'จอดรถ'
/ lo 5 ba 2 /	'Job's tears'	'ลูกเด็ย'
/ lo 5 ba 2 dɔ 2 /	'white Job's tears'	'ลูกเด็ยขาว'
/ lo 5 ba 2 na 2 /	'black Job's tears'	'ลูกเด็ยดำ'
/ lo 5 ba 2 dʒɔ̯ 2 /	'long Job's tears'	'ลูกเด็ยยาว'
/ lo 5 bɔ 3 /	'Chinese tea'	'ชาจีน'
/ lo 5 bɔ 3 kʰu 3 ma 3 /	'a small glass for drinking the tea'	'ถ้วยตะไลเล็ก ๆ สำหรับดื่มชา, เทฉัก'
/ lo 5 bɔ 3 kw 3 tso 4 /	'a thermos bottle'	'กระติกน้ำร้อน'
/ lo 5 dɔ 3 /	'the cape marigold'	'ดอกดาวเรือง'
/ lo 5 gɔ 2 /	'a stream'	'ลำธาร' ✓

/ lo 5 ɣɔ 3 ma 2 /	'ocean'	'มหาสมุทร'
/ lo 5 xɔ 4 /	'the ceremonial well'	'บ่อน้ำศักดิ์สิทธิ์'
/ lo 5 xɔ̃ 3 /	'the spirit gate'	'ประตูผี'
/ lo 5 xɔ̃ 3 bja 5 /	'the ceremonial spirit gate'	'ประตูผีในพิธีกรรม'
/ lɔ̃ 5 ʔ 1 /	'to jail,to coil'	'ขัง,ขดเป็นวง'
/ lɔ̃ 5 bja 3 /	'dewlap'	'เหนียงสัตว์'
/ lo 1 mɔ 5 /	'a mill'	'กังหัน'
/ lo 1 ʔɔ 2 /	'a stove made from three rocks put together'	'เตาที่ทำจากก้อนหิน 3 ก้อน'
/ lo 3 ʔ 1 /	'enough'	'เพียงพอ'
/ lu 1 ʔ 1 /	'to grab,to scramble for'	'ฉวย,คว้า'
/ lu 1 pa 4 /	'betel leaves'	'ใบพลู'
/ lu 1 ʔ̃ 3 /	'a worm'	'หนอน'
/ lu 5 ʔ 1 /	'to fry'	'ทอด'
/ lɯ̃ 3 bjɯ̃ 5 /	'cemetery'	'ป่าช้า'
/ lɯ̃ 3 gu 1 ne 3 ʔ 1 /	'to bawl'	'ตะโกน,พูดดอก'
/ lə 3 ʔ 1 /	'to peel the fruit"(by hand)	'ปอกเปลือกผลไม้ด้วยมือ'
/ lao 1 mi 5 xɔ̃ 3 /	'Laos'	'ประเทศลาว'

## / m /

/ mi 1 sɔ̃ 5 lɔ̃ 5 /	'the place for making ceremony of the village'	
	'สถานที่ทำพิธีของสัตว์ที่ผิดประเพณี'	
/ mi 1 tʰe 5 /	'a knife'	'มีด'
/ mi 1 tʰe 5 jɔ 1 pɯ̃ 5 /	'a short knife'	'มีดสั้น'
/ mi 1 tʰe 5 mi 1 xo 4 /	'a curved knife'	'มีดโค้ง'
/ mi 1 tʰe 5 mi 5 ma 2 /	'a big knife to use for cutting plants'	'มีดใหญ่ใช้ฟันหญ้า'
/ mi 3 bo 3 /	'a torch,a punk'	'ไต้,คบไฟ'
/ mi 3 bə 2 /	'gun'	'ปืน'
/ mi 3 bə 2 pɯ̃ 5 /	'a pistol'	'ปืนสั้น'
/ mi 3 bə 2 mi 3 si 3 /	'a bullet'	'ลูกปืน'
/ mi 3 da 4 /	'young woman'	'หญิงสาว'
/ mi 3 lɯ̃ 5 /	'flame'	'เปลวไฟ'



/ mi 3 xø 3 /	'smoke'	'ควันไฟ'
/ mi 3 dza 3 /	'fire,firewood'	'ฟืน'
/ mi 3 dza 3 ʔo 1 do 3 ʔə 1 /	'to put firewood'	'เรียงกองฟืน'
/ mi 3 dza 3 bjũ 5 /	'fire-place'	'เตาไฟ'
/ mi 3 dza 3 kə 2 /	'a stack of firewood'	'กองฟืน'
/ mi 3 tsa 3 tsa 2 /	'electric light'	'ไฟฟ้า'
/ mi 3 tʰø 3 /	'widow'	'หญิงหม้าย'
/ mi 3 tʰi 1 pʰo 2 /	'in front'	'ข้างหน้า'
/ mi 3 tʰu 3 /	'a pine tree'	'ต้นสน'
/ mi 3 tʰu 4 /	'a bride'	'เจ้าสาว'
/ mi 4 ʔĩ 5 ʔə 1 /	'to swallow'	'กลืน'
/ mi 5 bja 1 bja 1 ʔə 1 /	'to collapse'	'พัง,ยุบลง'
/ mi 5 nĩ 2 /	'yesterday'	'เมื่อวานนี้'
/ mi 5 nĩ 2 tʰo 3 /	'yesterday morning'	'เช้าเมื่อวานนี้'
/ mi 5 kʰa 3 /	'border'	'เขตแดน'
/ mi 5 lu 1 lu 1 ʔə 1 /	'to have an earthquake'	'แผ่นดินไหว'
/ mi 5 nu 1 xo 4 /	'last year'	'ปีที่แล้ว'
/ mi 5 xĩ 3 /	'country'	'ประเทศ'
/ mi 5 tʰa 3 /	'soil'	'ดิน'
/ mi 5 tʰa 3 du 3 pʰo 3 ʔə 1 /	'to break up the ground'	'ขุดดิน'
/ mi 5 tʰi 4 /	'last night'	'เมื่อคืนนี้'
/ mi 5 dzu 3 /	'a yellow hornet'	'ตัวหมาล่า'
/ me 4 ʔĩ 5 ʔə 1 /	'to swallow'	'กลืน'
/ me 1 mĩ 3 /	'moustache'	'หนวด'
/ me 1 pʰi 5 /	'galingale'	'ข่า'
/ me 1 pʰjo 3 jo 1 pø 3 /	'to have a sullen face'	'หน้าตาบึ้ง'
/ me 1 tʰu 5 tʰu 5 ʔə 1 /	'tricky,fraudulent, to deceive'	'หลอกหลวง'
/ me 3 ʔə 1 /	'to teach'	'สอน'
/ me 3 jo 2 jo 2 ʔə 1 /	'to gargle'	'(ไก่)ขัน'
/ me 3 li 5 /	'mouth organ'	'ทึบเพลงปาก'
/ me 3 la 5 /	'tongue'	'ลิ้น'
/ me 3 tʰĩ 3 /	'chin'	'คาง'
/ me 3 dze 5 /	'canker of the mouth'	'โรคปากนกกระจอก'
/ me 3 tʰi 2 /	'moustache'	'หนวด'

/ me 5 bjǎ 1 da 3 ʔ 1 /	'to gamble'	'เล่นการพนัน'
/ me 5 tɕw 4 tɕw 5 /	'a kind of rhizome'	'เผือกขี้, รากไม้'
/ ma 1 bjǎ 1 bjǎ 1 ʔ 1 /	'blistered'	'แผลพุพอง'
/ ma 1 bjǎ 5 /	'pus'	'หนองในแผล'
/ ma 2 hu 3 za 3 /	'the principle wife'	'เมียหลวง'
/ ma 2 pi 5 za 3 /	'the minor wife'	'เมียช้อย'
/ ma 3 /	'not'	'ไม่'
/ ma 3 ga 3 la 5 si 3 /	'still'	'ยังคง'
/ ma 3 la 2 /	'a species of small bamboo'	'ไม้รวก'
/ ma 3 mu 3 dʒe 3 ɲe 3 ʔ 1 /	'to be rude'	'พูดหยาบ'
/ ma 3 na 4 ʔ 1 /	'shallow'	'ตื้น'
/ ma 3 nɔ̄ 3 dzə 5 ja 2 ʔ 1 /	'to poke'	'กระทุ้ง, ผลักใส'
/ ma 3 pa 1 ʔ 1 /	'similar'	'คล้ายกัน'
/ ma 3 tɕa 5 /	'fire crackers'	'ประทัด'
/ ma 3 tɕ <sup>h</sup> e 2 /	'dry cell battery'	'ถ่านไฟฉาย'
/ ma 3 dʒɔ̄ 5 ʔ 1 /	'to be careless'	'สะเพร่า, ขี้ประมาท'
/ ma 5 ba 3 /	'coconut'	'มะพร้าว'
/ ma 5 bjɔ 4 /	'wound, scar'	'แผล'
/ ma 5 bɔ̄ 2 /	'hole'	'รู'
/ ma 5 de 2 /	'pumpkin'	'ฟักทอง'
/ ma 5 gw 3 /	'scabies'	'สะเก็ดแผล'
/ ma 5 k <sup>h</sup> ə 1 tə 2 /	'the eggplant'	'มะเขือ'
/ ma 5 k <sup>h</sup> ə 1 xa 3 /	'the bitter eggplant'	'มะเขือขม'
/ ma 5 k <sup>h</sup> ə 1 tɕ <sup>h</sup> e 5 /	'tomato'	'มะเขือเทศ'
/ ma 5 lu 2 /	'abscess'	'ฝี'
/ ma 5 mi 3 /	'jackfruit'	'ขนน'
/ ma 5 ma 5 ni 1 /	'real'	'จริง'
/ ma 5 ma 5 ni 1 sə 3 ma 3 ɲə 5 /	'false teeth'	'ฟันปลอม'
/ ma 5 sa 1 bɔ 5 /	'bamboo tree'	'ต้นไม้'
/ ma 5 tɔ̄ 1 tɔ̄ 1 tɕ <sup>h</sup> e 5 /	'a papule, a pustul'	'ผดผื่น'
/ ma 5 tɕa 4 /	'a bottle'	'ขวด'
/ mā 1 mi 5 xɔ̄ 3 /	'Myanmar'	'ประเทศเมียนมา'
/ mā 1 mə 3 /	'Myanmar'	'ประเทศเมียนมา'
/ mā 1 ne 5 /	'bullock'	'วัวที่ตอมนแล้ว'

/ mā 1 ne 5 mā 1 gə 2 /	'a bull'	'วัว'
/ mā 1 ne 5 mā 5 ma 2 /	'cow'	'วัวตัวเมีย'
/ mā 1 ne 5 t <sup>h</sup> i 4 ma 4 /	'a drove of cattle'	'ฝูงวัว-ควาย'
/ mā 1 ne 5 t <sup>h</sup> e 3 /	'the excretion of a bullock'	'ขี้วัว'
/ mā 1 ne 5 t <sup>h</sup> ə 5 bə 3 gə 2 /	'canned milk'	'นมกระป๋อง' ✓
/ mā 1 t <sup>h</sup> ə 5 ha 3 /	'Burmese people'	'คนพม่า'
/ mā 3 /	'horse'	'ม้า'
/ mā 3 bjā 3 /	'the bamboo basket on the back of the horse for carrying plants'	'ตะกร้าไม้ไผ่สานใช้ใส่ของบรรทุกบนหลังม้า'
/ mā 3 də 3 mi 3 /	'horse tail'	'หางม้า'
/ mā 3 ku 2 /	'a stable'	'คอกม้า'
/ mā 3 mā 3 ma 2 /	'female horse'	'ม้าตัวเมีย'
/ mā 3 nə 3 /	'bamboo leg use for walking'	'ขาไม้ไผ่'
/ mā 3 nə 3 nə 3 t <sup>h</sup> e 5 t <sup>h</sup> e 5 ʔə 1 /	'walk racing on bamboo leg'	'การแข่งขันเดินบนขาไม้ไผ่'
/ mā 3 tə 1 xə 4 /	'to latch'	'ใส่กลอน' ✓
/ mā 3 t <sup>h</sup> i 4 xo 4 /	'a horse year'	'ปีม้า'
/ mā 3 t <sup>h</sup> e 5 /	'a male horse'	'ม้าตัวผู้'
/ mā 3 dʒi 3 ga 2 /	'a bolster'	'อาบน้'
/ mə 1 k <sup>h</sup> ə 5 /	'radio, bone'	'วิทยุ, กระดูก'
/ mə 3 ʔə 1 /	'to want'	'อยาก, ต้องการ'
/ mə 3 tə 1 yə 4 /	'a door bolt'	'กลอนประตู' ✓
/ mə 3 t <sup>h</sup> ə 3 /	'motorcycle'	'รถจักรยานยนต์'
/ mə 3 t <sup>h</sup> ə 3 /	'clothes'	'เสื้อผ้า'
/ mə 3 t <sup>h</sup> ə 5 /	'sweet potato'	'มันเทศ'
/ mə 3 t <sup>h</sup> ə 3 t <sup>h</sup> i 3 t <sup>h</sup> ə 1 je 3 /	'a coat hanger'	'ที่แขวนเสื้อผ้า'
/ mə 4 le 5 ʔə 1 /	'to be interested in'	'สนใจ' ✓
/ mə 5 /	'classifier of animal, radio, television, car, bicycle'	'ฉลากชื่อนามสำหรับ สัตว์, วิทยุ, โทรทัศน์, รถยนต์, รถจักรยาน'
/ mə 5 ʔə 1 /	'to see'	'ดู, เห็น'
/ mə 5 dū 3 /	'a coffin'	'โลงศพ' ✓
/ mə 3 t <sup>h</sup> ə 3 ʔə 1 /	'to turn over'	'คว่ำ'
/ mə 5 t <sup>h</sup> e 2 /	'small teapot'	'กาต้มน้ำใบเล็ก'
/ mu 5 p <sup>h</sup> ə 2 /	'a mongoose'	'พังพอน' ✓

/ mə 3 /	'town'	'เมือง'
/ mə 3 sə 3 /	'Lahu people'	'คนมูเซอ'
/ mə 3 tɕə 3 ʔa 3 bɔ 5 /	'one type of local fruit tree'	'ผลไม้ป่า'

## / mj /

/ mja 1 bi 5 /	'tears'	'น้ำตา'
/ mja 1 ɣe 3 /	'to be squint eyed'	'ตาเหล่' ✓
/ mja 1 nɯ 1 jo 1 tʃ <sup>h</sup> ɯ 5 /	'dim eyes'	'ตาพร่ามัว' ✓
/ mja 1 nɯ 1 mja 1 tʃ <sup>h</sup> e 2 /	'eyebrows'	'คิ้ว'
/ mja 1 nɯ 1 na 5 ʔə 1 /	'to have an eye sore'	'ตาเจ็บ, ตาอักเสบ' ✓
/ mja 1 nɯ 3 tʃ <sup>h</sup> e 3 /	'excretions of the eyes'	'ขี้ตา' ✓
/ mja 1 nɯ 1 tʃ <sup>h</sup> e 1 k <sup>h</sup> ɔ̄ 5 /	'eyelash'	'ขนตา' ✓
/ mja 1 nɯ 2 /	'eye'	'ตา'
/ mja 1 p <sup>h</sup> jo 3 /	'forehead'	'หน้าผาก'
/ mja 1 p <sup>h</sup> jo 3 si 3 ʔə 1 /	'handkerchief'	'ผ้าเช็ดหน้า' ✓
/ mja 1 te 1 te 1 ʔə 1 /	'to blink'	'กระพริบตา' ✓
/ mja 1 to 2 /	'eye-glasses'	'แว่นตา' ✓
/ mja 4 le 5 ʔə 1 /	'to loose conciousness, to faint'	'หมดสติ, เป็นลม'
/ mjo 4 na 1 la 3 mɔ̄ 5 /	'gibbon'	'ชะนี'
/ mjo 4 tʃ <sup>h</sup> i 4 xo 4 /	'a monkey year'	'ปีลิง'
/ mjə 4 ʔə 1 /	'to lick'	'เลีย' ✓
/ mjã 3 /	'one type of grass use for black colour dying'	'หญ้าชนิดหนึ่ง ใช้ย้อมสีดำ'
/ mjã 3 ʔə 1 /	'to catch animals'	'จับสัตว์'

## / n /

/ ni 1 tʃ <sup>h</sup> ɔ̄ 3 /	'tomorrow'	'พรุ่งนี้' ✓
/ ne 4 /	'spirit'	'วิญญาณ' ✓
/ na 1 me 5 ʔu 5 dʒu 1 ʔə 1 /	'to catarrh'	'น้ำมูกไหล, เป็นหวัด'
/ na 1 me 5 bɔ̄ 3 /	'nose'	'จมูก'
/ na 1 me 5 bɔ̄ 2 /	'the nostrils'	'รูจมูก' ✓

/ na 1 k <sup>h</sup> 5 5 ma 3 tʃ <sup>h</sup> i 5 ʔə 1 /	'to envy'	'ชิงฉริชยา'
/ na 1 k <sup>h</sup> 5 5 tʃ <sup>h</sup> i 5 ʔə 1 /	'to be glad'	'ดีใจ'
/ na 1 li 3 ko 4 la 4 /	'six o'clock'	'6 นาฬิกา'
/ na 1 li 3 ɲe 3 la 4 /	'eight o'clock'	'8 นาฬิกา'
/ na 1 li 3 ɣø 3 la 4 /	'nine o'clock'	'9 นาฬิกา'
/ na 1 li 3 tʃ <sup>h</sup> e 5 la 4 /	'ten o'clock'	'10 นาฬิกา'
/ na 1 li 3 tʃ <sup>h</sup> e 5 pi 4 la 4 /	'twelve o'clock'	'12 นาฬิกา'
/ na 1 li 3 tʃ <sup>h</sup> e 5 ti 4 la 4 /	'eleven o'clock'	'11 นาฬิกา'
/ na 1 li 3 tʃ <sup>h</sup> i 4 la 4 /	'seven o'clock'	'7 นาฬิกา'
/ na 1 tʃ <sup>h</sup> ũ 5 /	'indoor'	'ในร่ม'
/ na 3 ʔə 1 /	'to break,to rest'	'หยุดพัก'
/ na 3 be 2 /	'a cock's comb'	'หงอนไก่'
/ na 3 be 5 /	'mucus'	'น้ำมูก'
/ na 3 bo 3 /	'deaf'	'หูหนวก'
/ na 3 bo 5 /	'ear'	'หู'
/ na 3 bo 5 na 3 jo 2 /	'earrings'	'ต่างหู'
/ na 3 bo 5 na 3 jø 5 /	'otorrhea'	'น้ำหูไหล'
/ na 3 bo 5 na 3 tʃ <sup>h</sup> ũ 3 /	'earwax'	'ขี้หู'
/ na 3 bja 3 /	'a cock's spur'	'เดือยไก่'
/ na 3 ja 3 xo 4 /	'next year'	'ปีหน้า'
/ na 3 li 3 /	'watch'	'นาฬิกา'
/ na 3 ma 1 si 3 /	'kerosine'	'น้ำมันก๊าด'
/ na 3 pa 1 ʔø 3 /	'fourth'	'ลำดับที่ 4'
/ na 3 pa 1 je 4 /	'eighth'	'ลำดับที่ 8'
/ na 3 pa 1 ko 4 /	'sixth'	'ลำดับที่ 6'
/ na 3 pa 1 pi 4 /	'second'	'ลำดับที่ 2'
/ na 3 pa 1 ɲa 3 /	'fifth'	'ลำดับที่ 5'
/ na 3 pa 1 p <sup>h</sup> ɔ 5 /	'monosodium glutamate'	'ผงชูรส'
/ na 3 pa 1 sũ 5 /	'third'	'ลำดับที่ 3'
/ na 3 pa 1 ɣø 3 /	'ninth'	'ลำดับที่ 9'
/ na 3 pa 1 tʃ <sup>h</sup> e 5 /	'tenth'	'ลำดับที่ 10'
/ na 3 pa 1 tʃ <sup>h</sup> i 4 /	'seventh'	'ลำดับที่ 7'
/ na 3 pa 2 /	'a label,a sign'	'ฉลาก,สัญลักษณ์'
/ na 3 pa 4 /	'ear'	'หู'

/ na 5 ɲə 1 /	'to hurt'	'เจ็บ'
/ na 5 ha 3 ɲə 1 /	'to ask, to listen'	'ถาม, ฟัง'
/ na 5 me 5 tʰi 3 /	'noseblood, epistaxis'	'เลือดกำเดา' ✓
/ na 5 x̌ 2 /	'back'	'หลัง' ✓
/ na 5 x̌ 1 na 5 ɲə 1 /	'to have a backache'	'ปวดหลัง' ✓
/ na 5 x̌ 1 p <sup>h</sup> ɔ 2 /	'behind'	'ข้างหลัง'
/ nã 1 ho 3 dza 3 ja 3 dzə 5 ɲə 1 /	'the afternoon'	'ตอนบ่าย'
/ nã 3 /	'to stop'	'หยุด'
/ nã 5 ma 1 do 1 la 5 ɲə 1 /	'to sunrise'	'พระอาทิตย์ขึ้น' ✓
/ nã 5 ma 1 do 1 xɛ 3 p <sup>h</sup> ɔ 2 /	'East'	'ทิศตะวันออก'
/ nã 5 ma 1 ka 1 ɲ̌ 5 ɲə 1 /	'to sunset'	'พระอาทิตย์ตก' ✓
/ nã 5 ma 1 ka 1 xɛ 3 p <sup>h</sup> ɔ 2 /	'West'	'ทิศตะวันตก'
/ nã 5 ma 2 /	'sock'	'ถุงเท้า' ✓
/ no 1 b̌ 3 /	'daytime'	'ตอนกลางวัน'
/ no 1 ɸ̌ 5 /	'second person pronoun'	'สรรพนามบุรุษที่ ๒'
/ no 5 /	'the ceremonial vacation'	'วันหยุดตามประเพณีอาข่า'
/ ň 1 ľ 1 ľ 1 /	'sun'	'ดวงอาทิตย์'
/ nu 3 si 3 /	'sesame'	'งา' ✓
/ nu 3 t <sup>h</sup> ɛ 5 /	'speck'	'จุดบนใบหน้า, ขี้แมลงวัน'
/ nu 1 da 2 da 2 ɲə 1 /	'to execrate'	'เกลียดชัง, โกรธ'
/ nu 1 də 1 k <sup>h</sup> ɔ 5 je 3 /	'winged bean'	'ถั้วพู'
/ nu 1 də 1 ne 5 /	'red bean'	'ถั้วแดง'
/ nu 1 də 2 /	'common bean'	'ถั้ว'
/ nu 1 kɔ 2 /	'long bean (larger variety)'	'ถั้วฝักยาว'
/ nu 1 ǩ 3 ɲ̌ 5 /	'green soybean'	'ถั้วเหลือง'
/ nu 1 le 2 /	'a pimple'	'สิ่ว'
/ nu 1 ma 1 da 1 ɲə 1 /	'to be in fury'	'โกรธเป็นไฟ'
/ nu 1 ma 1 jo 1 mu 3 /	'nice'	'ดี, น่ารัก'
/ nu 1 ma 1 jo 1 ľ 5 /	'important hasty'	'ใจเร็ว, ฉับไว'
/ nu 1 ma 1 jo 1 dzu 3 dzu 3 ɲə 1 /	'to tremble'	'ใจหายใจคว่ำ'
/ nu 1 ma 1 jo 1 dzu 2 /	'mentally calm'	'สงบ, เยือกเย็น'
/ nu 1 ma 1 ka 1 k <sup>h</sup> a 1 ɲə 1 /	'to be startled'	'ทำให้ตกใจ'
/ nu 1 ma 1 p <sup>h</sup> ɛ 5 /	'to be angry'	'โกรธ'
/ nu 1 ma 1 ť 2 /	'sorry, sad'	'เศร้า, เสียใจ'

/ nu 1 ma 2 /	'heart'	'หัวใจ'
/ nu 1 nu 3 nu 3 ɲ 1 /	'to think'	'คิด'
/ nu 3 zɔ̃ 3 dɔ 3 ɲ 1 /	'nervous'	'กระวนกระวายใจ' ✓
/ nu 5 ɲ 1 /	'to sit'	'นั่ง'
/ nu 5 bo 2 /	'wooden stool'	'ม้านั่งไม้เสื่อ'
/ nu 5 da 3 /	'a bench'	'ม้านั่ง'
/ nu 5 go 3 /	'rattan stool'	'ม้านั่งเสื่อทำจากหวาย'
/ nu 1 mɔ̃ 5 /	'middle finger'	'นิ้วกลาง'
/ nu 3 ɲ 1 lo 3 ɲ 5 /	'suspicious'	'สงสัย' ✓
/ nu 3 dɔ̃ 5 ɲ 1 /	'testy, to hate'	'ขี้โมโห, โกรธง่าย'
/ nu 3 gu 1 ɲ 1 /	'to be a coward, to be timid'	'ขี้เขลา' ✓
/ nu 3 ka 2 ɲ 1 /	'to feel sentimental about'	'รู้สึกคิดถึง'
/ nu 3 t <sup>h</sup> e 3 ɲ 1 /	'to endeavour'	'พยายาม, อุตสาหะ'
/ nu 3 t <sup>h</sup> a 3 ɲ 1 /	'to hope, to remember'	'หวัง, จำ'
/ nu 3 t <sup>h</sup> a 3 ka 5 ma 3 ja 2 ɲ 1 /	'to despair'	'ขอมแซม'
/ nu 3 t <sup>h</sup> a 3 ɲ 3 /	'to strain'	'ตั้งเคียว'

## / ɲ /

/ ɲi 4 /	'two'	'๒'
/ ɲi 4 ja 5 /	'two hundred'	'๒๐๐'
/ ɲi 4 ja 5 ta 4 t <sup>h</sup> i 4 /	'two hundred-one'	'๒๐๑'
/ ɲi 4 t <sup>h</sup> e 5 /	'twenty'	'๒๐'
/ ɲi 4 t <sup>h</sup> e 5 ɲa 3 /	'twenty-five'	'๒๕'
/ ɲi 4 t <sup>h</sup> e 5 ti 4 /	'twenty-one'	'๒๑'
/ ɲi 5 p <sup>h</sup> a 3 /	'the Akha woman who contacts with the spirit'	
	'ผู้หญิงอาข่าที่เป็นผู้ทำพิธีกรรม(แม่ผี)'	
/ ɲi 5 p <sup>h</sup> a 3 t <sup>h</sup> ɔ̃ 3 ɲ 1 /	'to be in communion with the spirit'	
		'ติดต่อกับวิญญาณ'
/ ɲe 1 bɔ̃ 5 /	'grasshopper'	'ตั๊กแตน'
/ ɲe 1 bɔ̃ 5 t <sup>h</sup> ɔ̃ 5 k <sup>h</sup> o 4 /	'shrimp'	'กุ้ง'
/ ɲe 1 dzɔ̃ 5 ɲa 1 be 2 /	'papaya'	'มะละกอ'
/ ɲe 3 t <sup>h</sup> e 5 /	'eighty'	'๘๐'
/ ɲe 3 t <sup>h</sup> e 5 ɲa 3 /	'eighty-five'	'๘๕'

/ ɲe 3 tʰe 5 ti 4 /	'eighty-one'	'81'
/ ɲe 3 ɲə 1 /	'to massage'	'นวด'
/ ɲe 4 ɲə 1 /	'to catch'	'จับ'
/ ɲe 4 ku 1 ɲə 1 /	'to squeeze with the hand'	'บีบมือ'
/ ɲe 4 tʰu 5 ɲə 1 /	'to soothe'	'ปลอบ'
/ ɲe 4 tɕu 1 ɲə 1 /	'to grip'	'เกาะจับ'
/ ɲa 2 ɲə 1 /	'can'	'สามารถ'
/ ɲo 3 ɲi 3 /	'cricket'	'จิ้งหรีด' ✓
/ ɲo 3 lɔ̄ 2 /	'a mud hole, a mud puddle'	'ปลักโคลน'
/ ɲo 3 tʰi 4 xo 4 /	'a buffalo year'	'ปีควาย'
/ ɲo 3 tʰe 3 la 3 ɲu 3 /	'a plough'	'คันไถ'
/ ɲū 5 /	'house, now'	'บ้าน, ตอนนี้'
/ ɲū 5 ɲū 3 /	'the roof'	'หลังคา'
/ ɲū 5 ɲū 3 dzɔ̄ 2 ɲə 1 /	'to thatch'	'มุงหลังคา' ✓
/ ɲū 5 ho.1.(v.).si 3 /	'just'	'เพิ่งจะ, เมื่อกี้'
/ ɲū 5 la 1 sa 2 ɲə 1 /	'to repair the house'	'ซ่อมแซมบ้าน'
/ ɲū 5 za 3 /	'a little house for the newly weds'	
	'กระท่อมหลังเล็กสำหรับชาย-หญิงที่เพิ่งจะแต่งงานใหม่'	

## / ɲ /

/ ɲe 3 ɲə 1 /	'to say, to speak'	'พูด'
/ ɲe 3 kʰo 4 ne 3 ɲə 1 /	'to answer'	'ตอบ'
/ ɲe 3 dzɔ̄ 1 dzɔ̄ 1 /	'utterance'	'คำพูด'
/ ɲe 3 tʰɔ̄ 5 ɲə 1 /	'to complain'	'บ่น'
/ ɲe 5 ɲə 1 /	'to forget'	'ลืม'
/ ɲe 5 ɲe 5 kʰū 1 /	'snow'	'หิมะ' ✓
/ ɲa 1 be 2 /	'banana'	'กล้วย'
/ ɲa 1 be 2 po 3 bo 4 /	'banana leaves'	'ใบกล้วย'
/ ɲa 1 be 2 tʰi 4 dzɔ̄ 5 /	'a bunch of bananas'	'หวีกล้วย'
/ ɲa 1 be 2 tʰi 5 ni 2 /	'banana root'	'รากกล้วย'
/ ɲa 1 du 2 /	'the floescence of the banana plant'	'ปลีกล้วย'
/ ɲa 1 je 2 kʰɔ̄ 5 /	'banana string'	'เชือกกล้วย'
/ ɲa 1 ma 4 /	'plural first person pronoun'	

'สรรพนามบุรุษที่ 1 พหูพจน์'



/ ɲa 3 /	'five'	'5'
/ ɲa 3 ʔə 1 /	'to borrow'	'ขอยืม'
/ ɲa 3 ju 4 k <sup>h</sup> a 1 ʔə 1 /	'to fish'	'ตกปลา'
ɲa 3 pə 1 de 3 /	'a cat fish'	'ปลาดุก'
/ ɲa 3 t <sup>h</sup> e 5 /	'fifty'	'50'
/ ɲa 3 t <sup>h</sup> e 5 ɲa 3 /	'fifty-five'	'55'
/ ɲa 3 t <sup>h</sup> e 5 ti 4 /	'fifty-one'	'51'
/ ɲa 3 t <sup>h</sup> a 3 /	'a salted fish of the mackerel kind'	'ปลาทูเค็ม'
/ ɲa 3 t <sup>h</sup> a 1 ba 1 ha 3 /	'fish bone'	'ก้างปลา'
/ ɲa 3 t <sup>h</sup> a 1 ɣə 2 /	'dry fish'	'ปลานแห้ง'
/ ɲa 3 t <sup>h</sup> a 1 ko 2 /	'a fish pond'	'บ่อปลา'
/ ɲa 3 t <sup>h</sup> a 1 lɔ̄ 2 /	'salted fish'	'ปลาเค็ม' ✓
/ ɲa 3 t <sup>h</sup> a 1 p <sup>h</sup> a 5 t <sup>h</sup> u 5 /	'a school of fishes'	'ฝูงปลา' ✓
/ ɲa 3 t <sup>h</sup> a 1 t <sup>h</sup> i 4 ma 4 /	'canned fish'	'ปลากระป๋อง' -
/ ɲa 3 t <sup>h</sup> a 1 t <sup>h</sup> e 5 bə 3 ɣə 2 /	'candle'	'เทียนไข'
/ ɲa 3 t <sup>h</sup> a 1 t <sup>h</sup> i 5 k <sup>h</sup> ɔ̄ 3 /	'fish'	'ปลา'
/ ɲa 3 dʒw 4 /	'a bait'	'เหยื่อ'
/ ɲa 5 /	'singular first person pronoun'	
		'สรรพนามบุรุษที่ 1 เอกพจน์'
/ ɲə 3 ʔə 1 /	'to shake something'	'เขย่าสิ่งของ' -
/ ɲə 3 pi 1 ʔə 1 /	'to shake the tree'	'เขย่าต้นไม้' -
/ ɲə 3 xɛ 4 ʔə 1 /	'to broke'	'หัก'
/ ɲə 1 ba 4 /	'a baht coin'	'เหรียญบาท'
/ ɲə 5 /	'yes'	'ใช่'
/ ɲɔ̄ 5 ʔə 1 /	'to cry'	'ร้องไห้'
/ ɲɔ̄ 5 ʔa 4 ʔə 1 /	'to sob'	'สะอื้น' ✓

## / p /

/ pɛ 5 le 4 /	'duck'	'เป็ด'
/ pɛ 5 le 4 ma 2 /	'female duck'	'เป็ดตัวเมีย' -
/ pa 1 ʔə 1 /	'to split, to hew'	'ถ่มไม้ตาย'
/ pa 3 ʔə 1 /	'to tie'	'ผูก'

/ pa 3 tʃ <sup>h</sup> w 3 do 1 la 5 ʔ 1 /	'to bud'	'ออกดอก'
/ pɔ 3 pi 5 /	'lemongrass'	'ตะไคร้'
/ po 1 ʔ 1 /	'to look for'	'หา'
/ po 1 k <sup>h</sup> a 2 /	'the compound of a house'	'ลานดินในบริเวณบ้าน'
/ pu 3 ʔ 1 /	'to boil'	'ต้ม'
/ pɯ 1 ʔ 1 /	'to burn (food)'	'เผา,หมก(อาหาร)'

## / pɲ /

/ pɲɛ 3 ʔ 1 /	'a pigtail,a tassel'	'หางหมู'
/ pɲa 1 ʔ 1 /	'to claw,to scratch,to demolish'	'รื้อถอน'

/ p<sup>h</sup> /

/ p <sup>h</sup> i 3 k <sup>h</sup> w 5 /	'bile'	'น้ำดี' ✓
/ p <sup>h</sup> i 3 t <sup>h</sup> e 3 ʔ 1 /	'to close'	'ปิด'
/ p <sup>h</sup> i 5 ʔ 1 /	'hot of taste'	'รสเผ็ด'
/ p <sup>h</sup> e 5 k <sup>h</sup> ɔ̄ 3 ma 2 /	'a woolen coat'	'เสื้อกั๊กขน' ✓
/ p <sup>h</sup> e 5 k <sup>h</sup> ɔ̄ 3 dʒũ 5 le 5 ʔ 1 /	'to blot the clothes'	'ทำเสื้อผ้าเสีย'
/ p <sup>h</sup> e 5 ɔ̄ 4 /	'button'	'กระดุม'
/ p <sup>h</sup> e 5 t <sup>h</sup> ɔ̄ 3 /	'a backpack'	'เป้หลัง'
/ p <sup>h</sup> e 5 t <sup>h</sup> ɔ̄ 5 /	'a bag'	'กระเป๋า,ย่าม'
/ p <sup>h</sup> e 5 xɔ̄ 3 /	'shirt'	'เสื้อ'
/ p <sup>h</sup> e 5 xɔ̄ 3 p <sup>h</sup> e 5 lɔ̄ 5 /	'T-shirt'	'เสื้อยืด'
/ p <sup>h</sup> e 1 t <sup>h</sup> w 5 lo 5 dʒa 5 /	'the frangipani'	'ดอกลิ้นจี่'
/ p <sup>h</sup> e 5 tʃ <sup>h</sup> w 5 /	'temple,monk'	'วัด,พระ'
/ p <sup>h</sup> e 5 dʒe 2 /	'a sheet for a baby'	'ผ้ารองตัวเด็ก'
/ p <sup>h</sup> a 1 la 1 tʃ <sup>h</sup> ɔ̄ 5 ha 3 /	'Westerner or Indian people'	'คนฝรั่ง,แขก'
/ p <sup>h</sup> a 3 ɲi 1 /	'card'	'ไพ่'
/ p <sup>h</sup> a 3 ɲi 1 da 3 ʔ 1 /	'to play cards'	'เล่นไพ่'
/ p <sup>h</sup> a 3 ʔ 1 /	'to exchange'	'แลกเปลี่ยน'
/ p <sup>h</sup> a 5 ma 3 sa 3 k <sup>h</sup> ɔ̄ 5 /	'a lamp mantle'	'ไส้ตะเกียง'
/ p <sup>h</sup> a 3 t <sup>h</sup> a 2 /	'a searchlight'	'ไฟฉาย'
/ p <sup>h</sup> a 4 bu 1 ʔa 3 ma 2 /	'a toad'	'คางคก'

/ p <sup>h</sup> a 5 lo 3 p <sup>h</sup> a 1 le 5 /	'a flag'	'ธง'
/ p <sup>h</sup> a 5 lo 3 p <sup>h</sup> a 1 le 5 k <sup>h</sup> o 1 sə 5 /	'a flag pole'	'เสาธง'
/ p <sup>h</sup> o 3 de 3 /	'a wooden harrow'	'คราดไม้'
/ p <sup>h</sup> o 3 t <sup>h</sup> ɔ̄ 5 /	'comb'	'หวี'
/ p <sup>h</sup> o 3 t <sup>h</sup> ɔ̄ 5 /	'sugar cane'	'อ้อย'
/ p <sup>h</sup> o 3 t <sup>h</sup> ɔ̄ 5 tɛa 4 /	'sweets'	'ของหวาน,ขนม'
/ p <sup>h</sup> o 5 ɲə 1 /	'to move'	'เคลื่อนย้าย'
/ p <sup>h</sup> ɔ̄ 1 ɲə 1 /	'to open'	'เปิด'
/ p <sup>h</sup> o 3 la 5 ɲə 1 /	'to be inflated by heat'	'พองขึ้นเพราะความร้อน'
/ p <sup>h</sup> u 2 /	'village'	'หมู่บ้าน'
/ p <sup>h</sup> u 3 ɲə 1 /	'to be born (animal)'	'(สัตว์) เกิด'
/ p <sup>h</sup> u 3 bɛ 2 /	'pocket'	'กระเป๋าสตางค์' ✓
/ p <sup>h</sup> u 3 t <sup>h</sup> e 5 /	'a fruit fly'	'แมลงหวี่' ✓
/ p <sup>h</sup> u 3 t <sup>h</sup> u 5 /	'big bamboo basket and cover for keeping the clothes'	'ตะกร้าไม้ไผ่ใส่เสื้อผ้า'
/ p <sup>h</sup> u 1 ɲə 1 /	'to scorch'	'เผาจนเกรียม' ✓

/ p<sup>h</sup>j /

/ p <sup>h</sup> je 3 ɲə 1 /	'to untie'	'ปลดอัย(ไม้ผูก)'
/ p <sup>h</sup> ju 5 /	'silver, money'	'เงิน,สตางค์'
/ p <sup>h</sup> ju 5 bi 3 ɲə 1 /	'to give money'	'ให้เงิน'
/ p <sup>h</sup> ju 5 t <sup>h</sup> a 3 du 3 /	'bank'	'ธนาคาร' ✓
/ p <sup>h</sup> ju 5 zū 3 ɲə 1 /	'to pay'	'จ่ายเงิน'
/ p <sup>h</sup> ju 5 t <sup>h</sup> a 5 ɲə 1 t <sup>h</sup> o 5 ha 3 /	'beggar'	'ขอทาน'

## / s /

/ si 1 ɲə 1 /	'to clean'	'ทำความสะอาด'
/ si 1 mu 2 /	'a leaf's fibre'	'เยื่อไม้'
/ si 1 t <sup>h</sup> o 5 /	'to clean the table or the floor'	'เช็ดโต๊ะ,ถูพื้น'
/ si 3 /	'classifier of the thing,( fruit )'	'ลักษณนามของสิ่งของ,ผลไม้'
/ si 3 ɲə 1 /	'to sharpen'	'คม'

/ si 3 gu 3 /	'fig'	'มะเดื่อ'
/ si 3 gu 3 ʔa 1 bo 5 /	'fig tree'	'ต้นมะเดื่อ'
/ si 3 k <sup>h</sup> o 1 lo 5 xa 3 /	'bitter gourd'	'มะระ' ✓
/ si 3 k <sup>h</sup> o 3 /	'cucumber'	'แตงกวา'
/ si 3 ɬ 5 /	'lemon'	'มะนาว'
/ si 3 ɬ 5 t <sup>h</sup> ɬ 5 /	'orange'	'ส้ม'
/ si 3 ɲa 1 ʔa 1 /	'to know'	'รู้, รู้จัก'
/ si 3 ɲū 1 ʔa 1 bo 5 /	'one type of fruit tree'	'ต้นไม้'
/ si 3 xa 3 la 3 ma 2 /	'the small eggplant'	'มะเขือ'
/ si 3 t <sup>h</sup> o 5 /	'a tree of the family Euphorbiaceae'	'มะทามป้อม' ✓
/ se 1 ɡɔ̃ 5 t <sup>h</sup> e 1 la 5 ʔa 1 /	'mid-night time'	'เที่ยงคืน'
/ se 1 p <sup>h</sup> u 5 /	'garlic'	'กระเทียม'
/ se 3 /	'the reed of the loom'	'ฟืมทอผ้า'
/ se 3 ʔa 1 /	'to scatter'	'กระจัดกระจาย'
/ se 3 ɡɔ̃ 2 /	'a lean-to'	'เพิง'
/ se 3 le 1 p <sup>h</sup> a 3 /	'an enameled basin'	'ชามเคลือบ'
/ se 3 no 2 /	'shoes'	'รองเท้า'
/ se 3 no 2 lɛ̃ 5 /	'canvas shoes'	'รองเท้าผ้าใบ'
/ se 3 no 2 te 2 /	'slippers'	'รองเท้าแตะ'
/ se 5 bo 3 bo 5 /	'onion'	'หอมหัวใหญ่'
/ se 5 bo 3 ne 5 /	'shallot'	'หอมแดง'
/ se 5 ju 3 t <sup>h</sup> i 5 ʔa 1 /	'late at night'	'ดึก'
/ se 5 p <sup>h</sup> u 2 /	'plastic mat'	'เสื่อพลาสติก'
/ sa 1 ʔa 1 /	'to weigh'	'ชั่งน้ำหนัก'
/ sa 3 ʔa 1 /	'to steam'	'ไอน้ำ'
/ sa 3 də 4 /	'salt'	'เกลือ'
/ sa 3 də 4 t <sup>h</sup> ɬ 5 /	'sugar'	'น้ำตาล'
/ sa 3 k <sup>h</sup> ɔ̃ 5 /	'thread'	'ด้าย'
/ sa 3 la 1 p <sup>h</sup> a 3 /	'resthouse'	'ศาลา' ✓
/ sa 3 la 3 /	'a carpenter, cotton'	'ช่างไม้, ผ้า'
/ sa 3 la 5 /	'soul'	'วิญญาณ'
/ sa 3 nū 5 za 3 ʔa 1 /	'to weave'	'ทอผ้า' ✓
/ sa 3 p <sup>h</sup> i 5 /	'chilli'	'พริก'
/ sa 3 p <sup>h</sup> i 5 sa 3 ɬ 5 /	'paprika, cayenne pepper'	'พริกป่น' ✓

/ sɛ 3 p <sup>h</sup> i 5 t <sup>h</sup> ɔ 5 ɲu 3 /	'bell pepper'	'พริกหยวก'
/ sɛ 3 p <sup>h</sup> a 5 /	'cloth'	'ผ้า'
/ sɛ 4 /	'air'	'อากาศ'
/ sɛ 4 do 1 le 5 ɲə 1 /	'to evaporate'	'ระเหย, ละลาย'
/ sɛ 4 ɔɔ 5 /	'to breath'	'หายใจ'
/ sɛ 4 ɔɔ 5 m <sup>ɔ</sup> i 5 ɲə 1 /	'to snore'	'กรน'
/ sɛ 4 dzɔ̄ 3 ɲə 1 /	'to hold one's breath'	'จิบซีพจร' ✓
/ sɛ 5 p <sup>h</sup> e 3 n <sup>ɔ</sup> i 1 /	'the day after tomorrow'	'วันมะรืนนี้'
/ sɛ̄ 3 bu 1 sɔ 5 ɲi 5 /	'school'	'โรงเรียน'
/ sɔ 1 ɲə 1 /	'to smear'	'ละเลงทาจนเนียน'
/ s <sup>ɔ</sup> i 3 /	'ink'	'หมึกปากกา'
/ s <sup>ɔ</sup> i 3 bɔ 1 da 1 du 5 /	'pencil'	'ดินสอ'
/ s <sup>ɔ</sup> i 3 ɲi 4 /	'the stump of a tree'	'ตอไม้'
/ s <sup>ɔ</sup> i 3 xɛ 3 /	'to be dented'	'เป็นรอยเว้า'
/ s <sup>ɔ</sup> i 3 tɔ 1 t <sup>h</sup> a 3 ɲə 1 /	'to tattoo'	'สัก (ทริท)' ✓
/ sɔ 5 /	'lock'	'แม่กุญแจ' ✓
/ sɔ 5 sɔ 5 k <sup>h</sup> ɔ̄ 3 /	'key'	'ลูกกุญแจ' ✓
/ s <sup>ɔ</sup> i 3 ja 5 /	'three hundred'	'300'
/ s <sup>ɔ</sup> i 3 t <sup>h</sup> e 5 /	'thirty'	'30'
/ s <sup>ɔ</sup> i 3 t <sup>h</sup> e 5 ɲa 3 /	'thirty-five'	'35'
/ s <sup>ɔ</sup> i 3 t <sup>h</sup> e 5 ti 4 /	'thirty-one'	'31'
/ s <sup>ɔ</sup> i 3 t <sup>h</sup> ɔ̄ 5 /	'triangle'	'สามเหลี่ยม'
/ s <sup>ɔ</sup> i 5 /	'three'	'3'
/ s <sup>ɔ</sup> i 5 k <sup>h</sup> ɔ̄ 3 /	'to steal'	'ขโมย'
/ s <sup>ɔ</sup> i 5 k <sup>h</sup> ɔ̄ 3 t <sup>h</sup> ɔ 5 ha 3 /	'a thief'	'นักขโมย'
/ s <sup>ɔ</sup> i 5 mɯ 3 /	'to be rich'	'รวย'
/ sə 3 /	'tooth'	'ฟัน'
/ sə 3 jo 2 da 1 du 5 /	'toothbrush'	'แปรงสีฟัน'
/ sə 3 jo 2 jo 2 ɲə 1 /	'to brush one's teeth'	'แปรงฟัน'
/ sə 3 jo 2 dʒa 1 ga 3 /	'toothpaste'	'ยาสีฟัน'
/ sə 3 ma 2 /	'molar'	'ฟันกราม' ✓
/ sə 3 na 5 ɲə 1 /	'to have a toothache'	'ปวดฟัน'
/ sə 3 sə 3 d <sup>ɔ</sup> i 3 /	'gum'	'เหงือก' ✓
/ sə 3 ɲa 3 /	'paper'	'กระดาษ'

/ sə 3 ɣa 3 ʔa 5 ta 4 /	'a sheet of paper'	'แผ่นกระดาษ'
/ sə 3 tʰe 3 /	'food particles between the teeth'	'ซึ่ฟัน'

## / t /

/ tɛ 1 ʔə 1 /	'to forge the iron'	'ตีเหล็ก'
/ tɛ 1 ko 1 ʔə 1 /	'to dry in sun and smoke'	'ตากแห้งรมควัน'
/ tɛ 1 ma 2 /	'guava'	'ผลฝรั่ง' ✓
/ tɛ 1 dʒɛ 1 ʔə 1 /	'to shake something'	'สะบัดของ'
/ ta 4 /	'classifier of one piece of paper'	'(กระดาษ) 1 แผ่น'
/ ta 4 si 3 /	'next month'	'เดือนหน้า'
/ tu 1 ʔə 1 /	'to bump into'	'กระแทกเข้าไป' ✓
/ tə 1 ʔə 1 /	'to be naughty'	'ซุกซน'
/ tə 1 tʰɔ 5 ʔə 1 /	'to be stubborn'	'ดื้อ'
/ tə 3 ʔə 1 /	'to gnaw'	'ทาว' ✓

## / tʰ /

/ tʰi 4 /	'one'	'1'
/ tʰi 4 ja 5 /	'one hundred'	'100'
/ tʰi 4 ja 5 ta 4 ʔə 3 /	'one hundred-four'	'104'
/ tʰi 4 ja 5 ta 4 pi 1 /	'one hundred-two'	'102'
/ tʰi 4 ja 5 ta 4 pi 4 tʰe 5 /	'one hundred-twenty'	'120'
/ tʰi 4 ja 5 ta 4 ɲa 3 /	'one hundred-five'	'105'
/ tʰi 4 ja 5 ta 4 tʰi 4 /	'one hundred-one'	'101'
/ tʰi 4 ja 5 ta 4 sū 5 /	'one hundred-three'	'103'
/ tʰi 4 ja 5 ta 4 tʰe 5 /	'one hundred-ten'	'110'
/ tʰi 4 ja 5 ta 4 tʰe 5 ti 4 /	'one hundred-eleven'	'111'
/ tʰi 4 ko 1 lo 1 tʰɔ 3 /	'neighbour'	'เพื่อนบ้าน'
/ tʰi 4 ko 1 lo 3 ʔə 5 di 1 ʔə 1 /	'to be equal'	'เท่ากัน'
/ tʰi 4 mw 5 /	'ten thousand'	'10,000'
/ tʰi 4 nɔ̄ 1 ʔa 3 na 1 na 2 /	'someday'	'บางวัน'
/ tʰi 4 po 2 ʔa 3 na 1 na 2 /	'sometimes'	'บางครั้ง'
/ tʰi 4 pʰa 5 /	'one thousand'	'10,000'

/ t <sup>hi</sup> 4 so 3 /	'a cubit'	'๑ ศอก'
/ t <sup>hi</sup> 4 ya 3 ʔa 3 na 1 na 2 /	'someone'	'บางคน'
/ t <sup>hi</sup> 4 dʒe 3 ʔa 3 na 2 /	'something'	'บางอย่าง'
/ t <sup>hi</sup> 4 dʒe 1 ma 3 dũ 1 nũ 3 ʔ 1 /	'to be naked'	'เปลือยกาย'
/ t <sup>hi</sup> 4 dʒe 1 ma 3 ʔə 5 /	'It doesn't matter!'	'ไม่เป็นไร'
/ t <sup>hi</sup> 4 dʒe 3 ma 3 dzɔ̄ 5 /	'Not at all!'	'ไม่ได้ทำอะไร'
/ t <sup>he</sup> 5 ʔə 1 /	'to pound sticky rice'	'ตำข้าวเหนียว'
/ t <sup>he</sup> 5 bja 4 /	'a board'	'แผ่นกระดาน'
/ t <sup>he</sup> 5 dʒe 1 ʔə 1 /	'to nudge (horse,pig)'	'ตุนด้วยจมูก'
/ t <sup>he</sup> 1 k <sup>hũ</sup> 3 ʔə 1 /	'to round up (cattle)'	'ล้อมจับสัตว์'
/ t <sup>he</sup> 1 tɕe 1 ʔə 1 /	'to chase'	'ไล่สัตว์'
/ t <sup>he</sup> 3 ʔə 1 /	'to cut'	'ตัด'
/ t <sup>he</sup> 3 di 1 ʔə 1 /	'to trim the hair'	'เล็มผม'
/ t <sup>he</sup> 3 da 5 /	'scissor'	'กรรไกร'
/ t <sup>ha</sup> 3 si 3 bje 1 ʔa 5 dʒe 3 /	'television'	'โทรทัศน์'
/ t <sup>ha</sup> 3 /	'Don't!'	'อย่า'
/ t <sup>ha</sup> 3 ʔə 1 /	'to postpone'	'เลื่อนไป'
/ t <sup>ha</sup> 3 si 3 bja 1 /	'movie'	'ภาพยนตร์'
/ t <sup>hã</sup> 3 xo 3 /	'the wax gourd'	'ฟักเขียว'
/ t <sup>hɔ̄</sup> 3 do 1 t <sup>hɔ̄</sup> 5 ha 3 /	'a prisoner'	'นักโทษ'
/ t <sup>hɔ̄</sup> 5 bu 4 /	'type of Acacia'	'ชะอม'
/ t <sup>hɔ̄</sup> 3 ʔə 1 /	'to pound'	'ตำ'
/ t <sup>hɔ̄</sup> 3 /	'drum'	'กลอง'
/ t <sup>hɔ̄</sup> 3 k <sup>hũ</sup> 3 /	'an ant-hill'	'ตัวม'
/ t <sup>hɔ̄</sup> 3 la 2 t <sup>hi</sup> 4 xo 4 /	'a mule year'	'ปีห่อ'
/ t <sup>hɔ̄</sup> 3 me 5 p <sup>hɔ̄</sup> 2 /	'the North'	'ทิศเหนือ'
/ t <sup>hɔ̄</sup> 3 p <sup>hɔ̄</sup> 1 je 1 ma 2 /	'sunflower'	'ดอกทานตะวัน'
/ t <sup>hɔ̄</sup> 3 p <sup>hɔ̄</sup> 1 je 1 ma 2 ʔa 5 nuw 2 /	'sunflower seed'	'เมล็ดของดอกทานตะวัน'
/ t <sup>hɔ̄</sup> 3 p <sup>hũ</sup> 3 ʔə 1 /	'to meet'	'พบ'
/ t <sup>hɔ̄</sup> 3 t <sup>hũ</sup> 5 si 3 /	'a large mortar for pounding paddy to separate the grins from the chaff'	'ครกกระเดื่อง'
/ t <sup>hɔ̄</sup> 3 dʒe 1 ʔə 1 /	'to nudge with the arm'	'ตันด้วยแขน'
/ t <sup>hɔ̄</sup> 5 ʔə 1 /	'to trap'	'บรวกของบนเครื่องม้า'
/ t <sup>hu</sup> 5 ʔə 1 /	'to fell a tree,to wake up,to chop'	'ตัดต้นไม้, ตัน'

/ t <sup>h</sup> ə 1 /	'this'	นี้
/ t <sup>h</sup> ɔ̄ 3 ɹə 1 /	'to point'	ชี้
/ t <sup>h</sup> ɔ̄ 3 t <sup>h</sup> ɛ 2 /	'the index finger'	นิ้วชี้
/ t <sup>h</sup> ai 1 mi 5 xɔ̄ 3 /	'Thailand'	'ประเทศไทย'
/ t <sup>h</sup> ai 1 mi 5 t <sup>h</sup> a 3 /	'Thailand'	'ประเทศไทย'
/ t <sup>h</sup> ai 1 t <sup>h</sup> ɔ̄ 5 ha 3 /	'Thai people'	'คนไทย'

## / x /

/ xa 1 ɹə 1 /	'to spit'	'ถ่มน้ำลาย'
/ xa 3 bɔ̄ 1 /	'a worm in a section of bamboo'	'ตัวด้วงไม้ไผ่'
/ xɔ̄ 3 ɹə 1 /	'to spread out'	'หว่าน' ✓
/ xɔ̄ 3 /	'chest'	'อก'
/ xɔ̄ 5 ɲɛ 1 ba 2 /	'formerly'	'เมื่อก่อนนี้'
/ xɔ̄ 5 dʒɛ 3 me 1 /	'because'	'เพราะว่า'
/ xa 3 p <sup>h</sup> u 3 /	'husk'	'รำข้าว' ✓
/ xa 3 zɔ̄ 5 bɛ 1 dʒɛ 5 /	'a chameleon'	'กิ้งก่า'
/ xo 4 /	'year,age'	'ปี,อายุ'
/ xɔ̄ 3 tɕə 5 ɹə 1 /	'to cross'	'ข้าม'

## / y /

/ yɛ 4 /	'a bunch of bananas'	'กล้วย)...หวี'
/ ya 1 ɹə 1 /	'to float'	'ลอย'
/ ya 1 k <sup>h</sup> a 5 /	'bamboo basket'	'ถ้อยไม้ไผ่ใช้แทนของ'
/ ya 3 /	'classifier of person'	'(คน) ...คน'
/ ya 3 lɔ̄ 2 /	'a pond,a well'	'บ่อน้ำ'
/ yɔ̄ 3 ɹə 1 /	'to divorce,to separate'	'หย่าร้าง'
/ yɔ̄ 5 ɹə 1 /	'to weed'	'ทางหญ้า'
/ yɔ̄ 5 dʒɛ 1 ho 1 ɹə 1 /	'to stretch one's neck out to see'	'กระชากคอ'
/ yɔ̄ 5 da 3 /	'ring finger'	'นิ้วนาง'
/ yu 3 ɹə 4 /	'kite'	'ว่าว'
/ yə 3 ɹə 1 /	'to crank the machine'	'หมุนเครื่องยนต์'
/ yɔ̄ 3 ɹə 1 /	'to chew'	'เคี้ยว' ✓



/ ʎø 3 /	'nine'	'9'
/ ʎø 3 tʰe 5 /	'ninety'	'90'
/ ʎø 3 tʰe 5 ŋa 3 /	'ninety-five'	'95'
/ ʎø 3 tʰe 5 ti 4 /	'ninety-one'	'91'
/ ʎø 5 ɔ̄ 3 mja 1 dʒe 3 /	'those'	'เหล่านั้น'
/ ʎø 5 dʒe 3 /	'that'	'นั้น'

## / z /

/ zi 5 dʒe 3 hu 1 p <sup>h</sup> ɔ̄ 2 /	'in the future'	'ในอนาคต'
/ zi 5 dzi 5 ɔ̄ 1 /	'a corpse'	'ศพ' ✓
/ za 1 ɔ̄ 2 /	'egg'	'ไข่'
/ za 1 ɔ̄ 2 ba 2 /	'egg, white albumen'	'ไข่ขาว' ✓
/ za 1 ɔ̄ 2 ne 5 /	'egg yolk'	'ไข่แดง' ✓
/ za 1 he 5 ɔ̄ 1 /	'to get'	'ได้รับ'
/ za 1 ju 3 du 3 /	'a hammock'	'เปลญวน' ✓
/ za 1 ji 3 /	'jungle fowl'	'ไก่ป่า'
/ za 1 p <sup>h</sup> ø 5 p <sup>h</sup> ø 5 ɔ̄ 1 /	'to crow (of a cock)'	'ไก่ขัน'
/ za 1 t <sup>h</sup> i 4 xo 4 /	'a chicken year'	'ปีไก่'
/ za 1 tɕi 2 p <sup>h</sup> ø 5 /	'rooster'	'ไก่ตัวผู้'
/ za 1 tɕi 4 /	'chicken'	'ไก่'
/ za 1 tɕ <sup>h</sup> e 2 /	'a tassel of woman's hair dressing made of dyed horse-tail'	
	'หางม้าย้อมสีใช้เป็นเครื่องประดับอย่างหนึ่งบนผมทวยของหญิงอาข่า'	
/ za 3 ɔ̄ 1 /	'to weave'	'ทอผ้า'
/ za 3 da 4 /	'young man'	'ชายหนุ่ม'
/ za 3 ju 3 je 3 /	'cradle'	'เปล'
/ za 3 ku 1 za 3 /	'young people'	'คนหนุ่ม-สาว'
/ za 3 k <sup>h</sup> a 2 /	'employee'	'ลูกจ้าง'
/ za 3 k <sup>h</sup> a 3 /	'boyfriend or girlfriend'	'แฟนหนุ่ม, แฟนสาว'
/ za 3 mi 1 za 3 /	'wife'	'ภรรยา'
/ za 3 n <sup>ɔ̄</sup> 1 ɔ̄ 3 ma 2 /	'a mother who has an infant'	'แม่ลูกอ่อน'
/ za 3 tɔ̄ 1 ɔ̄ 1 /	'to be naughty'	'ซุกซน'
/ za 3 tɕi 2 za 1 ma 2 /	'to hatch'	'ฟักไข่'

/ za 3 tɕə 1 ʔə 1 /	'to conceive'	'ตั้งครรภ์' ✓
/ za 3 tɕʰu 1 ʔa 3 da 2 /	'step father'	'พ่อเลี้ยง'
/ za 3 tɕʰu 1 ʔa 3 ma 2 /	'step mother'	'แม่เลี้ยง'
/ za 3 dʒɔ 3 /	'shuttle'	'กระสวยทอผ้า'
/ za 4 ma 2 /	'female pig'	'หมูตัวเมีย'
/ za 4 pʰu 5 tɕʰi 5 tʰe 2 /	'a section of bamboo stem on the ground'	
	'ส่วนของลำไม้ไผ่ที่อยู่บนพื้นดิน'	
/ za 4 tʰi 4 xo 4 /	'a pig year'	'ปีหมู'
/ za 4 tʰe 3 /	'wild pig'	'หมูป่า' ✓
/ za 5 ma 2 /	'a winnowing basket'	'กระด้งคัดข้าว'
/ zɔ 1 ʔə 1 /	'to fly'	'บิน' ✓
/ zɔ̃ 1 zɔ̃ 5 xo 4 /	'custom,tradition'	'ประเพณี'
/ zɔ̃ 1 zɔ̃ 5 xo 4 bɔ̃ 1 le 5 ʔə 1 /	'to violate custom or tradition'	'ผิดประเพณี'
/ zɔ̃ 1 zɔ̃ 5 xo 4 dzɔ̃ 5 ʔə 1 /	'to perform a ceremony'	'จัดพิธีกรรมตามประเพณี'
/ zɔ̃ 5 xo 3 za 3 lɔ̃ 3 bjɔ̃ 5 /	'cemetary for a baby'	'หลุมฝังศพสำหรับเด็ก'
/ zɔ̃ 1 ʔə 1 /	'to pay'	'จ่ายเงิน'
/ zə 1 ʔə 1 /	'to twist'	'หมุน' ✓
/ zə 1 nu 1 ʔə 1 /	'to grind'	'ลับมีด'
/ zə 5 ʔə 1 /	'to buy'	'ซื้อ'

## / dz /

/ dzi 3 ʔə 1 /	'to ride'	'ขี่,ขี่'
/ dze 1 ʔə 1 /	'to abort,to miscarry'	'แท้งลูก'
/ dza 3 ʔə 1 /	'to eat'	'กิน'
/ dza 4 tɕe 1 du 3 /	'the religious area for killing an animal which is against tradition.'	'ลานฆ่าสัตว์ตามพิธีกรรม'
/ dzɔ 1 ʔə 1 /	'to study'	'เรียน'
/ dzɔ 1 pa 1 ʔə 1 /	'to be domesticated'	'อยู่บ้าน,ทำให้เชื่อง'
/ dzɔ 5 la 1 ja 3 /	'summer'	'ฤดูร้อน'
/ dzɔ̃ 3 le 5 ʔə 1 /	'to be puzzled'	'งง'
/ dzɔ̃ 3 ta 4 /	'a chisel'	'ฉิว'
/ dzɔ̃ 3 tʰe 3 ʔə 1 /	'to be patient'	'อดทน'
/ dzɔ̃ 5 /	'a bunch of bananas'	'กล้วย 1 ทวี'

/ dzɔ̄ 5 mu 3 ɲ 1 /	'to repair'	'ซ่อมแซม'
/ dzu 4 /	'a pair of shoes'	'รองเท้า 1 คู่'
/ dzu 4 ɲ 1 /	'to wash,to take a bath'	'ล้าง,อาบน้ำ'
/ dzə 3 ɲ 1 /	'to weave (a basket)'	'สานตะกร้า'
/ dzə 5 ɲ 1 /	'to pass over'	'ข้ามผ่านไป'
/ dzə 5 si 3 /	'last month'	'เดือนที่แล้ว'

## / ʔ /

/ ʔɛ 1 ɲ 1 /	'to bark'	'เห่า'
/ ʔɔ 2 ɲ 1 /	'to pierce,to inoculate,to gore'	'แทง'
/ ʔo 2 ɲ 1 /	'to build'	'สร้าง'
/ ʔo 4 di 1 ɲ 1 /	'lightening'	'ฟ้าแลบ'
/ ʔu 4 ɲ 1 /	'to peel the fruit (by knife),to pinch,to nip'	'ปอกผลไม้ด้วยมีด,หยิก,หนีบ'
/ ʔu 4 je 5 /	'cousin'	'ญาติ'
/ ʔə 1 ɲ 1 /	'to pluck'	'เด็ดดอกไม้'
/ ʔə 1 mā 3 /	'tick'	'ตุ๊กที่นอน'
/ ʔə 1 p <sup>h</sup> u 5 ɲ 1 /	'to extricate'	'แก้ออก'

/ ʔ<sup>h</sup> /

/ ʔ <sup>h</sup> i 1 da 5 /	'chopstick'	'ตะเกียบ'
/ ʔ <sup>h</sup> i 3 ɲ 1 /	'to wash'	'ซัก'
/ ʔ <sup>h</sup> i 3 ɲ <sup>h</sup> ə 3 ɲ 1 /	'to hang'	'แขวน'
/ ʔ <sup>h</sup> i 5 /	'fat,oil'	'ไขมัน,ไขมัน'
/ ʔ <sup>h</sup> i 5 ni 2 /	'root,a vine'	'รากไม้,เถาวัลย์'
/ ʔ <sup>h</sup> e 5 /	'ten'	'10' ✓
/ ʔ <sup>h</sup> e 5 sū 5 /	'thirteen'	'13'
/ ʔ <sup>h</sup> e 5 ti 4 /	'eleven'	'11'
/ ʔ <sup>h</sup> e 1 k <sup>h</sup> ɔ̄ 5 /	'hair (head)'	'ผม'
/ ʔ <sup>h</sup> e 3 ɲ 1 /	'to plow'	'ไถดิน'
/ ʔ <sup>h</sup> e 3 ma 2 /	'a hoe'	'จอบ'
/ ʔ <sup>h</sup> e 3 t <sup>h</sup> ɔ̄ 3 na 5 /	'to be sick'	'ป่วย,ไม่สบาย'

/ ʰa 3 ʔ 1 /	'to guess'	'เดา'
/ ʰɔ 1 p <sup>h</sup> e 5 /	'twins'	'ฝาแฝด'
/ ʰɔ 1 mjã 5 /	'name'	'ชื่อ'
/ ʰɔ 1 ʰi 5 /	'to be stingy'	'ขี้เหนียว'
/ ʰɔ 3 /	'waterfall'	'น้ำตก'
/ ʰɔ 3 ʔ 1 /	'to jump'	'กระโดด'
/ ʰɔ 3 do 1 la 5 ʔ 1 /	'to spring up'	'โผล่'
/ ʰɔ 3 du 5 /	'sugar pea'	'ถั่วลันเตา'
/ ʰɔ 3 du 5 ma 2 /	'sweet pea'	'ถั่วลันเตาใหญ่'
/ ʰɔ 3 gu 2 ʔ 5 ʔ 1 /	'to be startled,to be surprised'	'แปลกใจ'
/ ʰɔ 3 pu 1 ʔa 1 lo 5 /	'cobra'	'งูเห่า'
/ ʰɔ 3 ʰu 4 /	'ginger'	'ขิง'
/ ʰɔ 3 ʰə 5 ʔ 1 /	'to hop'	'กระโดดข้าม'
/ ʰɔ 5 ʔu 3 /	'crazy'	'มั่ว'
/ ʰɔ 5 ha 3 /	'person'	'คน'
/ ʰɔ 5 ha 3 du 3 xɔ̃ 3 /	'a grave'	'หลุมฝังศพ'
/ ʰɔ 5 ha 3 jo 1 ʰɔ 2 /	'a cripple'	'คนพิการ'
/ ʰɔ 5 ha 3 t <sup>h</sup> i 4 bjũ 5 /	'a group of people'	'กลุ่มคน'
/ ʰɔ 5 mo 3 /	'elder'	'คนแก่คนฒ่า'
/ ʰɔ 5 dʒu 1 de 1 ʔ 1 /	'to rob'	'ปล้น'
/ ʰɔ 5 dʒə 3 /	'tribe,language'	'เผ่า,ภาษา'
/ ʰɔ 5 /	'to hug'	'กอด'

## / ๕ /

/ ʰi 1 do 4 /	'matches'	'ไม้ขีดไฟ'
/ ʰi 3 mje 4 /	'goat'	'แพะ'
/ ʰe 3 ʔ 1 /	'to rub the nose'	'ขยี้จมูก'
/ ʰe 3 ʔu 1 k <sup>h</sup> u 3 ma 3 /	'a glass'	'แก้วน้ำ'
/ ʰe 4 ʔ 1 /	'to scrub'	'ขัดพื้น'
/ ʰe 1 ʔ 1 /	'to run'	'วิ่ง'
/ ʰe 1 bjã 1 ʔ 1 /	'to leave'	'จากไป'
/ ʰe 1 za 3 ʔ 1 /	'to avoid being seen,to keep out of sight'	'หลบซ่อน'
/ ʰe 5 le 4 /	'cymbals or small cup-shaped cymbals'	'ฉิ่ง,ฉาบ'

/ tsa 1 /	'machine'	'เครื่องยนต์'
/ tsa 1 pi 5 tsa 5 no 4 /	'one type of a caterpillar (in cow's dung)	'ด้วงปีกแข็งชนิดหนึ่งชอบอยู่ในขี้วัว'
/ tsa 1 pø 2 /	'navel'	'สะดือ'
/ tsa 1 p <sup>h</sup> ø 3 /	'navel of animal'	'สะดือของสัตว์'
/ tsa 1 t <sup>h</sup> 5 3 /	'the umbilical cord'	'สายสะดือ'
/ tsa 1 t <sup>h</sup> ũ 3 /	'a knot'	'เงื่อนปม'
/ tsa 4 hũ 1 /	'hair (body)'	'ขนตามตัว'
/ tsa 4 hũ 1 t <sup>h</sup> o 3 t <sup>h</sup> u 5 t <sup>h</sup> u 5 tsa 1 /	'to have the hair standing on end as when frightened'	'ขนลุกชันเพราะตกใจ'
/ tso 1 ti 5 tsa 1 /	'to have a harelip'	'ปากแห่อง'
/ tso 4 tse 5 /	'quiet'	'เสียบ'
/ tso 1 tsa 1 /	'to suck, to beset, to plague'	'ดูด' ✓
/ tso 3 tsa 1 /	'to kiss'	'จูบ'
/ tso 4 nu 1 xo 4 /	'this year'	'ปีนี้'
/ tso 1 tsa 1 /	'to bump into'	'กระแทกเข้าไป'

/ t<sup>h</sup> /

/ t <sup>h</sup> i 1 tsa 1 /	'to hang up, to lift'	'แขวนขึ้นไว้, ยก'
/ t <sup>h</sup> i 3 t <sup>h</sup> a 3 /	'embric'	'มะขามป้อม'
/ t <sup>h</sup> i 5 ha 3 /	'barking deer'	'แก้ง'
/ t <sup>h</sup> e 1 tsa 1 /	'to fight each other'	'ต่อสู้กัน'
/ t <sup>h</sup> e 1 dza 3 tsa 1 /	'to quarrel'	'ทะเลาะ'
/ t <sup>h</sup> e 3 mjo 4 /	'Hmong people'	'คนม้ง'
/ t <sup>h</sup> e 3 p <sup>h</sup> je 3 tsa 1 /	'to rip, to tear'	'ฉีกขาด'
/ t <sup>h</sup> e 5 tsa 1 /	'to pickle'	'ดอง'
/ t <sup>h</sup> e 5 bo 5 /	'rice plant'	'ต้นข้าว'
/ t <sup>h</sup> e 5 bjũ 5 /	'a stack of grain'	'กองข้าว'
/ t <sup>h</sup> e 5 di 3 tsa 1 /	'to thrash'	'ตีข้าว' ✓
/ t <sup>h</sup> e 5 k <sup>h</sup> ũ 5 /	'unhusked rice'	'ข้าวเปลือก'
/ t <sup>h</sup> e 5 le 3 tsa 2 /	'a rice mill'	'โรงสีข้าว' ✓
/ t <sup>h</sup> e 5 mə 2 /	'flour'	'แป้ง'
/ t <sup>h</sup> e 5 nũ 5 /	'an ear of rice'	'งอกข้าว'

/ t <sup>h</sup> e 5 p <sup>h</sup> ju 5 /	'milled rice'	'ข้าวสาร'
/ t <sup>h</sup> e 5 si 3 /	'unhusked rice'	'ข้าวเปลือก'
/ t <sup>h</sup> e 5 t <sup>h</sup> e 5 du 3 ʔa 1 mo 5 /	'weevil'	'ตัวมอดกินข้าว' ✓
/ t <sup>h</sup> e 5 t <sup>h</sup> e 5 nu 2 /	'rice grains'	'เมล็ดข้าว'
/ t <sup>h</sup> e 5 dʒi 5 /	'granary'	'ยุ้งข้าว' ✓
/ t <sup>h</sup> e 5 za 5 za 5 ʔa 1 /	'to winnow'	'ผัดข้าว'
/ t <sup>h</sup> a 3 ʔɔ 3 /	'bow'	'ธนูตก'
/ t <sup>h</sup> a 3 bja 1 bja 1 /	'a kind of food equivalent to Thai dish [ la:p ]	'ลาบ'
/ t <sup>h</sup> a 3 la 3 /	'cotton wool'	'ฝ้าย'
/ t <sup>h</sup> a 3 t <sup>h</sup> a 5 t <sup>h</sup> a 5 ʔa 1 /	'to whistle'	'ผิวปาก' ✓
/ t <sup>h</sup> a 3 zi 1 zi 1 ʔa 1 /	'to speak or sing in traditional way'	'พูด,ร้องเพลงเป็นทำนองโบราณ' ✱
/ t <sup>h</sup> a 5 t <sup>h</sup> a 3 /	'the little finger'	'นิ้วก้อย'
/ t <sup>h</sup> ɔ 1 ba 1 ʔa 1 /	'to help'	'ช่วย'
/ t <sup>h</sup> ɔ 3 /	'friend'	'เพื่อน'
/ t <sup>h</sup> ɔ 3 ʔa 1 /	'to persuade'	'ชักชวน'
/ t <sup>h</sup> ɔ 1 ʔa 1 /	'to walk'	'เดิน'
/ t <sup>h</sup> ɔ 3 /	'a top'	'ลูกข่าง'
/ t <sup>h</sup> ɔ 3 ɛ 3 /	'a joss stick'	'จูป' ✓
/ t <sup>h</sup> c 3 ʔa 1 /	'to be unsteady (in walking),to stagger'	'เดินโซเซ'
/ t <sup>h</sup> u 1 ʔa 1 /	'to absorb water,to inhale'	'ดูด'
/ t <sup>h</sup> u 1 ʔa 1 /	'to raise the animals'	'เลี้ยงสัตว์'
/ t <sup>h</sup> u 5 de 3 /	'a peacock'	'นกยูง'
/ t <sup>h</sup> ə 3 /	'dew'	'น้ำค้าง'
/ t <sup>h</sup> ə 3 ʔa 1 /	'to sneeze,to praise'	'จาม'
/ t <sup>h</sup> ɔ 3 pe 2 /	'sputum'	'เสมหะ'
/ t <sup>h</sup> ɔ 3 ʔe 2 ʔa 1 /	'to leap'	'กระโดด'
/ t <sup>h</sup> ɔ 5 ʔa 1 /	'to be able to'	'สามารถ'

/ tʃ<sup>h</sup> /

/ tʃ <sup>h</sup> i 1 ʔa 1 /	'to urinate'	'ปัสสาวะ'
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/ tʃʰi 3 /	'blood'	'เลือด'
/ tʃʰi 3 do 1 le 5 ʔə 1 /	'to bleed'	'เลือดออก'
/ tʃʰi 3 buw 5 lɔ̄ 1 ma 2 /	'hell'	'นรก'
/ tʃʰi 4 /	'seven'	'7' ✓
/ tʃʰi 4 tʃʰe 5 /	'seventy'	'70'
/ tʃʰi 4 tʃʰe 5 ɲa 3 /	'seventy-five'	'75'
/ tʃʰi 4 tʃʰe 5 ti 4 /	'seventy-one'	'71'
/ tʃʰi 5 ʔə 1 /	'to die'	'ตาย'
/ tʃʰe 1 ʔə 1 /	'to pour'	'เท, ราด'
/ tʃʰe 1 mo 5 /	'lice'	'เหา'
/ tʃʰe 5 tʰi 4 xo 4 /	'a name of the traditional years called by the name of an animal [ tʃʰe <sup>55</sup> ]	'ตัวชะ'
/ tʃʰa 3 ʔə 1 /	'true'	'จริง'
/ tʃʰa 3 bje 2 /	'minced meat'	'เนื้อสับ, เนื้อบด'
/ tʃʰa 3 do 5 do 5 ʔə 1 /	'to be shy'	'อาย' ✓
/ tʃʰa 3 jø 3 /	'bone'	'กระดูก'
/ tʃʰa 3 ku 3 /	'blood vessels'	'เส้นเลือด'
/ tʃʰa 3 kʰɔ̄ 5 /	'ligament'	'เอ็น'
/ tʃʰa 3 na 2 /	'a mole on the skin'	'ไฝ'
/ tʃʰa 3 po 4 /	'lung'	'ปอด'
/ tʃʰa 3 pʰja 3 /	'thigh'	'ต้นขา'
/ tʃʰa 3 tʰe 5 /	'a chopping block'	'เขียง'
/ tʃʰa 3 zo 4 /	'sticked skewer'	'ไม้สำหรับเสียบย่าง'
/ tʃʰa 3 tʃʰɔ̄ 3 /	'liver'	'ตับ' ✓
/ tʃʰa 3 tʃʰi 3 /	'pustule'	'สิว'
/ tʃʰa 3 tʃʰa 1 tʃʰu 5 tʃʰu 5 /	'orchid'	'ดอกกล้วยไม้'
/ tʃʰa 3 dʒi 5 /	'meat'	'เนื้อ'
/ tʃʰa 3 dʒi 5 jo 1 ba 2 /	'white skin'	'ผิวขาว'
/ tʃʰa 3 dʒi 5 ma 3 tʃʰo 5 /	'dark skin'	'ผิวดำ'
/ tʃʰa 5 ʔə 1 /	'to entreat'	'3.' ✓
/ tʃʰo 5 ʔi 5 ʔə 1 /	'to have colour fade'	'ซีด' ✓
/ tʃʰɔ̄ 3 bja 1 bɔ̄ 5 lɔ̄ 5 /	'soap's bubble'	'ฟองสบู่'
/ tʃʰɔ̄ 3 bja 1 lɔ̄ 5 /	'powdered detergent'	'ผงซักฟอก'
/ tʃʰɔ̄ 3 bja 3 /	'soap'	'สบู่'

/ tʃʰũ 1 kʰɔ̃ 5 /	'wire'	'ลวด'
/ tʃʰũ 5 /	'iron'	'เหล็ก'
/ tʃʰũ 5 de 4 /	'a magnet'	'แม่เหล็ก'
/ tʃʰũ 5 kʰɔ̃ 2 /	'rust'	'สนิม'
/ tʃʰũ 5 kʰu 5 /	'tripod'	'เตา 3 ขา'
/ tʃʰũ 5 se 3 /	'nail'	'ตะปู'
/ tʃʰũ 5 te 1 te 1 ʔə 1 /	'to forge iron'	'ตีเหล็ก'
/ tʃʰũ 5 tɕa 2 /	'a chain'	'โซ่'
/ tʃʰu 5 /	'gold'	'ทอง' ✓
/ tʃʰə 1 /	'a log, timber'	'ท่อนไม้, ซุง'
/ tʃʰɔ̃ 3 xo 3 ʔə 1 ga 3 /	'creditor'	'เจ้าหนี้'

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/ dʒi 5 ʔə 1 /	'to finish'	'จบ, เสร็จ'
/ dʒi 5 ba 3 /	'liquor'	'เหล้า'
/ dʒi 5 ba 3 du 5 ʔə 1 /	'pickled whisky'	'ดองเหล้า'
/ dʒi 5 tɕʰu 1 /	'all'	'ทั้งหมด'
/ dʒe 1 ʔə 1 /	'to blow the nose, to clean (the table, the floor)'	'ขยี้จมูก, ขัดโต๊ะ, ขัดพื้น'
/ dʒe 3 bjǎ̃ 1 ʔə 1 /	'to erase'	'ลบ'
/ dʒe 3 bjǎ̃ 3 je 3 /	'a rubber'	'ยางลบ'
/ dʒe 3 dũ 5 ma 3 /	'Keng Tung'	'เมืองเขียงตุง'
/ dʒe 3 ka 3 ʔə 1 /	'a middle man'	'พ่อค้า'
/ dʒe 3 za 3 ku 2 /	'a sty (for animals), a stable'	'เล้าหมู, คอก'
/ dʒe 1 ʔə 1 /	'to shave, to scrape'	'โกนหนวด'
/ dʒa 1 ʔə 1 /	'to be exist (inanimate), to tell'	'มีอยู่ (สิ่งไม่มีชีวิต), บอก'
/ dʒa 1 bɔ̃ 3 /	'hair'	'ผม' ✓
/ dʒa 1 bɔ̃ 3 jɔ̃ 1 pʰju 5 /	'the hair when it has turned silver grey'	'ผมหงอก'
/ dʒa 1 ga 3 /	'medicine'	'ยา'
/ dʒa 1 ga 3 ʔi 5 tɕu 4 /	'liquid medicine'	'ยาน้ำ'
/ dʒa 1 ga 3 ʔə 5 si 3 /	'a tablet'	'ยาเม็ด'
/ dʒa 1 ga 3 du 5 ʔə 1 /	'tincture'	'ทิงเจอร์'
/ dʒa 1 ga 3 pʰi 5 /	'mentholated ointment'	'ยาหม'