

Bai Dialect Survey

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Abstract

The People's Republic of China is a nation of fifty-six ethnic groups. The Bai are the fourteenth largest minority group with a total population of 1,858,063. There are many speech varieties of Bai, and understanding between them varies greatly.

The purpose of the research described in this report is to increase the corpus of data available for Bai dialects and make it available both to other researchers and to the relevant authorities, providing them with accurate data upon which to base language policy. The primary goal was to determine centres of communication for selected speech varieties of Bai, that is to say, determine which lects are most widely understood. A secondary goal was to assess the current definitions of dialect boundaries by calculating lexical similarity. To this end, intelligibility testing was carried out in seven locations, and word lists have been compiled for nine locations.

中华人民共和国有 56 个民族。白族人口总数为 1,858,063，在全国少数民族中 位第十四。白语的方言土语众多，方言之间的通解程度也有很大的差异。

本研究课题的目的是为已知的白语方言素材添加新的数据，以供其他研究人员和有关当局使用，并可作为有关当局制订语言政策的准确依据。本研究的首要目标是确认哪些白语方言是最易懂的，即为所测试的方言土语确定最具代表性的白语交流中心。第二个目的是通过计算词汇的相似度来重新评估白语方言的划分范围。为此，我们在七个音点进行了通解度测试，并收集整理了九个音点（包括上述七个音点在内）的词汇表。

1. Introduction

The Bai Dialect Intelligibility Survey is a cooperative project carried out jointly by the Yunnan Minority Language Commission (YMLC) and SIL International, East Asia Group. The field work was undertaken between 1999 and 2001 by members of YMLC and SIL.

1. 1 Background

a. The Bai

The People's Republic of China is a nation of fifty-six ethnic groups. The Bai are the fourteenth largest minority group with a total population of 1,858,063.¹

b. Language

There is some debate as to the origins and genetic affiliation of the Bai language. Northwestern Yunnanese languages are for the most part Tibeto-Burman (Lisu, Achang, Nu, Yi, Dulong, Naxi). Most scholars place Bai in the Tibeto-Burman phylum but in an independent branch. Others put it as a branch of Yi. Starostin (1994) claims it is Sinitic and that it branched from Old Chinese early in the Han era. Bai word order is SVO unlike the usual Tibeto-Burman SOV and has eight tones, a comparatively large number. The main reason for the controversy is the exceptionally high number of loanwords from Chinese.

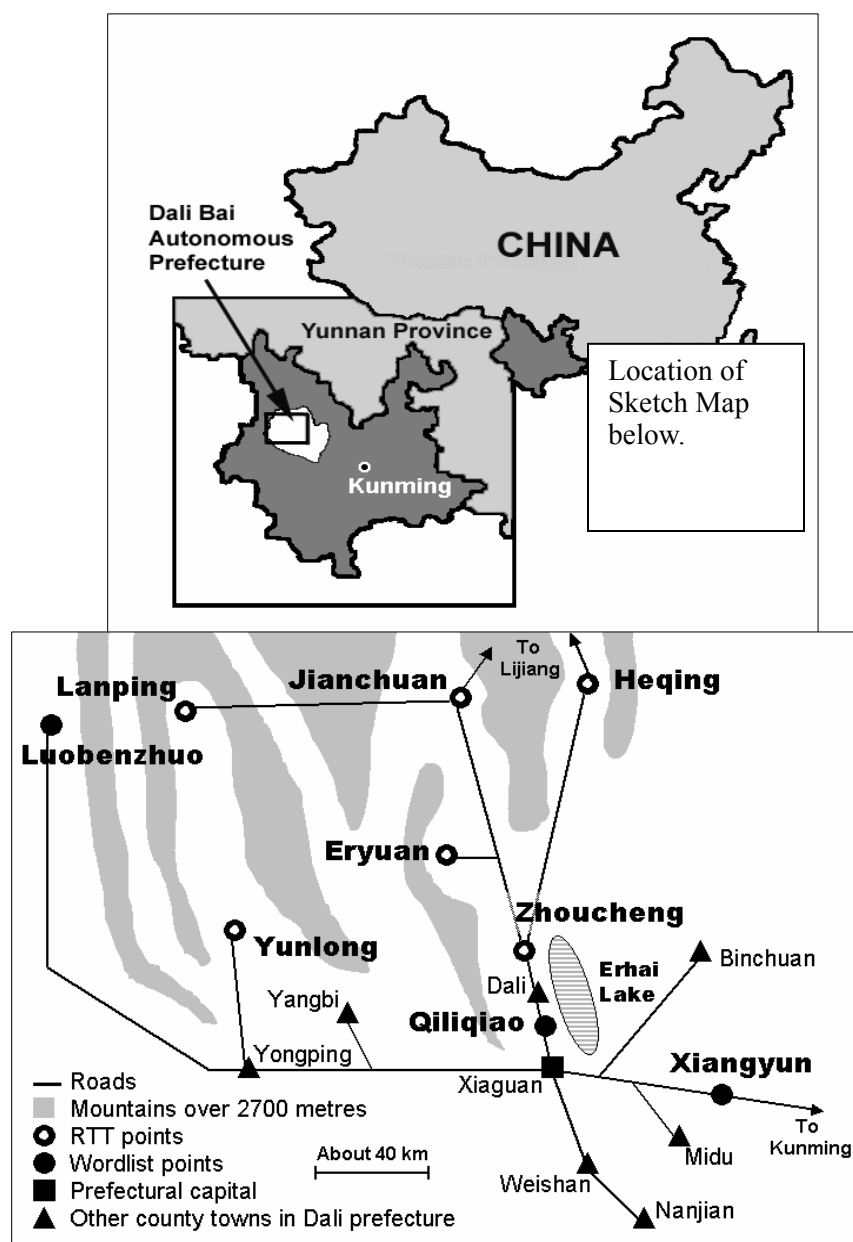
c. Population

According to the 1990 census, the total Bai ethnic population numbered 1,598,052.² Of these, 1,341,508 live in Yunnan province, i.e., about 85 percent. The majority of these, that is 997,905 people, live in the Dali Bai Autonomous Prefecture (Dali BAP). This is to say that of the total Bai population in China, 65 percent live in the Dali Prefecture. Of those living outside Yunnan, there are significant populations living in Guizhou (123,307) and Hunan (114,843). The Hunan Bai left the Dali area about

1 2000 national census.

2 Although the total population figure from the 2000 census was available, detailed breakdowns had not been made available at time of writing.

700 years ago and for the most part no longer speak Bai. In 1983, a 536 item wordlist was collected of Bai words in Sangzhi county, Hunan, and 92 percent were found to be cognate with Chinese. It is probable that only a few old people still speak any Bai at all. The situation in Guizhou is similar, the Bai people having moved there about 500 years ago.



Research is needed to establish whether or not there are any communities of Bai speakers outside Yunnan province. If we assume not, then actual speakers of the Bai language can number no more than 1,341,508, and there are undoubtedly fewer. Of these, 74 percent live in the Dali BAP. Outside the prefecture, the largest population (122,314) is found in the Nujiang Lisu Autonomous Prefecture. Adding the Dali and Nujiang Bai populations together, we arrive at a total figure of 1,120,219 people, representing 84 percent of Yunnan Bai. Outside this region, there are certainly many communities of Bai people who use Bai every day. To our knowledge, the dialects of Bai they speak have never been

documented. Preliminary research by Wang Feng in the Shalang variety, spoken just outside Kunming reveals that there are some significant differences between it and both the Dali and Jianchuan varieties.

This dialect survey cannot address the multitude of dialects spoken throughout the province, let alone any which may still be spoken further afield. We have decided to concentrate on the areas of highest Bai population density, which are the five counties in the Dali BAP and two in Nujiang Prefecture.

The following table shows the Bai population in Dali prefecture. (Figures from 2000 census, supplied by Dali prefecture *Minzongju*):

Table showing Bai population figures

County	Total population	Bai population	% Bai	% of total Bai population
Jianchuan	165,148	151,331	92%	9%
Yunlong	197,859	140,668	71%	8%
Eryuan	320,416	214,434	67%	13%
Dali	494,204	320,286	65%	19%
Heqing	256,133	147,396	58%	9%
Binchuan	321,000	44,245	14%	3%
Yangbi	97,807	11,257	12%	1%
Xiangyun	431,115	40,910	9%	2%
Yongping	169,058	5,402	3%	0.3%
Weishan	293,852	6,133	2%	0.4%
Nanjian	210,721	1,849	0.6%	0.1%
Midu	303,597	1,382	0.5%	0.05%
Prefecture	3,260,910	1,085,293	33%	64%

According to the *Dali Bai Autonomous Prefecture Annals, Volume Seven (2000)*, while the majority of the non-Bai population is ethnically Han, there are also pockets of many other minorities, including Yi, who make up 12 percent of the population, Hui, Lisu, Miao, Naxi and Pumi, among others. Together, these smaller ethnic groups make up 3.5 percent of the population. In many places, the multilingual environment, therefore, includes languages such as Lisu, Pumi, and Naxi, as well as Chinese (both Putonghua and Yunnanhua). In the prefecture as a whole, at least ten different languages are spoken.

d. Review of the related literature

The main source of dialect data for many researchers has been the *Description of the Bai Language*, by Xu and Zhao (1984). On the basis of phonological, grammatical, and lexical differences, they claim the Bai language has three dialects: Jianchuan, Dali, and Bijiang, also called the Central, Southern and Northern dialects respectively. They include a 1,015-item wordlist representing these dialects, although they do not state exactly from which locations the data comes. They further subdivide the dialects and estimate number of speakers as follows:

Jianchuan:	Jianchuan	(259,600)
	Heqing	(164,100)
	Total speakers:	423,700.
Dali:	Dali	(485,100)
	Xiangyun	(46,800)
	Total speakers:	531,900.
Bijiang:	Bijiang	(21,400)
	Lanping	(19,600)
Total speakers:		41,000.

NB Bijiang county is now Lushui county in Nujiang prefecture.

They state that there are a further 40,000 Bai people living in various places throughout Yunnan province, but are unable to speculate about which dialect these people speak.

Dell (1981) has a 1,000 item wordlist from Dali, collected in 1966, as well as a phonological description, and comparisons between Bai and Chinese.

The *Phonological Inventories of Tibeto-Burman Languages* (1996) gives two inventories for Bijiang and Dali dialects and three for Jianchuan. Their source includes Xu and Zhao (1984), as well as Dell (1981).

There is also a 1,822 item wordlist published in *A Tibeto-Burman Lexicon* (1992), which lists data for Jianchuan Bai, compiled by Li Shaoni.

Grimes (2000) lists as dialects Dali, Jianchuan, and Lanbi (Lanping-Bijiang). She adds that the three dialects may be separate languages.

The *Yunnan Province Almanac*, Volume 59, dealing with minority languages, includes a wordlist of 2,000 items from two Bai dialects: Xizhou in Dali and Jinhua in Jianchuan. The description of the dialect situation is similar to Xu and Zhao but a little more detailed. It states that the Dali dialect is spoken in Dali, Xiaguan, Xiangyun, Midu, Yangbi, Yongping, Eryuan, Binchuan, Nanhua, Yuanjiang, and Kunming. The Jianchuan dialect is spoken in Jianchuan, Heqing, Lijiang, Yongsheng, Ninglang, Eryuan, as well as places in Binchuan and Lanping. The Bijiang dialect is spoken in Fugong, Gongshan, Lanping, Yunlong, Eryuan, Weixi and Zhongdian. Furthermore, it states that the three dialects are rather similar, especially in grammar and lexicon, and that the main differences are phonological. The Central and Southern dialects are quite close, while the Northern is very different. It contains phonological inventories for the three dialects and lists some grammatical and lexical differences.

Duan Ling in *Dali Bai Autonomous Prefecture Annals*, Volume 7, describes the dialect situation as follows:

‘The southern dialect includes Dali, the western part of Binchuan county around Daying, the central and southern part of Eryuan county from Fengyu to Jiangwei, and the central and southern parts of Yunlong county from Baofeng to Jiuzhou.

‘The central dialect includes Jianchuan, Heqing, the northern part of Eryuan county around Niujie, the northeastern part of Yunlong around Baishi and Caojian in the southwest, the area around Qiaodian in Binchuan county, and Midian and Hedian in Xiangyun county.’

Duan Ling states that the Central dialect has more than half a million speakers, a little more than the Southern dialect. He also claims that the differences are mainly phonological and that these are regular, so that there is basic intelligibility between the two dialects. He adds that there are places where the local lects are more divergent, such as Baishi or Hedian. He includes a 664-item wordlist from four places: Jindun in Heqing county, Baishi in Yunlong county, Hedian in Xiangyun county, and Qiliqiao in Dali.

Duan Ling also gives phonological inventories for Zhoucheng and Qiliqiao in Dalishi, Longmen and Xiayangcen in Jianchuan county, Xishan and Fengyu in Eryuan county, Jindun in Heqing county, Baishi and Caojian in Yunlong county, and Hedian in Xiangyun county.

The aforementioned literature, where it deals with dialect differentiation, seems to be based on interviews, rather than on wordlist or other collected data. The exception would seem to be the *Dali Bai*

Autonomous Prefecture Annals: Duan Ling collected wordlists from at least ten locations. Until this time, however, there has been no lexicostatistical or phonostatistical research done, nor has any intelligibility study been carried out. All published work agrees that there are three dialects of Bai and agrees on their basic division.

Li Zanzu and Yang Yingxin in *Bai Culture Overview* state that the Jianchuan and Dali dialects share much of their vocabulary and where there are differences, the sound differences are regular and predictable. They claim, therefore, that speakers of the two dialects can basically understand each other after a period of one month together.

1.2 Purpose

The purpose of the research described in this book is to increase the corpus of data available for Bai dialects and make it available both to other researchers and to the relevant authorities, providing them with accurate data upon which to base language policy. The primary goal was to determine centres of communication for selected speech varieties of Bai, that is to say, determine which lects are most widely understood. A secondary goal was to assess the current definitions of dialect boundaries by calculating lexical similarity. To this end, intelligibility testing was carried out in seven locations, and wordlists have been compiled for nine locations.

a. Goal: Determine centres of communication for selected speech varieties of Bai

There are many speech varieties of Bai and understanding between them varies greatly. If there were one or more varieties which were understood by a greater proportion of people, these could serve as centres of communication. Currently, there are no recognised centres, and no research has been carried out to determine levels of comprehension between dialects. Subjective impressions taken from mother-tongue speakers vary enormously. Some Dali speakers say they understand practically nothing of Jianchuan speech, while others claim to understand about eighty percent. There has been no standardisation or promotion of a particular variety over another; the written Bai language has never been widely taught, and so there are no accepted norms for inter-dialect communication. Were there to be television or radio programs in the Bai language, which dialect would best communicate to the greatest number of people? If the government wanted to communicate health care information to Bai people in the Bai language, which variety would reach the highest number of people? Obviously, there are economic considerations. To produce radio broadcasts for every county individually would be far more expensive than choosing one or two speech varieties.

b. Choice of data points

The total Bai population is around 1.8 million. It is not known how many Bai no longer speak the Bai language, although it is clear that many who have migrated to cities such as Xiaguan and Kunming have adopted Chinese as their mother tongue. Furthermore, the large Bai populations in Guizhou and Hunan probably no longer speak Bai. The core of Bai speakers remain those living in Dali prefecture and in surrounding areas, and it is this population that we focused on. Within each county, there is much variation, even from village to village, and we were unable to carry out a highly time- and labour-intensive survey of every lect of Bai. Since the main aim was to determine centres of communication networks, it was felt important to select data points that could already be said to be centres within their region. For this reason the lect spoken in the county town was chosen as representative. It is likely that this lect is more widely understood than peripheral lects, because people come to the county town on business and become accustomed to that speech variety.

Because the main aim was to determine centres of communication, points were chosen which were considered to be representative, as far as possible. Counties with high Bai populations were selected, namely, Dali, Jianchuan, Eryuan, Yunlong and Heqing within the Dali Bai Autonomous Prefecture. These five counties contain 90 percent of the prefecture's Bai population. Luobenzhuo in Lushui county in Nujiang prefecture was selected because it is a Bai township in the Bijiang dialect grouping. Lanping was selected as having the highest Bai population outside the Dali prefecture and because it is contiguous to the Bai population centre. No county in Yunnan with a population of 50,000 Bai or more was excluded from the survey. From our understanding of the Bai dialect situation garnered from background research, of the points we chose, three would be from each of the Central and Southern dialect groups and one from

the much smaller Northern group. In addition to these seven points, wordlist data is listed for a further two points, both in the Southern dialect group.

1.3 Procedures

To determine centres of communication networks, intelligibility testing was carried out using the recorded text test (RTT) methodology. In addition to this, wordlist data was analysed for lexical similarity from a total of nine locations.

2. Wordlists

It was decided to collect a wordlist of 550 items, which would allow a comparison of at least a core of 500 words between lects. This list was selected from among the 2,000 words listed in the *Yunnan Province Almanac*, Volume 59, allowing comparisons to be made with existing data from related minority languages. Most of the lists were transcribed by Duan Ling. Data from Luobenzhuo and Lanping were transcribed and recorded by Bryan Allen and by Duan Ling together and this was later edited by Bryan Allen. The Yunlong wordlist was transcribed by Bryan Allen. The fact that Duan Ling was involved in transcribing most of the wordlists, ensured consistency of transcription. The lists were then checked and edited by Bryan Allen. All data was entered into an Access database.

Some items were not successfully elicited. For example, the Luobenzhuo informants could not think of a word for ‘willow tree’. Other items were found to be unhelpful for comparison purposes. For instance, there are many words for ‘not’, depending on the type of sentence and so this was also removed from the list. The word for ‘other people’ was hard to elicit and was also removed. The word for ‘egg’ was the same as ‘lay an egg’ so the latter was removed. Some numbers were also left out of the final list. The list was reduced from an initial 550 to 500 items (see appendix). The data was then used to calculate lexical similarity percentages. Phonological charts of each dialect were drawn up on the basis on the wordlist data (see appendix).

Lexical Similarity Percentages: In determining whether words were to be counted as lexically similar or not, the criterion laid down by Calvin Rensch (“Calculating Lexical Similarity,” in Casad 1997) was used as a rule of thumb. The criterion is as follows:

If the longer word of the pair has this many segments,	it should have at least this many segments of category 1,	at least this many segments of category 2,	and, at most, this many segments of category 3.
2	2	0	0
3	2	1	0
4	2	1	1
5	3	1	1
6	3	2	1
7	4	2	1
8	4	2	2
9	5	2	2
10	5	3	2
11	6	3	2
12	6	3	3

Category 1 consists of the following types of segments: (a) contoid (consonant-like) segments which match exactly; (b) vocoid (vowel-like) segments which match exactly or differ by only one articulatory feature; and (c) phonetically similar segments (of the sort which frequently are found as allophones) which correspond in at least three pairs of words.

Category 2 is broadly defined as: all other phonetically similar pairs of segments that are, however, not supported by at least three pairs of words.

Category 3 is constituted of: (a) pairs of segments which are not phonetically similar; and (b) a segment which is matched by no segment in the corresponding word.

The following two examples, adapted from the data, illustrate the process:

Example 1:

Yunlong:	n̥i ²¹	kɛ ³⁵
Heqing:	j̃i ²¹	kẽ ³⁵

Each word in this pair has six segments, three of which match exactly (the tones and the velar stop), and three of which are phonetically similar. When we take a close look at the data, we find that there is a close correspondence between [n̥] and [j̃], and between the oral and nasal vowels in these dialects. Therefore each segment can be classified as category 1, and these two words can be considered lexically similar.

Example 2:

Heqing:	tɕi ³¹	kou ⁵⁵	le ⁴⁴
Zhoucheng:	kʲi ³¹	xue ⁵⁵	pɔ ⁵⁵

These words each have nine segments, three of which match exactly. For these to be considered lexically similar, they should have at least five category 1 segments. [tɕ] and [kʲ] are phonetically similar, and, in fact, correspond in the data at least three times, so can also be considered category 1. Heqing's 44 tone and Zhoucheng's 55 tone also correspond at least three times. This can also be considered a category 1 correspondence. So there are now five category 1 segments out of the nine. [k] and [x] are phonetically similar and often occur as allophones, but do not correspond for Heqing and Zhoucheng; they are therefore category 2 segments. The remaining segments ([ou] and [ue], [l] and [p], [e] and [ɔ]) are all category 3 segments. There should be no more than two category 3 segments for two nine segment words to be considered lexically similar. Therefore, these two words are counted as dissimilar.

Using this method as a guideline, numbers of words which were lexically similar between two dialects were calculated and converted into a percentage figure. The figures for all dialects are collated in the following table:

Lexical Similarity Percentages for Bai Dialects

	Jianchuan	Eryuan	Heqing	Lanping	Zhoucheng	Qiliqiao	Yunlong	Xiangyun	Luobenzhuo
Jianchuan	100								
Eryuan	87	100							
Heqing	90	84	100						
Lanping	91	85	86	100					
Zhoucheng	82	83	81	79	100				
Qiliqiao	83	82	81	78	88	100			
Yunlong	79	81	78	77	77	77	100		
Xiangyun	79	78	79	76	76	76	74	100	
Luobenzhuo	60	57	58	61	55	55	54	55	100

It is clear from these figures that Luobenzhuo is lexically most divergent, sharing at most 61 percent of its vocabulary with another variety. While the other varieties are generally between 80 and 90 percent similar, Xiangyun is slightly lower. It is interesting to note that although it is closer geographically to Zhoucheng and Qiliqiao, lexically it is slightly closer to Jianchuan and Heqing.

Intelligibility cannot be satisfactorily predicted on the basis of lexical similarity percentages. “In Micronesia, for example, Ellis found that all his similarity scores were above 80 percent; yet the matching intelligibility readings ranged all the way from just above 0 percent up to 100 percent” (Grimes 1995). For this reason, if an understanding of the intelligibility situation is desired, testing is generally carried out using the recorded text method.

If, however, lexical similarity is below 60 percent then intelligibility will be unlikely (Grimes 1988a). Therefore, we decided not to carry out RTT testing in Luobenzhuo; we did, however, play the Luobenzhuo tape to subjects in other locations to check understanding and indeed found it universally low. For this reason, there is no data for Luobenzhuo comprehension in the tables given below.

3. Recorded Text Tests

3.1 History

The RTT methodology was devised by members of SIL Mexico Branch and described in Casad’s book *Dialect Intelligibility Testing* (1974). This work was based on earlier work by Voegelin and Harris, and Crawford. Recorded text testing has been widely used by SIL International in many countries throughout the world and is recognised as a valuable tool in assessing dialect intelligibility. The methods used in the Bai survey follow Casad’s methodology.

3.2 Overview

Recorded text tests (RTTs) are a tool to test intelligibility between related dialects. An RTT is a short text recorded by a speaker of dialect A which is then played to a speaker of dialect B. Questions about the content of the text are recorded in dialect B, and inserted into the body of the text. By testing a sample of speakers of dialect B, an estimate can be made of their comprehension of dialect A, according to how many questions they answer correctly.

Dialect intelligibility testing makes predictions about the intelligibility between dialects based on measurements of intelligibility of samples of speakers of those dialects. Once estimates have been made of intelligibility between dialects, it is possible to work out which locations are the centres of communication.

3.3 Procedure

The following procedure was followed in each location.

a. Making a test tape

(i) *The text*

A speaker was selected to record a short text in his or her own dialect. This person should be recognised as being a fairly typical speaker of the dialect with no speech defects. The speaker was asked to record a short story based on personal experience. This story should not be a folk story or be generally known; otherwise hearers may guess the content solely by understanding some parts of the story. This would influence test scores. The story should be between two and three minutes in length. The content should be detailed enough so that at least fifteen questions can be composed to test understanding of the content. Sometimes, stories elicited were too short or too long, and the speakers were asked to adjust the length and then re-record. Other times, the first speaker chosen was found to be a poor storyteller, and a second speaker was chosen.

(ii) *Recording*

Recordings were made with a portable Sony Minidisk recorder. A headset microphone was used to ensure placement of the microphone was close to the speaker's mouth and to the side, out of the direct air-flow. Recording levels were adjusted manually for each speaker in order to obtain the best level in each case. After recording, the story was then backed up onto a laptop computer and then recorded back onto the disk, so that it was there two times.

(iii) *Preparation of questions*

After recording, the story was transcribed using a rough practical transcription. Sometimes the Bai orthography was used, other times Chinese characters. Then, with the help of the speaker or another speaker of that dialect, a word-for-word translation into Chinese was made, followed by a free translation. On the basis of this understanding of the text, about fifteen questions were devised in Chinese to test comprehension of the story. Care was taken to devise questions that covered as wide a range of semantic areas as possible. Yes/no questions were not permitted. These questions were then translated back into the local Bai dialect and were recorded by a different speaker onto the same disk as the story. The Minidisk recorder allows for editing of the disk, so the questions were then moved so they immediately followed the sentence they were questioning.

(iv) *Practice stories*

A short practice story was also recorded in each place. This generally consisted of the following (adapted from Blair):

'My father bought a cow.

What did my father buy?

He paid 600 RMB for it.

How much did he pay for it?

One day when I was milking the cow I spilled some milk.

What did I do when I was milking the cow?

My mother scolded me.

What did my mother do?'

The reason for having a practice story was so that people could get used to the testing methodology and gain confidence before starting the test proper. They were allowed help with the practice, could repeat questions and so on until we felt they were ready to begin. With more educated subjects, it was often not necessary to give the practice story.

(v) *Final selection of questions*

Ten speakers of this dialect were then tested using the practice story and the full story just prepared. Any questions that were not answered one hundred percent accurately were then rejected, reducing the

number of questions to ten for each story. The purpose of this testing phase was to ensure that the mother tongue speakers could successfully answer the RTT correctly. It was at this point that questions we thought we had composed well were discovered to be ambiguous or badly phrased. At each location this procedure was followed to produce what is called the “hometown test.”

b. Testing phase

(i) Preparing the test tapes³

Having prepared all the hometown test tapes, a second visit was then made to each location. On this occasion, the questions for each story were translated into the local dialect and recorded. For example, during the second visit to Jianchuan, the questions for the Dali hometown test were translated into Jianchuan speech, recorded and then dubbed into the appropriate places on the Dali tape, replacing the questions in Dali speech. This was done for every story in every town.

(ii) Listening

In each location, subjects were asked to listen first to the practice story, then to their own hometown test tape and then to several other tapes from different dialect areas. Testing subjects on their home-town tape served as a control. Any subject who scored well on his own dialect and poorly on a different dialect demonstrated a difference in his ability to comprehend the two dialects. Subjects who could not score above 80 percent on their own dialect were not tested on other dialects as they had not successfully mastered the test procedures. Some people listened to all six tapes, others just to two or three. For each story, at least ten subjects listened and responded to the questions.

(iii) Evaluating answers

The answers given by subjects to each tape’s questions were evaluated as either right (one point), wrong (no points) or half right (half a point). Total points were summed up and converted to a percentage figure.

c. Personnel

The test tapes were prepared on three trips made in March, April, and September 2000. The dates and personnel were as per the table below (speakers of Bai are listed in bold typeface):

Date	Location	Personnel
March 2000	Jianchuan	Bryan A., Silvia A., Zhang X., Meng S.
March 2000	Zhoucheng	Bryan A., Zhang X., Meng S.
April 2000	Luobenzhuo	Silvia A., Zhang X., Meng S., Paul G.
April 2000	Lanping	Silvia A., Zhang X., Meng S., Paul G.
Sep. 2000	Heqing	Bryan A., Silvia A., Wang F., Meng S., Paul G.
Sep. 2000	Eryuan	Bryan A., Wang F., Meng S., Paul G.
Sep. 2000	Yunlong	Wang F., Meng S., Paul G.

The testing phase followed the schedule below:

³The word “tape” is used for convenience, but minidisks were always used.

Date	Location	Personnel
April 2001	Yunlong	Bryan A., Silvia A., Wang F., Yang S.
April 2001	Heqing	Bryan A., Wang F., Yang S.
April 2001	Zhoucheng, Xizhou	Silvia A., Wang F., Yang S.
April 2001	Eryuan	Bryan A., Wang F., Yang S.
April 2001	Jianchuan	Bryan A., Silvia A., Wang F., Yang S.
May 2001	Lanping	Wang F., Yang S.

d. Subjects

In each location we sought to find subjects with minimum exposure to other Bai language varieties. We first went to the local bureau of ethnic and religious affairs in the government office in the county towns we visited, and asked for their assistance. They helped us find suitable subjects. We attempted to ensure that the sample was balanced between men and women, and educated and uneducated. Inherent intelligibility should be the same across the language community, but comprehension levels may be influenced by various factors. Subjects with a higher level of education are more likely to be used to test taking and less likely to be intimidated by the test procedures and presence of foreigners. We also speculate whether a greater ability in Mandarin Chinese might influence comprehension of other dialects. Since Bai has a high percentage of loanwords from Chinese, it might be presumed that the knowledge of Chinese would aid in understanding another Bai dialect. Comparing results from monolingual subjects with those from subjects with a good knowledge of Chinese would enable us to evaluate this hypothesis. As it turned out, there were no monolingual Bai subjects and so this evaluation was not possible. Even were there to be a correlation between high education in Chinese and high test scores, this could be due to greater confidence in test taking, rather than due to better comprehension of Chinese loanwords.

3.4 Analysis of RTT Results

For each test tape the responses of each subject were scored, summed, and averaged, resulting in a percentage score. For example, the scores of subjects in Eryuan responding to questions on the Zhoucheng story were as follows: 7, 9.5, 6.5, 7, 9, 9, 7, 8, 7, and 7. The total is 77, which is an average of 7.7 out of 10 for each person, or 77 percent. This figure represents the average understanding of this text by ten speakers in Eryuan. In itself, it is not a direct measure of intelligibility. However, we can make an inference about intelligibility from this score. Wherever we talk about intelligibility between language varieties, we are basing this on inferences made from comprehension scores on particular texts. The scores for all the tests are summarised in the following table:

Average Intelligibility Scores

Tape:	Subjects from:					
	Yunlong	Eryuan	Heqing	Jianchuan	Lanping	Zhoucheng
Yunlong	98 18/4.3	92 10/5.8	82 10/12.0	82 10/12.3	87 10/9.1	70 12/19.4
Eryuan	93 10/9.5	98 15/4.1	79 10/11.1	80 10/11.5	89 10/7.4	67 10/21.9
Heqing	80 9/11.2	72 10/20.3	94 17/6.1	88 10/11.4	79 10/12.9	58 10/28.6
Jianchuan	66 10/15.5	80 10/6.9	59 10/19.8	92 18/7.7	81 10/8.1	44 10/17.0
Lanping	77 10/8.2	71 10/23.5	50 10/20.1	83 10/10.9	93 10/6.7	25 11/19.7
Zhoucheng	62 10/15.5	77 10/10.9	30 10/15.2	37 10/23.1	40 10/7.1	89 20/10.0
Luobenzhuo	11 9/16.2	0 3/0	2 5/4.5	27 3/20.8	29 10/24.3	0 7/0

The above table shows mean scores in bold, and below that, the number of subjects and the standard deviation. For example, the upper right-hand cell shows the results of subjects from Zhoucheng listening to a tape from Yunlong, scoring an average of 70 percent for twelve subjects with a standard deviation of 19.4.

a. Standard deviation

Barbara Grimes (1990) states that a standard deviation of more than 15 percent probably indicates acquired intelligibility, in other words, that some of the subjects have learned the dialect being tested. It could also indicate that one or more of the subjects were atypical for some reason. For example, while other subjects were scoring highly, one subject failed to answer one or more questions because of nerves, tiredness, or unwillingness to cooperate. In any case, high standard deviations warrant further investigation.

b. Other variables that may affect RTT results

High standard deviations may be an indicator of bilingual overlay, but they may also indicate other variations within the sample. There are a whole host of factors that may impact the results, and we list them below with discussion of each.

c. Factors influencing individual subjects

(i) Nervousness

When observing people taking the tests, it was quite clear that some were extremely nervous, and it is certain that confidence, or lack of it, will affect the accuracy of a subject's answers. For example, a subject may simply remain silent instead of risking an answer that they fear may be wrong. We observed this on several occasions; the most nervous subjects usually did not proceed beyond the hometown test however. There was no way to determine whether a wrong answer was due to nerves or another reason. Usually, taking the practice test and then taking the hometown test helped to calm subjects' nerves as they discovered that the tests were not as hard as they imagined. We also tried to ensure that subjects were comfortable by chatting with them and reassuring them that this was not an examination. The foreign

participants also tried to stay in the background as far as possible, allowing Chinese colleagues to do the talking, as it was felt that the presence of foreigners might add to some people's nervousness.

(ii) Test-taking ability

O'Leary (1994) found a significant difference in the Gujarati HTT between educated and uneducated men. Educated men scored higher, on average, which could be due to a familiarity with test taking that comes from schooling. Our samples were too small to judge whether there were any differences arising from education.

(iii) Peer pressure

In some cases subjects took the test in the presence of their friends or colleagues. This might have encouraged them to try extra hard to be seen to do well, or it might have increased their nervousness as a result of fear of failing. While we strove to test people by themselves, this was not always possible.

(iv) Linguistic ability and intelligence

Some people have a greater ability to learn languages or a better feel for languages and although this is hard to quantify, it may be a factor when listening to texts from other language varieties. In Yunlong, subject YL08 scored exceptionally high on all her tests and after she left, we were told that she was very good at languages. Those who enjoy languages and are more skilled in learning them will make the adjustments to a different phonological system more quickly than those with less linguistic ability. Thus, even in the space of listening to a tape two times, they will have already started to 'learn' the new dialect. This means they will score higher than someone with less ability in this area.

(v) Memory and attentiveness

There were times when people could have been distracted because of the external situation. For example, a mother or grandmother taking the test while watching a child might be partially distracted by the child. On one occasion in Jianchuan, a woman was minding a child and because she was so distracted, we let her leave after the hometown test.

(vi) Attitudes

Although a subject with a very negative attitude toward the test situation would not have agreed to take the test, there were subjects who only listened to one or two and left abruptly. For example, subject YL06, a young girl in Yunlong, scored 10 on her hometown test, 10 on the Eryuan test, 7 on the Jianchuan test, then listened to the Heqing test. She only listened one time and left, saying she couldn't understand anything. Naturally, this zero score was not counted. Perhaps she was tired, but she didn't want to try and answer the questions. In another example, an old lady in Heqing took the hometown test and scored 8, but with the second story, she started giving us random answers that she made up! We realised that she had no desire to take the test seriously, so we dropped it, again not scoring her responses.

(vii) Zhoucheng text

All texts are elicited with great care to ensure they are accounts of a biographical nature and not widely known events or folk stories. However, we had a problem with the Zhoucheng text. The story concerns an argument about a beggar that the narrator had witnessed in the village some time before. When we carried out the hometown testing, there seemed to be no problem; no one admitted prior knowledge or had any difficulty answering questions. However, the narrator was present during the testing and so may have inhibited negative comment. When we did the field testing in Zhoucheng, some people did not know how to respond to question eight ('How much money did the beggar really have?'), because they did not want to take sides in the argument, possibly because they knew the people concerned. Question nine posed a similar dilemma. These two questions were answered correctly by Zhoucheng listeners 70 percent of the time compared with a score of 90 percent or 100 percent for the other questions. Had they been answered 90 percent correctly, this would have raised the final average score from 89 percent to 94 percent. A closer examination of the answers shows that subjects from Zhoucheng village scored an average of 50 percent and 60 percent respectively for questions 8 and 9,

while subjects from Xizhou, who would have had no knowledge of the argument in the story, scored 100 percent on question 8 and 88 percent on question 9.

d. Factors influencing test tapes

(i) Choice of speaker

The speaker should be a representative speaker of the dialect in question. If he or she is in some way atypical, this invalidates the test. In each case, we sought to ensure that the speaker who recorded the text was a native speaker from the village in question.

(ii) Content of story

Texts vary considerably in complexity in several aspects. One is the subject of the text. If it deals with a familiar topic, comprehension will be higher than if it talks of a situation outside the hearer's experience. We rejected stories that might in some way be exceptional. Of the stories that we recorded, two are set in the market, and two talk of climbing a mountain both topics reasonably familiar to hearers.

(iii) Amount of borrowed vocabulary used

Bai borrows heavily from Chinese. Often there is a native Bai word for a concept, as well as a borrowed modern Chinese word. For example, in Xizhou, people say both *baf* (modern) and *dix* (traditional) for 'father'; in Jianchuan, there are two words for 'boat': *yindsul*, the traditional word, and *cuant*, the modern borrowing. Speakers who use Chinese a lot in everyday life tend to use more Chinese loan words when speaking Bai. The Heqing speaker recorded the story a couple of times in an attempt to reduce the number of loan words he used. The reason this is an important factor in intelligibility testing is that bilingual hearers may understand the loanword, whereas the Bai word may be incomprehensible to them. A text with a more than average number of loans could, therefore, be more intelligible to some speakers.

(iv) Difficulty of text

Every text is different in complexity of grammatical structures and in lexical items used. If one text were significantly harder to understand than another, it would influence the scores. It could be that the Zhoucheng story was a little harder than the others, because of the use of certain unusual words.

(v) Speed of narration

Of the seven test tapes, the Jianchuan and Zhoucheng stories (both told by women) were narrated at a faster pace than the others, while Lanping (told by an old man) was a lot slower. It is hard to evaluate how important a factor this is, but a faster pace may add to the overall difficulty of a text.

(vi) Quality of recording

A poor quality recording can certainly affect intelligibility, but all the recordings in this research were made with high quality equipment by trained personnel and were of a consistently high standard.

(vii) Choice of questions

This is possibly the most important factor affecting test scores. If a question hits on a lexical item that is particular to that dialect, it will result in reduced intelligibility scores for listeners from other dialect areas. Question four in the Zhoucheng text is a good example: 'What were the man's arms and legs like?'. The answer is *beif* which means 'crooked' or 'handicapped'. It turns out that this word is only used in the Dali area and is unknown to speakers from other places. Zhoucheng subjects scored 100 percent on this question; subjects from elsewhere scored 0, 10 or 20 percent. Only Eryuan listeners scored an average of 50 percent. Eryuan is the closest test location to Zhoucheng geographically, and there is a lot of communication between the two places. In the Yunlong story, question five reads, "What do people in the countryside use to cook with?" The answer is firewood, which only one subject answered incorrectly. It so happens that the word for firewood is almost the same in every test location, but in any case, the answer can easily be guessed since it is a matter of general knowledge. This is, therefore, not a great question for testing intelligibility.

(viii) Translation of questions

Inequivalence of translation into each dialect could influence the number of correct answers. A wrong translation could skew the results seriously. In Zhoucheng the Lanping text question three, “Why did the woman leave?” was translated as ‘Where did the woman go?’ The error was not discovered until near the end of the testing. The average score for Zhoucheng listeners for the Lanping tape was 25 percent. If we remove the mistranslated question and recalculate the mean score, the average falls to 22 percent. If we assume that everyone would have answered correctly had the question been accurately translated (an unlikely assumption), then the mean score would have risen to 31 percent. In any event, in this particular case, understanding remains so low that it does not affect overall results, so the original score of 25 percent was left.

e. Factors influencing administration of test

(i) Different researchers scoring differently

When two or more researchers are administering tests separately (for example, one does one day’s tests or handles subjects in one location, while another takes another location), their approach to scoring may differ slightly. One may be stricter in defining a correct answer, thus, scores can be distorted. We didn’t have this problem, since one researcher (Wang Feng, a native speaker of Bai) marked every single test. Other researchers were present too, but having one person responsible for grading ensured consistency. It is true that one researcher can grade inconsistently on different days, but this is still better than having different researchers grade on different days.

(ii) Researchers’ level of knowledge of the language being tested

Usually, the greater the knowledge of the language under investigation, the more reliable the data obtained. In this project, Bryan and Silvia Allen had been studying the Zhoucheng variety of the Bai language for around four years, while Wang Feng is a mother tongue Bai speaker from Wase (Southern dialect). Zhang Xia is also a mother tongue Bai speaker from Jianchuan. The presence of Bai speakers helped ensure accuracy in terms of translation of texts and questions, as well as in understanding subjects’ responses.

(iii) Order of testing

It has been conjectured that the order a subject hears the test tapes can influence her scores. For example, she may become fatigued after a few tests and her scores may suffer. Alternatively, she may become used to the method and her understanding may rise. The subjects in this test usually listened to three or four tapes (although some did listen to all seven), and the order the tapes were presented was as follows: practice tape, home-town tape, ‘easy’ tape, ‘medium’ tape, ‘hard’ tape, other tapes in random order. Whether texts were easy or hard was based on our estimate of how similar they were to the subject’s own dialect. So, for Jianchuan subjects, easy tapes were Heqing and Lanping, medium ones were Yunlong and Eryuan and hard ones were Zhoucheng and Luobenzhuo. The order tapes were played in was different for nearly every subject, which minimised the influence of fatigue on the average results. By playing the easier tapes first, we wanted to give subjects confidence they could take the test.

(iv) Language of response

Subjects could respond in either their own variety of Bai or in Mandarin. If they use a language of wider communication (LWC), it is claimed that this may affect their answers; an inadequate competence in the LWC can lead to their answer being interpreted as wrong when they had in fact understood the tape. In our survey, for the most part they chose to use Bai. Where they used Chinese, this was because they were extremely bilingual. We consider that this has not affected the results.

f. Summary

There are a number of factors that can significantly influence test results. Factors affecting subjects may be a reason for high standard deviations. Factors influencing test tapes may lead to lower results for a reference tape across the board. Every effort was made to minimise the effect of these factors, but some

remain outside the control of the researchers, while others were discovered only by actually carrying out the research. In this research, we feel that the most serious factor is the selection and phrasing of test questions.

3.5 Discussion of Test Scores

Because comprehension of a related dialect should be uniform across a population, we expect low standard deviations. High standard deviations are examined more closely here.

a. Luobenzhuo tape

As discussed above, where lexical similarity figures are less than 60 percent, we do not expect to find high intelligibility scores. The scores for the Luobenzhuo tape are consistently low. It is clear that subjects from other dialect areas do not understand Luobenzhuo speech no matter how we analyse the results. We have chosen to leave the scores out of further analysis.

b. Yunlong subjects

The scores for the Jianchuan and Zhoucheng tapes both have rather high standard deviations and range from 40 to about 85. Perhaps they warrant further investigation.

c. Eryuan subjects

A closer examination of the subjects tested revealed that the two lowest scoring subjects were from Jiangwei (江尾) and Yousuo (右所) respectively (although both were living in Eryuan county town at the time of the test). These two places, although still in Eryuan County, are close to Erhai lake, that is, they are closer to the Zhoucheng dialect area. It could be that their home dialect is phonologically closer to the Zhoucheng dialect. Since they are not representative of the Eryuan county town dialect, their scores should be removed from the results. They both listened to the Lanping and Heqing tapes, and one of them listened to the Yunlong and Zhoucheng tapes. When we remove their scores from the Lanping results, the standard deviation falls to 12.9 and the mean rises to 81, which makes it closer to the score of 89 achieved by Lanping subjects listening to the Eryuan tape. Grimes, as quoted in Aumann (2001), states that bilingualism should be suspected where there is an asymmetry of greater than 30 percent in opposing directions of intelligibility tests.

When the scores of the two atypical subjects are removed from the Heqing tape results, we are left with the following scores: 20, 60, 70, 70, 75, 80, 90, 90. The score of 20 is highly divergent. If we remove it, then the standard deviation falls to 11.1 and the mean rises to 76.

d. Heqing subjects

The scores for Heqing subjects listening to the Jianchuan tape range from 25 to 85 and those for the Lanping tape range from 10 to 75. These results both have large standard deviations and must be considered less reliable than most of the other results. The scores for the Zhoucheng tape range from 10 to 55. Although the standard deviation is high, when the highest score is only 55, they clearly will not be able to understand radio broadcasts, for example, in the Zhoucheng dialect.

e. Jianchuan subjects

The only score with a standard deviation higher than 15 is that for the Zhoucheng tape. The scores range from 0 to 70. With only one person scoring 70, it is once again very unlikely that Jianchuan speakers will be able to understand Zhoucheng speech for adequate communication to take place.

f. Lanping subjects

All the results had acceptable standard deviations.

g. Zhoucheng subjects

Generally, the Zhoucheng scores all have higher standard deviations than the scores obtained elsewhere, therefore, we will deal with these results at greater length. Although the researchers tried to ensure that the subjects had not been previously exposed to speakers of other dialects, it is clear that they were not entirely successful. While all subjects were asked whether or not they had travelled outside their home area, and those who had spent a length of time living elsewhere were not tested, it is possible that

they had been exposed to speakers from other dialects coming to Zhoucheng. Why should this be the case more than in other locations? It may be because Zhoucheng is a tourist spot. It was chosen because it is the largest village in Dali, located close to Xizhou, which is considered the standard dialect for the Dali area, and a wordlist was available already. However, it happened that it was much harder to obtain a reliable sample there than in other locations.

Testing was harder in Zhoucheng than in other locations. The weather was bad, and the pouring rain kept people indoors and out of the way. Those who were willing to listen to the tapes were generally unwilling to listen to more than three stories, so more subjects had to be found. Also, their home-town scores were lower than elsewhere. In fact, four subjects scored only 60 percent on the hometown tests and had to be rejected. The people tested, in general, were of a lower educational level than in other towns and that may have influenced their results.

Due to the difficulties in finding enough subjects in Zhoucheng, subjects were also taken from the nearby township of Xizhou. The two places are close enough that it seemed reasonable to assume there would be no significant differences between the two groups of people. The principal researchers also spoke the Xizhou dialect and were familiar with the Zhoucheng variety. In their estimation, the two varieties are close enough that intelligibility is not affected. Local people express the same opinion.

When we examine the scores obtained more closely, it is sometimes possible to conjecture that the reason for a high standard deviation is due to one atypical subject. For example, the Zhoucheng subjects listening to the Lanping tape scored as follows: 0, 5, 5, 20, 20, 20, 30, 30, 35, 40 and 70. The 70 score appears anomalous since no one else scored higher than 40 percent. It would seem that subject ZC03 had already learnt to understand Lanping speech. Were we to delete his score from the overall result, the standard deviation would fall to 13.6 from 19.7 and the mean would fall to 21. In the case of the Jianchuan tape, the scores were as follows: 15, 30, 30, 35, 35, 50, 55, 55, 60, and 70. Although there is no one especially anomalous subject, with the highest score being 70, it is unlikely that the inherent intelligibility can be very high. The scores for the Heqing tape range all the way from 0 to 90, so they must be considered rather unreliable.

Zhoucheng subjects listening to the Eryuan tape scored 20, 50, 55, 60, 70, 70, 80, 80, 80, and 100. Subjects generally did fairly well on this test, with the exception of the subject who scored only 20 percent. If we were to remove this subject from the results on the grounds that he is in some way nonrepresentative, the standard deviation would be lowered to 15.4, which is borderline acceptable.

The two locations that we were most concerned about were Yunlong and Eryuan, since scores were approaching significant threshold levels, yet had high standard deviations. We decided to carry out more intelligibility testing in the nearby village of Xiangyangxi. We followed the same procedures as elsewhere, but only administered the hometown test, the Eryuan test and the Yunlong test. The table below shows the results:

Tape:	HTT	Eryuan	Yunlong
Number of subjects	9	9	7
MEAN	92	88	72
STDEV	8.3	10.6	25.5

While the results for the Eryuan tape look reliable, the Yunlong score still has a high standard deviation. Closer examination reveals one subject only scored 20, while the others scored 60 to 90. If that subject is removed, then the standard deviation falls to 12 while the mean rises to 81.

If we total the scores for Zhoucheng and Xiangyangxi, and leave out the two anomalous subjects, then the table looks as follows:

Tape:	HTT	Eryuan	Yunlong
Number of subjects	27	17	17
MEAN	90	79	76
STDEV	9.9	15.5	15.9

The above discussion highlights the importance of careful screening of subjects to ensure they are genuinely from the village concerned and have had no exposure to other dialects. In many places, it is almost impossible to find people with no exposure. This is especially true of people in the Erhai valley, which includes Zhoucheng, Xiangyangxi, Dali and Qiliqiao. This is a densely populated area where most of the Southern dialect speakers live. The main road to northwest Yunnan runs through this valley, leading to places such as Eryuan, Jianchuan, Heqing and Lanping. There is an especially high degree of interchange between this area and Eryuan, which lies immediately to the north. It is the opinion of the researchers that people from the Zhoucheng area are fairly familiar with Eryuan speech. Given that Eryuan and Yunlong varieties seem mutually intelligible, it may then follow that Zhoucheng speakers are able to understand more than would be expected of the Yunlong variety. Conversely, Yunlong speakers can understand Eryuan speech, but find Zhoucheng speech much harder to understand, giving rise to asymmetrical scores of 62 and 76.

Taking into account the adjustments mentioned above, here is the revised table of intelligibility testing results:

Revised Table Of Intelligibility Testing Results

Tape:	Subjects from:					
	Yunlong	Eryuan	Heqing	Jian-chuan	Lanping	Zhou-cheng
Yunlong	98 18/4.3	91 9/6.0	82 10/12.0	82 10/12.3	87 10/9.1	76 17/15.9
Eryuan	93 10/9.5	98 13/4.4	79 10/11.1	80 10/11.5	89 10/7.4	79 17/15.5
Heqing	80 9/11.2	76 7/11.1	94 17/6.1	88 10/11.4	79 10/12.9	58 10/28.6
Jianchuan	66 10/15.5	80 10/6.9	59 10/19.8	92 18/7.7	81 10/8.1	44 10/17.0
Lanping	77 10/8.2	81 8/12.9	50 10/20.1	83 10/10.9	93 10/6.7	21 10/13.6
Zhoucheng	62 10/15.5	78 9/11.2	30 10/15.2	37 10/23.1	40 10/7.1	90 27/9.9

3.6 Determining Centres of Communication Networks

Having determined intelligibility figures, we can proceed to determine which centres would be the best centres for communication. First, it is necessary to decide on a threshold level of comprehension. Grimes suggests that a minimum threshold of 85 percent is necessary for adequate communication to take place from the central language variety to those listening on the periphery (Grimes 1995). By determining the centres at various thresholds, patterns can be seen which may help to confirm the choice of a centre or centres. To do this, we want to minimise two costs, namely the number of centres needed and the loss of communication involved. Loss of communication means how much below 100 percent the intelligibility level is. If, for example, we choose between two centres, we would choose the one with the highest overall intelligibility scores. We wish to minimise the number of centres because this reduces the costs of any language development program. If radio broadcasts are to be made, the overall cost is lower if programs have only to be dubbed into two dialects as opposed to six. In general, the fewer centres, the greater the communication loss, which is why establishing the right threshold is important.

a. Intelligibility thresholds

Mean RTT scores:

Tape	Subjects from:					
	Yunlong	Eryuan	Heqing	Jianchuan	Lanping	Zhoucheng
Yunlong	98	91	82	82	87	76
Eryuan	93	98	79	80	89	79
Heqing	80	76	94	88	79	58
Jianchuan	66	80	59	92	81	44
Lanping	77	81	50	83	93	21
Zhoucheng	62	78	30	37	40	90

Taking the figures from our table of results, we apply them to varying intelligibility thresholds. Grimes (1974) describes a procedure for calculating this. If we use a threshold of 90 percent, then it is clear that the speakers in each location are unable to understand any other dialect at that high a level of intelligibility, with one exception: Yunlong speakers can understand Eryuan speakers at a level of 93 percent and Eryuan speakers understand Yunlong speakers at a level of 91 percent. Therefore these two locations can be grouped together, while the remaining locations all need to be their own centre. In other words, if we wanted to produce radio programs that could be understood at a level of 90 percent intelligibility, we would need to produce them in five dialects. If we lower the requirement to an understanding of 85 percent, then three centres will suffice as Yunlong and Lanping speakers are able to understand Eryuan speech at this level, and Jianchuan speakers understand Heqing speech at that level. Zhoucheng speakers continue to need their own program. If we wish to reduce the number of communication centres to just one then we need to accept an intelligibility threshold of 75 percent. This is summarised in the following chart:

90%: 5 centres: **Eryuan** – Yunlong

Jianchuan

Heqing

Lanping

Zhoucheng

85%: 3 centres: **Eryuan** – Yunlong, Lanping

Heqing – Jianchuan

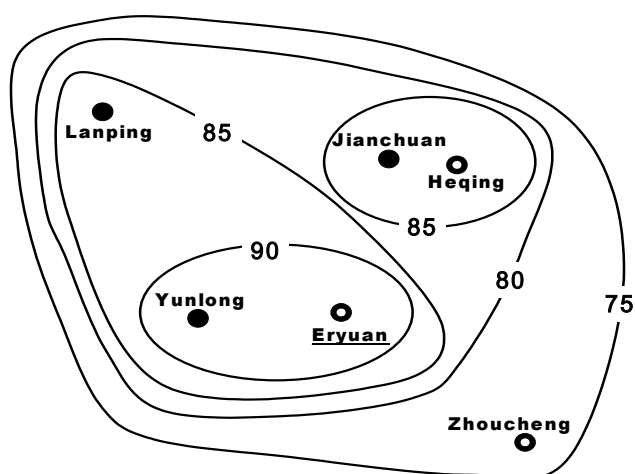
Zhoucheng

80%: 2 centres: **Yunlong** – Eryuan, Lanping, Jianchuan, Heqing

Zhoucheng

75%: 1 centre: **Eryuan**

This can also be represented schematically, using the following diagram. Circles are drawn around locations on a map, indicating that they group together at a certain level of intelligibility, which is written next to the line. These contour lines show visually which places are ‘peaks’ of communication, most readily understood by speakers of other varieties. In this case, Eryuan and Yunlong group together as the centre.



b. Confidence limits

However much the researcher may control for the potential problems listed above, it remains true that with a sample of only ten speakers of the dialect, there will always remain some uncertainty as to the accuracy of the results. Intelligibility testing is a statistical procedure which hypothesises the intelligibility of one variety to all speakers of another extrapolating from a small number of test results. It determines whether or not intelligibility of language variety B to speakers of language variety A is at, or above, a certain threshold (normally 85 percent or 90 percent). If it is, then variety B is said to be intelligible, otherwise it is not.

As discussed above, there is much variation in test scores. The average of the test scores should not be considered as the intelligibility level, but rather only an estimate of the intelligibility. For example, Jianchuan speakers listening to the Heqing tape scored a mean of 88 percent, but the standard deviation was 11.4. Therefore, we can be reasonably confident that the intelligibility of Heqing to Jianchuan speakers is between 81 percent and 95 percent. This is calculated using the t-test, which is the standard procedure used when estimating the average value of something in a population (such as the speakers of the Jianchuan variety) from the average measured in a small sample of that population. We want to test at a significance level of 5 percent, and from statistical tables we find that $t_{0.05}$ with degrees of freedom $n-1=9$ is 1.833. Then, using the following formula (from Aumann (2001)), we can calculate the deviation:

$$deviation = \left(\frac{s}{\sqrt{n}} \right) * 1.833$$

Using this figure, we then calculate a new range within which the mean probably lies. We first subtract the new deviation from the mean to arrive at the lowest intelligibility level, then add the mean to give us the highest intelligibility level. Using the example of Jianchuan speakers listening to Heqing speech, we arrive at a new deviation of 6.59. By adding and subtracting this from the mean of 88 percent, we arrive at a range of 81.4 to 94.6. We can now be 90 percent confident (from twice the significance level) that the intelligibility of the whole population lies within this range, which we can call a confidence interval.

If we are using a threshold of 90 percent, we still remain unsure, in this case, whether the population will understand the other dialect, because the range extends down to 81.4 percent, which is below the threshold of intelligibility. So we use the lower limits of the confidence interval to create a new set of figures, which represents what we believe to be the lowest levels of intelligibility for that population. We do the same for the upper limits that represent the highest levels of intelligibility.

The table of results can then be redrawn to show the means with their upper and lower confidence limits, having three figures for each test and working out centres of communication for each set of figures. Using the lower confidence limits, we are working with what are likely to be the lowest levels of intelligibility, so will come up with a higher number of centres at each threshold. While using the upper limits, we will arrive at a lower number of centres needed. The probable number lies somewhere in between.

Table showing mean intelligibility figures with upper and lower confidence limits

Tape	subjects from									
	Yunlong	Eryuan		Heqing		Jianchuan		Lanping		Zhoucheng
Yunlong	98	91		82		82		87		76
		87	95	75	88	75	89	81	92	69 83
Eryuan	93	98		79		80		89		79
	87	99		72	85	73	87	85	93	72 86
Heqing	80	76		94		88		79		58
	73	87	67	85		81	95	71	86	41 75
Jianchuan	66	80		59		92		81		44
	56	75	76	83	47	71		76	86	34 53
Lanping	77	81		50		83		93		21
	72	81	74	89	38	62	76	89		13 29
Zhoucheng	62	78		30		37		40		90
	53	71	71	85	21	38	24	50	36	44

We can now recalculate the number of communication centres using the lower confidence limits:

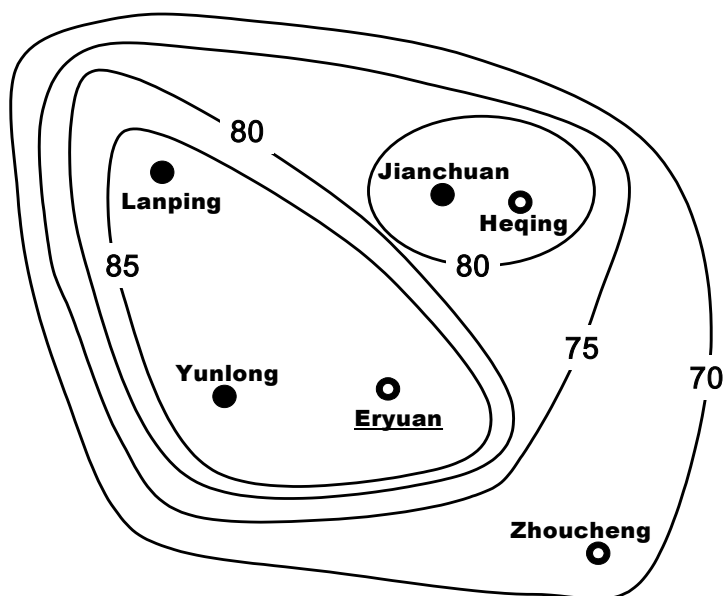
Tape	Yunlong	Eryuan	Heqing	Jianchuan	Lanping	Zhoucheng
Yunlong		87	75	75	81	69
Eryuan	87		72	73	85	72
Heqing	73	67		81	71	41
Jianchuan	56	76	47		76	34
Lanping	72	74	38	76		13
Zhoucheng	53	71	21	24	36	

85% four centres: **Eryuan:** Lanping, Yunlong
Heqing
Jianchuan
Zhoucheng

80% three centres: **Eryuan:** Lanping, Yunlong
Heqing: Jianchuan
Zhoucheng

75% two centres: **Yunlong:** Eryuan, Heqing, Jianchuan, Lanping
Zhoucheng

70% one centre: **Eryuan:** Yunlong, Heqing, Jianchuan, Lanping, Zhoucheng



Now we recalculate using the upper confidence limits:

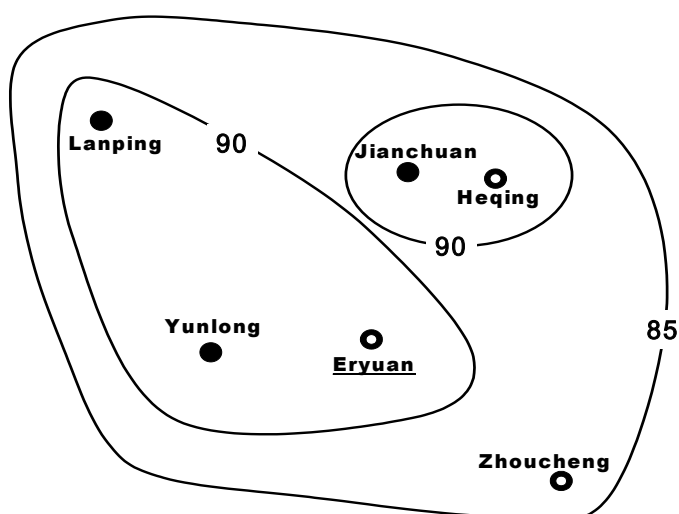
Tape	Yunlong	Eryuan	Heqing	Jianchuan	Lanping	Zhoucheng
Yunlong		95	88	89	92	83
Eryuan	99		85	87	93	86
Heqing	87	85		95	86	75
Jianchuan	75	83	71		86	53
Lanping	81	89	62	89		29
Zhoucheng	71	85	38	50	44	

90% three centres: **Eryuan:** Lanping, Yunlong

Heqing: Jianchuan

Zhoucheng

85% one centre: **Eryuan:** Yunlong, Heqing, Jianchuan, Lanping, Zhoucheng



The following table summarises the results:

Threshold	No.	Expected centres	No.	Minimal centres	No.	Maximal centres
100%	6	EY, HQ, JC, LP, YL, ZC	6	EY, HQ, JC, LP, YL, ZC	6	EY, HQ, JC, LP, YL, ZC
90%	5	EY, HQ, JC, LP, ZC	3	EY, HQ, ZC	6	EY, HQ, JC, LP, YL, ZC
85%	3	EY, HQ, ZC	1	EY	4	EY, HQ, JC, ZC
80%	2	EY, ZC			3	EY, HQ, ZC
75%	1	EY			2	YL, ZC
70%					1	EY

It is clear from these tables that the first major division in these dialects is between Zhoucheng and the rest. It is interesting to observe how the other dialects cluster. Eryuan and Yunlong cluster closely together: speakers of other dialects have similar intelligibility figures for Yunlong as for Eryuan. This Eryuan-Yunlong cluster is a communication centre, but is understood far better by the Jianchuan, Lanping and Heqing dialect speakers than by Zhoucheng speakers.

4. Conclusions

The following table combines the lexical similarity and intelligibility figures in one table:

Table showing average intelligibility and lexical similarity

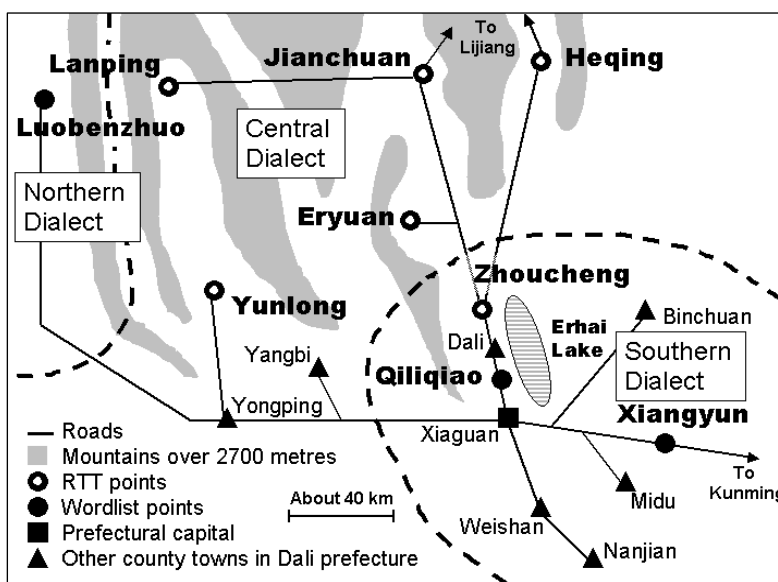
Tape	subjects from						
		Yunlong	Eryuan	Heqing	Jianchuan	Lanping	Zhoucheng
Yunlong	RTT	98	92	82	82	87	70
	LEX		81	78	79	77	77
Eryuan	RTT	93	98	79	80	89	67
	LEX	81		84	87	85	83
Heqing	RTT	80	72	94	88	79	58
	LEX	78	84		90	86	81
Jianchuan	RTT	66	80	59	92	81	44
	LEX	79	87	90		91	82
Lanping	RTT	77	71	50	83	93	25
	LEX	77	85	86	91		79
Zhoucheng	RTT	62	77	30	37	40	89
	LEX	77	83	81	82	79	

Although every lect in the table shares at least 77 percent of its vocabulary with the other lects, intelligibility ranges from 25 percent to 93 percent. This confirms what many other researchers have found, namely that lexical similarity is not a good predictor of intelligibility. The intelligibility testing results show that Zhoucheng should be considered a separate dialect from the other lects. If we then examine the figures for the other lects, we find that, generally, the difference between the lexical similarity and intelligibility percentages is between 1 and 15. There are two exceptions to this: the scores for Heqing subjects listening to the Jianchuan and Lanping tapes are surprisingly low. The confidence intervals for these scores are also very large, so the prediction that Heqing speakers find Jianchuan and Lanping speech hard to understand warrants further investigation.

According to the intelligibility results, Eryuan and Yunlong lects group closely together. This is somewhat surprising, in view of the fact that there are mountains between the two counties and there is no major communication route between them. We conjecture a historical connection between these two places. Indeed, they were once part of the same administrative district, and during the Qing dynasty many people moved to Yunlong to work in the salt mining industry.⁴ While their lexical similarity figures show that they share about 81 percent of their vocabulary in common, Eryuan has much more vocabulary in common with the other lects than Yunlong does. We, therefore, consider Eryuan more central linguistically.

⁴Duan Ling, personal communication.

Map showing approximate dialect boundaries



On the basis of both lexical similarity and intelligibility figures, we conclude that Bai can be divided into at least three dialects: the Central dialect, spoken in Eryuan, Jianchuan, Heqing, Lanping, and Yunlong, the Southern dialect spoken in Dali, and the Northern dialect spoken in various parts of Nujiang prefecture and illustrated in our research by the Luobenzhuo data. This can be summarised in the map above:

The lects of the Central dialect share between 84 percent and 91 percent of their vocabulary in common, with the exception of Yunlong, whose figures drop to 77 percent, so Yunlong can be considered a little divergent. Xiangyun has similar lexical similarity figures to Yunlong, but no intelligibility testing was carried out. We are, therefore, unable to say with certainty whether it groups more closely with the Central or Southern dialects.

Estimates of the populations of each dialect are as follows:

- Central dialect: 700,000 (Jianchuan, Heqing, Lanping, Yunlong, Eryuan, Lijiang)
- Southern dialect: 430,000 (the Erhai valley including Zhoucheng and Dali)
- Northern dialect: 50,000 (Nujiang area including Luobenzhuo and some parts of Lanping).

The recorded text testing establishes what levels of understanding of different Bai dialects Bai people have on first hearing. Informal interviews with locals, for the most part, bears this out. For example, Jianchuan college students who find themselves in classes with peers from various Bai-speaking regions say that they can usually use Bai with students from Lanping, Heqing, Eryuan and Yunlong, but resort to Chinese with those from Dali. We believe, however, that a more important question is how learnable are the other dialects? If a Bai person from Zhoucheng were to live in Jianchuan and try to understand Jianchuan Bai speech, how long would it take them? If someone from Jianchuan wanted to understand Zhoucheng Bai, how much effort would it take? We might assume that the initial intelligibility figures would be a good predictor of learnability, that is, that the Eryuan dialect would be easier for a Zhoucheng person to learn than the Jianchuan dialect, but there are a number of factors at play. How similar are the two dialects grammatically? How regular are the phonological correspondences? How much semantic shift has occurred in the lexicon? The author's own experience of six years learning the Bai dialect spoken in Xizhou (adjacent to Zhoucheng), followed by two years in Jianchuan, confirms that the two dialects are different enough from each other that an outsider does not

find the transition an easy one. We gave the RTT test to a woman from the Erhai valley (Southern dialect region) who moved to Jianchuan. She scored 30 percent on the Jianchuan tape upon arrival. Six months later, we tested her again and she scored 70 percent. This anecdote demonstrates that some people can increase their understanding through exposure. As for the Northern dialect, it is so different from the other two dialects that some listeners could not even recognise it as Bai.

Another important factor is the attitude of the people towards the other dialect. Some dialects are regarded as prestige dialects, while others are thought of as inferior. There is widespread recognition that the Bai dialect spoken in Jianchuan is somehow “genuine” Bai. Some people may not make the effort to learn an “inferior” dialect. Others are simply not motivated to learn any other dialect. We know a man from Jianchuan who has lived in Dali for over twenty years, but still cannot understand the Bai spoken there. Others are highly motivated: shopkeepers from the Southern dialect area who have moved to Jianchuan to work can communicate in Jianchuan Bai (though they never lose their Dali accent).

While the Bai Dialect Intelligibility Survey would suggest that Eryuan would be the most suitable lect to develop if a standard is desired for the Central and Southern dialects, it is possible that language attitudes may be more important when it comes to language development strategies than pure linguistic data. A short digression to examine one example of language development, namely the orthography, may serve to illustrate this.

The Roman orthography that has been developed for Bai was first drawn up in 1958 using the Bai spoken in Xiaguan (Southern Dialect) as the basis. Xiaguan is the administrative capital of the Dali Bai Autonomous Prefecture. Later, in 1982, the orthography was revised on the basis of the dialect spoken in Jianchuan county town. Literacy programs using this orthography in rural areas of Jianchuan county were successful, but when transferred to Zhoucheng, they failed because the people said they ‘did not have time to study Jianchuan Bai’.⁵ There was no motivation to learn what they perceived to be a ‘foreign’ dialect. In 1993, the orthography was again revised, but this time two versions were produced, one based on the Jianchuan dialect and one on the Dali dialect, specifically the Xizhou lect. Books in the Bai language are often published with both these experimental orthographies, one after the other, in the same book. To my knowledge, Bai is the only minority language in China to do this.

This brief discussion of the orthography demonstrates that with regards to the Bai language there are two natural centres: Jianchuan county town and Xizhou in the Dali area. Both places have historical significance for the Bai, although today it is the Dali area which serves as the political and economic centre. It is unlikely that either place could serve as a unifying dialect, because of negative reaction from the other pole. The suggestion that Eryuan could serve as a centre bears further investigation. It has no great prestige as a dialect, but perhaps might not generate negative opinion either. Were it not acceptable, then it may be that the Southern and Central dialect areas would need their own language development projects. We recommend further research into the attitudes of Bai people towards the use of their own language.

⁵Quoted in 《关于白族文字方案》, (The Bai orthography project), 甲斐胜二, 大理师专学报, 1997 年出版。

Appendix 1 RTT Texts (English Translations)

ERYUAN

Location of text collection: Yuhu township in Eryuan county, Dali prefecture.

Date of collection: 19 September 2000

Collation: Wang F.

When I was young, I had a classmate who lived in the mountains (1). We were very good friends (2). We studied together and did everything together: sleeping, playing; later we remained best friends. At graduation time, we went up to the mountain where his home was. When we climbed up this mountain, we found two plum trees (3) and decided to uproot them and take them back with us. After we were walking for a while, all of a sudden it started to rain with thunder and lightning. We weren't that old then and got pretty scared by this so we went to find shelter by some gravestones (4). The rain only stopped after dark (5). It was so dark we were really scared (6). The road was very slippery, so we came down holding hands for support (7). It was so hard. When we got back, I planted those trees in my garden. Since then, I've been very fond of those trees. One day I saw my mother digging in the garden (8). I told her to be careful (9) not to dig up those trees. She said not to worry, how could I dig them up; if you don't believe me, just watch. As she spoke, she was digging around them but went too far and uprooted them. I had a big argument with her, since I was so worried about my trees (10).

Questions

1. Where did his classmate live? (up the mountain)
2. How were the two of them getting along? (very well)
3. What did they found on the mountain? (two plum trees)
4. Where did they shelter from the rain? (by some grave stones)
5. When did the rain stop? (after dark)
6. How did they feel when it was so dark? (they were afraid)
7. How did they get down from the mountain? (holding hands for support)
8. Who was digging the garden? (his mother)
9. What did the storyteller say to his mother? (be careful)
10. What did the storyteller do with his mother? (he had an argument with her).

HEQING

Location of text collection: Yunhe township in Heqing county, Dali prefecture.

Date of collection: 16 September 2000

Collation: Wang F.

I must have been six (1) that time I went with some friends up the mountain (2). On that day, the weather was beautiful (3), the sun was shining and there was no rain. Six or seven of us went up the mountain to play (4)—a crowd of children. And what did this crowd of kids do on the mountain? We picked some flowers, played hide and seek, rested here and there, gathered a few mushrooms; we played all over the place (5). There was this friend of mine, a year younger than me (6), who decided to climb a tree (7). He climbed higher and higher, but then he slipped and fell to the ground. 'Bang', he fell and broke his leg. What could we six year olds do—we were only little. We could only go back and call some adults to come and help (8). We told them our friend had climbed a tree and fallen down and broken his leg; we could do nothing else. Two or three adults came and carried our friend to the hospital to be looked at. They said he had broken his foot. The doctor, after examining the foot, said it was only dislocated (9), it wasn't broken. Then he wrapped a poultice round his foot (10), and said it would be better in three or four days. After two or three days his foot was better. It was strange, that boy later studied in my class at school; he was a good student and ended up studying in Beijing.

Questions

1. How old was the storyteller then? (six years old)
2. Where did the storyteller go? (up the mountain)
3. What was the weather like on that day? (the weather was beautiful)
4. How many people went? (six or seven children)
5. What did they gather on the mountain? (some mushrooms)
6. Who was a year younger than him? (one of his friends)
7. What did this boy want to do? (he wanted to climb a tree)
8. Who did they call to come and help? (some adults)
9. What did the doctor say about his foot? (it was only dislocated)
10. What did the doctor do? (the doctor put a poultice round his foot)

JIANCHUAN

Location of text collection: Jinhua town in Jianchuan county, Dali prefecture.
 Date of collection: 11 March 2000
 Collation: Zhang X.

A few years ago, in our agricultural market near the East Gate, it was market day. I went shopping (1), and just as I entered the section where they sell rice (2), I saw an old lady carrying on her back about twenty *jin* of rice to sell (3). As she was on her way to sell the rice, two thieves, who were outsiders, came along (4). They were wearing sleeve protectors on their sleeves and wanted to steal some rice (5). I was just walking in front and felt that these two people were a bit strange and wondered what the old lady had on her, anyway. I saw the two men dip their sleeves into the old lady's basket (6). As they put their hands in, the rice went into their clothes, that is, into their sleeve protectors. I felt very sorry for the old woman (7). These two men shouldn't do this, so I went to scold them and tell them they shouldn't do this. If you want to steal, then steal from those people who do a lot of business. This old lady only has twenty or thirty *jin* of rice. So that day those two men stared coldly at me (8) and I said, "Why are you staring at me? If you're not convinced, then I'll call someone over here to beat you up (9)." This happened at the agricultural market, which used to be held at the East Gate. I saw it with my own eyes (10).

Questions

1. What was the storyteller going to do? (go shopping)
2. Which place in the agricultural market was the storyteller coming to? (where they sell rice)
3. How much rice was the old lady carrying on her back? (about twenty *jin*)
4. What kind of people came along? (outsiders, thieves)
5. What did these two people have on their arms? (protective sleeves)
6. Where did these two men put their hands? (in the basket)
7. What did the storyteller think about the old lady? (she felt sorry for her)
8. How did the two men look at her? (they stared coldly at her)
9. How did the storyteller threaten the two men? (call someone to beat them up)
10. Where did the storyteller say the market was? (by the East Gate)

LANPING

Location of text collection: Wenxing district, Jinding township in Lanping county, Nujiang prefecture.
 Date of collection: 25 April 2000
 Collation: Zhang X.

In the morning, I was still asleep in bed (1) when an old lady came in. The peonies were blossoming well (2) and the dogs were barking fiercely. When she was sick of hearing the barking, she turned around and left (3). After she had gone, I got out of bed. After I got up, I brewed myself a jar of tea. After the tea was brewed, I went into the courtyard to relax (4) and a fifty year old lady came in. She was wearing an apron and a waistcoat (5). After she came in, I realised she wanted to ask me to do something (6), I realised that this person who had come in definitely wanted to ask me to do something, otherwise she wouldn't have come here. She told me that they placed offerings to the spirits at their burial

grounds, but there was no fixed place—they made the offerings all over the place. She had asked the stone mason to make her a stone tablet to mark the spot, but she didn't know what characters to write on the tablet. I said that was easy. "I'll write you some characters (7). I can write 'this is where the spirits reside', and then the stone mason can inscribe them on the tablet. Then you can worship the spirits in the right place and all of your Li family can worship in the right place." Then Teacher Li, my uncle, telephoned me (8) to ask me to come over and meet some people who are researching the Bai language. I said that I hadn't even eaten my breakfast yet (9), but he said, "Come over even if you haven't eaten your breakfast. This is an urgent matter." So, even before breakfast, I rushed over there (10). And when I went over there, I met the Bai researchers and laughed.

Questions

1. What was the storyteller doing? (sleeping on his bed)
2. How did the storyteller say the peonies were blossoming? (blossoming well)
3. Why did the old lady go out? (she was sick of hearing the dogs barking fiercely)
4. Where was the storyteller relaxing? (in the courtyard)
5. The woman who came in, how was she dressed? (she was wearing an apron and a waistcoat)
6. What did the storyteller think the lady wanted? (ask him to do something)
7. What did the storyteller help the lady to do? (write some characters)
8. Who gave the storyteller a phone call? (his uncle, Teacher Li)
9. What did the storyteller say? (he hadn't even eaten his breakfast)
10. Even though he hadn't had breakfast, what did the storyteller do? (rush out)

LUOBENZHUO

Location of text collection: Luobenzhuo Bai township in Lushui county, Nujiang prefecture.
 Date of collection: 20 April 2000
 Collation: Zhang X.

A long time ago, when I was in fifth grade (1), in 1970, five of us students agreed to go fishing beside the river (2). When we got to the river bank, we came across three old men fishing with a net. We fished for a while, but only caught tiddlers (3); I felt unhappy about this, so I borrowed the old men's net to fish (4). The first time I tried with the net, I caught nothing. I saw a rock on the other side and waded across to it, wading through water which came up to my hips, so I reached the rock (5). After I threw out the net, I caught a fish, then I quickly rolled up the net (6). I was so excited that I slipped (7) and fell into the water. I felt it was a pity (8) to fish for so long and only catch one big one. I quickly grabbed the pole of the fishing net. My friends came over to help me and pulled me back onto the bank. Once on the bank, I opened up the net and found that the fish I had caught was between 5 and 8 *liang* (that is between 250 and 400 grams) (9) and I was very happy. Just before it got dark, I returned home (10). When I took the fish home, my parents were very happy, I was happy and we all ate a meal of steamed fish.

Questions

1. What grade was the storyteller in? (5th grade)
2. What did the five students go to do? (go fishing)
3. What were the fish like that the storyteller caught? (tiddlers)
4. What did the story teller take? (a fishing net)
5. Where did the one with the net go? (to the rock)
6. What did the fisherman do after he caught a fish? (he rolled up the net)
7. What happened to the fisherman when he got excited? (he slipped)
8. How did the fisherman feel? (he felt it was a pity)
9. How big was the fish in the net? (between 5 and 8 *liang*)
10. When did the fisherman go home? (just before it got dark).

YUNLONG

Location of text collection: Shimen township in Yunlong county, Dali prefecture.
 Date of collection: 22 September 2000
 Collation: Wang F.

Once, when I was at home, there was an old man in our village (1). This old man is still alive and his name is Ba Xiudi. Ba Xiudi had eight children and had married four times (2). These wives had all died before him. Because his wives had all died and his children were incapable (3), his life was very hard. He grew old and was about seventy or eighty and didn't even have firewood to burn (4). (In the countryside, we burn firewood to cook our food) (5). Ba Xiudi was unable to walk very far (6), so he thought he would chop down some firewood nearby. But there wasn't any suitable firewood to chop down nearby. In our village, on the tomb of the Liu family (7), there were a few trees left (8), which the Liu family didn't want to chop down. Ba Xiudi thought that since he was old and had no trees to chop down he might as well chop down some of the trees on the Liu family grave (9). So, he took an axe and "chop chop," began to turn the Liu family trees into firewood. Someone from the Liu family cried out: "Who is on our family tomb?" and again, "Who is it? Don't chop on our family tomb." Ba Xiudi heard this and said: "I didn't chop it up fine, I chopped it into thick pieces" (10). The Liu family man thought he had told the man not to chop, but he had said he had chopped it fine, so he ran out to see and found it was that old man, Ba Xiudi, so he said, "Grandfather, you're old, take home what you have already cut, but don't cut any more."

Note: The words for 'fine' and 'tomb' are homophones in Bai.

Questions

1. What kind of person was there in the storyteller's home? (an old man)
2. How many wives had the old man married? (four)
3. Who was incapable in his home? (his children)
4. What was his situation when he was old? (he didn't even have firewood to burn)
5. What do they use in the countryside to cook their food? (firewood)
6. Where could he not go? (far away)
7. What did the Liu family have? (a tomb)
8. What was there on top of the Liu family tomb? (some trees)
9. Where did the old man want to go to chop firewood? (on the Liu family tomb)
10. What did the old man say? (I didn't chop it fine, I chopped it thick).

ZHOUCHEG

Location of text collection: Zhoucheng village in Dali county, Dali prefecture.
 Date of collection: 13 March 2000
 Collation: Zhang X., Xi S.

I'm going to tell you something. Yesterday, I went into our small village market to buy some more oil (1). At the place where they sell oil, I heard some people arguing. They were talking about a man in his fifties from number one cooperative of our village (2), with dirty clothes (3) and twisted limbs (4). He moved around in a clumsy fashion and didn't look very nice. He often went begging in our village and the nearby villages (5). That day he had begged some money and was counting it by the place where they sell oil. Because his hands and feet were deformed, it was hard for him to count the money by himself. That day, the weather was overcast and it was even raining (6). We were cold, but he looked colder than us. He was even shivering a little. Since he couldn't count his money properly, he asked a woman in her forties, who was from number seven work unit of our village, to help him count. That kind-hearted person helped him count the money (7). When she counted it, there was about twenty *yuan*, but when she gave the money back to the beggar, he said there should be about thirty *yuan* (8). He claimed the money was not enough and that the one who had counted the money for him had hidden some away. In fact, that woman had certainly not hidden any money. Her heart was kind. The onlookers all agreed that the beggar shouldn't behave like this (9). The woman had her heart in the right place to help him count his money and to claim she was stealing his money was not right. There were a lot of people on the road discussing

the situation, a group here, a group there, all discussing it. He said that woman had hidden his money, but that woman couldn't have taken it. Her family situation was good, her heart was kind, she certainly couldn't have done it (10). So after a while, that woman nearly died of anger. That is the matter I wanted to tell you, do you think that woman would have taken his money?

Questions

1. What did the storyteller want to buy? (oil)
2. The fifty-year-old man was from which commune? (number one cooperative)
3. What were this man's clothes like? (dirty)
4. What were this man's hands and feet like? (deformed)
5. What did this man often go to villages to do? (beg)
6. What was the weather like that day? (overcast, raining)
7. What kind of heart did the woman have who helped him count his money? (a good heart)
8. How much money did the beggar really have? (about twenty *yuan*)
9. What did the onlookers say? (he shouldn't do that)
10. What was the family situation of the woman who helped him like? (good).

Appendix 2 Phonological Descriptions of Dialects Investigated

1. Introduction

The phonological descriptions below have been worked out on the basis of the wordlists found in the appendix and should, therefore, be considered as preliminary interpretations. As an aid to correct understanding of the IPA symbols used in this book, the tables below list all the symbols used, along with a description of the manner and place of articulation.

Syllable patterns in Bai language varieties are fairly simple: the vast majority are CV, with some that can be considered as V. There are sequences of two vowels such as /ai/ and /ue/, but if these are considered diphthongs, then we do not need to posit the syllabic pattern VV or CVV. We have chosen to transcribe the ambiguous palatal and labio-velar approximants (/j/ and /w/) when they occur in syllable-initial position as consonants, rather than as the corresponding high vowels (/i/ and /u/). When they occur following a consonant, as in /pia/ or /kua/, they are interpreted as the onset of a diphthong.

Tables showing all IPA symbols used:

			labial	alveolar	retroflex	post-alveolar	palatal	velar	uvular	glottal
plosives	voiced		b	d	ɖ			ɡ		
	voiceless	unaspirated	p	t	ʈ		c	k	q	ʔ
		aspirated	pʰ	tʰ	ʈʰ		cʰ	kʰ	qʰ	
nasals			m	n		ɳ	ŋ	ɴ		
laterals				l						
fricatives	voiced		v	z	ʐ	ʒ	j	ɣ	ʁ	
	voiceless	unaspirated	f	s	ʂ	ʃ	ç	x	χ	h
		aspirated		sʰ		ʃʰ	çʰ	xʰ	χʰ	
affricates	voiced			ɖ	ɖ		ɖ͡			
	voiceless	unaspirated		ts	t͡ʂ	t͡ʃ	t͡ɕ			
		aspirated		tsʰ	t͡ʂʰ	t͡ʃʰ	t͡ɕʰ			
approximants							j	w		

	front - unrounded	front - rounded	central	back - unrounded	back - rounded
close	i	y		ɯ	u
close mid	e				o
open mid	ɛ				ɔ
open	æ		a		

diphthongs:			
iɯ	ɥɛ	ue	ao
iɛ	iɔ	uɛ	uɔ
ia	ai	ua	ou

The syllabic voiced labio-dental fricative /ɣ/ also functions as a vowel.
/ʊ/ is a mid-centralised close back-rounded vowel.

2. Tone

Tone in Bai can be considered a complex combination of pitch, phonation type, and degree of tenseness. Xu and Zhao (1984) describe Bai as having five tones: mid to high rising, high level, mid level, and two kinds of mid to low falling. In addition to pitch contrasts, they classify Bai vowels as either tense or lax. This gives rise to eight tonal categories for Jianchuan Bai, based on a combination of pitch and tenseness:

Lax	Tense
55	66
33	44
31	42
21	
35	

Tenseness in Bai has the effect of raising the pitch level, so a tense 33 tone word is produced at a level corresponding to a 44 tone. Edmondson (1994) states, “in the level tones the pitch is raised so dramatically by tenseness that this feature cannot be ignored in transcription.” We have transcribed tense tones using 42, 44, and 66 to indicate their higher pitch. The extra high pitch of a tense high-level tone has been assigned the number 66, even though this is outside the traditional system used for transcribing tone as it best represents the true pitch. In practice, this tone is reserved for modern loans from Chinese, and as such, does not actually occur in the data presented here. It is found in Jianchuan and Lanping dialects, as well as frequently in the Baishi variety in Yunlong county. The southern dialect grouping also has a contrastive 32 tone. In an earlier paper, we describe Xizhou Bai as having eight tones: three level tones, one rising and four falling. We found that tense was not a significant feature in the southern dialect variety, so here we use pitch contour notation to denote six to eight tones for each variety, rather than a combination of pitch and the feature tense-lax.

Furthermore, Bai vowels can be categorised by their phonation type. In addition to modal voice, some words are produced with breathy voice and some with creaky voice. Generally, words transcribed with a 21 tone can often be produced with a greater degree of breathiness, while 42 tones are more glottalised. Some Bai varieties also have a contrast between oral and nasal vowels. Edmondson (1994) describes in detail the rich voice quality patterns found in one Jianchuan language variety.

Eryuan Phoneme Chart: Tones

洱源音位系统：声调

There are the following seven tones: 55, 44, 33, 35, 42, 31, 21.

有 7 个声调：55, 44, 33, 35, 42, 31, 21。

Eryuan Phoneme Chart: Consonants

洱源音位系统：声母

p	t			k
p ^h	t ^h			k ^h
m	n	ɲ		ŋ
	l			
f	s	ɕ	ʃ	x
v	z		ʒ	ɣ
	ts	tɕ	tʃ	
	ts ^h	tɕ ^h	tʃ ^h	
		j		w

/p/	pu ³³	水塘	pond
	pi ²¹ pu ³¹	蚂蚁	ant
/p ^h /	p ^h u ⁵⁵	吹	blow
	ɲi ⁴⁴ p ^h i ³¹	太阳	sun
/m/	mu ⁵⁵ tu ²¹ nɔ ³⁵	刚才	just now
	mi ⁵⁵ ŋua ⁴⁴	月亮	moon
/f/	fɛ ³⁵ tɕu ⁵⁵ ku ⁵⁵	斑鸠	turtledove
	fɿ ⁴⁴	六	six
/v/	vɿ ²¹	云	cloud
/t/	tu ²¹ pɔ ²¹	头	head
	tɛ ⁴²	猪	pig
/t ^h /	t ^h u ⁵⁵	下(山)	down
	t ^h ɔ ³³	路	road
/n/	nu ³¹	这	this
	nɔ ³¹	你	you (sg)
/l/	t ^h ɔ ⁵⁵ lo ⁴⁴	兔	hare, rabbit
	le ³¹	慢	slow
/s/	su ³³	麻	hemp
	se ⁴²	蛋	egg
/z/	zɔ ²¹	读	read
	ʒɿ ²¹	土罐	clay pot
/ts/	tsɔ ⁵⁵	鸟	bird
	tse ³⁵	煎	shallow fry

/ts ^h /	ts ^h ɔ ³¹	咸	salty
	ts ^h a ⁵⁵	早饭	breakfast
/ɕ/	ɕy ³³	水	water
	ɕɛ ³³ k ^j ɛ ³⁵	脖子	neck
/tɕ/	tɕi ³¹	地	earth
	tɕɛ ³¹	剃(头)	shave (head)
/tɕ ^h /	tɕ ^h i ⁵⁵	辣	hot (spicy)
	tɕ ^h ɛ ⁵⁵	蓝	blue
/ɲ/	ɲi ⁴⁴	天(日子)	day
	ɲu ⁴²	条(绳子)	cls for rope
/ʂ/	ʂu ³³	手	hand
	ʂɛ ⁴⁴	叶	leaf
/z/	zu ²¹	苍蝇	fly (insect)
	p ^h ɛ ⁵⁵ zɿ ⁴²	稀饭	congee
/tʂ/	tʂɔ ²¹	茶	tea (drink)
	tʂɛ ⁴² pɔ ³¹	右边	right (side)
/tʂ ^h /	tʂ ^h ɛ ³³	睡	sleep
	tʂ ^h ɿ ³¹	把(斧头)	cls for axe
/k/	kɔ ²¹	湖	lake
	ku ³⁵	冷	cold

preceding front vowels (i,e,ɛ) /k/ has the allophone [k^j]

/k/在前元音 (i,e,ɛ) 前变音为 [k^j]

/k ^h /	k ^j ɛ ³⁵	鸡	chicken
	k ^j i ²¹	手镯	bracelet
	k ^h u ³¹ tsɿ ³³	肾脏	kidney
	k ^h ua ⁴⁴	摘(果子)	pick (fruit)

preceding front vowels (i,e,ɛ) /k^h/ has the allophone /k^{jh}/

/k^h/在前元音 (i,e,ɛ) 前变音为 [k^{jh}]

/ŋ/	k ^{jh} ɛ ⁵⁵	牵(牛)	lead (cow)
	k ^{jh} i ⁴⁴ ɿu ⁴²	力气	strength
	ŋu ²¹	牛	cow
/x/	ŋɛ ²¹	芽	shoot, sprout
	xɛ ⁵⁵	天	sky
	xɔ ²¹	房	house
/ɣ/	xɛ ⁵⁵ le ⁵⁵ ɿɛ ³³	燕子	swallow (bird)
	tua ³⁵ sua ³⁵ ɿɔ ³¹	蜘蛛	spider
	a ⁵⁵ ji ²¹	父亲	father
/w/	jɛ ⁴²	背(物)	carry on back
	wɛ ⁴²	写	write
	wa ⁴²	核	pit, stone

Eryuan Phoneme Chart: Vowels

洱源音位系统：韵母

i	y		ɤ	u	u
e					o
ɛ					ɔ
		a			
				ue	
iɛ	iɔ			ue	
ia				ua	

/i/	ni ⁴⁴ pi ³¹	太阳	sun
	tɕi ⁵⁵	粪	dung
	following alveolar sibilants (s,z,ts,ts ^h) /i/ has the allophone [ɿ]		
	/i/ 在齿擦音 (s,z,ts,ts ^h) 后变音为 [ɿ]。		
	tsɿ ⁴²	十	ten
	zɿ ²¹	土罐	clay pot
/y/	ɕy ⁵⁵ li ⁵⁵	梨子	pear
	tɕy ³¹	骗	deceive, cheat
/e/	xe ⁵⁵ me ²¹	打雷	thunder (vb)
	te ⁴²	猪	pig
/ɛ/	tɕ ^h ɛ ⁵⁵ pe ²¹	锅(扁锅)	wok
	p ^h ɛ ³¹ me ³¹	魂	soul
/a/	sa ²¹ na ³³ kje ³⁵	蚂蚱	locust
	la ⁴⁴	会	able to
/u/	t ^h u ³³	土	soil
	ku ³³	老	old
/u/	fe ³⁵ tɕu ⁵⁵ ku ⁵⁵	斑鸠	turtledove
	ʂu ³³ tu ²¹ kje ⁴⁴	指甲	finger nail
/o/	ko ⁴⁴	脚	foot
	po ⁴⁴	拍(桌子)	hit (table)
/ɔ/	tɕɔ ⁴² pɔ ⁴² tsɿ ³³	冰雹	hail
	t ^h ɔ ⁵⁵ lo ⁴⁴	兔	hare, rabbit
/ɤ/	vɤ ³³ ɕi ³³	雨	rain
	kɤ ³⁵	河	river

There are the following diphthongs:
有以下复合元音:

/ue/	tue ³³	远	far
	k ^h ue ³³ tɕ ⁴²	穷	poor
/ue/	sɿ ³⁵ ts ^h ue ⁴⁴	书本	book
	u ⁵⁵ tɕue ⁵⁵ lɛ ⁵⁵	喜鹊	magpie
/ua/	tua ³⁵ sua ³⁵ ɣɔ ³¹	蜘蛛	spider
	kua ³⁵	裤	trousers
/iɛ/	miɛ ³⁵	名字	name
	piɛ ⁴⁴	问	ask
/ia/	p ^h ia ⁴⁴	到	to (reach)
	pia ⁴⁴	八	eight
/io/	p ^h io ³¹	布	cloth
	miɔ ⁴²	直	straight

Heqing Phoneme Chart: Tones

鹤庆音位系统：声调

There are the following six tones: 55, 44, 33, 35, 42, 31, 21.
有 6 个声调：55, 44, 33, 35, 42, 31, 21。

Heqing Phoneme Chart: Consonants

鹤庆音位系统：声母

p	t		k
p ^h	t ^h		k ^h
m	n		ŋ
	l		
f	s, s ^h	ɕ, ɕ ^h	x, x ^h
v	z		ɣ
	ts	tɕ	
	ts ^h	tɕ ^h	
		j	w

/p/	puw ⁵⁵ puw ³³	蝙蝠	bat
	pe ²¹	皮	peel, husk
/p ^h /	p ^h uw ⁵⁵	吹	blow
	p ^h ɛ ⁵⁵	湿	wet

/m/	mɯ ²¹	逃	flee
	mɛ ⁴²	买	buy
/f/	fɛ ⁴⁴	发(芽)	sprout (vb)
	fɿ ⁴⁴	六	six
/v/	vɯ ⁵⁵	他(的)	his/her
	vɛ ⁴²	写	write
/t/	tɯ ³¹	豆子	bean
	ta ³¹	偷	steal
/t ^h /	t ^h ɯ ⁵⁵	下(山)	down
	t ^h u ³³	路	road
/n/	nɯ ⁵⁵	你(的)	your (sg)
	ni ³⁵	猫	cat
/l/	lu ²¹ tɕ ^h i ³³	现在	now
	ɕy ⁵⁵ li ⁵⁵	梨子	pear
/s/	su ⁵⁵	收	receive
	se ³³	知道	know
/s ^h /	s ^h ɯ ⁴⁴	放置	lay aside
	s ^h e ³¹	小	small
/z/	zu ²¹	苍蝇	fly (insect)
	ze ²¹	土罐	clay pot
/ts/	tsu ³¹	树	tree
	tse ⁴²	断	break in two
/ts ^h /	ts ^h ɯ ³¹	菜	vegetable
	ts ^h ɛ ⁴⁴	红	red
/ɕ/	ɕa ⁴⁴	头发	hair
	ɕi ⁴⁴	虱子	louse
/ɕ ^h /	ɕ ^h i ⁵⁵	柴	firewood
	ɕ ^h ɛ ⁵⁵ k ^h ɔ ³³	星星	star
/tɕ/	tɕɯ ³³	九	nine
	tɕi ⁴⁴	水蛭	leech
/tɕ ^h /	tɕ ^h ɯ ⁵⁵	勤	diligent
	tɕ ^h i ⁵⁵	辣	hot (spicy)
/k/	ku ²¹	卖	sell
	ke ³⁵	鸡	chicken

/k ^h /	k ^h u ⁵⁵	开(门)	open (door)
	k ^h e ⁴⁴	拿	hold
/ŋ/	ŋu ²¹	牛	cow
	ŋɛ ²¹	芽	shoot, sprout
/x/	xu ⁴⁴	黑	black
	xɛ ³³	坏	bad
/x ^h /	x ^h ɔu ³¹	房	house
	x ^h e ⁵⁵	生	raw
/ɣ/	ɣu ³³	后面	behind
	ɣɔu ⁴²	容易	easy
/j/	ja ⁴⁴	回	return
	jĩ ⁴⁴	天(日子)	day
/w/	wẽ ⁵⁵	热	hot
	mi ³⁵ wã ⁴⁴	月亮	moon

Heqing Phoneme Chart: Vowels

鹤庆音位系统：韵母

i	y		u	u
e				o
ɛ				ɔ
		a		
			ue	
iɛ	ou		uɛ	uɔ
ia	ɔu		ua	

All vowels are also found in their nasalised forms, except for /ue/.

除了/ue/ 外，所有的元音都能找到对应的鼻化形式。

/i/	pi ⁵⁵	左边	left (side)
	tɕĩ ³⁵	熊	bear (animal)
following alveolar sibilants (s,s ^h ,z,ts,ts ^h) /i/ has the allophone [ɿ]			
/i/ 在齿擦音(s,s ^h ,z,ts,ts ^h) 后变音为 [ɿ]			
/y/	sɿ ³³	麻	hemp
	tsɿ ³³	把(刀)	cls for knife
	ɕy ³³	水	water
	tɕ ^h ỹ ⁵⁵	称	call (name)
/e/	te ⁴²	猪	pig
	sẽ ⁴²	蛋	egg

/ɛ/	s ^h ɛ ⁴⁴	割	cut, reap
	kẽ ⁵⁵	怕	fear
/a/	ta ⁴²	踩	step on
	kã ⁵⁵	教	teach
/u/	ku ³³	老	old
	γũ ³³	五	five

Following labio-dental fricatives (f,v) /u/ has the allophone [ɥ]

/u/ 在唇齿摩擦音 (f, v) 后变音为 [ɥ]

	fɥ ⁵⁵	蜜蜂	bee
	vɥ ⁴²	胃	stomach
/u/	pu ³³	水塘	pond
	tũ ⁴²	戴(帽)	wear (hat)
/o/	ni ⁴⁴ tō ⁴²	耳朵	ear
	jō ²¹ tsu ³¹	松树	pine tree
/ɔ/	kɔ ²¹	湖	lake
	tɔ ²¹	话	word, speech

There are the following diphthongs:

有以下复合元音:

/ou/	tsou ⁴⁴	鸟	bird
	tsõũ ³³ ãũ ³³	脸	face
/ɔu/	tsɔu ²¹	茶	tea (drink)
	tsõũ ²¹	床	bed
/ue/	tsue ⁴⁴	扫帚	broom
	tũẽ ³³	远	far
/ue/	k ^h ue ³¹ tu ²¹	膝盖	knee
/ua/	k ^h ua ⁴⁴	摘(果子)	pick (fruit)
	k ^h ũã ³³	狗	dog
/uo/	kuo ²¹	爱	love
	s ^h ũõ ³¹	痛	painful
/iɛ/	piɛ ⁴⁴	问	ask
	pĩẽ ²¹	瓶子	bottle
/ia/	p ^h ia ⁴⁴	肺	lungs

Jianchuan Phoneme Chart: Tones

剑川音位系统：声调

There are the following seven tones: 55, 44, 33, 35, 42, 31, 21, plus a tense 66 tone, which is produced at a slightly higher pitch than the lax 55 tone. This is only used for modern loan words.

有 7 个声调：55, 44, 33, 35, 42, 31, 21, 加上一个发音时音调比松喉 55 调稍高一些的紧喉 66 调，这个调仅仅只用于现代汉语借词。

Jianchuan Phoneme Chart: Consonants

剑川音位系统：声母

p	t		k
p ^h	t ^h		k ^h
m	n		ŋ
	l		
f	s	ɕ	x
v			ɣ
	ts	tɕ	
	ts ^h	tɕ ^h	
		j	w

/p/	pi ⁵⁵ sɿ ⁵⁵	风	wind
	pa ⁴² tu ⁵⁵	凳子	stool, low chair
/p ^h /	p ^h u ³¹	草席	straw mat
	p ^h ɿ ⁴⁴	骗	deceive, cheat
/m/	ma ²¹	拔(秧)	pull up
	mi ³³	想	think
/f/	fɿ ⁴⁴	六	six
	fɛ ⁴⁴	肥(猪)	fat (pig)
/v/	vɛ ⁴²	写	write
	vɿ ⁴²	胃	stomach
/t/	te ⁴²	猪	pig
	ta ²¹	桃子	peach
/t ^h /	t ^h a ⁴⁴ tsɿ ²¹	柿子	persimmon
	t ^h ɿ ³¹	发(芽)	sprout (vb)
/n/	na ⁵⁵	你们	you (pl)
	nu ²¹ kou ²¹	楼梯	stairs
/l/	lu ³¹	这	this
	la ⁵⁵ tsɿ ²¹ tso ⁴⁴	麻雀	sparrow

/s/	su ³³	手	hand
	sa ⁵⁵ ɣu ⁴⁴	骂架	quarrel
/ts/	tsu ³¹	树	tree
	tɕa ³⁵	都	all
/ts ^h /	ts ^h u ⁵⁵	短	short
	ts ^h ä ⁵⁵	早饭	breakfast
/ɕ/	ɕi ⁴⁴	四	four
	ɕẽ ⁵⁵ ɕẽ ⁵⁵	醒	wake up
/tɕ/	tɕi ⁴⁴	水蛭	leech
	tɕe ³¹	剃(头)	shave (head)
/tɕ ^h /	tɕ ^h i ⁵⁵	辣	hot (spicy)
	tɕ ^h e ⁴⁴	呕吐	vomit
/k/	ke ⁵⁵	鸡	chicken
	ku ²¹	骑	ride
/k ^h /	k ^h e ⁵⁵	牵(牛)	lead (cow)
	k ^h u ³¹ fɿ ³³	里边	inside
/ŋ/	ŋe ⁴²	硬	hard
	ŋu ²¹	牛	cow
/x/	xε ⁵⁵	生	raw
	xu ³³	熟	cooked
/ɣ/	ɣu ³⁵	来	come
	ɣou ²¹ tou ²¹	核桃	walnut
/j/	ja ⁴⁴	回	return
	jĩ ³³ jĩ ²¹	女人	woman
/w/	wẽ ⁴²	磨	grind
	wa ⁴²	核	pit, stone

Jianchuan Phoneme Chart: Vowels

剑川音位系统：韵母

i	y		ɥ	u	u
e					o
ε					
		a			
	iu		ue	ou	
iε			uε		
ia			ua		

All vowels are also found in their nasalised forms.

所有的元音都能找到对应的鼻音形式。

/i/	pi ⁵⁵ sɿ ⁵⁵	臭虫	bedbug
	çi ⁵⁵	柴	firewood
following alveolar sibilants (s,ts,ts ^h) /i/ has the allophone [ɿ]			
/i/ 在齿擦音 (s,ts,ts ^h) 后变音为 [ɿ]			
	sɿ ³³	麻	hemp
	ts ^h ɿ ⁵⁵	吐(痰)	spit
/y/	ɕy ³³	水	water
	tɕy ³³ kɛ ⁵⁵	嘴	mouth
/e/	pe ²¹	皮	peel, husk
	sẽ ³³	知道	know
/ɛ/	pɛ ⁴²	白	white
	sẽ ³³	菌子	mushroom
/a/	ta ²¹	偷	steal
	kã ⁵⁵	高	high, tall
/u/	ku ²¹	瓶子	bottle
	t ^h u ³³	路	road
/ʉ/	ku ²¹	旧	old
	sũ ²¹	苍蝇	fly (insect)
/o/	ko ²¹	湖	lake
	kõ ³³	二	two
/ʏ/	tsʏ ³¹	筷子	chopstick
	kỹ ⁵⁵	河	river

There are the following diphthongs:

有以下复合元音:

/ue/	tɕo ⁴² k ^h ue ⁵⁵	石头	stone
	tsue ⁴⁴	扫帚	broom
/uɛ/	k ^h ue ³¹ tsɿ ³¹ te ⁴⁴	膝盖	knee
	sʏ ⁵⁵ ts ^h ue ⁴⁴	书本	book
/ua/	ji ⁵⁵ kua ⁴⁴	腰	waist
	k ^h ũã ³³	狗	dog
/ou/	kou ²¹	水稻	paddy field
	tsũ ²¹	床	bed

/ie/	pie ⁴⁴	问	ask
	mie ⁵⁵	名字	name
/ia/	p ^h ia ⁴⁴	到	to (reach)
	mia ⁵⁵	推	push
/iu/	sẽ ²¹ tsɿ ³³ p ^h iu ⁴⁴	闪电	lightning (vb)

Lanping Phoneme Chart: Tones

兰坪音位系统：声调

There are the following seven tones: 55, 44, 33, 35, 42, 31, 21.
有 7 个声调：55, 44, 33, 35, 42, 31, 21。

Lanping Phoneme Chart: Consonants

兰坪音位系统：声母

p	t			k
p ^h	t ^h			k ^h
m	n			ŋ
	l			
f	s		ɕ	x
v		ʐ		ʎ
	ts		tɕ	
	ts ^h		tɕ ^h	
			j	w

/p/	pe ⁴⁴	走	walk
	pu ⁵⁵ pu ⁵⁵	蝙蝠	bat
/p ^h /	p ^h u ⁵⁵	吹	blow
	p ^h ẽ ⁴⁴ wu ³¹	稀饭	congee
/m/	mu ²¹	逃	flee
	me ⁴⁴	迟	late
/f/	fũ ⁴⁴ piẽ ⁵⁵ p ^h ao ⁴⁴	左边	left side
	fɔ ⁴⁴	六	six
/v/	vã ²¹	云	cloud
	væ ⁴²	写	write
/t/	te ⁴²	猪	pig
	tu ²¹	钝(刀)	blunt (knife)
/t ^h /	t ^h u ³³	路	road
	t ^h ɔ ⁵⁵ lo ⁴⁴	兔	hare, rabbit

/n/	nu ⁴⁴ pe ⁴²	现在	now
	ni ⁵⁵	猫	cat
/l/	lo ⁵⁵ ja ⁴⁴	斗笠	bamboo hat
	le ⁵⁵	骗	deceive, cheat
/s/	su ⁵⁵	花椒	pepper
	se ⁴⁴	布	cloth
/ts/	tsu ²¹	树	tree
	tse ⁴²	钱	money
/ts ^h /	ts ^h u ⁵⁵	短	short
	ts ^h ε ⁴²	把(斧头)	cls for axe
/z/	zu ²¹	苍蝇	fly (insect)
	ze ²¹ pe ³³	土罐	clay pot
/ɕ/	ɕo ⁴²	好	good
	ɕi ⁴⁴	虱子	louse
/tɕ/	tɕi ³³	拉	pull
	tɕu ⁵⁵ ku ⁵⁵	斑鸠	turtledove
/tɕ ^h /	tɕ ^h ε ⁴⁴	踢	kick
	tɕ ^h i ²¹	刺	thorn
/k/	kɔ ²¹	湖	lake
	kε ²¹	肉	meat
/k ^h /	k ^h u ³³	果	fruit
	k ^h ẽ ⁵⁵	牵(牛)	lead (cow)
/ŋ/	ŋε ²¹	去	go
	ŋu ²¹	牛	cow
/x/	xẽ ⁵⁵	汤	soup
	xã ⁵⁵	放牧	put out to pasture
/ɣ/	ɣu ⁴²	读	read
	ɣu ³⁵	来	come
/j/	ju ⁴⁴	吃	eat
	jã ⁵⁵	咱们	we (inclusive)
	/j/ before close front vowel /i/ may be pronounced [j]		
	/j/ 在前元音/i/前可发 [j]		
	ji ³¹	快(刀)	sharp
w/	wa ⁴²	核	pit, stone
	wẽ ⁴⁴	眼	eye

Lanping Phoneme Chart: Vowels

兰坪音位系统：韵母

i	y		ɯ	u
e				o
ɛ				ɔ
		a		
	iɯ		ue	ao
iɛ			uɛ	uɔ
ia			ua	

All vowels are also found in their nasalised forms.
所有的元音都能找到对应的鼻音形式。

/i/	tɕi ³¹	地	earth
	pĩ ⁵⁵	盐	salt
/y/	ɕy ³³	水	water
	tɕ ^h ỹ ⁵⁵	称	call (name)
/e/	te ⁴²	猪	pig
	wẽ ⁴⁴	眼	eye
/ɛ/	ke ²¹	肉	meat
	sẽ ⁴²	蛋	egg
/a/	ta ²¹	桃子	peach
	kã ⁵⁵	教	teach
/u/	su ³¹	山	mountain
	t ^h u ³³	路	road
/ɯ/	tsu ²¹	树	tree
	kũ ⁴⁴	厚	thick
/o/	tsõ ⁴⁴	种子	seed
	ko ²¹	爱	love
/ɔ/	tsɔ ⁴⁴	是	is
	kɔ ²¹	荞	buckwheat

There are the following diphthongs:
有以下复合元音:

/ao/	ts ^h ao ⁴⁴	坐	sit
	lao ²¹	筛子	sieve
/ue/	tsu ³¹ k ^h ue ⁵⁵	石头	stone
	tũẽ ⁴⁴	远	far

/ue/	kue ³¹	跪	kneel
	sũẽ ⁵⁵	知道	know
/ua/	kua ⁴⁴	根(棍)	cls for stick
	k ^h ũã ⁴⁴	狗	dog
/uo/	wɔ ³³ tuɔ ³¹	核桃	walnut
	k ^h uo ⁴⁴	民歌	folk song
/iẽ/	mie ⁵⁵	名字	name
	çĩẽ ⁴²	相信	believe
/ia/	pia ⁴²	吠	bark (of dog)
	p ^h ia ⁴⁴	到	to (reach)
/iu/	tiu ²¹	豆子	bean
	t ^h iu ³³	下(山)	down

Luobenzhuo Phoneme Chart: Tones

洛本卓音位系统：声调

There are the following seven tones: 55, 44, 33, 35, 42, 31, 21.
有 7 个 声调：55, 44, 33, 35, 42, 31, 21。

Luobenzhuo Phoneme Chart: Consonants

洛本卓音位系统：声母

b	d	ɖ			g		
p	t	t̪	c		k	q	ʔ
p ^h	t ^h	t̪ ^h	c ^h		k ^h	q ^h	
m	n		ɳ		ŋ	N, N̥	
	l						
f	s	ʃ	ç		x	χ	
v	z	ʒ					
		ɗ	ɗ̥				
	ts	ts̪	tɕ				
	ts ^h	ts̪ ^h	tɕ ^h				
			j		w		

/b/	bo ⁴⁴	背(人)	carry (person) on back
	bẽ ³³	饭	cooked rice
/p/	po ³³	拍(桌子)	hit (table)
	pæ ⁵⁵	发(芽)	sprout (vb)
/p ^h /	p ^h ɔ ⁵⁵	个(碗)	cls for bowl
	p ^h æ ⁴²	贴	stick, glue

/m/	mɔ̃ ⁴⁴	细	fine, thin
	mæ ⁴²	放牧	put out to pasture
/f/	fɔ̃ ⁴⁴	六	six
	fi ³³	火	fire
/v/	vɔ̃ ⁴⁴	圈(牛圈)	(cattle) stall
	ve ³³	背(物)	carry (thing) on back
/d/	du ⁴²	豆子	bean
	di ⁴⁴	再	again
/t/	tu ⁵⁵	得	must
	ti ⁵⁵	多	much, many
/t ^h /	t ^h u ⁵⁵	下(山)	down
	t ^h ao ⁴⁴	踢	kick
/n/	nu ⁵⁵	砍(柴)	chop (firewood)
	ne ³³ p ^h a ⁵⁵	土	soil
/l/	lo ⁵⁵	骗	deceive, cheat
	la ⁴⁴ tɕỹ ⁵⁵	左边	left (side)
/s/	sæ ⁵⁵	布	cloth
	sɔ̃ ³¹	痛	painful
/z/	zɔ̃ ³³ ni ³³	前天	day before yesterday
	zẽ ³³	双(鞋)	cls for pair of shoes
/ts/	tso ⁴⁴	犁(田)	plough (field)
	tsẽ ⁵⁵ pu ⁵⁵	熊	bear
/ts ^h /	ts ^h o ⁵⁵	搓(绳子)	twist (rope)
	ts ^h e ⁴⁴	刺	thorn
/d/	dɔ̃ ³¹	树	tree
	dẽ ³³	堆(放)	pile up
/t/	tu ⁵⁵	织(布)	weave (cloth)
	tẽ ⁵⁵	钝(刀)	blunt (knife)
/t ^h /	t ^h u ³³	坏	bad
	t ^h ã ⁵⁵	轻	light (not heavy)
/ɕ/	ɕæ ⁴²	寻找	look for
	ɕẽ ³³	菌子	mushroom
/z/	zu ³¹ dɔ̃ ³¹	松树	pine tree
	za ⁴⁴	肚子	belly, stomach

/ɖ/	ɖɿ ³³	雨	rain
	ɖɿ̃ ³³	肾脏	kidney
/ʈ/	ʈæ ⁴²	十	ten
	ʈɿ ⁴²	拾(谷子)	pick up from ground (grain)
preceding high back vowel /u/ /ʈ/ has the allophone [tʃ]			
/ʈ/ 在高后元音 /u/ 前变音为 [tʃ]			
/ʈʰ/	tʃua ⁴⁴	问	ask
	tʃua ⁴⁴	八	eight
	ʂɿ ³³ ʈʰɿ ³³	遗失	lose (can't find)
	ʈʰɿ̃ ⁵⁵	肿	swell
preceding high back vowel /u/ /ʈʰ/ has the allophone [tʃʰ]			
/ʈʰ/ 在高后元音 /u/ 前变音为 [tʃʰ]			
/ɖ/	tʃʰu ⁵⁵	粗	thick
	tʃʰua ⁵⁵	来	come
	ɖy ³³	低	low
	ɖi ³³	有	there is
/ɕ/	ɕi ³³	手	hand
	ɕa ⁵⁵	割	cut, reap
/tɕ/	tɕu ³³	鬼	ghost
	tɕā ⁴⁴	拉	pull
/tɕʰ/	tɕʰa ⁵⁵	呕吐	vomit
	tɕʰɿ̃ ⁵⁵	听	listen
/ŋ/	ŋo ⁵⁵	要	want
	ŋi ³³	天(日子)	day
/c/	ci ⁵⁵	怕	fear
	ca ²¹	茶	tea (drink)
/cʰ/	cʰa ⁵⁵ ɖɿ̃ ³³	柿子	persimmon
	cʰā ⁴⁴	声音	sound
/g/	gɿ ³³	硬	hard
	gɿ̃ ³³	旧	old
/k/	ka ⁴²	草鞋	straw sandal
	ku ⁵⁵	冷	cold
/kʰ/	kʰɿ̃ ⁵⁵	件(衣)	cls for clothing
/ŋ/	ŋa ⁴⁴	勤	diligent
	ŋo ³¹	黄	yellow

/x/	xu ⁴²	芋头	taro
	xa ⁴² muĩŋ ⁵⁵	玉米	corn, maize
/q/	qu ⁵⁵	脚	foot
	qa ²¹	肉	meat
/q ^h /	q ^h a ⁵⁵	渴	thirsty
	q ^h o ³³	狗	dog
/N/	Na ²¹	汗	sweat
	Nɔ ⁴²	我	I
/N̥/	N̥ ³⁵	鱼	fish
	N̥ ³¹	炒	stir-fry
/N̥/	tɕẽ ⁵⁵ N̥ ⁵⁵	蜜蜂	bee
	ni ⁵⁵ N̥ ³³ bẽ ³³	午饭	lunch
/χ/	χua ⁵⁵ lao ³¹	猫	cat
	χu ⁵⁵	花	flower
/j/	ji ⁴⁴	吃	eat
	jɔ ³¹ ʔẽ ³³	村子	village
/w/	wɔ ⁴⁴ la ⁴²	蝙蝠	bat
	wæ ³¹	肥(猪)	fat (pig)
/ʔ/	ʔẽ ⁴² ʔẽ ⁵⁵	裤	trousers
	ʔi ⁵⁵	一	one

Luobenzhuo Phoneme Chart: Vowels

洛本卓音位系统：韵母

i	y		ɤ		u	u
e					o	o
ɛ					ɔ	ɔ
æ		a				
				ue	ao	ao
iɛ				uɛ	uɔ	uɔ
					ua	ua

All vowels are also found in their nasalised forms.

所有的元音都能找到对应的鼻音形式。

/i/	di ⁴⁴	再	again
	ɕĩ ⁵⁵ tɕĩ ⁵⁵	包头	turban, head dress
/y/	dy ³³	远	far
	la ⁴⁴ tɕỹ ⁵⁵	左边	left (side)

/e/	te ³¹ me ⁵⁵	头发	hair
	bẽ ³³	饭	cooked rice
/ɛ/	tɛ ⁴²	猪	pig
	tɕ ^h ẽ ³³	蛇	snake
/æ/	pæ ⁵⁵	发(芽)	sprout (vb)
	tɕæ ⁴²	舌头	tongue
/a/	pa ⁴⁴	乳房	breast
	xã ⁴⁴	汤	soup
/u/	sɔ ³³ t ^h u ³³	锁	lock
	tʃ ^h u ⁵⁵	粗	thick
/ʊ/	t ^h u ³³	桶	bucket
	tʃ ^h u ⁴⁴	草	grass
/ʉ/	p ^h ʉ ⁴⁴	吹	blow
	tɕʉ ³³ nɔ ²¹	绵羊	sheep
/o/	tõ ²¹	河	river
	bo ⁴⁴	背(人)	carry (person) on back
/ɔ/	bɔ ⁴⁴	他	he, she, it
	q ^h õ ³³ ɕu ³³	跳蚤	flea
/ʏ/	tʏ ³¹	先	first
	kʏ ³³	二	two

There are the following diphthongs:

有以下复合元音:

/ao/	p ^h ao ⁵⁵	黄瓜	cucumber
	kao ³¹	爱	love
/ue/	tɕ ^h ũẽ ⁵⁵	称	call (name)
	wẽ ⁵⁵	暖和	warm
/ue/	tue ⁵⁵	扫帚	broom
	tsũẽ ⁵⁵	盐	salt
/ua/	tɕua ⁴⁴	八	eight
	tʃ ^h ũã ⁵⁵	肺	lung
/uo/	q ^h uɔ ⁵⁵	摘(果)	pick (fruit)
	tsuɔ ⁵⁵	鸟	bird
/iɛ/	pie ⁴⁴	狼	wolf
	mĩẽ ³³	满	full

Qiliqiao Phoneme Chart: Tones

七里桥音位系统：声调

There are the following eight tones: 55, 44, 33, 35, 42, 31, 32, 21.
有 8 个 声调：55, 44, 33, 35, 42, 31, 32, 21。

Qiliqiao Phoneme Chart: Consonants

七里桥音位系统：声母

p	t		k
p ^h	t ^h		k ^h
m	n		ŋ
	l		
f	s	ɕ	x
v	z		ʎ
	ts	tɕ	
	ts ^h	tɕ ^h	
		j	w

/p/	pi ²¹ pu ³¹	蚂蚁	ant
	po ⁴²	麻布	hemp cloth
/p ^h /	p ^h u ⁵⁵	吹	blow
	p ^h ɔ ⁴⁴	黄瓜	cucumber
/m/	mi ⁴⁴ p ^h i ³¹	太阳	sun
	mu ⁴⁴ tsɿ ³³	蚊子	mosquito
/f/	fɿ ⁴⁴	肚子	stomach
	fɛ ⁴⁴	很	very
/v/	vɿ ²¹	云	cloud
	va ⁵⁵	他们	they
/t/	tɛ ⁴²	猪	pig
	ta ³¹	偷	steal
/t ^h /	t ^h a ⁴⁴ tsɿ ²¹	柿子	persimmon
	t ^h u ³³	路	road
/n/	ne ²¹	土	soil
	nu ³¹	追	chase
preceding high front vowel /i/, /n/ has the allophone [ɲ]			
/n/ 在高前元音 /i/ 前变音为 [ɲ]			
	ɲi ⁴⁴	天(日子)	day
	ɲio ⁴⁴	要	want

/l/	lu ³¹	这	this
	lɔ ³¹ pɔ ³¹	被子	quilt
/s/	su ²¹	苍蝇	fly (insect)
	sɛ ³³	菌子	mushroom
preceding back vowel /u/, /s/ has the allophone [ʃ]			
/s/ 在后元音 /u/ 前变音为 [ʃ]			
	ʃua ⁴⁴	年、岁	year
	ʃuɔ ²¹	锁	lock
/z/	zu ⁴⁴	放置	lay aside
	zɿ ³³	用(使用)	use
/ts/	tsu ³¹	树	tree
	tsɿ ³³	重	heavy
preceding back vowel /ts/, /u/ has the allophone [tʃ]			
/ts/ 在后元音 /u/ 前变音为 [tʃ]			
	tʃu ³³	早	early
/ts ^h /	ts ^h u ³¹	菜	vegetable
	ts ^h ɛ ⁵⁵	蓝	blue
preceding back vowel /u/, /ts ^h / has the allophone [tʃ ^h]			
/ts ^h / 在后元音 /u/ 前变音为 [tʃ ^h]			
	tʃ ^h u ⁵⁵	臭、闻	smell
	tʃ ^h ua ³³	切	cut (with knife)
/ɕ/	ɕo ³¹	松树	pine tree
	ɕi ⁴⁴	虱子	louse
/tɕ/	tɕi ⁴⁴	水蛭	leech
	tɕy ³³	嘴	mouth
/tɕ ^h /	tɕ ^h i ⁵⁵	辣	hot (spicy)
	tɕ ^h y ⁵⁵	称	call (name)
/k/	ku ²¹	桥	bridge
	ke ³⁵	鸡	chicken
/k ^h /	k ^h ua ⁵⁵ ɕi ³⁵	慢慢	slowly
	k ^h e ⁵⁵	牵(牛)	lead (cow)
/ŋ/	ŋu ⁵⁵	我(的)	my
	ŋɛ ³²	硬	hard
/x/	xe ⁵⁵	天	sky
	xa ⁵⁵	放牧	put out to pasture
/ɣ/	ɣu ⁴⁴	村子	village
	ɣu ³³	墙	wall

/j/	ja ⁴⁴ yu ³⁵	回	return
	je ³²	背(物)	carry on back
/w/	mi ⁵⁵ wa ⁴⁴	月亮	moon
	we ⁴²	写	write

Qiliqiao Phoneme Chart: Vowels

七里桥音位系统：韵母

i	y		ɥ	u	u
e					o
ɛ					ɔ
		a			
			ue		uo
iɛ	io		ue		
ia			ua		

/i/	pi ³⁵ si ³⁵	风	wind
	mi ³³ 0	想	think
	following alveolar sibilants (s,z,ts,ts ^h), /i/ has the allophone [ɿ]		
	/i/ 在齿擦音 (s,z,ts,ts ^h) 后变音为 [ɿ]		
/y/	si ²¹	土罐	clay pot
	ts ^h i ²¹	恨	hate
	ɕy ⁵⁵ li ⁵⁵	梨子	pear
/e/	tɕy ³³	嘴	mouth
	xe ⁵⁵ me ²¹	打雷	thunder (vb.)
	tse ⁴² se ⁴⁴ ni ⁴⁴	昨天	yesterday
/ɛ/	xe ⁵⁵	菜(熟菜)	cooked food
	tse ³⁵ tsɿ ³³ tso ³⁵	桌子	table
/a/	xa ⁵⁵	放牧	put out to pasture
	ta ²¹	桃子	peach
/u/	lu ³⁵ ku ³⁵	玉米	corn, maize
	mu ²¹	逃	flee
/u/	p ^h u ⁵⁵	吹	blow
	ku ²¹	骑	ride
/o/	po ⁴²	麻布	hemp cloth
	ko ⁴⁴	脚	foot

/ɔ/	p ^h ɔ ³¹ se ⁴⁴	草席	straw mat
	kɔ ²¹	湖	lake
/ɥ/	tsɥ ³¹	筷子	chopstick
	kɥ ³⁵	河	river

There are the following diphthongs:
有以下复合元音:

/ue/	k ^h ue ³³ tso ³¹	穷	poor
	tue ³³	远	far
/uε/	s ₁ ³⁵ t ^h ue ⁴⁴	书本	book
	k ^h ue ³¹ ts ₁ ²¹ te ⁴⁴	膝盖	knee
/ua/	k ^h ua ³³	狗	dog
	ɟua ⁴⁴	年、岁	year
/uo/	k ^h uo ³³	果	fruit
	ɟuo ²¹	锁	lock
/iε/	kiε ²¹	肉	meat
	piε ⁴⁴	问	ask
/ia/	p ^h ia ⁴⁴	到	to (reach)
	pia ⁴²	吠	bark (of dog)
/io/	p ^h io ³¹	布	cloth
	t ^h io ³³ ɟuo ³³	跳蚤	flea

Xiangyun Phoneme Chart: Tones

祥云音位系统：声调

There are the following seven tones: 55, 44, 33, 35, 42, 31, 21.
有 7 个 声调：55, 44, 33, 35, 42, 31, 21。

Xiangyun Phoneme Chart: Consonants

祥云音位系统：声母

p	t		k
p ^h	t ^h		k ^h
m	n		ŋ
	l		
f	s	ɕ	x
	z		ɣ
	ts	tɕ	
	ts ^h	tɕ ^h	
		j	w

/p/	pi ²¹ pou ²¹ tsɿ ³³	蚂蚁	ant
	pa ³¹	背(人)	carry (person) on back
/p ^h /	p ^h ɔ ⁴⁴	黄瓜	cucumber
	p ^h i ⁵⁵	慢	slow
/m/	mi ³⁵ wã ⁴⁴	月亮	moon
	mɔ ⁴⁴ tsɿ ³³	蚊子	mosquito
/f/	fɛ ³⁵ sy ³⁵	蜘蛛	spider
	fɛ ⁴⁴	发(芽)	sprout (vb)
/t/	ta ²¹	桃子	peach
	tĩ ³³	滴(水)	cls for drop of water
/t ^h /	t ^h a ⁴⁴ tsɿ ²¹	柿子	persimmon
	t ^h u ⁵⁵	下(山)	down (mountain)
/n/	ni ²¹ pa ⁴²	鞋	shoe
	na ⁵⁵	你们	you (pl)
/l/	la ⁴⁴	会	able to
	lɔ ³¹ pɔ ³¹	被子	quilt
/s/	sã ⁵⁵	晾(衣)	hang out (clothes)
	su ⁵⁵ yɔ ⁴²	柳树	willow
/z/	za ³¹	嚼	chew
	zu ²¹	苍蝇	fly (insect)
/ts/	tso ²¹	茶	tea (drink)
	tse ²¹ ni ⁴⁴	后天	day after tomorrow
/ts ^h /	ts ^h o ⁵⁵	短	short
	ts ^h ɛ ⁴⁴	红	red
/ɕ/	ɕi ⁴⁴	四	four
	ɕɛ ⁴⁴	老鼠	mouse
/tɕ/	tɕi ⁴²	水蛭	leech
	tɕɛ ⁴⁴	条(绳子)	cls for rope
/tɕ ^h /	tɕ ^h i ⁵⁵	辣	hot (spicy)
	tɕ ^h ɛ ⁵⁵	听	listen
/k/	ku ²¹	水稻	paddy field
	kã ³⁵	教	teach

preceding front vowels (i,e,ε), /k/ has the allophone [kʲ]
/k/ 在前元音 (i,e,ε) 前变音为 [kʲ]

	kʲe ³⁵	鸡	chicken
	kʲi ⁴²	小碗	bowl
/kʰ/	kʰo ³³	果	fruit
	kʰa ⁵⁵	件(衣)	cls for clothing
/ŋ/	ŋe ³³ ji ³¹	东西	thing
	ŋa ⁵⁵	我们	we
/x/	xu ³³	好	good
	xε ⁴⁴	坏	bad
/ʏ/	ʏa ³³	墙	wall
	ʏou ⁴²	读	read
/j/	jou ⁴⁴	村子	village
	jε̃ ²¹	剃(头)	shave (head)
/w/	wã ⁴⁴	月(月份)	month
	wɔ ⁴²	容易	easy

Xiangyun Phoneme Chart: Vowels

祥云音位系统：韵母

i	y	ɤ	u	u
e				o
ε				ɔ
		a		
			ue	ou
iε	iɔ		uε	uɔ
ia			ua	

All vowels have contrastive nasal forms. However, there is no instance of nasalised /u/ found in the data.
所有的元音都有对比的鼻音形式，只有/u/的鼻音在数据中没有发现例证。

/i/	pĩ ³⁵	盐	salt
	tɕi ³⁵	多	much, many
following alveolar sibilants (s,z,ts,tsʰ) /i/ has the allophone [ɿ]			
/i/ 在齿擦音 (s,z,ts,tsʰ) 后变音为 [ɿ]			
	tsɿ ³³ pa ⁴⁴	牙	tooth
	zɿ ³³	街子	market

/y/	ɕy ³³	水	water
	ɣɔ ³⁵ tɕ ^h ỹ ⁵⁵	围腰	apron
/e/	ne ³¹	土	soil
	sẽ ⁴²	蛋	egg
/ɛ/	k ^h ɛ ³³	蛇	snake
	p ^h ẽ ³¹ me ²¹	魂	soul
/a/	sa ³³ ma ³³ k ^j i ³⁵	蚂蚱	locust
	ts ^h ã ⁵⁵	早饭	breakfast
/u/	t ^h u ³³	路	road
	ku ³³	老	old
/ʉ/	ku ⁴²	坐	sit
	ts ^h ũ ⁵⁵	称	call (name)
/o/	so ³⁵ to ²¹	红糖	brown sugar
	ts ^h o ⁵⁵	短	short
/ɔ/	ts ^h ɔ ⁵⁵ lo ²¹	筛子	sieve
	p ^h ɔ ⁴⁴	黄瓜	cucumber
/ʏ/	fɛ ³⁵ sɿ ³⁵	蜘蛛	spider
	tsỹ ²¹	肠子	intestine, gut

There are the following diphthongs:

有以下复合元音:

/ue/	tso ⁴² k ^h ue ⁵⁵	石头	stone
	tue ³³	钝(刀)	blunt (knife)
/uɛ/	k ^h ue ³¹ te ²¹ te ⁴⁴	膝盖	knee
	tɕ ^h ue ⁵⁵	都	all
/ua/	ji ³⁵ kua ⁴⁴	腰	waist
	sua ⁴⁴	年、岁	year
/iɛ/	piɛ ⁴⁴	问	ask
	miɛ ⁴²	硬	hard
/ia/	pia ⁴⁴	八	eight
	nia ⁴²	贴	stick, glue
/io/	p ^h io ³¹	布	cloth
	nio ⁴⁴	要	want
/ou/	sou ³³ tou ²¹ tsɿ ³³	手指	finger
	zou ³³ mou ⁴²	柱子	pillar, column

/uo/	kuo ³⁵	长(长大)	grow
	k ^h uo ³³	粒(米)	cls for grain of rice

Yunlong Phoneme Chart: Tones

云龙音位系统：声调

There are the following seven tones: 55, 44, 33, 35, 42, 31, 21.

有 7 个声调：55, 44, 33, 35, 42, 31, 21。

Yunlong Phoneme Chart: Consonants

云龙音位系统：声母

	d		g
p	t		k
p ^h	t ^h		k ^h
m	n	ɲ	ŋ
	l		
f	s	ɕ	x
v	z		ɣ
	ɗ	ɗ͡ʒ	
	ts	tɕ	
	ts ^h	tɕ ^h	
	ɟ	j	w

/p/	pa ⁴²	乳房	breast
	pɛ ⁴²	白	white
/p ^h /	p ^h u ⁵⁵	吹	blow
	p ^h ɛ ⁵⁵	湿	wet
/m/	ma ³⁵	推	push
	me ³³	迟	late
/f/	fɛ ⁴⁴	发(芽)	sprout
	fɿ ⁴⁴	六	six
/d/	du ²¹ ma ³⁵	头发	hair
	dɛ ³³	根	root
/t/	ta ²¹	桃子	peach
	tu ²¹	只(鸡)	cls for chicken
/t ^h /	t ^h u ⁵⁵	下(山)	go down
	t ^h u ³³	路	road
/n/	nu ³¹	这	this
	no ³¹	你	you (s)
/l/	lao ²¹	虎	tiger

	lua ⁴²	掉	drop
/s/	sa ²¹ na ³³ ke ³⁵	蚂蚱	locust
	se ⁴⁴	叶	leaf
preceding syllabic labiodental fricative (ɣ) /s/ has the allophone [ʃ]			
/s/ 在唇齿摩擦音节辅音 (ɣ) 前边音为 [ʃ]			
	ʃɣ ⁴²	山	mountain
	ʃɣ ³⁵ ts ^h ue ⁴⁴	书本	book
/z/	zu ²¹	苍蝇	fly (insect)
	ze ²¹	土罐	clay pot
/ɬ/	ɬu ³¹	树	tree
	ɬe ³³	双(鞋)	pair (of shoes)
/ts/	tsu ³³	把(刀)	cls for knife
	tse ²¹	钱	money
/ts ^h /	ts ^h u ³¹	菜	vegetables
	ts ^h e ³³	红	red
/ɕ/	ɕe ⁴⁴	天(日子)	day
	ɕi ⁴⁴	虱子	louse
/ɬ/	ɬi ³³ mi ³³ jε ³³	闪电	lightning
	ɬy ³³ ke ³³	嘴	mouth
/tɕ/	tɕi ²¹	手镯	bracelet
	tɕo ³¹	骗	cheat, deceive
/tɕ ^h /	tɕ ^h i ³³	出(出去)	go out
	tɕ ^h e ⁵⁵	听	listen
/n/	nu ⁴²	条(绳子)	cls for rope
	no ⁴⁴	要	want
/g/	gu ³¹	故事	story
	nu ³¹ ge ⁵⁵	现在	now
/k/	ka ³⁵	教	teach
	ke ²¹	肉	meat
/k ^h /	k ^h e ⁵⁵	牵(牛)	lead (cow)
	k ^h ua ³³	狗	dog
/ŋ/	ŋua ⁴⁴	外边	outside
	ŋe ²¹	鞋	shoe
/x/	xe ⁵⁵	汤	soup
	xao ²¹	房	house

/ɣ/	ɣur ⁴²	读	study
	ɣa ²¹	汗	sweat
preceding back vowels (ɔ), /ɣ/ has the allophone [ɣ]			
/ɣ/ 在后元音 (ɔ) 前变音为 [ɣ]			
	ɤɔ ³¹	黄	yellow
	ɤɔ ²¹ tɔ ²¹	核桃	walnut
/j/	jɛ ⁴²	背(物)	carry on back
	jo ³³ ji ³¹	易	easy
/w/	wa ⁴²	乌鸦	crow
	wɛ ⁴²	写	write
/ʈ/	ʈɛ ⁴⁴	云	cloud

Yunlong Phoneme Chart: Vowels

云龙音位系统：韵母

i	y		ɤ	u	u
e					o
ɛ					ɔ
		a			
	yɛ	ai			
			ue		ao
iɛ	iɔ		uɛ		uɔ
ia			ua		

/i/	mi ³³	想	think
	tɕi ³³	拉	pull
following alveolar sibilants (s,z,ɕ,ts,ts ^h) /i/ has the allophone [ɿ]			
/i/ 在齿擦音 (s,z,ɕ,ts,ts ^h) 后变音为 [ɿ]			
	ɕɿ ³¹	话	speech, word
	tsɿ ³³	是	is
/y/	ɕy ³³	水	water
	ɕy ³³ ɲue ³³	脸	face
/e/	me ³³	米	uncooked rice
	ke ³⁵	鸡	chicken
/ɛ/	mɛ ³³	马	horse
	kɛ ⁴²	草鞋	straw sandal
/a/	ma ²¹	毛	feather, hair
	ka ³⁵	肝	liver
/u/	ku ²¹	桥	bridge

	p ^h u ⁴⁴	黄瓜	cucumber
/u/	ku ³⁵	河	river
	mu ⁴⁴ tsɿ ³³	蚊子	mosquito
/o/	to ⁴²	剁	chop
	po ⁴⁴	拍(桌子)	hit (table)
/ɔ/	mɔ ⁴²	细	fine, thin
	pɔ ⁴²	薄	thin, flimsy
/y/	ky ⁴⁴	角	horn
	tsy ⁴⁴	竹子	bamboo

There are the following diphthongs:

有以下复合元音:

/ue/	ɲue ⁴²	磨	grind
	tue ³³	远	far
/uɛ/	ʃy ³⁵ ts ^h ue ⁴⁴	书本	book
	wu ⁵⁵ tsue ⁵⁵	喜鹊	magpie
/ua/	wu ²¹ tsua ⁴²	青蛙	frog
	ɲua ⁴⁴	外边	outside
/uo/	kuɔ ⁵⁵	锅(扁锅)	wok
	suɔ ³³	扫(地)	sweep
/iɛ/	mie ³⁵	名字	name
	pie ⁴⁴	问	ask
/ia/	pia ⁴²	拔(秧)	pull up
	p ^h ia ⁴⁴	肺	lung
/io/	miɔ ⁴²	直	straight
	p ^h io ³¹	布	cloth
/yɛ/	tɕye ⁴⁴ ky ²¹	扫帚	broom
	ma ³⁵ lyɛ ³³ ɲi ²¹	儿童	child
/ao/	du ²¹ pao ²¹	头	head
	tsao ²¹	茶	tea (drink)
/ai/	ts ^h ai ³¹	猜	guess
	a ⁵⁵ nai ³³	祖母	grandmother

/ai/ is only used in Chinese loanwords.

/ai/ 只用于汉语借词。

Zhoucheng Phoneme Chart: Tones

周城音位系统：声调

There are the following eight tones: 55, 44, 33, 35, 42, 31, 32, 21.
有 8 个声调：55, 44, 33, 35, 42, 31, 32, 21。

Zhoucheng Phoneme Chart: Consonants

周城音位系统：声母

p	t		k
p ^h	t ^h		k ^h
m	n	ɲ	ŋ
	l		
f	s	ɕ	x
v	z		ɣ
	ts	tɕ	
	ts ^h	tɕ ^h	
		j	w

/p/	pu ³³	水塘	pond
	pe ³³	晚饭	dinner
/p ^h /	p ^h u ⁵⁵	吹	blow
	p ^h ɛ ⁵⁵ zɿ ⁴²	稀饭	congee
/m/	mu ⁴⁴ tsɿ ³³	蚊子	mosquito
	mɛ ⁴⁴	爬	climb
/f/	fɿ ⁴⁴	肚子	stomach
	fɛ ³⁵	好	good
/v/	vɿ ⁴⁴	孵	incubate
	ve ⁴²	佛	Buddha
/t/	tu ³¹	这	this
	te ⁴²	猪	pig
/t ^h /	t ^h u ³³	路	road
	t ^h a ⁴⁴ tsɿ ²¹	柿子	persimmon
/n/	nu ²¹ ka ³⁵	楼梯	stairs
	ne ²¹	土	soil
/l/	lɔ ²¹ se ⁴²	筛子	sieve
	li ⁵⁵ ja ⁴² tsɿ ³³	燕子	swallow (bird)
/s/	su ³³	手	hand
	se ³²	蛋	egg

/z/	zu ²¹	苍蝇	fly (insect)
	zy ³¹	用(使用)	use
/ts/	tsu ³¹	树	tree
	tse ⁴² p ^h i ³¹	舌头	tongue
/ts ^h /	ts ^h u ⁵⁵	短	short
	ts ^h e ³³	睡	sleep
/ɕ/	ɕo ⁴²	熊	bear
	ɕi ⁵⁵	柴	firewood
/tɕ/	tɕi ³²	水蛭	leech
	tɕy ³³ we ³³	脸	face
/tɕ ^h /	tɕ ^h i ⁵⁵	辣	hot (spicy)
	tɕ ^h e ⁵⁵	听	listen
/ŋ/	ŋu ³²	条(绳子)	cls for rope
	ŋy ³³	女儿	daughter
/k/	ku ²¹	骑	ride
	ke ⁴²	小碗	small bowl

preceding high front vowel /i/, /k/ has the allophone [k^j]

/k/ 在高前元音 /i/ 前变音为 [k^j]

/k ^h /	k ^j i ²¹	手镯	bracelet
	k ^j i ³³	拉	pull
	k ^h u ³¹ mi ³²	里边	inside
	k ^h e ⁵⁵	牵(牛)	lead (cow)
/ŋ/	ŋu ²¹	牛	cow
	ŋe ²¹	芽	shoot, sprout
/x/	xu ⁴⁴	黑	black
	xe ³⁵	湿	wet
/ɣ/	ɣu ³³	喝	drink
	s ¹ ⁵⁵ ɣu ³³	柳树	willow

/ɣ/ only occurs before /u/

/ɣ/ 只在 /u/ 前出现

/j/	ju ⁴⁴	村子	village
	ji ³¹	寻找	search for
/w/	we ⁴²	写	write
	wa ⁴⁴	月(月份)	month

Zhoucheng Phoneme Chart: Vowels

周城音位系统：韵母

i	y		ɥ	u	u
e					o
ɛ					ɔ
		a			
			ue		
iɛ	iɔ		ue		uo
ia			ua		

/i/	pi ³⁵ sɿ ³⁵	风	wind
	tɕi ³¹	刺	thorn
	following alveolar sibilants (s, s ^h , z, ts, ts ^h) /i/ has the allophone [ɿ]		
	/i/ 在齿擦音 (s, s ^h , z, ts, ts ^h) 后变音为 [ɿ]		
	sɿ ³³	麻	hemp
	tsɿ ²¹	浸(种)	soak (seeds)
/y/	ɕy ³³	水	water
	tɕy ⁵⁵	称	call (name)
	/y/ only occurs after palatals		
	/y/ 只在腭音后出现		
/e/	xe ⁵⁵	天	sky
	pe ⁴⁴	走	walk
/ɛ/	xɛ ⁵⁵	汤	soup
	pɛ ⁴²	白	white
/a/	ka ³⁵	教	teach
	pa ⁴²	乳房	breast
/u/	ku ²¹	桥	bridge
	mu ³³	五	five
/u/	pi ²¹ pu ³¹	蚂蚁	ant
	ju ⁴⁴	吃	eat
/o/	tso ⁴⁴	鸟	bird
	to ²¹	话	word, speech
/ɔ/	tso ⁴²	灶	stove
	to ³¹	大	big
/ɥ/	k ^h ɥ ³³	蛇	snake

tsʏ³¹

筷子

chopstick

There are the following diphthongs:

有以下复合元音:

/ue/ tue³³

远

far

k^hue³¹

呕吐

vomit

/ue/ sɿ³⁵ ts^hue⁴⁴

书本

book

we⁴²

写

write

/ua/ sua⁴⁴

年、岁

year

k^hua³³

狗

dog

/uo/ kuɔ²¹

水稻

paddy field

k^huo³³

粒(米)

cls for grain of rice

/iɛ/ mie³⁵

名字

name

pie⁴⁴

问

ask

/ia/ p^hia⁴⁴

到

to (reach)

pia⁴⁴

八

eight

/io/ p^hio³¹

布

cloth

Appendix 3 Wordlist

附录 3 词 表

The following table lists the Chinese and English names of the locations from which wordlist data has been made available. Blank spaces in the wordlist indicate that no data was collected for that item. Where more than one word was elicited, this is indicated by a backslash between the two alternatives, for example: wu²¹sua³⁵/sɿ⁵⁵.

下面的表格列出了数据出处的中文和英文名称。词表中的空格处表明此项没有收集到数据。当收集到一个以上的词汇时，用斜线/表明，例如：wu²¹sua³⁵/sɿ⁵⁵。

Chinese	English	Abbreviation	收集地点
剑川	Jianchuan	JC	剑川县甸南镇龙门村
洱源	Eryuan	EY	洱源县西山乡
鹤庆	Heqing	HQ	鹤庆县金墩乡
兰坪	Lanping	LP	怒江州兰坪县金顶镇
周城	Zhoucheng	ZC	大理市周城村
七里桥	Qiliqiao	QLQ	大理市七里桥镇
云龙	Yunlong	YL	云龙县白石乡
祥云	Xiangyun	XY	祥云县禾甸乡
洛本卓	Luobenzhuo	LBZ	怒江州泸水县洛本卓白族乡

	1	2	3	4
中文	天	太阳	月亮	星星
英文	sky	sun	moon	star
剑川 JC	xɛ ⁵⁵	ji ⁴⁴ p ^h i ³¹	mi ⁵⁵ wā ⁴⁴	ɕɛ ⁵⁵ k ^h o ³³
洱源 EY	xɛ ⁵⁵	ni ⁴⁴ p ^h i ³¹	mi ⁵⁵ ɲua ⁴⁴	ɕɛ ⁵⁵ ɔ ³³
鹤庆 HQ	x ^h ɛ ⁵⁵	ji ⁴⁴ p ^h i ³¹	mi ³⁵ wā ⁴⁴	ɕ ^h ɛ ⁵⁵ k ^h ɔ ³³
兰坪 LP	xɛ ⁵⁵ k ^h ao ³¹	ji ⁵⁵ p ^h i ³¹	mi ⁵⁵ wā ⁴⁴ p ^h i ³¹	ɕiɛ ⁵⁵ k ^h u ⁴⁴
周城 ZC	xɛ ⁵⁵	mi ⁴⁴ p ^h i ³¹	mi ³⁵ wa ⁴⁴	ɕɛ ⁵⁵ k ^h ɔ ³³
七里桥 QLQ	xɛ ⁵⁵	mi ⁴⁴ p ^h i ³¹	mi ⁵⁵ wa ⁴⁴	ɕɛ ⁵⁵ o ³³
云龙 YL	xɛ ⁵⁵	ni ⁴⁴ p ^h i ³¹	mi ⁵⁵ ɲua ⁴⁴	ɕɛ ⁵⁵ k ^h ɔ ³³
祥云 XY	xɛ ⁵⁵	ni ⁴⁴ ts ^h ou ⁴⁴ tsɿ ³³	mi ³⁵ wā ⁴⁴	ɕɛ ⁵⁵ k ^h ɔ ³³
洛本卓 LBZ	xɛ ⁵⁵	ni ⁵⁵	no ³³ no ³¹	ɕa ³³ tɕi ³¹

	5	6	7	8
中文	云	风	雨	闪电
英文	cloud	wind	rain	lightning (vb)
剑川 JC	vŷ ²¹	pi ⁵⁵ sɿ ⁵⁵	vŷ ³³	sɛ ²¹ tsɿ ³³ p ^h iu ⁴⁴
洱源 EY	vŷ ²¹	pi ⁵⁵ sɿ ⁵⁵	vŷ ³³ ɕi ³³	kʰi ³¹ ŋue ³³ ze ³³
鹤庆 HQ	vŷ ²¹	pi ⁵⁵	vŷ ³³	tɕi ³¹ kou ⁵⁵ la ⁴⁴
兰坪 LP	vā ²¹	pi ⁵⁵ sɿ ⁵⁵	zu ³³	zu ³³ tsɿ ³³ p ^h iu ⁴⁴
周城 ZC	vŷ ²¹	pi ³⁵ sɿ ³⁵	vŷ ³³ ɕi ³³	kʰi ³¹ xue ³³ lɛ ⁵⁵
七里桥 QLQ	vŷ ²¹	pi ³⁵ sɿ ³⁵	vŷ ³³ ɕi ³³	tɕi ³¹ ky ³⁵ la ⁴⁴
云龙 YL	ɥɛ ⁴⁴	pi ³⁵ ɕi ⁵⁵	vŷ ³³ ɕi ³³	dɕi ³³ mi ³³ jɛ ³³
祥云 XY	jɛ ²¹	pi ³⁵	jɛ ³³	jɿ ²¹ lüɛ ³³ jɛ ³³
洛本卓 LBZ	mu ³¹ kao ⁴²	tɕy ³³	dɕɿ ³³	xɛ ⁵⁵ tɕæ ⁵⁵ mi ³¹
	9	10	11	12
中文	打雷	冰雹	雪	霜
英文	thunder (vb)	hail	snow	frost
剑川 JC	xɛ ⁵⁵ mɛ ²¹	sue ⁴⁴ wa ⁴² tsɿ ³³	sue ⁴⁴	so ⁵⁵
洱源 EY	xɛ ⁵⁵ mɛ ²¹	ʂo ⁴² po ⁴² tsɿ ³³	sue ⁴⁴	ʂo ⁵⁵
鹤庆 HQ	x ^h ɛ ⁵⁵ mɛ ²¹	s ^h ue ⁴⁴ wa ⁴² tsɿ ³³	s ^h ue ⁴⁴	s ^h ou ⁵⁵
兰坪 LP	xɛ ⁵⁵ mæ ²¹	po ³³ tɛ ⁴⁴	sue ⁴⁴	so ⁵⁵
周城 ZC	xɛ ⁵⁵ mɛ ²¹	sue ⁴⁴ k ^h uo ³³ tsɿ ³³	sue ⁴⁴	so ⁵⁵
七里桥 QLQ	xɛ ⁵⁵ mɛ ²¹	ɕy ⁴⁴ k ^h uo ³³ tsɿ ³³	ɕy ⁴⁴	so ⁵⁵
云龙 YL	xɛ ⁵⁵ mɛ ²¹	tso ⁴² po ⁴² tsɿ ³³	ɕyɛ ⁴⁴	so ³³
祥云 XY	xɛ ⁵⁵ mɛ ²¹	sua ⁴⁴ k ^h uo ³³ tsɿ ³³	sue ⁴⁴	sou ⁵⁵
洛本卓 LBZ	xɛ ⁵⁵ mā ³¹	ɕo ³³ q ^h ao ³¹	sue ⁵⁵	ɕo ³³
	13	14	15	16
中文	雾	水	河	湖
英文	fog	water	river	lake
剑川 JC	mu ²¹ kō ⁴²	ɕy ³³	kŷ ⁵⁵	ko ²¹
洱源 EY	pu ³¹ kō ²¹	ɕy ³³	kŷ ³⁵	kō ²¹
鹤庆 HQ	mu ³¹ kō ⁴²	ɕy ³³	kō ⁵⁵	kō ²¹
兰坪 LP	nō ²¹ kō ²¹ wɛ ⁴²	ɕy ³³	kō ⁵⁵	kō ²¹
周城 ZC	vŷ ⁵⁵	ɕy ³³	kŷ ³⁵	kō ²¹
七里桥 QLQ	u ⁵⁵ lu ⁵⁵	ɕy ³³	kŷ ³⁵	kō ²¹
云龙 YL	mu ³¹ kao ⁴²	ɕy ³³	ku ³⁵ ku ³³	kao ²¹ kao ²¹
祥云 XY	mu ³¹ kã ⁴²	ɕy ³³	k ^j ɛ ³⁵ tso ⁴²	pu ³³
洛本卓 LBZ	mu ³¹ kao ⁴²	sy ³³	lō ²¹	lu ³¹ bu ³³

	17	18	19	20
中文	水塘	水田	旱地	地
英文	pond	wet field	meadow	earth
剑川 JC	pu ³³	so ⁵⁵ jo ⁴⁴ tei ³¹	kā ⁵⁵ tei ³¹	tei ³¹ pe ²¹
洱源 EY	pu ³³	cy ³³ tei ³¹	ka ³⁵ tei ³¹	tei ³¹
鹤庆 HQ	pu ³³	cy ³³ tei ³¹	kā ⁵⁵ tei ³¹	tei ³¹ pe ²¹
兰坪 LP	cy ³³ pu ³³	cy ³³ tei ³¹	kā ⁵⁵ tei ³¹	tei ³¹
周城 ZC	pu ³³	cy ³³ tei ³¹	ka ³⁵ tei ³¹	tei ³¹
七里桥 QLQ	pu ³³	kuo ⁴² tei ³¹	kā ⁵⁵ wo ⁴⁴	tei ³¹ pe ²¹
云龙 YL	cy ³³ t ^h a ⁴⁴	cy ³³ tei ³¹	ka ³⁵ tei ³¹	tei ³¹
祥云 XY	cy ³³ ā ³³	cy ³³ ji ³¹	kā ³⁵ ji ³¹	ji ³¹ pe ²¹
洛本卓 LBZ	lu ³¹ bu ³³	p ^h ao ⁵⁵ tei ⁴²	qa ⁵⁵ tei ³¹	tei ⁴⁴ pa ⁴²
	21	22	23	24
中文	土	山	石头	火
英文	soil	mountain	stone	fire
剑川 JC	t ^h u ³³ sl ³³	sv ⁴²	tco ⁴² k ^h ue ⁵⁵	xue ³³
洱源 EY	t ^h u ³³	sy ⁴²	šo ⁴² k ^h ue ⁵⁵	xue ³³
鹤庆 HQ	t ^h u ³³ sl ³³	suo ⁴²	tsou ⁴² k ^h ue ⁵⁵	x ^h ue ³³
兰坪 LP	t ^h u ³³ sl ³³	su ³¹	tsu ³¹ k ^h ue ⁵⁵	xue ⁴⁴
周城 ZC	ne ²¹	sv ³²	tso ⁴² k ^h ue ³⁵	xue ³³
七里桥 QLQ	ne ²¹	sv ³²	tso ⁴² k ^h ue ⁵⁵	xue ³³
云龙 YL	ni ³¹ t ^h i ⁵⁵ p ^h a ⁴⁴	fy ⁴²	tso ⁴² k ^h ue ⁵⁵	xue ³³
祥云 XY	ne ³¹	ce ⁴²	tso ⁴² k ^h ue ⁵⁵	xue ³³
洛本卓 LBZ	ne ³³ p ^h a ⁵⁵	se ⁵⁵	tu ⁴² q ^h e ⁵⁵	fi ³³
	25	26	27	28
中文	前面	后面	左边	右边
英文	in front	behind	left (side)	right (side)
剑川 JC	te ²¹ mi ⁴²	yur ³³ mi ⁴²	pi ⁵⁵ fy ³³	tse ⁴² fy ³³
洱源 EY	tu ³¹ po ³¹	yur ³³ po ³¹	pi ³⁵ po ³¹	tse ⁴² po ³¹
鹤庆 HQ	tu ²¹ mi ⁴²	yur ³³ mi ⁴²	pi ⁵⁵ fy ³³	tse ⁴² fy ³³
兰坪 LP	tiur ³¹ mi ³³ no ⁴⁴	yur ⁴⁴ mi ³³ no ⁴⁴	fũ ⁴⁴ pĩ ⁵⁵	tse ⁴⁴ pĩ ⁵⁵
周城 ZC	tei ³¹ mi ³² ci ³⁵	yur ³³ to ³¹ pe ²¹	pi ³⁵ po ³¹	tse ³² po ³¹
七里桥 QLQ	tei ⁴² mi ³² ci ³⁵	o ²¹ to ³⁵ mi ⁴⁴	pi ³⁵ po ²¹	tse ⁴⁴ po ²¹
云龙 YL	tu ³¹ mu ⁵⁵	do ³¹ xu ⁵⁵	pi ³⁵ po ³¹	tse ³¹
祥云 XY	tou ²¹ mou ⁵⁵	yur ³³ sẽ ²¹	pi ³⁵ sẽ ²¹	tse ⁴² sẽ ²¹
洛本卓 LBZ	tu ²¹ mo ⁵⁵	duĩ ³¹ xuĩ ³³	la ⁴⁴ tey ⁵⁵	ca ⁴⁴ ci ³³

	29	30	31	32
中文	里边	外边	年、岁	今年
英文	inside	outside	year	this year
剑川 JC	k ^h u ³¹ fy ³³	wā ⁴⁴ fy ³³	sua ⁴⁴	ke ⁵⁵ tsɿ ⁵⁵ sua ⁴⁴
洱源 EY	k ^h u ³¹ po ³¹	ɣua ⁴⁴ po ³¹	sua ⁴⁴	k ^j e ⁵⁵ tsɿ ⁵⁵
鹤庆 HQ	k ^h u ³¹ fy ³³	wā ⁴⁴ fy ³³	s ^h ua ⁴⁴	ke ⁵⁵ tsɿ ⁵⁵ s ^h ua ⁴⁴
兰坪 LP	mu ⁵⁵ xu ³¹	wā ⁵⁵ p ^h ao ⁴⁴	sua ⁴⁴	ke ⁵⁵ tsɿ ⁴⁴
周城 ZC	k ^h u ³¹ mi ³²	wa ⁴⁴ mi ³²	sua ⁴⁴	ke ⁵⁵ tsɿ ⁵⁵ sua ⁴⁴
七里桥 QLQ	k ^h u ³¹ po ²¹	wa ⁴⁴ po ²¹	ɣua ⁴⁴	kie ⁵⁵ tsɿ ⁵⁵ ɣua ⁴⁴
云龙 YL	k ^h u ³¹ p ^h ao ³³	ɣua ⁴⁴ po ³¹	sua ⁴⁴	ke ⁵⁵ tsɿ ⁵⁵ sua ⁴⁴
祥云 XY	kou ³¹ sē ²¹	wā ⁴⁴ sē ²¹	sua ⁴⁴	k ^j e ⁵⁵ tsɿ ⁵⁵
洛本卓 LBZ	bo ⁵⁵ wā ⁴² mu ⁵⁵	po ³³ tɕæ ³³ nao ³¹	sua ⁴⁴	qao ⁴⁴ tsɿ ⁴⁴
	33	34	35	36
中文	去年	月(月份)	正月	二月
英文	last year	month	first month(lunar)	second month
剑川 JC	na ²¹ tsɿ ⁵⁵ sua ⁴⁴	wā ⁴⁴	tsɿ ⁵⁵ wā ⁴⁴	sɿ ²¹ wā ⁴⁴
洱源 EY	na ²¹ tsɿ ⁵⁵	ɣua ⁴⁴	tse ³⁵ ɣua ⁴⁴	ɣɿ ³¹ ɣua ⁴⁴
鹤庆 HQ	na ²¹ tsɿ ⁵⁵ s ^h ua ⁴⁴	wā ⁴⁴	tsē ³⁵ wā ⁴⁴	ɣɿ ³¹ wā ⁴⁴
兰坪 LP	na ³¹ tsɿ ⁴⁴	wā ⁴⁴	tsā ⁵⁵ wā ⁴⁴	ɣu ³³ wā ⁴⁴
周城 ZC	na ²¹ tsɿ ⁵⁵ sua ⁴⁴	wa ⁴⁴	tse ³⁵ wa ⁴⁴	ɣɿ ³¹ wa ⁴⁴
七里桥 QLQ	na ²¹ tsɿ ⁵⁵ ɣua ⁴⁴	wa ⁴⁴	tse ³⁵ wa ⁴⁴	sɿ ³¹ wa ⁴⁴
云龙 YL	na ²¹ tsɿ ⁵⁵ sua ⁴⁴	ɣua ⁴⁴	tse ³⁵ ɣua ⁴⁴	ɛ ⁴⁴ ɥe ⁴⁴
祥云 XY	na ²¹ tsɿ ⁵⁵	wā ⁴⁴	tsē ³⁵ wā ⁴⁴	ɣɿ ³¹ wā ⁴⁴
洛本卓 LBZ	ni ³³ tsu ⁴⁴	ɣua ⁴⁴	ɕā ³³ ɣua ⁴⁴	ne ³³ ɣua ⁴⁴
	37	38	39	40
中文	天(日子)	今天	昨天	前天
英文	day	today	yesterday	day before yesterday
剑川 JC	ɿ ⁴⁴ /ɕe ⁴⁴	ke ⁵⁵ ɿ ⁴⁴	ɕi ²¹ ɿ ⁴⁴	tsō ³³ ɿ ⁴⁴
洱源 EY	ni ⁴⁴	k ^j e ⁵⁵ ni ⁴⁴	ɕi ²¹ ni ⁴⁴	tsō ³³ ni ⁴⁴
鹤庆 HQ	ɿ ⁴⁴	kē ³⁵ ɿ ⁴⁴	ɕi ²¹ ɿ ⁴⁴	tsō ³³ ɿ ⁴⁴
兰坪 LP	ɿ ⁴⁴	kē ⁴⁴ ɿ ⁴⁴	ɕie ³¹ ɿ ⁴⁴	tsō ³³ ɿ ⁴⁴
周城 ZC	ni ⁴⁴	ke ⁵⁵ ni ⁴⁴	ɕi ²¹ se ⁴⁴ ni ⁴⁴	to ³¹ se ⁴⁴ ni ⁴⁴
七里桥 QLQ	ni ⁴⁴	kie ⁵⁵ ni ⁴⁴	tse ⁴² se ⁴⁴ ni ⁴⁴	tu ²¹ ni ⁴⁴
云龙 YL	ɕe ⁴⁴	ke ⁵⁵ ɕe ⁴⁴	ɕi ³¹ ɕe ⁴⁴	ɕo ³³ ɕe ⁴⁴
祥云 XY	ni ⁴⁴	k ^j e ⁵⁵ ni ⁴⁴	ɕi ²¹ ni ⁴⁴	zā ³³ pu ²¹ ni ⁴⁴
洛本卓 LBZ	ni ³³	qā ⁵⁵ ni ³³	ɕi ²¹ ni ³³	zō ³³ ni ³³

	41	42	43	44
中文	明天	后天	早晨	中午
英文	tomorrow	day after tomorrow	morning	noon
剑川 JC	me ⁵⁵ ji ⁴⁴	tsɿ ³³ ji ⁴⁴	k ^h ɛ ⁵⁵ te ²¹	ju ³³ tu ³¹ pe ²¹ ke ⁴⁴
洱源 EY	me ⁵⁵ ni ⁴⁴	a ³¹ tsɿ ³³ ni ⁴⁴	k ^h ɛ ⁵⁵ tu ²¹	ni ⁴⁴ tu ²¹
鹤庆 HQ	me ⁵⁵ ji ⁴⁴	tsɿ ³³ ji ⁴⁴	k ^h ɛ ⁵⁵ tsɿ ⁵⁵ tu ²¹	ji ⁴⁴ tu ³¹ tu ⁵⁵
兰坪 LP	mẽ ⁵⁵ ji ⁴⁴	(a ³³)tsu ³³ ji ⁴⁴	k ^h u ⁵⁵ (tsɿ ⁴⁴)ti ³¹	ju ⁴⁴ tu ³¹ tse ³¹ ke ³
周城 ZC	me ⁵⁵ ni ⁴⁴	a ³¹ tsɿ ³³ ni ⁴⁴	ts ^h ɛ ³³ k ^h u ⁵⁵	nu ⁴⁴ tu ²¹ tsɿ ³¹ te ⁴⁴
七里桥 QLQ	me ⁵⁵ ni ⁴⁴	a ³¹ tsɿ ⁴² ni ⁴⁴	ts ^h ɛ ³³ k ^h u ³³	ni ⁴⁴ tu ²¹
云龙 YL	me ⁵⁵ ɕe ⁴⁴	a ³¹ tsɿ ³³ ɕe ⁴⁴	k ^h ɛ ⁵⁵ tsɿ ³³ tu ²¹	ni ⁴⁴ xu ³¹
祥云 XY	me ⁵⁵ ni ⁴⁴	tse ²¹ ni ⁴⁴	zu ³³ k ^h u ³³	ni ⁴⁴ tu ²¹
洛本卓 LBZ	mɔ ³¹ pa ⁴²	a ³³ ɬɿ ³³ ni ³³	mu ³¹ pa ⁴² tsu ³¹	ni ³³ xu ³³
	45	46	47	48
中文	现在	牛	马	猪
英文	now	cow	horse	pig
剑川 JC	le ²¹ ke ⁴⁴	ɲu ²¹	me ³³	te ⁴²
洱源 EY	nu ³¹ te ¹ ji ⁵⁵	ɲu ²¹	me ³³	te ⁴²
鹤庆 HQ	lu ²¹ te ^h i ³³	ɲu ²¹	me ³³	te ⁴²
兰坪 LP	nu ⁴⁴ pe ³¹	ɲu ²¹	me ³³	te ⁴²
周城 ZC	nu ³¹ te ^h a ⁵⁵ tsɿ ³³	ɲu ²¹	me ³³	te ⁴²
七里桥 QLQ	lu ³¹ te ^h a ⁵⁵	ɲu ²¹	me ³³	te ⁴²
云龙 YL	nu ³¹ ge ⁵⁵	ɲu ²¹	me ³³	te ⁴²
祥云 XY	tu ³¹ te ¹ ji ⁵⁵	ɲu ²¹	me ³³	te ⁴²
洛本卓 LBZ	no ³¹ pa ³¹	ɲu ²¹	mɔ ³³	te ⁴²
	49	50	51	52
中文	绵羊	狗	猫	兔
英文	sheep	dog	cat	hare, rabbit
剑川 JC	tsẽ ⁵⁵ jo ²¹	k ^h uā ³³	a ⁵⁵ ni ⁵⁵	t ^h o ⁵⁵ lo ⁴⁴
洱源 EY	tsɿ ⁵⁵ jo ²¹	k ^h o ³³	a ⁵⁵ ni ⁵⁵	t ^h o ⁵⁵ lo ⁴⁴
鹤庆 HQ	pe ⁴² tsɿ ³⁵ jo ²¹	k ^h uā ³³	ni ³⁵ tu ²¹	t ^h ou ³⁵ lou ³³
兰坪 LP	tsɿ ³³ jo ²¹	k ^h uā ⁴⁴	ni ⁵⁵	t ^h o ⁵⁵ lo ⁴⁴
周城 ZC	tsɿ ⁵⁵ jo ²¹	k ^h ua ³³	a ⁵⁵ mi ⁵⁵	t ^h o ⁵⁵ lo ⁵⁵ tsɿ ³³
七里桥 QLQ	jo ²¹	k ^h ua ³³	a ⁵⁵ mi ⁵⁵	t ^h o ⁵⁵ lo ⁵⁵
云龙 YL	pe ⁴² tsɿ ³³ jo ²¹	k ^h ua ³³	mi ⁵⁵	t ^h ao ⁵⁵ lao ⁴⁴
祥云 XY	ã ²¹	k ^h uā ³³	a ⁵⁵ mi ⁵⁵	t ^h o ⁵⁵ lo ⁵⁵
洛本卓 LBZ	teu ³³ no ²¹	q ^h o ³³	xua ⁵⁵ lao ³¹	t ^h o ⁵⁵ la ³³

	53	54	55	56
中文	龙	虎	熊	猴子
英文	dragon	tiger	bear	monkey
剑川 JC	ny ²¹	lou ²¹	tci ⁵⁵	you ²¹ sua ⁵⁵
洱源 EY	ny ²¹	lo ²¹	tci ³⁵	u ²¹ sua ³⁵
鹤庆 HQ	nu ²¹	lo ²¹	tci ³⁵	u ²¹ sua ³⁵
兰坪 LP	no ²¹	lao ²¹	tci ⁵⁵	o ²¹ sua ⁴⁴
周城 ZC	ly ²¹	lo ²¹	co ⁴²	o ²¹ sa ³⁵
七里桥 QLQ	ny ²¹	lo ²¹	co ⁴²	o ⁴² fua ³⁵
云龙 YL	ny ²¹	lao ²¹	tci ³⁵	wu ²¹ sua ³⁵ /sɿ ⁵⁵
祥云 XY	nŷ ²¹	lo ²¹	tci ³⁵	a ⁵⁵ sua ³⁵
洛本卓 LBZ	lu ³¹	lao ³¹	tsẽ ⁵⁵ pu ⁵⁵	o ³¹ so ⁵⁵
	57	58	59	60
中文	狼	老鼠	鸡	斑鸠
英文	wolf	mouse	chicken	turtledove
剑川 JC	na ⁴²	sy ³³	ke ⁵⁵	tci ⁵⁵ ku ⁵⁵
洱源 EY	pe ⁴² ʂur ⁴²	ʂy ³³	k'e ³⁵	fe ³⁵ tci ⁵⁵ ku ⁵⁵
鹤庆 HQ	na ⁴²	suo ³³	ke ³⁵	xo ⁴⁴ ku ⁵⁵ ku ³³
兰坪 LP	la ⁴²	su ³³	kẽ ⁵⁵	tci ⁵⁵ ku ⁵⁵
周城 ZC	la ⁴²	sy ³²	ke ³⁵	ku ²¹ ku ³³ ku ³³
七里桥 QLQ	ts ^h e ⁴² ko ³¹	sy ³³	ke ³⁵	ku ⁵⁵ ku ³³
云龙 YL	wẽ ⁵⁵ wu ⁴⁴	ʃy ³³	ke ³⁵	ẽ ³³ t ^h u ⁴⁴ tci ⁵⁵ ku ⁵⁵
祥云 XY	tsou ⁴²	ɕe ⁴⁴	k'e ³⁵	tci ⁵⁵ ku ⁵⁵
洛本卓 LBZ	pie ⁴⁴	wu ⁴⁴ ʂu ³³	qẽ ³⁵	tci ⁵⁵ ku ⁵⁵
	61	62	63	64
中文	鸟	老鹰	乌鸦	喜鹊
英文	bird	eagle	crow	magpie
剑川 JC	tsou ⁴⁴ tsɿ ³³	wa ⁴²	xur ⁴⁴ vy ⁵⁵	vy ⁵⁵ tɕa ⁴² li ⁵⁵ tsɿ ³³
洱源 EY	tsɔ ⁵⁵	wa ⁴²	xu ⁴⁴ u ⁵⁵	u ⁵⁵ ʂue ⁵⁵ le ⁵⁵
鹤庆 HQ	tsou ⁴⁴ tsɿ ³³	wa ⁴²	xur ⁴⁴ o ³⁵	wo ³⁵ tɕa ⁴² la ³⁵
兰坪 LP	tsu ⁵⁵ tsɿ ⁵⁵	wa ⁴²	xu ³³ u ⁵⁵	a ⁵⁵ tɕa ⁵⁵ le ⁵⁵
周城 ZC	tsɔ ⁴⁴	wa ⁴²	xur ⁴⁴ vy ³⁵	o ⁵⁵ tɕa ⁴² la ⁴²
七里桥 QLQ	tsɔ ⁴⁴	wa ⁴²	xur ⁴⁴ ŋy ³⁵	o ⁵⁵ ʃua ⁴²
云龙 YL	tsu ⁴⁴	lao ³¹ wa ⁴⁴	wa ⁴²	wu ⁵⁵ ʂue ⁵⁵
祥云 XY	tsɔ ⁴⁴	wa ⁴²	xur ⁴⁴ ẽ ³⁵	u ⁵⁵ ts ^h a ⁴²
洛本卓 LBZ	tsuo ⁵⁵	wa ⁴²	tɕa ⁵⁵ vy ⁵⁵	pa ⁵⁵ tɕa ⁵⁵ vy ⁵⁵

	65	66	67	68
中文	燕子	麻雀	蝙蝠	青蛙
英文	swallow	sparrow	bat	frog
剑川 JC	xɛ ⁵⁵ ŋɛ ³³ tsɿ ³³	la ⁵⁵ tsɿ ²¹ tso ⁴⁴	po ⁵⁵ po ⁴⁴ tsɿ ³³	o ²¹ mɛ ⁵⁵
洱源 EY	xɛ ⁵⁵ le ⁵⁵ ɣɛ ³³	lo ³⁵ tsɿ ²¹ kɛ ³⁵	po ³⁵ pu ⁴⁴	o ³¹ mɛ ³⁵
鹤庆 HQ	ti ⁵⁵ kɛ ⁴² lɛ ³⁵			
	tsɿ ³³	la ⁵⁵ tsɿ ³¹ tso ⁴²	pu ⁵⁵ pu ³³	u ³¹ mɛ ³⁵
兰坪 LP	xɛ ⁵⁵ jɛ ⁴⁴ tsɿ ⁴⁴	la ⁵⁵ tsɿ ³³ tsu ⁴⁴	pu ⁵⁵ pu ⁵⁵	tɕ ^h ɛ ⁴⁴ o ²¹ mɛ ⁵⁵
周城 ZC			se ⁵⁵ ju ⁴⁴ mu ⁴⁴	
	li ⁵⁵ ja ⁴² tsɿ ³³	lo ³⁵ tsɿ ²¹ tso ⁴⁴	tsɿ ³³	o ²¹ tɕa ⁴⁴ mo ³³
七里桥 QLQ	ke ⁵⁵ jɛ ³¹ tsɿ ³³	lo ³⁵ tɕi ⁴² tso ⁴⁴	po ⁵⁵ po ⁴⁴	o ²¹ mɛ ³⁵
云龙 YL	xɛ ⁵⁵ a ³³ tsɿ ³³	lo ⁵⁵ tsɿ ²¹ kɛ ³³	fɿ ³³ pu ⁵⁵ ku ³¹	wu ²¹ tsua ⁴²
祥云 XY	tɕi ³⁵ li ³⁵ kɛ ⁴²			tɕ ^h ɛ ²¹ mɛ ²¹ mɛ ³⁵
	tsɿ ³³	la ³⁵ tsɿ ³¹ tso ⁴⁴	ɕɛ ⁴⁴ po ³⁵ pou ³³	tsɿ ³³
洛本卓 LBZ	pa ⁵⁵ pu ⁵⁵ tɕi ³¹	lo ⁵⁵ zua ²¹ tsu ⁵⁵	wo ⁴⁴ la ⁴²	a ⁴² ɔ ⁴⁴
	69	70	71	72
中文	鱼	蛇	蜜蜂	蝴蝶
英文	fish	snake	bee	butterfly
剑川 JC	ɿ ⁵⁵	k ^h ɿ ³³	fɿ ⁵⁵	kou ⁵⁵ lɛ ⁴⁴ tsɿ ³³
洱源 EY	ɿ ³⁵	k ^h ɿ ³³	tsɿ ⁵⁵ fɿ ⁵⁵	ko ⁵⁵ lɛ ⁴⁴
鹤庆 HQ	ũ ⁵⁵	k ^h uo ³³	fɿ ⁵⁵	kou ³⁵ lɛ ⁴⁴ lɛ ⁴⁴
				tsɿ ³³
兰坪 LP	ũ ⁵⁵	k ^h ue ³³	fũ ⁵⁵	ku ⁵⁵ lɛ ³³ (tsɿ ³³)
周城 ZC	ŋɿ ³⁵	k ^h ɿ ³³	fɿ ⁵⁵	ko ⁵⁵ lɛ ⁴⁴ tsɿ ³³
七里桥 QLQ	ŋɿ ³⁵	k ^h ɿ ³³	fɿ ⁵⁵	ko ⁵⁵ li ⁴⁴
云龙 YL	ŋu ³⁵	k ^h ɿ ³³	tsɿ ⁵⁵ fɿ ⁵⁵	ko ⁵⁵ lɛ ⁴⁴
祥云 XY	ŋu ³⁵	k ^h ɛ ³³	fũ ⁵⁵	ko ³⁵ li ⁴⁴ tsɿ ³³
洛本卓 LBZ	ɿ ³⁵	tɕ ^h ɛ ³³	tɕɛ ⁵⁵ NN ⁵⁵	qe ⁴⁴ lɛ ⁴⁴

	73	74	75	76
中文	蚂蚱	蚂蚁	蜘蛛	臭虫
英文	locust	ant	spider	bedbug
剑川 JC	sua ³¹ ma ³¹ ke ⁵⁵	pi ²¹ po ²¹ tsɿ ³³	ke ³³	pi ⁵⁵ sɿ ⁵⁵
洱源 EY	sa ²¹ na ³³ ke ³⁵	pi ²¹ pu ³¹	tua ³⁵ sua ³⁵ yo ³¹	tsy ⁴⁴ ci ⁴⁴
鹤庆 HQ	sa ⁴² mou ³³ ke ⁵⁵	pi ²¹ pu ²¹ tsɿ ³³	pi ⁵⁵ se ⁵⁵ le ⁵⁵ yo ²¹	pi ⁵⁵ sɿ ⁵⁵
兰坪 LP	sua ³³ mui ³³ ke ⁵⁵	pi ³³ pao ³³ tsɿ ⁴⁴	tu ⁵⁵ ci ⁵⁵ o ²¹ tei ⁵⁵	pi ⁴⁴ se ⁴⁴
周城 ZC	so ³³ lo ³³ ke ³⁵	pi ²¹ pu ³¹	to ⁵⁵ ko ³⁵ ci ³⁵ ɲu ²¹	tsy ⁴⁴ ci ⁴⁴
七里桥 QLQ	co ³³ lo ³⁵ ke ³⁵	pi ²¹ pu ³¹	to ³⁵ sɿ ³⁵ to ³⁵ ɲu ²¹	tsy ⁴⁴ ci ⁴⁴
云龙 YL	sa ²¹ na ³³ ke ³⁵	pi ²¹ pu ³¹	tao ⁵⁵ su ⁵⁵ wa ³¹	ts ^h o ³³ pe ³³ ke ³³ lv ³³
祥云 XY	sa ³³ ma ³³ ki ³⁵	pi ²¹ pou ²¹ tsɿ ³³	fe ³⁵ sy ³⁵	teɛ ⁴⁴ ci ⁴⁴
洛本卓 LBZ	la ⁴⁴ le ³³	tei ³¹ pu ²¹	tao ⁵⁵ sao ⁵⁵ lao ³¹	teo ⁵⁵ ci ⁵⁵
	77	78	79	80
中文	跳蚤	虱子	苍蝇	蚊子
英文	flea	louse	fly (insect)	mosquito
剑川 JC	k ^h ua ³³ ci ⁴⁴	ci ⁴⁴	su ²¹	mo ⁴⁴ tsɿ ³³
洱源 EY	k ^h ua ³³ so ⁴⁴	ci ⁴⁴	zu ²¹	mo ⁴⁴ tsɿ ³³
鹤庆 HQ	k ^h ua ³³ ci ⁴⁴	ci ⁴⁴	zu ²¹	mou ⁴⁴ tsɿ ³³
兰坪 LP	k ^h ua ⁴⁴ ci ⁴⁴ tsɿ ³³	ci ⁴⁴	zu ²¹	mu ⁵⁵ tsɿ ⁴⁴
周城 ZC	te ^h o ³³ sua ³¹ tsɿ ³³	ci ⁴⁴	zu ²¹	mu ⁴⁴ tsɿ ³³
七里桥 QLQ	ti ^h o ³³ fuo ³³	ci ⁴⁴	su ²¹	mu ⁴⁴ tsɿ ³³
云龙 YL	k ^h ua ³³ su ³³	ci ⁴⁴	zu ²¹	mu ⁴⁴ tsɿ ³³
祥云 XY	k ^h ua ³³ sy ⁴⁴	ci ⁴⁴	zu ²¹	mo ⁴⁴ tsɿ ³³
洛本卓 LBZ	q ^h o ³³ eu ³³	ci ⁴⁴	mo ⁵⁵ nae ³¹	mo ⁵⁵ tei ⁴⁴

	81	82	83	84
中文	蚯蚓	水蛭	虫	蛋
英文	earthworm	leech	insect, bug	egg
剑川 JC	tɕi ²¹ tɕɛ ⁵⁵ tsv ²¹	tɕi ⁴⁴	tsṽ ²¹	se ⁴²
洱源 EY	k'i ³¹ ke ³⁵ tsv ²¹	tɕi ⁴⁴	tsv ³¹	se ⁴²
鹤庆 HQ	xua ⁵⁵ h ³³ u ³³	tɕi ⁴⁴	tsũ ⁵⁴²	se ⁴²
兰坪 LP	ku ⁵⁵ lu ⁵⁵ tsu ²¹	kã ⁵⁵ tɕi ³³	tsɔ ²¹	se ⁴²
周城 ZC	pi ³¹ tɕa ³⁵ tsṽ ²¹	tɕi ³²	tsv ²¹	se ³²
七里桥 QLQ	pi ²¹ tɕa ³⁵ tsv ²¹	tɕi ⁴⁴	tsv ²¹	se ³²
云龙 YL	tɕi ³¹ ke ³⁵ tɕao ²¹	tɕi ⁴⁴	lv ³³	se ⁴²
祥云 XY	tɕi ³³ li ³³ ke ³⁵	tɕi ⁴²	tɕɛ ³¹	se ⁴²
洛本卓 LBZ	qo ⁵⁵ tɕv ³¹	qa ⁵⁵ tɕi ⁵⁵	tɕu ³¹	sã ⁴²
	85	86	87	88
中文	翅膀	毛	角	尾巴
英文	wing (bird)	feather, hair	horn	tail
剑川 JC	ji ³³ h ⁵⁵ v ⁵⁵	ma ²¹	ky ⁴⁴	ṽ ³³ ty ⁵⁵
洱源 EY	ji ³¹ h ⁵⁵ v ⁵⁵	ma ²¹	ky ⁴⁴	ŋv ⁴⁴ ty ³⁵
鹤庆 HQ	ji ⁴⁴ h ⁵⁵ uo ³⁵	ma ²¹	kuo ⁴⁴	ṽ ³³ tu ⁵⁵ luo ⁵⁵
兰坪 LP	jo ²¹ h ⁵⁵ u ⁵⁵	ma ²¹	ko ⁵⁵	wẽ ³³ tu ⁵⁵
周城 ZC	ji ³⁵ h ⁵⁵ v ⁵⁵ kua ⁴⁴	ma ²¹	ky ⁴⁴	mi ⁴⁴ ty ³⁵
七里桥 QLQ	ji ³⁵ la ⁴⁴ h ⁵⁵ v ⁵⁵	ma ²¹	ky ⁴⁴	mi ⁴⁴ tu ³⁵
云龙 YL	lao ²¹ ji ²¹	ma ²¹	ky ⁴⁴	ŋv ⁴⁴ ty ³⁵
祥云 XY	jo ³³ h ⁵⁵ e ⁵⁵	ma ²¹	kur ³³	mi ³³ tu ³⁵
洛本卓 LBZ	lao ³¹ ji ⁴²	mie ²¹	qo ⁵⁵	mã ³¹ qua ⁵⁵
	89	90	91	92
中文	树	松树	柳树	竹子
英文	tree	pine tree	willow	bamboo
剑川 JC	tsur ³¹	ɕo ²¹ tsur ³¹	yur ³³ tsur ³¹	tsv ⁴⁴
洱源 EY	tsur ³¹	zo ³¹ tsur ³¹	sɿ ³⁵ yur ³³	tsv ⁴⁴
鹤庆 HQ	tsur ³¹	jo ²¹ tsur ³¹	yur ³³ tsur ³¹	tsuo ⁴⁴
兰坪 LP	tsur ²¹	jo ²¹ tsur ²¹	sur ⁵⁵ yur ³³	tsao ⁵⁵ tsur ³³
周城 ZC	tsur ³¹	jo ²¹ tsur ³¹	sɿ ⁵⁵ yur ³³	tsv ⁴⁴
七里桥 QLQ	tsur ³¹	ɕo ³¹	sur ⁵⁵ ur ³³	tsv ⁴⁴
云龙 YL	ɕur ³¹	jo ²¹ fv ³³ ɕur ³¹	ju ³¹ ur ³³	tsv ⁴⁴
祥云 XY	zou ³¹	ã ³¹ zou ³¹	sur ⁵⁵ yo ⁴²	tse ⁴⁴
洛本卓 LBZ	ɕur ³¹	zu ³¹ ɕur ³¹		tɕo ⁵⁵ ɕur ³¹

	93	94	95	96
中文	水稻	玉米	大麦	荞
英文	paddy field	corn, maize	barley	buckwheat
剑川 JC	kou ²¹	ju ⁵⁵ mu ⁵⁵	me ⁵⁵ sou ²¹	ky ²¹
洱源 EY	ko ²¹	y ⁵⁵ mu ⁵⁵	mi ³⁵ zo ²¹	ky ²¹
鹤庆 HQ	kuo ²¹	jẽ ³⁵ mu ³⁵	mi ⁵⁵ zou ³¹	kuo ²¹
兰坪 LP	ku ²¹ tsur ³³	xã ³³ mu ³³	me ⁵⁵ zao ²¹	ko ²¹
周城 ZC	kuo ²¹	ji ⁵⁵ me ⁵⁵	mi ³⁵ zo ³¹	ky ²¹
七里桥 QLQ	kuo ²¹	lu ³⁵ ku ³⁵	mi ³⁵ so ²¹	ky ²¹
云龙 YL	kao ²¹	y ⁵⁵ me ⁵⁵	mi ³⁵ zo ²¹	ky ²¹
祥云 XY	ku ²¹	o ⁴⁴ me ³⁵	mi ³⁵ zo ²¹	ku ²¹
洛本卓 LBZ	qao ³¹	xa ⁴² mu ⁵⁵	mu ⁵⁵ zao ³¹	ky ³¹
	97	98	99	100
中文	芋头	棉花	麻	豆子
英文	taro	cotton	hemp	bean
剑川 JC	pi ²¹ tĩ ⁵⁵	mi ⁵⁵ xua ⁵⁵	sɿ ³³	tu ²¹
洱源 EY	pi ²¹ t ^h v ⁵⁵	xo ³⁵ ci ⁵⁵	sur ³³	tu ³¹
鹤庆 HQ	pi ²¹ t ^h ɔ ³⁵	mi ⁵⁵ xua ⁵⁵	sɿ ³³	tu ³¹
兰坪 LP	pi ²¹ t ^h ɔ ⁵⁵	mi ⁵⁵ xua ⁵⁵	sɿ ⁴⁴	tiur ²¹
周城 ZC	pi ²¹ t ^h v ⁵⁵	xo ³⁵ ci ³⁵	sɿ ³³	tu ³¹
七里桥 QLQ	pi ²¹ t ^h v ⁵⁵	xo ³⁵ mi ³¹	sɿ ³³	tu ³¹
云龙 YL	pi ²¹ t ^h u ⁵⁵	xo ³⁵ se ⁵⁵	sɿ ³³	du ³¹
祥云 XY	pi ²¹ t ^h v ⁵⁵	xo ³⁵ mi ³¹	sv ³⁵	tou ³¹
洛本卓 LBZ	xu ⁴²	xo ⁵⁵	sɿ ³³	du ⁴²
	101	102	103	104
中文	豌豆	黄豆	南瓜	黄瓜
英文	pea	soybean	pumpkin	cucumber
剑川 JC	tu ²¹ sɿ ³¹ tsɿ ³³	sẽ ⁵⁵ tsɿ ³³ tu ²¹	tci ⁵⁵ kua ⁵⁵	p ^h o ⁴⁴
洱源 EY	tu ³¹ lu ³¹ ts ^h u ³¹	pẽ ⁴⁴ xue ³⁵ tu ³¹	e ⁵⁵ kua ⁵⁵	p ^h o ⁴⁴
鹤庆 HQ	tu ³¹ ts ^h u ³² tsɿ ³³	pẽ ⁴² tu ³¹ tsɿ ³³	na ⁵⁵ kua ⁵⁵	p ^h ou ⁴⁴
兰坪 LP	tiur ²¹ liur ²¹	pa ⁴⁴ tiur ²¹	tci ⁵⁵ kũã ⁵⁵	p ^h ao ³³
周城 ZC	tu ³¹ ts ^h u ³¹	sɿ ⁵⁵ sɿ ⁴⁴ tu ³¹	na ³⁵ kua ³⁵	p ^h o ⁴⁴
七里桥 QLQ	tu ³¹ ts ^h u ³¹	sɿ ³⁵ tsɿ ³³ tu ³¹	na ⁴² kua ³³	p ^h o ⁴⁴
云龙 YL	du ³¹ lu ³¹	pẽ ⁴⁴ du ³¹ tsɿ ³³	tco ⁵⁵ kua ⁵⁵	p ^h u ⁴⁴
祥云 XY	tou ³¹ ts ^h ou ³¹	pẽ ⁴² tou ³¹	tci ⁵⁵ kua ⁵⁵	p ^h o ⁴⁴
洛本卓 LBZ	du ⁴² ts ^h ɿ ³³	ey ³³ du ⁴²	v ⁴⁴	p ^h ao ⁵⁵

	105	106	107	108
中文	菜	辣子	花椒	核桃
英文	vegetable	chilli pepper	pepper	walnut
剑川 JC	ts ^h ur ³¹	la ³⁵ tsɿ ³³	su ⁵⁵	you ²¹ to ²¹
洱源 EY	ts ^h ur ³¹	na ³⁵ tsɿ ³¹	su ³⁵	ɔ ²¹ to ²¹
鹤庆 HQ	ts ^h ur ³¹	la ³⁵ tsɿ ³³	su ⁵⁵	you ²¹ to ²¹
兰坪 LP	ts ^h ur ³¹	la ⁴⁴ tsu ³³	su ⁵⁵	wo ³³ tuɔ ³¹
周城 ZC	ts ^h ur ³¹	la ³⁵ tsɿ ³³	su ³⁵	ɔ ²¹ to ²¹
七里桥 QLQ	ts ^h ur ³¹	la ³⁵ tsɿ ³¹	ji ³¹ tɕo ³⁵	ɔ ²¹ to ²¹
云龙 YL	ts ^h ur ³¹	la ³⁵ tsɿ ³¹	su ³⁵	ɛɔ ²¹ to ²¹
祥云 XY	ts ^h ou ³¹	la ³⁵ tsɿ ³¹	su ³⁵	yo ²¹ to ²¹
洛本卓 LBZ	ts ^h l ⁵⁵	lao ³¹ zi ³¹	ɕo ⁵⁵ ne ³¹	ʔo ⁴⁴ ty ³¹
	109	110	111	112
中文	桃子	梨子	柿子	草
英文	peach	pear	persimmon	grass
剑川 JC	ta ²¹	ɕy ⁵⁵ li ⁵⁵	t ^h a ⁴⁴ tsɿ ²¹	ts ^h u ³³
洱源 EY	ta ²¹	ɕy ⁵⁵ li ⁵⁵	t ^h a ⁴⁴ tsɿ ²¹	ts ^h ɔ ³³
鹤庆 HQ	ta ²¹	ɕy ⁵⁵ li ⁵⁵	t ^h a ⁴⁴ tsɿ ²¹	ts ^h u ³³
兰坪 LP	ta ²¹	ɕy ⁵⁵ li ⁵⁵	t ^h a ⁴⁴ tsu ⁴⁴	ts ^h u ³³
周城 ZC	ta ²¹	ɕy ⁵⁵ li ⁵⁵	t ^h a ⁴⁴ tsɿ ²¹	ts ^h u ³³
七里桥 QLQ	ta ²¹	ɕy ⁵⁵ li ⁵⁵	t ^h a ⁴⁴ tsɿ ²¹	tʃ ^h u ³³
云龙 YL	ta ²¹	ɕy ⁵⁵ li ⁵⁵	sɿ ⁴⁴ xua ⁴⁴	ts ^h u ³³
祥云 XY	ta ²¹	ɕy ⁵⁵ li ⁵⁵	t ^h a ⁴⁴ tsɿ ²¹	ts ^h u ³³
洛本卓 LBZ	tao ²¹ χao ³³	ɕy ⁵⁵ li ⁵⁵	c ^h a ⁵⁵ ɕɿ ³³	tʃ ^h u ⁴⁴
	113	114	115	116
中文	菌子	种子	根	叶
英文	mushroom	seed	root	leaf
剑川 JC	sẽ ³³	tsṽ ³³	mi ⁴⁴	se ⁴⁴
洱源 EY	sẽ ³³	tsṽ ³³	me ⁴²	sẽ ⁴⁴
鹤庆 HQ	s ^h ɿ ³³	tsũɔ̃ ³³	mi ⁴⁴	s ^h e ⁴⁴
兰坪 LP	sẽ ³³	tsõ ⁴⁴	te ⁴⁴ / mi ⁵⁵	sẽ ⁴⁴
周城 ZC	sẽ ²¹	tsṽ ³³	mi ⁴⁴	sẽ ⁴⁴
七里桥 QLQ	sẽ ³³	tsṽ ³³	mi ⁴⁴	sẽ ⁴⁴
云龙 YL	sẽ ³³	ɕw̃ ³³	dẽ ³³	sẽ ⁴⁴
祥云 XY	sẽ ³³	ĩẽ ³³ ts ^h u ³³	me ³¹ me ³¹	sẽ ⁴⁴
洛本卓 LBZ	sẽ ³³	bo ⁵⁵ tɕɔ̃ ³¹	bo ⁵⁵ mẽ ⁴⁴	sẽ ⁴⁴

	117	118	119	120
中文	芽	花	果	核
英文	shoot, sprout	flower	fruit	pit, stone
剑川 JC	ɲe ²¹	xou ⁵⁵	kou ³³	wa ⁴²
洱源 EY	ɲe ²¹	xo ³⁵	k ^h o ³³	wa ⁴²
鹤庆 HQ	ɲe ²¹	xuo ³⁵	k ^h uo ³³	wa ⁴²
兰坪 LP	ɲe ²¹	xu ⁵⁵	k ^h u ³³	wa ⁴²
周城 ZC	ɲe ²¹	xuo ³⁵	k ^h uo ³³	wa ⁴²
七里桥 QLQ	pi ²¹	xuo ³⁵	k ^h uo ³³	wa ⁴²
云龙 YL	ɲe ²¹	xao ³³	k ^h ao ³³	wa ⁴²
祥云 XY	ĩe ²¹	xo ³⁵	k ^h o ³³	wa ⁴²
洛本卓 LBZ	bo ⁵⁵ ni ³¹	χu ⁵⁵	bo ⁵⁵ q ^h ao ³³	bo ⁵⁵ se ⁵⁵
	121	122	123	124
中文	皮	刺	身体	头
英文	peel, husk	thorn	body	head
剑川 JC	pe ²¹	tɕi ^h 31	ts ^h ẽ ⁵⁵ k ^h u ³¹	tu ²¹ po ²¹
洱源 EY	pe ²¹	tɕi ^h 31	ts ^h ĩ ⁵⁵ ku ³¹	tu ²¹ po ²¹
鹤庆 HQ	pe ²¹	tɕi ^h 31	ts ^h ĩ ⁵⁵ ku ³¹	tu ²¹ po ²¹
兰坪 LP	pe ²¹	tɕi ^h 21	ts ^h ũ ⁵⁵ ku ²¹	tiu ³³ pao ³¹
周城 ZC	pe ²¹	tɕi ^h 31	ts ^h ĩ ⁵⁵ ku ³¹	tɛ ²¹ po ²¹
七里桥 QLQ	pe ²¹	tɕi ^h 31	ts ^h ĩ ⁵⁵ ku ³¹	tu ²¹ po ²¹
云龙 YL	pe ²¹	tɕi ^h 31	ts ^h ĩ ⁵⁵ ku ³¹	du ²¹ pao ²¹
祥云 XY	pe ²¹	tɕi ^h 31	ts ^h ẽ ⁵⁵ kou ³¹	tu ²¹ po ²¹
洛本卓 LBZ	bo ⁵⁵ tɕy ³¹ qa ⁵⁵	ts ^h e ⁴⁴	tɕi ^h 55ku ⁴⁴	tu ³³ pao ³¹
	125	126	127	128
中文	头发	脸	眼	鼻子
英文	hair	face	eye	nose
剑川 JC	tu ²¹ ma ⁵⁵	tɕi ³³ wẽ ³³	wẽ ³³	ĩ ³¹ k ^h y ⁴⁴ tu ⁴²
洱源 EY	tu ²¹ ma ³⁵	tɕy ³³ ɲue ³³	ɲue ³³	pi ²¹ tse ⁴⁴
鹤庆 HQ	ɕa ⁴⁴	tsou ³³ wẽ ³³	wẽ ³³	vy ³¹ tu ²¹
兰坪 LP	tiu ³³ ma ⁵⁵	tɕy ³³ wẽ ³³	wẽ ⁴⁴	v ³³ tiu ³¹
周城 ZC	tu ²¹ ma ³⁵	tɕy ³³ we ³³	we ³³	pi ²¹ fɥ ⁴⁴ tsɿ ³³
七里桥 QLQ	tu ²¹ ma ³⁵	tɕy ³³ we ³³	we ³³	pi ²¹ fɥ ⁴⁴ tu ²¹
云龙 YL	du ²¹ ma ³⁵	ɕy ³³ ɲue ³³	ɲue ³³	pi ²¹ k ^h ao ³³
祥云 XY	tu ²¹ ma ³⁵	ĩ ³³ wẽ ³³	wẽ ³³	pi ³³ tu ³¹
洛本卓 LBZ	tɛ ³¹ me ⁵⁵	tɕy ³³ mi ³³	mi ³³	q ^h ue ⁵⁵ tu ²¹

	129	130	131	132
中文	耳朵	嘴	牙	舌头
英文	ear	mouth	tooth	tongue
剑川 JC	jɿ ³³ tu ²¹ kua ⁵⁵	tɕy ³³ kɛ ⁵⁵	tsɿ ³³ pa ⁴⁴	tse ⁴²
洱源 EY	nɿ ³³ pi ²¹	tɕy ³³ ka ³⁵ tu ²¹	ts ^h _ɿ ³³ p ^h a ³³	tse ⁴² p ^h i ³¹
鹤庆 HQ	ni ⁴⁴ tō ⁴²	ts ^h ue ³³ k ^h ɔ ⁴⁴	ts ^h _ɿ ³³ pa ⁴⁴	tse ⁴² p ^h i ³¹
兰坪 LP	jɛ ³³ tiu ³¹ kua ⁵⁵	tɕy ³³ kue ⁵⁵ k ^h u ³¹	tsu ⁴⁴ pa ⁴⁴	tse ³³ p ^h i ³¹
周城 ZC	nɿ ³³ tō ³²	tɕy ³³ kua ³⁵	tsɿ ³³ pa ⁴⁴	tse ⁴² p ^h i ³¹
七里桥 QLQ	nɿ ³³ tō ⁴⁴	tɕy ³³	tsɿ ³³ pa ⁴⁴	tse ⁴² p ^h i ³¹
云龙 YL	nɿ ³³ tu ³¹	dʒy ³³ kɛ ³³	tsɿ ³³ pa ³³	tse ⁴² p ^h i ³¹
祥云 XY	ɔ ³³ pi ³¹ tsɿ ³³	y ³³	tsɿ ³³ pa ⁴⁴	ʒɿ ³³ tou ³¹
洛本卓 LBZ	ʔɛ ⁴⁴ tɕy ³¹	tɕo ⁴⁴ qo ⁴⁴	tɕo ³³ pa ⁵⁵	tɕɛ ⁴²
	133	134	135	136
中文	胡子	脖子	手	手指
英文	beard, moustache	neck	hand	finger
剑川 JC	u ²¹	ky ⁴² mi ⁴² tsy ⁴⁴	su ³³	su ³³ tu ²¹ tsɿ ³³
洱源 EY	u ²¹	ɕɛ ³³ k ^j ɛ ³⁵	su ³³	su ³³ tu ²¹ tse ⁴⁴ ne ³¹
鹤庆 HQ	u ²¹	mie ⁴² t ^h ɔ ⁵⁵ tsuo ⁴⁴	s ^h tu ³³	s ^h tu ³³ tu ²¹ ti ⁵⁵ mo ^u ³³
兰坪 LP	wɔ ²¹	ko ³³ mi ³³ tsa ⁴⁴	su ³³ p ^h ao ³³	su ³³ ti ⁵⁵ ti ³³
周城 ZC	u ²¹	po ³⁵ tsɿ ³³ ku ³⁵	su ³³	su ³³ tsɿ ³³ tu ²¹
七里桥 QLQ	u ²¹	po ³⁵ tsɿ ³³ ku ⁴⁴	su ³³	su ³³ tsɿ ³¹ tsɿ ³³
云龙 YL	wu ²¹	kao ⁴² te ³³	ʃy ³³	ʃy ³³ tsɿ ³³
祥云 XY	u ²¹	ku ²¹ lu ⁵⁵ mi ⁴² tɕɿ ³³	sou ³³	sou ³³ tou ²¹ tsɿ ³³
洛本卓 LBZ	v ³¹	qo ⁴⁴ tɛ ⁵⁵	ci ³³	ci ³³ tɕu ³¹
	137	138	139	140
中文	指甲	乳房	肚子	肚脐
英文	finger nail	breast	belly, stomach	navel
剑川 JC	su ³³ tu ²¹ ke ⁴⁴	pa ⁴²	fɿ ⁴⁴	ɔ ²¹ fɿ ⁴⁴ te ⁴⁴
洱源 EY	su ³³ tu ²¹ k ^j ɛ ⁴⁴	pa ⁴²	fɿ ⁴⁴	ʒɿ ⁴² ɲy ³³ te ⁴⁴
鹤庆 HQ	s ^h tu ³³ tu ²¹ ke ⁴²	pa ⁴² tu ³⁵	fɿ ⁴⁴	ɔ ²¹ fɿ ⁴⁴ te ⁴⁴
兰坪 LP	su ³³ ti ⁵⁵ ke ⁴⁴ p ^h ie ⁵⁵	pa ⁴² pe ⁵⁵	zɛ ³¹ k ^h u ³³	zɛ ³¹ fo ⁴² te ⁴⁴
周城 ZC	su ³³ tsɿ ³³ k ^j ɛ ⁴⁴	pa ⁴²	fɿ ⁴⁴	ɔ ³¹ fɿ ⁴⁴ te ⁴⁴
七里桥 QLQ	su ³³ tɕi ³³ kie ⁴⁴	pa ⁴² ku ²¹	fɿ ⁴⁴	sɿ ³¹ fɿ ⁴⁴ te ⁴⁴
云龙 YL	ʃy ³³ tu ²¹ ke ⁴⁴	pa ⁴²	fɿ ⁴⁴	tu ⁴⁴ tɕi ^h ⁴² ɲue ³³
祥云 XY	sou ³³ tou ²¹ k ^j ɛ ⁴⁴	pa ⁴²	fɿ ⁴⁴	ɔ̃ ²¹ fɿ ⁴⁴ te ⁴⁴
洛本卓 LBZ	ci ³³ tɕu ³¹ tu ³¹ qao ⁵⁵	pa ⁴⁴	za ⁴⁴	za ⁴² fu ⁵⁵ tɛɿ ⁵⁵

	141	142	143	144
中文	腰	脚	膝盖	骨头
英文	waist	foot	knee	bone
剑川 JC	ji ⁵⁵ kua ⁴⁴	kou ⁴⁴	k ^h ue ³¹ tsɿ ³¹ te ⁴⁴	kua ⁴⁴ tur ²¹
洱源 EY	ji ³⁵ kua ⁴⁴ tsy ⁴⁴	ko ⁴⁴	k ^h ue ³¹ tur ²¹ tse ⁴⁴	kua ⁴⁴ tur ²¹
鹤庆 HQ	ji ⁵⁵ kua ⁴⁴ tsuo ⁴⁴	kou ⁴⁴	k ^h ue ³¹ tur ²¹ tse ⁴⁴	kua ⁴⁴ tur ²¹
兰坪 LP	ji ⁴⁴ kua ³³ tsɿ ³³	ko ⁵⁵	k ^h ue ³¹ tiur ²¹ ka ⁴⁴	kua ⁴⁴ tse ⁴⁴
周城 ZC	ji ³⁵ kua ⁴⁴	ko ⁴⁴	k ^h ua ³¹ tur ²¹ tse ⁴⁴	kua ⁴⁴ tur ²¹
七里桥 QLQ	ji ³⁵ kua ⁴⁴ ci ³⁵	ko ⁴⁴	k ^h ue ³¹ tsɿ ²¹ te ⁴⁴	kua ⁴⁴ tur ²¹
云龙 YL	ji ³⁵ kua ⁴⁴	ku ³³	ku ³³ tse ³³ ŋe ³³	kua ⁴⁴ tur ²¹
祥云 XY	ji ³⁵ kua ⁴⁴	ko ⁴⁴	k ^h ue ³¹ te ²¹ te ⁴⁴	kua ⁴⁴ tou ²¹
洛本卓 LBZ	ʔe ⁵⁵ qua ⁵⁵	qu ⁵⁵	qu ⁵⁵ tse ⁴⁴	qua ⁵⁵ tse ⁴⁴
	145	146	147	148
中文	血	肾脏	肠子	胃
英文	blood	kidney	intestine, gut	stomach
剑川 JC	sua ⁴⁴	a ⁵⁵ tsɿ ³³	tsō ²¹	vɿ ⁴²
洱源 EY	sua ⁴⁴	k ^h ur ³¹ tsɿ ³³	tsō ²¹	ʒɿ ⁴² k ^h ɔ ³³
鹤庆 HQ	s ^h ua ⁴⁴	ɔ ³⁵ tsɿ ³³	tsōu ²¹	vɿ ⁴²
兰坪 LP	sua ⁴⁴	tsuĩ ³³ (k ^h u ³³)	tsō ²¹	ʒɛ ⁴²
周城 ZC	sua ⁴⁴	ɔ ³⁵ tsɿ ³³	tsō ²¹	vɿ ⁴²
七里桥 QLQ	ʃua ⁴⁴	ɔ ³⁵ tsɿ ³³	tsō ²¹	fɿ ⁴²
云龙 YL	sua ⁴⁴	ao ²¹ tsɿ ³³	tsao ²¹	we ⁵⁵
祥云 XY	sua ⁴⁴	ɔ ³⁵ tsɿ ³³	tsĩ ²¹	v ⁴²
洛本卓 LBZ	sua ⁵⁵	ɬuĩ ³³	tō ²¹	sã ³³ ʒa ³³
	149	150	151	152
中文	心	肝	肺	汗
英文	heart	liver	lung	sweat
剑川 JC	ci ⁵⁵	kã ⁵⁵	p ^h ia ⁴⁴	ŋa ²¹
洱源 EY	ci ⁵⁵	ka ³⁵	p ^h ia ⁴⁴	ŋa ²¹
鹤庆 HQ	ci ^h 55	kã ⁵⁵	p ^h ia ⁴⁴	ŋa ²¹
兰坪 LP	ci ⁵⁵	kã ⁵⁵	p ^h ia ⁴²	ŋa ²¹
周城 ZC	ci ³⁵	ka ³⁵	p ^h ia ⁴⁴	ŋa ²¹
七里桥 QLQ	ci ³⁵	ka ³⁵	p ^h ia ⁴⁴	ŋa ²¹
云龙 YL	se ⁵⁵	ka ³⁵	p ^h ia ⁴⁴	ya ²¹
祥云 XY	ci ⁵⁵	kã ⁵⁵	p ^h ia ⁴⁴	ɿã ²¹
洛本卓 LBZ	sẽ ⁵⁵	qō ⁵⁵	ŋ ^h ũã ⁵⁵	na ²¹
	153	154	155	156
中文	屎	尿	人	女人

英文	faeces	urine	person	woman
剑川 JC	ʃɿ ³³	sou ²¹	ʃi ²¹ kɛ ⁵⁵ ʃi ²¹	ʃỹ ³³ ʃi ²¹
洱源 EY	ʃɿ ³³	ʃɿ ⁵⁵ k ^h y ³¹ tsɿ ⁴⁴	ni ²¹ kɛ ³⁵ ni ²¹	ny ³³ ni ²¹
鹤庆 HQ	ʃɿ ³³	s ^h ou ³¹	ʃi ²¹ kɛ ³⁵ ʃi ²¹	õ ³³ ʃi ²¹
兰坪 LP	sɛ ³³	so ³¹	ʃi ²¹ kɛ ⁵⁵	ʃũ ³³ ʃi ²¹
周城 ZC	ʃɿ ³³	a ³⁵ ʃɿ ³³	ni ²¹ kɛ ³⁵ ni ²¹	ny ³³ ni ²¹
七里桥 QLQ	ʃɿ ³³	a ⁵⁵ ʃɿ ³³	ni ²¹ kɛ ³⁵	ny ³³ ni ²¹
云龙 YL	ʃɿ ³³	ʃɿ ³¹	ni ²¹ kɛ ³⁵	ny ³³ ni ²¹
祥云 XY	ʃɿ ³³	ʃɿ ⁵⁵ ʃɿ ³¹	ni ²¹ kɛ ³⁵	nẽ ³³ ni ²¹
洛本卓 LBZ	ʃɿ ³³	a ⁵⁵ sæ ³³ tsæ ⁵⁵	ni ³¹ qao ⁵⁵	nõ ⁴⁴ ne ⁴⁴ tɕi ³¹ ni ³¹
	157	158	159	160
中文	老人	儿童	祖宗	祖父
英文	old person	child	ancestor	grandfather
剑川 JC	ku ³³ ʃi ²¹	ʃɿ ⁵⁵ tsɿ ³³ jỹ ³³	to ⁵⁵ po ⁵⁵	a ³¹ ʃi ⁴²
洱源 EY	ku ³³ ni ²¹	ma ³⁵ ly ³⁵ ni ²¹	to ³⁵ po ³⁵	a ⁵⁵ lo ²¹
鹤庆 HQ	ku ³³ ʃi ²¹	ʃɿ ⁵⁵ tsɿ ³³ jy ³³	to ³⁵ po ³⁵	a ⁵⁵ po ⁵⁵
兰坪 LP	ku ³³ ʃi ²¹	ʃɿ ⁵⁵ tsu ⁴⁴ jɿ ⁴⁴	tu ⁵⁵ pu ⁵⁵	a ⁴⁴ jɛ ⁴²
周城 ZC	ku ³³ ni ²¹	ʃɿ ⁵⁵ tsɿ ³³ ni ³³	to ³⁵ po ³⁵	a ³¹ lo ³¹
七里桥 QLQ	ku ³³ ni ²¹	ʃy ⁵⁵ tsy ³³ ny ³³	to ³⁵ po ³⁵	a ³¹ lo ³¹
云龙 YL	ku ³³ ni ²¹	ma ³⁵ lyɛ ³³ ni ²¹	tu ³³ pao ³³	a ⁴⁴ wo ⁴²
祥云 XY	ku ³³ ni ²¹	ɕo ³¹ kou ⁵⁵ tsɿ ³³	tsu ²¹ kõ ³⁵	a ³¹ po ³⁵
洛本卓 LBZ	dao ³³ xao ³³	xõ ⁴⁴ cõ ³¹ tsɿ ⁴⁴	ʃɿ ⁵⁵ py ⁵⁵	a ⁵⁵ py ⁵⁵
	161	162	163	164
中文	祖母	父亲	母亲	妻子
英文	grandmother	father	mother	wife
剑川 JC	a ³¹ ne ⁴⁴	a ³¹ ti ³³	a ³¹ mo ³³	vy ³³ ʃi ²¹
洱源 EY	a ⁵⁵ ne ⁴⁴	a ⁵⁵ ʃi ²¹	a ⁵⁵ mo ³³	vy ³³ ni ²¹
鹤庆 HQ	ne ⁴⁴	ti ³³	mo ³³	fɿ ³³ ti ²¹
兰坪 LP	a ⁴⁴ ne ⁴⁴	a ⁴⁴ ti ⁴⁴	a ⁴⁴ mõ ³³	vɛ ³³ ʃi ²¹
周城 ZC	a ³¹ ne ⁴⁴	a ³³ tɕi ³³	a ³³ mo ³³	vy ³³ ni ²¹
七里桥 QLQ	a ³¹ ne ⁴⁴	a ³¹ ti ³³	a ³¹ mo ³³	vy ³³ ni ²¹
云龙 YL	a ⁵⁵ nai ³³	a ⁵⁵ ti ³³	a ⁵⁵ mo ³³	vy ³³ ni ²¹
祥云 XY	a ³¹ ne ⁴⁴	a ³¹ ti ³³	a ³¹ mo ³³	nẽ ³³ ni ³¹
洛本卓 LBZ	a ⁵⁵ jõ ⁴²	a ⁵⁵ bõ ³³	a ⁵⁵ mo ³³	nõ ⁴⁴ ne ³¹

	165	166	167	168
中文	儿子	女儿	家	房
英文	son	daughter	family	house
剑川 JC	tsɿ ³³	jy ³³	xa ³¹ ty ⁵⁵	xou ²¹
洱源 EY	tsɿ ³³	nɿ ³³	xa ³¹ ty ⁵⁵	xo ²¹
鹤庆 HQ	tsɿ ³³	jɔ ³³	x ^h ɔu ³¹ tũɔ ³⁵	x ^h ɔu ³¹
兰坪 LP	tsɿ ³³ jɿ ²¹		xã ⁴⁴ to ⁵⁵	xo ³¹ kjẽ ⁵⁵
周城 ZC	tsɿ ³³	nɿ ³³	xo ³¹ ty ³⁵	xo ³¹
七里桥 QLQ	tsɿ ³³	nɿ ³³	xo ³¹ ty ³⁵	xo ²¹
云龙 YL	tsɿ ³³	nɿ ³³	xa ³¹ ty ⁵⁵	xao ²¹
祥云 XY	tsɿ ³³	nẽ ³³	xẽ ³¹ tẽ ³⁵	xo ²¹
洛本卓 LBZ	ɕi ³³	nũ ³³	xã ³³ ty ⁵⁵	xo ⁴²
	169	170	171	172
中文	村子	街子	路	桥
英文	village	market	road	bridge
剑川 JC	jw ⁴⁴	tsɿ ³³	t ^h u ³³	ku ²¹
洱源 EY	jw ⁴⁴	tsɿ ³³	t ^h ɔ ³³	ku ²¹
鹤庆 HQ	jw ⁴⁴	tsɿ ³³	t ^h u ³³	ku ²¹
兰坪 LP	jw ⁴⁴ jw ⁴⁴	tsũ ³³ no ³¹	t ^h u ³³	kuɔ ³¹
周城 ZC	jw ⁴⁴	tsɿ ³³	t ^h u ³³	ku ²¹
七里桥 QLQ	yw ⁴⁴	tsɿ ³³	t ^h u ³³	ku ²¹
云龙 YL	jw ⁴⁴	ɕɿ ³³	t ^h u ³³	ku ²¹
祥云 XY	jou ⁴⁴	zɿ ³³	t ^h u ³³	ku ²¹
洛本卓 LBZ	ɔ ³¹ ɾẽ ³³	zũ ³³ tɕ ^h o ⁵⁵	tao ⁴² c ^h y ³³	qẽ ⁵⁵ ky ³³
	173	174	175	176
中文	墙	柱子	门	圈 (牛圈)
英文	wall	pillar, column	door	(cattle) stall
剑川 JC	you ³³	tsui ³³	me ²¹	u ³¹
洱源 EY	ɲɔ ³³	ɬsui ³³	me ²¹	u ³¹
鹤庆 HQ	ɲɔu ³³	tsui ³³	me ²¹	u ³¹
兰坪 LP	ũ ⁴⁴ (p ^h ie ⁵⁵)	tsui ³³ k ^h u ³³	mẽ ²¹ sẽ ²¹	wu ³³ (ke ⁵⁵)
周城 ZC	u ³³	tsui ³³	me ²¹	tso ³¹
七里桥 QLQ	yũ ³³	tsui ³³	me ²¹	u ³¹
云龙 YL	ɛɔ ³³	ɕw ³³	mẽ ²¹	wu ³¹
祥云 XY	yã ³³	zou ³³ mou ⁴²	me ²¹	u ³¹
洛本卓 LBZ	ca ³¹ puĩ ⁵⁵	ɕw ³³	mæ ²¹	vu ⁴⁴

	177	178	179	180
中文	衣服	裤	围腰	包头
英文	clothing	trousers	apron	turban, headdress
剑川 JC	ji ⁵⁵ kũā ⁵⁵ pe ⁴²	kũā ⁵⁵	pe ³³ tei ³¹	su ⁴⁴ tei ⁵⁵ pu ⁴⁴
洱源 EY	ji ³⁵ pe ⁴²	kua ³⁵	pe ³³ se ⁴⁴ pu ⁴⁴	su ⁴⁴ ki ³⁵ pu ⁴⁴
鹤庆 HQ	ji ³⁵ kũā ³⁵	kũā ⁵⁵	u ³⁵ pu ⁴⁴ jo ²¹	su ⁴⁴ tei ⁵⁵
兰坪 LP	ji ⁵⁵ pe ³³	kũā ⁴⁴ ju ⁴⁴	pi ³³ tei ³¹ k ^h o ⁵⁵	se ⁴⁴ tei ⁵⁵ pu ⁴⁴
周城 ZC	ji ³⁵ pe ⁴²	kua ³⁵	we ³⁵ te ^h u ⁵⁵ pu ⁴⁴	su ³¹ tei ³⁵ pu ⁴⁴
七里桥 QLQ	ji ³⁵ pe ³²	kua ³⁵ jo ³⁵	k ^h o ⁵⁵ se ⁴²	su ⁴⁴ te ^h u ³⁵
云龙 YL	ji ³⁵ k ^h ao ⁵⁵	kua ³⁵ jo ³³	wu ³³ te ^h u ³³	pao ⁴⁴ t ^h o ⁴²
祥云 XY	ji ³⁵ kũā ³⁵	kũā ³⁵	yo ³⁵ te ^h y ⁵⁵	te ^h e ⁵⁵ y ⁴²
洛本卓 LBZ	ʔe ⁵⁵	ʔe ⁴² ʔe ⁵⁵	tey ³³ pu ⁵⁵	ɕi ⁵⁵ tei ⁵⁵
	181	182	183	184
中文	帽子	耳环	手镯	斗笠
英文	cap, hat	earring	bracelet	bamboo hat
剑川 JC	mo ⁴⁴ tsɿ ³¹ tu ⁴²	ji ³³ kō ²¹	tei ²¹	lou ⁵⁵ wa ⁴⁴
洱源 EY	ɕo ³¹ mō ⁵⁵ tu ⁴²	ny ³³ ky ³¹ tɕa ²¹	ki ²¹	lo ⁵⁵ ja ⁴⁴ tu ⁴²
鹤庆 HQ	mou ⁴⁴ tu ⁴²	ji ³³ kō ⁴²	tei ²¹	tu ⁴² mou ³³ pi ^h 42
兰坪 LP	māō ⁴⁴ tsu ³³ ka ⁵⁵	je ⁴⁴ kō ³¹ tei ⁴⁴	tei ³¹ (p ^h o ³³)	lo ⁵⁵ ja ⁴⁴
周城 ZC	ɕo ³¹ mō ³³ tu ⁴²	ny ³³ ku ²¹ tɕa ²¹	ki ²¹	tu ³² mu ³¹ tu ⁴²
七里桥 QLQ	ɕo ³¹ mō ⁵⁵	ny ³³ ky ²¹ kua ⁴⁴	tei ²¹	tu ⁴² mu ³¹
云龙 YL	ɕo ³¹ mo ³³	ny ³³ ky ³¹	tei ²¹	tsu ⁵⁵ se ⁵⁵ ɕo ³¹ mo ³³ tu ²¹
祥云 XY	co ⁴² mō ⁵⁵ tsɿ ³³	jo ³³ pi ³¹ kou ⁵⁵ lou ⁵⁵	sou ³³ tei ²¹	tũ ⁴² mō ⁴²
洛本卓 LBZ	sæ ⁵⁵ qa ⁵⁵	ʔe ⁵⁵ qo ²¹	tye ²¹	mut ⁵⁵ qa ⁵⁵

	185	186	187	188
中文	蓑衣	鞋	草鞋	草席
英文	palm bark rain cape	shoe	straw sandal	straw mat
剑川 JC	pi ³¹	ŋe ²¹	ke ⁴²	p ^h u ³¹
洱源 EY	pi ³¹ se ⁴²	ŋe ²¹	k ^h e ⁴²	p ^h u ³¹ se ⁴⁴
鹤庆 HQ	pi ³¹ s ^h e ⁴⁴	ŋe ²¹	ke ⁴²	p ^h u ³¹
兰坪 LP	pi ⁴² se ⁴⁴	ŋe ²¹ (tɕi ⁴⁴)	ke ⁴⁴ (tɕi ⁴⁴)	p ^h u ³¹ se ³³
周城 ZC	pi ³¹ se ⁴⁴	ŋe ²¹	k ^h e ³²	p ^h u ³¹
七里桥 QLQ	pi ³¹ se ⁴⁴	ŋe ²¹ tɕi ³³	ki ⁴² tɕi ³³	p ^h u ³¹ se ⁴⁴
云龙 YL	biu ²¹ se ⁵⁵	ŋe ²¹	ke ⁴²	p ^h u ³¹ se ⁴⁴
祥云 XY	pi ³¹	ni ²¹ pa ⁴²	k ^h e ⁴² pa ⁴²	p ^h u ³¹
洛本卓 LBZ	ɕy ⁴²	wu ⁴⁴ ts ^l ³³	ka ⁴²	qe ⁵⁵ tɕ ^h o ³³ [u ⁵⁵
	189	190	191	192
中文	被子	布	麻布	米
英文	quilt	cloth	hemp cloth	uncooked rice
剑川 JC	lou ³¹ po ³¹	se ⁴⁴	po ⁴²	me ³³
洱源 EY	lo ³¹ po ³¹	p ^h io ³¹	po ⁴²	me ³³
鹤庆 HQ	lou ³¹ pou ³¹	s ^h e ⁴⁴	pou ⁴²	me ³³
兰坪 LP	lo ³¹ po ³¹	se ⁴⁴	pu ³¹	mē ³³
周城 ZC	lo ³¹ po ³¹	p ^h io ³¹	po ³²	me ³³
七里桥 QLQ	lo ³¹ po ³¹	p ^h io ³¹	po ⁴²	me ³³
云龙 YL	lao ³¹ pao ³¹	p ^h io ³¹	tsu ⁵⁵ p ^h io ³¹	me ³³
祥云 XY	lo ³¹ po ³¹	p ^h io ³¹	tsu ⁵⁵ p ^h io ³¹	me ³³
洛本卓 LBZ	la ³¹ tɕ ^h a ⁵⁵	sæ ⁵⁵	s ^l ³³	qo ²¹ mi ³³
	193	194	195	196
中文	饭	稀饭	早饭	午饭
英文	cooked rice	congee	breakfast	lunch
剑川 JC	xε ⁵⁵ s ^l ³¹	p ^h ε ⁵⁵ vɤ ⁴²	ts ^h a ⁵⁵	ji ⁴⁴ tu ²¹
洱源 EY	xε ⁵⁵ z ^l ³¹	p ^h ε ⁵⁵ zɤ ⁴²	ts ^h a ⁵⁵	ni ⁴⁴ tu ³¹
鹤庆 HQ	x ^h ε ⁵⁵ z ^l ³¹	p ^h ε ⁵⁵ vɤ ⁴²	ts ^h a ⁵⁵	ji ⁴⁴ tu ³¹
兰坪 LP	xε ⁵⁵ zu ³³	p ^h ε ⁵⁵ wu ³¹	ts ^h a ⁴⁴	ju ⁴⁴ tu ⁴²
周城 ZC	xε ⁵⁵ z ^l ³¹	p ^h ε ⁵⁵ zɤ ⁴²	ts ^h a ⁵⁵	ni ⁴⁴ tu ³¹
七里桥 QLQ	xε ⁵⁵ s ^l ³¹	p ^h ε ⁵⁵ sɤ ⁴²	ts ^h a ⁵⁵	ni ⁴⁴ tu ²¹
云龙 YL	xε ⁵⁵ z ^l ³¹	p ^h ε ⁵⁵ zɤ ⁴²	ts ^h a ⁵⁵	ni ⁴⁴ tu ³¹
祥云 XY	xε ⁵⁵	p ^h ε ⁵⁵ ɤ ⁴² ts ^l ⁴⁴	ts ^h a ⁵⁵	ni ⁴⁴ tu ²¹
洛本卓 LBZ	bē ³³	p ^h ao ⁵⁵ jao ⁴² bē ³³	ma ³¹ pa ⁴² tse ²¹ tse ² bē ³³	ni ⁵⁵ NN ³³ bē ³³

	197	198	199	200
中文	晚饭	动物油(脂肪)	植物油	盐
英文	dinner (evening meal)	animal oil	vegetable oil	salt
剑川 JC	pe ³³	tsɿ ⁵⁵	ju ²¹	pi ⁵⁵
洱源 EY	pe ³³	tsɿ ³⁵	ju ²¹	pi ³⁵
鹤庆 HQ	pe ³³	tsɿ ⁵⁵	ju ²¹	pi ³⁵
兰坪 LP	(ju ⁴⁴)pẽ ⁴²	tsɿ ⁵⁵	ju ²¹	pi ⁵⁵
周城 ZC	pe ³³	tsɿ ³⁵	ju ²¹	pi ³⁵
七里桥 QLQ	pe ³³	tsɿ ³⁵	yu ²¹	pi ³⁵
云龙 YL	pe ³³	tsɿ ³⁵	ju ²¹	pi ³⁵
祥云 XY	pe ³³	tsɿ ³⁵	ju ²¹	pi ³⁵
洛本卓 LBZ	ni ⁵⁵ wu ⁴² bẽ ³³	tsɿ ⁵⁵	ji ²¹	tsũẽ ⁵⁵
	201	202	203	204
中文	肉	菜 (熟菜)	汤	酒
英文	meat	cooked food	soup	alcohol (drink)
剑川 JC	kẽ ²¹	ts ^h u ³¹	xẽ ⁵⁵	tsỹ ³³
洱源 EY	k ^l ẽ ²¹	ts ^h u ³¹	xẽ ⁵⁵	tsy ³³
鹤庆 HQ	kẽ ²¹	ts ^h u ³¹	xẽ ⁵⁵	tsũõ ³³
兰坪 LP	kẽ ²¹	ts ^h u ³¹	xẽ ⁵⁵	tsõ ⁴⁴
周城 ZC	k ^l ẽ ²¹	xẽ ⁵⁵ p ^h a ⁴⁴	xẽ ⁵⁵	tsɿ ³³
七里桥 QLQ	kiẽ ²¹	xẽ ⁵⁵ p ^h a ⁴⁴	xẽ ⁵⁵	tsɿ ³³
云龙 YL	kẽ ²¹	ts ^h u ³¹	xẽ ⁵⁵	ɕɿ ³³
祥云 XY	k ^l ẽ ²¹	ts ^h ou ³¹	tsɿ ⁴⁴	ẽ ³³
洛本卓 LBZ	qa ²¹	ts ^h u ³¹	xã ⁴⁴	tsõ ³³
	205	206	207	208
中文	茶	红糖	刀	锄头
英文	tea (drink)	brown sugar	knife	hoe
剑川 JC	tsou ²¹	ts ^h ẽ ⁴⁴ so ⁵⁵ to ²¹	ji ⁵⁵ tã ⁵⁵	tsy ²¹ sẽ ⁴²
洱源 EY	tsõ ²¹	sõ ³⁵ to ²¹	ji ⁵⁵ tã ⁵⁵	tsõ ²¹ sẽ ⁴²
鹤庆 HQ	tsou ²¹	ts ^h ẽ ⁴⁴ sou ³⁵ to ²¹	ji ⁵⁵ tã ⁵⁵	tsuo ²¹ sẽ ⁴²
兰坪 LP	tsao ²¹	sɿ ⁵⁵ tao ⁴²	ji ⁵⁵ tã ⁵⁵	tsu ²¹ sẽ ⁴²
周城 ZC	tsõ ²¹	sõ ³⁵ to ²¹	ji ³⁵ tã ³⁵	tsy ²¹ sẽ ⁴²
七里桥 QLQ	tsõ ²¹	sõ ⁵⁵ to ²¹	o ³⁵ tã ³⁵	tsy ²¹
云龙 YL	tsao ²¹	sao ³⁵ tao ²¹	ji ⁵⁵ tã ⁵⁵	tsu ²¹ sẽ ⁴²
祥云 XY	tsõ ²¹	sõ ³⁵ to ²¹	ji ³⁵ tã ³⁵	ɕẽ ²¹
洛本卓 LBZ	ca ²¹	ɕõ ⁵⁵ tao ³¹	ɕi ⁵⁵ ci ⁵⁵	ɕu ²¹

	209	210	211	212
中文	犁	磨	筛子	扫帚
英文	plough (implement)	mill, grind	sieve	broom
剑川 JC	tɕi ⁵⁵ ku ³¹	wɛ ⁴²	lou ²¹ tu ²¹	tsue ⁴⁴
洱源 EY	kʲi ³⁵ ta ⁴²	ɲue ⁴²	lo ²¹ pe ²¹	ʈʂue ⁴⁴ ky ²¹
鹤庆 HQ	tɕi ⁵⁵ ku ³¹	wɛ ⁴² kʰa ⁴⁴	lou ²¹ tsɿ ³³	tsue ⁴⁴ ku ²¹
兰坪 LP	tɕi ⁴⁴ kʰɛ ³³	wɛ ⁴² kʰa ⁴⁴	lao ²¹	tsue ⁴⁴ ku ³¹
周城 ZC	kʲi ³⁵ ku ³¹	wɛ ³²	lo ²¹ se ⁴²	tsue ⁴⁴ ky ³¹
七里桥 QLQ	tɕi ³⁵ ku ³¹	wɛ ³²	lo ²¹ se ³²	tɕy ⁴⁴ ky ³¹
云龙 YL	tɕi ³¹ kʰao ⁵⁵	ɲue ⁴²	lo ²¹ pe ²¹	ye ⁴⁴ ky ²¹
祥云 XY	tɕi ³⁵	wɛ ⁴²	tsʰɿ ⁵⁵ lo ²¹	tsue ⁴⁴
洛本卓 LBZ	tɕʰi ⁵⁵ qʰo ⁵⁵	mi ⁴² pɛ ³³	lo ²¹ tɕi ³³	tue ⁵⁵
	213	214	215	216
中文	簸箕	桶	盆	小碗
英文	dustpan	bucket	basin	small bowl
剑川 JC	po ³³ po ³³ tɕi ⁵⁵	tʰɿ ³¹	pā ²¹	ke ⁴²
洱源 EY	kʲi ³⁵ ʂɛ ⁴²	tʰɿ ²¹	pa ³¹	k'e ⁴²
鹤庆 HQ	pou ³³ pou ³³ sɛ ⁴²	tʰɿ ³¹	pā ²¹	ke ⁴²
兰坪 LP	tɕi ⁵⁵ sɛ ⁴²	tũ ⁵⁵	pa ²¹ tɕi ³³	ke ⁴² pe ³³
周城 ZC	po ³³ mɔ ³³ tɕi ³⁵	tʰɿ ³¹	pa ³¹	ke ⁴²
七里桥 QLQ	po ³³ mu ³³ tɕi ³⁵	tʰɿ ²¹	pa ²¹	ke ³²
云龙 YL	tɕi ⁵⁵ sɛ ⁴²	tʰɿ ²¹	pa ³¹	ke ⁴²
祥云 XY	po ³³ me ³³ tɕi ³⁵	tʰɛ ⁴²	pā ³¹	k'i ⁴²
洛本卓 LBZ	po ³³ mɔ ³³ tɕi ⁵⁵	tʰu ³³	bɛ ⁵⁵ lu ³¹ qa ⁵⁵	ni ³³ pʰo ⁵⁵
	217	218	219	220
中文	筷子	土罐	瓶子	锅 (扁锅)
英文	chopstick	clay pot	bottle	wok
剑川 JC	tsɿ ³¹	sɛ ²¹	ku ²¹	tsʰɛ ⁵⁵
洱源 EY	ʂɿ ³¹	zɿ ²¹	ku ²¹	ʈʂʰɛ ⁵⁵ pe ²¹
鹤庆 HQ	tsuo ³¹	ze ²¹	pĩɛ ²¹	kuo ³⁵ pʰɿ ³¹
兰坪 LP	tsu ³¹ (sɔ ⁵⁵)	ze ²¹ pe ³³	ku ²¹ kʰu ⁵⁵	tsʰũ ⁵⁵ pʰɿ ³³
周城 ZC	tsɿ ³¹	zɿ ³¹	ku ²¹	ku ³⁵ le ³¹
七里桥 QLQ	tsɿ ³¹	sɿ ²¹	ku ²¹	kuo ³⁵ pe ²¹
云龙 YL	ɕɿ ³¹	ze ²¹	ʔu ⁴⁴ kʰao ³³	kuo ⁵⁵ kʰao ³³
祥云 XY	ʃɛ ³¹	ze ²¹	pɛ ²¹	kuo ³⁵
洛本卓 LBZ	ɕy ⁴⁴	næ ²¹	vi ⁵⁵ tʰa ⁵⁵	ʈʰa ⁵⁵ tɕi ³³

	221	222	223	224
中文	灶	柴	粪	桌子
英文	stove	firewood	animal faeces, dung	table
剑川 JC	tsou ⁴²	ɕi ⁵⁵	tɕi ^{h:55}	tsɿ ⁵⁵ tsɿ ³³
洱源 EY	tsɔ ⁴²	ɕi ⁵⁵	tɕi ^{h:55}	tɕe ³⁵ tsɿ ³³
鹤庆 HQ	tsou ⁴²	ɕi ^{h:55}	tɕi ^{h:55}	tɕe ⁵⁵ tsɿ ³³
兰坪 LP	tsu ³¹ k ^h o ⁵⁵	ɕi ⁵⁵	tɕi ^{h:55}	tsɿ ⁴⁴ tsɿ ³³ tsɔ ⁵⁵
周城 ZC	tsɔ ⁴²	ɕi ⁵⁵	tɕi ^{h:55}	tɕe ³⁵ tsɿ ³³
七里桥 QLQ	tsɔ ³²	ɕi ³⁵	tɕi ^{h:55}	tɕe ³⁵ tsɿ ³³ tso ³⁵
云龙 YL	tsɔ ⁴²	se ⁵⁵	tɕi ^{h:55}	tsao ³⁵ tsɿ ³³
祥云 XY	tsɔ ⁴²	ɕi ⁵⁵	tɕi ^{h:55}	tɕe ³⁵ tso ³³
洛本卓 LBZ	lu ³¹ tsu ³³	se ⁵⁵	ɕɿ ³³	pa ⁴² tuu ⁵⁵
	225	226	227	228
中文	凳子	床	楼梯	木梯
英文	stool, low chair	bed	stairs	ladder
剑川 JC	pa ⁴² tuu ⁵⁵	tsou ²¹	nu ²¹ kou ²¹	tɕe ²¹ t ^h i ⁵⁵
洱源 EY	pa ⁴² tuu ³⁵	tsɔ ³¹	lu ²¹ ku ²¹ t ^h i ⁵⁵ ka ³⁵	tsɿ ²¹ t ^h i ⁵⁵ ka ³⁵
鹤庆 HQ	pā ⁴² tuu ⁵⁵	tsou ²¹	le ²¹ ku ²¹	tsɿ ²¹ t ^h e ³⁵
兰坪 LP	pa ⁴⁴ tuu ⁵⁵	tsɔ ³³	ni ²¹ ku ³³ ti ⁵⁵ pa ³¹	ke ⁵⁵ ku ²¹ pao ³¹
周城 ZC	pa ⁴² tuu ³⁵	tsɔ ²¹	nu ²¹ ka ³⁵	tsɿ ²¹ t ^h u ⁵⁵ ka ³⁵
七里桥 QLQ	pa ³² tuu ³⁵ tuu ²¹	tsɔ ²¹	nu ²¹ tsɿ ²¹ t ^h i ⁵⁵	kua ⁴² tsɿ ²¹ t ^h i ⁵⁵
云龙 YL	pa ⁴² tuu ³⁵	k ^h ɿ ³¹	ke ³⁵ t ^h i ⁵⁵	ɕɿ ²¹ ke ³⁵ t ^h i ⁵⁵
祥云 XY	pā ⁴² tuu ³⁵	p ^h e ³¹	nou ²¹ t ^h e ⁵⁵	ta ⁴² t ^h e ⁵⁵
洛本卓 LBZ	tuu ⁵⁵ tɕi ³³	N ³³ fi ³³ t ^h u ³¹ q ^h a ⁴²	qu ⁵⁵ t ^h a ⁵⁵	qɕe ⁵⁵ ky ³¹
	229	230	231	232
中文	锁	钥匙	镜子	梳子
英文	lock	key	mirror	comb
剑川 JC	tsou ⁴²	tso ⁴² ku ⁵⁵	ke ⁴² mi ⁴²	ɕy ⁵⁵
洱源 EY	sɔ ³³ ky ²¹	tsɔ ⁴² k ^h u ³⁵	k ^h e ⁴² mi ⁴⁴ p ^h i ⁵⁵	ɕv ³⁵ pe ²¹
鹤庆 HQ	su ³³	tsou ⁴² ku ⁵⁵	kē ⁴² mi ⁴²	su ⁵⁵ tsɿ ³³
兰坪 LP	su ⁴⁴ pao ³¹	tsu ³¹ ku ⁵⁵ t ^h a ³¹	ke ⁴² mi ³³ mi ³³	su ⁵⁵ (p ^h i ³¹)
周城 ZC	sua ³³ ky ²¹	tso ⁴² ku ³⁵	k ^h e ⁴² mi ⁴²	k ^h ɔ ⁵⁵ ɕy ³⁵
七里桥 QLQ	fu ²¹	tso ⁴² ku ³⁵	ke ³² mi ³²	k ^h ɔ ⁵⁵ ɕy ³⁵ p ^h i ²¹
云龙 YL	su ³³	tsao ³¹ ku ³⁵	ke ⁴² mi ⁴⁴	ɕy ³⁵ pe ²¹
祥云 XY	tsou ⁴²	tsou ⁴² ku ³⁵	k ^h ē ⁴²	ɕe ³⁵ tsɿ ³³
洛本卓 LBZ	sɔ ³³ t ^h u ³³	sɔ ³³ t ^h u ³³ qua ⁴⁴	ni ⁵⁵ sã ⁵⁵	ɕu ³³ tuu ³¹

	233	234	235	236
中文	剪刀	纸	笔	书本
英文	scissors	paper	pen	book
剑川 JC	tɕi ²¹ ta ⁵⁵	tsɿ ³³	fɿ ⁴⁴	sv ⁵⁵ ts ^h ue ⁴⁴
洱源 EY	tɕi ²¹ ta ³⁵	tsɿ ³³	fɿ ⁴⁴ mu ⁴⁴ kua ⁴²	sv ³⁵ ts ^h ue ⁴⁴
鹤庆 HQ	tɕ ^h i ³¹ tã ³⁵	tsɿ ³³	fɿ ⁴⁴	suo ³⁵ tɕ ^h ue ⁴⁴
兰坪 LP	tɕ ^h i ³¹ ta ⁵⁵ pa ⁴²	tsɿ ⁴⁴	fɛ ⁴⁴ (kɔ̃ ³¹)	sɿ ⁴⁴ tɕ ^h ue ³³
周城 ZC	tɕ ^h i ³¹ ta ³⁵	tsɿ ³³	fɿ ⁴⁴	sɿ ³⁵ ts ^h ue ⁴⁴
七里桥 QLQ	tɕ ^h i ³¹ ta ³⁵	tsɿ ³³	fɿ ⁴⁴	sɿ ³⁵ tʃ ^h ue ⁴⁴
云龙 YL	tɕi ²¹ ta ³⁵	ɕɿ ³³	fɿ ³³	ʃv ³⁵ ts ^h ue ⁴⁴
祥云 XY	tɕ ^h i ³¹ tã ³⁵	tsɿ ³³	fɿ ⁴⁴	sv ³⁵ tɕ ^h ue ⁴⁴
洛本卓 LBZ	ts ^h ɿ ³³ te ⁵⁵	tɕu ³¹	tɕo ⁴⁴ sɿ ³³ qua ⁴⁴	su ³³ pu ³¹
	237	238	239	240
中文	民歌	舞蹈	故事	话
英文	folk song	dance	story	word, speech
剑川 JC	k ^h v ⁴⁴	ta ⁴² ko ³³	ku ³¹ xua ⁴⁴	ɕi ⁵⁵ you ⁴² / tɔ̃ ²¹
洱源 EY	k ^h v ⁴⁴	t ^h io ⁵⁵ vɿ ³¹	ku ³¹ pu ³¹	tɔ̃ ²¹
鹤庆 HQ	kuo ⁴⁴	ta ⁴² kou ³³	ku ³¹	tɔ̃ ²¹
兰坪 LP	k ^h uo ⁴⁴	ta ⁴² ko ⁴⁴	ka ⁴² tsɿ ³³	ɕi ⁵⁵ wɔ̃ ⁴² / tɔ̃ ²¹ / wɔ̃ ⁴²
周城 ZC	tɕi ³² k ^h v ⁴⁴	tɕ ^h ɔ̃ ⁵⁵ vɿ ³¹	ku ³¹ jy ³¹	tɔ̃ ²¹
七里桥 QLQ	tɕi ³² ts ^h ε ⁵⁵	t ^h io ⁵⁵ vɿ ³¹	ku ³¹ pu ³¹	tɔ̃ ²¹
云龙 YL	k ^h v ⁴⁴	t ^h io ⁵⁵ vɿ ³¹	gu ³¹ ɕɿ ³¹	ɕɿ ³¹
祥云 XY	k ^h ε ⁴⁴	ta ⁴² kou ³³	ku ²¹	tã ²¹
洛本卓 LBZ	pa ⁵⁵ ta ⁵⁵ ko ³³ nɔ̃ ³¹	ta ⁴⁴ ko ³³	ca ³¹ ku ³³ tɔ̃ ³¹	tso ³¹ tɔ̃ ³¹
	241	242	243	244
中文	声音	名字	东西	事情
英文	sound, voice	name	thing	matter
剑川 JC	ts ^h ε ⁵⁵ tɕ ^h i ⁴⁴	mie ⁵⁵	ɿ ³³ ta ⁴²	se ³¹ vɿ ³³
洱源 EY	ts ^h ε ⁵⁵ k ^h i ⁴⁴	mie ³⁵	vɿ ³³ k ^h i ³¹	sɿ ³¹ vɿ ³³
鹤庆 HQ	ts ^h ε ⁵⁵ tɕ ^h i ⁴⁴	mie ³⁵	ts ^h ɿ ³³ te ⁴²	sɿ ³¹ vɿ ³³
兰坪 LP	ts ^h u ⁵⁵ tɕ ^h i ⁴²	mie ⁵⁵	ve ⁴⁴ ta ⁴²	se ⁴⁴ v ³³
周城 ZC	ts ^h ɿ ⁵⁵ tɕ ^h i ⁴⁴	mie ³⁵	xua ³³ vɿ ³¹	sɿ ³¹ vɿ ³¹
七里桥 QLQ	ts ^h ε ⁵⁵ tɕ ^h i ⁴⁴	mie ³⁵	xu ³³ ŋv ³³	sɿ ³¹ vɿ ³³
云龙 YL	ts ^h ε ⁵⁵ tɕ ^h i ⁴⁴	mie ³⁵	vɿ ³³ tɕi ³¹	sɿ ³¹ vɿ ³³
祥云 XY	ts ^h ε ⁵⁵ tɕ ^h i ⁴⁴	mie ³⁵	ŋe ³³ ji ³¹	sɿ ³¹
洛本卓 LBZ	c ^h ã ⁴⁴	nɔ̃ ⁵⁵	qao ⁵⁵ tɕa ⁴²	sɿ ⁴² vu ³³

	245	246	247	248
中文	神	鬼	佛	魂
英文	deity, spirit	ghost	Buddha	soul
剑川 JC	sɛ ³¹	ky ³³	ve ⁴²	p ^h ɛ ³¹ mɛ ³¹
洱源 EY	zɪ ²¹	ky ³³	we ⁴²	p ^h ɛ ³¹ mɛ ³¹
鹤庆 HQ	zɛ ²¹	kuɔ ³³	we ⁴²	p ^h u ³¹ mɛ ³¹
兰坪 LP	zɛ ³¹	kuɛ ³³	ve ⁴²	p ^h a ⁴⁴ ma ³³
周城 ZC	zɪ ³¹	ky ³³	ve ⁴²	p ^h u ³¹ mɛ ³¹
七里桥 QLQ	sɪ ²¹	ky ³³	we ⁴²	sɪ ²¹ ts ^h ɛ ⁵⁵
云龙 YL	sɛ ³⁵	ky ³³	wɛ ⁴² ts ^h ɛ ⁵⁵	p ^h ɛ ³¹ mɛ ³¹
祥云 XY	sui ⁴²	ku ³³	wɛ ⁴²	p ^h ɛ ³¹ mɛ ²¹
洛本卓 LBZ	sɛ ⁵⁵ nɛ ³¹	ɕui ³³	we ⁴²	p ^h a ⁴⁴ ma ⁴⁴
	249	250	251	252
中文	力气	钱	价钱	利息
英文	strength	money	price, cost	interest
剑川 JC	tɕi ^h ɪ ⁴⁴ yui ⁴²	tse ²¹	kɛ ⁴²	pu ²¹
洱源 EY	k ^h ɪ ⁴⁴ yui ⁴²	tse ²¹	k ^l ɛ ⁴²	pu ²¹
鹤庆 HQ	tɕi ^h ɪ ⁴⁴ yui ⁴²	tɕɛ ^h ɛ ³⁵	kɛ ⁴²	pu ²¹
兰坪 LP	tɕi ^h ɪ ⁵⁵ yui ⁴²	tse ⁴²	kɛ ³¹	pu ²¹
周城 ZC	ts ^h ɛ ⁵⁵ k ^h ɪ ⁴⁴	tse ⁵⁵	k ^l ɛ ³²	pu ²¹
七里桥 QLQ	tɕi ^h ɪ ⁴⁴ xo ⁴⁴	tɕɛ ^h ɛ ⁵⁵	vui ⁵⁵ kɛ ³²	pu ²¹
云龙 YL	tɕi ^h ɪ ⁴⁴	tse ²¹	kɛ ⁴²	li ⁵⁵ ɕɛ ⁴⁴
祥云 XY	tɕi ^h ɪ ⁴⁴	tɕɪ ^h ɪ ⁵⁵	k ^l ɛ ⁴² tɕɪ ^h ɪ ⁵⁵	pou ²¹
洛本卓 LBZ	yui ⁴⁴	ni ³¹	bo ³³ qao ³³	bo ⁵⁵ pu ³¹
	253	254	255	256
中文	工钱	药	看	见
英文	salary, pay	medicine	look	see
剑川 JC	yui ⁴² kɛ ⁴²	jo ⁴⁴	xã ⁵⁵ / ă ³³	kɛ ⁴²
洱源 EY	yui ⁴² k ^l ɛ ⁴²	jo ⁴⁴	a ³³	k ^l ɛ ⁴²
鹤庆 HQ	yui ⁴² kɛ ⁴²	ɔu ⁴⁴	x ^h ã ⁵⁵	kɛ ⁴²
兰坪 LP	yui ⁴⁴ kɛ ³¹	jo ⁴⁴	ă ⁴⁴	kɛ ⁴²
周城 ZC	yui ⁴² k ^l ɛ ³²	jo ⁴⁴	a ³³	kɛ ⁴²
七里桥 QLQ	ui ⁴² kɛ ³²	jo ⁴⁴	a ³³	kɛ ⁴²
云龙 YL	ɣui ⁴² kɛ ⁴²	jao ⁴⁴	a ³³	tu ³³
祥云 XY	yui ⁴² k ^l ɛ ⁴²	ɔ ⁴⁴	ă ³³	k ^l ɛ ⁴²
洛本卓 LBZ	yui ⁴⁴ qa ⁴²	jao ⁵⁵	ɣɛ ³³	tu ⁵⁵

	257	258	259	260
中文	闭 (眼)	听	臭、闻	吃
英文	close (eyes)	listen	smell (vb)	eat
剑川 JC	me ⁵⁵	tɕ ^h ɛ ⁵⁵	ts ^h u ⁵⁵	ɯ ⁴⁴
洱源 EY	mi ³⁵	k ^l ɛ ⁵⁵	tɕ ^h u ⁵⁵	ɯ ⁴⁴
鹤庆 HQ	me ³⁵	tɕ ^h ɛ ⁵⁵	tɕ ^h u ³⁵	ɯ ⁴⁴
兰坪 LP	mĩ ⁵⁵ (k ^h u ³³)	tɕ ^h ɛ ⁴⁴	ts ^h u ⁵⁵	ɯ ⁴⁴
周城 ZC	me ³⁵	tɕ ^h ɛ ⁵⁵		ɯ ⁴⁴
七里桥 QLQ	me ³⁵	tɕ ^h ɛ ⁵⁵	ɣ ^h u ⁵⁵	ɣu ³³
云龙 YL	mi ³⁵	tɕ ^h ɛ ⁵⁵	ts ^h u ⁵⁵	ɯ ⁴⁴
祥云 XY	mi ³⁵	tɕ ^h ɛ ⁵⁵	tɕ ^h u ⁵⁵	ɯ ⁴⁴
洛本卓 LBZ	tɕɛ ⁴²	tɕ ^h ɔ ⁵⁵	t ^h ɣ ³¹	i ⁴⁴
	261	262	263	264
中文	喝	咬	嚼	吐 (痰)
英文	drink	bite	chew	spit
剑川 JC	ũ ³³	ŋa ⁴⁴	tsou ⁴²	ts ^h ɿ ⁵⁵
洱源 EY	u ³³	ŋa ⁴⁴	tso ⁴²	ts ^h ɿ ⁵⁵
鹤庆 HQ	u ³³	ŋa ⁴⁴	tsou ⁴²	ts ^h ɿ ⁵⁵
兰坪 LP	ũ ⁴⁴	ŋa ⁴⁴	tsa ⁴²	ts ^h ɛ ⁵⁵
周城 ZC	ɣu ³³	ŋa ⁴⁴	tso ⁴²	tsɿ ⁵⁵
七里桥 QLQ	u ³³	ŋa ⁴⁴	tso ⁴²	e ⁴² (t ^h ɔ ³¹ wa ⁴²)
云龙 YL	ɣu ³³	ŋa ⁴⁴	tso ⁴²	tsɿ ³⁵
祥云 XY	ẽ ³³	ŋa ⁴⁴	za ³¹	ts ^h ɿ ⁵⁵
洛本卓 LBZ	ũ ³³	ŋa ⁵⁵	ŋa ⁵⁵ za ⁴²	fɛ ⁵⁵ t ^h ao ³¹
	265	266	267	268
中文	呕吐	吹	读	喊
英文	vomit	blow	read	shout
剑川 JC	tɕ ^h ɛ ⁴⁴	p ^h u ⁵⁵	ɣu ⁴² / jo ³¹	u ⁵⁵
洱源 EY	e ⁴⁴ ta ⁴²	p ^h u ⁵⁵	ɔ ²¹	ŋu ³⁵
鹤庆 HQ	tã ⁴²	p ^h u ⁵⁵	ɣu ⁴²	u ³⁵
兰坪 LP	xue ⁴⁴	p ^h u ⁵⁵	ɣu ⁴²	u ⁵⁵
周城 ZC	k ^h ue ³¹	p ^h u ⁵⁵	ɣu ⁴²	vɣ ³⁵
七里桥 QLQ	ta ³²	p ^h u ⁵⁵	u ⁴²	kɣ ³⁵
云龙 YL	ta ⁴²	p ^h u ⁵⁵	ɣu ⁴²	ɣu ³⁵
祥云 XY	k ^h ue ³¹	p ^h ou ⁵⁵	you ⁴²	ku ³⁵
洛本卓 LBZ	tɕ ^h a ⁵⁵	p ^h u ⁴⁴	ɣu ⁴² sɣ ³³	ɣ ⁴⁴

	269	270	271	272
中文	拿	拍 (桌子)	摘 (果子)	搓 (绳子)
英文	hold	hit (table)	pick (fruit)	twist (rope)
剑川 JC	ne ⁴⁴	po ⁴⁴	k ^h ua ⁴⁴	ts ^h ou ⁴⁴
洱源 EY	na ³⁵	po ⁴⁴	k ^h ua ⁴⁴	ts ^h ɔ ⁴⁴
鹤庆 HQ	k ^h e ⁴⁴	pou ⁴⁴	k ^h ua ⁴⁴	sou ⁴⁴
兰坪 LP	tā ⁵⁵ / nē ⁵⁵	pao ⁴⁴	k ^h ua ⁴⁴	ts ^h uo ⁴⁴
周城 ZC	ne ⁴⁴	po ⁴⁴	k ^h ua ⁴⁴	ts ^h o ⁴⁴
七里桥 QLQ	ne ⁴⁴	po ⁴⁴	k ^h ua ⁴⁴	ts ^h o ⁴⁴
云龙 YL	la ⁵⁵	po ⁴⁴	k ^h ua ⁴⁴	ts ^h u ³¹
祥云 XY	kā ³³	pou ⁴⁴	k ^h ua ⁴⁴	ts ^h ɔ ³³
洛本卓 LBZ	q ^h æ ⁵⁵	po ³³	q ^h uo ⁵⁵	ts ^h o ⁵⁵
	273	274	275	276
中文	拾 (谷子)	播 (种)	拉	推
英文	pick up from ground (grain)	scatter (seeds)	pull	push
剑川 JC	tsɛ̃ ⁴²	sa ⁴⁴	tɕi ³³	mia ⁵⁵
洱源 EY	tsɿ ⁴²	sa ⁴⁴	kʲi ³³	ma ³⁵
鹤庆 HQ	tsɿ ⁴²	sa ⁴⁴	k ^h a ³³	ma ⁵⁵
兰坪 LP	tsɛ̃ ⁴²	sa ⁴⁴	tɕi ³³	ma ⁴⁴
周城 ZC	tsɿ ⁴²	sa ⁴⁴	kʲi ³³	ma ³⁵
七里桥 QLQ	tsɿ ⁴²	sa ³²	tɕi ³³	ma ³⁵
云龙 YL	tsɿ ⁴²	sa ⁴⁴	tɕi ³³	ma ³⁵
祥云 XY	tsɿ ⁴²	sa ⁴⁴	tɕi ⁴⁴ / tɕɛ̃ ³⁵	ts ^h u ⁵⁵ / ma ³⁵
洛本卓 LBZ	tsɿ ⁴²	tɕo ⁴²	tɕā ⁴⁴	p ^h a ⁵⁵
	277	278	279	280
中文	踢	跪	踩	骑
英文	kick	kneel	step on	ride
剑川 JC	tɕ ^h e ⁴⁴	kʲy ³¹	ta ⁴²	ku ²¹
洱源 EY	kʲe ⁴⁴	kʲy ²¹	ta ⁴²	ku ²¹
鹤庆 HQ	tɕ ^h e ⁴⁴	kuɔ ²¹	ta ⁴²	ku ²¹
兰坪 LP	tɕ ^h e ⁴⁴	kue ³¹	ta ⁴²	ku ²¹
周城 ZC	tɕ ^h e ⁴⁴	kʲy ³³	ta ⁴²	ku ²¹
七里桥 QLQ	tu ³⁵	kʲy ²¹	ta ⁴²	ku ²¹
云龙 YL	tsua ³³	kʲy ²¹	ta ⁴²	ku ²¹
祥云 XY	t ^h ie ⁴⁴	ku ²¹	ta ⁴²	ku ²¹
洛本卓 LBZ	t ^h ao ⁴⁴	tɕi ³³	ta ⁴⁴	ku ²¹

	281	282	283	284
中文	走	坐	背 (物)	背 (人)
英文	walk	sit	carry (thing) on back	carry person on back
剑川 JC	pe ⁴⁴	ky ⁴²	ɛ ⁴²	ma ²¹
洱源 EY	pe ⁴⁴	ky ⁴²	ɛ ⁴²	
鹤庆 HQ	pe ⁴⁴	kuo ⁴²	jɛ ⁴²	pou ³¹
兰坪 LP	pe ⁴⁴	ts ^h ao ⁴⁴	ve ³³	ma ²¹
周城 ZC	pe ⁴⁴	ky ³²	ɛ ⁴²	ne ²¹
七里桥 QLQ	pe ⁴⁴	ky ³²	jɛ ³²	tɛ ³³
云龙 YL	pe ⁴⁴	ky ⁴²	jɛ ⁴²	pao ²¹
祥云 XY	pe ⁴⁴	ku ⁴²	pa ³¹	pa ³¹
洛本卓 LBZ	ja ⁵⁵	ky ⁴⁴	ve ³³	bo ⁴⁴
	285	286	287	288
中文	跌倒	爬	休息	睡
英文	fall down	climb	rest	sleep
剑川 JC	tue ⁴⁴ fe ³³	me ⁴⁴	ɛa ⁵⁵	ts ^h ɛ ³³
洱源 EY	to ⁴⁴ pa ⁴⁴	me ⁴⁴	ɛo ³⁵	ts ^h ɛ ³³
鹤庆 HQ	tou ⁴⁴	me ⁴⁴	ɛa ⁵⁵	ts ^h ɛ ³³
兰坪 LP	tue ⁴⁴ fe ³³	mae ⁴⁴	ɛa ⁵⁵	ts ^h ɛ ⁴⁴
周城 ZC	to ⁴⁴	me ⁴⁴	ɛa ³⁵	ts ^h ɛ ³³
七里桥 QLQ	to ⁴⁴ xu ⁵⁵	me ⁴⁴	ɛa ³⁵	ts ^h ɛ ³³
云龙 YL	to ⁴⁴ fe ⁴⁴	me ⁴⁴	ɛa ³⁵	ts ^h ɛ ³³
祥云 XY	kũa ³³ ts ^h ɛ ³³	me ⁴⁴	ɛa ³⁵	ts ^h ɛ ³³
洛本卓 LBZ	tu ⁵⁵ xa ⁴⁴	ma ⁵⁵	ɛa ⁵⁵	N ³³ ti ³¹
	289	290	291	292
中文	醒	做 (活)	劳动	犁 (田)
英文	wake up	do (work)	labour	plough (field)
剑川 JC	ɛɛ ⁵⁵ ɛɛ ⁵⁵	tsu ⁵⁵	tsu ⁵⁵ tsou ⁴² su ³³	tsou ⁴⁴
洱源 EY	ɛɛ ⁵⁵ ɛɛ ⁵⁵	tsu ⁵⁵	tsu ⁵⁵ tsou ⁴² su ³³	tsou ⁴⁴
鹤庆 HQ	ɛ ^h ɛ ⁵⁵ ɛ ^h ɛ ⁵⁵	ts ^l ⁵⁵	ts ^l ⁵⁵ tsou ⁴² s ^h u ³³	tsou ⁴⁴
兰坪 LP	ɛ ^h ɛ ⁵⁵ ɛ ^h ɛ ⁵⁵	tsu ⁵⁵	tsu ⁵⁵ tsu ³¹ su ⁴⁴	tsu ⁵⁵ ɛi ³¹
周城 ZC	ɛi ⁵⁵ ɛɛ ⁵⁵	ts ^l ⁵⁵	ts ^l ⁵⁵ tsou ⁴² su ³³	tsou ⁴⁴
七里桥 QLQ	ɛi ⁵⁵ ɛɛ ⁵⁵	ts ^l ⁵⁵	ts ^l ⁵⁵ tsou ⁴² su ³³	tsou ⁴⁴
云龙 YL	ts ^h u ³¹	ts ^l ⁵⁵	ts ^l ⁵⁵ tsou ⁴² su ³³	tsu ⁴⁴
祥云 XY	tɛ ^h ɛ ⁵⁵ tɛ ^h ɛ ²¹	ts ^l ⁵⁵	kã ⁵⁵ tsou ⁴² sou ³³	tsou ⁴⁴
洛本卓 LBZ	tɛi ⁵⁵ tɛ ^h o ³¹	tsy ³³ ɛo ³¹	tsy ³³ tsy ³³ ɛi ⁵⁵	tsou ⁴⁴

	293	294	295	296
中文	栽种	割	砍 (柴)	拔 (秧)
英文	plant (seed)	cut, reap	chop (firewood)	pull up (rice seedlings)
剑川 JC	tsɿ ⁴²	se ⁴⁴	tsou ⁴⁴	ma ²¹
洱源 EY	tsɿ ⁴²	se ⁴⁴	k ^h a ³³	p ^h ia ⁴² / ma ²¹
鹤庆 HQ	tsũ ⁴²	s ^h ɛ ⁴⁴	tsou ⁴⁴	ma ²¹
兰坪 LP	tsɔ̃ ⁴² ku ⁴⁴ / fɛ ⁴⁴	se ⁴⁴	tsu ⁴⁴	pia ⁴² / ma ²¹
周城 ZC	tsɿ ⁴²	se ⁴⁴	tso ⁴⁴	ma ²¹
七里桥 QLQ	tsɿ ³²	se ⁴⁴	tso ⁴⁴	ma ²¹
云龙 YL	ke ³³	se ⁴⁴	tsu ⁴⁴	pia ⁴²
祥云 XY	k ^l ɛ ³⁵ / tɕɛ ⁴²	se ⁴⁴	tsɔ̃ ⁴⁴	ma ²¹
洛本卓 LBZ	tɕõ ⁴²	ɕa ⁵⁵	nu ⁵⁵	tɕaõ ⁵⁵
	297	298	299	300
中文	放牧	喂 (催膘)	牵 (牛)	织 (布)
英文	put out to pasture	feed (fatten up)	lead (cow)	weave (cloth)
剑川 JC	xã ⁵⁵	wɛ ⁴²	k ^h e ⁵⁵	tsɿ ⁵⁵
洱源 EY	xa ⁵⁵	wɛ ⁴²	k ^h e ⁵⁵	tɕu ⁴⁴
鹤庆 HQ	x ^h a ⁵⁵	wɛ ⁴²	ke ⁵⁵	tsu ⁴⁴
兰坪 LP	xã ⁵⁵	wɛ ⁴²	k ^h e ⁵⁵	tsu ⁵⁵
周城 ZC	xa ⁵⁵	wɛ ⁴²	k ^h e ⁵⁵	tsu ⁴⁴
七里桥 QLQ	xa ⁵⁵	wa ³²	k ^h e ⁵⁵	tsu ³³
云龙 YL	xa ⁵⁵	wɛ ⁴²	k ^h e ⁵⁵	tsu ⁴⁴
祥云 XY	xã ⁵⁵	wɛ ⁴²	k ^h e ⁵⁵	tsu ³³
洛本卓 LBZ	mã ⁴²	ao ⁵⁵	q ^h e ³³	tɕu ⁵⁵
	301	302	303	304
中文	买	卖	称	教
英文	buy	sell	call (name)	teach
剑川 JC	mɛ ⁴²	ku ²¹	tɕ ^h y ⁵⁵	kã ⁵⁵
洱源 EY	mɛ ⁴²	ku ²¹	tɕ ^h y ⁵⁵	ka ³⁵
鹤庆 HQ	mɛ ⁴²	ku ²¹	tɕ ^h y ⁵⁵	kã ⁵⁵
兰坪 LP	mã ⁴²	ku ⁴²	tɕ ^h y ⁵⁵	kã ⁵⁵
周城 ZC	mɛ ³²	ku ²¹	tɕ ^h y ⁵⁵	ka ³⁵
七里桥 QLQ	mɛ ³²	ku ²¹	tɕ ^h y ⁵⁵	ka ³⁵
云龙 YL	mɛ ⁴²	ku ²¹	tɕ ^h yɛ ⁵⁵	ka ³⁵
祥云 XY	mɛ ⁴²	kou ²¹	ts ^h ũ ⁵⁵	kã ³⁵
洛本卓 LBZ	ma ³¹	qu ³¹	ts ^h ũɛ ⁵⁵	qɔ̃ ⁵⁵

	305	306	307	308
中文	写	贴	煮 (洋芋)	炒
英文	write	stick, glue	steam (yams)	stir-fry
剑川 JC	vɛ ⁴²	tɕ ^h a ⁴⁴	tsy ³³	ts ^h u ³³
洱源 EY	wɛ ⁴²	tɕ ^h a ⁴⁴	tsy ³³	ts ^h u ³³
鹤庆 HQ	vɛ ⁴²	tɕ ^h a ⁴⁴	tsuo ³³	ts ^h u ³³
兰坪 LP	vɛ ⁴²	tɕ ^h a ⁴⁴	tsu ³³	ts ^h u ³³
周城 ZC	wɛ ⁴²	na ⁴⁴	tsy ³³	ts ^h u ³³
七里桥 QLQ	wɛ ⁴²	ŋa ³⁵ / tɕ ^h a ⁴⁴	tsy ³³	tɕ ^h u ³³
云龙 YL	wɛ ⁴²	na ⁴⁴	dzy ⁴⁴	ts ^h u ³³
祥云 XY	wɛ ⁴²	nia ⁴²	kou ⁴²	ts ^h u ³³
洛本卓 LBZ	kua ⁵⁵	p ^h æ ⁴²	tɕu ³³	N ³¹
	309	310	311	312
中文	煎	蒸	浸 (种)	沸 (水开)
英文	shallow fry	braise	soak (seeds)	boil (water)
剑川 JC	tsẽ ⁵⁵	tsũ ⁵⁵	tsur ²¹	xua ⁴⁴
洱源 EY	tse ³⁵	tsur ³⁵	tsur ²¹	xua ⁴⁴
鹤庆 HQ	tsẽ ⁵⁵	tsũ ⁵⁵	tsɿ ²¹	xua ⁴⁴
兰坪 LP	tsẽ ⁵⁵	tsũ ⁵⁵	p ^h ao ⁵⁵ / tsur ²¹	xua ⁴⁴
周城 ZC	tse ³⁵	tsur ³⁵	tsɿ ²¹	xua ⁴⁴
七里桥 QLQ	tse ³⁵	tsur ³⁵	tsɿ ²¹	xua ⁴⁴
云龙 YL	tse ³⁵	tsur ³⁵	p ^h ao ³³	xua ⁴⁴
祥云 XY	tsẽ ³⁵	tsũ ³⁵	zɿ ²¹	xua ⁴⁴
洛本卓 LBZ	tao ³³	tũ ⁵⁵	nũã ⁵⁵	χua ⁴⁴
	313	314	315	316
中文	切	剁	剪	磨 (面)
英文	cut (with knife)	chop	cut (with scissors)	grind (wheat)
剑川 JC	ts ^h ũã ³³	tõ ⁴²	kẽ ⁴²	wẽ ⁴²
洱源 EY	ts ^h ua ³³	tõ ⁴²	k ^j ẽ ⁴²	ts ^h ẽ ⁴⁴
鹤庆 HQ	ts ^h ũã ³³	tou ⁴²	kẽ ⁴²	wẽ ⁴²
兰坪 LP	tɕ ^h ũã ⁴⁴	tu ⁴²	kẽ ⁴²	wẽ ⁴²
周城 ZC	ts ^h ua ³³	tu ⁴²	k ^j ẽ ³²	we ³²
七里桥 QLQ	tɕ ^h ua ³³	tuõ ³²	kie ⁴²	we ⁴²
云龙 YL	ts ^h ua ³³	tõ ⁴²	kẽ ⁴²	ts ^h ẽ ⁴⁴
祥云 XY	ts ^h ũã ³³	tuõ ⁴²	k ^j ẽ ⁴²	ts ^h ẽ ⁴⁴
洛本卓 LBZ	co ⁴⁴	tao ⁴²	qa ⁴⁴	ji ⁴⁴

	317	318	319	320
中文	戴 (帽)	晾 (衣)	晒	洗
英文	wear (hat)	hang out (clothes)	dry (sthg) in sun	wash
剑川 JC	tɯ ⁴²	sɔ ⁵⁵	xou ³¹	se ³³
洱源 EY	tɯ ⁴²	sɔ ⁵⁵	xɔ ³¹	se ³³
鹤庆 HQ	tũ ⁴²	s ^h ɔu ⁵⁵	x ^h ɔu ³¹	s ^h e ³³
兰坪 LP	tiɯ ⁴²	sɔ ⁵⁵	xɔ ³¹	se ⁴⁴
周城 ZC	tɯ ³²	sɔ ⁵⁵	xɔ ³¹	se ³³
七里桥 QLQ	tɯ ³²	sɔ ⁵⁵	xɔ ²¹	se ³³
云龙 YL	tɯ ⁴²	sɔ ⁵⁵	xɔ ³¹	se ³³
祥云 XY	tũ ⁴²	sã ⁵⁵	xɔ ⁴²	se ³³
洛本卓 LBZ	tũ ⁴²	tɕ ^h o ⁵⁵	xao ⁴²	ɕy ³³
	321	322	323	324
中文	剃 (头)	梳 (头)	扫 (地)	开 (门)
英文	shave (head)	comb (hair)	sweep	open (door)
剑川 JC	tɕɛ ³¹	sɿ ³¹	ts ^h ou ⁴⁴	k ^h u ⁵⁵
洱源 EY	tɕɛ ³¹	sɿ ³¹	sɔ ⁴⁴	k ^h u ⁵⁵
鹤庆 HQ	tɕɛ ³¹	suɔ ³¹	ts ^h ou ⁴⁴	k ^h u ⁵⁵
兰坪 LP	tɕɛ̃ ⁴²	su ³¹	ts ^h u ⁴⁴	k ^h e ⁵⁵
周城 ZC	tɕɛ ³¹	sɿ ³¹	sɔ ³³	k ^h u ⁵⁵
七里桥 QLQ	tɕɛ ³¹	sɿ ³¹	ɕu ³³	k ^h u ⁵⁵
云龙 YL	tɕɛ ³¹	ʃɿ ³¹	suɔ ³³	k ^h u ⁵⁵
祥云 XY	jɛ̃ ²¹	ɕɛ ²¹	su ³³	k ^h ou ⁵⁵
洛本卓 LBZ	ɕo ⁵⁵	ɕu ³³	t ^h u ⁵⁵	q ^h u ⁵⁵
	325	326	327	328
中文	放置	藏	堆 (放)	点 (灯)
英文	lay aside	hide	pile up	light (lamp)
剑川 JC	su ⁴⁴	tsɔ̃ ²¹	tsɛ̃ ³³	kɛ̃ ³¹
洱源 EY	tɯ ³¹	tsɔ̃ ²¹	tsɛ̃ ³³	k'e ³¹
鹤庆 HQ	s ^h u ⁴⁴	tsɔ̃u ²¹	tsɛ̃ ³³	ke ⁴²
兰坪 LP	su ⁴⁴	tsɔ̃ ²¹	tsɛ̃ ⁴⁴	ke ³³
周城 ZC	su ⁴⁴	tsɔ̃ ²¹	tsɛ̃ ³³	ta ²¹
七里桥 QLQ	zu ⁴⁴	tsɔ̃ ²¹	tsɛ̃ ³³	ke ³¹
云龙 YL	tsɔ̃ ³³ k ^h u ³¹	tsɔ̃ ²¹	tue ³³	ke ³¹
祥云 XY	tsã ³⁵	tsã ²¹	ma ²¹	k'ɛ̃ ²¹
洛本卓 LBZ	tɕã ⁴²	tsɔ̃ ³¹	ɕɛ̃ ³³	ni ³³

	329	330	331	332
中文	收	遗失	寻找	用 (使用)
英文	receive	lose (can't find)	look for	use
剑川 JC	su ⁵⁵	ne ⁴² su ³³ ts ^h u ⁵⁵	ɕi ²¹ / ǎ ³³	õ ⁴²
洱源 EY	su ³⁵	ta ³⁵ so ³³	ji ²¹	jo ⁴²
鹤庆 HQ	su ⁵⁵	s ^h ou ³³	tsou ³³	ju ⁴²
兰坪 LP	su ⁵⁵	so ³³ su ⁴⁴	ji ²¹ / ǎ ⁴⁴	õ ⁴²
周城 ZC	su ³⁵	ts ^h l ⁵⁵ xo ⁵⁵	ji ³¹	zy ³¹
七里桥 QLQ	su ³⁵	ts ^h l ⁵⁵ xu ⁵⁵	ji ²¹	zy ³³
云龙 YL	sy ³⁵	la ⁴⁴ so ³³	ze ³¹	jo ⁴²
祥云 XY	sou ³⁵	ts ^h l ⁵⁵ ts ^h l ⁵⁵	ze ³¹	jẽ ²¹
洛本卓 LBZ	q ^h ε ⁵⁵	ɕl ³³ ts ^h l ³³	sæ ⁴²	no ⁴⁴
	333	334	335	336
中文	玩耍	问	答	告诉
英文	play	ask	answer	tell
剑川 JC	wa ⁴² sẽ ²¹	pie ⁴⁴	ta ⁵⁵ ju ⁴⁴	ka ³¹ / sua ⁴⁴
洱源 EY	u ³¹ tc ^h u ³¹	pie ⁴⁴	ta ³⁵ ju ⁴⁴	ka ³¹
鹤庆 HQ	vy ⁴² tu ³³	pie ⁴⁴	ta ⁵⁵ ju ⁴⁴	ka ³¹ / tsou ⁴²
兰坪 LP	wa ⁴² zẽ ²¹	pie ⁴⁴	ta ³³ pu ⁵⁵ tõ ³¹	ka ³¹
周城 ZC	no ³³ / o ²¹ tc ^h o ³¹	pie ⁴⁴	ta ³⁵ lu ⁴⁴	sua ⁴⁴ ku ³¹
七里桥 QLQ	o ²¹ tc ^h o ³³	pie ⁴⁴	ta ³⁵ jo ³³	ka ³¹
云龙 YL	wu ³¹ tc ^h u ³¹	pie ⁴⁴	ta ³⁵ ju ⁴⁴	ka ³¹
祥云 XY	ts ^h u ³¹	pie ⁴⁴	tã ⁴²	kã ³⁵
洛本卓 LBZ	xã ³⁵ zæ ⁴²	tʃua ⁴⁴	ti ⁴⁴ tõ ²¹	tsuo ⁴² qã ⁵⁵
	337	338	339	340
中文	骂架	帮助	遇见	逃
英文	quarrel	help	meet	flee
剑川 JC	sa ⁵⁵ tu ⁴⁴	ta ⁴² yur ⁴²	jy ⁴⁴ tu ⁴⁴	mo ²¹
洱源 EY	sa ⁵⁵ xẽ ⁴⁴ / sa ⁵⁵ pe ³⁵	ta ⁴² po ²¹	y ⁴⁴ tu ⁴⁴	mu ²¹
鹤庆 HQ	sua ⁴⁴ tca ⁴⁴	pa ²¹	s ^h a ⁵⁵ kẽ ⁴²	mu ²¹
兰坪 LP	sã ⁴⁴ to ³³ / ur ⁴⁴	ta ⁴² yur ⁴²	sã ⁴⁴ to ³³ / jy ⁴⁴ tu ⁴⁴	mu ²¹
周城 ZC	sa ⁵⁵ tu ⁴⁴	ta ³² po ²¹	mu ³⁵ tu ³³	mu ²¹
七里桥 QLQ	sa ⁵⁵ tu ⁴⁴	tsa ⁴² po ²¹	jy ⁴⁴ tu ⁴⁴	mu ²¹
云龙 YL	sa ⁵⁵ xẽ ⁴⁴	ta ⁴² yur ⁴²	jy ⁴⁴ tu ⁴⁴	mu ²¹
祥云 XY	ou ⁴⁴ tca ⁴⁴	pa ²¹	pẽ ⁴⁴ tcẽ ⁴²	mou ²¹ / tsua ³⁵
洛本卓 LBZ	sao ⁵⁵ xa ⁵⁵	ta ⁵⁵ yur ⁴²	sao ⁵⁵ tca ⁴²	mãõ ³⁵
	341	342	343	344

中文	追	抢	偷	骗
英文	chase	rob	steal	deceive, cheat
剑川 JC	tɕi ⁴²	tɕ ^h a ²¹	ta ²¹	p ^h i ⁴⁴
洱源 EY	tɕi ⁴² / tɕ ³³	ts ^h a ²¹	ta ³¹	tɕy ³¹
鹤庆 HQ	tɕie ⁴²	tɕ ^h a ³¹	ta ³¹	tu ⁵⁵
兰坪 LP	tɕ ⁴² / tɕi ³¹ su ³¹	tɕ ^h a ⁴²	ta ²¹	le ⁵⁵
周城 ZC	kɿ ⁴²	tɕ ^h a ²¹	ta ²¹	sua ⁴²
七里桥 QLQ	nu ³¹	tɕ ^h a ³¹	ta ³¹	p ^h i ⁵⁵
云龙 YL	ke ³¹	tɕ ^h a ³¹	ta ³¹	tɕo ³¹
祥云 XY	tɕi ⁴²	ts ^h a ²¹	ta ³¹	pi ⁵⁵
洛本卓 LBZ	tɕ ³³	tɕy ³¹	diɛ ⁴²	lo ⁵⁵
	345	346	347	348
中文	生气	恨	怕	笑
英文	angry	hate	fear	laugh
剑川 JC	xu ³¹ k ^h u ³³	ku ⁴²	kɛ ⁵⁵	sou ³¹
洱源 EY	xo ³¹ k ^h u ³³	xu ⁴⁴	k ^h ɛ ³⁵	so ³³
鹤庆 HQ	kuo ⁴⁴ fɛ ⁴⁴	xu ⁴⁴	kɛ ⁵⁵	ɕ ^h i ³¹
兰坪 LP	xo ³³ k ^h u ⁴⁴	ku ⁴²	kɛ ⁵⁵	su ³¹
周城 ZC	tsɿ ⁴⁴	xu ³²	k ^h ɛ ³⁵	so ³¹
七里桥 QLQ	xa ⁴² l ^h u ³³	tsɿ ²¹	ke ³⁵	so ³¹
云龙 YL	tɕ ^h i ³¹ tsa ³³	tsɿ ³¹	ke ³⁵	sao ³¹
祥云 XY	xue ³³ k ^h ou ³³	xu ³³	k ^h ɛ ³⁵	so ²¹
洛本卓 LBZ	xɛ ⁵⁵ tsɛ ⁵⁵	qa ⁵⁵ sɛ ⁵⁵	ci ⁵⁵	su ⁴⁴
	349	350	351	352
中文	哭	爱	喜欢	相信
英文	cry	love	like	believe
剑川 JC	k ^h ou ⁴⁴	kou ²¹	ɕi ³¹ xuā ⁵⁵	ɕi ³¹
洱源 EY	k ^h o ⁴⁴	ko ²¹	ɕi ³¹ xua ³⁵	ɕi ³¹
鹤庆 HQ	x ^h ɛ ⁵⁵ kuo ⁵⁵	kuo ²¹	ɕ ^h i ³¹ xuā ⁵⁵	ɕ ^h i ³¹
兰坪 LP	k ^h u ³³	ko ²¹	ɕi ³¹ xuā ⁵⁵	ɕi ³¹
周城 ZC	k ^h o ⁴⁴	ko ²¹	ɕi ³¹ xua ³⁵	ɕi ³¹
七里桥 QLQ	k ^h o ⁴⁴	kuo ²¹	ɕi ³¹ xua ³⁵	ɕa ³³ ɕu ⁵⁵
云龙 YL	k ^h u ⁴⁴	ko ²¹	ɕi ³¹ xua ³⁵	ɕi ³¹
祥云 XY	k ^h ou ⁴⁴	ɛ ⁴⁴	ɕi ²¹ xuā ³⁵	ɕɛ ⁴²
洛本卓 LBZ	q ^h o ⁵⁵	kao ³¹	no ⁵⁵ si ⁵⁵	da ³¹ sɛ ⁴²

	353	354	355	356
中文	知道	猜	记得	忘记
英文	know	guess	remember	forget
剑川 JC	sẽ ³³	tsu ⁴²	tsu ⁴⁴ tu ⁴⁴	p ^h ẽ ³³ mi ³¹ ci ⁵⁵
洱源 EY	se ³³	tsu ⁴²	tsu ⁴⁴ tu ⁴⁴	p ^h ẽ ³³ mẽ ³¹ ci ⁵⁵
鹤庆 HQ	se ³³	t ^h ẽ ³³	tsu ⁴⁴ tu ⁴⁴	p ^h u ³³ mu ³³ ci ⁵⁵ xa ⁵⁵
兰坪 LP	sũẽ ⁵⁵	tsũ ⁴²	tci ⁴⁴ tu ⁴⁴	p ^h a ⁴⁴ mẽ ³¹ ci ⁴⁴
周城 ZC	se ³³	ts ^h ẽ ³³	tci ⁴⁴ tu ⁴⁴	p ^h u ³³ mẽ ³¹ xu ⁵⁵
七里桥 QLQ	zu ⁴⁴ tu ⁴⁴	ts ^h ẽ ³³	tci ⁴⁴ tu ⁴⁴	p ^h ẽ ⁴⁴ mu ³¹ xu ⁵⁵
云龙 YL	zɿ ³³ tu ³³	ts ^h ai ³¹	tci ⁴⁴ to ³³	p ^h ẽ ³³ mẽ ³¹ ci ⁵⁵
祥云 XY	zẽ ²¹ to ⁴⁴	ts ^h ẽ ⁵⁵	tci ⁴⁴ to ⁴⁴	p ^h ɿ ³³ mou ³¹ xou ⁵⁵
洛本卓 LBZ	ta ⁵⁵ tu ⁵⁵	t ^h ũ ⁴²	tu ⁵⁵ tu ⁵⁵	q ^h ɔ̃ ³⁵ mã ³¹ sẽ ³³
	357	358	359	360
中文	想	要	得	会
英文	think	want	must	able to
剑川 JC	mi ³³	jõ ⁴⁴	tu ⁴⁴	sẽ ³³
洱源 EY	mi ³³	nɔ̃ ⁴⁴	tu ⁴⁴	la ⁴⁴
鹤庆 HQ	mi ³³	jũ ⁴⁴	tu ⁴⁴	la ⁴⁴
兰坪 LP	mi ³³	jõ ⁴⁴	tu ⁴⁴	sũẽ ³³
周城 ZC	mi ³³	nɔ̃ ⁴⁴	tu ⁴⁴	tẽ ³³
七里桥 QLQ	mi ³³	nio ⁴⁴	tu ⁴⁴	tẽ ³³
云龙 YL	mi ³³	nɔ̃ ⁴⁴	tu ⁴⁴	xue ⁵⁵
祥云 XY	ẽã ³¹	nio ⁴⁴	to ⁴⁴	la ⁴⁴
洛本卓 LBZ	mi ³³	nɔ̃ ⁵⁵	tu ⁵⁵	q ^h ɿ ³³
	361	362	363	364
中文	是	有	来	去
英文	is	there is	come	go
剑川 JC	tsɿ ³³	tsu ³³	ɣu ³⁵	ɣẽ ²¹
洱源 EY	tsɔ̃ ³³	tsu ³³	pe ⁴⁴ jɿ ³⁵	pe ⁴⁴ tsɿ ²¹
鹤庆 HQ	tɕa ³³	tsu ³³	ɣu ³⁵	ɣẽ ²¹
兰坪 LP	tsɔ̃ ⁴⁴	tsu ⁴⁴	ɣu ³⁵	ɣẽ ²¹
周城 ZC	tsɔ̃ ³³	tsu ³³	pe ⁴⁴ jɿ ³⁵	pe ⁴⁴ ɣẽ ²¹
七里桥 QLQ	tsɔ̃ ³³	tsu ³³	pe ⁴⁴ tsu ³⁵	pe ⁴⁴ ɣẽ ²¹
云龙 YL	tsɿ ³³	zɿ ³³	pe ⁴⁴ jɿ ³⁵	su ³³
祥云 XY	zɔ̃u ³³	zou ³³	ɣu ³⁵	nie ²¹
洛本卓 LBZ	ta ³³	dɿ ³³	t ^h ua ⁵⁵	ja ⁴⁴

	365	366	367	368
中文	回	到	上 (山)	下 (山)
英文	return	to (reach)	up (mountain)	down (mountain)
剑川 JC	a ⁴⁴	p ^h ia ⁴⁴	tsɔ ³³	t ^h u ⁵⁵
洱源 EY	pe ⁴⁴ ti ³⁵	p ^h ia ⁴⁴	tsɔ ³³	t ^h u ⁵⁵
鹤庆 HQ	a ⁴⁴	p ^h ia ⁴⁴	tsu ³³	t ^h u ⁵⁵
兰坪 LP	a ⁴⁴ ku ⁵⁵	p ^h ia ⁴⁴	tsɔ ³³	t ^h iu ³³
周城 ZC	pe ⁴⁴ ta ⁴²	p ^h ia ⁴⁴	tsɔ ³³	pe ⁴⁴ t ^h u ⁵⁵
七里桥 QLQ	a ⁴⁴ y ³⁵	p ^h ia ⁴⁴	ke ³¹ tsɔ ³³	ke ³¹ t ^h u ⁵⁵
云龙 YL	pe ⁴⁴ ti ³⁵ / pe ⁴⁴ ja ⁴⁴	p ^h ia ⁴⁴	dzo ³³	t ^h u ⁵⁵
祥云 XY	a ²¹	p ^h ie ⁴⁴	za ³³	t ^h u ⁵⁵
洛本卓 LBZ	ku ⁴⁴	t ^h ua ⁵⁵	t ^h u ³³ nao ³¹	t ^h u ⁵⁵
	369	370	371	372
中文	出 (出去)	进 (进来)	掉	断
英文	go out	go in	drop, fall	snap, break in two
剑川 JC	ɲe ²¹ tɕ ^h i ⁴⁴	y ³⁵ ji ⁴⁴	tua ⁴²	tse ⁴²
洱源 EY	sy ³³	ni ⁴⁴	tua ⁴²	tse ⁴²
鹤庆 HQ	pe ⁴⁴ tɕ ^h i ⁴⁴	pe ⁴⁴ ji ⁴⁴	tua ⁴²	tse ⁴²
兰坪 LP	pẽ ⁴⁴ tɕ ^h i ⁴⁴	pẽ ⁴⁴ ji ⁴⁴	tua ⁴²	tse ⁴⁴
周城 ZC	pe ⁴⁴ ci ⁴⁴	pe ⁴⁴ ni ⁴⁴	tua ⁴²	tse ³³
七里桥 QLQ	pe ⁴⁴ tɕ ^h i ⁴⁴	pe ⁴⁴ ni ⁴⁴	lua ⁴²	tse ⁴²
云龙 YL	pe ⁴⁴ tɕ ^h i ³³	ni ⁴⁴	lua ⁴²	tse ⁴⁴
祥云 XY	tɕ ^h e ⁴²	ni ⁴²	tua ⁴²	tse ⁴⁴
洛本卓 LBZ	ma ⁵⁵ tɕ ^h e ⁵⁵	ma ⁵⁵ ni ⁵⁵	tua ⁴²	ta ⁵⁵

	373	374	375	376
中文	破	嫁	娶	分娩
英文	break, cleave	marry (of woman)	marry (of man)	give birth
剑川 JC	pou ³¹	tɛ ⁴⁴ fɛ ⁴⁴	u ⁵⁵ vɤ ³³	tɕi ⁴² xɛ ⁵⁵
洱源 EY	p ^h ɔ ²¹	tɛ ⁴⁴ fɛ ⁴⁴	tsɔ ³⁵ vɤ ³³	tɕi ⁴² xɛ ⁵⁵
鹤庆 HQ	p ^h ɔu ³¹	tɛ ⁴⁴ fɛ ⁴⁴	ji ⁴⁴ tsɿ ³³ fɤ ³³	ts ^h ɛ ³³
兰坪 LP	p ^h o ³¹	tɛ ⁴⁴ fɛ ⁴⁴	ka ⁴⁴ vɛ ⁴⁴	ku ³¹ xue ⁴⁴ mu ⁵⁵ / tɕi ⁴² xɛ ⁵⁵
周城 ZC	p ^h ɔ ³¹	tɛ ⁴⁴ fɛ ⁴⁴	tɕa ⁴⁴ vɤ ³³	xa ⁵⁵
七里桥 QLQ	p ^h ɔ ³¹	tɛ ⁴⁴ fɛ ⁴⁴	t ^h u ⁵⁵ vɤ ³³	tɕi ⁴² xɛ ⁵⁵
云龙 YL	ɕo ³¹	tɛ ⁴⁴ fɛ ⁴⁴	t ^h u ⁵⁵ vɤ ³³	tɕi ⁴² xɛ ⁵⁵
祥云 XY	t ^h ɛ̃ ⁵⁵	tɛ̃ ⁴⁴ fɛ ⁴⁴	tsou ⁴² ɕi ⁵⁵ vɤ ³³	sũ ³⁵
洛本卓 LBZ	ty ³³ que ⁴²	qu ³¹	u ⁵⁵	ɕo ³¹
	377	378	379	380
中文	长 (长大)	病	发抖	肿
英文	grow (of people)	be sick, ill	shiver	swell
剑川 JC	kou ⁵⁵ / tou ⁴²	pɛ̃ ³¹ / sɤ̃ ³¹	ju ³¹	ts ^h ɛ̃ ⁵⁵
洱源 EY	kɔ ⁵⁵	pɛ̃ ³¹	ju ³¹	ts ^h ɿ ⁵⁵
鹤庆 HQ	tou ⁴²	pɛ̃ ³¹	ju ³¹	ts ^h ɿ ⁵⁵
兰坪 LP	to ³¹ k ^h u ⁵⁵	sɔ̃ ⁴² / pæ̃ ⁴²	ju ³¹ k ^h u ⁵⁵	ts ^h ɛ̃ ⁴⁴
周城 ZC	kuɔ ³⁵	pɛ̃ ³¹	ɔ̃ ³¹	ts ^h ɿ ⁵⁵
七里桥 QLQ	kuɔ ³⁵	pɛ̃ ³¹	ɔ̃ ³¹	ts ^h ɿ ⁵⁵
云龙 YL	kɔ ³⁵ dao ³¹	pɛ̃ ³¹	tɕa ³¹ pi ⁴⁴ tsɿ ³³ jo ³¹	ts ^h ɿ ⁵⁵
祥云 XY	kuɔ ³⁵	pɛ̃ ³¹	ju ²¹	ts ^h ɛ̃ ⁵⁵
洛本卓 LBZ	dao ⁴²	sɔ̃ ³¹	ju ³¹	ts ^h ɛ̃ ⁵⁵

	381	382	383	384
中文	死	吠	啼(鸡鸣)	孵
英文	die	bark (of dog)	crow (noise of cock)	incubate
剑川 JC	ɕi ³³	pia ⁴²	mɛ ²¹	v ⁴⁴
洱源 EY	ɕi ³³	pia ⁴²	mɛ ²¹	v ⁴⁴
鹤庆 HQ	ɕi ³³	pia ⁴²	mɛ ²¹	ɔ ⁴⁴
兰坪 LP	ɕi ⁴⁴	pia ⁴²	mæ ²¹	wɛ ⁴⁴
周城 ZC	ɕi ³³	mɛ ²¹	mɛ ²¹	vy ⁴⁴
七里桥 QLQ	ɕi ³³	pia ⁴²	mɛ ²¹	vy ⁴⁴
云龙 YL	ɕi ³³	pia ⁴²	mɛ ²¹	ʔu ⁴⁴
祥云 XY	ɕi ³³	pia ⁴²	ku ³⁵	ɛ ⁴⁴
洛本卓 LBZ	si ⁴⁴	fua ⁴⁴	mā ³¹	wɛ ⁵⁵
	385	386	387	388
中文	发(芽)	大	小	高
英文	sprout (vb)	big	small	high, tall
剑川 JC	t ^h v ³¹	tou ⁴²	se ³¹	kā ⁵⁵
洱源 EY	t ^h v ⁴²	tɔ ³¹	se ³¹	ka ³⁵
鹤庆 HQ	fɛ ⁴⁴	tou ⁴²	s ^h e ³¹	kā ⁵⁵
兰坪 LP	ŋɛ ²¹	tɔ ³¹	se ³¹	kā ⁵⁵
周城 ZC	t ^h v ³¹	tɔ ³¹	se ³¹	ka ³⁵
七里桥 QLQ	t ^h v ³¹	tɔ ³¹	se ³³	ka ³⁵
云龙 YL	fɛ ⁴⁴	dao ³¹	se ³¹	ka ³⁵
祥云 XY	fɛ ⁴⁴	tou ²¹	se ²¹	kā ³⁵
洛本卓 LBZ	pæ ⁵⁵	ʔao ⁴⁴	sæ ⁴²	qɔ ⁵⁵
	389	390	391	392
中文	底	长	短	粗
英文	low	long	short	thick, coarse
剑川 JC	pi ³³	tsou ²¹	ts ^h u ⁵⁵	ts ^h u ⁵⁵
洱源 EY	pi ³³	tsɔ ²¹	ts ^h u ⁵⁵	ts ^h u ⁵⁵
鹤庆 HQ	pi ³³	tsou ²¹	ts ^h u ⁵⁵	ts ^h u ⁵⁵
兰坪 LP	pi ⁴⁴	tsɔ ²¹	ts ^h u ⁵⁵	ts ^h u ⁵⁵
周城 ZC	pi ³³	tso ²¹	ts ^h u ⁵⁵	ts ^h u ⁵⁵
七里桥 QLQ	pi ³³	tso ²¹	ts ^h u ⁵⁵	ʃ ^h u ⁵⁵
云龙 YL	pi ³³	tsɔ ²¹	ts ^h u ⁵⁵	ts ^h u ⁵⁵
祥云 XY	pi ³³	tsā ²¹	ts ^h o ⁵⁵	ts ^h u ⁵⁵
洛本卓 LBZ	ɖy ³³	ʈɔ ³¹	ɕ ^h u ⁵⁵	ʃ ^h u ⁵⁵

	393	394	395	396
中文	细	厚	薄	远
英文	fine, thin	thick	thin, flimsy	far
剑川 JC	mo ⁴²	ku ³¹	po ⁴²	tue ³³
洱源 EY	mo ⁴²	ku ³³	po ⁴²	tue ³³
鹤庆 HQ	ma ⁴²	ku ³¹	po ⁴²	tue ³³
兰坪 LP	mɔ̃ ³¹	ku ⁴⁴	pao ⁴²	tue ⁴⁴
周城 ZC	mu ³²	ku ³³	po ⁴²	tue ³³
七里桥 QLQ	mu ³²	ku ³³	po ⁴²	tue ³³
云龙 YL	mo ⁴²	ku ³³	po ⁴²	tue ³³
祥云 XY	mo ⁴²	ku ³³	po ⁴²	tue ³³
洛本卓 LBZ	mɔ̃ ⁴⁴	qu ³¹	po ⁴⁴	dy ³³
	397	398	399	400
中文	近	多	少	直
英文	near	much, many	few	straight
剑川 JC	tɕi ³³	tɕi ⁵⁵	ɕo ³³	tue ⁵⁵
洱源 EY	tɕi ³³	tɕi ⁵⁵	ɕu ³³	mio ⁴²
鹤庆 HQ	tɕi ³³	tɕi ⁵⁵	ɕu ³³	tsɿ ⁵⁵
兰坪 LP	tɕi ⁴⁴	tɕi ⁵⁵	ɕo ⁴⁴	tue ⁴⁴
周城 ZC	tɕie ³³	mɛ ⁵⁵ / tɕi ⁵⁵	ɕo ³³	tsɿ ⁵⁵
七里桥 QLQ	tɕie ³³	tɕi ⁵⁵	ɕo ³³	mio ³²
云龙 YL	tɕi ³³	tɕi ⁵⁵	ɕu ³³	mio ⁴²
祥云 XY	ɿ ³³	tɕi ⁵⁵	ɕu ³³	tsɿ ⁵⁵
洛本卓 LBZ	ts ^h uo ⁵⁵	ti ⁵⁵	ɕo ³³	dy ⁵⁵
	401	402	403	404
中文	轻	重	硬	亮
英文	light (not heavy)	heavy	hard	light, bright
剑川 JC	ts ^h ɛ ⁵⁵	tsɿ ³³	ɲɛ ⁴²	mɛ ²¹
洱源 EY	ts ^h ɛ ⁵⁵	tsɿ ³³	ɲɛ ⁴²	lia ⁴⁴
鹤庆 HQ	ts ^h ɛ ⁵⁵	tsũ ³³	ɲɛ ³¹	mɛ ²¹
兰坪 LP	ts ^h ɛ ⁵⁵	tsõ ³³	ɲɛ ⁴²	mæ ²¹
周城 ZC	ts ^h ɛ ⁵⁵	tsɿ ³³	ɲɛ ³²	mɛ ²¹
七里桥 QLQ	ts ^h ɛ ⁵⁵	tsɿ ³³	ɲɛ ³²	mɛ ²¹
云龙 YL	ts ^h ɛ ⁵⁵	dzy ³³	ɲɛ ⁴²	na ⁴⁴
祥云 XY	ts ^h ɛ ⁵⁵	ɿ̃ ³³	mie ⁴²	mɛ ²¹
洛本卓 LBZ	t ^h ã ⁵⁵	dõ ³³	gy ³³	pa ⁴⁴

	405	406	407	408
中文	暗	红	黄	蓝
英文	dark	red	yellow	blue
剑川 JC	mie ⁴² / ǣ ⁴⁴	ts ^h ɛ ⁴⁴	ɿ ²¹	tɕ ^h ɛ ⁵⁵ / piɛ ⁴⁴
洱源 EY	mie ⁴² / xu ⁴⁴	xɔ ³⁵	ɲɿ ²¹	tɕ ^h ɛ ⁵⁵
鹤庆 HQ	mie ⁴²	ts ^h ɛ ⁴⁴	ũ ²¹	tɕ ^h ɛ ⁵⁵ / piɛ ⁴⁴
兰坪 LP	mie ⁴²	ts ^h ɛ ⁴⁴	wɔ ²¹	tɕ ^h ɛ ⁵⁵
周城 ZC	mie ⁴² / xu ⁴⁴	ts ^h ɛ ⁴⁴	ɲɿ ²¹	tɕ ^h ɛ ⁵⁵
七里桥 QLQ	mie ³² / xu ⁴⁴	ts ^h ɛ ⁴⁴ / xuɔ ³⁵	ɲɿ ²¹	ts ^h ɛ ⁵⁵
云龙 YL	xu ⁴⁴	ts ^h ɛ ³³	ɛɔ ³¹	tɕ ^h ɛ ⁵⁵
祥云 XY	xou ⁴⁴	ts ^h ɛ ⁴⁴	ɲu ²¹	tɕ ^h ɛ ⁵⁵
洛本卓 LBZ	mu ⁴⁴	l ^h a ⁵⁵	ɲo ³¹	tɕ ^h a ⁴⁴
	409	410	411	412
中文	白	黑	绿	满
英文	white	black	green	full
剑川 JC	pɛ ⁴²	xu ⁴⁴	lu ⁴⁴	ma ³³
洱源 EY	pɛ ⁴²	xu ⁴⁴	ly ⁴⁴	ma ³³
鹤庆 HQ	pɛ ⁴²	xu ⁴⁴	luɔ ⁴⁴	ma ³³
兰坪 LP	pæ ⁴²	xu ⁴⁴	lao ⁴⁴	ma ³³
周城 ZC	pɛ ⁴²	xu ⁴⁴	ly ⁴⁴	ma ³³
七里桥 QLQ	pɛ ⁴²	xu ⁴⁴	ny ³³	ma ²¹
云龙 YL	pɛ ⁴²	xu ⁴⁴	ly ³³	ma ³³
祥云 XY	pɛ ⁴²	xou ⁴⁴	lu ⁴⁴	ma ³³
洛本卓 LBZ	pa ⁴⁴	xu ⁵⁵	pa ⁴⁴ tɕ ^h a ³¹	mĩɛ ³³
	413	414	415	416
中文	肥(猪)	干净	老	好
英文	fat (pig)	clean	old	good
剑川 JC	fɛ ⁴⁴	kā ⁵⁵ tɕu ⁴²	ku ³³	tɕ ^h o ⁵⁵ / ɕo ³¹ / xu ³³
洱源 EY	fɛ ⁴⁴	kā ³⁵ tɕu ⁴²	ku ³³	fɛ ³⁵
鹤庆 HQ	fv ²¹	kā ⁵⁵ tɕu ⁴²	ku ³³	xu ³³
兰坪 LP	fɛ ⁴⁴	kā ⁵⁵ tɕu ³¹	ku ³³	ɕo ⁴² / xu ³³
周城 ZC	ko ⁴²	kā ³⁵ tɕu ⁴²	ku ³³	fɛ ³⁵
七里桥 QLQ	ko ²¹	kā ³⁵ tɕu ⁴⁴	ku ³³	xu ³³
云龙 YL	fɛ ⁴⁴	kā ³⁵ tɕu ⁴²	ku ³³	xu ³³
祥云 XY	kā ²¹	kā ⁵⁵ tɕu ⁴²	ku ³³	xu ³³
洛本卓 LBZ	wæ ³¹	kā ⁵⁵ tɕi ⁴⁴	kv ³³	xu ³³ / N ³³

	417	418	419	420
中文	坏	慢	干	湿
英文	bad	slow	dry	wet
剑川 JC	xɛ ⁴⁴	k ^h uā ⁵⁵	kā ⁵⁵	xɛ ⁵⁵
洱源 EY	xɛ ⁴⁴	ɛ ³¹	ka ³⁵	p ^h ɛ ⁵⁵
鹤庆 HQ	xɛ ³³	k ^h uā ⁵⁵	kā ⁵⁵	p ^h ɛ ⁵⁵
兰坪 LP	xɛ ⁴⁴	k ^h uā ⁴⁴ ɕi ⁴⁴	kā ⁵⁵	xɛ ⁵⁵
周城 ZC	tua ³³	p ^h i ⁵⁵	ka ³⁵	xɛ ³⁵
七里桥 QLQ	xɛ ⁴⁴	k ^h ua ³⁵ ɕi ³⁵ / p ^h i ⁴²	ka ³⁵	p ^h ɛ ⁵⁵
云龙 YL	xɛ ³³	k ^h ua ⁴⁴	ka ³⁵	p ^h ɛ ⁵⁵
祥云 XY	xɛ ⁴⁴	p ^h i ⁵⁵	kā ⁵⁵	p ^h iɛ ⁵⁵
洛本卓 LBZ	ɬu ³³	diɛ ³¹	qā ⁵⁵	xā ⁵⁵
	421	422	423	424
中文	新	旧	生	熟
英文	new	old	raw	cooked
剑川 JC	ɕi ⁵⁵	ku ²¹	xɛ ⁵⁵	xu ³³
洱源 EY	ɕi ⁵⁵	ku ³¹	xɛ ⁵⁵	ɬy ⁴²
鹤庆 HQ	ɕi ⁵⁵	ku ³¹	x ^h ɛ ⁵⁵	tsū ⁴²
兰坪 LP	ɕi ⁵⁵	ku ³¹	xɛ ⁵⁵	tsao ⁴²
周城 ZC	ɕi ³⁵	ku ³¹	xɛ ⁵⁵	xu ³⁵
七里桥 QLQ	ɕi ³⁵	ku ³³	xɛ ⁵⁵	ɬy ⁴²
云龙 YL	sɛ ⁵⁵	ku ³¹	xɛ ⁵⁵	xu ³³
祥云 XY	ɕi ⁵⁵	ku ²¹	xɛ ⁵⁵	ɬɛ ⁴²
洛本卓 LBZ	sɛ ⁵⁵	gu ³³	xā ⁴⁴	p ^h ā ⁵⁵
	425	426	427	428
中文	快(刀)	钝(刀)	早	迟
英文	sharp (knife)	blunt (knife)	early	late
剑川 JC	ji ³¹	tua ³¹	ts ^h u ³³	me ³³
洱源 EY	ji ³¹	tua ³¹	tsɔ ³³	me ³³
鹤庆 HQ	ji ³¹	tua ³¹	tsu ³³	me ³³
兰坪 LP	ji ³¹	tu ²¹	tsu ³³	me ⁴⁴
周城 ZC	ji ³¹	ji ³¹ mu ³³	tsu ³³	me ³³
七里桥 QLQ	ji ³³	ji ³¹ mu ³³	tʃu ³³	me ³³
云龙 YL	ɛ ³¹	tua ³¹	tsu ³³	me ³³
祥云 XY	ji ³¹	tue ³³	zu ³³	me ³³
洛本卓 LBZ	ji ⁴⁴	ɬɛ ⁵⁵	ɬɛy ³³	mɛ ³³

	429	430	431	432
中文	贵	便宜	容易	难
英文	expensive	cheap	easy	difficult
剑川 JC	kɛ ⁴² tou ⁴²	p ^h i ⁵⁵ ji ⁴⁴	you ⁴² se ³¹	na ²¹
洱源 EY	k'i ⁴² to ³¹	p ^h i ⁵⁵ ji ⁴⁴	u ⁴²	na ³¹
鹤庆 HQ	kɛ ⁴² tou ⁴²	p ^h i ⁵⁵ ji ⁴⁴	you ⁴²	na ²¹
兰坪 LP	kɛ ³³ to ³¹	p ^h i ⁵⁵ ji ³¹	wu ³¹	na ²¹
周城 ZC	kɛ ⁴² to ³¹	p ^h i ⁵⁵ ji ⁴⁴	ɔ ⁴²	na ³¹
七里桥 QLQ	kiɛ ⁴⁴ to ³¹	p ^h i ⁵⁵ ji ⁴⁴	ɔ ⁴²	na ²¹
云龙 YL	kɛ ⁴² to ³¹	p ^h i ⁵⁵ ji ⁴⁴	jo ³³ ji ³¹	na ³¹
祥云 XY	k'i ⁴² tɕ ^h i ⁵⁵	p ^h i ⁵⁵ ji ⁴⁴	wɔ ⁴²	na ³¹
洛本卓 LBZ	qa ⁵⁵ ɔ ³¹	tɕ ^h y ⁵⁵ ji ³¹	wu ³³	nɛ ³³
	433	434	435	436
中文	热	冷	暖和	酸
英文	hot	cold	warm	sour
剑川 JC	wɛ ⁵⁵	ku ⁵⁵	wɛ ⁵⁵ vy ⁴⁴	sua ⁵⁵
洱源 EY	ui ³¹	ku ³⁵	wɛ ³⁵ vy ⁴⁴	sua ⁵⁵
鹤庆 HQ	wɛ ⁵⁵	ku ⁵⁵	wɛ ⁵⁵	s ^h ua ⁵⁵
兰坪 LP	ui ⁴² jɛ ⁴⁴	ku ⁴⁴	wɛ ⁵⁵	sua ⁵⁵
周城 ZC	wɛ ³⁵	ku ³⁵	wɛ ³⁵	sua ⁵⁵
七里桥 QLQ	ui ³¹ ni ⁴⁴ / wɛ ³⁵	ku ³⁵	wɛ ³⁵	ʃua ⁵⁵
云龙 YL	wɛ ³³	ku ³⁵	wɛ ⁴⁴ na ³¹	sua ⁵⁵
祥云 XY	wɛ ³⁵	ku ³⁵	wɛ ³⁵	sua ⁵⁵
洛本卓 LBZ	ni ⁵⁵	ku ⁵⁵	wɛ ⁵⁵	tɕa ^o ⁵⁵
	437	438	439	440
中文	甜	苦	辣	咸
英文	sweet	bitter	hot (spicy)	salty
剑川 JC	kã ⁵⁵ ɿ ³³	k ^h u ³³	tɕ ^h i ⁵⁵	ts ^h ou ³¹
洱源 EY	ka ³⁵ mi ⁴⁴	k ^h u ³³	tɕ ^h i ⁵⁵	ts ^h ɔ ³¹
鹤庆 HQ	kã ⁵⁵ vy ³³	k ^h u ³³	tɕ ^h i ⁵⁵	ts ^h ou ³¹
兰坪 LP	ɕo ⁵⁵	k ^h u ⁴⁴	tɕ ^h i ⁵⁵	ts ^h ɔ ⁴²
周城 ZC	ka ³⁵ mi ⁴⁴	k ^h u ³³	tɕ ^h i ⁵⁵	ts ^h o ³¹
七里桥 QLQ	ka ³⁵ mi ⁴⁴	k ^h u ³³	tɕ ^h i ⁵⁵	ts ^h o ³¹
云龙 YL	ka ³⁵ mi ⁴⁴	k ^h u ³³	tɕ ^h i ⁵⁵	ts ^h ɔ ³¹
祥云 XY	kã ³⁵ mi ⁴⁴	k ^h u ³³	tɕ ^h i ⁵⁵	ts ^h a ³¹
洛本卓 LBZ	ɕo ⁵⁵	q ^h y ³³	ts ^h e ⁵⁵	q ^h y ³³

	441	442	443	444
中文	香	臭	渴	累
英文	fragrant	smelly	thirsty	tired
剑川 JC	ɕõ ⁵⁵	ts ^h u ³¹	k ^h a ⁴⁴	sou ⁵⁵ k ^h u ³³
洱源 EY	ɕo ³⁵	ts ^h u ³¹	k ^h a ⁴⁴	so ³⁵ k ^h u ³³
鹤庆 HQ	ɕõu ⁵⁵	ts ^h u ³¹	k ^h a ⁴⁴	sou ⁵⁵ k ^h u ³³
兰坪 LP	ɕo ⁵⁵	ts ^h u ³¹	k ^h a ⁴⁴	so ⁵⁵ k ^h u ³³ / nɛ ⁴⁴
周城 ZC	ɕo ³⁵	ts ^h u ³¹	k ^h a ⁴⁴	so ³⁵ k ^h u ³³
七里桥 QLQ	ɕo ³⁵	tʃ ^h u ³¹	k ^h a ⁴⁴	so ³⁵ k ^h u ³³
云龙 YL	ɕo ³⁵	ts ^h u ³¹	k ^h a ⁴⁴	so ³⁵ k ^h u ³³
祥云 XY	ɕã ³⁵	ts ^h u ³¹	k ^h a ⁴⁴	so ³⁵ k ^h u ³³
洛本卓 LBZ	me ³³	t ^h ɿ ⁴²	q ^h a ⁵⁵	næ ⁴²
	445	446	447	448
中文	痛	勤	懒	穷
英文	painful	diligent	lazy	poor
剑川 JC	sɿ ³¹	tɕ ^h ũ ⁴² k ^h ue ⁵⁵ / tɕy ²¹	pe ⁴² jo ³³ ku ³³	ji ⁵⁵ ku ²¹
洱源 EY	sɿ ³¹	k ^h u ²¹ tɕ ^h ye ³¹	pe ⁴² jo ³³ ku ³³	k ^h ue ³³ so ⁴²
鹤庆 HQ	s ^h ũ ³¹	tɕ ^h ũ ⁵⁵ li ⁵⁵	pe ⁴² jo ³³	ji ⁵⁵ na ⁵⁵ ku ²¹
兰坪 LP	so ³¹	la ⁴⁴ le ³¹	lā ³¹	ɛ̃ ⁵⁵ ku ³¹
周城 ZC	sɿ ³¹	tɕ ^h u ⁴²	la ³¹	tɕ ^h o ⁴²
七里桥 QLQ	sɿ ³¹	vɿ ³⁵ li ³¹ / h ^u ⁵⁵ tɕu ³¹	pe ⁴² jo ³³ ku ³³	k ^h ue ³³ so ³¹
云龙 YL	sɿ ³¹	tɕ ^h u ³¹ k ^h ue ⁵⁵	pe ⁴² jo ³³ ku ³³	na ⁴² ko ³¹
祥云 XY	ɕɛ̃ ³¹	pa ⁴⁴ tɕa ⁴⁴	pe ⁴² jo ³³ ku ³³	na ²¹ kuo ⁴²
洛本卓 LBZ	so ³¹	ŋa ⁴⁴	pa ⁴² jao ⁴²	tɕi ³¹ tɕa ⁴²
	449	450	451	452
中文	富	一	二	三
英文	rich	one	two	three
剑川 JC	kou ²¹ ɕo ²¹	ji ⁴⁴	ko ³³	sa ⁵⁵
洱源 EY	ko ²¹ ji ³⁵ po ³⁵	ji ⁴⁴	ko ³³	sa ⁵⁵
鹤庆 HQ	ko ²¹ ji ²¹ pou ⁵⁵	ji ⁴⁴	kou ³³	s ^h a ⁵⁵
兰坪 LP	ku ³³ ɕo ³¹	ji ⁴⁴	ko ⁴⁴	sa ⁵⁵
周城 ZC	ko ²¹ ni ⁵⁵ po ³⁵	ji ⁴⁴	ko ³³	sa ⁵⁵
七里桥 QLQ	ko ²¹ ni ⁵⁵ po ³⁵	ji ⁴⁴	ko ³³	sa ⁵⁵
云龙 YL	ky ³¹ tɕ ^h o ⁴⁴	ji ⁴⁴ / a ³¹	ko ³³	sa ⁵⁵
祥云 XY	kou ⁴² xu ³³	a ³¹	kou ³³	sa ⁵⁵
洛本卓 LBZ	kao ³¹	ɿ ⁵⁵	ky ³³	sæ ⁵⁵

	453	454	455	456
中文	四	五	六	七
英文	four	five	six	seven
剑川 JC	ɕi ⁴⁴	ŋ ³³	fy ⁴⁴	tɕ ^h i ⁴⁴
洱源 EY	ɕi ⁴⁴	ŋo ³³	fy ⁴⁴	tɕ ^h i ⁴⁴
鹤庆 HQ	ɕi ⁴⁴	ŋü ³³	fy ⁴⁴	tɕ ^h i ⁴⁴
兰坪 LP	ɕi ⁴⁴	wõ ⁴⁴	fɔ ⁴⁴	tɕ ^h i ⁴⁴
周城 ZC	ɕi ⁴⁴	mu ³³	fy ⁴⁴	tɕ ^h i ⁴⁴
七里桥 QLQ	ɕi ⁴⁴	ŋy ³³	fy ⁴⁴	tɕ ^h i ⁴⁴
云龙 YL	ɕi ⁴⁴	ŋu ³³	fy ⁴⁴	tɕ ^h i ⁴⁴
祥云 XY	ɕi ⁴⁴	wõ ³³	fy ⁴⁴	tɕ ^h i ⁴⁴
洛本卓 LBZ	si ⁵⁵	ŋy ³³	fɔ ⁴⁴	tɕ ^h i ⁴⁴
	457	458	459	460
中文	八	九	十	一百
英文	eight	nine	ten	one hundred
剑川 JC	pia ⁴⁴	tɕu ³³	tse ⁴²	a ³¹ pe ⁴⁴
洱源 EY	pia ⁴⁴	tɕu ³³	tsɿ ⁴²	a ³¹ pe ⁴⁴
鹤庆 HQ	pia ⁴⁴	tɕu ³³	tsɿ ⁴²	a ³¹ pe ⁴⁴
兰坪 LP	pia ⁴⁴	tɕu ⁴⁴	tse ⁴²	a ³¹ pæ ⁴⁴
周城 ZC	pia ⁴⁴	tɕu ³³	tsɿ ⁴²	a ³¹ pe ⁴⁴
七里桥 QLQ	pia ⁴⁴	tɕu ³³	tsɿ ⁴²	a ³¹ pe ⁴⁴
云龙 YL	pia ⁴⁴	tɕu ³³	tsɿ ⁴²	a ³¹ pe ⁴⁴
祥云 XY	pia ⁴⁴	tɕou ³³	tsɿ ⁴²	a ³¹ pe ⁴⁴
洛本卓 LBZ	tʃua ⁴⁴	tɕi ³³	tɕæ ⁴²	ʔa ⁴⁴ pao ⁵⁵
	461	462	463	464
中文	一千	一万	个 (人)	个 (碗)
英文	one thousand	ten thousand	CLS for person	CLS for bowl
剑川 JC	a ³¹ tɕ ^h i ⁵⁵	a ³¹ ŋ ⁴²	ʃi ³¹	pe ²¹
洱源 EY	a ³¹ tɕ ^h i ⁵⁵	a ³¹ ŋy ⁴²	ni ²¹	pe ²¹
鹤庆 HQ	a ³¹ tɕ ^h i ⁵⁵	a ³¹ ŋ ⁴²	tu ²¹ ɔji ²¹	pe ²¹
兰坪 LP	a ³¹ tɕ ^h i ⁵⁵	a ³¹ wẽ ⁴²	ʃi ²¹	pe ²¹
周城 ZC	a ³¹ tɕ ^h i ⁵⁵	a ³¹ va ⁵⁵	ni ³¹	pe ²¹
七里桥 QLQ	a ³¹ tɕ ^h i ⁵⁵	a ³¹ ŋy ³²	ni ²¹	pe ²¹
云龙 YL	a ³¹ tɕ ^h i ⁵⁵	a ³¹ ne ⁴⁴	ni ²¹	pe ²¹
祥云 XY	a ³¹ tɕ ^h i ⁵⁵	a ³¹ ŋu ⁴²	i ⁴⁴ /we ³¹ /ku ⁴²	ku ⁴² pe ²¹
洛本卓 LBZ	ʔa ⁴⁴ tɕ ^h i ⁴⁴	ʔa ⁴⁴ wẽ ⁵⁵	ni ³¹	p ^h ɔ ⁵⁵

	465	466	467	468
中文	只 (鸡)	把 (刀)	把 (斧头)	条 (绳子)
英文	CLS for chicken	CLS for knife	CLS for axe	CLS for rope
剑川 JC	tɛ ²¹	tsɿ ³³	ts ^h ɿ ³¹	ju ⁴²
洱源 EY	tu ²¹	tsu ³³	ts ^h ɿ ³¹	nu ⁴²
鹤庆 HQ	tu ²¹	tsɿ ³³	tɕ ^h u ³¹	ju ⁴²
兰坪 LP	tiu ²¹	tsu ³³	ts ^h ɛ ⁴²	ju ⁴²
周城 ZC	tu ²¹	tsɿ ³³	ts ^h ɿ ³¹	nu ³²
七里桥 QLQ	tu ²¹	tsɿ ³³	ts ^h ɿ ³¹	ni ³²
云龙 YL	tu ²¹	tsu ³³	pa ⁴²	nu ⁴²
祥云 XY	we ³¹	tsɿ ³³	we ³¹	tɕɛ ⁴⁴
洛本卓 LBZ	ɬu ³¹	tɕi ³³	ʂɛ ³³	ʂæ ⁵⁵
	469	470	471	472
中文	根 (棍)	粒 (米)	滴 (水)	件 (衣)
英文	CLS for stick	CLS for grain of rice	CLS for drop of water	CLS for clothing
剑川 JC	kua ⁴⁴	k ^h ou ³³	fi ³³	k ^h o ⁵⁵
洱源 EY	kua ⁴⁴	k ^h ɔ ³³	tɛ ³³ / tɔ ⁴⁴	k ^h ɔ ⁵⁵
鹤庆 HQ	kua ⁴⁴	k ^h u ³³	tiɛ ³³	k ^h ɔu ⁵⁵
兰坪 LP	kua ⁴⁴	k ^h u ³³	fiɛ ³³	k ^h ɔ ⁵⁵
周城 ZC	kua ⁴⁴	k ^h u ³³	to ³³	k ^h o ⁵⁵
七里桥 QLQ	kua ⁴⁴	ɔ ³³	to ⁴⁴	k ^h o ⁵⁵
云龙 YL	kua ⁴⁴	k ^h ɔ ³³	ti ³³	k ^h ɔ ⁵⁵
祥云 XY	kua ⁴⁴	k ^h u ³³ ku ⁴²	fi ³³	k ^h a ⁵⁵
洛本卓 LBZ	qua ⁵⁵	q ^h ɔ ³¹	to ⁵⁵	k ^h ɿ ⁵⁵
	473	474	475	476
中文	双 (鞋)	我	我们	咱们
英文	CLS for pair of shoes	I (1 p.s.)	we (1 p.p.)	we (inclusive)
剑川 JC	tɕi ³³	ŋo ³¹	ja ⁵⁵	ja ⁵⁵
洱源 EY	tɕi ³³	ŋɔ ³¹	ja ⁵⁵	na ⁵⁵
鹤庆 HQ	tɕi ³³	ŋɔ ³¹	ja ⁵⁵	ja ⁵⁵
兰坪 LP	tɕi ³³	ŋɔ ³¹	ja ⁵⁵	ja ⁵⁵
周城 ZC	tɕi ³³	ŋɔ ³¹	ja ⁵⁵	na ⁵⁵
七里桥 QLQ	tɕi ³³	ŋɔ ³¹	ja ⁵⁵	nia ⁵⁵
云龙 YL	dɛ ³³	ŋɔ ³¹	na ⁵⁵	na ⁵⁵
祥云 XY	ji ³³	ŋɔ ³¹	ja ⁵⁵	nia ⁵⁵
洛本卓 LBZ	zɛ ³³	no ⁴²	mi ⁵⁵	mi ⁵⁵ tɕa ³¹

	477	478	479	480
中文	你	你们	他	他们
英文	you (2 p.s.)	you (2 p.p.)	he, she, it (3 p.s.)	they (3 p.p.)
剑川 JC	no ³¹	na ⁵⁵	mo ³¹	ma ⁵⁵
洱源 EY	no ³¹	na ⁵⁵	po ³¹	pa ⁵⁵
鹤庆 HQ	no ³¹	na ⁵⁵	vo ³¹	va ⁵⁵
兰坪 LP	no ³¹	na ⁵⁵	mo ³¹	ma ⁵⁵
周城 ZC	no ³¹	na ⁵⁵	po ³¹	pa ⁵⁵
七里桥 QLQ	no ³¹	na ⁵⁵	vo ³¹	va ⁵⁵
云龙 YL	no ³¹	na ⁵⁵	po ³¹	pa ⁵⁵
祥云 XY	no ³¹	na ⁵⁵	po ³¹	pa ⁵⁵
洛本卓 LBZ	no ⁴⁴	ni ⁵⁵ tɕa ³¹	bo ⁴⁴	bi ⁵⁵ tɕa ³¹
	481	482	483	484
中文	我 (的)	你 (的)	他 (的)	这
英文	my	your (sg)	his/her	this
剑川 JC	yo ⁵⁵	nur ⁵⁵	mur ⁵⁵	lu ³¹
洱源 EY	ɣur ⁵⁵	nur ⁵⁵	pur ⁵⁵	nur ³¹
鹤庆 HQ	ɣur ⁵⁵	nur ⁵⁵	vur ⁵⁵	a ⁵⁵ ta ⁴⁴
兰坪 LP	ɣur ⁵⁵ xao ³¹	nur ⁵⁵ xao ³¹	mur ⁵⁵ xao ³¹	no ³¹
周城 ZC	ɣur ⁵⁵	nur ⁵⁵	pur ⁵⁵	tu ³¹
七里桥 QLQ	ɣur ⁵⁵	nur ⁵⁵	vur ⁵⁵	lu ³¹
云龙 YL	ɣur ⁵⁵	nur ⁵⁵	pur ⁵⁵	nur ³¹
祥云 XY	ɣur ⁵⁵	mur ⁵⁵	pou ⁵⁵	to ³¹
洛本卓 LBZ	no ⁵⁵ my ⁵⁵	no ⁵⁵ my ⁵⁵	bo ⁵⁵ my ⁵⁵	no ⁴⁴
	485	486	487	488
中文	这里	那	那里	谁
英文	here	that	there	who
剑川 JC	a ⁵⁵ ta ⁴⁴	na ⁵⁵	na ⁵⁵ a ⁴²	a ³¹ to ²¹
洱源 EY	a ⁵⁵ ta ⁴⁴	na ⁵⁵	na ⁵⁵ xa ²¹	a ³¹ to ²¹
鹤庆 HQ	ta ⁴⁴ lu ³³	na ⁵⁵	na ⁵⁵ lu ³³	ma ⁴⁴ tu ²¹
兰坪 LP	a ⁵⁵ la ⁵⁵	na ⁵⁵	ta ⁵⁵ wa ⁴⁴	mu ⁵⁵ ji ³¹
周城 ZC	tu ³¹ we ³³	to ⁵⁵	to ⁵⁵ we ³³	a ⁵⁵ na ⁴⁴ ni ²¹
七里桥 QLQ	a ⁵⁵ ta ⁴⁴	vur ⁵⁵	vur ⁵⁵ ta ⁴⁴	a ⁵⁵ ni ²¹
云龙 YL	a ⁵⁵ ta ⁴⁴	na ⁵⁵	na ⁵⁵ ɣue ³³	a ⁵⁵ na ⁴⁴ ni ²¹
祥云 XY	a ⁵⁵ ta ⁴⁴	na ⁵⁵	na ⁵⁵ xou ³¹	a ⁵⁵ to ²¹ i ⁴⁴
洛本卓 LBZ	no ⁴⁴ pæ ⁵⁵ xui ³³	to ⁵⁵ wā ⁵⁵	to ⁴⁴ wa ⁴⁴ m ⁴⁴	a ⁵⁵ to ³¹

	489	490	491	492
中文	什么	哪里	怎样	多少
英文	what	where	how	how many
剑川 JC	e ⁵⁵ xɛ ³¹	a ⁵⁵ na ⁴⁴	tsɿ ⁵⁵ ke ²¹	tɕi ⁵⁵ ɕu ³³
洱源 EY	a ⁵⁵ ne ³¹	a ⁵⁵ na ⁴⁴		ti ⁵⁵ ɕu ³³
鹤庆 HQ	a ⁵⁵ x ^h a ³¹	ma ⁴⁴ lu ³³	tsɿ ⁵⁵ ke ²¹	tɕi ⁵⁵ ɕu ³³
兰坪 LP	e ⁵⁵ xɛ ⁴²	a ⁵⁵ ma ⁵⁵	l ⁵⁵ ke ³¹	tɕi ⁵⁵ ɕo ⁴⁴
周城 ZC	xa ³¹ le ³¹	a ⁵⁵ we ³³	tsu ⁵⁵ nu ⁵⁵ to ²¹	tɕi ⁵⁵ ɕo ³³
七里桥 QLQ	xɛ ³¹ ne ³¹	a ⁵⁵ na ⁴⁴	tsɿ ⁵⁵ mu ⁵⁵ ne ³¹	tɕi ⁵⁵ ɕo ³³
云龙 YL	a ⁵⁵ xe ³¹	a ⁵⁵ na ⁴⁴	l ⁴⁴ mu ⁴⁴	tɕi ⁵⁵ ɕu ³³
祥云 XY	a ⁵⁵ le ³¹ xo ⁴⁴	tɕɛ̃ ³⁵ tsɿ ⁵⁵ xou ³³		tɕo ⁵⁵ ɕu ³³
洛本卓 LBZ	a ⁵⁵ xã ⁴²	a ⁵⁵ mã ⁵⁵	ʃɛ̃ ⁵⁵ me ³³ xe ³³	ti ⁵⁵ du ⁴⁴
	493	494	495	496
中文	刚才	先	后	慢慢
英文	just now	first	afterwards	slowly
剑川 JC	mu ⁵⁵ tu ²¹	ɕi ⁵⁵ ɔ̃tu ²¹	yur ³³	k ^h ũã ⁵⁵ ɕi ⁵⁵
洱源 EY	mu ⁵⁵ tu ²¹ no ³⁵	tu ²¹	yur ³³	k ^h ua ⁵⁵ ɕi ⁵⁵
鹤庆 HQ	tɕa ⁵⁵ pu ⁵⁵ tu ⁵⁵	tu ²¹	yur ³³	k ^h ũã ⁵⁵ ɕi ⁵⁵
兰坪 LP	mu ⁵⁵ tiu ²¹	tiu ²¹	yur ³³	k ^h ũã ⁵⁵ ɕi ⁵⁵
周城 ZC	mu ⁵⁵ tɕi ⁴²	ɕi ³³	yur ³³	k ^h ua ⁵⁵ ɕi ³⁵
七里桥 QLQ	tu ²¹ t ^h a ⁵⁵	tu ²¹	u ³³	k ^h ua ⁵⁵ ɕi ³⁵
云龙 YL	tsu ⁴⁴ sɿ ³¹	sɛ ³³	do ³¹ xu ⁴⁴	k ^h ua ⁵⁵ se ⁵⁵
祥云 XY	tou ³¹ mu ⁵⁵ na ⁵⁵ ɕi ³⁵	tou ³¹	you ³³	a ³¹ sou ³¹ sou ³¹ nou ⁵⁵
洛本卓 LBZ	xa ³⁵ cy ³¹	ty ³¹	tũ ³¹ xũ ³³	a ⁴⁴ ju ⁵⁵

	497	498	499	500
中文	快快	很	都	再
英文	quickly	very	all	again
剑川 JC	tɕi ⁴² tsua ⁴²	tsa ³⁵ sɿ ⁵⁵	tsa ³⁵	tse ⁴⁴
洱源 EY	tɕi ⁴² tsua ⁴²	tsa ³⁵ sɿ ³⁵	tɕ ^h ɿ ⁵⁵ ku ⁵⁵	tse ⁴⁴
鹤庆 HQ	tɕi ⁴² tsua ⁴²	tsa ³⁵ s ^h u ⁵⁵	tsa ³⁵ ɕu ⁵⁵	tse ⁵⁵
兰坪 LP	tɕi ⁵⁵ tsua ⁴²	tsa ³⁵ sɿ ⁵⁵	tɕ ^h ɿ ⁵⁵ (tu ³¹ ku ³³)	tse ⁴²
周城 ZC		fɿ ³¹	tu ⁵⁵	tse ⁴⁴
七里桥 QLQ	tɕu ³¹ / ɛ ³³ le ³³	fɛ ⁴⁴	ɿ ³⁵ so ³¹	tse ⁴⁴
云龙 YL	ka ³¹ tɕu ³³	xa ³¹	tsa ⁵⁵ tɕ ^h ɿ ³¹	tse ⁴⁴
祥云 XY	p ^h ɿ ⁵⁵ p ^h ɿ ³¹ nou ⁵⁵	tsa ³⁵ sɿ ³³	tɕ ^h ue ⁵⁵	tse ⁴⁴
洛本卓 LBZ	tsa ⁴⁴ lu ⁵⁵	kao ⁵⁵	da ⁵⁵ tɕã ³¹	di ⁴⁴

Appendix 4: Bai population by province and sex¹

附录5：白族人口（以省、自治区、直辖市及

性别划分统计）²

		小计(total)	男(male)	女(female)	小计(total)	男(male)	女(female)
合计	China total	1,858,063	947,019	911,044	946	225	721
云南省	Yunnan	1,505,644	763,316	742,328	831	392	439
贵州省	Guizhou	187,362	101,312	86,050	761	117	644
湖南省	Hunan	125,597	65,371	60,226	722	505	217
四川省	Sichuan	7,335	3,441	3,894	608	302	306
湖北省	Hubei	7,173	3,940	3,233	506	244	262
广东省	Guangdong	5,905	2,983	2,922	449	223	226
浙江省	Zhejiang	2,659	920	1,739	409	216	193
山东省	Shandong	2,405	220	2,185	353	120	233
江苏省	Jiangsu	2,300	453	1,847	338	193	145
北京市	Beijing	1,554	816	738	337	119	218
重庆市	Chongqing	1,140	464	676	298	161	137
河北省	Hebei	946	197	749	278	142	136
					272	158	114
					248	108	140
					242	149	93
					222	101	121
					184	94	90
					39	17	22
河南省	Henan						
广西壮族自治区	Guangxi						
安徽省	Anhui						
西藏自治区	Tibet						
福建省	Fujian						
上海市	Shanghai						
辽宁省	Liaoning						
新疆维吾尔自治区	Xinjiang						
山西省	Shanxi						
陕西省	Shaanxi						
江西省	Jiangxi						
吉林省	Jilin						
黑龙江省	Heilongjiang						
甘肃省	Gansu						
内蒙古自治区	Inner Mongolia						
青海省	Qinghai						
海南省	Hainan						
天津市	Tianjin						
宁夏回族自治区	Ningxia						

¹ These data are the unadjusted figures from the fifth national census, which was carried out on 1 November 2000

² 此数据直接引自 2000 年 11 月 1 日第五次全国人口普查数据。

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