



**HAL**  
open science

## The phonology of Laze: phonemic analysis, syllabic inventory, and a short word list

Alexis Michaud, Guillaume Jacques

► **To cite this version:**

Alexis Michaud, Guillaume Jacques. The phonology of Laze: phonemic analysis, syllabic inventory, and a short word list. *Yuyanxue Luncong*, 2012, 45, pp.196-230. halshs-00582639v1

**HAL Id: halshs-00582639**

**<https://shs.hal.science/halshs-00582639v1>**

Submitted on 3 Apr 2011 (v1), last revised 24 Jul 2012 (v2)

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

---

The phonology of Laze: phonemic analysis, syllabic inventory, and a short word list\*

[Final author manuscript. To appear in *Yuyanxue Luncong* 语言学论丛]

Alexis Michaud (米 可)

Guillaume Jacques (向柏霖)

LACITO-CNRS

CRLAO-CNRS

alexis.michaud@vjf.cnrs.fr

rgyalrongskad@gmail.com

*Abstract:* Laze is a Sino-Tibetan language spoken in the county of Muli, in Sichuan, by a population of less than 1,000. The article proposes a synchronic account of Laze phonology, supplemented by a list of about 1,400 words in the Appendix. A phonemic analysis is proposed, with an inventory of syllables that brings to light the synchronic distributional properties of Laze onsets and rhymes – properties that are crucial to ongoing research into the historical phonology of the subgroup of Sino-Tibetan to which Laze belongs.

## Introduction

This article focuses on Laze (autonym: /laːlzeː/; referred to in China as Muli Shuitian 木里水田话 or Lare 拉热话), as spoken in Xiangjiao township, Muli prefecture, Sichuan, China (四川凉山州木里县项脚乡). Laze has fewer than 300 proficient speakers, and is little documented; see Huang Bufan 2009 for an introduction to a neighbouring dialect. The first author of this article conducted fieldwork on Laze in 2008 and 2009.

The article provides a synchronic analysis of Laze; a Chinese-Laze word list is provided in the Appendix. A phonemic analysis is proposed, with a discussion of issues encountered in phonemicisation, and an inventory of syllables that brings to light the synchronic distributional properties of Laze onsets and rhymes – properties that are crucial to ongoing research into the historical phonology of the subgroup of Sino-Tibetan to which Laze belongs: see Jacques et al. 2011.

The phonemic system of Laze is analysed here following the classical methods developed in the Prague school of phonology, as set out, for instance, by Martinet (1956, 1980 [1960]:61-82).

---

\* The Laze data were collected by Alexis Michaud in Muli in 2008 and 2009. Many thanks to Mrs. Tian Xiufang (田秀芳女士; in Laze: /suːˈgɣ̃ˈmiː/) and her family. Many thanks to our colleagues Katia Chirkova, Huang Xing, Latami Dashi, Lurong Duoding and Sun Hongkai for their help and support, and to an anonymous reviewer for helpful and encouraging comments; errors are our own responsibility. Fieldwork was funded by the Agence Nationale de la Recherche (France) as part of the research project “What defines Qiang-ness? Towards a phylogenetic assessment of the Southern Qiangic languages of Muli” (ANR-07-JCJC-0063; acronym: PASQi).

### 1. *Syllable structure and inventory of syllables*

Laze, like Naxi and Yongning Na, has a simple syllabic structure: (C)(G)V + T, where C is a consonant, G an on-glide, V a vowel, and T a tone. Brackets indicate optional constituents. There are neither initial clusters nor final consonants. Table 1 provides a syllabic inventory. For the sake of convenience, glides have been considered as part of the rhyme: thus, there are separate columns for /æ/, /wæ/ and /jæ/. Tones are not included because in synchrony they combine freely with all syllable types.<sup>1</sup> The table is phonemicised: for instance, ‘ɥwɣ’ in the cell corresponding to initial /h/ and rhyme /wɣ/ indicates that the combination /hwɣ/ is attested, and that its phonetic realisation can be approximated as [ɥwɣ], i.e. the consonant /h/ undergoes allophonic rounding in this context. Explanations on the phonemicisation process will be provided below (section 3).

Each cell contains (i) the phonetic realisation of the syllable and (ii) at least one example in Chinese translation. A long dash (—) indicates an unattested combination. In addition to these two clear cases (existence vs. nonexistence), there exist a few borderline cases, essentially consisting of borrowings and of syllables resulting from vowel harmony. ‘B’ indicates a recent borrowing from Chinese, e.g. ‘B’ in the cell corresponding to initial /f/ and rhyme /a/ means that the syllable /fa/ is only found in recent Chinese borrowings; an example is 发, Pinyin: fā. (A description of the essentials of the Chinese dialect of Muli, the most important donor dialect from the 1950s to recent years, is provided by Li Lan 2010.) ‘VH’ indicates that the combination at issue is very likely to be the result of vowel harmony: that it is only found as the first syllable within disyllables whose two syllables have the same rhyme. This important phenomenon is described in section 2 below.

---

<sup>1</sup> In Laze, there are three lexical tones for nouns: High, Mid and Low, and four for verbs (including stative verbs): again, High, Mid and Low, and Mid-to-High, the latter consisting of a sequence of two tonal levels (see Michaud 2009 for an analysis of this tone system).

Table 1. An inventory of the syllables of Laze. The two words glossed as ‘（虚词）’(‘function words’) are the accomplished, /tjɣ-/ and the mirative, /ljɣ-/.<sup>2</sup>

|                | a                   | æ                  | wæ                  | wa                  | i                   | ie                   | y                    | u                   | ɔ                  | u                  | ɣ                   | e | wɣ                   | ɿ         | ɤ                  | jæ     | jɣ                   | ja                   |
|----------------|---------------------|--------------------|---------------------|---------------------|---------------------|----------------------|----------------------|---------------------|--------------------|--------------------|---------------------|---|----------------------|-----------|--------------------|--------|----------------------|----------------------|
| zero           | ʔa 家                | —                  | wæ 猪崽               | wa 花                | ʔi 水                | ʔie 打饱嗝儿             | jy 梦, 坟              | ʔu, u 咱们            | —                  | —                  | ɣɣ 肚带               | — | wɣ 猪                 | ɿ 书, 笑, 石 | ɤ 肠                | —      | jɣ 奶奶                | ja 袖子                |
| h              | xa 难                | hæ 害羞              | ɣwæ 肩膀              | ɣwa 挂               | ci 舌头               | —                    | cy 痔                 | ɣu 孩子               | xɔ 楔子              | xu 晚上              | —                   | — | ɣwɣ 渴                | —         | —                  | —      | —                    | —                    |
| f              | B                   | —                  | —                   | —                   | fi 雨                | —                    | —                    | —                   | —                  | —                  | —                   | — | —                    | —         | fy 脑子              | —      | —                    | —                    |
| v              | —                   | væ 左               | —                   | —                   | vi 牛                | vie 雪                | —                    | —                   | —                  | —                  | —                   | — | —                    | —         | cf zero + ɣ        | —      | —                    | —                    |
| k <sup>h</sup> | q <sup>h</sup> a 露水 | q <sup>h</sup> æ 沟 | —                   | —                   | tɕ <sup>h</sup> i 卖 | —                    | tɕ <sup>h</sup> y 头发 | k <sup>h</sup> u 坝  | q <sup>h</sup> ɔ 雾 | k <sup>h</sup> u 狗 | k <sup>h</sup> ɣ 背篓 | — | k <sup>h</sup> wɣ 房屋 | —         | k <sup>h</sup> y 烟 | —      | tɕ <sup>h</sup> ɣ 蔬菜 | tɕ <sup>h</sup> a 礼物 |
| k              | qa 遮                | qæ 换               | —                   | qwa 痒, 晋            | tɕi 云               | tɕie 痰               | tɕy 压                | ku 这里               | qɔ 喉咙              | ku 能               | kɣ 额头               | — | kwɣ 黎明               | —         | kɤ 皮肤              | tɕæ 湿  | tɕɣ 煮                | tɕa 蓑衣, 嚼            |
| ɣ              | ka 埡口               | kæ 富               | k <sup>w</sup> æ 反刍 | k <sup>w</sup> a 庄稼 | —                   | —                    | —                    | —                   | kɔ 吞, 客气           | —                  | —                   | — | —                    | —         | —                  | —      | —                    | —                    |
| g              | VH                  | —                  | VH                  | —                   | dzi 袋子              | —                    | dzy 手镯               | gu 妹妹               | —                  | gu 弟弟              | gɣ 上                | — | gwɣ 下午               | —         | gy 雷               | dzæ 泥巴 | dzɣ 美                | dza 泥巴               |
|                | a                   | æ                  | wæ                  | wa                  | i                   | ie                   | y                    | u                   | ɔ                  | u                  | ɣ                   | e | wɣ                   | ɿ         | ɤ                  | jæ     | jɣ                   | ja                   |
| t <sup>h</sup> | t <sup>h</sup> a 书  | —                  | —                   | —                   | —                   | t <sup>h</sup> ie 聪明 | —                    | t <sup>h</sup> u 牙齿 | —                  | —                  | —                   | — | —                    | —         | —                  | —      | —                    | —                    |
| t <sup>h</sup> | —                   | t <sup>h</sup> æ 冷 | —                   | —                   | —                   | —                    | —                    | —                   | —                  | t <sup>h</sup> u 这 | —                   | — | —                    | —         | t <sup>h</sup> y 出 | —      | —                    | —                    |
| t              | ta 全部               | —                  | —                   | —                   | B                   | tie (退)后             | ty 系                 | tu 哄                | —                  | —                  | tɣ 茶壶; 那里           | — | —                    | —         | tɤ 洞               | —      | tjɣ (虚词)             | —                    |

<sup>2</sup> Throughout the article, tones are indicated by means of Chao tone-letters: 1 for H(igh), 2 for M(id), 3 for L(ow), 4 for MH.

|                 |                      |                     |                      |        |                     |                      |             |                     |            |                     |                     |       |                      |       |                      |       |         |    |
|-----------------|----------------------|---------------------|----------------------|--------|---------------------|----------------------|-------------|---------------------|------------|---------------------|---------------------|-------|----------------------|-------|----------------------|-------|---------|----|
| t               | —                    | tæ 白齿               | —                    | —      | —                   | —                    | —           | —                   | —          | tu 雾                | —                   | —     | —                    | tɥ 皱  | tɥ 骨髓                | —     | —       | —  |
| d               | da 砍                 | —                   | —                    | —      | di 少                | die 浅                | dy 地, 户     | du 害羞               | —          | —                   | dy 围起来              | —     | —                    | —     | dy 翅膀                | —     | —       | —  |
| dɥ              | —                    | dæ 涉过去              | dɥwæ 狐狸              | —      | —                   | —                    | —           | —                   | —          | ɥu 刻                | —                   | —     | —                    | ɥɥ 湖  | dɥ 坟                 | —     | —       | —  |
|                 | a                    | æ                   | wæ                   | wa     | i                   | ie                   | y           | u                   | ɔ          | u                   | ɣ                   | e     | wɣ                   | ɥ     | ɥ                    | jæ    | jɣ      | ja |
| p <sup>h</sup>  | p <sup>h</sup> a 狼   | p <sup>h</sup> æ 块  | —                    | —      | p <sup>h</sup> i 高兴 | p <sup>h</sup> ie 蝴蝶 | —           | p <sup>h</sup> u 逃跑 | —          | —                   | p <sup>h</sup> ɣ 后悔 | —     | —                    | —     | p <sup>h</sup> ɥ 霜   | —     | —       | —  |
| p               | pa 洞                 | —                   | —                    | —      | pi 长大               | pie 嘴                | —           | pu 一堆               | —          | —                   | pɣ 拿                | B     | —                    | —     | pɥ 祈祷                | pjæ 半 | —       | —  |
| b               | ba 衣服                | bæ 蠢                | —                    | —      | bi 门                | bie 旁                | —           | bu 闪电               | bɔ 苍蝇 (VH) | —                   | bɣ 普米               | —     | —                    | —     | bɥ 臭                 | bjæ 腮 | —       | —  |
| ɬ               | —                    | —                   | —                    | —      | ɬi 天花板              | ɬie 月                | ɬy 庚        | ɬu 肋骨               | —          | —                   | —                   | —     | —                    | —     | —                    | —     | —       | —  |
| l               | la 手                 | læ 洞                | lwæ 叫                | —      | ɬi 田                | ɬie 茶                | ɬy 果子       | ɬu 扛                | ɬɔ 马       | —                   | —                   | —     | —                    | —     | ɬɥ 含                 | —     | lɣ (虚词) | —  |
| s               | sa 气                 | sæ 鞋 (VH)           | —                    | —      | si 怕                | —                    | sy 公 (马...) | su 明天               | —          | sɥ 知道               | —                   | se 凉快 | —                    | —     | sɥ 磨刀                | —     | —       | —  |
| z               | za 孩子                | —                   | —                    | —      | zi 睡觉               | —                    | zy 林        | zu 孤儿               | —          | zɥ 疹子               | —                   | ze 儿子 | —                    | —     | zɥ 揉                 | —     | —       | —  |
| ʃ               | ʃa 话                 | ʃæ 拖                | ʃwæ 马嚼子              | ʃwa 搅拌 | —                   | ʃie 七月 VH            | ʃy : —      | ʃu 铁                | —          | ʃɥ 跳蚤               | —                   | —     | ʃwɣ 盘子               | ʃɥ 水獭 | ʃɥ 喝                 | —     | —       | —  |
| ʒ               | —                    | zæ 火花               | zwæ 飘动               | zwa 努力 | —                   | —                    | zy : —      | zu 中午               | —          | zɥ 山                | —                   | —     | zwɣ 养                | —     | zɥ 蛇                 | —     | —       | —  |
|                 | a                    | æ                   | wæ                   | wa     | i                   | ie                   | y           | u                   | ɔ          | u                   | ɣ                   | e     | wɣ                   | ɥ     | ɥ                    | jæ    | jɣ      | ja |
| tʃ <sup>h</sup> | tʃ <sup>h</sup> a 铍头 | tʃ <sup>h</sup> æ 代 | tʃ <sup>h</sup> wæ 快 | —      | —                   | —                    | —           | tʃ <sup>h</sup> u 炒 | —          | tʃ <sup>h</sup> ɥ 掉 | —                   | —     | tʃ <sup>h</sup> wɣ 梳 | —     | tʃ <sup>h</sup> ɥ 染料 | —     | —       | —  |
| tʃ              | tʃa 掷                | tʃæ 段               | tʃwæ 搅拌              | —      | —                   | —                    | —           | tʃu 锥               | —          | tʃɥ 画               | —                   | B     | tʃwɣ 数               | —     | tʃɥ 传染               | —     | —       | —  |

|                 |                          |                |            |            |                     |            |                          |                     |   |                          |         |                     |            |   |                     |            |       |        |
|-----------------|--------------------------|----------------|------------|------------|---------------------|------------|--------------------------|---------------------|---|--------------------------|---------|---------------------|------------|---|---------------------|------------|-------|--------|
| dz              | dza 干<br>扰               | dzæ 抢          | dzywæ<br>挖 | —          | —                   | —          | —                        | dzu 痛               | — | dzu 下<br>(雨)             | —       | —                   | dzywɣ 抓    | — | dzy 燃烧              | —          | —     | —      |
| ts <sup>h</sup> | ts <sup>h</sup> a 蚂<br>蚁 | —              | —          | —          | ts <sup>h</sup> i 剪 | —          | ts <sup>h</sup> y 冬<br>天 | ts <sup>h</sup> u 跳 | — | ts <sup>h</sup> ɿ 一<br>张 | —       | ts <sup>h</sup> e 盐 | —          | — | ts <sup>h</sup> y 拣 | —          | —     | —      |
| ts              | tsa 刨                    | tsæ 钩子<br>(VH) | —          | —          | tsi 星               | —          | —                        | tsu 火塘              | — | tsɿ 黏                    | —       | tse 山               | —          | — | tsy 咳嗽              | —          | —     | —      |
| dz              | dza 跑                    | —              | —          | —          | dzi 海               | —          | dzy 缠,<br>桥              | —                   | — | dzi 勒住                   | —       | dze 吃               | —          | — | dzy 凿<br>子          | —          | —     | —      |
|                 | a                        | æ              | wæ         | wa         | i                   | ie         | y                        | u                   | ɔ | ɯ                        | ɣ       | e                   | wɣ         | ɿ | ɥ                   | jæ         | jɣ    | ja     |
| m               | ma 士兵                    | mæ 大<br>竹子     | —          | —          | mi 酥油               | mie 太<br>阳 | —                        | mu 天                | — | —                        | — (neg) | —                   | —          | — | mɯ 天                | mjæ 眼<br>泪 | —     | —      |
| n               | na 海                     | næ 挤压          | —          | —          | ni 嘴唇               | —          | —                        | nu 你                | — | nɯ 由                     | —       | —                   | —          | — | nɯ 臭                | njæ 眨<br>眼 | njɣ 鼻 | nja 苋米 |
| ŋ               | ŋa 我                     | —              | —          | ŋwa 膝<br>盖 | ni 太阳               | nie 霜      | ny 火钳                    | —                   | — | ŋw 是                     | ŋɣ 跌    | —                   | ŋwɣ 白<br>齿 | — | ŋɯ 银                | —          | —     | —      |

To the onsets and rhymes in Table 1 must be added some phonemes that are so restricted in their distribution that it is simpler to present them separately. These are (i) a neutral vowel, /ə/, appearing in some function words such as the negation, /məɫ/, and taking on its quality from the vowel that follows; and (ii) as many as nine nasal rhymes, shown in Table 2.

Table 2. Laze syllables containing nasal rhymes (in phonemic notation).

|          |     |    |      |    |    |     |    |       |           |
|----------|-----|----|------|----|----|-----|----|-------|-----------|
| syllable | hṽa | hṽ | hṽ   | hṽ | hṽ | hṽɣ | hṽ | hṽe   |           |
| example  | 绿豆  | 听  | 锯, 金 | 毛  | 走  | 慢   | 人  | 站, 面包 |           |
| syllable |     |    | ṽ    | ṽ  |    |     |    |       | ṽ         |
| example  |     |    | 铜    | 呛  |    |     |    |       | 螳螂, 自己, 驴 |

Most syllables with nasal vowels are made up of an initial [h] and a nasal vowel: nasality runs throughout the syllable. They can be analysed synchronically in either of two ways: as /hṽ/, where /ṽ/ is a nasal vowel, in which case a large set of nasal vowels must be granted phonemic status; or as /hṽ/, recognising an additional consonant: a nasal fricative, /h/. The latter solution, adopted by Bradley 2003:224 for similar examples in Lisu, is more economical in terms of number of phonemes.

These sounds originate diachronically in initial consonantal clusters CN-, where C is an obstruent and N a nasal consonant.<sup>1</sup> There are also three syllables without an initial /h/, consisting simply of a nasal vowel: [ṽ], [ṽ] and [ṽ].<sup>2</sup> Examples include:

(i) [ṽ] ‘brass’

(ii) [ṽ] ‘to irritate (e.g. smoke irritates the eye)’; Huang Bufan also reports [ṽ]

<sup>1</sup> See Michaud 2006 for Naxi, Michaud 2008 for Yongning Na, and Michaud et al. submitted for a cross-linguistic study.

<sup>2</sup> Pr. Huang also noted /wṽ/ for ‘to shout, to cry out (of pigs)’; in the dialect described here, this word is realised as /lwṽ/.

(original transcription: [ʔ̃<sup>31</sup>]) for ‘goose’, a word for which the language consultants in the valley of Xiangjiao now use a Chinese borrowing.

(iii) [la.lmie.lla.ʔ̃ʔ̃] ‘praying mantis’, [ʔ̃ʔ̃-tʂʔ̃] ‘-self (*in*: myself, yourself)’, and two likely borrowings from Pumi/Prinmi, which up until the middle of the 20<sup>th</sup> century was the lingua franca of Muli (about the history of Muli, see Wellens 2006): [tʂ.lby.l] ‘donkey, ass’ and [nʂ.lby.ltɕ<sup>hi</sup>.l] ‘elephant’.

These syllables raise an issue for phonemicisation. Those with an initial glottal stop can be interpreted phonemically as simple vowels, the phonetic glottal stop being an empty-onset filler, on the analogy of other cases such as /i/, realised as [ʔ̃i]. Pushing further the logic of descriptive economy, in the absence of any [ʔ̃æ] or [ʔ̃ɔ] syllables, the syllable [ʔ̃æ] could be interpreted as the phonetic realisation of a simple /æ/, and [ʔ̃ɔ] as /ɔ/; but this option, which would be costly in terms of phonetic plausibility, is not open for [ʔ̃ʏ], since that syllable contrasts with [ʏ]. We propose to analyse [ʔ̃ʏ], [ʔ̃æ] and [ʔ̃ɔ] as /ʏ/, /æ/ and /ɔ/, a decision which is consistent with the recognition of the phonemic nasal rhymes /æ̃/, /ʏ̃/, /w̃a/, /ã/, /ũ/, /w̃ɔ̃/, /ĩ/ and /ĩe/ after /h/.

## 2. A note about vowel harmony and sandhi phenomena in Laze

Some syllables in Table 1 carry the mention ‘VH’, indicating that they are probably the result of vowel harmony. Some explanations about this phenomenon are in order.

Sporadic anticipatory vowel harmony (‘right-to-left’ harmony) is common in Laze in connected speech: for instance, /i.tdy.t/ ‘family’ is sometimes realised close to [y.tdy]. Phenomena such as vowel harmony and the voicing of intervocalic voiceless consonants are cross-linguistically common in connected speech; however, the extent to which these phonetic tendencies manifest themselves and eventually become lexicalised or even generalised as phonological rules is highly language-specific. Of the three Naish languages studied here (Laze, Na and Naxi), Naxi is least prone to the lexicalisation of such phenomena, and Laze most prone to it.<sup>1</sup> Vowel harmony is lexicalised in some disyllabic words, along with other processes such as the voicing of

<sup>1</sup> For instance, the form /bu.lha.t/ ‘pig swill’, from /bu.t/ ‘pig’ and /ha.t/ ‘food’, is reported by He Jiren and Jiang Zhuyi 1985 and confirmed by He Jiren (p.c. 2002) for his own native dialect: Yangxi 漾西; however, other dialects of the Lijiang plain retain the form /bu.lha.t/, without vowel harmony.



intervocalic voiceless consonants (and tone sandhi, about which see, again, Michaud 2009). A typical example is /ʃie-ɦie-ɦmie-ɦ/ ‘seventh month’, from /ʃur-ɦ/ ‘seven’ and /ɦie-ɦmie-ɦ/ ‘month’: in addition to the change in the vowel of the first syllable, note the voicing of /ɦ/ to /ɦ/. Importantly, processes of categorical, lexicalised vowel harmony are sporadic: they are not the result of regular phonological sandhi rules.

Lexicalised cases of vowel harmony are still relatively few; however, this is an important phenomenon, which in the course of language evolution has the potential for filling any of the gaps in Table 1.

### 3. Remarks on phonemicisation

The phonemicisation process that led to the creation of Table 1 brought out the following facts, arranged from the most obvious to the most problematic:

#### 3.1. The labial-dental fricatives /f/ and /v/, and the allophones of the glottal fricative /h/

The labial-dental fricative initials /f/ and /v/ are phonemic in Laze. Examples include /fiɦ/ ‘rain’, /fiɦts<sup>hi</sup>ɦ/ ‘gingiva’, /fiɦdziɦ/ ‘charcoal’, /fiɦ/ ‘lake’; /viɦdzuɦ/ [tuɦ] ‘East’, /viɦ/ ‘cow’, and /viɦ/ ‘to owe’. In front of /i/, they contrast with /h/ (realised as [ç]) and with the absence of any initial, e.g. /hiɦmieɦ/ ‘tongue (body part)’, /iɦts<sup>hi</sup>ɦ/ ‘water’.

In Laze, the two syllables containing /f/, leaving aside Chinese borrowings, are [fi] and [fɣ]; the initial [f] in the latter syllable could be treated as an allophone of /h/ (as is the case in Naxi and Yongning Na), but since this option is not open for [fi], as mentioned in the previous paragraph, initial [f] must be granted phonemic status, and [fɣ] comes to be interpreted as /fɣ/ – hence the empty slot at the intersection of initial /h/ and rhyme /ɣ/.<sup>1</sup>

Initial [ç] and [h] are analysed as allophones of /h/; the situation is one of perfect complementary distribution, unlike in Naxi, where gap-filling processes have disrupted this pattern (Michaud 2006).

<sup>1</sup> From a comparative point of view, some of the words with initial /f/ or /v/ in Laze correspond to stop-initial words in Naxi and Na (see Jacques et al. 2011 for details). A look at comparanda in conservative languages suggests that the fricatives in the Laze words result from spirantisation: pre-initials can be reconstructed for the Proto-Naish stage. In Laze, these pre-initials caused a lenition of the following stop – a phenomenon akin to that observed in Vietnamese, where medial consonants were spirantised (Ferlus 1982; about the term “spirants”, see Martinet 1981, 1985).

### 3.2. *The fronting of velar stops in front of high, front rhymes*

Alveolo-palatal affricates /dʒ/, /tʃ/ and /tʃʰ/ are analysed as allophones of velar stops /g/, /k/ and /kʰ/ in front of high vowels or rhymes starting with a palatal on-glide. These syllables are much more fronted than in Naxi, where the allophones of velar stops in this context are palatal, not alveolo-palatal. This results phonetically in two sets of well-differentiated initials – a situation which holds a potential for systemic gap-filling, whereby velars and alveolo-palatals would cease to be in neat complementary distribution. The only example observed so far is [tʃɔ], in [wɣlmie|tʃɔ|ɔ] ‘cicada’: this syllable can be phonemicised as /kʃɔ/, postulating an otherwise unattested /-jɔ/ rhyme, or as /tʃɔ/, granting phonemic status to the alveolopalatal initial. In this case, the new syllable appears to result from vowel harmony, the /ɔ/ rhyme of [ɔ] being copied onto the previous syllable.

### 3.3. *The palatalisation of the velar nasal in front of high, front rhymes<sup>1</sup>*

Since there exists a contrast between /n/ and /ɲ/ (the latter realised as palatal) in front of /i/, there is no obvious reason why this contrast should be neutralised in front of the other high, front rhymes, /ie/ and /y/. The combinations [ɲie] and [ɲy] are therefore analysed here as /ɲie/ and /ɲy/, on the analogy of the analysis of [ɲi] as /ɲi/, even though no contrast has been found between alveolar and (palatalised) velar nasals in front of /ie/ and /y/. At present, it is not possible to rule out entirely the possibility that some [ny] and [nie] syllables do exist, and that the words in which they appear are missing from our lists (or even that they were mistakenly bunched together with the [ɲy] and [ɲie] syllables in our transcriptions, though this is less likely).

### 3.4. *The rhyme [e] and its possible phonemic analyses*

The rhyme [e] is so infrequent – appearing only after coronal fricatives and affricates – that it could actually be said to be in complementary distribution with any of the following rhymes: /ɣ/, /wɣ/, /ɣ/, /jæ/, /jɣ/, /jɑ/, /ɔ/, /ie/, /wæ/, /wɑ/, and even /æ/. The first (/ɣ/) is a plausible choice, since the only difference between the two allophones would consist in the frontness of the allophone [e]. An indirect argument pointing to a

<sup>1</sup> Note that the symbol /ɲ/ for a palatal nasal, used here in accordance with the International Phonetic Alphabet, is strictly equivalent with the symbol /ɲ/ which is more commonly used in China.

special closeness between [ɣ] and [e] comes from the fact that the rhyme /wɣ/ is sometimes realised close to [we], but this argument is less than conclusive. Given this high degree of uncertainty, it appeared safest to let [e] appear on its own in Table 1.

### 3.5. *The rhyme [-ɥe]*

The rhyme [-ɥe] appears in only two syllables: [lɥe] (more precisely [ɣɥe]), and [tɕ<sup>h</sup>ɥe]. Only one example of each was observed: [lɥe] 草木灰 ‘ashes (of wood)’, and [tɕ<sup>h</sup>ɥe] 滴 ‘classifier for drops (of liquid)’. The word for ‘ashes’ is plausibly a borrowing from the Pumi /lyɜ/ (recall that up until the middle of the 20<sup>th</sup> century Pumi was the lingua franca of Muli), or a borrowing from another language of the area. A similar word is found in Shuiluo Na (a dialect of Na spoken in Shuiluo township, Muli county; 2009 fieldwork data): /lɥə/, which is likewise marginal in the phonological system, and could likewise be put down to borrowing. The latter may likewise call for a special explanation, but so far we have not been able to clarify this point. The rhyme [-ɥe] could in principle be treated as an allophone of /-wɣ/; after an alveolo-palatal initial /tɕ<sup>h</sup>/, a fronted allophone of /wɣ/ would make good phonetic sense. However, there are reasons to treat this syllable as a marginal case (such as the absence of syllables with other initials of the same series: [tɕɥe] and [dʒɥe]); as a consequence, it is provisionally considered as a rhyme on its own, /ɥe/. (For reasons of space, this rhyme was not included in Table 1.)

### 3.6. *Uvular initials and the vowel [ɔ]*

The contrasts between [k<sup>h</sup>u] and [q<sup>h</sup>ɔ], [ku] and [qɔ], [gu] and [ɣɔ] could be put down to the initial, recognising a series of uvular initials that are contrastive only in front of /-u/: /k<sup>h</sup>u/ vs. /q<sup>h</sup>u/, /ku/ vs. /qu/, and /gu/ vs. /ɣu/. Or they could be put down to the rhyme: /k<sup>h</sup>u/ vs. /k<sup>h</sup>ɔ/, etc. Support for the latter option comes from the fact that /ɔ/ contrasts with /u/ in another context: after /h-/. The examples are /hɔ/ ‘wedge’, and /hɔ-ɬɯ-ɬ/ ‘watery rice gruel, 稀饭’, vs. /hu-ɬ/ ‘gruel, 粥’. Moreover, processes of vowel harmony involving [ɔ] tend to consolidate the phonemic status of this vowel: in addition to the syllable /tɕɔ/ mentioned in (ii), there exists a syllable /bɔ/ in /bɔ-ɬɔ/ ‘fly’.

The interpretation of [ɣ] as an allophone of /g/ would further simplify the synchronic picture: [ɣɔ] would be interpreted as /gɔ/, and [ɣɑ], [ɣæ] and [ɣwæ] as /gɑ/, /gæ/ and /gwæ/, respectively. However, the complementary distribution between [ɣ] and [g] is not complete: processes of vowel harmony have introduced the combinations [gɑ] and [gwæ], which now contrast with [ɣɑ] and [ɣwæ]. The initial [ɣ] is therefore granted phonemic status.

### 3.7. Retroflex initials

Retroflex initial stops contrast with coronal stops in front of /ɤ/: /tɤ/ vs. /tʲɤ/, and /dɤ/ vs. /dʲɤ/; no example of /tʰɤ/ was observed (only examples of /tʰɤʲ/), but this is likely to be an accidental gap rather than a systemic one. These contrasts lead to the recognition of a series of retroflex stops. The contrast is neutralised in all other contexts. This situation is somewhat complex, but it can easily be handled in synchronic description: under a strict approach to phonemic description, in all the contexts where coronal and retroflex stops do not contrast, they can be subsumed under the same archiphoneme. The words [tʰɑ-ɬɬ] ‘书, book’ and [tʰæʌ] ‘冷, cold’ would then be written as /Tʰɑ-ɬɬ/ and /Tʰæʌ/, where Tʰ stands for the archiphoneme covering [tʰ] and [tʰʲ].

The retroflex [ʎ] raises more difficult issues for phonemicisation. The only attested syllable containing [ʎ] is [ʎɔ] (e.g. [ʎɔ] ‘horse’): the retroflex initial [ʎ] is only found in this syllable. In Naxi, the syllable [ʎɔ] is phonemicised as /ɔ/: retroflex and coronal initials contrast only in front of /o/ (Michaud 2006). However, this option is not open in Laze, since this language does not have an /o/. The only back rounded vowel in Laze is /u/, and there exists a /lu/ syllable (realised close to [ɣu]); phonemicising [ʎɔ] as /u/ is not entirely convincing. Alternatively, it could be phonemicised as /ɔ/: the /ɔ/ would then have allophones ranging from [ʎ] to [ɣ] through [ɹ]. This phonemic solution receives support from two facts: first, there are some reasons to grant phonemic status to /ɔ/, as was mentioned in (vi); second, retroflex allophones of coronal initials are found elsewhere in the system: the nasal initial /n/ is realised [ɲ] in front of /æ/, /u/ and /ɤ/ ([ɲæ], [ɲu] and [ɲɤ]) are phonemicised as /næ/, /nu/ and /nɤ/).

#### 4. A brief note on Pr. Huang Bufan's notations concerning a close dialect

Pr. Huang Bufan (2009) provides a similar but not entirely identical phonemic inventory for another dialect of Laze, spoken in the township of Bowa (二区博瓦乡达瓦村).

(i) Pr. Huang presents a nasal rhyme, /ŋ/, which is absent from our inventory. The ninth nasal rhyme is in fact the product of coalescence with a /hĩ/ syllable: the phrase ‘the day before yesterday, 前天’, transcribed by Pr. Huang as [s̃ɿ<sup>33</sup>dzɿ<sup>53</sup>ni<sup>53</sup>], is [s̃uɿŋɿ|d̃uɿŋɿ] in our data, where the nasal tail [ŋ] after the first syllable can be analysed as a reduced form of /hĩ/.

(ii) Pr. Huang reports a contrast between retroflex /dʒ/ and postalveolar /ɖʒ/, and between /tʂ/ and /tʃ/, for items all of which have retroflex initials in our data, as shown in Table 3 below.

Table 3. Some words transcribed with postalveolar initials by Pr. Huang.

| meaning                 | Pr. Huang's transcription          | A. Michaud's transcription   |
|-------------------------|------------------------------------|------------------------------|
| to suffer, to be ill    | ɖʒu <sup>53</sup>                  | dʒuɿ                         |
| earthen wall            | ɖʒu <sup>33</sup> bu <sup>33</sup> | tʂuɿbuɿ (cp. /tʂuɿ/ ‘earth’) |
| to fall (rain, hail...) | ɖʒi <sup>53</sup>                  | dʒuɿ                         |

This may be a case of dialectal difference; on the other hand, Pr. Huang (p.c.) indicated that her Laze data were collected over a relatively short period of time, and as part of an extremely crowded fieldwork agenda, so that not all notations could be fully verified at the stage of phonemicisation.

### Conclusion and perspectives for future research

This article aimed to contribute both to the synchronic study of Laze and to a better understanding of its historical phonology as a member of the Naish branch of Sino-Tibetan.

Laze has a relatively large phonemic inventory, with massive neutralisations of the contrasts. As is customary, synchronic statements about restricted distributions flip

diachronic statements around. For instance, synchronically, the contrast between /e/ and other vowels is neutralised in all positions except TS-; diachronically, /e/ appeared in a single context: \*TS-, from former \*TSa. The features analysed as redundant in phonemic analysis constitute important cues to diachronic developments.

While Laze is similar with Na and Naxi in many respects, including its present-day syllable structure, using Laze data in the comparison brings out a larger number of correspondences than those that exist between Na and Naxi alone; in turn, conservative languages provide useful indications for interpreting these correspondences between short forms. For instance, the initial /f/ and /v/ of Laze lead to postulate earlier consonant clusters, and evidence from conservative Sino-Tibetan languages suggests plausible hypotheses about the nature of these clusters.

Our long-time project is to document the entire phonological history of the Naish languages. Ultimately, it should be possible to account for all synchronic restrictions on combinations of onsets and rhymes. There remains a long way to go; however, on a positive note, a good degree of certainty is now being reached on some parts of the system.

## References

- Bradley, David. 2003. "Lisu". *The Sino-Tibetan languages* ed. by Graham Thurgood and Randy LaPolla, 222-235. London: Routledge.
- Ferlus, Michel. 1982. "Spirantisation des obstruantes médiales et formation du système consonantique du vietnamien". *Cahiers de linguistique - Asie Orientale* 11:1.83-106.
- He Jiren and Jiang Zhuyi. 1985. *Naxiyu Jianzhi* 纳西语简志 (*A Presentation of the Naxi Language*). Beijing: Minzu Chubanshe 民族出版社.
- Huang Bufan. 2009. "A survey of Muli Shuitian 木里水田话概况 (Muli Shuitianhua Gaikuang)". *Journal of Sino-Tibetan Linguistics* 汉藏语学报 (*Hanzangyu Xuebao*) 3.30-55.
- Jacques, Guillaume and Alexis Michaud. 2011. "Approaching the historical phonology of three highly eroded Sino-Tibetan languages: Naxi, Na and Laze". *Diachronica* 28:4.
- Li Lan. 2010. "A Sketch of Chinese Dialect in Muli Tibetan Autonomous County in Sichuan Province (四川木里方言记略)". *Fangyan* (方言) 2.114-133.
- Martinet, André. 1956. *La Description phonologique avec application au parler franco-provençal d'Hauteville (Savoie)*. Genève: Droz.
- Martinet, André. 1980 [1960]. *Éléments de linguistique générale*. Paris: Armand Colin.

- Martinet, André. 1981. "Fricatives and spirants". *Suniti Kumar Chatterji commemoration volume* ed. by Bhakti Prasad Mallik, 145-151. Burdwan, West Bengal, India: Burdwan University Press.
- Martinet, André. 1985. "Two proposals". *The Study of Sounds (Onsei no Kenkyuu), Commemorative volume for the 50th anniversary of the Phonetic Society of Japan XXI*.67-72.
- Michaud, Alexis. 2006. "Three extreme cases of neutralisation: nasality, retroflexion and lip-rounding in Naxi". *Cahiers de linguistique - Asie Orientale* 35:1.23-55.
- Michaud, Alexis. 2008. "Phonemic and tonal analysis of Yongning Na". *Cahiers de linguistique - Asie Orientale* 37:2.159-196.
- Michaud, Alexis. 2009. "The prosodic system of Muli Shuitian (Laze) (Muli Shuitianhua Shengdiao Xitong Yanjiu 木里水田话声调系统研究)". *Minority Languages of China (Minzu Yuwen 民族语文)* 6.28-33.
- Michaud, Alexis, Guillaume Jacques and Robert L. Rankin. submitted. "Historical transfer of nasality between consonantal onset and vowel: from C to V or from V to C?". *Diachronica*.
- Wellens, Koen. 2006. *Consecrating the Premi house: Ritual, community and the state in the borderlands of East Tibet. Faculty of Humanities*. Oslo: University of Oslo. 288.

### Appendix: A short Chinese-Laze glossary, arranged semantically

This short list, arranged by semantic field, is based on a subset of the first author's field notes (heretofore unpublished). Despite its shortcomings, such as the lack of proper definitions and example sentences, it appeared useful to publish it as an illustration of the analyses presented in this article. A longer list (slightly above 2,000 items, with English and Chinese glosses) was deposited with the Sino-Tibetan Etymological Dictionary and Thesaurus (STEDT) project in February 2011 for open access online.

|        |            |         |                |       |                  |
|--------|------------|---------|----------------|-------|------------------|
| 天      | mu˩        | 彩虹      | zɯ˩ʃsu˩mɣ˩ʃsu˩ | 垭口    | ɛa˩ly˩           |
| 天空     | mu˩tu˩     | 雪       | vie˩           | 山     | zɯ˩tse˩          |
| 天地     | mu˩dy˩     | 雷, 霹雷   | mu˩gy˩         | 高山    | u˩gu˩            |
| 太阳     | ɲi˩mie˩    | 闪电, 打闪电 | bɣ˩bæ˩bæ˩      | 山坡, 岗 | tu˩bie˩          |
| 光 (阳光) | ɲi˩mie˩tu˩ | 冰雹      | dzy˩           | 山脊    | dzy˩kʰu˩tu˩      |
| 月亮     | ʃie˩mie˩   | 冰雹块     | dzy˩ly˩ly˩     | 山谷    | zɯ˩tse˩.ɬæ˩tsʰu˩ |
| 星星     | tsi˩       | 露水      | dʒɯ˩kʰa˩       | 山洞    | læ˩qʰɔ˩          |
| 流星     | tsi˩qʰæ˩   | 冰       | ɲi˩pʰy˩        | 森林    | sy˩zy˩           |
| 风      | mɣ˩hæ˩     | 火       | mɣ˩            | 地上的小洞 | pa˩ty˩           |
| 雨      | fi˩        | 火花      | mɣ˩lzæ˩        | 洞     | qʰɔ˩             |
| 云      | tɕi˩su˩    | 烟       | mu˩kʰy˩        | 河流    | zɯ˩mie˩          |
| 雾      | qʰɔ˩pɔ˩    | (一口) 气  | sa˩            | 溪流    | i˩tsʰi˩qʰæ˩lu˩   |

|         |                     |          |                   |       |                     |
|---------|---------------------|----------|-------------------|-------|---------------------|
| 湖       | fiJ                 | 眉毛       | mie-tu1           | 胆汁    | tsi-tzu1            |
| 海       | na1dziJ             | 眼睛       | mie-ly1           | 吐酸水   | tci-tzu1            |
| 小型水库    | q11                 | 眼（单音节）   | mie1              | 腰     | i1tsuJ              |
| 岸       | zu1mie1khu1ku1      | 眼珠       | mie-ly1na1i1      | 屁股    | q1æ1sæ1p1y1mie1     |
| 水坑      | pa1ty1              | 眼圈骨      | mie-ly1sə1tu1     | 胯     | ts1u1mie1           |
| 水沟      | q1æ1lu1             | 眼泪       | mjæ1dzu1          | 尾椎骨   | dzy1tu1             |
| 井       | i1ts1i1qwæ1         | 鼻子       | nj1x1gx1          | 锁骨    | læ1dzy1             |
| 小堤坝     | bu1tu1              | 鼻孔       | nj1x1gx1q1h1o1    | 肌肉    | su1na1              |
| 路       | læ1gy1              | 鼻涕       | ny1               | 腿     | æ1ts1u1             |
| 地（天地的地） | dy1                 | 耳朵       | hie1tu1           | 大腿    | by1sa1mie1          |
| 平坝      | du1k1u1             | 耳孔       | hie1ze1           | 膝盖    | ɲwa1tu1             |
| 平地      | hæ1du1              | 耳垂       | hie1tu1kə1by1     | 膝盖骨   | ka1p1æ1             |
| 田地      | li1                 | 耳垢       | hie1q1æ1bæ1       | 关节    | tsu1                |
| 水田      | dze1li1             | 脸        | p1y1mie1          | 小腿    | dzy1bæ1             |
| 石头      | læ1t1mie1           | 腮        | bjæ1o1            | 胫骨    | w1x1nj1x1gx1sə1tu1  |
| 粉，粉末    | zy1                 | 嘴，嘴巴，口   | ny1q1h1o1         | 踝关节   | læ1mie1tsu1tu1ly1   |
| 土       | tsu1                | 嘴巴       | ku1pie1           | 脚底    | w1x1tə1x1           |
| 干土      | tsu1zy1             | 嘴巴里面     | ku1pie1ku1lu1     | 脚跟    | gy1t1u1             |
| 尘土      | p1y1hæ1             | 牙齿       | fi1t1u1           | 脚背    | mi1gy1              |
| 泥巴      | dza1q1æ1            | 牙齿       | fi1t1u1           | 下半身   | y1d1u1tsæ1          |
| 水       | i1ts1i1             | 白齿 + 后白齿 | ɲw1x1t1æ1mie1     | 上半身   | gx1d1u1tsæ1         |
| 洪水，大水   | zu1ly1              | 牙龈       | fi1ts1i1          | 四肢，手脚 | zy1ts1u1            |
| 波浪      | i1ts1i1t1hie1sa1sa1 | 舌头       | ci1mie1           | 胳膊    | la1p1hie1           |
| 水泉，山泉   | zu1q1h1o1           | 舌头的筋     | ci1zæ1            | 胳膊    | la1bu1ly1           |
| 温泉      | ts1y1tzu1           | 小舌       | ci1zæ1            | 肘     | la1tu1              |
| 泉水      | zu1q1h1o1li1ts1i1   | 喉咙       | qə1tsu1           | 臂弯    | tsæ1qæ1             |
| 金子      | hæ1                 | 喉结       | qə1tsu1tu1ly1     | 手掌    | la1kw1x1hie1gy1tci1 |
| 银子      | ɲy1                 | 嘴唇       | ni1tə1x1          | 手纹    | la1p1hie1læ1gy1     |
| 黄铜      | æ1                  | 颧骨       | p1y1sy1dzy1       | 手背    | la1gy1              |
| 白铜      | æ1p1y1              | 胡子       | my1tsu1           | 拳     | la1ky1ty1           |
| 红铜      | æ1hi1               | 连鬓胡      | bie1na1           | 手腕    | la1tsu1             |
| 铁       | su1                 | 颚        | ta1o1             | 手指    | la1ɲi1              |
| 锈       | tsu1q1æ1            | 脖子       | kæ1su1pa1         | 大拇指   | la1ɲi1a1mie1        |
| 炭       | fi1dzi1             | 甲状腺肿瘤    | æ1bæ1             | 指甲    | la1tsu1             |
| 盐       | ts1e1               | 项背       | gx1t1pa1          | 肛门    | k1æ1q1h1o1          |
| 草木灰     | lu1e1               | 肩膀       | hwæ1ts1u1         | 男生殖器  | ɲi1tsi1             |
| 桥       | dzy1                | 脊背       | gy1tsu1           | 皮肤    | zu1ky1              |
| 坟墓      | y1dy1               | 肩胛骨      | ts1u1             | 皱纹    | zu1ky1t1            |
| 身体      | qu1ti1              | 驼背       | du1qə1            | 黑痣    | cy1                 |
| 头       | u1tu1               | 腋下       | ja1da1            | 疮     | mi1                 |
| 脑子，脑髓   | u1fy1               | 胸膛       | ɲi1mjæ1q1h1o1     | 伤口    | mi1pa1pa1           |
| 太阳穴     | su1by1              | 乳房       | a1pu1             | 癣     | la1li1k1w1x1        |
| 头发      | u1tə1y1             | 奶汁       | ɲæ1               | 血     | su1                 |
| 辫子      | o1pa1               | 月经       | dzu1h1v1ts1u1tsu1 | 血管    | su1by1              |
| 毛       | h1v1                | 心脏，性情    | ɲi1mie1           | 骨头    | sə1tu1              |
| 人身上的毛   | ɲi1h1v1             | 肚子       | ha1mie1           | 骨髓    | tsi1ty1             |
| 额头      | tu1k1x1             | 肚脐       | tə1x1pu1          | 脊椎骨   | gy1tsu1sə1tu1       |
| 眼睫毛     | mjæ1tsu1            | 肚脐       | tə1x1             | 肋骨    | tu1                 |
|         |                     | 胆        | tsi1              | 肺     | ts1y1               |



|               |                      |              |                    |               |                    |
|---------------|----------------------|--------------|--------------------|---------------|--------------------|
| 肝             | siɬ                  | 女儿           | myɹ                | 贵族, 奴隶主       | suɹɹpʰieɹ          |
| 肾             | ɣɹliɹ                | 儿子           | zeɹ                | 木匠            | siɬgyɹhɹɹ          |
| 胃             | ɥyɹmieɹ              | 孩子们, 子女      | zeɹɹmyɹ            | 编竹子的工匠        | mæɹɹdaɹhɹɹhɹɹ      |
| 鸡胃            | læɹɹpjæɹɹɹɹ          | 姨母 (比母亲大)    | aɹɹpaɹ             | 铁匠            | ʂuɹɹlaɹhɹɹhɹɹ      |
| 肠             | ɣɹnaɹ                | 姨母 (比母亲小)    | æɹɹtɹeiɹ           | 打铁            | ʂuɹɹlaɹ            |
| 膀胱            | suɹɹɹpyɹ             | 母亲的所有姐妹      | aɹɹɹpaɹlæɹɹtɹeiɹ   | 喇嘛            | laɹɹmaɹ            |
| 屎             | qʰæɹ                 | 姑母           | æɹɹtɹjiɹ           | 尼姑            | myɹɹɹkʰɹɹɹɹɹdaɹɹɹɹ |
| 尿             | dziɹ                 | 舅舅、舅父 (比母亲大) | æɹɹɹɹɹ             | 达巴, 巫         | daɹɹɹɹɹ            |
| 大小便的统称        | aɹɹɹpʰuɹɹɹɹɹ         | 舅舅、舅父 (比母亲大) | æɹɹɹɹɹ             | 乞丐            | dzeɹɹɹmieɹɹhɹɹ     |
| 屁             | kʰæɹɹtsʰiɹ           | 伯父           | aɹɹɹpaɹ            | 强盗            | kʰɹɹɹmaɹ           |
| 汗 (单音节)       | tɹɹɹɹ                | 叔父           | aɹɹɹbuɹ            | 病人            | hɹɹɹɹɹɹɹɹ          |
| 痰             | tɹeiɹɹkʰæɹɹɹbæɹ      | 侄子           | zeɹ                | 朋友, 伙伴        | tɹɹɹɹɹɹmieɹ        |
| 口水, 唾         | tɹeiɹ                | 侄女           | myɹ                | 瞎子            | mɹɹæɹɹɹæɹ          |
| 脓             | bæɹ                  | 侄子女          | zeɹɹzeɹɹmyɹɹmyɹ    | 跛子            | buɹɹɹɹɹhɹɹ         |
| 天花            | tsʰuɹɹɹɹɹɹ           | 孙子           | iɹɹɹɹ              | 聋子            | tɹeiɹɹbuɹ          |
| 麻疹, 疹子        | byɹɹɹzuɹɹɹzuɹ        | 孙女           | hɹɹɹmieɹ           | 秃子            | wɹɹɹɹɹɹɹɹ          |
| 感冒            | tsʰaɹɹɹɹɹɹɹ          | 孙子孙女         | iɹɹɹɹɹɹɹɹ          | 傻瓜            | zyɹɹɹbæɹ           |
| 发烧            | tɹɹɹɹuɹ              | 重孙, 曾孙       | iɹɹɹɹɹɹɹ           | 疯子            | ɹɹɹɹɹɹ             |
| 尸体            | hɹɹɹɹmuɹ             | 重孙女, 曾孙女     | iɹɹɹɹɹɹɹ           | 结巴            | ɥiɹɹɹɹɹ            |
| 生命            | hɹɹɹɹɹɹɹɹ            | 女            | iɹɹɹɹɹɹɹ           | 主人            | daɹɹɹɹuɹ           |
| 人             | hɹɹɹ                 | 重孙与重孙女       | iɹɹɹɹɹɹɹɹɹɹɹ       | 客人            | hɹɹɹɹɹɹ            |
| 藏族            | kaɹɹmiɹ              | 哥哥           | maɹɹɹmyɹ           | 寡妇            | uɹɹɹmieɹɹɹɹɹɹɹ     |
| 彝族            | leɹɹɹhɹɹɹɹɹ          | 弟弟           | gɹɹɹɹɹɹ            | 孤儿            | zuɹɹɹɹɹɹɹ          |
| 普米族           | bɹɹ                  | 兄弟 (哥哥们与弟弟们) | aɹɹɹɹɹɹɹɹɹ         | 稀饭            | hɹɹɹɹɹɹ            |
| 纳西族           | naɹɹhɹɹ              | 姐姐           | aɹɹɹɹ              | 饭 (米饭)        | tɹɹɹɹɹɹɹɹɹɹɹ       |
| 自称            | laɹɹzeɹ              | 姐姐           | tɹeiɹɹtɹeiɹ        | 粥             | huɹ                |
| 木里县的纳人        | naɹɹɹɹɹ              | 妹妹           | guɹɹmieɹ           | 面粉            | zyɹ                |
| 汉人            | hæɹ                  | 妹妹           | guɹɹɹmieɹ          | 浆糊, 浆子        | huɹ                |
| 苗族            | mɹɹɹɹɹ.tsuɹ          | 姐妹           | aɹɹɹɹɹɹɹmieɹ       | 馒头            | miɹɹɹhiɹɹ          |
| 孩子            | zaɹɹɹhuɹ             | 姐妹           | gɹɹɹɹɹɹɹɹɹmieɹ     | 肉             | ʂuɹ                |
| 儿童            | zaɹɹɹhuɹɹɹɹɹɹɹhɹɹ    | 姐妹           | gɹɹɹɹɹɹɹɹɹɹmieɹ    | 熟肉            | ʂuɹɹɹlaɹɹmiɹ       |
| 老人            | hɹɹɹɹɹɹɹɹɹ           | 弟弟 + 妹妹      | mæɹɹɹɹ             | 生肉            | ʂuɹɹɹɹɹɹɹɹɹɹ       |
| 老太太           | aɹɹɹɹɹɹmieɹ          | 女婿           | tsʰuɹɹɹmieɹ        | 瘦肉            | ʂuɹɹɹnaɹ           |
| 妇女, 女人        | myɹɹɹɹɹɹhɹɹ          | 媳妇, 儿媳       | miɹɹtɹɹɹiɹ         | 肥肉            | ʂuɹɹɹpʰɹ           |
| 女人 (已婚)       | myɹɹɹɹɹɹɹɹɹ          | 祖母, 奶奶       | aɹɹɹɹɹ             | 牲畜前腿的肉        | laɹɹɹɹɹ            |
| 男人            | zeɹɹɹkʰɹɹ            | 姥姥           | aɹɹɹɹɹɹmieɹ        | 牲畜后腿的肉        | ʂuɹɹɹsaɹpʰɹɹmieɹ   |
| 小伙子           | zeɹɹɹkʰɹɹɹɹɹhɹɹ      | 舅舅的舅舅        | æɹɹɹpʰɹ            | 猪的肚皮的肉        | aɹɹɹɹɹɹ            |
| 小姐            | hæɹɹɹkʰwɹɹɹmieɹ      | 父子           | əɹɹɹdaɹɹɹɹɹ        | 层肉            | ɹɹɹɹɹ              |
| 少爷            | hæɹɹɹkʰwɹɹɹɹɹ        | 母亲与孩子们       | æɹɹɹmieɹɹɹɹɹɹ      | 猪胸股上的肉        | ɹɹɹɹɹiɹ            |
| 妻子            | myɹɹɹkʰɹɹ            | 父亲与母亲        | aɹɹɹdaɹɹɹɹmieɹ     | 猪尾部划出来的膘      | wɹɹɹmiɹɹtsɹɹɹɹɹɹɹɹ |
| 丈夫            | zeɹɹɹkʰɹɹ            | 叔叔侄子         | aɹɹɹɹbuɹɹɹɹɹ       | 的膘            | hɹɹ                |
| 一户人           | dyɹ                  | 叔叔侄女         | aɹɹɹbuɹɹɹɹɹɹ       | 猪身躯带骨头的肉      | wɹɹɹɹtuɹ           |
| 家人            | aɹɹɹɹhɹɹ             | 劳动人民         | luɹɹɹvieɹhɹɹ       | 把猪的骨头装在大肠里    | buɹɹɹkʰuɹɹtɹɹɹɹɹɹ  |
| 亲戚            | tɹɹwɹɹɹtɹwɹɹɹhɹɹɹhɹɹ | 士兵           | maɹɹɹmiɹ           | 把瘦肉装在肠子里      | ɣɹɹɹɹɹ             |
| 母亲            | æɹɹɹmieɹ             | 商人           | gɹɹɹɹtɹɹɹiɹɹɹɹɹhɹɹ | 把猪腿的皮剥下来, 缝成筒 | wæɹɹtsʰuɹɹɹɹɹɹɹɹ   |
| 母亲 (孩子对母亲的称呼) | æɹɹɹɹjiɹ             | 医生           | tsʰuɹɹɹɹɹɹɹ        |               |                    |
| 父亲            | aɹɹɹdaɹ              | 寨首           | ɹɹæɹɹɹɹɹɹ          |               |                    |
| 后妈            | aɹɹɹmieɹɹɹɹɹɹɹhɹɹ    |              |                    |               |                    |

|         |   |                |                                |                |  |
|---------|---|----------------|--------------------------------|----------------|--|
| 形, 塞满瘦肉 |   | 宝贵的毯子          | zyldzu]                        | 蒸笼             | dze-lby]                                     |
| 猪皮      | wɔ-lzɔw-lky]  | 垫子             | q <sup>h</sup> ɔ]              | 刀              | kwa-ta-lmie]                                 |
| 猪油      | kælmil]   | 枕头             | u-lgu]                         | 菜板, 俎          | tsu-ltɕe]                                    |
| 酥油      | mi]   | 褥子             | zæ-lmie]                       | 把子             | qɔ]  |
| 油       | mi]   | 被子             | tɕy]hu]                        | 勺子、瓢           | bi-lze]                                      |
| 蛋       | leæ-lmjæ-lɕɔ]   | 蚊帐             | t <sup>h</sup> a-l-lal]tɕu]hi] | 调羹             | bi-lze-t <sup>h</sup> a-ltɕilhi]             |
| 蛋黄      | ljæ-lmjæ-lɕɔ-lqɔ-lɕu]                                     | 木头             | si]                            | 大调羹            | bi-lze]                                      |
| 蛋白      | ljæ-lmjæ-lɕɔ-lku-lp <sup>h</sup> ]                        | 木板, 木板子        | si-lp <sup>h</sup> æ]          | 碗              | k <sup>h</sup> wɔ]                           |
| 汤       | zɔw-lŋi]  | 家, 家庭          | ylqy]                          | 盘子             | ɕwɔ-lp <sup>h</sup> ie]                      |
| 酒       | zɔw]  | 房屋             | ylk <sup>h</sup> wɔ]           | 木盘子            | si-lk <sup>h</sup> wɔ]                       |
| 黄酒      | pie-lmy]  | 家              | a-lu]                          | 筷子             | qzɔw-lɕu]                                    |
| 醋       | tɕy]hi]   | 座位             | dzy]læ]                        | 瓶子             | dzɔ]   |
| 开水      | i-lts <sup>h</sup> i-lts <sup>h</sup> u]l <sup>h</sup> y] | 菜园             | u-ltɕ <sup>h</sup> ɔ-lili]     | 坛子, 罐子<br>(陶器) | pi-lze]                                      |
| 茶       | lie]  | 圈, 牲畜圈         | bi]                            | 茶壶             | tɔ-lɔ]                                       |
| 糖       | dzy]zɔw]  | 土墙             | tɕu-lbu]                       | 大水桶            | tɕa-lta]                                     |
| 烟       | jɔ]   | 城              | lu-lwɔ-ljy]k <sup>h</sup> wɔ]  | 过去用杯水的         | si-lp <sup>h</sup> u]ta]                     |
| 药       | ts <sup>h</sup> u-lfi]                                    | 城里、市上          | qzɔw]                          | 背篓             |  |
| 丸、小球    | tu]ly]  | 村寨, 村子         | qzɔw-lu]                       | 桶              | zy]mie]                                      |
| 饭       | dze]  | 街              | qzɔw-lfy]lqzɔw-lbie]           | 木盆             | si-ltse-lu]                                  |
| 猪食      | wɔ-ldze]  | 石墙             | wɔ-lbie]                       | 脸盆             | p <sup>h</sup> y-lmie-lts <sup>h</sup> u-lu] |
| 马料      | lɔ]ly]  | 窗户             | lu-lwɔ]                        | 三脚架            | ɕu-lts <sup>h</sup> i]                       |
| 线       | tɕ <sup>h</sup> æ]  | 柱子             | da-lk <sup>h</sup> u]          | 火塘             | kwa-lu]                                      |
| 布       | fi-ltɕu]  | 梁              | zæ-lmie]                       | 厨房             | tsu-lkwɔ]                                    |
| 丝绸      | tɕu-lze]  | 门              | gu]ly]lie]gy]tie]              | 火钳             | mu-lŋy]                                      |
| 衣服      | ba]la]  | 门              | k <sup>h</sup> u]bi]           | 风箱             | my-lmi-ltsu]                                 |
| 蓑衣      | tɕa-lɔ]   | 门槛             | k <sup>h</sup> u]              | 用来背小孩的         | za-lhu]pa]ldzi]                              |
| 上衣, 衣服  | bx-lze]   | 梯子             | k <sup>h</sup> u-lta]          | 带子             |  |
| 衣领      | ɕæ-lhɔ]   | 天花板            | dzy]l <sup>h</sup> y]          | 背带             | dzi]   |
| 袖子      | ja]q <sup>h</sup> ɔ]                                      | 石头台阶           | kwɔ-lhi]                       | 称              | sa]  |
| 扣子      | bu-lly]   | 粮仓             | læ]mie]ldzy]                   | 钱              | qzɔw]  |
| 裤子      | lie]k <sup>h</sup> wɔ]                                    | 打场             | gu]                            | 价钱             | tɕɔ-lhi]                                     |
| 头帕      | la]tɕ <sup>h</sup> y]                                     | 篱笆             | hæ]du]                         | 工资, 工钱         | ka-lp <sup>h</sup> y]                        |
| 帽子      | tɕy-ltɕy]   | 商品             | q <sup>h</sup> ɔ-lta]          | 马鞍             | tɕi]q <sup>h</sup> ɔ]                        |
| 斗笠      | u-lmu]  | 东西             | no]                            | 马笼头            | u]y]   |
| 梳子(粗)   | tɕy]mie]  | 桌子             | tɕa-lsu]                       | 马肚带            | bie-lɔ]                                      |
| 毡毯      | t <sup>h</sup> u]li]                                      | 凳子             | ɕa]llæ]                        | 马嚼子            | kwa-lɕwæ]                                    |
| 羊毛裙子    | hɔ-lɕu]k <sup>h</sup> wɔ]                                 | 床              | q <sup>h</sup> ɔ]              | 马槽             | wɔ]gy]                                       |
| 裙子      | ɕu]k <sup>h</sup> wɔ]                                     | 箱子             | qɔ]                            | 挽具, 后鞅         | mæ]ky]                                       |
| 裹腿      | ts <sup>h</sup> u]l <sup>h</sup> u]                       | 扫帚             | su-lgy]                        | 缰绳             | lɔ-ldzi]                                     |
| 鞋垫      | sæ-lhæ]l <sup>h</sup> æ]                                  | 扫帚             | hwɔ-ltɕu]                      | 打马的鞭子,         | mæ]ldzy]                                     |
| 鞋, 鞋子   | sæ-lhæ]   | 火绒(把小麻<br>皮捶绒) | tsa]lɕɔ]                       | 马鞭             |  |
| 耳环      | lie-lk <sup>h</sup> y]                                    | 火镰             | tse-lmie]                      | 驮架             | li-lmi]                                      |
| 戒指      | la]l <sup>h</sup> u]                                      | 火把             | my]ltɕ <sup>h</sup> y]         | 牛鼻绳            | njɔ-lgɔ]ldzi]                                |
| 手镯      | la]ldzy]  | 香              | sy]ldy]                        | 斧头             | ly-lmie]                                     |
| 珠, 珠子   | q <sup>h</sup> ɔ-lze]                                     | 染料             | tɕ <sup>h</sup> y]zɔw]         | 锯              | ɕwa-lta]                                     |
| 席子      | tɕɔ-lgɔ]  | 锅              | y-lmie]                        | 针              | u]   |
| 毯子      | tɕɔ]hu]   | 锅的盖子           | u-lhu]                         | 锥、锥子           | tɕu]   |
|         |   |                |                                | 凿子             | dzy]   |

|               |                     |                 |                     |            |                    |
|---------------|---------------------|-----------------|---------------------|------------|--------------------|
| 木锤子           | daɭtɣɿ              | 故事              | tʂʰæɿ               | 初一         | laɿtsʰiɿɿdɿuɿŋiɿ   |
| 连枷            | kuɿɿtɿ              | 舞蹈              | tsʰuɿ               | 初二         | laɿtsʰiɿɿŋiɿŋiɿ    |
| 铁钉            | ʂuɿɿqʰɔɿ            | 旗子              | tsiɿ                | 初三         | laɿtsʰiɿɿsuɿŋiɿ    |
| 钩子            | tsæɿɿqæɿ            | 声音              | qʰɔɿ                | 初十         | laɿtsʰiɿɿtsʰiɿɿŋiɿ |
| 剪刀            | tsuɿɿtiɿɿ           | 鼓               | daɿɿkʰɿɿɿ           | 十一日        | tsʰiɿɿɿdɿuɿŋiɿ     |
| 锁             | tsaɿɿkwaɿ           | 钹               | bɿɿɿtsʰuɿɿ          | 十五日        | tsʰiɿɿɿŋwɿɿŋiɿ     |
| 钥匙            | tseɿɿɿɿ             | 笛子              | tʂʰuɿɿɿɿ            | 十六日        | tsʰiɿɿɿqʰɔɿŋiɿ     |
| 犁头            | ɿɿɿɿɿ               | 胡琴              | zwaɿɿɿmaɿɿdaɿɿqɔɿ   | 三十日        | suɿɿtsʰiɿɿŋiɿ      |
| 犁头, 犁铧        | tʂʰaɿ               | 铃铛              | tɿɿɿɿɿ              | 今天         | tsʰiɿɿŋiɿ          |
| 耙             | dzɿɿwɿɿ             | 牛角 (用来当<br>长号角) | buɿɿɿqʰɔɿ           | 昨天         | æɿŋiɿ              |
| 牛轭 (单行)       | ɿæɿɿhwaɿ            | 神, 菩萨           | gaɿɿlaɿ             | 前天         | ʂuɿɿɿɿɿdɿuɿŋiɿ     |
| 牛皮绳, 犁具       | dzuɿɿɿdzuɿ          | 鬼               | ŋiɿ                 | 前几天        | ɔɿŋiɿɿɿɿɿ          |
| 连轭之绳          |                     | 灵魂, 魂魄          | ɿɿɿɿɿ               | 明天         | miɿɿsuɿ            |
| 锄头            | tsɿɿɿɿ              | 运气              | tʂʰaɿɿuɿ            | 后天         | uɿɿsuɿ             |
| 挖锄            | bæɿɿwɿɿ             | 力气              | ɿaɿɿziɿ             | 大后天        | uɿɿdɿuɿɿsuɿ        |
| 楔子            | hɔɿ                 | 胆量              | ŋiɿɿmieɿɿdzuɿ       | 四天以后       | uɿɿŋiɿsuɿ          |
| 绳子            | dziɿ                | 礼物              | tɿɿɿaɿɿɿ            | 今晚         | tsʰiɿɿɿhuɿ         |
| 背篓            | kʰɿɿ                | 名字              | hiɿ                 | 明晚         | suɿɿhuɿ            |
| 袋子            | dziɿɿkuɿ            | 有区别             | tʰaɿɿnieɿɿnieɿ      | 昨晚         | aɿɿhuɿ             |
| 肥料, 粪         | kʰæɿ                | 一样, 没有区<br>别    | məɿɿŋuɿ             | 早晨         | daɿɿnaɿ            |
| 白[坨坨]         | tʂuɿɿmuɿ            |                 | tʰaɿɿnieɿɿnieɿ      | 黎明         | pʰɿɿɿkwɿɿ          |
| 杵[捶捶]         | luɿɿdɿuɿ            |                 |                     | 今天早上       | tsʰiɿɿɿɿsuɿ        |
| 碓             | muɿɿtʂuɿ            |                 |                     | 早点         | daɿɿnaɿɿdzeɿɿdzeɿ  |
| 小筛子           | muɿɿtʰaɿɿtɿɿɿhiɿ    | 渣滓              | dzuɿɿmaɿ            | 白天         | mieɿɿlieɿɿɿɿ       |
| 筛子 2          | bɿɿɿkʰuɿ            | 影子              | daɿɿzɿɿ             | 中午饭、中<br>午 | zuɿɿ, zuɿɿtuɿ      |
| 筛子 4          | iɿɿtʂuɿ             | 梦               | yɿɿmuɿkʰwɿɿ         | 吃中午饭       | zuɿɿɿdzeɿ          |
| 筛子 5          | muɿɿaɿɿpaɿɿdzuɿɿhiɿ | 东方              | viɿɿdzyɿɿɿ          | 下午         | zuɿɿɿdzeɿɿgwɿɿ     |
| 簸箕 (簸粮食<br>用) | muɿ                 | 西方              | yɿɿdzyɿɿɿ           | 晚上         | miɿɿkʰuɿ           |
| 手磨            | tɿɿɿɿɿ              | 南方              | iɿɿtʂʰuɿɿmieɿ       | 晚饭         | miɿɿkʰuɿɿdzeɿ      |
| 水磨            | iɿɿtsʰiɿɿtɿɿɿɿ      | 北方              | kʰuɿɿɿdzyɿɿɿ        | 吃晚饭        | miɿɿkʰuɿɿdzeɿɿdzeɿ |
| 水槽            | iɿɿtsʰiɿɿwɿɿɿɿ      | 旁边              | bieɿɿkuɿ            | 黄昏, 暮      | naɿɿpʰɿɿtsʰaɿɿwɿɿ  |
| 织布机           | ɿɿɿdaɿ              | 左边              | væɿɿtaɿ             | 夜里         | syɿɿɿqɔɿɿtsɿɿ      |
| 拐棍            | miɿɿɿɿɿ             | 右边              | iɿɿtaɿ              | 年          | kʰɿɿɿ              |
| 镰刀            | hūɿɿɿ               | 前面              | uɿɿdaɿ              | 今年         | tsʰuɿɿɿvieɿ        |
| 刀鞘            | yɿ                  | 后面              | gwɿɿɿtuɿ            | 去年         | æɿɿvieɿ            |
| 枪             | myɿɿɿieɿ            | 外面              | aɿɿpʰɿɿ             | 前年         | ʂuɿɿɿvieɿ          |
| 准星            | ɿieɿɿɿɿɿ            | 里面              | kuɿɿluɿ             | 三年以前       | ʂuɿɿɿdɿuɿɿvieɿ     |
| 装火药的皮带        | kuɿɿɿɿ              | 周围              | kʰuɿɿkʰuɿɿlieɿɿlieɿ | 明年         | suɿɿvieɿ           |
| 枪把            | qɔɿ                 | 地界              | tʰuɿɿlaɿtsʰiɿ       | 后年         | uɿɿvieɿ            |
| 弩弓            | taɿɿnaɿ             | 上面              | gɿɿɿtʂuɿ            | 鼠年         | hwɿɿɿkʰɿɿ          |
| 弓             | ɿieɿ                | 上面              | gɿɿɿbɿɿ             | 牛年         | viɿɿkʰɿɿ           |
| 箭             | ɿɔɿɿbɿɿ             | 下面              | yɿɿɿtʰæɿ            | 虎年         | laɿɿkʰɿɿ           |
| 陷阱            | paɿɿɿɿ              | 中间              | dæɿɿmieɿ            | 兔年         | tʰuɿɿlieɿɿkʰɿɿ     |
| 毒             | dɿɿ                 | 顶上              | ɿɔɿɿbɿɿ             | 龙年         | muɿɿɿgɿɿkʰɿɿ       |
| 字             | tʰaɿɿɿ              | 上半身             | gɿɿɿdɿuɿɿdæɿ        | 蛇年         | zɿɿɿkʰɿɿ           |
| 记号            | hæɿɿtyɿ             | 下半身             | yɿɿɿdɿuɿɿtʂæɿ       | 马年         | ɿɿɿkʰɿɿ            |
| 纹路            | læɿɿɿ               | 时候              | dɿuɿɿɿmiɿ           | 羊年         | yɿɿkʰɿɿ            |
| 话             | ʂaɿɿvæɿ             | 一夜              | dɿuɿɿɿhiɿ           | 猴年         | zyɿɿkʰɿɿ           |
|               |                     | 一天              | dɿuɿɿɿɿ             | 鸡年         | læɿɿkʰɿɿ           |

|         |   |        |  |         |  |
|---------|---|--------|--|---------|--|
| 狗年      | k <sup>h</sup> uŋk <sup>h</sup> yŋ      | 40     | zyŋts <sup>h</sup> iŋgyŋ               | 一架牛     | ɖuŋp <sup>h</sup> ɣŋ                   |
| 猪年      | wɣŋk <sup>h</sup> yŋ                    | 50     | ŋwɣŋts <sup>h</sup> iŋgyŋ              | 一张      | ɖuŋts <sup>h</sup> uŋ                  |
| 过年      | k <sup>h</sup> yŋɣsuŋ                   | 60     | q <sup>h</sup> ɔŋts <sup>h</sup> iŋgyŋ | 一元      | ɖuŋmæŋ                                 |
| 月       | ɦieŋ                                    | 70     | ɣuŋts <sup>h</sup> iŋgyŋ               | 一亩      | ɖuŋp <sup>h</sup> æŋ                   |
| 上半月     | ɦieŋp <sup>h</sup> ɣŋ                   | 80     | ɕiŋts <sup>h</sup> iŋgyŋ               | 一辈子     | ɖuŋtɕ <sup>h</sup> æŋ                  |
| 正月      | ɖuŋlieŋmieŋ                             | 90     | gyŋts <sup>h</sup> iŋgyŋ               | 一步      | ɖuŋt <sup>h</sup> yŋ                   |
| 二月      | ŋiŋlieŋmieŋ                             | 百      | ɖuŋɕiŋgyŋ                              | 一次      | ɖuŋdzɣŋ                                |
| 三月      | suŋlieŋmieŋ                             | 千      | ɖuŋtɣŋgyŋ                              | (吃的) 一口 | ɖuŋt <sup>h</sup> æŋ                   |
| 四月      | zyŋlieŋmieŋ                             | 万      | ts <sup>h</sup> iŋtɣŋ                  | 经常      | ɖɔŋɔŋ                                  |
| 五月      | ŋwɣŋlieŋmieŋ                            | 一半     | ɖuŋdɕæŋ                                | 转回      | laŋɦ                                   |
| 六月      | q <sup>h</sup> ɔŋlieŋmieŋ               | 一条绳子   | ɖuŋtɕ <sup>h</sup> æŋ, ɖuŋkɣŋ          | 又, 再    | ɑŋmaŋɖuŋdzɣŋ                           |
| 七月      | ɣieŋlieŋmieŋ                            | 一根(线)  | ɖuŋtɕ <sup>h</sup> æŋ                  | 天天晚上    | ɖuŋɦiɕiŋɖuŋɦiɕiŋ                       |
| 八月      | ɕiŋlieŋmieŋ                             | 一棵树    | ɖuŋdzɣŋ                                | 每天      | ɖuŋŋiŋɖuŋŋiŋ                           |
| 九月      | gyŋlieŋmieŋ                             | 一根(竹子) | ɖuŋtuŋ                                 | 整天      | byŋts <sup>h</sup> uŋŋiŋ               |
| 十月      | ts <sup>h</sup> iŋlieŋmieŋ              | 一根棍子   | ɖuŋkɣŋ                                 | 全部, 一切  | ɖuŋɦɔŋ                                 |
| 十一月     | ts <sup>h</sup> iŋɖuŋlieŋmieŋ           | 个(一个人) | ɖuŋɦ                                   | 都, 所有   | ɑŋɦwɣŋ                                 |
| 十二月     | ts <sup>h</sup> iŋŋiŋlieŋmieŋ           | 一只鸡    | ɖuŋp <sup>h</sup> ɣŋ                   | 自己      | ɕɦtsɕŋ                                 |
| 古时候, 传说 | æŋvieŋɣsuŋvieŋ                          | 一群, 一队 | ɖuŋɦwɣŋ                                | 这个(近指)  | uŋt <sup>h</sup> uŋ                    |
| 古代      |   | 一把刀    | ɖuŋnaŋ                                 | 这个(近指)  | tɕ <sup>h</sup> ɣŋt <sup>h</sup> uŋ    |
| 从前      | ɑŋɣsuŋ                                  | 一粒(米)  | ɖuŋliŋ                                 | 那个(远指)  | uŋt <sup>h</sup> uŋ                    |
| 以前      | uŋdaŋ                                   | 一个碗    | ɖuŋk <sup>h</sup> æŋ                   | 这里      | tɕ <sup>h</sup> ɣŋŋkuŋ                 |
| 近来      | ɑŋmuŋ                                   | 一件衣服   | ɖuŋlyŋ                                 | 那里      | ɣŋŋkuŋ                                 |
| 近来      | ɑŋŋiŋts <sup>h</sup> uŋŋiŋ              | 一包, 一卷 | ɖuŋtuŋ                                 | 谁       | k <sup>h</sup> ɑŋsiŋ                   |
| 后(后去)   | gwxŋtuŋ                                 | 一筐     | ɖuŋk <sup>h</sup> ɣŋ                   | 什么      | ɑŋtsuŋ                                 |
| 今后      | k <sup>h</sup> uŋt <sup>h</sup> uŋ      | 一捧     | ɖuŋkwaŋ                                | 怎么样     | ɑŋŋieŋvieŋɦiŋ?                         |
| 夏天、春夏   | muŋzɣŋbieŋ                              | 驮子     | ɖuŋtuŋlyŋ                              | 哪里      | ɦɣŋkuŋ                                 |
| 冬天      | muŋts <sup>h</sup> yŋɦieŋ               | 一串     | ɖuŋkwxŋ                                | 什么时候    | k <sup>h</sup> ɑŋt <sup>h</sup> ɑŋ     |
| 婚姻      | ts <sup>h</sup> uŋmieŋk <sup>h</sup> yŋ | 一滴     | ɖuŋtɕ <sup>h</sup> ɕeŋ                 | 多少      | k <sup>h</sup> ɑŋɦɣŋ                   |
| 1       | ɖuŋgyŋ                                  | 一滴水    | ɖuŋtɕ <sup>h</sup> ɕeŋ                 | 几个      | k <sup>h</sup> ɑŋɦ                     |
| 2       | ŋiŋgyŋ                                  | 一瓶     | ɖuŋdzɣŋ                                | 粗(树粗大)  | ɑŋpɣŋbuŋɦiŋ                            |
| 3       | suŋgyŋ                                  | 升      | ɖuŋtuŋ                                 | 细(树)    | t <sup>h</sup> ɑŋtɕ <sup>h</sup> yŋɦiŋ |
| 4       | zyŋgyŋ                                  | 一斤     | ɖuŋtsɑŋ                                | 高       | ɑŋpaŋɦuŋ                               |
| 5       | ŋwɣŋgyŋ                                 | 一两     | ɖuŋtyŋ                                 | 低       | t <sup>h</sup> ɑŋɦyŋɦiŋ                |
| 6       | q <sup>h</sup> ɔŋgyŋ                    | 一堆(比如: | ɖuŋpuŋ                                 | 长       | ɦæŋɦɦ                                  |
| 7       | ɣuŋgyŋ                                  | 一堆粮食)  |  | 短       | dɕæŋ                                   |
| 8       | ɕiŋgyŋ                                  | 一块     | ɖuŋp <sup>h</sup> æŋ                   | 远       | læŋq <sup>h</sup> ɔŋ                   |
| 9       | gyŋgyŋ                                  | 一对     | ɖuŋdzeŋ                                | 近       | læŋɦyŋ                                 |
| 10      | ts <sup>h</sup> iŋgyŋ                   | 一双鞋    | ɖuŋdzeŋ                                | 宽(布, 纸) | ɑŋpaŋdzɣŋ                              |
| 11      | ts <sup>h</sup> iŋɖuŋgyŋ                | 一只     | ɖuŋp <sup>h</sup> ɣŋ                   | 窄       | t <sup>h</sup> ɑŋtɕiŋ                  |
| 12      | ts <sup>h</sup> iŋŋiŋgyŋ                | 一段     | ɖuŋtɕæŋ                                | 宽敞      | ɑŋpɣŋɦwɣŋ                              |
| 13      | ts <sup>h</sup> iŋsuŋgyŋ                | 一庹[一排] | ɖuŋɦyŋ                                 | 挤(房子)   | kuŋkkuŋ                                |
| 14      | ts <sup>h</sup> iŋzyŋgyŋ                | 一拃(大拇指 | ɖuŋtɕyŋ                                | 厚       | ɑŋpɣŋluŋ                               |
| 15      | ts <sup>h</sup> iŋŋwɣŋgyŋ               | 和食指之间的 |  | 薄       | t <sup>h</sup> ɑŋɦieŋ                  |
| 16      | ts <sup>h</sup> iŋq <sup>h</sup> ɔŋgyŋ  | 距离、拇指与 |  | 浅(水浅)   | dieŋ                                   |
| 17      | ts <sup>h</sup> iŋɣsuŋgyŋ               | 食指平伸量物 |  | 深(水深)   | ɦɑŋ                                    |
| 18      | ts <sup>h</sup> iŋɕiŋgyŋ                | 之长)    |  | 过于, 太   | koŋlyŋ                                 |
| 19      | ts <sup>h</sup> iŋgyŋgyŋ                | 一拃(大拇指 | tɕyŋtzeŋ                               | 多       | dziŋ                                   |
| 20      | ŋiŋtsiŋgyŋ                              | 和中指之间的 |  | 多       | ɑŋpɣŋɦɣŋ                               |
| 30      | suŋts <sup>h</sup> iŋgyŋ                | 距离)    |  | 少       | ɖuŋɦmuŋ                                |

|             |                     |          |               |           |                      |
|-------------|---------------------|----------|---------------|-----------|----------------------|
| 少           | di'hiŋ              | 硬, 坚硬    | uŋ            | 富         | læ'kæ'ɛ              |
| 一些          | dʉ'ɪbæ'ɛ            | 紧        | tsiŋ          | 穷         | mə'dzɣ'ɪ             |
| 圆形 (球)      | gwx'ldie'llæ'hiŋ    | 松        | mə'tsiŋ       | 很穷        | dzy'ldzɣuŋ           |
| 秃           | byŋ                 | 松起来      | ta'ɪ          | 干净        | ʂwx'ŋʂwx'ŋ           |
| 皱 (衣服)      | tʃ'ɪ                | 软, 柔软    | my'ŋæ'ɛ       | 脏         | mə'ŋsuŋ              |
| 准           | wx'ŋ                | 黏 (胶)    | tʰie'tsuuŋ    | 乱         | kæ'tmæ'tzu'ɪ         |
| 不对          | mə'wɣ'ŋ             | 光滑 (路)   | kæ'ɪ          | 痛, 病 (生病) | dzɣuŋ                |
| 歪, 偏 (帽子)   | la'taŋ              | 生        | dzy'ɪdzɣ'ɪ    | 觉得不舒服     | mə'ŋtsʰe'ɪ           |
| 横 (横躺)      | dæ'ɪdæ'llæ'ɪ        | 熟        | miŋ           | 肿, 膨胀     | tʂu'ɪ                |
| 竖           | tʃ'ɪtʃ'llæ'ɪ        | 新        | ʂu'ɪtsaŋ      | (肚子) 胀    | tʂu'ɪ                |
| 直 (站直)      | tʃ'ɪtʃ'llæ'ɪ        | 陈旧       | tsu'ɪziŋ      | 着凉        | tsʰa'ɪdza'ɪzuŋ       |
| 伸直          | tʃ'ɪ                | 好        | dzɣ'ɪ         | 干扰、妨碍     | tʰie'ɪdzɣ'ɪ          |
| 弯           | la'ŋɣ'ɪ             | 好 (心好)   | nuŋ           | 好 (技巧好)   | vie'ldzɣwx'ŋ         |
| 颜色          | tʂ'ɪ'ɪzɣuŋ          | 稳重、谨慎    | tʂ'ɪa'tʂ'ɪa'ɪ | 勤快        | hu'ɪ                 |
| 黑 (颜色)      | na'ɪ                | 坏        | mə'dzɣ'ɪ      | 聪明        | tʰie'ɪ               |
| 黑 (颜色)      | na'tʂ'ɪæ'llæ'ɪ      | 贵        | pʰɪ'ɪdzɣu'ɪ   | 傻、笨、蠢     | bæ'ɪ                 |
| 白 (脸、衣服)    | pʰɪ'ɪ               | 便宜       | pʰɪ'ɪ'ɪ       | 狡猾        | tɕɣ'ŋ                |
| 白 (脸、衣服)    | pʰɪ'ɪtɕæ'llæ'ɪ      | 年老       | my'ɪ'ɪ        | 一条心, 想得   | dʉ'ɪ'ɪ               |
| 白 (头发)      | u'ŋtɕ'ɪ'ɪpʰɪ'ɪhiŋ   | 年轻       | pʰæ'ɪtɕi'ɪ    | 一致        |                      |
| 红           | wæ'ɪsu'ɪŋjie'hiŋ    | 温暖, 暖和   | ly'ɪ          | 和气、和睦     | wɣ'tʃu'ɪ             |
| 黄           | ʂu'ɪqɔ'llæ'ɪ        | 冷 (天气..) | dzɣu'ɪ        | 安静        | hi'ɪkʰa'ɪmx'ŋtsʰe'ɪ  |
| 绿 (布)       | zu'ɪhʷa'ɪŋjie'hiŋ   | 冷 (水)    | tʰæ'ɪ         | 装做        | tɕɣ'ɪvie'ɪkʰæ'ɪvie'ɪ |
| 灰           | pʰu'ɪdu'llæ'ɪhiŋ    | 难作       | lu'ɪha'ɪ      | 骄傲, 自以为   | dæ'ɪʂɣ'ɪ             |
| 灰           | pʰɪ'ɪhæ'llæ'ɪhiŋ    | 辛苦       | lu'ɪ'ɪ        | 好         |                      |
| 暗, 黑 (天)    | na'ɪfy'ɪfy'ɪ        | 容易, 容易做  | lu'ɪʂu'ɪ      | 凶恶        | ma'ɪnuŋ              |
| 花的 (蛋、鸟)    | fi'tʂu'ɪhwa'ɪhwa'ɪl | 轻松       | pʰa'ɪla'ɪ     | 爱破坏       | wæ'ɪkʰæ'ɪhiŋ         |
| 重           | zɣu'ɪ               | 香 (气味)   | suŋ           | 客气/害羞     | hi'ɪkɔ'ɪvie'ɪ        |
| 轻           | pʰa'ɪla'ɪ           | 香 (气味)   | yŋ            | 吝啬        | la'tʂ'ɪ'ɪ'ɪ          |
| 快 (动作)      | tʂ'ɪhæ'ɪ            | 香 (吃得香)  | suŋ           | 大方        | a'ɪpɣ'ɪ'ɪ'ɪku'ɪ      |
| 快           | la'ɪkwɣ'ɪ           | 臭        | by'ɪŋɣ'ɪ      | 贪心不足, 贪   | se'ɪtɕ'ɪ'ɪ'ɪ         |
| 迟           | hʷɣ'ŋ               | 腐烂       | la'ɪby'ɪ      | 吃         |                      |
| 慢           | æ'ɪze'ɪ             | 酸        | tɕy'ɪ         | 懒         | mə'ɪhuuŋ             |
| (起得) 早      | tʂ'ɪhæ'ɪ            | 甜        | tsʰi'ɪ        | 多嘴        | ɕi'ɪmie'ɪdziŋ        |
| 尖           | u'ŋtɕy'llæ'ɪ        | 苦        | kʰa'ɪ         | 笨拙        | mə'tʂ'ɪhæ'tʂ'ɪhæ'ɪ   |
| 锋利          | tʰa'ɪ               | 咸        | tsʰe'ɪsuŋ     | 努力        | zɣwa'ɪvie'ɪ          |
| 清 (水)       | ʂwx'ŋʂwx'ŋhiŋ       | 太咸       | tsʰe'ɪkʰa'ɪ   | 不幸 (人)    | ma'ɪda'ɪ             |
| 浑浊 (水)      | zɣu'ɪdqwæ'ɪ         | 食物变味, 人  | tsu'ɪby'ɪŋɣ'ɪ | 高兴、起劲     | læ'ɪpʰi'ɪ            |
| 干燥          | læ'ɪfy'ɪ            | 虚弱、瘦     |               | 幸福, 安逸    | tsʰe'ɪ               |
| 湿           | tɕæ'ɪlæ'ɪ           | 腻 (食物)   | dɣ'ɪ          | 喜欢, 爱     | pʰi'ɪ                |
| 浸泡 (如: 浸种子) | tʰie'tʃu'ɪ          | 饿 (饭)    | dze'ɪmi'ɪ     | 爱, 关心     | ma'ɪda'ɪ             |
| 稠 (粥)、黏     | ma'ɪfy'ɪmx'ŋmie'ɪ   | 馋        | tɕɣ'ɪ         | 讨厌        | dzy'ɪ                |
| (比较干)       |                     | 需要       | ŋi'ɪ          | 生气        | ɣy'ɪdzɣu'ɪ           |
| 稀 (粥, 汤)    | hæ'ɪ                | 申请, 要    | mie'ɪ         | 高兴, 心情好   | se'ɪse'ɪ             |
| 结实          | tʂ'ɪa'tʂ'ɪa'ɪ       | 讨饭       | dze'ɪmie'ɪ    | 好玩 (人)    | tsʰe'ɪtʃu'ɪ          |
|             |                     | 感谢       | kə'ɪmie'ɪ     | 安宁        | da'ɪ                 |
|             |                     | 饱        | ŋu'ɪ          | 悲哀, 伤心    | mə'ŋtsʰe'ɪ           |
|             |                     | 休息, 松懈   | hi'e'ɪ        | 孤单        | hi'ɪtʃu'ɪ            |
|             |                     | 忙        | ŋi'ɪtsʰi'ɪ    | 陡峭 (山)    | tu'ɪbie'ɪ            |
|             |                     | 事务繁忙     | lu'ɪdziŋ      |           |                      |

|          |  |           |   |            |                                       |
|----------|--|-----------|---|------------|---------------------------------------|
| 安装       | tʏt  | 拉肚子       | q <sup>h</sup> æ-tʃwæ1                    | 摇          | dzɹu1                                 |
| 搬土       | dʉu1                                       | 打喷嚏       | a1t <sup>h</sup> u1                       | 凋谢         | la-k <sup>h</sup> u1                  |
| 薅锄、锄草    | lwæ1                                       | 打嗝儿       | hu1tʏ1                                    | 上吊自杀, 缢    | ɛæ-tsu1                               |
| 挖        | dzywæ1                                     | 打饱嗝儿      | ie1p <sup>h</sup> ʏ1                      | 冻          | la1tɹ1                                |
| 耙        | tsa1                                       | 吐(吐口水)    | tɕi-tʃtu1                                 | 爬行, 匍匐     | dy1                                   |
| 扫        | væ1  | 喝         | ʃy1                                       | 翻身         | t <sup>h</sup> u1tɕy1                 |
| 拔、扯(草)   | py1  | 吸吮        | ts <sup>h</sup> i1ts <sup>h</sup> i1      | 翻过来翻过去     | zi1tɕy1p <sup>h</sup> ʏ1              |
| 获, 割草    | zu1ts <sup>h</sup> u1                      | 抽烟        | jɹ1ʃy1                                    | 滚(石头滚)     | gu1by1ly1                             |
| 压扁       | ŋæ1  | 串珠        | su1                                       | 使滚         | la1p <sup>h</sup> u1                  |
| 弄扁不弄开    | ta1pie1læ1                                 | 穿针        | u1tsu1                                    | 躲藏         | t <sup>h</sup> ie1ŋæ1                 |
| (竹子)     |  | 穿孔        | q <sup>h</sup> ɔ1t <sup>h</sup> ʏ1        | 藏          | t <sup>h</sup> ie1tʃ <sup>h</sup> wæ1 |
| 摆整齐、使均匀  | by1by1læ1                                  | 插、戳       | tʃ <sup>h</sup> u1                        | 藏(一个小的东西)  | t <sup>h</sup> ie1lmɹ1                |
| 排列整齐     | tʉu1                                       | 刺痛        | pu1                                       | 动          | li1li1                                |
| 举、抬起     | gɹ1ts <sup>h</sup> i1                      | 扎(针...扎)  | gy1                                       | 堵塞         | dzy1                                  |
| 上驮子      | gɹ1ts <sup>h</sup> i1                      | 一代, 一世    | qu1tʃ <sup>h</sup> æ1                     | 棍子断        | la1q <sup>h</sup> æ1                  |
| 抬(几个人一起) | gɹ1ts <sup>h</sup> i1                      | 传染        | tʃy1                                      | 碎          | q <sup>h</sup> ɔ1                     |
| 背柴       | pa1  | 出来, 刮(风)  | t <sup>h</sup> ʏ1                         | 破、碎(碗, 罐子) | q <sup>h</sup> ɔ1                     |
| 背水       | i1ts <sup>h</sup> i1pa1                    | 下(雪)      | vie1sa1                                   | 损坏         | wæ1ɛæ1                                |
| 背孩子      | za1hu1pa1                                  | 下(雨)      | fi1dqɹu1                                  | 撕(撕纸)      | ʃwɹ1                                  |
| 扛        | lu1  | 下(冰雹)     | dzy1la1                                   | 拆(线)       | ʃwɹ1                                  |
| 驮运       | tsi1                                       | 有(露水)     | dzy1-k <sup>h</sup> a1la1                 | 拆          | q <sup>h</sup> æ1                     |
| 帮助       | ka1ka1                                     | 发生(打雷)    | mu1gy1gy1                                 | 拆          | wæ1q <sup>h</sup> æ1                  |
| 包        | t <sup>h</sup> u1                          | 吹(灰)      | mi1                                       | 生长         | kɹ1pi1                                |
| 瞒着别人     | na1na1                                     | 缠线        | dzy1dzy1                                  | 长大         | gɹ1kwɹ1                               |
| 刨        | tsa1                                       | 钓鱼        | ŋi1ze1la1                                 | 发抖, 颤抖     | tɕ <sup>h</sup> y1tɕ <sup>h</sup> y1  |
| 比        | t <sup>h</sup> a1t <sup>h</sup> a1nie1nie1 | 赶, 打猎     | dzi1, hã1dzi1                             | 发烧         | tʃ <sup>h</sup> u1                    |
| 量        | læ1  | 打散, 驱赶, 撵 | q <sup>h</sup> æ1li1hu1-k <sup>h</sup> u1 | 为别人担心      | ŋi1mjæ1hũ1                            |
| 放置       | t <sup>h</sup> ie1tʉu1                     | 牵(牵牛)     | k <sup>h</sup> u1tʃæ1                     | 发芽(树)      | hwa1pɹ1-i1tjɹ1                        |
| 提前准备好    | tɕɹ1tɕɹ1                                   | 散开        | p <sup>h</sup> a1                         | 发芽(种子)     | y1                                    |
| 修理       | gy1  | 打开(如: 开门) | la1ts <sup>h</sup> i1                     | 开花         | væ1                                   |
| 宰牲畜      | k <sup>h</sup> a1                          | 张开手心      | k <sup>h</sup> æ1k <sup>h</sup> æ1        | 告状         | tɕɹ1zɹɹ1                              |
| 重新做      | li1tie1vie1                                | 闭         | tæ1                                       | 惩罚         | u1dy1                                 |
| 还东西      | t <sup>h</sup> ie1la1ku1                   | 关(羊)      | tæ1                                       | 掺和         | t <sup>h</sup> ie1ts <sup>h</sup> i1  |
| 唱        | gɹɹ1                                       | 锁门        | tse1                                      | 放牧         | dzy1ldze1ly1                          |
| 称        | sa1  | 闭嘴        | t <sup>h</sup> ie1mu1                     | 飞          | dzy1                                  |
| 完成       | la1se1                                     | 眨眼        | ŋjæ1mæ1                                   | 盘旋         | q <sup>h</sup> æ1q <sup>h</sup> æ1    |
| 吃        | dze1                                       | 闭眼        | mjɹ1ly1                                   | 分东西        | zy1zy1                                |
| 拍(拍桌子)   | t <sup>h</sup> ie1tʉu1                     | 穿(衣服)     | hɹ1                                       | 逢          | zy1                                   |
| 咬        | t <sup>h</sup> æ1                          | 脱(脱衣服)    | p <sup>h</sup> ʏ1                         | 孵          | zy1                                   |
| 嚼        | tɕa1qɔ1                                    | 佩带        | pɹ1                                       | 符合         | dʉu1                                  |
| 吃草       | ɛwæ1                                       | 戴手铐       | pɹ1                                       | 上街         | wɹ1bie1bi1                            |
| 舔        | jɹ1  | 戴帽子       | tʏ1                                       | 敢          | ŋwɹ1                                  |
| 含在嘴里     | ly1  | 挡住        | q <sup>h</sup> ɔ1                         | 做, 工作      | vie1                                  |
| 吞        | ɛɔ1  | 等候        | t <sup>h</sup> ie1hi1                     | 劳动         | lu1vie1                               |
| 呕吐       | p <sup>h</sup> ie1                         | 地震        | dy1dqɹu1dqɹu1;                            | 给、传        | ku1                                   |
| 小便, 解溲   | dzi1hæ1                                    | 摇         | dzy1dqɹu1                                 | 喂动物        | dze1ku1                               |
| 拉屎       | k <sup>h</sup> æ1hæ1                       |           |   |            |                                       |

|         |   |           |   |           |  |
|---------|---|-----------|---|-----------|--|
| 撒 (种子)  | p <sup>h</sup> aJ   | 借给别人      | ts <sup>h</sup> yJ, tʂ <sup>h</sup> uJts <sup>h</sup> yJ  | 爬, 上山     | gɣ <sup>h</sup> -duJ   |
| 使钩住     | mi <sup>h</sup>   | 欠钱        | viJ   | 爬, 上山     | dy <sup>h</sup> -dy <sup>h</sup>   |
| 钩住, 悬挂  | hwaJ  | 递过去       | ɬu <sup>h</sup> -pɣ <sup>h</sup> -thūJ  | 打 (如: 脱粒) | ɬuJ  |
| 够       | lyJ   | 居住        | dzyJ  | 敲门        | ta <sup>h</sup> -ta <sup>h</sup>   |
| 为别人打工   | hi <sup>h</sup> -k <sup>h</sup> ɣ <sup>h</sup> -ka <sup>h</sup> l <sup>h</sup> u <sup>h</sup> -vie <sup>h</sup> | 聚集        | la <sup>h</sup> -ly <sup>h</sup> -lyJ   | 打 (人, 钉)  | la <sup>h</sup>  |
| 管理庄稼    | li <sup>h</sup> lɔJ   | 蜷缩        | zyJ   | 排队        | ɬu <sup>h</sup> -la <sup>h</sup> -vie <sup>h</sup>   |
| 管庄稼     | li <sup>h</sup> -tʂ <sup>h</sup> u <sup>h</sup>   | 观看        | lɔJ   | 跑         | dzaJ   |
| 管理      | a <sup>h</sup> l <sup>h</sup> u <sup>h</sup> lɣ <sup>h</sup> -tzu <sup>h</sup>                                  | 看、看望      | lɔ <sup>h</sup> biJ   | 碰撞        | p <sup>h</sup> je <sup>h</sup>   |
| 灌溉      | li <sup>h</sup> ʂu <sup>h</sup> J   | 听         | hāJ   | 泼水        | ɕyJ  |
| 害羞      | hæ <sup>h</sup> duJ   | 听见        | my <sup>h</sup>   | 欺负        | dzyJlɔ <sup>h</sup> ma <sup>h</sup> hāJ  |
| 害怕      | si <sup>h</sup>   | 嗅         | la <sup>h</sup> -mi <sup>h</sup>  | 欺骗        | qæJ  |
| 吓       | ɬzy <sup>h</sup>  | 闻到        | bu <sup>h</sup> -ŋy <sup>h</sup>  | 垒起来       | ɣ <sup>h</sup> J   |
| 后悔      | p <sup>h</sup> ɣ <sup>h</sup>   | 呼吸        | sa <sup>h</sup> se <sup>h</sup> J   | 砌墙        | tʂu <sup>h</sup> l <sup>h</sup> buJ  |
| 画、写     | tʂu <sup>h</sup> J  | 烤火取暖      | my <sup>h</sup> lkwɣ <sup>h</sup> J   | 骑马        | dzu <sup>h</sup> J   |
| 刻       | ɬuJ   | 站 (站立)    | hi <sup>h</sup> ēJ  | 起 (起床)    | gɣ <sup>h</sup> -t <sup>h</sup> u <sup>h</sup>   |
| 怀孕一个孩子  | za <sup>h</sup> -th <sup>h</sup> l <sup>h</sup> pɣ <sup>h</sup>   | 跪下        | ma <sup>h</sup> -ku <sup>h</sup> l <sup>h</sup> ie <sup>h</sup> -ts <sup>h</sup> y <sup>h</sup>                 | 打招呼       | ɣ <sup>h</sup> -k <sup>h</sup> u <sup>h</sup> l <sup>h</sup> u <sup>h</sup> lɔ <sup>h</sup> je <sup>h</sup> -tʂ <sup>h</sup> ? |
| 交换      | qæ <sup>h</sup> -lqæ <sup>h</sup>   | 跪下磕头 (叩头) | lɔ <sup>h</sup> -p <sup>h</sup> y <sup>h</sup> lɬuJ   | 染         | tʂ <sup>h</sup> y <sup>h</sup> J   |
| 变 (蛹变蛾) | tɕɣ <sup>h</sup> lɣ <sup>h</sup> -væ <sup>h</sup> J   | 咳嗽        | tsy <sup>h</sup>  | 热饭        | tsi <sup>h</sup>   |
| 换       | qæ <sup>h</sup> , qæ <sup>h</sup> -lqæ <sup>h</sup>   | 渴         | hwɣ <sup>h</sup>  | 必须        | lɔ <sup>h</sup>  |
| 飘动      | li <sup>h</sup> -li <sup>h</sup> -tʂwæ <sup>h</sup> lɣwæ <sup>h</sup> J   | 困倦        | ts <sup>h</sup> e <sup>h</sup> J  | 会         | ku <sup>h</sup> J  |
| 挥动      | tɕi <sup>h</sup> -tɕi <sup>h</sup>  | 拉 (向前拉)   | tɕæ <sup>h</sup>  | 能, 能够     | ɬzywɣ <sup>h</sup> J   |
| 来       | i <sup>h</sup>  | 拖         | gwæ <sup>h</sup> lɣsæ <sup>h</sup> J  | 扔         | la <sup>h</sup>  |
| 毁灭      | t <sup>h</sup> u <sup>h</sup> l <sup>h</sup> ts <sup>h</sup> u <sup>h</sup> J                                   | 推         | mie <sup>h</sup> J  | 甩         | du <sup>h</sup> J  |
| 使混合     | tʂwæ <sup>h</sup> -tʂwæ <sup>h</sup>  | 按 (用手)    | ŋæ <sup>h</sup> J   | 掷 (掷石头)   | tʂa <sup>h</sup> l <sup>h</sup> ts <sup>h</sup> i <sup>h</sup>   |
| 搀       | zæ <sup>h</sup> lɣzæ <sup>h</sup> J   | 挤压        | tɕy <sup>h</sup>  | 散了        | p <sup>h</sup> y <sup>h</sup>  |
| 搀       | ʂwæ <sup>h</sup> -ʂwæ <sup>h</sup>  | 靠         | t <sup>h</sup> u <sup>h</sup> J   | 解开, 解绳结   | tʂ <sup>h</sup> u <sup>h</sup> J   |
| 和泥      | dzæ <sup>h</sup> l <sup>h</sup> hæ <sup>h</sup> lɣzæ <sup>h</sup> J   | 留下        | t <sup>h</sup> ie <sup>h</sup> -ɬzy <sup>h</sup> -t <sup>h</sup> u <sup>h</sup> !                               | 杀         | k <sup>h</sup> a <sup>h</sup> J  |
| 累积      | ku <sup>h</sup> -ku <sup>h</sup>  | 遗漏        | my <sup>h</sup> J   | 筛         | lyJ  |
| 记得      | ŋi <sup>h</sup> mie <sup>h</sup> lq <sup>h</sup> ɔ <sup>h</sup> J   | 忘记        | la <sup>h</sup> lmy <sup>h</sup> J  | 射中        | zy <sup>h</sup>  |
|         | g <sup>h</sup> y <sup>h</sup> l <sup>h</sup> ts <sup>h</sup> i <sup>h</sup>                                     | 绑, 捆      | ts <sup>h</sup> i <sup>h</sup> J  | 伸 (伸手)    | ɣ <sup>h</sup> l <sup>h</sup> tʂ <sup>h</sup> u <sup>h</sup> J   |
| 寄存      | t <sup>h</sup> u <sup>h</sup>   | 绑         | tsu <sup>h</sup> -tsu <sup>h</sup>  | 生锈        | tʂu <sup>h</sup> -lq <sup>h</sup> -æ <sup>h</sup> -n <sup>h</sup> -ɬze <sup>h</sup>  |
| 寄信、服送   | q <sup>h</sup> ɔ <sup>h</sup> -pɣ <sup>h</sup>  | 系         | ty <sup>h</sup> J   | 生孩子       | za <sup>h</sup> -th <sup>h</sup> l <sup>h</sup> ɬzy <sup>h</sup> J   |
| 妒忌      | g <sup>h</sup> y <sup>h</sup> lɬzy <sup>h</sup> J   | 勒住        | dzu <sup>h</sup> lɬzy <sup>h</sup> J  | 失踪        | t <sup>h</sup> u <sup>h</sup> l <sup>h</sup> ts <sup>h</sup> u <sup>h</sup> J  |
| 停止      | læ <sup>h</sup> hi <sup>h</sup> ē <sup>h</sup> J  | 漏水        | ma <sup>h</sup> lɣæ <sup>h</sup> J  | 撑开 (帐篷)   | q <sup>h</sup> æ <sup>h</sup> -lq <sup>h</sup> æ <sup>h</sup> J  |
| 剪       | ts <sup>h</sup> i <sup>h</sup>  | 滤         | tsu <sup>h</sup> J  | 收拾、弄整齐    | ʂu <sup>h</sup> lɣsu <sup>h</sup> J  |
| 砍 (树)   | da <sup>h</sup>   | 弄乱        | wæ <sup>h</sup> lq <sup>h</sup> æ <sup>h</sup> J  | 梳         | tʂ <sup>h</sup> h <sup>h</sup> wɣ <sup>h</sup> J   |
| 劈、剖     | q <sup>h</sup> ɔ <sup>h</sup>   | 驱逐        | q <sup>h</sup> æ <sup>h</sup> -pɣ <sup>h</sup> -hū <sup>h</sup> !   | 梳         | si <sup>h</sup> -si <sup>h</sup>   |
| 剁肉, 宰   | da <sup>h</sup>   | 埋         | ŋy <sup>h</sup>   | 败、输       | mæ <sup>h</sup> -tɕ <sup>h</sup> ɣ <sup>h</sup>  |
| 切       | hæ <sup>h</sup> J   | 买         | z <sup>h</sup> u <sup>h</sup>   | 用手剥       | ʂu <sup>h</sup> J  |
| 断 (线)   | tʂ <sup>h</sup> u <sup>h</sup> J  | 卖         | tɕ <sup>h</sup> i <sup>h</sup>  | 剥皮        | ʂu <sup>h</sup> J  |
| 马叫      | lwæ <sup>h</sup>  | 生意        | gɣ <sup>h</sup> -tɕ <sup>h</sup> i <sup>h</sup> l <sup>h</sup> ɣ <sup>h</sup> -tɕ <sup>h</sup> i <sup>h</sup> l | 削         | ʂu <sup>h</sup> J  |
| 狗吠      | ly <sup>h</sup> J   | 抿嘴巴       | ts <sup>h</sup> i <sup>h</sup> l <sup>h</sup> ts <sup>h</sup> i <sup>h</sup> J                                  | 煮熟        | tɕɣ <sup>h</sup> J   |
| 老虎叫     | lwæ <sup>h</sup>  | 触碰        | g <sup>h</sup> y <sup>h</sup> J   | 煮了一会      | ɬu <sup>h</sup> -lmy <sup>h</sup> l <sup>h</sup> mi <sup>h</sup> l <sup>h</sup> tɕɣ <sup>h</sup> J                             |
| 名字叫     | hi <sup>h</sup> J   | 磨刀        | sy <sup>h</sup> J   | 烧开        | tɕɣ <sup>h</sup> J   |
| 结很多果子   | ly <sup>h</sup> l <sup>h</sup> dy <sup>h</sup> J  | 拧 (拧毛巾)   | ɣæ <sup>h</sup> -tʂy <sup>h</sup> J   | 煨熟        | tsi <sup>h</sup> J   |
| 结果子     | la <sup>h</sup> l <sup>h</sup> dy <sup>h</sup> l <sup>h</sup> ɣa <sup>h</sup>                                   | 搓 (搓绳子)   | zy <sup>h</sup> J   | 蒸熟        | by <sup>h</sup> J  |
| 婚姻      | z <sup>h</sup> u <sup>h</sup> lɣy <sup>h</sup> J  | 缠线        | dzy <sup>h</sup> lɬzy <sup>h</sup> J  | 炒 (肉、菜)   | hi <sup>h</sup> J  |
| 向别人借    | ŋi <sup>h</sup>   |           |   | 炒 (肉、菜)   | tʂ <sup>h</sup> u <sup>h</sup> J   |

|         |                         |         |  |         |  |
|---------|-------------------------|---------|--|---------|--|
| 干炒 (麦子) | hi-thi                  | 养 (动物)  | zwx  | 错、犯错误   | qæ                                     |
| 揉面      | zy                      | 溢出来     | q <sup>h</sup> ɔ                                     | 舀水      | qwa                                    |
| 搅拌      | ɣwa                     | 送行      | py   | 守卫      | ʃ <sup>h</sup> u                       |
| 尝试、体会、  | ɖu pɔbi                 | 漂浮      | tɕy  | 带孩子     | qæ                                     |
| 经过      |                         | 跨 (跨小沟) | ɛa   | 带路      | læ ɛɔ ɣy                               |
| 烘干      | læ-fy-ik <sup>h</sup> u | 遇见      | ɛɔ-py  | 骨折      | q <sup>h</sup> æ                       |
| 弄碎 (用牙  | tɕy-ly-tɕy              | 盖, 覆盖   | hu   | 倒       | q <sup>h</sup> æ                       |
| 齿、手磨)   |                         | 遮 (云遮月) | ka   | 掉下      | ʃ <sup>h</sup> u                       |
| 在磨房里磨   | tɕy                     | 挡住去路    | ka   | 掉入、沉下去  | ʃ <sup>h</sup> u                       |
| 点灯      | ʃy                      | 包起来     | ɣu ɣu , la ɣu  | 摔倒, 跌倒  | t <sup>h</sup> ie ɖu                   |
| 烧       | ɖzy                     | 遮蔽      | hu   | (路很滑)   |  |
| 烧焦      | q <sup>h</sup> æ        | 使火炉灭了   | ny   | 立起来     | t <sup>h</sup> ie ɖzy k <sup>h</sup> u |
| 烧火      | ts <sup>h</sup> i       | 灭, 熄    | k <sup>h</sup> u                                     | 到达      | t <sup>h</sup> y                       |
| 熏       | hwa                     | 震动      | ɖzy  | 得到      | ɔ                                      |
| 一起摔交    | zi zi                   | 震动      | ɖzy-ɖzy  | 丢失, 遗失  | t <sup>h</sup> u ts <sup>h</sup> u     |
| 甩来甩去    | ɣwx-lie u               | 点头      | u-tu ɣy ɣy   | 捉 (捉鸡)  | zi                                     |
| 睡觉      | zi                      | 抢       | ɖzæ  | 握 (握刀把) | ts <sup>h</sup> y                      |
| 睡着      | zi my zi                | 争夺      | ɖzæ-ɖzæ  | 拣, 拾, 取 | la ts <sup>h</sup> y                   |
| 讲       | zwx                     | 吵架      | ɖæ-ɖæ  | 捡起来, 拾  | ku                                     |
| 商量、谈天   | ɣa-væ                   | 偷       | k <sup>h</sup> y                                     | 摘       | ʃ <sup>h</sup> u                       |
| 讲故事     | u                       | 催别人把东西  | ta   | 拿过来     | y                                      |
| 问       | my du                   | 交出来     |  | 赠送      | py                                     |
| 读       | ɲi tsi                  | 织       | da   | 哄       | tu-tu                                  |
| 批评      | ɖæ                      | 编 (竹子)  | mæ da  | 抱起小孩子   | tu-t, tu-tu                            |
| 骂       | u ɖy                    | 指       | ɣy   | 亲吻      | bu-tu                                  |
| 逃, 逃跑   | p <sup>h</sup> u        | 种       | t <sup>h</sup> y                                     | 铺 (铺床)  | k <sup>h</sup> u                       |
| 踢一脚     | tsa                     | 抓       | ɖzwx   | 去       | bi                                     |
| 踩       | t <sup>h</sup> y        | 啄       | k <sup>h</sup> y                                     | 去       | ɛy                                     |
| 剔, 刮    | si-tsi                  | 醉       | ɛæ   | 去 (过去式) | hu                                     |
| 满       | ɣi                      | 坐/住     | dzy  | 走路      | se                                     |
| 挑选      | si                      | 做梦      | y mu k <sup>h</sup> wx                               | 散步      | ɣa lɔ y lɔ bi                          |
| 跳舞      | ts <sup>h</sup> u       | 暗 (房子)  | na fy fy   | 走 (离开)  | hū                                     |
| 往后仰     | ɣy ɣy                   | 天阴      | mu-ta  | 喊 (大声叫) | ku                                     |
| 弄弯      | tsa-qæ k <sup>h</sup> u | 瘦 (人瘦)  | ɣu-tza   | 笑       | ɔ                                      |
| 退后      | tie-tse                 | 瘦 (肉)   | ɣu-na  | 玩笑      | a-tzu ɣa-væ                            |
| 洗衣服     | ts <sup>h</sup> u       | 肥 (肥肉)  | ɣu-p <sup>h</sup> y                                  | 逗弄 (话)  | ze k <sup>h</sup> wx vie               |
| 冲水      | ɕy                      | 胖       | ɣu ɖy  | 玩, 玩耍   | a zmu                                  |
| 下蛋      | ɛɔ ɛɔ                   | 干燥      | fy   | 玩具      | a zmu tsu                              |
| 相信      | mu-tɣu                  | 可爱      | a-li   | 哭       | ny                                     |
| 醒       | ʃy                      | 丑陋      | a-tmx li   | 过去 (时间) | ɣy                                     |
| 学       | su                      | 辣       | tsu  | 数       | ʃwx-tʃwx                               |
| 教       | su                      | 活       | sy   | 跳       | ts <sup>h</sup> u                      |
| 写       | ʃsu                     | 死 (人)   | su   | 过河      | ɖæ                                     |
| 知道      | su                      | 死       | k <sup>h</sup> y                                     | 贴       | zu zu                                  |
| 传闻      | ɲɔ                      | 合适      | ɖu   | 想       | ɣ-tɖu                                  |
| 懂       | my                      | 擦       | ʃ <sup>h</sup> y, ʃ <sup>h</sup> y-tʃ <sup>h</sup> y | 愿意      | lwæ                                    |
| 寻找      | ɣu                      | 揉       | zy   | 请       | lwæ                                    |
| 搔痒      | kwa                     | 呛       | v  | 接       | ʃy, ʃy-tʃy                             |
| 阉割      | læ mie ɣy               | 塌毁, 倒塌  | ɖzɛ  | 游泳、漂浮   | ɖzy, zu-tɖzy                           |



|         |  |        |   |         |  |
|---------|--|--------|---|---------|--|
| 有       | dzyt   | 大苍蝇    | fyJmieJk <sup>h</sup> æJ  | 蝌蚪      | px <sup>h</sup> ldzyJlyJ   |
| 没有      | mətdzyt  | 蝉      | wɔJmieJtɕɔJɔJ   | 鱼       | ɲiJzeJ   |
| 大       | a <sup>h</sup> pa <sup>h</sup> ldzuJ   | 蜘蛛     | ba <sup>h</sup> la <sup>h</sup> tmie <sup>h</sup>   | 兔子      | t <sup>h</sup> u <sup>h</sup> lieJ                               |
| 小       | tɕiJ   | 大蜘蛛    | ba <sup>h</sup> la <sup>h</sup> tmie <sup>h</sup> a <sup>h</sup> pa <sup>h</sup> ldz              | 蛇       | zy <sup>h</sup> lbæJ   |
| 交配 (动物) | lyJ  |        | u <sup>h</sup> h <sup>h</sup> iJ  | 蛇的蜕皮    | ky <sup>h</sup> iqæJ   |
| 鸟       | uJiJ   | 蜘蛛网    | ba <sup>h</sup> la <sup>h</sup> tmie <sup>h</sup> k <sup>h</sup> u <sup>h</sup> l                 | 壁虎      | lie <sup>h</sup> daJ   |
| 鸡       | læJ  | 蜗牛, 螺蛳 | ɲjɔ <sup>h</sup> ky <sup>h</sup> ɔ <sup>h</sup> syJ   | 水獭      | ʂɥ   |
| 公鸡      | læ <sup>h</sup> p <sup>h</sup> yJ  | 蜣螂[牛屎] | wɔJmieJk <sup>h</sup> æJh <sup>h</sup> iJtu   | 野兽的洞    | q <sup>h</sup> ɔJ  |
| 母鸡      | læ <sup>h</sup> mieJ   | 虫、粪虫]  | JlyJ  | 鸟窝, 鸟巢  | k <sup>h</sup> u <sup>h</sup> l                                  |
| 鸭子      | bæ <sup>h</sup> tmie <sup>h</sup>  | 蝴蝶     | p <sup>h</sup> ie <sup>h</sup> lieJ   | 骡子      | da <sup>h</sup> luJ  |
| 雉       | t <sup>h</sup> u <sup>h</sup> ty <sup>h</sup>  | 螳螂     | laJmieJlaJɔ <sup>h</sup> ɔ <sup>h</sup> J   | 獐子      | lie <sup>h</sup>   |
| 雉       | t <sup>h</sup> ɕ <sup>h</sup> a <sup>h</sup> my <sup>h</sup> t <sup>h</sup> ɕ <sup>h</sup> a <sup>h</sup> t <sup>h</sup> ɕ <sup>h</sup> a <sup>h</sup> | 蝗虫     | ɲi <sup>h</sup> by <sup>h</sup> ky <sup>h</sup> wa <sup>h</sup> ta <sup>h</sup> tmie <sup>h</sup> | 麂子      | ts <sup>h</sup> i <sup>h</sup> J                                 |
| 雉, 鹇    | kɔ <sup>h</sup> piJ  | 小的树枝虫  | si <sup>h</sup> dze <sup>h</sup> dzeJh <sup>h</sup> iJ  | 猴子      | yJ   |
| 啄木鸟     | t <sup>h</sup> u <sup>h</sup> bie <sup>h</sup> t <sup>h</sup> u <sup>h</sup> ta <sup>h</sup> ta <sup>h</sup>   | 象      | nɔ <sup>h</sup> by <sup>h</sup> ɔ <sup>h</sup> ɕ <sup>h</sup> iJ                                  | 老虎      | la <sup>h</sup>  |
| 鹤       | ɛɔJ  | 猪      | wɔ <sup>h</sup> t   | 豹子      | zæJ  |
| 雁       | mu <sup>h</sup> ze <sup>h</sup> hæ <sup>h</sup> ze <sup>h</sup>  | 母猪     | wɔJmieJ   | 狼       | p <sup>h</sup> a <sup>h</sup> J                                  |
| 梟       | bu <sup>h</sup> lu <sup>h</sup> ty <sup>h</sup>  | 种公猪    | wɔ <sup>h</sup> syJ   | 牛       | vi <sup>h</sup>  |
| 老鹰      | ka <sup>h</sup> na <sup>h</sup> tmie <sup>h</sup>  | 猪崽     | wæ <sup>h</sup> by <sup>h</sup>   | 公牛      | vi <sup>h</sup> syJ  |
| "小鹰"    | t <sup>h</sup> swɔ <sup>h</sup> la <sup>h</sup> t <sup>h</sup> su <sup>h</sup>   | 野猪     | wɔ <sup>h</sup> JtuJ  | 水牛      | væJ  |
| 乌鸦      | la <sup>h</sup> kæ <sup>h</sup>  | 马      | ɔ <sup>h</sup> t  | 牦牛/野牦牛  | by <sup>h</sup> J  |
| 喜雀      | læ <sup>h</sup> seJ  | 公马     | ɔ <sup>h</sup> syJ  | 驴子      | tɔ <sup>h</sup> by <sup>h</sup> J                                |
| 鸚 (鸚)   | dzywɔ <sup>h</sup> tmie <sup>h</sup>   | 母马     | ɔ <sup>h</sup> JmieJ  | 野驴子     | iJbæJ  |
| 鸚鹉      | a <sup>h</sup> lqæJ  | 骗马     | ɔ <sup>h</sup> ɛɔJ  | 藏羚      | se <sup>h</sup>  |
| 羽毛      | hɔ <sup>h</sup> J  | 马驹子    | ɔ <sup>h</sup> za <sup>h</sup> thu <sup>h</sup>   | 牲畜      | dzy <sup>h</sup> ldzeJ   |
| 翅膀      | dy <sup>h</sup> ts <sup>h</sup> u <sup>h</sup> J   | 马鹿     | t <sup>h</sup> ɕ <sup>h</sup> æJ  | 野猫      | ɔ <sup>h</sup> tmie <sup>h</sup>                                 |
| 龙       | zy <sup>h</sup> lbæJ   | 鹿      | t <sup>h</sup> ɕ <sup>h</sup> æ <sup>h</sup> by <sup>h</sup> J                                    | 松鼠, 灰鼠  | hwæ <sup>h</sup> zquJ  |
| 蝙蝠      | dzy <sup>h</sup> lwɔ <sup>h</sup> J  | 母鹿     | t <sup>h</sup> ɕ <sup>h</sup> æ <sup>h</sup> tmie <sup>h</sup>                                    | 老鼠 = 耗子 | hwɔ <sup>h</sup> J   |
| 虫       | dzi <sup>h</sup> h <sup>h</sup> iJ   | 狗      | k <sup>h</sup> u <sup>h</sup> t   | 黄鼠狼, 黄喉 | u <sup>h</sup> p <sup>h</sup> y <sup>h</sup> J                   |
| 蜈蚣      | ty <sup>h</sup> ɕi <sup>h</sup>  | 母狗     | k <sup>h</sup> u <sup>h</sup> tmie <sup>h</sup>   | 貂       |  |
| 蚊子      | i <sup>h</sup> tsu <sup>h</sup> t  | 流浪的狗   | t <sup>h</sup> ɕ <sup>h</sup> ãJlaJ   | 尖鼠、鼯鼠   | ɔ <sup>h</sup> tɕy <sup>h</sup> hwɔ <sup>h</sup> t               |
| 跳蚤      | k <sup>h</sup> u <sup>h</sup> t <sup>h</sup> su <sup>h</sup> J   | 看门狗    | a <sup>h</sup> lu <sup>h</sup> k <sup>h</sup> u <sup>h</sup> t                                    |         | ɲy <sup>h</sup> q <sup>h</sup> ɔJ                                |
| 虱子      | ʂu <sup>h</sup> tmie <sup>h</sup>  | 旱獭     | dzi <sup>h</sup> hwɔ <sup>h</sup> t   | 飞鼠      | ɲiJzeJ   |
| 虻子      | ʂu <sup>h</sup> ʂu <sup>h</sup> ɛɔJ  | 熊      | u <sup>h</sup>  | 刺猬      | py <sup>h</sup>  |
| 臭虫      | qɔ <sup>h</sup> t <sup>h</sup> su <sup>h</sup> t   | 熊胆     | u <sup>h</sup> tsiJ   | 马鬃      | ɔ <sup>h</sup> by <sup>h</sup> by <sup>h</sup>                   |
| 象鼻虫     | by <sup>h</sup> t <sup>h</sup> ɕ <sup>h</sup> æJ   | 猫      | hwɔ <sup>h</sup> lie <sup>h</sup>   | 蹄子      | k <sup>h</sup> wɔ <sup>h</sup> lbieJ                             |
| 毛虫      | sa <sup>h</sup> lda <sup>h</sup> by <sup>h</sup> ts <sup>h</sup> y <sup>h</sup> J  | 公猫     | hwɔ <sup>h</sup> lie <sup>h</sup> by <sup>h</sup> J   | 奶牛的乳房   | vi <sup>h</sup> ta <sup>h</sup> puJ                              |
| 瓢虫      | dzi <sup>h</sup> h <sup>h</sup> i <sup>h</sup> ɛæJtsu <sup>h</sup> Jlæ <sup>h</sup>  | 母猫     | hwɔ <sup>h</sup> lie <sup>h</sup> tmie <sup>h</sup> J   | 犄角      | q <sup>h</sup> ɔJ  |
|         | h <sup>h</sup> iJ  | 山羊     | ts <sup>h</sup> u <sup>h</sup> J  | 爪子      | laJtsu <sup>h</sup> J  |
| 四脚蛇     | za <sup>h</sup> lmɔ <sup>h</sup> by <sup>h</sup> J   | 公山羊    | ts <sup>h</sup> u <sup>h</sup> by <sup>h</sup> J  | 大蒜      | fy <sup>h</sup>  |
| 蚂蟥, 水蛭  | i <sup>h</sup> ts <sup>h</sup> i <sup>h</sup> ldzu <sup>h</sup> h <sup>h</sup> iJ  | 麝香     | lie <sup>h</sup> hu <sup>h</sup>  | 菌子 (蘑菇) | muJt <sup>h</sup> wɔ <sup>h</sup> J                              |
| 马蜂 (黄蜂) | dzyJ   | 山羊羔    | ts <sup>h</sup> u <sup>h</sup> t <sup>h</sup> u <sup>h</sup> J                                    | 果核      | tɕyJ   |
| 蚯蚓      | ɲjɔ <sup>h</sup> ɕɔ <sup>h</sup> ldzi <sup>h</sup> h <sup>h</sup> i <sup>h</sup>   | 绵羊     | y <sup>h</sup>  | 水果      | si <sup>h</sup> tu <sup>h</sup> li <sup>h</sup> J                |
| 蚂蚁      | ts <sup>h</sup> ɕ <sup>h</sup> a <sup>h</sup> zy <sup>h</sup> J  | 公绵羊    | y <sup>h</sup> by <sup>h</sup>  | 桃子      | ts <sup>h</sup> u <sup>h</sup> ky <sup>h</sup> ta <sup>h</sup> J |
| 蚂蚁巢     | ts <sup>h</sup> ɕ <sup>h</sup> a <sup>h</sup> zy <sup>h</sup> q <sup>h</sup> ɔJ  | 母绵羊    | y <sup>h</sup> tmie <sup>h</sup>  | 梨子      | si <sup>h</sup> zy <sup>h</sup>                                  |
| 蜜蜂      | dzy <sup>h</sup>   | 绵羊羔    | y <sup>h</sup> za <sup>h</sup> thu <sup>h</sup> J   | 柿子      | su <sup>h</sup> by <sup>h</sup> J                                |
| 蜂蜜      | dzy <sup>h</sup> zqu <sup>h</sup>  | 羊毛     | ts <sup>h</sup> u <sup>h</sup> h <sup>h</sup> v <sup>h</sup> J                                    | 大麦      | miJdzeJ  |
| 蜂窝      | dzy <sup>h</sup> ɕu <sup>h</sup>   | 岩羊[青羊] | se <sup>h</sup>   | 青稞      | t <sup>h</sup> ɕ <sup>h</sup> y <sup>h</sup> zqu <sup>h</sup> J  |
| 蛆       | mu <sup>h</sup> k <sup>h</sup> y <sup>h</sup> ly <sup>h</sup> J  | 狐狸     | q <sup>h</sup> wæ <sup>h</sup> tmie <sup>h</sup>  | 甜荞, 荞麦, | ja <sup>h</sup> dzy <sup>h</sup> t                               |
| 苍蝇      | bɔ <sup>h</sup> ɔ <sup>h</sup> J   | 青蛙     | px <sup>h</sup> tmie <sup>h</sup>   | 花荞      |  |

|              |                     |          |                |
|--------------|---------------------|----------|----------------|
| 苦荞           | jaɪkʰɑɪ             | 菁叶子      |                |
| 稻子           | dzeɪsyɿ             | 根        | siɪɑɪtsʰuɿ     |
| 米            | tɕʰiɿ               | 树枝       | mæɿdyɿ         |
| 米饭           | t͡sʰæɿpʰyɿdzeɿ      | 树枝       | siɿkaɿllaɪ     |
| 玉米、包谷        | kʰɑɿdzeɿ            | 树干       | siɪdziɪ        |
| 燕麦           | myɿlzuɿ             | 液, 汁     | zuɿɪ, siɪ-zuɿɪ |
| 莜麦           | ʂuɿ                 | 松香       | tʰuɪɪɬæɿ       |
| 苋米           | njaɿllaɪmaɪ         | 麦苗       | dzuɿliɿ        |
| 糠            | tsʰiɪ               | 种子       | læɿ            |
| 麦麸           | pʰɑɪdaɿ             | 叶子       | tɕʰyɿ          |
| 麦秸           | zuɿ                 | 刺        | tɕʰiɪtuɿ       |
| 麦芒           | mieɪ                | 花        | væɿ            |
| 小麦           | dzeɿ                | 花        | aɿliɿwaɿ       |
| 火麻           | saɪɑɪ               | 草        | zuɿ            |
| 大麻           | saɿ                 | 玉米包      | qʰuɿɿtʰyɿ      |
| 蔬菜           | uɿtɕʰyɿ             | 杉树果      | siɪliɿ         |
| 萝卜           | lyɿbiɿ              | 豆类的粗糠    | ɲyɪtsaɿ        |
| 南瓜           | tseɿhiɿɟwɿɿ         | 秕, 喂牛    |                |
| 黄瓜           | tʰyɿhwɿɿ            | 树墩、树桩    | siɪpɿɿtʰyɿ     |
| 土豆 (马铃薯, 洋芋) | jaɿyɿ               | 树瘤       | tsuɿtuɿɿlyɿ    |
| 树            | siɪdziɪ             | 茎        | zuɿɪdzyɪ       |
| 松树           | tʰuɪsiɪ             | 我        | ɲɑɿ            |
| 松明           | qʰɔɪqʰɔɿ            | 你        | nuɪ            |
| 落叶松          | tʰuɪɬyɿ             | 他        | tʰuɪ           |
| 柳树, 杨柳       | zyɿsiɿ              | 咱们       | uɪmɿɿ          |
| 柏树           | syɿ                 | 我们       | ɲɑɪmɿɿ         |
| 大竹子          | mæɿ                 | 你们       | nuɪmɿɿ         |
| 竹子           | tsʰuɪt͡sʰyɿ         | 他们 (对平辈) | tʰuɪkʰyɿ       |
| 竹子           | mæɿtʰæɿtɕiɿhiɿ      | 你们俩      | nuɿdziɿ        |
| 甘蔗           | kʰɑɪdzeɪpuɪzyɪ      | 不        | məɪ            |
| 黄豆           | ɲyɿ                 | 是 (这是什么) | ɲuɿ            |
| 豆花           | ɲyɪhuɿ              | 这样, 这么   | uɿnieɿ         |
| 豌豆           | daɿtsʰyɿ            | 越、更      | laɪhaɿ         |
| 豌豆干草         | daɿtsʰyɿlzuɪ        | 凉山木里县    | muɿliɿ         |
| 花椒           | dzyɿ                | 木里县项脚    | hʰwɑɿdzyɿ      |
| 野花椒          | dzyɿɿbyɿ            |          |                |
| 庄稼           | kʰyɿɿɬwaɿ           |          |                |
| 庄稼 (未收)      | ɬɔɿɿbieɿ            |          |                |
| 藤子           | ɲyɿɿbæɿ             |          |                |
| 辣椒           | læɿtsuɿ             |          |                |
| 四川桦树, 白桦树    | muɿkɿɿ              |          |                |
| 核桃           | uɿduɿ               |          |                |
| 荨麻 [和麻]      | ɲiɿt͡sʰuɿ           |          |                |
| 血满草 [臭草]     | jaɿɿbyɿɿjaɿtsuɿtsuɿ |          |                |
| [酸酸草]        | hwɿɿtɕyɿ            |          |                |
| 大蒜的根         | fɪɪtuɿ              |          |                |
| 酸菜, 如: 芜菁    | tɕyɿɿlæɿ            |          |                |