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## The phonology of Laze: phonemic analysis, syllabic inventory, and a short word list<sup>\*</sup>

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*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.

*Keywords:* Muli Shuitian; Laze; phonemic analysis; word list; syllabic inventory

### 木里水田话（拉热话）音系分析：音位归纳与音节盘点

提要：木里水田话（拉热话）是四川凉山州木里县的一种语言，使用人口不到一千人。本文是对拉热话音系的共时分析，附录一个 1,400 词左右的词汇表。通过音位分析表这个归纳工具，可以看出拉热话声母与韵母的分布特征。这些特征对拉热话、纳西语、纳语等纳语组语言的历史研究有较为重要的意义。

关键词：木里水田话，拉热话，音位归纳，词汇表，音节分析表

#### 0. Introduction

This article focuses on Laze (autonym: /la˩˩ze˩˩/; 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 and Michaud 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).

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<sup>\*</sup> 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: /su˩˩˩gɣ˩˩mi˩˩/) 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 are 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, ‘wɿʔ’ in the cell corresponding to initial /h/ and rhyme /wɿ/ indicates that the combination /hwɿ/ is attested, and that its phonetic realisation can be approximated as [wɿʔ], 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.

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                   | ɟ         | ɣ                  | 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                 | ɟ 书, 笑, 石 | ɣ 肠                | —      | jɣ 奶奶                | ja 袖子                |
| h              | xa 难                | hæ 害羞              | ɣwæ 肩膀 | ɣwa 挂    | ɕi 舌头               | —                    | ɕy 痔                 | ɣu 孩子               | xɔ 楔子              | xu 晚上              | —                   | — | ɣwɣ 渴                | —         | —                  | —      | —                    | —                    |
| f              | B                   | —                  | —      | —        | fi 雨                | —                    | —                    | —                   | —                  | —                  | —                   | — | —                    | —         | fɣ 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> ɣ 烟 | —      | tɕ <sup>h</sup> ɣ 蔬菜 | tɕ <sup>h</sup> a 礼物 |
| k              | qa 遮                | qæ 换               | —      | qwa 痒, 舀 | tɕi 云               | tɕie 痰               | tɕy 压                | ku 这里               | qɔ 喉咙              | ku 能               | kɣ 额头               | — | kwɣ 黎明               | —         | kɣ 皮肤              | tɕæ 湿  | tɕɣ 煮                | tɕa 蓑衣, 嚼            |
| ɕ              | ka 埕口               | ɕæ 富               | kwæ 反刍 | kwa 庄稼   | —                   | —                    | —                    | —                   | ko 吞, 客气           | —                  | —                   | — | —                    | —         | —                  | —      | —                    | —                    |
| g              | VH                  | —                  | VH     | —        | dzi 袋子              | —                    | dzy 手镯               | gu 妹妹               | —                  | gu 弟弟              | gɣ 上                | — | gwɣ 下午               | —         | gɣ 雷               | dzæ 泥巴 | dzɣ 美                | dza 泥巴               |
|                | a                   | æ                  | wæ     | wa       | i                   | ie                   | y                    | u                   | ɔ                  | u                  | ɣ                   | e | wɣ                   | ɟ         | ɣ                  | 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> ɣ 出 | —      | —                    | —                    |
| t              | ta 全部               | —                  | —      | —        | B                   | tie (退)后             | ty 系                 | tu 哄                | —                  | —                  | tɣ 茶壶; 那里           | — | —                    | —         | ty 洞               | —      | tjɣ (虚词)             | —                    |
| t              | —                   | tæ 臼齿              | —      | —        | —                   | —                    | —                    | —                   | —                  | tɣ 雾               | —                   | — | —                    | tɟ 皱      | tɣ 骨髓              | —      | —                    | —                    |

|                |                    |                    |           |         |                      |                       |                    |                      |             |        |                      |        |         |        |                    |         |            |    |
|----------------|--------------------|--------------------|-----------|---------|----------------------|-----------------------|--------------------|----------------------|-------------|--------|----------------------|--------|---------|--------|--------------------|---------|------------|----|
|                | a                  | æ                  | wæ        | wa      | i                    | ie                    | y                  | u                    | ɔ           | u      | ɣ                    | e      | wɣ      | ɿ      | ʏ                  | jæ      | jɣ         | ja |
| d              | da 砍               | —                  | —         | —       | di 少                 | die 浅                 | dy 地, 户            | du 害 羞               | —           | —      | dɣ 围 起来              | —      | —       | —      | dʏ 翅 膀             | —       | —          | —  |
| ɖ              | —                  | ɖæ 涉 过去            | ɖwæ 狐狸    | —       | —                    | —                     | —                  | —                    | —           | ɖu 刻   | —                    | —      | —       | ɖɿ 湖   | ɖʏ 坟               | —       | —          | —  |
| 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> ʏ 霜 | —       | —          | —  |
| p              | pa 洞               | —                  | —         | —       | pi 长 大               | pie 嘴                 | —                  | pu 一 堆               | —           | —      | pɣ 拿 B               | —      | —       | —      | pʏ 祈 祷             | pjæ 一 半 | —          | —  |
| b              | ba 衣 服             | bæ 蠢               | —         | —       | bi 门                 | bie 旁                 | —                  | bu 闪 电               | bɔ 苍 蝇 (VH) | —      | bɣ 普 米               | —      | —       | —      | bʏ 臭               | bjæ 腮   | —          | —  |
| t              | —                  | —                  | —         | —       | tɿ 天 花板              | tɿe 月                 | tʏ 庾               | tɯ 肋 骨               | —           | —      | —                    | —      | —       | —      | —                  | —       | —          | —  |
| l              | la 手               | læ 洞               | lwæ 叫     | —       | ɭi 田                 | ɭie 茶                 | ɭy 果 子             | ɭu 扛                 | ɭɔ 马        | —      | —                    | —      | —       | —      | ɭʏ 含               | —       | ɭjɣ ( 虚 词) | —  |
| s              | sa 气               | sæ 鞋 (VH)          | —         | —       | si 怕                 | —                     | sy 公 ( 马 天 ..... ) | su 明                 | —           | sɿ 知 道 | —                    | se 凉 快 | —       | —      | sʏ 磨 刀             | —       | —          | —  |
| z              | za 孩 子             | —                  | —         | —       | zi 睡 觉               | —                     | zy 林               | zu 孤 儿               | —           | zɿ 疹 子 | —                    | ze 儿 子 | —       | —      | zy 揉               | —       | —          | —  |
| ʃ              | ʃa 话               | ʃæ 拖               | ʃwæ 马 嚼 子 | ʃwa 搅 拌 | —                    | ʃie 七 月 VH            | ʃy : —             | ʃu 铁                 | —           | ʃɿ 跳 蚤 | —                    | —      | ʃwɣ 盘 子 | ʃɿ 水 獭 | ʃʏ 喝               | —       | —          | —  |
| ʒ              | —                  | zæ 火 花             | zʷæ 飘 动   | zʷa 努 力 | —                    | —                     | zy : —             | zu 中 午               | —           | ʒɿ 山   | —                    | —      | zʷɣ 养   | —      | zy 蛇               | —       | —          | —  |

|                 |                      |                     |                      |        |                     |        |                      |                     |   |                      |         |                     |                      |   |                      |        |       |        |
|-----------------|----------------------|---------------------|----------------------|--------|---------------------|--------|----------------------|---------------------|---|----------------------|---------|---------------------|----------------------|---|----------------------|--------|-------|--------|
|                 | a                    | æ                   | wæ                   | wa     | i                   | ie     | y                    | u                   | ɔ | u                    | ɣ       | e                   | wɣ                   | ɿ | ʏ                    | jæ     | jɣ    | ja     |
| ts <sup>h</sup> | ts <sup>h</sup> a 铎头 | ts <sup>h</sup> æ 代 | ts <sup>h</sup> wæ 快 | —      | —                   | —      | —                    | ts <sup>h</sup> u 炒 | — | ts <sup>h</sup> ɿ 掉  | —       | —                   | ts <sup>h</sup> wɣ 梳 | — | ts <sup>h</sup> ʏ 染料 | —      | —     | —      |
| ts              | tsa 掷                | tsæ 段               | tswæ 搅拌              | —      | —                   | —      | —                    | tsu 锥               | — | tsɿ 画                | —       | B                   | tswɣ 数               | — | tsʏ 传染               | —      | —     | —      |
| dʒ              | dʒa 干扰               | dʒæ 抢               | dʒwæ 挖               | —      | —                   | —      | —                    | dʒu 痛               | — | dʒɿ 下(雨)             | —       | —                   | dʒwɣ 抓               | — | dʒʏ 燃烧               | —      | —     | —      |
| ts <sup>h</sup> | ts <sup>h</sup> a 蚂蚁 | —                   | —                    | —      | ts <sup>h</sup> i 剪 | —      | ts <sup>h</sup> y 冬天 | ts <sup>h</sup> u 跳 | — | ts <sup>h</sup> ɿ 一张 | —       | ts <sup>h</sup> e 盐 | —                    | — | ts <sup>h</sup> ʏ 拣  | —      | —     | —      |
| ts              | tsa 刨                | tsæ 钩子 (VH)         | —                    | —      | tsi 星               | —      | —                    | tsu 火塘              | — | tsɿ 黏                | —       | tse 山               | —                    | — | tsʏ 咳嗽               | —      | —     | —      |
| dz              | dza 跑                | —                   | —                    | —      | dzi 海               | —      | dzy 缠, 桥             | —                   | — | dʒɿ 勒住               | —       | dze 吃               | —                    | — | dzy 凿子               | —      | —     | —      |
|                 | a                    | æ                   | wæ                   | wa     | i                   | ie     | y                    | u                   | ɔ | u                    | ɣ       | e                   | wɣ                   | ɿ | ʏ                    | jæ     | jɣ    | ja     |
| m               | ma 士兵                | mæ 大竹子              | —                    | —      | mi 酥油               | mie 太阳 | —                    | mu 天                | — | —                    | — (neg) | —                   | —                    | — | mʏ 天                 | mjæ 眼泪 | —     | —      |
| n               | na 海                 | ɳæ 挤压               | —                    | —      | ni 嘴唇               | —      | —                    | nu 你                | — | ɳu 由                 | —       | —                   | —                    | — | ɳʏ 臭                 | ɳjæ 眨眼 | ɳjɣ 鼻 | ɳja 苋米 |
| ŋ               | ŋa 我                 | —                   | —                    | ŋwa 膝盖 | ɲi 太阳               | ɲie 霜  | ɲy 火钳                | —                   | — | ŋu 是                 | ɳɣ 跌    | —                   | ŋwɣ 白齿               | — | ŋʏ 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, /mə-/, and taking on its quality from the vowel that follows; and (ii) as many as nine nasal rhymes, shown in Table 2.

|          |     |    |      |    |    |     |    |       |           |
|----------|-----|----|------|----|----|-----|----|-------|-----------|
| syllable | hwa | hã | hæ   | hĩ | hũ | hĩɣ | hĩ | hĩe   |           |
| example  | 绿豆  | 听  | 锯, 金 | 毛  | 走  | 慢   | 人  | 站, 面包 |           |
| syllable |     |    | ã    | ĩ  |    |     |    |       | õ         |
| example  |     |    | 铜    | 呛  |    |     |    |       | 螳螂, 自己, 驴 |

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

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 /hV/, recognising an additional consonant: a nasal fricative, /h̃/. 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>③</sup> There are also three syllables without an initial /h/, consisting simply of a nasal vowel: [ʔĩ], [ʔæ] and [ʔõ]<sup>④</sup>. Examples include:

(i) [ʔæ-] ‘brass’

(ii) [ʔĩɿ] ‘to irritate (e.g. smoke irritates the eye)’; Huang Bufan also reports [ʔĩɿ] (original transcription: [ʔĩ<sup>31</sup>]) for ‘goose’, a word for which the language consultants in the valley of Xiangjiao now use a Chinese borrowing.

(iii) [laɿmieɿlaɿʔõɿʔõɿ] ‘praying mantis’, [ʔõɿtsõɿ] ‘-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): [tõɿɿɿ] ‘donkey, ass’ and [nõɿɿɿtɕ<sup>hi</sup>ɿ] ‘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 [ʔi]. Pushing further the logic of descriptive economy, in the absence of any [ʔæ] or [ʔõ] syllables, the syllable [ʔæ] could be interpreted as the phonetic realisation of a simple /æ/, and [ʔõ] as /õ/; but this option, which would be costly in terms of phonetic plausibility, is not open for [ʔĩ], since that syllable contrasts with [ṽ]. We propose to analyse [ʔĩ], [ʔæ] and [ʔõ] as /ĩ/, /æ/ and /õ/, a decision which is consistent with the recognition of the phonemic nasal rhymes /ẽ/, /ĩ/, /ĩa/, /ĩ/, /ĩ/, /ĩɣ/, /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, /iɫdyɫ/ ‘family’ is sometimes realised close to [yɫdyɫ]. 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>5</sup> Vowel harmony is lexicalised in some disyllabic words, along with other processes such as the voicing of intervocalic voiceless consonants (and tone sandhi, about which see, again, Michaud 2009). A typical example is /ɕieɫlieɫmieɫ/ ‘seventh month’, from /ɕuɫ/ ‘seven’ and /ɫieɫmieɫ/ ‘month’: in addition to the change in the vowel of the first syllable, note the voicing of /ɫ/ to /l/. 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 /fiɫ/ ‘rain’, /fiɫts<sup>hi</sup>ɫ/ ‘gingiva’, /fiɫdziɫ/ ‘charcoal’, /fiɫ/ ‘lake’; /viɫdzuɫtɕuɫ/ ‘East’, /viɫ/ ‘cow’, and /viɫ/ ‘to owe’. In front of /i/, they contrast with /h/ (realised as [ɕ]) and with the absence of any initial, e.g. /hiɫmieɫ/ ‘tongue (body part)’, /iɫts<sup>hi</sup>ɫ/ ‘water’.

In Laze, the two syllables containing /f/, leaving aside Chinese borrowings, are [fiɫ] and [fɕɫ]; 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 [fiɫ], as mentioned in the previous paragraph, initial [f] must be granted phonemic status, and [fɕɫ] comes to be interpreted as /fɕ/ – hence the empty slot at the intersection of initial /h/ and rhyme /ɕ/.<sup>6</sup>

Initial [ɕ] 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).

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

Alveolo-palatal affricates /dz/, /tɕ/ and /tɕʰ/ 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 [tɕɔ], in [wɣɿmieɪtɕɔɿɔɿ] ‘cicada’: this syllable can be phonemicised as /kɿɔ/, postulating an otherwise unattested /-jɔ/ rhyme, or as /tɕɔ/, granting phonemic status to the alveolopalatal initial. In this case, the new syllable appears to result from vowel harmony, the /ɔ/ rhyme of [ɿɔ] being copied onto the previous syllable.

### 3.3. *The palatalisation of the velar nasal in front of high, front rhymes*<sup>⑦</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/, /ɿ/, /jæ/, /jɣ/, /ja/, /ɔ/, /ie/, /wæ/, /wa/, 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 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 [-ɤe]*

The rhyme [-ɤe] appears in only two syllables: [lɤe] (more precisely [ɿɤe]), and [tɕʰɤe]. Only one example of each was observed: [lɤeɿ] 草木灰 ‘ashes (of wood)’, and [tɕʰɤeɿ] 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): /lɤɤ/, 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 [-ɤe] could in principle be treated as an allophone of /-wɣ/; after an alveolo-palatal initial /tɕʰ/, 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: [tɕɛ] and [dʒɛ]); as a consequence, it is provisionally considered as a rhyme on its own, /ɛ/. (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-ɰu/ ‘watery rice gruel, 稀饭’, vs. /hu/ ‘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-ɰɔ/ ‘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. /ɰɤ/, and /dɤ/ vs. /ɰɤ/; no example of /t<sup>h</sup>ɤ/ was observed (only examples of /t<sup>h</sup>ɰ/), 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 [t<sup>h</sup>ɑ-ɰɰ] ‘书, book’ and [t<sup>h</sup>æɰ] ‘冷, cold’ would then be written as /T<sup>h</sup>ɑ-ɰɰ/ and /T<sup>h</sup>æɰ/, where T<sup>h</sup> stands for the archiphoneme covering [t<sup>h</sup>] and [ɰ<sup>h</sup>].

The retroflex [ɰ] raises more difficult issues for phonemicisation. The only attested syllable containing [ɰ] is [ɰɔ] (e.g. [ɰɰ] ‘horse’): the retroflex initial [ɰ] is only found in this syllable. In Naxi, the syllable [ɰɔ] is phonemicised as /ɰo/: 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 [ɰu]); phonemicising [ɰɔ] as /ɰu/ is not entirely convincing. Alternatively, it could be phonemicised as /lɔ/: the /l/ would then have allophones ranging from [ɰ] to [ɰ] through [l]. 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 as retroflex [ɰ] in front of /æ/, /u/ and /ɤ/ ([ɰæ], [ɰu] and [ɰɤ]) 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 [ʃĩ<sup>33</sup>dʒĩ<sup>53</sup>ni<sup>53</sup>], is [ʃuɹɿɹɿdʒuɹɿni] 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 /tʃ/ and /tʃʰ/, for items all of which have retroflex initials in our data, as shown in Table 3 below.

| 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> | tʃuɹɿbuɿ (cp. /tʃuɹɿ/ ‘earth’) |
| to fall (rain, hail...) | ɖʒi <sup>53</sup>                  | dʒuɿ                           |

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

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.

## 5. 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.

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## 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 (some 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       | muɬ                   | 石头       | læɬɰmieɬ             | 嘴巴里面     | kuɰpieɰkuɰluɰ         |
| 天空      | muɰtuɰ                | 粉, 粉末    | zyɰ                  | 牙齿       | fiɬ                   |
| 天地      | muɰdyɰ                | 土        | ʈsuɰɬ                | 牙齿       | fiɰtɰuɰ               |
| 太阳      | ɲiɰɰmieɬ              | 干土       | ʈsuɰɰzyɰ             | 白齿 + 后白齿 | ɲwɰɰɰtɰæɰɰmieɰ        |
| 光 (阳光)  | ɲiɰɰmieɰtuɰ           | 尘土       | pɰɰyɰɰhæɰ            | 牙龈       | fiɰɰtsɰhiɰ            |
| 月亮      | ʰieɰɰmieɬ             | 泥巴       | dzaɰɰqɰɰhæɰ          | 舌头       | ɕiɰɰmieɰ              |
| 星星      | tsiɬ                  | 水        | iɰtsɰhiɰ             | 舌头的筋     | ɕiɰɰɰɰɰɰ              |
| 流星      | tsiɰɰqɰɰhæɬ           | 洪水, 大水   | zuɰɰlyɬ              | 小舌       | ɕiɰɰɰɰɰɰ              |
| 风       | myɰɰhæɬ               | 波浪       | iɰtsɰhiɰɰɰieɰɰsaɰsaɰ | 喉咙       | qɰɰtsuɰ               |
| 雨       | fiɰ                   | 水泉, 山泉   | zuɰɰqɰɰɰɰ            | 喉结       | qɰɰtsuɰɰtuɰɰlyɰ       |
| 云       | tɕiɰɰsuɰ              | 温泉       | ʈɰɰɰyɰɰzuɰ           | 嘴唇       | niɰɰtɕɰɰɰ             |
| 雾       | qɰɰɰɰɰɰɰ              | 泉水       | zuɰɰqɰɰɰɰɰtsɰhiɰ     | 颧骨       | pɰɰyɰɰsyɰɰdzɰɰ        |
| 彩虹      | zuɰɰɰsuɰɰmyɰɰɰsuɰ     | 金子       | hæɰ                  | 胡子       | myɰɰtsuɰ              |
| 雪       | vieɬ                  | 银子       | ɲyɰɬ                 | 连鬓胡      | bieɰɰnaɰ              |
| 雷, 霹雷   | muɰɰgyɰɬ              | 黄铜       | æɬ                   | 颞        | taɰɰɰɰɰ               |
| 闪电, 打闪电 | byɰɰbæɰɰbæɰ           | 白铜       | æɰɰpɰɰyɰ             | 脖子       | ɰæɰɰsuɰɰpaɬ           |
| 冰雹      | dzyɬ                  | 红铜       | æɰɰhiɰ               | 甲状腺肿瘤    | æɰɰbæɬ                |
| 冰雹块     | dzyɰɰlyɰɰlyɰɬ         | 铁        | suɰ                  | 项背       | ɰɰɰɰɰɰɰpaɬ            |
| 露水      | dɕzuɰɰkɰɰaɬ           | 锈        | ʈsuɰɰqɰɰhæɬ          | 肩膀       | hwæɰɰtsɰɰhuɰ          |
| 冰       | ɲiɰɰpɰɰyɰ             | 炭        | fiɰɰdziɬ             | 脊背       | gyɰɰsuɰɬ              |
| 火       | myɰɬ                  | 盐        | tsɰɰeɬ               | 肩胛骨      | tsɰɰhuɰ               |
| 火花      | myɰɰɰɰɰɰ              | 草木灰      | lɰɰeɰ                | 驼背       | duɰɰqɰɰ               |
| 烟       | muɰɰkɰɰyɰ             | 桥        | dzyɬ                 | 腋下       | jaɰɰdaɰ               |
| (一口) 气  | saɰ                   | 坟墓       | yɰɰɰɰyɰ              | 胸膛       | ɲiɰɰmjæɰɰqɰɰɰ         |
| 埡口      | ɰaɰɰlyɬ               | 身体       | dɰuɰɰhiɬ             | 乳房       | aɰɰpuɰ                |
| 山       | zuɰɰɰtseɰ             | 头        | uɰɰtuɰ               | 奶汁       | ɲɰɰeɬ                 |
| 高山      | uɰɰguɰ                | 脑子, 脑髓   | uɰɰfyɰ               | 月经       | dzuɰɰɰhɰɰtsɰɰhuɰtsuɰɬ |
| 山坡, 岗   | tuɰɰɰbieɬ             | 太阳穴      | suɰɰɰbyɬ             | 心脏, 性情   | ɲiɰɰmieɰ              |
| 山脊      | dzyɰɰkɰɰhuɰtuɰ        | 头发       | uɰɰtɕɰɰyɰ            | 肚子       | haɰɰmieɰ              |
| 山谷      | zuɰɰɰtseɰɰæɰɰtsɰɰhuɰ  | 辫子       | ɰɰɰpaɰ               | 肚脐       | tɕɰɰɰɰɰpuɰ            |
| 山洞      | læɰɰqɰɰɰ              | 毛        | hɰɰ                  | 肚脐       | tɕɰɰɰɰ                |
| 森林      | syɰɰzyɰ               | 人身上的毛    | ɲiɰɰɰhɰ              | 胆        | tsiɰ                  |
| 地上的小洞   | paɰɰtyɰ               | 额头       | tuɰɰkɰɰ              | 胆汁       | tsiɰɰɰzuɰɬ            |
| 洞       | qɰɰɰ                  | 眼睫毛      | mjæɰɰtsuɰ            | 吐酸水      | tɕiɰɰɰzuɰ             |
| 河流      | zuɰɰɰmieɬ             | 眉毛       | mieɰɰtuɰ             | 腰        | iɰɰtsuɰ               |
| 溪流      | iɰtsɰhiɰɰqɰɰhæɰɰluɰ   | 眼睛       | mieɰɰlyɰ             | 屁股       | qɰɰæɰɰsæɰɰpɰɰyɰɰmieɰ  |
| 湖       | fiɰ                   | 眼 (单音节)  | mieɰ                 | 胯        | tsɰɰhuɰmieɰ           |
| 海       | naɰɰdziɰ              | 眼珠       | mieɰɰlyɰɰnaɰɰliɰ     | 尾椎骨      | dzyɰɰtuɰ              |
| 小型水库    | dɰɰɬ                  | 眼圈骨      | mieɰɰlyɰɰsaɰɰtuɰ     | 锁骨       | læɰɰdɕyɰ              |
| 岸       | zuɰɰɰmieɰɰkɰɰuɰɰkɰɰuɰ | 眼泪       | mjæɰɰdɕzuɰ           | 肌肉       | suɰɰɰnaɰ              |
| 水坑      | paɰɰtyɰ               | 鼻子       | ɲjɰɰɰɰɰɰ             | 腿        | æɰɰtsɰɰhuɰ            |
| 水沟      | qɰɰæɰɰluɰ             | 鼻孔       | ɲjɰɰɰɰɰqɰɰɰ          | 大腿       | byɰɰsaɰɰmieɰ          |
| 井       | iɰtsɰhiɰɰqɰɰwæɰ       | 鼻涕       | ɲyɰ                  | 膝盖       | ɲwaɰɰtuɰ              |
| 小堤坝     | buɰɰtuɰ               | 耳朵       | ʰieɰɰtuɰ             | 膝盖骨      | kaɰɰpɰɰæɰ             |
| 路       | læɰɰgyɰ               | 耳孔       | ʰieɰɰɰzeɬ            | 关节       | tsuɰ                  |
| 地 (天地的) | dyɰ                   | 耳垂       | ʰieɰɰtuɰɰkɰɰɰbyɰ     | 小腿       | dɕyɰɰɰbæɰ             |
| 平地      | duɰɰkɰɰuɰ             | 耳垢       | ʰieɰɰqɰɰæɰɰbæɰ       | 胫骨       | wɰɰɰɲjɰɰɰɰɰsaɰɰtuɰ    |
| 平地      | hæɰɰduɰ               | 脸        | pɰɰyɰɰmieɬ           | 踝关节      | læɰɰmieɰtsuɰɰtuɰɰlyɰ  |
| 田地      | liɬ                   | 腮        | bjæɰɰɰɰ              | 脚底       | wɰɰɰtɕɰɰɰ             |
| 水田      | dzeɰɰliɬ              | 嘴, 嘴巴, 口 | ɲyɰɰqɰɰɰ             | 脚跟       | gyɰɰɰtuɰ              |
|         |                       | 嘴巴       | kuɰɰpieɰ             | 脚背       | miɰɰgyɰɬ              |

下半身 yɿdɯ-tɕæɿ  
 上半身 gɤɿdɯ-tɕæɿ  
 四肢，手脚 zɤɿtsʰuɿ  
 胳膊 laɰpʰieɿ  
 胳膊 laɰbuɿɿyɿ  
 肘 laɰtuɿ  
 臂弯 tsæ-tqæɿ  
 手掌 laɰkwɤɿɿieɿgɤɿɿtɕiɿ  
 手纹 laɰpʰieɿɿlæ-tgɤɿ  
 手背 laɰgɤɿ  
 拳 laɰkɤɿɿtɕɿ  
 手腕 laɰtsuɿ  
 手指 laɰɲiɿ  
 大拇指 laɰɲiɿa-tmieɿ  
 指甲 laɰtɕsuɿ  
 肛门 kʰæɿqʰɔɿ  
 男生殖器 ɲiɿtsiɿ  
 皮肤 zɯɿkɤɿ  
 皱纹 zɯɿkɤɿɿtɕɿɿ  
 黑痣 çɤɿ  
 疮 miɿ  
 伤口 miɰpaɰpaɿ  
 癣 la-tɿɿɿkʰwɤɿɿ  
 血 surɿ  
 血管 surɿbɤɿ  
 骨头 ɕaɰtuɿ  
 骨髓 tsiɿtɕɿ  
 脊椎骨 gɤɿsurɿɕaɰtuɿ  
 肋骨 ɬuɿ  
 肺 tsʰɤɿɿ  
 肝 siɿ  
 肾 ɤɿɿliɿ  
 胃 dɤɿɿmieɿ  
 鸡胃 læɰpjæɿɿɔɿ  
 肠 ɤɿɿnaɿ  
 膀胱 surɿpɤɿ  
 尿 qʰæɿ  
 尿 dziɿ  
 大小便的统称 aɰpʰuɿɿdzyɿ  
 屁 kʰæɿtsʰiɿɿ  
 汗（单音节） tɕɤɿɿ  
 痰 tɕieɿkʰæɿɿbæɿ  
 口水，唾 tɕiɿɿ  
 脓 bæɿ  
 天花 tsʰuɿ-tɕʰɤɿ  
 麻疹，疹子 bɤɿ-zuɿ-zuɿ  
 感冒 tsʰaɰdaɰzuɿ  
 发烧 tɕʰuɿ  
 尸体 hɿɿmuɿ

生命 hɿɿdɯɿɿ  
 人 hɿɿ  
 藏族 kaɰɿmiɿ  
 彝族 læɿɿhɿɿɿsaɿ  
 普米族 bɤɿɿ  
 纳西族 naɰhɿɿ  
 自称 laɰzeɿ  
 木里县的纳人 naɰzuɿ  
 汉人 hæɿ  
 苗族 mɿɿɿen.tsuɿ  
 孩子 zaɰhuɿ  
 儿童 zaɰhuɿtʰæɿɿtɕiɿɿhɿɿ  
 老人 hɿɿɿmɤɿɿɤɿɿhɿɿ  
 老太太 aɰɿɤɿɿmieɿ  
 妇女，女人 mɤɿɿzuɿɿhɿɿ  
 女人（已婚） mɤɿɿkʰɤɿɿkʰɤɿɿ  
 男人 zeɰkʰɤɿɿ  
 小伙子 zeɰkʰɤɿɿzeɰhɿɿ  
 小姐 hæɿɿkʰwɤɿɿmieɿ  
 少爷 hæɿɿkʰwɤɿɿzeɰ  
 妻子 mɤɿɿkʰɤɿɿ  
 丈夫 zeɰkʰɤɿɿ  
 一户人 dyɿ  
 家人 aɰuɿɿhɿɿ  
 亲戚 tɕswɤɿ-tɕswɤɿɿhɿɿhɿɿ  
 母亲 æɰmieɿ  
 母亲（孩子对 母亲称呼） æɰɲiɿ  
 父亲 aɰdaɰ  
 后妈 aɰmieɿ-tʰæɿɿtɕiɿɿhɿɿ  
 女儿 mɤɿɿ  
 儿子 zeɰ  
 孩子们，子女 zeɰmɤɿɿ  
 姨母（比母亲 大） aɰpaɿ  
 姨母（比母亲 小） æɰtɕiɿ  
 母亲的所有姐妹 aɰpaɿæɰtɕiɿ  
 姑母 æɰɲiɿ  
 舅舅、舅父 æɰɤɿɿ  
 （比母亲大）  
 伯父 aɰpaɿ  
 叔父 aɰbuɰ  
 侄子 zeɰ  
 侄女 mɤɿɿ  
 侄子侄女 zeɰzeɰmɤɿɿmɤɿɿ  
 孙子 iɰɤɿ  
 孙女 iɰmieɿ

孙子孙女 iɰɤɿɿiɰmieɿ  
 重孙，曾孙 iɰpʰɤɿɿ  
 重孙女，曾孙女 iɰmieɿ  
 女  
 重孙与重孙女 iɰpʰɤɿɿiɰmieɿ  
 哥哥 maɰmɤɿɿ  
 弟弟 gɤɿɰzuɰ  
 兄弟（哥哥们 与弟弟们） aɰɿɰgɤɿɰzuɰ  
 姐姐 aɰɤɿɿ  
 姐姐 tɕiɿɿtɕiɿɿ  
 妹妹 guɰmieɿ  
 姐妹 aɰɤɿɰguɰmieɿ  
 弟弟+妹妹 gɤɿɰzuɰguɰmieɿ  
 女婿 mæɰɤɿɿ  
 媳妇，儿媳 tsʰuɿɿmieɿ  
 嫂子 miɰtɕʰiɿɿ  
 祖母，奶奶 aɰɿɤɿɿ  
 姥姥 aɰzuɰmieɿ  
 舅舅的舅舅 æɰpʰɤɿɿ  
 父子 ɔɰdaɰɔɰzuɰ  
 母亲与孩子们 æɰmieɿseɰzeɰ  
 父亲与母亲 aɰdaɰæɰmieɿ  
 叔叔侄子 aɰbuɰseɰzeɰ  
 叔叔侄女 aɰbuɰseɰmɤɿɿ  
 劳动人民 luɰɤɿieɿhɿɿ  
 士兵 maɰmiɿ  
 商人 gɤɿ-tɕʰiɿɿɤɰtɕʰiɿɿhɿɿ  
 医生 tsʰuɰɿɤɰɤɿieɿ  
 寨首 kæɰzuɰhɿɿ  
 贵族，奴隶主 suɰpʰieɿ  
 木匠 siɰgɤɿɿhɿɿ  
 编竹子的工匠 mæɰdaɰhɿɿhɿɿ  
 铁匠 ɕuɰlaɰhɿɿhɿɿ  
 打铁 ɕuɰlaɰ  
 喇嘛 laɰmaɰ  
 尼姑 mɤɿɰkʰɤɿɰdaɰpɤɿɰ  
 达巴，巫 daɰpɤɿɰ  
 乞丐 dzeɰmieɿɿhɿɿ  
 强盗 kʰɤɿɰmæɰ  
 病人 hɿɿɰdzuɰhɿɿ  
 朋友，伙伴 tɕʰɤɿɰmieɿ  
 瞎子 mɿɰæɰkæɰ  
 跛子 buɰdɤɿɿhɿɿ  
 聋子 ɕieɰbuɰ  
 秃子 wɤɿɰɤɿɰɤɿ  
 傻瓜 zyɰbæɰ  
 疯子 ɤɿɰɔɿ  
 结巴 çiɰtɕʰæɿ

|                    |                      |        |                       |            |                       |
|--------------------|----------------------|--------|-----------------------|------------|-----------------------|
| 主人                 | daɿpuɿ               | 丸、小球   | tuɿlyɿ                | 街          | ɬuɿɿfyɿɿɬɬuɿɿbieɿ     |
| 客人                 | hiɿɿkɔɿ              | 饭      | dzeɿ                  | 石墙         | wɿɿɿbieɿ              |
| 寡妇                 | uɿɿmieɿɿtɕʰyɿɿhiɿ    | 猪食     | wɿɿɿdzeɿ              | 窗户         | luɿɿwɿɿ               |
| 孤儿                 | zuɿɿtɕʰyɿɿ           | 马料     | ɿɿɿɿlyɿ               | 柱子         | daɿɿkʰuɿ              |
| 稀饭                 | hoɿɿɿzuɿ             | 线      | tɕʰæɿ                 | 梁          | zæɿɿmieɿ              |
| 饭（米饭）              | tɕʰæɿɿpʰyɿɿɿdzeɿ     | 布      | fiɿɿtɕsuɿ             | 门          | guɿɿlyɿɿhieɿɿgyɿɿtieɿ |
| 粥                  | huɿ                  | 丝绸     | tɕsuɿɿzeɿ             | 门          | kʰuɿɿbiɿ              |
| 面粉                 | zyɿ                  | 衣服     | baɿɿlaɿ               | 门槛         | kʰuɿ                  |
| 浆糊，浆子              | huɿ                  | 蓑衣     | tɕaɿɿɿɿɿɿ             | 梯子         | kʰuɿɿtaɿ              |
| 馒头                 | miɿɿhiɿɿ             | 上衣，衣服  | bɿɿɿzeɿ               | 天花板        | dzyɿɿɿtʰyɿɿ           |
| 肉                  | ɕuɿ                  | 衣领     | ɿæɿɿhɿɿ               | 石头台阶       | kʰwɿɿɿhiɿ             |
| 熟肉                 | ɕuɿɿlaɿɿmiɿ          | 袖子     | jaɿɿqʰɿɿɿ             | 粮仓         | læɿɿmieɿɿdzeɿɿ        |
| 生肉                 | ɕuɿɿɿdzeɿɿɿɿɿhiɿ     | 扣子     | buɿɿlyɿ               | 打场         | guɿ                   |
| 瘦肉                 | ɕuɿɿnaɿ              | 裤子     | hieɿɿkʰwɿɿ            | 篱笆         | hæɿɿduɿ               |
| 肥肉                 | ɕuɿɿpʰyɿɿ            | 头帕     | laɿɿtɕʰyɿɿ            | 商品         | qʰɿɿɿtaɿ              |
| 牲畜前腿的肉             | laɿɿsaɿ              | 帽子     | tʰyɿɿtʰyɿɿ            | 东西         | noɿ                   |
| 牲畜后腿的肉             | ɕuɿɿsaɿɿpʰyɿɿɿmieɿ   | 斗笠     | uɿɿmuɿ                | 桌子         | tɕaɿɿsuɿ              |
| 猪的肚皮的肉             | aɿɿtɕyɿɿ             | 梳子（粗）  | tɕyɿɿɿmieɿ            | 凳子         | ɕaɿɿlæɿ               |
| 层肉                 |                      | 氍毹     | tʰuɿɿliɿ              | 床          | qʰɿɿɿ                 |
| 猪胸股上的肉             | ɿɿɿbiɿ               | 羊毛裙子   | hɿɿɿɿɕuɿɿkʰwɿɿ        | 箱子         | qɔɿ                   |
| 猪尾部划出来的膘           | wɿɿɿmiɿɿtsyɿɿ        | 裙子     | ɕuɿɿkʰwɿɿ             | 扫帚         | suɿɿgyɿ               |
| 猪身躯带骨头             | wɿɿɿtuɿ              | 裹腿     | tsʰuɿɿtʰuɿ            | 火绒（把小麻皮捶绒） | hwɿɿɿtɕsuɿ            |
| 把猪的骨头装在大肠里         | buɿɿkʰuɿɿtɕʰɿɿɿtuɿ   | 鞋垫     | sæɿɿhæɿɿtʰæɿ          | 火镰         | tsaɿɿɿɿɿɿ             |
| 把瘦肉装在肠子里           | yɿɿɿtieɿ             | 鞋，鞋子   | sæɿɿhæɿ               | 火把         | tseɿɿmieɿ             |
| 把猪腿的皮剥下来，缝成筒形，塞满瘦肉 | wæɿɿtsʰuɿɿlaɿɿɿɿɿɿɿ  | 耳环     | hieɿɿkʰyɿɿ            | 香          | myɿɿtɕʰyɿɿ            |
| 猪皮                 | wɿɿɿɿzuɿɿkʰyɿɿ       | 戒指     | laɿɿtʰuɿ              | 染料         | syɿɿɿɿɿ               |
| 猪油                 | kæɿɿmiɿ              | 手镯     | laɿɿɿdzeɿ             | 锅          | tɕʰyɿɿɿɿzuɿ           |
| 酥油                 | miɿ                  | 珠，珠子   | qʰɿɿɿzeɿ              | 锅的盖子       | yɿɿmieɿ               |
| 油                  | miɿɿɿ                | 席子     | tɕɿɿɿgɿɿ              | 蒸笼         | uɿɿhuɿ                |
| 蛋                  | læɿɿɿmjæɿɿɿɿɿ        | 毯子     | tɕɿɿɿɿhuɿ             | 菜板，俎       | dzeɿɿbyɿ              |
| 蛋黄                 | ɿɿmjæɿɿɿɿɿɿɿɿɿɿ      | 宝贵的毯子  | zyɿɿɿdzeɿ             | 刀子         | kwaɿɿtaɿɿmieɿ         |
| 蛋白                 | ɿɿmjæɿɿɿɿɿɿɿɿɿɿ      | 垫子     | qʰɿɿɿɿɿɿ              | 把子         | tsuɿɿɿtʰæɿ            |
| 汤                  | ɿɿmjæɿɿɿɿɿɿɿɿɿɿ      | 枕头     | uɿɿɿguɿ               | 勺子、瓢       | qɔɿ                   |
| 酒                  | zyɿɿɿɿɿɿ             | 褥子     | zæɿɿɿmieɿ             | 调羹         | biɿɿzeɿ               |
| 黄酒                 | pieɿɿɿmyɿ            | 被子     | tɕyɿɿɿhuɿ             | 大调羹        | biɿɿzeɿ               |
| 醋                  | tɕyɿɿɿhiɿ            | 蚊帐     | tʰaɿɿɿɿlaɿɿtɕsuɿɿɿhiɿ | 碗          | kʰwɿɿ                 |
| 开水                 | iɿɿtsʰiɿɿtsʰuɿɿtʰyɿɿ | 木头     | siɿ                   | 盘子         | ɕwɿɿɿpʰieɿ            |
| 茶                  | lieɿ                 | 木板，木板子 | siɿɿpʰæɿ              | 木盘子        | siɿɿkʰwɿɿ             |
| 糖                  | dzyɿɿɿɿɿɿ            | 家，家庭   | yɿɿɿɿɿ                | 筷子         | dzyɿɿɿɿɿɿ             |
| 烟                  | jɿɿ                  | 房屋     | yɿɿkʰwɿɿ              | 瓶子         | dzyɿɿɿ                |
| 药                  | tsʰuɿɿɿfiɿ           | 家      | aɿɿluɿ                | 坛子，罐子（陶器）  | piɿɿzeɿ               |
|                    |                      | 座位     | dzyɿɿlæɿ              | 茶壶         | ɿɿɿɿɿ                 |
|                    |                      | 菜园     | uɿɿtɕʰɿɿɿliɿ          | 大水桶        | tɕaɿɿtaɿ              |
|                    |                      | 圈，牲畜圈  | biɿ                   | 过去用杯水的背篓   | siɿɿpuɿɿtaɿ           |
|                    |                      | 土墙     | tɕsuɿɿbuɿ             | 桶          | zyɿɿɿmieɿ             |
|                    |                      | 城      | luɿɿwɿɿɿɿɿɿkʰwɿɿ      |            |                       |
|                    |                      | 城      | dzyɿɿ                 |            |                       |
|                    |                      | 城里、市上  | dzyɿɿluɿ              |            |                       |
|                    |                      | 村寨，村子  | ɬuɿɿɿbieɿɿ            |            |                       |

|          |                    |            |                 |         |                  |
|----------|--------------------|------------|-----------------|---------|------------------|
| 木盆       | si˥tse˥lu˧         | 肥料，粪       | kʰæ˥            | 有区别     | tʰa˧nie˧nie˧     |
| 脸盆       | pʰy˥mie˥tsʰu˧˥lu˧˥ | 臼[坨坨]      | t͡su˧mu˧        |         | mə˥ŋu˧           |
| 三脚架      | ʂu˧tsʰi˧           | 杵[捶捶]      | lu˧d͡ʑu˧        | 一样，没有区别 | tʰa˧nie˧nie˧     |
| 火塘       | kwa˧lu˧            | 碓          | mu˥t͡su˥        |         |                  |
| 厨房       | tsu˥kwɤ˥           | 小筛子        | mu˧tʰa˧t͡ʃi˧hi˧ | 渣滓      | dzu˧ma˥          |
| 火钳       | mu˥ŋy˧             | 筛子 2       | bɤ˧kʰu˧         | 影子      | da˧zɤ˧           |
| 风箱       | my˥mi˥tsu˧         | 筛子 4       | i˧t͡su˧         | 梦       | y˧mu˧kʰwɤ˧       |
| 用来背小孩的带子 | za˥hu˧pa˧d͡zi˧     | 筛子 5       | mu˧a˧pa˧dzu˧hi˧ | 东方      | vi˧dzy˧t͡ʑu˧     |
| 背带       | dzi˧               | 簸箕（簸粮食用）   | mu˧             | 西方      | y˧dzy˧t͡ʑu˧      |
| 称        | sa˧                | 手磨         | t͡ʃy˥ly˥        | 南方      | i˥t͡ʂʰu˧mie˥     |
| 钱        | d͡ʑu˧              | 水磨         | i˥tsʰi˧t͡ʃy˥ly˥ | 北方      | kʰu˧dzy˧t͡ʑu˧    |
| 价钱       | t͡ʃɤ˧hi˧           | 水槽         | i˥tsʰi˧wɤ˧ŋy˥   | 旁边      | bie˥ku˥          |
| 工资，工钱    | ɤa˥pʰy˥            | 织布机        | ɹ˧da˧           | 左边      | væ˥ta˥           |
| 马鞍       | t͡ʃi˧qʰɔ˧          | 拐棍         | mi˥tʰy˧         | 右边      | i˧ta˧            |
| 马笼头      | u˧ly˧              | 镰刀         | hũ˥gy˧          | 前面      | u˧da˧            |
| 马肚带      | bie˧ɤ˧             | 刀鞘         | y˧              | 后面      | gɤɤ˥tu˧          |
| 马嚼子      | kwa˥ʂwæ˥           | 枪          | my˥hie˥         | 外面      | a˧pʰy˧           |
| 马槽       | wɤ˧ŋy˧             | 准星         | hie˥gy˧tie˧     | 里面      | ku˧lu˧           |
| 挽具，后鞅    | mæ˧kɤ˧             | 装火药的皮带     | ku˧ly˧          | 周围      | kʰu˥kʰu˥lie˥lie˥ |
| 缰绳       | ɔ˥d͡zi˧            | 枪把         | qɔ˧             | 地界      | tʰu˧la˧tsʰi˧     |
| 打马的鞭子，马鞭 | mæ˧d͡ʑy˧           | 弩弓         | ta˥na˥          | 上面      | gɤ˥t͡ʑu˧         |
| 驮架       | li˥mi˥             | 弓箭         | hie˧            | 上面      | gɤ˥by˧           |
| 牛鼻绳      | njɤ˥ŋɤ˧d͡zi˧       | 陷阱         | ɤɔ˥by˥          | 下面      | y˥tʰæ˧           |
| 斧头       | ly˥mie˥            | 毒          | pa˧ty˧          | 中间      | d͡ʃæ˧mie˧        |
| 锯        | ʂwa˥da˥            | 字          | d͡ʑy˧           | 顶上      | ɤɔ˥by˥           |
| 针        | u˧                 | 记号         | tʰa˥ɹ˥          | 上半身     | gɤ˧d͡ʑu˥d͡ʃæ˧    |
| 锥、锥子     | t͡su˧              | 纹路         | hæ˧ty˧          | 下半身     | y˧d͡ʑu˥t͡ʂæ˥     |
| 凿子       | d͡ʑy˧              | 话          | læ˥gy˧          | 时候      | d͡ʑu˥mɤ˧mi˧      |
| 木锤子      | da˧t͡ʑy˧           | 故事         | ʂa˥væ˧          | 一夜      | d͡ʑu˥hie˧        |
| 连枷       | ku˥ty˥             | 舞蹈         | t͡ʂʰæ˧          | 一天      | d͡ʑu˥ŋi˥         |
| 铁钉       | ʂu˧qʰɔ˧            | 旗子         | tsʰu˧           | 初一      | la˧tsʰi˧d͡ʑu˧ŋi˧ |
| 钩子       | tsæ˥qæ˧            | 声音         | tsi˥            | 初二      | la˧tsʰi˧ŋi˧ŋi˧   |
| 剪刀       | tsu˧t͡ʃie˧         | 铃铛         | qʰɔ˥            | 初三      | la˧tsʰi˧su˧ŋi˧   |
| 锁        | tsa˧kwa˧           | 牛角（用来当长号角） | da˧kʰɤ˧         | 初十      | la˧tsʰi˧tsʰi˧ŋi˧ |
| 钥匙       | tsɛ˧ɕi˧            | 神，菩萨       | by˥tsʰu˥        | 十一日     | tsʰi˧d͡ʑu˧ŋi˧    |
| 犁头       | ɔ˧ŋy˧              | 鬼          | t͡ʂʰu˧ly˧       | 十五日     | tsʰi˧ŋwɤ˧ŋi˧     |
| 犁头，犁铧    | t͡ʂʰa˥             | 灵魂，魂魄      | zwæ˧ma˧da˧ŋqɔ˧  | 十六日     | tsʰi˧qʰɔ˧ŋi˧     |
| 耙        | d͡ʑwɤ˧             | 胆量         | t͡ʃy˧bu˧        | 三十日     | su˧tsʰi˧ŋi˧      |
| 牛轭（单行）   | ɤæ˧hwa˧            | 礼物         | bu˧qʰɔ˧         | 今天      | tsʰi˧ŋi˧         |
| 牛皮绳，犁具   | dzu˥d͡zu˧          | 名字         | hi˧             | 昨天      | æ˧ŋi˧            |
| 连轭之绳     |                    |            |                 | 前天      | ʂwa˧n˧d͡ʑu˧ŋi˧   |
| 锄头       | tsy˥qɔ˧            |            |                 | 前几天     | ɔ˧ŋi˧ʂwa˧ŋi˧     |
| 挖锄       | bæ˥wɤ˥             |            |                 | 明天      | mi˥su˧           |
| 楔子       | ho˧                |            |                 | 后天      | u˧su˧            |
| 绳子       | dzi˥               |            |                 | 大后天     | u˥d͡ʑu˧su˧       |
| 背篓       | kʰɤ˧               |            |                 | 四天以后    | u˥ŋi˧su˧         |
| 袋子       | d͡zi˧ku˧           |            |                 | 今晚      | tsʰi˧ŋhu˧        |
|          |                    |            |                 | 明晚      | su˧hu˧           |
|          |                    |            |                 | 昨晚      | a˧hu˧            |

|        |                     |        |                     |        |                  |
|--------|---------------------|--------|---------------------|--------|------------------|
| 早晨     | da'naJ              | 从前     | aJsuwJ              | 一粒（米）  | qur'liJ          |
| 黎明     | p'hY'kwɿŋ           | 以前     | u'ldaJ              | 一个碗    | qur'k'hæJ        |
| 今天早上   | ts'hij'suJ          | 近来     | a'tmu+              | 一件衣服   | qur'lyJ          |
| 早点     | da'naJdze+dze+      | 近来     | a'tɲi+ts'hw+ɲiJ     | 一包、一卷  | qur'tu+          |
| 白天     | mie+lie+gy+         | 后（后去）  | gwx+tuJ             | 一筐     | qur'k'hɿŋ        |
| 中午饭、中午 | zu+, zu+tuJ         | 今后     | k'hul't'uJ          | 一捧     | qur'kwa+         |
| 吃中午饭   | zu+dze+             | 夏天、春夏  | mu'zu'bieJ          | 驮子     | qur'tu'ly+       |
| 下午     | zu+dze+gwx+         | 冬天     | mu+ts'h'y+bie+      | 一串     | qur'kwɿŋ         |
| 晚上     | mi'k'h'uJ           | 婚姻     | ts'hwu+mie'k'h'yJ   | 一滴     | qur'tɕ'h'ueJ     |
| 晚饭     | mi'k'h'uJdze+       | 1      | qur'gyJ             | 一滴水    | qur'tɕ'h'ueJ     |
| 吃晚饭    | mi'k'h'uJdze+dze+   | 2      | ɲi'gyJ              | 一瓶     | qur'ldzɿŋ        |
| 黄昏，暮   | naJp'h'yJts'a'lwɿ+  | 3      | su'gy+              | 升      | qur'tur+         |
| 夜里     | sy+qo+tsy+          | 4      | zy'gyJ              | 一斤     | qur'saJ          |
| 年      | k'h'yJ              | 5      | ɲwx'gyJ             | 一两     | qur'ty+          |
| 今年     | ts'hw+vie+          | 6      | q'h'ɔJgyJ           | 一堆（比如： | qur'tpu+         |
| 去年     | æ+vie+              | 7      | s'u'gyJ             | 一堆粮食）  |                  |
| 前年     | s'uJvieJ            | 8      | ɕiJgyJ              | 一块     | qur'p'hæJ        |
| 三年以前   | s'uJqurJvieJ        | 9      | gy'gyJ              | 一对     | qur+dzeJ         |
| 明年     | su'vieJ             | 10     | ts'hil'gy+          | 一双鞋    | qur+dzeJ         |
| 后年     | u+vie+              | 11     | ts'hil'qur'gyJ      | 一只     | qur'p'hɿŋ        |
| 鼠年     | hwɿŋ'k'h'yJ         | 12     | ts'hil'ɲiJgyJ       | 一段     | qur'tsæJ         |
| 牛年     | vi'k'h'yJ           | 13     | ts'hil'suJgyJ       | 一庹[一排] | qur'tyJ          |
| 虎年     | la'k'h'yJ           | 14     | ts'hil'zyJgyJ       | 一拃（大拇指 | qur'tɕy+         |
| 兔年     | t'h'u+lie'k'h'yJ    | 15     | ts'hil'ɲwx'gyJ      | 和食指之间的 |                  |
| 龙年     | mu'gy'k'h'yJ        | 16     | ts'hil'q'h'ɔJgyJ    | 距离、拇指与 |                  |
| 蛇年     | zy'k'h'yJ           | 17     | ts'hil'su'gyJ       | 食指平伸量物 |                  |
| 马年     | ɔ'k'h'yJ            | 18     | ts'hil'ɕiJgyJ       | 之长）    |                  |
| 羊年     | y'k'h'yJ            | 19     | ts'hil'gyJgyJ       | 一拃（大拇指 | tɕy+ze+          |
| 猴年     | zyJk'h'yJ           | 20     | ɲi+tsi+gy+          | 和中指之间的 |                  |
| 鸡年     | læ'k'h'yJ           | 30     | su'ts'hil'gy+       | 距离）    |                  |
| 狗年     | k'h'u'k'h'yJ        | 40     | zy'ts'hil'gy+       | 一架牛    | qur'p'hɿŋ        |
| 猪年     | wɿŋ'k'h'yJ          | 50     | ɲwx'ts'hil'gy+      | 一张     | qur+ts'hwuJ      |
| 过年     | k'h'yJsuwJ          | 60     | q'h'ɔJts'hil'gyJ    | 一元     | qur+maeJ         |
| 月      | ɦie+                | 70     | s'u'ts'hil'gy+      | 一亩     | qur'p'hæJ        |
| 上半月    | ɦie+phɿ+            | 80     | ɕiJts'hil'gyJ       | 一辈子    | qur'ts'hæJ       |
| 正月     | qur+lie+mie+        | 90     | gy'ts'hil'gy+       | 一步     | qur't'hyJ        |
| 二月     | ɲi+lie+mie+         | 百      | qur'ɕiJgyJ          | 一次     | qur+dzɿJ         |
| 三月     | su+lie+mie+         | 千      | qur'ty+gy+          | （吃的）一口 | qur't'æJ         |
| 四月     | zy+lie+mie+         | 万      | ts'hil'tyJ          | 经常     | do+ɔJ            |
| 五月     | ɲwx+lie+mie+        | 一半     | qur+dɕæJ            | 转回     | la+ɦ+            |
| 六月     | q'h'ɔJlieJmieJ      | 一条绳子   | qur'ts'hæJ, qur'kɿŋ | 又，再    | a+ma+qur'ldzɿJ   |
| 七月     | s'ie+lie+mie+       | 一根（线）  | qur'ts'hæJ          | 天天晚上   | qur+ɦiɕJqur+ɦiɕJ |
| 八月     | ɕiJlieJmieJ         | 一棵树    | qur'ldziJ           | 每天     | qur+ɲi+qur+ɲi+   |
| 九月     | gy+lie+mie+         | 一根（竹子） | qur+tuJ             | 整天     | byJts'hw+ɲi+     |
| 十月     | ts'hil'lieJmieJ     | 一根棍子   | qur'kɿŋ             | 全部，一切  | qur+taJ          |
| 十一月    | ts'hil'qur'lieJmieJ | 个（一个人） | qur+ɦ+              | 都、所有   | a+hwɿŋ           |
| 十二月    | ts'hil'ɲiJlieJmieJ  | 一只鸡    | qur'p'hɿŋ           | 自己     | ɦ+tsɔJ           |
| 古时候，传说 | æ+vieJsu'vieJ       | 一群、一队  | qur'hwɿŋ            | 这个（近指） | u'ɦ'uJ           |
| 古代     |                     | 一把刀    | qur'naJ             | 这个（近指） | tɕ'hɿŋ'ɦ'uJ      |

那个（远指） u˧lʰu˧  
 这里 tɕʰɤ˧ku˧  
 那里 tɤ˧ku˧  
 谁 kʰa˧si˧  
 什么 a˧tsu˧  
 怎么样 a˧ŋje˧lvie˧li˧?  
 哪里 jɤ˧ku˧  
 什么时候 kʰa˧lʰa˧  
 多少 kʰa˧jɤ˧  
 几个 kʰa˧ti˧  
 粗（树粗大） a˧pɤ˧bu˧lhi˧  
 细（树） tʰa˧tɕʰy˧lhi˧  
 高 a˧pa˧lhu˧  
 低 tʰa˧ti˧lhi˧  
 长 hæ˧hi˧  
 短 dɕæ˧  
 远 læ˧qʰɔ˧  
 近 læ˧ŋy˧  
 宽（布，纸） a˧pa˧ldzu˧  
 窄 tʰa˧ltɕi˧  
 宽敞 a˧pɤ˧lhwɤ˧  
 挤（房子） ku˧tku˧  
 厚 a˧pɤ˧llu˧  
 薄 tʰa˧bie˧  
 浅（水浅） die˧  
 深（水深） ha˧  
 过于，太多 ko˧ly˧  
 多 dzi˧  
 多 a˧pɤ˧ljɤ˧  
 少 dʒu˧mu˧  
 少 di˧lhi˧  
 一些 dʒu˧bæ˧  
 圆形（球） gwɤ˧ldie˧llæ˧lhi˧  
 秃 by˧  
 皱（衣服） tɕi˧  
 准 wɤ˧  
 不对 mɔ˧lwɤ˧  
 歪，偏（帽子） la˧ta˧  
 横（横躺） dɕæ˧dɕæ˧llæ˧  
 竖 tɕy˧ti˧llæ˧  
 直（站直） tɕy˧ti˧llæ˧  
 伸直 tɕy˧  
 弯 la˧gy˧  
 颜色 tɕʰy˧lɕu˧  
 黑（颜色） na˧  
 黑（颜色） na˧tɕʰæ˧llæ˧  
 白（脸、衣服） pʰy˧

白（脸、衣服） pʰy˧tɕæ˧llæ˧  
 白（头发） u˧lɕʰy˧pʰy˧lhi˧  
 红 wæ˧tsu˧ŋje˧lhi˧  
 黄 ɕu˧tqɔ˧llæ˧  
 绿（布） zu˧lhwa˧ŋje˧lhi˧  
 灰 pʰu˧ldu˧llæ˧lhi˧  
 暗，黑（天） pʰy˧lhæ˧llæ˧lhi˧  
 花的（蛋、鸟） na˧lfy˧lfy˧  
 重 fi˧tsu˧thwa˧thwa˧tl  
 轻 a˧lla˧lhi˧  
 快（动作） zɕu˧  
 快 pʰa˧lla˧  
 迟 tɕʰwæ˧  
 慢 la˧kwɤ˧  
 （起得）早 hɤ˧wɤ˧  
 尖 æ˧ze˧  
 锋利 tɕʰwæ˧  
 清（水） u˧ltɕy˧llæ˧  
 浑浊（水） tʰa˧  
 干燥 ɕwɤ˧lɕwɤ˧lhi˧  
 湿 zu˧ldwæ˧  
 浸泡（如：浸种子） læ˧fy˧  
 稠（粥）、黏 tɕæ˧llæ˧  
 （比较干） tʰie˧tu˧  
 稀（粥，汤） ma˧tfy˧lmɤ˧lmie˧  
 结实 hæ˧  
 硬，坚硬 tɕʰa˧tɕʰa˧  
 紧 u˧  
 松 tsi˧  
 松起来 mɔ˧tsi˧  
 软，柔软 ta˧  
 黏（胶） mɤ˧lŋæ˧  
 光滑（路） tʰie˧tsu˧  
 生 kæ˧  
 熟 dɕy˧tdɕy˧  
 新 mi˧  
 陈旧 ɕu˧tsa˧  
 好 tsu˧zi˧  
 好（心好） dɤ˧wɤ˧  
 稳重、谨慎 nu˧  
 坏 tɕʰa˧tɕʰa˧  
 贵 mɔ˧dzɤ˧  
 便宜 pʰy˧ldzu˧  
 年老 pʰy˧ly˧  
 年轻 pʰæ˧ltɕi˧

温暖，暖和 ly˧  
 冷（天气..） dɕu˧  
 冷（水） tʰæ˧  
 难作 lu˧ha˧  
 辛苦 tʰu˧  
 容易，容易做 lu˧tsu˧  
 轻松 pʰa˧lla˧  
 香（气味） su˧  
 香（气味） y˧  
 香（吃得香） su˧  
 臭 by˧tŋy˧  
 腐烂 la˧by˧  
 酸 tɕy˧  
 甜 tsʰi˧  
 苦 kʰa˧  
 咸 tsʰe˧lsu˧  
 太咸 tsʰe˧lkʰa˧  
 食物变味，人 tsu˧tby˧tŋy˧  
 虚弱、瘦  
 腻（食物） dɕy˧  
 饿（饭） dze˧lmi˧  
 馋 tɕɤ˧  
 需要 ŋi˧  
 申请，要 mie˧  
 讨饭 dze˧lmie˧  
 感谢 ka˧mie˧  
 饱 ŋu˧  
 休息，松懈 hie˧  
 忙 ŋi˧tsʰi˧  
 事务繁忙 lu˧ldzi˧  
 富 læ˧tɕæ˧  
 穷 mɔ˧dzɤ˧  
 很穷 dɕy˧ldɕu˧  
 干净 ɕwɤ˧lɕwɤ˧  
 脏 mɔ˧ɕu˧  
 乱 ka˧lmæ˧tzu˧  
 痛，病（生病） dɕu˧  
 觉得不舒服 mɔ˧tsʰe˧  
 肿，膨胀 tɕu˧  
 （肚子）胀  
 着凉 tsʰa˧dza˧lzu˧  
 干扰、妨碍 tie˧dɕa˧  
 好（技巧好） vie˧ldɕwɤ˧  
 勤快 hu˧  
 聪明 tʰie˧  
 傻、笨、蠢 bæ˧  
 狡猾 tɕɤ˧  
 一条心，想得 dʒu˧ti˧

一致  
和氣、和睦 wɣ-tɕuɪ  
安靜 hĩ-kʰaɪmɣ-tɕʰeɪ  
裝做 tɕɣɪvieɪkʰæɪvieɪ  
驕傲，自以為 dæɪsɣɪ  
好  
凶惡 maɪnuɪ  
愛破壞 wæɪkʰæ-thĩɪ  
客氣/害羞 hĩ-tɕɔɪvieɪ  
吝嗇 la-tɕʰɣɪ  
大方 aɪpɣɪjɣ-tkuɪ  
貪心不足，貪 seɪtɕʰɣɪ  
吃  
懶 mæɪhuɪ  
多嘴 ɕɪɪmieɪdziɪ  
笨拙 mæ-tɕʰæ-tɕʰæɪ  
努力 zwaɪvieɪ  
不幸（人） maɪdaɪ  
高興、起勁 læ-pʰɪɪ  
幸福，安逸 tsʰeɪ  
喜歡，愛 pʰɪɪ  
愛，關心 maɪdaɪ  
討厭 dzɣɪ  
生氣 gɣɪdʒuɪ  
高興，心情好 seɪseɪ  
好玩（人） tsʰeɪɪtuɪ  
安寧 daɪ  
悲哀，傷心 mæɪtsʰeɪ  
孤單 hĩ-tɕuɪ  
陡峭（山） tuɪbieɪ  
安裝 ɪɣɪ  
搬土 dɕuɪ  
薅鋤、鋤草 lwæɪ  
挖 dʒwæɪ  
耙 tsɑɪ  
掃 væɪ  
拔、扯（草） pyɪ  
荻，割草 zuɪtsʰuɪ  
壓扁 ɳæɪ  
弄扁不弄開 taɪpieɪllæɪ  
（竹子）  
擺整齊、使均 bɣ-tbɣ-llæɪ  
勻  
排列整齊 ɪuɪ  
舉、抬起 gɣ-tɕʰɪɪ  
上馱子 gɣ-tɕʰɪɪ  
抬（幾個人一起） gɣ-tɕʰɪɪ  
背柴 paɪ

背水 i-tɕʰɪɪpaɪ  
背孩子 zaɪhuɪpaɪ  
扛 luɪ  
馱運 tɕɪɪ  
幫助 kaɪkaɪ  
包 tʰuɪ  
瞞着別人 naɪnaɪ  
刨 tsɑɪ  
比 tʰaɪ-tʰaɪnieɪnieɪ  
量 læɪ  
放置 tʰieɪɪtuɪ  
提前准备好 tɕɣɪtɕɣɪ  
修理 gɣɪ  
宰牲畜 kʰaɪ  
重新做 liɪtieɪvieɪ  
還東西 tʰieɪɪlaɪtkuɪ  
唱 gwɣɪ  
稱 saɪ  
完成 laɪseɪ  
吃 dzeɪ  
拍（拍桌子） tʰieɪɪtuɪ  
咬 tʰæɪ  
嚼 tɕaɪqɔɪ  
吃草 ɕwæɪ  
舔 jɣɪ  
含在嘴里 ɪɣɪ  
吞 ɕɔɪ  
嘔吐 pʰieɪ  
小便，解溲 dziɪhæɪ  
拉屎 kʰæɪhæɪ  
拉肚子 qʰæɪɕwæɪ  
打噴嚏 aɪtʰuɪ  
打嗝兒 huɪɪɣɪ  
打飽嗝兒 ieɪpʰɣɪ  
吐（吐口水） tɕɪ-tɕʰuɪ  
喝 ɕɣɪ  
吸吮 tsʰɪɪtsʰɪɪ  
抽煙 jɣɪɕɣɪ  
串珠 suɪ  
穿針 uɪtsuɪ  
穿孔 qʰɔɪtʰɣɪ  
插、戳 tɕʰuɪ  
刺痛 puɪ  
扎（針...扎） gɣɪ  
一代，一世 dɕuɪ-tɕʰæɪ  
傳染 ɕɣɪ  
出來，刮 tʰɣɪ  
（風）  
下（雪） vieɪsaɪ

下（雨） fiɪdʒuɪ  
下（冰雹） dzyɪlaɪ  
有（露水） dʒɣɪkʰaɪlaɪ  
發生（打雷） muɪgɣɪgɣɪ  
吹（灰） miɪ  
纏線 dzyɪdzyɪ  
釣魚 ɳɪɪzeɪlaɪ  
趕，打獵 dziɪɪ, hãɪdziɪ  
打散，驅趕， qʰæɪɪɪɪhuɪkʰuɪ  
撵  
牽（牽牛） kʰuɪ-tɕæɪ  
散開 pʰaɪ  
打開（如：開門） laɪtsʰɪɪ  
張開手心 kʰæɪkʰæɪ  
閉 tæɪ  
關（羊） tæɪ  
鎖門 tseɪ  
閉嘴 tʰieɪɪmuɪ  
眨眼 ɳjæɪɪmaɪ  
閉眼 mɳɣɪɪɣɪ  
穿（衣服） hɣɪ  
脫（脫衣服） pʰɣɪ  
佩帶 pɣɪ  
戴手鐲 pɣɪ  
戴帽子 ɪɣɪ  
擋住 qʰɔɪ  
等候 tʰieɪ-hiɪɪ  
地震 dyɪdʒuɪdʒuɪ;  
搖 dʒuɪdʒuɪ  
搖 dʒuɪ  
凋謝 laɪkʰuɪ  
上吊自殺，縊 ɕæɪtsuɪ  
凍 laɪɪɪ  
爬行，匍匐 dyɪ  
翻身 tʰuɪtɕɣɪ  
翻過來翻過去 ziɪtɕɣɪpʰɣɪ  
滾（石頭滾） guɪɪbɣɪɪɣɪ  
使滾 laɪpʰuɪ  
躲藏 tʰieɪ-ɳæɪ  
藏 tʰieɪ-tɕʰwæɪ  
藏（一個小的東西） tʰieɪɪmɣɪ  
動 liɪliɪ  
堵塞 dzyɪ  
棍子斷 laɪqʰæɪ  
碎 qʰɔɪ

|           |                                      |        |                                                          |          |                                            |
|-----------|--------------------------------------|--------|----------------------------------------------------------|----------|--------------------------------------------|
| 破、碎（碗，罐子） | q <sup>h</sup> ɔʌ                    | 变（蛹变蛾） | tɕɤŋʂaʌvæʌ                                               | 跪下磕头（叩头） | ɔʌtpɤŋʌdɕuʌ                                |
| 损坏        | wæʌkæʌ                               | 换      | qæʌ, qæʌqæʌ                                              | 咳嗽       | tsɤʌ                                       |
| 撕（撕纸）     | ʂwɤʌ                                 | 飘动     | liʌliʌzwæʌzwæʌ                                           | 渴        | hwɤʌʌ                                      |
| 拆（线）      | ʂwɤʌ                                 | 挥动     | tɕiʌtɕiʌ                                                 | 困倦       | ts <sup>h</sup> eʌ                         |
| 拆         | q <sup>h</sup> æʌ                    | 来      | iʌ                                                       | 拉（向前拉）   | tæʌ                                        |
| 拆         | wæʌq <sup>h</sup> æʌ                 | 毁灭     | t <sup>h</sup> uʌts <sup>h</sup> uʌ                      | 拖        | gwæʌʂæʌ                                    |
| 生长        | kɤʌpiʌ                               | 使混合    | tʂwæʌtʂwæʌ                                               | 推        | mieʌ                                       |
| 长大        | gɤʌkwɤʌ                              | 搀      | zæʌzæʌ                                                   | 按（用手）    | ŋæʌ                                        |
| 发抖，颤抖     | tɕ <sup>h</sup> yʌtɕ <sup>h</sup> yʌ | 搀      | ʂwæʌʂwæʌ                                                 | 挤压       | tɕyʌ                                       |
| 发烧        | tʂ <sup>h</sup> uʌ                   | 和泥     | dzæʌk <sup>h</sup> æʌzæʌ                                 | 靠        | t <sup>h</sup> uʌ                          |
| 为别人担心     | ŋiʌmjæʌhũʌ                           | 累积     | kuʌkuʌ                                                   | 留下       | t <sup>h</sup> ieʌdzɤʌtʂuʌ!                |
| 发芽（树）     | hũʌʌpɤʌʌiʌtʂɤʌ                       | 记得     | ŋiʌmieʌq <sup>h</sup> ɔʌ                                 | 遗漏       | myʌ                                        |
| 发芽（种子）    | yʌ                                   | 寄存     | tʂuʌ                                                     | 忘记       | læʌmyʌ                                     |
| 开花        | væʌ                                  | 寄信、服送  | q <sup>h</sup> ɔʌpɤʌ                                     | 绑，捆      | ts <sup>h</sup> iʌ                         |
| 告状        | tɕɤŋʌzwɤʌ                            | 妒忌     | gɤʌdzɤʌ                                                  | 绑        | tsuʌʌtsuʌ                                  |
| 惩罚        | uʌdyʌ                                | 停止     | læʌhiẽʌ                                                  | 系        | tyʌ                                        |
| 掺和        | t <sup>h</sup> ieʌts <sup>h</sup> iʌ | 剪      | ts <sup>h</sup> iʌ                                       | 勒住       | dzɤʌdzɤʌ                                   |
| 放牧        | dzɤʌdzɛʌʌyʌ                          | 砍（树）   | daʌ                                                      | 漏水       | maʌkæʌ                                     |
| 飞         | dzɤʌ                                 | 劈、剖    | q <sup>h</sup> ɔʌ                                        | 滤        | tsuʌ                                       |
| 盘旋        | q <sup>h</sup> æʌq <sup>h</sup> æʌ   | 剁肉，宰   | daʌ                                                      | 弄乱       | wæʌq <sup>h</sup> æʌ                       |
| 分东西       | zyʌzyʌ                               | 切      | hæʌ                                                      | 驱逐       | q <sup>h</sup> æʌpɤʌʌhũʌ!                  |
| 逢         | zɤʌ                                  | 断（线）   | tʂ <sup>h</sup> uʌ                                       | 埋        | ŋyʌ                                        |
| 孵         | zyʌ                                  | 马叫     | lwæʌ                                                     | 买        | zɤʌ                                        |
| 符合        | dɤʌ                                  | 狗吠     | lyʌ                                                      | 卖        | tɕ <sup>h</sup> iʌ                         |
| 上街        | wɤʌʌbieʌʌbiʌ                         | 老虎叫    | lwæʌ                                                     | 生意       | gɤʌʌtɕ <sup>h</sup> iʌyʌtɕ <sup>h</sup> iʌ |
| 敢         | ŋwɤʌ                                 | 名字叫    | hiʌ                                                      | 抿嘴巴      | ts <sup>h</sup> iʌts <sup>h</sup> iʌ       |
| 做，工作      | vieʌ                                 | 结很多果子  | lyʌdyʌ                                                   | 触碰       | gɤʌ                                        |
| 劳动        | luʌvieʌ                              | 结果子    | laʌdyʌŋaʌ                                                | 磨刀       | syʌ                                        |
| 给、传       | kuʌ                                  | 婚姻     | zɤʌʂɤʌ                                                   | 拧（拧毛巾）   | kæʌʂɤʌ                                     |
| 喂动物       | dzeʌkuʌ                              | 向别人借   | ŋiʌ                                                      | 搓（搓绳子）   | zyʌ                                        |
| 撒（种子）     | p <sup>h</sup> aʌ                    | 借给别人   | ts <sup>h</sup> yʌ, tʂ <sup>h</sup> uʌts <sup>h</sup> yʌ | 缠线       | dzyʌdzɤʌ                                   |
| 使钩住       | miʌ                                  | 欠钱     | viʌ                                                      | 爬，上山     | gɤʌduʌ                                     |
| 钩住，悬挂     | hwaʌ                                 | 递过去    | dɤʌʌpɤʌʌhũʌ                                              | 爬，上山     | dyʌdyʌ                                     |
| 够         | lyʌ                                  | 居住     | dzyʌ                                                     | 打（如：脱粒）  | dɤʌ                                        |
| 为别人打工     | hiʌʌk <sup>h</sup> ɤʌʌkaʌʌluʌvieʌ    | 聚集     | laʌlyʌlyʌ                                                | 敲门       | taʌtaʌ                                     |
| 管理庄稼      | liʌʌɔʌ                               | 蜷缩     | zyʌ                                                      | 打（人，钉）   | laʌ                                        |
| 管庄稼       | liʌʌtʂ <sup>h</sup> uʌ               | 观看     | ʌɔʌ                                                      | 排队       | dɤʌʌlæʌvieʌ                                |
| 管理        | aʌʌʌkæʌʌzuʌ                          | 看、看望   | ʌɔʌbiʌ                                                   | 跑        | dzaʌ                                       |
| 灌溉        | liʌʌsuʌ                              | 听      | hãʌ                                                      | 碰撞       | p <sup>h</sup> jeʌ                         |
| 害羞        | hæʌduʌ                               | 听见     | myʌ                                                      | 泼水       | ɕyʌ                                        |
| 害怕        | siʌ                                  | 嗅      | læʌmiʌ                                                   | 欺负       | dzyʌʌʌmaʌhãʌ                               |
| 吓         | dzyʌ                                 | 闻到     | buʌŋɤʌ                                                   | 欺骗       | qæʌ                                        |
| 后悔        | p <sup>h</sup> ɤʌ                    | 呼吸     | saʌseʌ                                                   | 垒起来      | ɤʌ                                         |
| 画、写       | tʂuʌ                                 | 烤火取暖   | myʌkwɤʌ                                                  | 砌墙       | tʂuʌʌbuʌ                                   |
| 刻         | dɤʌ                                  | 站（站立）  | hiẽʌ                                                     | 骑马       | dzɤʌ                                       |
| 怀孕一个孩子    | zaʌʌhuʌʌpɤʌ                          | 跪下     | maʌkuʌʌt <sup>h</sup> ieʌts <sup>h</sup> yʌ              | 起（起床）    | gɤʌʌtʂuʌ                                   |
| 交换        | qæʌqæʌ                               |        |                                                          | 打招呼      | jɤʌʌkuʌʌk <sup>h</sup> uʌʌʌjæʌ?            |

|        |                   |        |                  |        |                        |
|--------|-------------------|--------|------------------|--------|------------------------|
| 染      | tʂʰy̌]            | 睡着     | ziɿmy̌Jziɿ]      | 争夺     | dʒæɪdʒæɪ               |
| 热饭     | tsiɪ              | 讲      | zɰwɔ̌]           | 吵架     | dʒæɪdʒæɪ               |
| 必须     | lɕɪ               | 商量、谈天  | ʂɑɪvæɪ]          | 偷      | kʰy̌ɪ                  |
| 会      | kuɿ]              | 讲故事    | uɿ]              | 催别人把东西 | taɿ]                   |
| 能，能够   | dʒɰwɔ̌]           | 问      | my̌Jduɿ]         | 交出来    |                        |
| 扔      | laɪ               | 读      | ŋiɿtsiɿ]         | 织      | daɿ]                   |
| 甩      | duɿ]              | 批评     | dʒæɪ             | 编（竹子）  | mæɿdaɿ]                |
| 掷（掷石头） | tʂɑɿtsʰiɪ]        | 骂      | uɿdyɿ]           | 指      | gyɿ]                   |
| 散了     | pʰy̌ɪ             | 逃，逃跑   | pʰuɿ]            | 种      | tʃyɪ                   |
| 解开，解绳结 | tʂʰuɿ]            | 踢一脚    | tsaɪ             | 抓      | dʒɰwɔ̌]                |
| 杀      | kʰaɿ]             | 踩      | tʰy̌ɪ            | 啄      | kʰy̌ɪɪ                 |
| 筛      | lyɿ]              | 剔，刮    | siɪsiɪ]          | 醉      | ɤæɪ                    |
| 射中     | zyɪ               | 满      | ʂɿɪ]             | 坐/住    | dzyɿ]                  |
| 伸（伸手）  | ɣɿ[tʂʰuɿ]         | 挑选     | siɿ]             | 做梦     | yɿɿmuɿkʰwɔ̌]           |
| 生锈     | tʂuɪɪqʰæɪnɪdʒeɪ]  | 跳舞     | tsʰuɿ]           | 暗（房子）  | naɿfɣɿfɣɿ]             |
| 生孩子    | zɑɪhuɿdzɰɿ]       | 往后仰    | jɔ̌Jŋɔ̌]         | 天阴     | muɪnaɪ]                |
| 失踪     | tʰuɿtsʰuɿ]        | 弄弯     | tsɑɪqæɿkʰuɿ]     | 瘦（人瘦）  | ʂuɪdzɑɪ]               |
| 撑开（帐篷） | qʰæɪqʰæɿ]         | 退后     | tieɪseɪ]         | 瘦（肉）   | ʂuɿnaɿ]                |
| 收拾、弄整齐 | ʂuɿʂuɿ]           | 洗衣服    | tsʰuɿ]           | 肥（肥肉）  | ʂuɿpʰy̌ɿ]              |
| 梳      | tʂʰwɔ̌]           | 冲水     | ɕyɿ]             | 胖      | ʂuɿdyɿ]                |
| 梳      | siɪsiɪ]           | 下蛋     | ɤɔ̌Jɤɔ̌]         | 干燥     | fɣyɪ                   |
| 败、输    | məɪtɕʰɔ̌]         | 相信     | muɪtɕuɪɪ]        | 可爱     | aɿliɿ]                 |
| 用手剥    | ʂuɿ]              | 醒      | tʂɰy̌ɪ]          | 丑陋     | aɿɿmɔ̌Jliɿ]            |
| 剥皮     | ʂuɿ]              | 学      | suɿ]             | 辣      | tsuɪɪ]                 |
| 削      | ʂuɿ]              | 教      | suɿ]             | 活      | sɰyɿ]                  |
| 煮熟     | tɕɔ̌]             | 写      | tʂuɿ]            | 死（人）   | suɿ]                   |
| 煮了一会   | dʒuɪɿmɔ̌Jmiɿtɕɔ̌] | 知道     | suɿ]             | 死      | kʰɔ̌]                  |
| 烧开     | tɕɔ̌]             | 传闻     | ŋɔ̌ɪ]            | 合适     | dʒuɿ]                  |
| 煨熟     | tsiɿ]             | 懂      | myɪɪ]            | 擦      | tʂʰy̌ɪɪ, tʂʰy̌ɪtʂʰy̌ɪ] |
| 蒸熟     | bɣyɪ]             | 寻找     | ʂuɪɪ]            | 揉      | zyɿ]                   |
| 炒（肉、菜） | hiɪ]              | 抠痒     | kwaɪ]            | 呛      | ɕɪɪ]                   |
| 炒（肉、菜） | tʂʰuɪɪ]           | 阉割     | læɿmieɿgyɿ]      | 塌毁，倒塌  | dʒɔ̌]                  |
| 干炒（麦子） | hiɪhiɪ]           | 养（动物）  | zɰwɔ̌]           | 错、犯错误  | qæɪ]                   |
| 揉面     | zyɿ]              | 溢出来    | qʰɔ̌ɪ]           | 舀水     | qwaɪ]                  |
| 搅拌     | ʂwaɪ]             | 送行     | pɰyɪ]            | 守卫     | tʂʰuɪɪ]                |
| 尝试、体会、 | dʒuɿlɕɿbiɪ]       | 漂浮     | tɕyɿ]            | 带孩子    | qæɿ]                   |
| 经过     |                   | 跨（跨小沟） | ɤɑɪ]             | 带路     | læɿɤɔ̌Jɰyɿ]            |
| 烘干     | læɪfɣyɿkʰuɿ]      | 遇见     | ɤɔ̌Jpɰyɪ]        | 骨折     | qʰæɿ]                  |
| 弄碎（用牙  | tɕyɪlyɿtɕyɪ]      | 盖，覆盖   | huɪ]             | 倒      | qʰæɿ]                  |
| 齿、手磨）  |                   | 遮（云遮月） | kaɿ]             | 掉下     | tʂʰuɪɪ]                |
| 在磨房里磨  | tɕyɿ]             | 挡住去路   | kaɿ]             | 掉入、沉下去 | tʂʰuɪɪ]                |
| 点灯     | tʂɰyɿ]            | 包起来    | ʂuɿʂuɿ], laɿʂuɿ] | 摔倒，跌倒  | tʰieɿdʒuɿ]             |
| 烧      | dʒɰyɪ]            | 遮蔽     | huɪ]             | （路很滑）  |                        |
| 烧焦     | qʰæɿ]             | 使火炉灭了  | ŋyɪ]             | 立起来    | tʰieɿdzɰyɿkʰuɪɪ]       |
| 烧火     | tsʰiɪ]            | 灭，熄    | kʰuɪ]            | 到达     | tʰy̌ɪɪ]                |
| 熏      | hwaɿ]             | 振动     | dʒɰuɿ]           | 得到     | ɿɪ]                    |
| 一起摔交   | ziɿziɿ]           | 震动     | dʒɰuɪdʒɰuɿ]      | 丢失，遗失  | tʰuɿtsʰuɿ]             |
| 甩来甩去   | ʂwɔ̌Jlieɿluɿ]     | 点头     | uɪtuɿlgyɿJgyɿ]   | 捉（捉鸡）  | ziɿ]                   |
| 睡觉     | ziɿ]              | 抢      | dʒæɪ]            | 握（握刀把） | tsʰy̌ɪ]                |

拣, 拾, 取 la'ts<sup>h</sup>yJ  
 捡起来, 拾 kuJ  
 摘 tɕ<sup>h</sup>uJ  
 拿过来 yJ  
 赠送 pɣJ  
 哄 tu'tuJ  
 抱起小孩子 tuJ, tu'tuJ  
 亲吻 bu'tbuJ  
 铺 (铺床) k<sup>h</sup>uJ  
 去 biJ  
 去 bɣJ  
 去 (过去式) huJ  
 走路 seJ  
 散步 ga'ŋɔ'ŋɔ'ŋɔ'biJ  
 走 (离开) hūJ  
 喊 (大声叫) kuJ  
 笑 ɣJ  
 玩笑 a'tzu'ŋsa'væJ  
 逗弄 (话) ze'ŋk<sup>h</sup>wɣ'vieJ  
 玩, 玩耍 aJzuJ  
 玩具 aJzuJtsuJ  
 哭 ŋyJ  
 过去 (时间) gyJ  
 数 tɕwɣ'tɕwɣJ  
 跳 ts<sup>h</sup>uJ  
 过河 dæJ  
 贴 zu'zuJ  
 想 ɕJ'dɕuJ  
 愿意 lwæJ  
 请 lwæJ  
 接 tɕyJ, tɕy'tɕyJ  
 游泳、漂浮 dzyJ, zu'dzyJ  
 有 dzyJ  
 没有 mæ'dzyJ  
 大 a'pa'dzuJ  
 小 tɕiJ  
 交配 (动物) lyJ  
 鸟 uJiJ  
 鸡 læJ  
 公鸡 læ'p<sup>h</sup>yJ  
 母鸡 læ'mieJ  
 鸭子 bæ'mieJ  
 雉 t<sup>h</sup>u'tyJ  
 雉 tɕ<sup>h</sup>a'my'tɕ<sup>h</sup>a'tɕ<sup>h</sup>aJ  
 雉, 鹇 kɣ'piJ  
 啄木鸟 t<sup>h</sup>u'bie't<sup>h</sup>u'ta'taJ  
 鹤 ɔJ  
 雁 mu'tze'lhæ'tzeJ  
 梟 bu'lu'tfyJ

老鹰 ka'ŋa'mieJ  
 "小鹰" tɕwɣ'tla'tɕuJ  
 乌鸦 la'ɬæJ  
 喜雀 læ'seJ  
 鸚 (鸚) dzywɣ'mieJ  
 鸚鹉 a'qæJ  
 羽毛 hɨJ  
 翅膀 dɣJts<sup>h</sup>uJ  
 龙 zy'lbæJ  
 蝙蝠 dzy'wɣJ  
 虫 dzi'thij  
 蜈蚣 tɣ'tɕiJ  
 蚊子 i'tsuJ  
 跳蚤 k<sup>h</sup>u'tɕuJ  
 虱子 ɕu'tmieJ  
 虻子 ɕu'tɕu'ɬɔJ  
 臭虫 qɔ'tɕuJ  
 象鼻虫 by'tɕ<sup>h</sup>æJ  
 毛虫 sa'da'ŋby'ts<sup>h</sup>yJ  
 瓢虫 dzi'thij'ɬæ'tsuJlæJ  
 四脚蛇 hiJ  
 蚂蟥, 水蛭 za'ŋmɣ'ŋbyJ  
 马蜂 (黄蜂) i'ts<sup>h</sup>i'ŋdzu'hiJ  
 蚯蚓 dzyJ  
 蚂蚁 njɣ'tgɣ'ŋdzi'hiJ  
 蚂蚁巢 ts<sup>h</sup>a'tzyJ  
 蜜蜂 ts<sup>h</sup>a'tzy'ŋq<sup>h</sup>ɔJ  
 蜂蜜 dzyJ  
 蜂窠 dzy'tzuJ  
 蛆 dzy'tguJ  
 苍蝇 mu'k<sup>h</sup>y'ŋlyJ  
 大苍蝇 bɔ'tɕJ  
 蝉 fy'ŋmieJk<sup>h</sup>æJ  
 蜘蛛 wɣ'ŋmieJtɕɔJɕJ  
 大蜘蛛 ba'tla'mieJ'a'pa'dz  
 蜘蛛网 u'hiJ  
 蜗牛, 螺蛳 ba'tla'mieJk<sup>h</sup>uJ  
 蜚螂[牛屎 njɣ'tkɣ'ŋsyJ  
 虫、粪虫] wɣ'ŋmieJk<sup>h</sup>æJhiJtu  
 蝴蝶 JlyJ  
 螳螂 p<sup>h</sup>ie'lieJ  
 蝗虫 la'ŋmieJlaJɔJɔJ  
 小的树支虫 ŋi'tby'tkwa'ŋta'mieJ  
 象 si'dze'dzeJhiJ  
 猪 nɔ'ŋby'tɕ<sup>h</sup>iJ  
 母猪 wɣ'ŋmieJ  
 种公猪 wɣ'ŋsyJ

猪崽 wæ'tbyJ  
 野猪 wɣ'tuJ  
 马 ɕJ  
 公马 ɕJsyJ  
 母马 ɕJmieJ  
 骗马 ɕJ'ɬɔJ  
 马驹子 ɕJ'za'thuJ  
 马鹿 tɕ<sup>h</sup>æJ  
 鹿 tɕ<sup>h</sup>æ'tbyJ  
 母鹿 tɕ<sup>h</sup>æ'mieJ  
 狗 k<sup>h</sup>uJ  
 母狗 k<sup>h</sup>u'tmieJ  
 流浪的狗 tɕ<sup>h</sup>ɔJlaJ  
 看门狗 a'ŋu'ŋk<sup>h</sup>uJ  
 早獭 dzi'hwɣJ  
 熊 uJ  
 熊胆 u'tsiJ  
 猫 hwɣ'tlieJ  
 公猫 hwɣ'tlie'tbyJ  
 母猫 hwɣ'tlie'mieJ  
 山羊 ts<sup>h</sup>uJ  
 公山羊 ts<sup>h</sup>uJbyJ  
 麝香 lie'thuJ  
 山羊羔 ts<sup>h</sup>uJt<sup>h</sup>uJ  
 绵羊 yJ  
 公绵羊 y'tbyJ  
 母绵羊 y'mieJ  
 绵羊羔 y'tza'thuJ  
 羊毛 ts<sup>h</sup>uJhɨJ  
 岩羊[青羊] seJ  
 狐狸 dɕwæ'tmieJ  
 青蛙 pɣ'mieJ  
 蝌蚪 pɣ'dzyJlyJ  
 鱼 ŋiJzeJ  
 兔子 t<sup>h</sup>u'tlieJ  
 蛇 zy'lbæJ  
 蛇的蜕皮 ky'tqæJ  
 壁虎 lie'tdaJ  
 水獭 ɕJ  
 野兽的洞 q<sup>h</sup>ɔJ  
 鸟窝, 鸟巢 k<sup>h</sup>uJ  
 骡子 da'ŋuJ  
 獐子 lieJ  
 鹿子 ts<sup>h</sup>iJ  
 猴子 yJ  
 老虎 laJ  
 豹子 zɕæJ  
 狼 p<sup>h</sup>aJ  
 牛 viJ

|         |               |           |                   |          |             |
|---------|---------------|-----------|-------------------|----------|-------------|
| 公牛      | viˈsy˧        | 糠         | tsʰi˧             | 酸菜, 如: 芜 | tɕy˧læ˧     |
| 水牛      | væ˧           | 麦麸        | pʰa˧da˧           | 菁叶子      |             |
| 牦牛/野牦牛  | bɿ˧           | 麦秸        | zu˧               | 根        | si˧a˧tsʰu˧  |
| 驴子      | tõ˧bɿ˧        | 麦芒        | mie˧              | 树枝       | mæ˧dy˧      |
| 野驴子     | i˧bæ˧         | 小麦        | dze˧              | 树枝       | si˧ka˧lla˧  |
| 藏羚      | se˧           | 火麻        | sa˧a˧             | 树干       | si˧dzi˧     |
| 牲畜      | dʒu˧dze˧      | 大麻        | sa˧               | 液, 汁     | zɿ˧, si˧zɿ˧ |
| 野猫      | ɔ˧mie˧        | 蔬菜        | u˧tɕʰɿ˧           | 松香       | tʰu˧ɬæ˧     |
| 松鼠, 灰鼠  | hwæ˧tzu˧      | 萝卜        | ly˧bi˧            | 麦苗       | dzu˧li˧     |
| 老鼠=耗子   | hwɿ˧          | 南瓜        | tse˧hi˧lgwɿ˧      | 种子       | læ˧         |
| 黄鼠狼, 黄喉 | u˧pʰɿ˧        | 黄瓜        | tɿ˧hwɿ˧           | 叶子       | tɕʰɿ˧       |
| 貂       |               | 土豆 (马铃薯)  | ja˧y˧             | 刺        | tɕʰi˧tu˧    |
| 尖鼠、鼯鼠   | ɔ˧tɕy˧hwɿ˧    | 薯, 洋芋)    |                   | 花        | væ˧         |
|         | ɲy˧qʰɔ˧       | 树         | si˧dzi˧           | 花        | a˧li˧wa˧    |
| 飞鼠      | ɲi˧ze˧        | 松树        | tʰu˧si˧           | 草        | zu˧         |
| 刺猬      | pɿ˧           | 松明        | qʰɔ˧qʰɔ˧          | 玉米包      | dʒu˧tʰɿ˧    |
| 马鬃      | ɔ˧bɿ˧bɿ˧      | 落叶松       | tʰu˧bɿ˧           | 杉树果      | si˧li˧      |
| 蹄子      | kʰwɿ˧bie˧     | 柳树, 杨柳    | zɿ˧si˧            | 豆类的粗糠    | ɲy˧tsa˧     |
| 奶牛的乳房   | vi˧a˧pu˧      | 柏树        | sy˧               | 秕, 喂牛    |             |
| 犄角      | qʰɔ˧          | 大竹子       | mæ˧               | 树墩、树桩    | si˧pɿ˧tɿ˧   |
| 爪子      | la˧tɕsu˧      | 竹子        | tsʰu˧tɕy˧         | 树瘤       | tsu˧tu˧ly˧  |
| 大蒜      | fɿ˧           | 竹子        | mæ˧tʰæ˧tɕi˧hi˧    | 茎        | zu˧dʒy˧     |
| 菌子 (蘑菇) | mu˧tɕʰwɿ˧     | 甘蔗        | kʰa˧dze˧pu˧tɕy˧   | 我        | ɲa˧         |
| 果核      | tɕy˧          | 黄豆        | ɲy˧               | 你        | nu˧         |
| 水果      | si˧u˧a˧li˧    | 豆花        | ɲy˧hu˧            | 他        | tʰu˧        |
| 桃子      | tsʰu˧ky˧ta˧   | 豌豆        | da˧tsʰy˧          | 咱们       | u˧mɿ˧       |
| 梨子      | si˧tɕy˧       | 豌豆干草      | da˧tsʰy˧zu˧       | 我们       | ɲa˧mɿ˧      |
| 柿子      | su˧bɿ˧        | 花椒        | dʒy˧              | 你们       | nu˧mɿ˧      |
| 大麦      | mi˧dze˧       | 野花椒       | dʒy˧by˧           | 他们 (对平辈) | tʰu˧kʰɿ˧    |
| 青稞      | tɕʰy˧tzu˧     | 庄稼        | kʰy˧ɬwa˧          | 你们俩      | nu˧dzi˧     |
| 甜荞, 荞麦, | ja˧dʒu˧       | 庄稼 (未收)   | ɬɔ˧bie˧           | 不        | mə˧         |
| 花荞      |               | 藤子        | ɲy˧bæ˧            | 是 (这是什么) | ɲu˧         |
| 苦荞      | ja˧kʰa˧       | 辣椒        | læ˧tsu˧           | 这样, 这么   | u˧nie˧      |
| 稻子      | dze˧tsy˧      | 四川桦树, 白桦树 | mu˧kɿ˧            | 越、更      | la˧ha˧      |
| 米       | tɕʰi˧         | 核桃        | u˧du˧             | 凉山木里县    | mu˧li˧      |
| 米饭      | tɕʰæ˧pʰy˧dze˧ | 荨麻[和麻]    | ɲi˧tɕʰu˧          | 木里县项脚    | hwa˧dʒy˧    |
| 玉米、包谷   | kʰa˧dze˧      | 血满草[臭草]   | ja˧bɿ˧ja˧tsu˧tsu˧ |          |             |
| 燕麦      | my˧zu˧        | [酸酸草]     | hwɿ˧tɕy˧          |          |             |
| 莜麦      | ɕu˧           | 大蒜的根      | fɿ˧u˧tu˧          |          |             |
| 苋米      | ɲa˧la˧ma˧     |           |                   |          |             |

<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).

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

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<sup>③</sup> See Michaud 2006 for Naxi, Michaud 2008 for Yongning Na, and Michaud et al. 2012 for a cross-linguistic study.

<sup>④</sup> Pr. Huang also noted /wǎŋ/ for ‘to shout, to cry out (of pigs)’; in the dialect described here, this word is realised as /lwǎŋ/.

<sup>⑤</sup> For instance, the form /baŋha/ ‘pig swill’, from /bu/ ‘pig’ and /ha/ ‘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 /buŋha/, without vowel harmony.

<sup>⑥</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).

<sup>⑦</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 /ɳ/ which is more commonly used in the People’s Republic of China.