WANCHO PHONOLOGY AND WORD LIST

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1.0. INTRODUCTION

This article is intended as a companion to the preceding article by Burling and Phom on the Phom language. Like Phom, Wancho is one of the so-called "Northern Naga" languages. It is spoken in the extreme southeastern tip of the Indian state of Arunachal Pradesh, just across the state border that divides Arunachal from Nagaland. Phom and Wancho are closely related languages but they are by no means mutually intelligible. They are separated geographically by Konyak, the best known of the northern Naga languages and the one with the largest number of speakers. Speakers of Phom and Wancho rarely have any reason to learn each other's languages, but both find it reasonably easy to learn to speak Konyak and they sometimes do so. One of the authors of this article, Wangsu, is a native speaker of the Wancho language and, like L. Among Phom, he is interested in standardizing the orthography of his language in order to achieve effective Bible translation. We have worked together to understand the phonology of the language and to assemble a list of core vocabulary. This paper is the product of that collaboration.

Like Phom, Wancho is a tone language and, as with Phom, it is convenient to describe the phonology in terms of its syllables and their parts: 1. Initial consonants, 2. Vowels, 3. Final consonants, 4. Tones. Assimilation across syllable boundaries is a rather more complex and active process in Wancho than in Phom, and tones sometimes change when syllables are used together in compounds. Before dealing with these topics, however, the phonology of individual syllables needs to be considered.

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1 This issue, pp. 13-42. Burling would like to thank the Fulbright Foundation for the generous support that allowed him to return to work in northeastern India after a gap of no less than forty years.
2.0. SYLLABLE-INITIAL CONSONANTS

The consonants that can occur as syllable initials are shown in Table 1. A few syllables lack an initial consonant entirely. Wancho differs from Phom in having three series of stops rather than just two: voiceless aspirated, voiceless unaspirated, and voiced. Each of these occurs in the three familiar articulatory positions (bilabial, apical, and velar), as do the unremarkable nasals. Most of the nine stops are found in a large number of words, but, strangely, /g/ is exceedingly rare. Indeed, Wangsu has been able to think of only a single word that he pronounces with /g/: a⁴⁴ga⁴⁴ 'five'. There can be no doubt that this word has a voiced velar stop, however, so it must be included in the inventory of consonants. Some Wancho speakers use /g/ in a few other words.

\[
\begin{array}{cccc}
p^h & t^h & k^h \\
p & t & ts & č & k \\
s & s & f \\
b & d & z & ʒ & (g) \\
m & n & n & η \\
β & l & h \\
\end{array}
\]

Table 1. Syllable-initial consonants.

/ts/ and /č/ are voiceless unaspirated affricates, alveolar and palatal respectively (/č/ is considerably less aspirated than English /č/) and, as shown in Table 1, Wancho lacks aspirated affricates. The voiceless sibilants /s/ and /ʃ/ are articulated in much the same positions as /ts/ and /č/, and they sound very much like English /s/ and /ʃ/. /ʒ/ and /ʒ/ are also articulated in roughly the same positions. They are both voiced, but /ʒ/ has somewhat less friction than English /ʒ/, though more than English /ʝ/. /ʒ/ and the onglide that initiates several diphthongs (symbolized here as /y/) are articulated in a similar position, but they differ in their degree of friction. The consonant /ʒ/ has considerable friction, while the onglide /y/ does not. Wancho /ʒ/ does not have the marked rhotic quality of the /ʒ/ of Phom.

/β/ is a voiced fricative, more bilabial than English /v/. Its acoustic impression is intermediate between English /w/ and /v/. Wancho /β/ is clearly distinct from the onglide that is symbolized here as /w/ and that is a component of several diphthongs (see below). Just as consonantal /ʒ/ has more friction than the onglide /y/, so /β/ has considerably more friction than /w/. /l/ is a
voiced lateral and /h/ is a glottal fricative. Both are very much like the corresponding consonants of English.

The initial consonants can be illustrated by the following examples.

- ph  pʰa⁴⁴ ‘tick’ (insect)
- th  tʰaw⁴⁴ ‘papaya’
- kh  khɑŋ⁵² ‘head’
- p  puŋ⁵² ‘granary’
- t  ti⁵² ‘water’
- ts  tsɑ⁵² ‘twenty’
- č  čoŋ⁴⁴ ‘worm’
- k  kya⁴⁴ ‘white’
- s  saʔ⁴⁴ ‘cooked rice’
- j  ja⁴⁴ ‘rot’
- b  bancements ⁵² ‘ten’

- d  da⁵² ‘untie’
- z  zaŋ¹¹ ‘field’
- ʒ  ʒan⁵² ‘iron’
- g  a⁴⁴ga⁴⁴ ‘five’
- m  mak⁵² ‘spider’
- n  nok⁴⁴ ‘village’
- ŋ  ŋo⁴⁴ ‘banana’
- β  βaŋ⁴⁴ ‘fire’
- l  le⁵² ‘tongue’
- h  ham¹¹ ‘walk’

3.0. VOWELS

Wancho can be described as having six simple vowels and nine distinctive diphthongs, as shown in Table 2. By comparison with Phom, its vowels are relatively transparent. Three of the diphthongs are rising, having either /y/ or /w/ offglides. The other six are falling, three with /y/ onglides and three with /w/ onglides. We have failed to find other combinations of glides with vowels. Phonetic [ŋ] can be found in syllable-initial position in Wancho, but only when followed by one of a limited set of vowels.² However, [y] can follow most, perhaps all, of the initial consonants, so we find it more parsimonious to interpret the [y]s as onglides, the first part of three rising diphthongs, rather than as the second part of a large number of initial clusters.

\[
\begin{array}{ccccccc}
i & u & ay & ay & aw \\
Λ & o & yi & ye & ya \\
a & wi & wa & wo
\end{array}
\]

Table 2. Vowels and diphthongs.

² We do not recognize a Wancho phoneme /ŋ/. This is unlike the analysis of Phom in Burling and Phom (this issue), where such a phoneme is recognized.
3.1. Simple vowels

/i/. High front unrounded. This vowel is lower in closed than in open syllables. hi44 ‘dog’.

/ə/. Mid central unrounded. This vowel is not ‘like the vowel of English but (although it is closer to the American than to the British version of this vowel). It is not really a schwa, though it does have some schwa-like features. It is sometimes very short, and syllables with /ə/ are especially likely to pick up a final consonant by assimilation to the initial of the following syllable (see the discussion of assimilation below). It can be more tense and more stressed than a proper schwa, however. man11 ‘name’.

/u/. High back rounded. Like /i/, this vowel is usually slightly lower in closed syllables than in open ones, but the difference is not great. bu52 ‘itch’.

/e/. Mid front unrounded. This vowel is considerably less common than the other five simple vowels. le52 ‘tongue’.

/a/. Low central unrounded. This is just slightly to the front of most pronunciations of the English “a” in father. ha44 ‘firewood’. Wangsu has a nasal /ã/ in the word a52pã44 ‘listen’. This is the only word in the language that he pronounces with a nasal, although there are other dialects of Wancho in which nasals are found in other words as well. This may be an example of dialect borrowing.

/ɔ/. Most often this vowel is lower mid, back, and rounded. Before syllable-final /m/ and /p/, however, it is centralized, and articulated higher, further front, and with less rounded lips than otherwise. As a result, it approaches the pronunciation of /ə/. /ʌ/ and /ɔ/ contrast in most positions, but not before /m/ and /p/. On strictly distributional grounds, therefore, this allophone could be grouped either with /ʌ/ or with /ɔ/. Wangsu’s strong intuition is that it should be grouped with /ɔ/ rather than /ʌ/, so that is the way we transcribe it. Except when occurring before /m/ or /p/, /ɔ/ sounds much like the vowel in English long. Before /m/ or /p/ it is intermediate between the vowels of English cup and long, or even a bit closer to cup. ho44 ‘kick’; a44zom52 ‘three’.

3.2. Diphthongs

/ay/. A diphthong that begins with a low central unrounded vowel and then moves toward high front. It is very similar to the vowel in English pie. Like several of the diphthongs, /ay/ does not occur in closed syllables. pay44 ‘cotton’.

/əy/. A diphthong that begins with a mid central vowel and moves toward high front. Phonetically this is very close to the Phom vowel that in the previous paper was also transcribed as /əy/. may44 ‘meat’.
/aw/. A diphthong that begins with a low central vowel and moves toward high back. It is very similar to the English vowel in now. **baw**\textsuperscript{52} ‘evil spirit’.

/yi/. A diphthong that begins with a palatal approximant and moves toward a high front unrounded vowel. **nyi**\textsuperscript{44} ‘laugh’.

/ye/. A diphthong that begins with a palatal approximant and moves toward a mid front unrounded vowel. **syep**\textsuperscript{52} ‘narrow’.

/ya/. A diphthong that begins with a palatal approximant and moves toward a low central unrounded vowel. **mya**\textsuperscript{52} ‘cat’.

/wi/. A diphthong that begins with a bilabial approximant and then moves toward a high front unrounded vowel. Phonetically, the two parts of this diphthong are quite distinct and it might seem tempting to interpret it as a sequence of two vowels /u-i/ rather than as the diphthong /wi/. Sequences of two full vowels are otherwise virtually nonexistent in Wancho, however (see below, “Limitations on Phonological Cooccurrence”), and this, together with the occurrence of /wi/ under a single tone, argues in favor of a diphthongal interpretation. **lwī**\textsuperscript{111} ‘many’.

/wa/. A diphthong that begins in the high back rounded position and then moves toward a low central unrounded vowel. As with /wi/, the two parts of this diphthong are quite distinct. **khwā**\textsuperscript{52} ‘boat’.

/wo/. A diphthong that begins with a bilabial approximant and moves toward a low back rounded vowel. It is much less tempting to interpret /wo/ as a sequence of two vowels than in the case of /wa/ or /wi/. The initial glide of /wo/ in fact is quite subtle, much less distinct from the following vowel than is the first part of /wa/ and /wi/. Nevertheless, /wo/ clearly contrasts with /o/ and with all other vowels and diphthongs. **fkwō**\textsuperscript{44} ‘dance’.

### 4.0. SYLLABLE-FINAL CONSONANTS

Only seven consonants are found at the end of syllables, the same as those in Phom. See Table 3.

<table>
<thead>
<tr>
<th>-p</th>
<th>-t</th>
<th>-k</th>
<th>-ʔ</th>
</tr>
</thead>
<tbody>
<tr>
<td>-m</td>
<td>-n</td>
<td>-ŋ</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Syllable-final consonants.

Final /-p -t -k/ are similar to initial /p- t- k-/ but the finals are usually unreleased and they end the syllable very abruptly. The glottal stop occurs only as syllable final, never initially. Final /-m -n -ŋ/ are pronounced very much as they are at the beginning of a syllable. Vowels are shortened in syllables with final nasals, and this means that sequences of VNV (vowel—nasal consonant—
vowel) must be distinguished according to the position of the syllable boundary. The first vowel of a V-NV sequence is pronounced longer than the first vowel of VN-V. Vowels before final /-p -t -k/ are even shorter than those before nasals; this means that VS-V sequences are clearly distinct from V-SV sequences. Vowels in syllables closed with /-ʔ/ are the shortest of all.

\[-p \quad kʰap^{52} \quad \text{‘tongs’} \quad -m \quad tsom^{11} \quad \text{‘tame’}\]
\[-t \quad dət^{44} \quad \text{‘fall’} \quad -n \quad mun^{52} \quad \text{‘body hair’}\]
\[-k \quad čak^{52} \quad \text{‘hand’} \quad -ŋ \quad nan^{44} \quad \text{‘you’ (sg.)}\]
\[-ʔ \quad miʔ^{44}moʔ^{44} \quad \text{‘short’ (of people)}\]

As in Phom, a wide range of consonant sequences can be found medially in a Wancho word, but all of these can be readily interpreted as sequences formed from the final consonant of one syllable and the initial of the next. We know of no limits on which final consonant and which initial consonant can occur side by side. Assimilation across syllable boundaries does complicate this picture somewhat, however (see below).

5.0. TONES

Tones are far and away the most difficult aspect of Wancho phonology. Not only does a listener who has not acquired the Wancho language as a birthright occasionally find it difficult to distinguish tones, even in monosyllables, but in longer words the tones interact with one another in rather complex ways. It is easiest to start the description of tones with monosyllables, where the contrasts are clearest.

5.1. Tones with monosyllables

Unstopped monosyllables (i.e., open syllables and syllables closed with /-m -n -ŋ/) can have one of three contrasting tones; monosyllables ending in /-p -t -k/ can take either of two tones; syllables ending in /-ʔ/ show no tonal contrasts at all. Although the tones of stopped and unstopped syllables are a bit different phonetically, it seems clear that the two tones of syllables that are stopped with /-p -t -k/ should be identified with the first two unstopped tones that are described just below. No phonetic reality is seriously violated, and some simplicity is achieved, if syllables ending in /-ʔ/ are regarded as having tone /44/. This means that the following six combinations of tones and final consonants are possible, where “S” stands for /-p -t -k/: unstopped^{44}, unstopped^{52}, unstopped^{11}, S^{44}, S^{52}, ?^{44}. 
/44/. High level tone. This tone is level, quite resonant, and fairly high pitched. To call this tone "quite resonant" means that it has something of a "sung" quality, at least when a syllable is pronounced in isolation. It can be pulled just a bit lower in pitch when it follows the low tone /11/, and it can be pulled slightly higher when it follows the falling tone /52/. This is by far the most common tone in the language, and can be regarded as the unmarked tone. As will be pointed out below, syllables that have tones /52/ or /11/ in isolation sometimes change to tone /44/ when they become part of a compound, rather as if they "lose" their more marked tone and have their tone "reduced" to /44/.

Syllables stopped with /p - t - k/ are considerably shorter than open syllables or syllables that end with /m - n - η/, and this can make stopped tones harder to discriminate, at least for a non-Wancho speaker. Perhaps this is why only two tones are found on stopped syllables, as opposed to the three of open and nasal syllables. On stopped syllables as well as on open and nasal syllables, /44/ is more level and a bit more resonant than /52/. Syllables closed with /l/ are so short that they hardly have time for any resonance, but neither do they have time to fall (as tone /52/ ordinarily does). Simplicity is achieved by grouping these syllables with tone /44/. ċon⁴⁴ ‘worm’; nok⁴⁴ ‘village’; sa⁴⁴ ‘eat’.

/52/. Falling tone. On open and nasal syllables this tone usually starts a bit higher than /44/, and can sometimes be perceived as higher. However, its pitch then falls decisively and it often ends lower than /44/. The fall that characterizes this tone gives its syllables a considerably less resonant quality than those with tone /44/ or /11/. In isolation /52/ sounds less "sung", more "spoken", than the other tones. On stopped as well as unstopped syllables /52/ may fall somewhat, and it is a bit less resonant than /44/; but the brevity of stopped syllables makes the difference in resonance between /44/ and /52/ considerably less salient than on unstopped syllables. This is the second most common tone in Wancho. kʰo⁵² ‘hair of head’; lom⁵² ‘road’; nak⁵² ‘black’; lwa⁵² ‘elephant’.

/11/. Low tone. Level, resonant and very low. This tone is decisively lower than either /44/ or /52/, but it is as level and resonant as /44/. We find no examples of stopped syllables where it is necessary to assign tone /11/, and even with open and nasal syllables /11/ is considerably less common than either of the other two tones. In spite of its relative rarity, Burling found it much easier to distinguish /11/ from the other two tones than to distinguish /44/ and /52/ from each other. kʰo¹¹ ‘spade’; man¹¹ ‘name’.

5.2. Tones with disyllabic words

The tonal patterns become more complex and considerably more difficult to establish in two-syllable words. The most important fact about the disyllabic tone sequences is that no more than one syllable can have either tone /52/ or tone
/11/. In other words, at least one syllable must have tone /44/, and many two-syllable words have /44/ on both syllables. This means that the tone sequences of two-syllable words are limited to /44-44, 44-52, 44-11, 52-44/, and /11-44/. Words never need to be assigned tone sequences /52-52, 11-11, 52-11/, or /11-52/. This limitation has an interesting and useful implication for a practical writing system. Tone /44/ can be indicated simply by the absence of any tone mark at all. A two-syllable word will then never need more than a single tone mark. Sometimes the tone mark will appear on the first syllable and sometimes on the second, but tone marks will never be needed for both. Many two-syllable words will need no explicit tone mark at all.

In addition to this limitation on the tones that can occur together, enough phonetic interaction takes place between the tones of disyllabic words to make the assignment of tones much less transparent than in monosyllables. Each of the five two-syllable tone sequences needs to be separately described.

/44-44/. High level tone followed by high level tone. Large numbers of disyllabic words have this tone sequence, the most common in our sample of disyllables. Words with this tone sequence are quite level and resonant throughout, but the second syllable may be pronounced slightly higher than the first.

\[
\begin{align*}
a^{44}lî^{44} & \quad \text{‘four’} & \quad \mathrm{nak}^{44}kya^{44} & \quad \text{‘stamp the foot’} \\
a^{44}zom^{44} & \quad \text{‘soak’} & \quad a^{44}hu?^{44} & \quad \text{‘close (a container)’} \\
\text{ha}^{44}tho^{44} & \quad \text{‘dig’} & \quad a^{44}nat^{44} & \quad \text{‘mix’} \\
z^{04}kya^{44} & \quad \text{‘wake up’} \\
\end{align*}
\]

/44-52/. High level tone followed by high falling tone. The jump in pitch between the first syllable and start of the second is marked here, and it can give the impression that the second syllable is higher. In fact, the second syllable falls sharply and ends lower than the first, but its lower resonance makes its pitch less salient than that of the first syllable. This tone sequence gives an impression similar to ordinary English disyllables that are stressed on the second syllable. This is, by a good margin, the second most common two-syllable tone sequence in our sample. A substantial majority of disyllabic words have either /44-44/ or /44-52/ as their tone sequence.

\[
\begin{align*}
a^{44}li^{52} & \quad \text{‘elder brother’} & \quad a^{44}nat^{52} & \quad \text{‘seven’} \\
a^{44}zom^{52} & \quad \text{‘three’} & \quad hîn^{44}zaŋ^{52} & \quad \text{‘grass’} \\
\text{ho}^{44}mâŋ^{52} & \quad \text{‘price’} & \quad a^{44}pōŋ^{52} & \quad \text{‘meet’} \\
\end{align*}
\]
/44-11/. High level tone followed by low level tone. Tone /11/ is the least common tone on monosyllables, and /44-11/ is very much less frequent than either /44-44/ or /44-52/. It is clearly distinctive, however, with the second syllable unambiguously lower than the first, a rather unusual pattern in Wancho. (Most tone sequences, even /44-44/, give the impression of some sort of rise on the second syllable.)

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>o44ti11</td>
<td>'chicken soup'</td>
</tr>
<tr>
<td>mon44ma11</td>
<td>'unhappy'</td>
</tr>
<tr>
<td>kom44le11</td>
<td>'whole, entire'</td>
</tr>
<tr>
<td>cu44ya11</td>
<td>'that'</td>
</tr>
<tr>
<td>a44pa11</td>
<td>'give me!'</td>
</tr>
</tbody>
</table>

/52-44/. High falling tone followed by high level tone. This is the most difficult of the two-syllable sequences to distinguish and describe. There appears to be a tendency for the contrast between /52-44/ and /44-44/ to be minimized, and in rapid speech the difference is perhaps entirely neutralized, with /52-44/ coming to sound like ordinary /44-44/. With careful articulation, however, /52-44/ and /44-44/ can be distinguished, and the fact that the first syllable is indeed tone /52/ is confirmed by the frequent derivation of these syllables from monosyllabic words under tone /52/. For example, when verbs are cited in isolation they often have the suffix /-kya44/. It is also possible to use verbs without /-kya44/, and these monosyllabic verb bases without /-kya44/ are easily divided into two groups, one with tone /44/, the other with tone /52/. (Verb bases with tone /11/ occur as well, but they are so clearly distinct from the others that they pose no problem.) When the /-kya44/ suffix is added, the verbs can still be sorted into the same two groups, /44-44/ and /52-44/, at least under careful articulation, but the phonetic difference is less clear than with monosyllables.

Two phonetic clues distinguish /52-44/ from /44-44/. First, when carefully articulated, the first syllable has a fall similar to tone /52/ monosyllables, although this is less salient in /52-44/ sequences. In addition, the second syllable of these words is often pushed slightly higher than is otherwise characteristic of tone /44/. It is as if the need to emphasize the rise from the end of the falling tone on the first syllable necessitates an especially high pitch for the second.

The boosting effect that an initial tone /52/ has on the pitch of the following syllable is especially evident when the second syllable is closed with a /-?/. Ordinarily, syllables ending in /?/ show no tone differences at all, but the second syllable of /a52hu44/ 'steal, move silently', for example, is distinctly higher than the second syllable of /a44hu?44/ 'close (a container)'. Indeed the pitch difference of the final syllables may be more salient than any difference between the initial syllables. The first syllables of words with the tone pattern of /a52hu?44/ often have tone /52/ when used as monosyllables. The first syllables
of words with the tone pattern of /a^44hu^44/ generally have tone /^44/ when used as monosyllables. Thus there can be no doubt that these should be interpreted as having /^32/ and /^44/, respectively, in disyllables as well. By distinguishing disyllables in this way, moreover, we avoid having to recognize tone differences in syllables ending in /-^3/`, something that is otherwise unnecessary. The different pitches found in syllables ending in /-^3/` are simply the result of the underlying tones in the preceding syllables. We are confident, therefore, that these words should be interpreted as having a /^52-^44/ tone sequence.

\[
\begin{align*}
m\text{og}^{52} & \text{ma}^{44} & \text{‘in the heart’} & a^{52} & \text{hu}^{44} & \text{‘steal, go silently’} \\
a^{52} & \text{nu}^{44} & \text{‘mother’} & a^{52} & \text{y}i^{44} & \text{‘blood’} \\
\text{nak}^{52} & \text{kya}^{44} & \text{‘black’} & a^{52} & \text{po}^\text{ŋ}^{44} & \text{‘wife’s brother’}
\end{align*}
\]

/11^-44/. Low tone followed by high level tone. This sequence has the most pronounced rise between syllables of any of the five two-syllable tone sequences. Both syllables are quite level and resonant but the second syllable is abruptly higher than the first, even though the low tone of the first syllable may pull the high tone of the second slightly lower than its more usual pitch. Since low tones are relatively rare, they tend to stand out rather sharply.

\[
\begin{align*}
t\text{ho}^{11} & \text{le}^{44} & \text{‘able’} & m\text{ay}^{11} & \text{k}i^{44} & \text{‘barking deer’} \\
\text{na}^{11} & \text{le}^{44} & \text{‘climb’} & \text{pom}^{11} & \text{sa}^{44} & \text{‘sleeping place for boys’} \\
\text{zo}^{11} & \text{kya}^{44} & \text{‘drill hole’}
\end{align*}
\]

Before considering the tone patterns of longer words, a comment is needed about the source of the tones of two-syllable words. Since many disyllables are compounds, it will have occurred to the reader that some sort of tone change may be needed when a compound is formed from two monosyllabic words, neither of which has tone /^44/. This is correct. We can give examples, but we have discovered no consistent or predictable patterns to the changes. It is probably somewhat more common for the first syllable to have its tone changed than the second, but changes do sometimes affect second syllables instead or as well. A syllable that has its tone changed in one compound may retain its underlying monosyllabic tone in another compound. A syllable, moreover, sometimes undergoes a tone change even when this would not be forced by the tone of the syllable to which it is joined. Some tones are “reduced” to /^44/ even when entering a compound with another syllable that has tone /^44/. There is also a certain amount of variation, so that some words have two alternate pronunciations, though this appears to be a rather random matter. We have not been able to find generalizations that would let us predict what tones alternate
under what conditions. As the examples suggest, vowels can also vary, and once again we have discovered no pattern in this variation. The following examples are typical:

\[
\begin{align*}
\text{tsom}^{44}\text{ti}^{44} & \quad \text{‘milk’} & < & \quad \text{tsom}^{44} & \quad \text{‘breast’}; \\
\text{ti}^{44}\text{lo}^{52}, \text{ta}^{44}\text{lo}^{52} & \quad \text{‘sea’} & < & \quad \text{ti}^{52} & \quad \text{‘water’} \\
\text{na}^{44}\text{ti}^{52} & \quad \text{‘honey’} & < & \quad \text{na}^{44} & \quad \text{‘bee’}; \\
\text{ti}^{52} & \quad \text{‘water’} \\
\text{moŋ}^{44}\text{tsik}^{52} & \quad \text{‘angry’} & < & \quad \text{moŋ}^{52} & \quad \text{‘heart’} \\
\text{ce}^{44}\text{ku}^{?44} & \quad \text{‘knee’} & < & \quad \text{cya}^{44} & \quad \text{‘leg’} \\
\text{ci}^{44}\text{p’a}^{44} & \quad \text{‘sole of foot’} & < & \quad \text{cya}^{44} & \quad \text{‘leg’} \\
\text{ma}^{44}\text{thom}^{44} & \quad \text{preserved bamboo shoots’} & < & \quad \text{me}^{44} & \quad \text{‘newly picked bamboo shoots’} \\
\text{k’anŋ}^{44}\text{poŋ}^{44} & \quad \text{‘forehead’} & < & \quad \text{k’anŋ}^{52} & \quad \text{‘head’}
\end{align*}
\]

It should be pointed out that in spite of a fair number of tone changes, far more syllables maintain their underlying tones in compounds than change them. It appears that something over half of all monosyllables have tone /'44/. On a purely statistical basis, therefore, it might be expected that more than three quarters of disyllabic compounds would include at least one syllable that is derived from an underlying tone /'44/. In such a case the other syllable could retain its underlying tone even if it does not originate as /'44/, and in many cases, this is what happens. A good many disyllables, moreover, are not compounds at all, at least as used in the synchronic language, and in this case there can be no question of identifying tone changes. In other disyllables only one of the syllables has a clear derivation from a monosyllable, and if the other syllable has /'44/ there is no need for any change. In the word list included with this article we give the tones that are actually used in each syllable of each word. As a result, some syllables that are certainly etymologically related appear with varied tones in different words.

We are now ready to turn to three-syllable words. It is natural to expect that these will have an even wider range of tone patterns than disyllables. As might also be expected, we have fewer examples of three-syllable words than of shorter words. The small number of trisyllables and the increase in possible tone sequences combine to give us considerably less confidence in our understanding of the tone patterns of three-syllable words than those of shorter
words. Our assignment of tones to three-syllable words must, therefore, be regarded as no more than provisional. Nevertheless, some tentative generalizations appear to be reasonable.

It seems probable that, as with two-syllable words, only one syllable of a three-syllable word can have a tone other than /44/. A considerable fraction of our trisyllables, in fact, appear to have the tone sequence /44-44-44/, the result of considerable leveling of the tones that would appear on the same syllables when used in shorter words. We feel relatively confident about the tones of three-syllable words that we have marked as /44-44-44/. From their beginning to their end these are very level in pitch.

We also feel reasonably confident about a number of three-syllable words that we mark as having tones /44-52-44/ or /44-44-52/. The first of these sequences results in words in which the second syllable starts markedly higher than the first but then falls sharply. The third syllable is then particularly high and level, as would be expected when tone /44/ follows tone /52/. /44-44-52/ is characterized by a distinct fall on the third syllable and it gives an impression (to an English speaker) that is reminiscent of a three-syllable English word, such as understand, that is stressed on its final syllable.

We have less confidence in the tones of about twenty other trisyllabic words that do not fit easily into any of these three patterns. Some of these twenty may have one low syllable. We give our best judgment in the word lists, but in order to indicate our lack of confidence in the tones we place an asterisk after these words.

We have even less confidence in the tones of the ten four-syllable words in our list. All of these are compounds, some of them compounds of compounds. It is relatively easy to determine the tones of the constituents of these compounds, and to some extent their underlying tones are carried into the larger compounds. This may bring a wider variety of tone patterns to long words than to short words, but there is certainly some leveling toward tone /44/. We give our best guess about the tones of these long words, but we also mark them with a warning asterisk.

Certain tone alternations reflect Wancho syntax. As in Phom, causative/noncausative (or transitive/intransitive) pairs are sometimes distinguished by tone.

\[
\begin{align*}
a^{44}cyen^{52} & \quad \text{‘shake’ (v.i.)} \\
a^{44}p\text{\textdagger}y^{52} & \quad \text{‘come’} \\
a^{44}cyen^{44} & \quad \text{‘bounce (a baby)’} \\
a^{44}p\text{\textdagger}y^{44} & \quad \text{‘bring’}
\end{align*}
\]
In one case the nominative and accusative forms of a pronoun are distinguished by tone, but other pronouns do not have alternate forms of this kind:

\[
\text{kworm}^{44} \quad 'we' \quad \text{kworm}^{11} \quad 'us'
\]

We have had no chance to examine changes of this sort systematically, but simply offer these as examples of processes that we expect to be widespread in the language.

6.0. ASSIMILATION ACROSS SYLLABLE BOUNDARIES

In addition to the impact of adjacent syllables on tones, some consonantal assimilation takes place across syllable boundaries. This happens most often when a syllable that ends in a vowel picks up a consonant from the initial of the following syllable. A final /-p/, /-t/ or /-k/ may be added to one syllable in anticipation of the initial consonant that follows. A syllable-final nasal may also be added to anticipate an initial nasal in the next syllable. In most such cases the vowel of the first syllable (the one to which a consonant is added) is /ʌ/, though this vowel may itself be derived from another vowel, as shown in the examples. This "reduction" to /ʌ/ suggests that /ʌ/ has a somewhat schwa-like quality, but its role is much less extensive than that of the English schwa. Wancho /ʌ/ occurs in the same range of circumstances as other vowels. It can take the same tones, and it occurs with the same degree of stress. It does not typically serve as the vowel of the kind of phonologically reduced "prefixal" syllables that are found in some Tibeto-Burman languages. Nevertheless, /ʌ/ can be very short, and its affinity for assimilating final consonants does set it apart from the other vowels.

Assimilation to a following syllable-initial consonant is idiosyncratic rather than automatic. Words can be found in Wancho that never assimilate:

\[
\text{yu}^{44}\text{nu}^{44} \quad 'rice liquor' \quad \text{bi}^{44}\text{k}^{b}\text{a}^{44} \quad 'mouth'
\]

In other examples there are alternative pronunciations, the assimilated forms being more likely to occur in fast speech than under careful articulation. The fact that assimilation takes place is shown clearly by the shortening of the vowel in the first syllable. In several cases there is also a change of the vowel to /ʌ/:

\[
\begin{align*}
\text{ci}^{44}\text{p}^{b}\text{a}^{44} & \quad 'sole of the foot' \quad > \quad \text{c}_{\text{A}}\text{p}^{44}\text{p}^{b}\text{a}^{44} \\
\text{ci}^{44}\text{dwa}^{44} & \quad 'heel' \quad > \quad \text{c}_{\text{A}}\text{t}^{44}\text{dwa}^{44} \\
\text{s}_{\text{A}}^{44}\text{k}^{b}\text{a}^{44} & \quad 'gibbon' \quad > \quad \text{s}_{\text{A}}\text{k}^{44}\text{k}^{b}\text{a}^{44}
\end{align*}
\]
she\textsuperscript{44}ko\textsuperscript{52} ‘female’ > shak\textsuperscript{44}ko\textsuperscript{52}
λ\textsuperscript{44}ka\textsuperscript{52} ‘male’ > lak\textsuperscript{44}ka\textsuperscript{52}
\Sa\textsuperscript{44}nu\textsuperscript{44} ‘wife’ > san\textsuperscript{44}nu\textsuperscript{44}

Still other words have homorganic consonants in adjacent syllables which look as though they could have resulted from assimilation. Since these words never vary, they provide no evidence, by themselves, for assimilation.

ok\textsuperscript{44}kun\textsuperscript{44} ‘vulture’            hom\textsuperscript{44}mo\textsuperscript{52} ‘inside’

Nevertheless, /o\textsuperscript{44}/ appears as the initial syllable of many names for birds (see §7 below), so /ok\textsuperscript{44}kun\textsuperscript{44}/ presumably developed originally by assimilation that has now become fixed.

As will be pointed out below, syllables that lack any initial consonant, and thus start with a vowel, are not common in Wancho, but they do occur and it can happen that a noninitial syllable starts with a vowel. In such cases the syllable is likely to begin with a very slight glottal stop, thus isolating it decisively from any final consonant of the preceding syllable and making it quite impossible to confuse with a syllable that starts with a consonant. This glottal stop is much less strong than the more common syllable-final glottal stop, and cannot be confused with it.

7.0. “PREFIXES”

While Wancho does not have phonologically reduced “minor” syllables of the sort that characterize some Tibeto-Burman languages, a number of syllables do occur so frequently as the initial syllables of longer words that they act rather like prefixes. Some of these have obvious meanings and might be better regarded as the initial constituents of compounds:

• /o\textsuperscript{44}/ is used as the first syllable of a large number of names of bird species, as well as for the parts and products of birds: o\textsuperscript{44}la\textsuperscript{44} ‘hawk’; o\textsuperscript{44}ka\textsuperscript{44} ‘crow’; o\textsuperscript{44}pwa\textsuperscript{52} ‘peacock’; o\textsuperscript{44}za\textsuperscript{44} ‘wing’; o\textsuperscript{44}may\textsuperscript{44} ‘nest’; o\textsuperscript{44}ti\textsuperscript{44} ‘egg’.

• A number of words concerning the sky or the weather begin with the syllable /za\textsuperscript{44}/: za\textsuperscript{44}han\textsuperscript{52} ‘sun’; za\textsuperscript{44}vat\textsuperscript{44} ‘rain’; za\textsuperscript{44}vin\textsuperscript{44} ‘wind’; za\textsuperscript{44}k\textsuperscript{44}ho\textsuperscript{52} ‘sky’.

• The majority of kinship terms, at least in their most common citation form, begin with /a\textsuperscript{52}/: a\textsuperscript{52}pu\textsuperscript{44} ‘grandfather’; a\textsuperscript{52}nu\textsuperscript{44} ‘mother’; a\textsuperscript{52}pe\textsuperscript{44} ‘younger sister’.
In addition to these semantically transparent syllables, Wancho has two initial syllables that have very high frequency, but no consistent meaning. Hints of meanings can be extracted from a list of examples but not all examples fit easily into any clear set of meanings:

*/a⁴⁴/ is found as the first syllable of numerals (e.g. a⁴⁴nyi⁴⁴ ‘two’), of many temporal words (e.g. a⁴⁴tha⁴⁴ ‘now’), of some words with adjectival meanings (e.g. a⁴⁴ne⁵² ‘blunt, dull’), and of a considerable number of verbs (e.g. a⁴⁴nu⁴⁴ ‘dislike, hate’).

*/ho⁴⁴/ is used with a large number of words that have core adjectival meanings (ho⁴⁴kʰik⁵² ‘red’, ho⁴⁴kʰon⁴⁴ ‘cold’, ho⁴⁴zaŋ⁴⁴ ‘old’), but it is also used in many words whose meanings defy simple classification: ho⁴⁴ti⁵² ‘juice’, ho⁴⁴kʰal⁵² ‘pocket’, ho⁴⁴mar⁵² ‘price’. /ho⁴⁴/ is used much less often in verbs than is /a⁴⁴/. In a few cases /ho⁴⁴/ and /a⁴⁴/ can both be used with the same second syllable with no obvious change of meaning.

### 8.0. LIMITATIONS ON PHONOLOGICAL COOCCURRENCE

Like Phom, Wancho has some striking but apparently rather random limitations on which vowels can occur with which final consonants. In other words, there are far fewer possible rhymes (sequences of a vowel plus a final consonant) than would be predicted from simply multiplying the number of vowels and diphthongs in the language by the number of syllable-final consonants. Table 4 shows the number of syllables in our sample of Wancho words that exhibit each rhyme. We have done our best to cut out duplicate examples in which homophonous and synonymous syllables occur in more than one word, i.e. we have tried to count each morpheme just once, rather than every time it appears, although in some cases it is difficult to know how many morphemes are involved. Where a single morpheme has phonological variants, however, all the forms are included in the tabulation. Of course the language must have a number of additional rhymes besides those that have shown up in our limited sample, but the uneven distribution of the rhymes would be unlikely to disappear even in a much larger sample of words.

It is tempting to try to reduce the number of vowels by recognizing that some of them are in complementary distribution, or almost so. /wo/, for example, is in complementary distribution with both /wa/ and /wi/. These are so different phonetically, however, that we would hesitate to group any of them together as the same phoneme. /a/ and /e/ seem close to being in complementary distribution, but both occur too often in open syllables for there to be any easy way to assign them to a single phoneme. Until a good deal more
is known about the details of the language, it seems best to cling to phonetic reality and to regard all of these vowels as different.

Wancho exhibits one other odd distributional limitation. It has surprisingly few syllables that lack an initial consonant. Moreover, syllables without an initial consonant almost always lack a final consonant as well. Indeed, we find only three syllables in our entire word list that have final consonants but no initial consonants: won\(^{52}\) ‘winnowing basket’ (where the \(w\) is an onglide of a diphthong, not an initial consonant); An\(^{44}\)to?le\(^{44}\) ‘and’; and ok\(^{44}\)kun\(^{44}\) ‘vulture’. (This last word may look like an error, since the names of many birds have /o\(^{44}\)/ as their first syllable, but the final /-k/ of the first syllable of ‘vulture’ cannot be doubted. The form ok\(^{44}\)kun\(^{44}\) probably resulted from assimilation, but whatever its origins, ok\(^{44}\)kun\(^{44}\) now contrasts consistently and clearly with o\(^{44}\)kun\(^{44}\) ‘bird coop’.) Most syllables that lack an initial consonant have either /a/ or /o/ as their vowel. Only a handful of such syllables are found with other vowels. See Table 4:

<table>
<thead>
<tr>
<th>Vowel</th>
<th>Final Consonant</th>
<th>-p</th>
<th>-t</th>
<th>-k</th>
<th>-?</th>
<th>-m</th>
<th>-n</th>
<th>-η</th>
<th>-#</th>
<th>Total</th>
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<td>1</td>
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<td></td>
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<td>6</td>
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<td></td>
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<td>3</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 4. Rhymes.
In marked contrast to the restrictions on the cooccurrence of vowels and final consonants, we find no limitations on the cooccurrence of initial consonants and vowels. As far as we are able to tell, any initial consonant can occur with any vowel or diphthong. To be sure some conceivable combinations of initial consonants and vowels do not occur in our sample, but the large number of possible combinations (21 different initial consonants times 15 vowels and diphthongs yields 315 possibilities) means that we should not expect to find all of them in a word list as brief as ours. Nor do we find limitations on the types of syllables that can succeed each other in the same word, except for the restrictions on tone sequences that we have already described. Even the assimilation that occurs across syllable boundaries does not put limits on the kinds of syllables that can occur side by side, since assimilation is not an automatic process.

The remainder of this paper consists of a list of core vocabulary items from Wancho. An asterisk indicates that the assignment of tones for this word should be regarded as tentative.
**WORD LIST**

**NATURE**

**Sky and Weather**

- blow (wind) \( \text{zang}^{52}\text{bin}^{44}\text{le}^{44}\text{*} \)
- cloud \( \text{zang}^{44}\text{phwom}^{44} \)
- dew \( \text{nyen}^{44}\text{ti}^{52} \)
- earthquake \( \text{br}^{44}\text{ti}^{44}\text{si}^{44} \)
- fog / mist \( \text{zang}^{44}\text{phwom}^{52}\text{a}^{44}\text{tyen}^{44}\text{*} \)
- ice / snow / hail \( \text{jun}^{52} \)
- lightning \( \text{zang}^{52}\text{tsang}^{44}\text{sep}^{44}\text{*} \)
- moon \( \text{leyet}^{44}\text{nu}^{44} \)
- rain (n.) \( \text{zang}^{44}\text{bat}^{44} \)
- rain (vb.) \( \text{zang}^{44}\text{bat}^{44}\text{le}^{44} \)
- shade / shadow \( \text{zang}^{44}\text{khu}^{44} \)
- sky \( \text{din}^{44}, \text{zang}^{44}\text{kho}^{52} \)
- star \( \text{leyet}^{44}\text{si}^{44} \)
- sun \( \text{zang}^{44}\text{han}^{52} \)
- thunder \( \text{zang}^{44}\text{dun}^{44} \)
- wind (air) \( \text{zang}^{44}\text{bin}^{44} \)

**Land and Water**

- dust \( \text{la}^{44}\text{bu}^{52}, \text{la}^{44}\text{bu}^{44} \)
- earth \( \text{ha}^{44}\text{ban}^{52} \)
- lake \( \text{thom}^{44}\text{nu}^{44} \)
- mountain \( \text{ha}^{44}\text{hwa}^{52} \)
- mud \( \text{ha}^{44}\text{tham}^{52} \)
- river \( \text{jwa}^{44} \)
- sand \( \text{sak}^{52} \)
- sea / ocean \( \text{ta}^{44}\text{lo}^{52}, \text{ti}^{44}\text{lo}^{52} \)
- stone \( \text{lo}^{44} \)
- valley \( \text{ha}^{44}\text{may}^{52} \)

**ANIMALS**

**Mammals (Domestic)**

- animal / meat \( \text{may}^{44} \)
- cat \( \text{mya}^{52} \)
- cow / ox \( \text{may}^{44}\text{hu}^{44}, \text{may}^{44}\text{hu}^{52} \)
- dog \( \text{hi}^{44} \)
- goat \( \text{zwon}^{52} \)
- horse \( \text{man}^{44} \)
- mithun \( \text{nya}^{44} \)
- pig \( \text{b}^{44}\text{ak}^{52} \)
- water buffalo \( \text{lw}^{44}\text{si}^{52} \)

**Mammals (Wild)**

- bat (animal) \( \text{pak}^{44}\text{pe}^{44} \)
- bat (large sp.) \( \text{a}^{44}\text{pak}^{52} \)
- bear \( \text{c}^{44}\text{ep}^{52} \)
- deer \( \text{ma}^{44}\text{y}^{44}\text{ki}^{44} \)
- deer (long-haired) \( \text{c}^{44}\text{ok}^{52} \)
- elephant \( \text{lw}^{44}\text{ak}^{52} \)
- gibbon \( \text{sa}^{44}\text{ka}^{44} \)
- jackal \( \text{hi}^{44}\text{san}^{44} \)
- macaque \( \text{ma}^{44}\text{y}^{44}\text{pak}^{44} \)
- mongoose \( \text{zu}^{44}\text{zan}^{52} \)
- monkey (long-tailed langur) \( \text{ma}^{44}\text{y}^{44}\text{zo}^{52} \)
- mountain goat \( \text{ma}^{44}\text{y}^{44}\text{za}^{44} \)
- otter \( \text{za}^{44}\text{zom}^{52} \)
- rabbit \( \text{zu}^{44}\text{hon}^{44}\text{na}^{44}\text{lo}^{44}\text{*} \)
- rat \( \text{zu}^{44}\text{hon}^{44} \) (\text{zu}^{44}\text{hon}^{44} \) ‘large rat’; \text{na}^{44} \) ‘ear’; \text{lo}^{44} \) ‘long’)
- squirrel \( \text{zu}^{44}\text{zut}^{44} \)
- tiger \( \text{ca}^{44} \)

**Birds**

- bird / chick \( \text{o}^{44}\text{sa}^{44} \) (\text{sa}^{44} \) ‘suffix for small things’)
- bird / fowl \( \text{o}^{44}\text{ka}^{44} \)
- crow \( \text{o}^{44}\text{su}^{44} \)
- dove \( \text{o}^{44}\text{pak}^{44} \)
- duck \( \text{han}^{44}\text{o}^{44} \)
hawk / kite  o⁴⁴la⁴⁴
jungle fowl  o⁴⁴hʌŋ⁴⁴
myna bird  o⁴⁴cwa⁵²
owl  o⁴⁴kʰuʔ⁴⁴
peacock  o⁴⁴pwa⁵²
stork  o²⁵lo⁴⁴bəʔ⁴⁴hom⁴⁴*
vulture  ok⁴⁴kun⁴⁴
woodpecker  zo₄⁴tan⁵²

curling  bət⁴⁴tiʔ⁴⁴
centipede³  na⁴⁴kay⁵²
dragonfly  diʔ⁴⁴tu⁴⁴
(dìʔ⁴⁴ ‘dung’)
dung beetle  th⁴⁴sa⁴⁴
fly  hwot⁴⁴
grasshopper  kuk⁵²
insect / bug  kuk⁵²sa⁴⁴bəy⁵²sa⁴⁴
leech (land)  bət⁴⁴
leech (water)  bəy⁴⁴
louse  kʰan⁴⁴tsə⁴⁴
mosquito  mun⁴⁴tswa⁴⁴
spider  mak⁵²
spider web  mak⁵²zi⁴⁴
sting  tsik⁵²
tick (insect)  pʰa⁴⁴
worm  čon⁴⁴

Reptiles, Fish, and Miscellaneous

eel  nyaʔ⁴⁴pu⁴⁴ (nyaʔ⁴⁴ ‘fish’; pu⁴⁴ ‘snake’)
fish  nyaʔ⁴⁴
frog  luk⁵²
house lizard  man⁴⁴pʰa⁴⁴lok⁴⁴,
man⁴⁴pu⁴⁴lwa⁴⁴sa⁴⁴*
small; not
lizard (big or
house lizard)
shrimp  huk⁴⁴za⁴⁴, huk⁴⁴za⁵²
(snake)
(snail)
snail  kʰop⁵²twa⁴⁴
turtle shell
(turtle shell
(large)
(large)
(snail)
(turtle / tortoise

Insects and Worms

ant  sa⁴⁴kʰj⁴⁴
ant (red)  tsik⁴⁴bwa⁴⁴ (tsik⁴⁴
(‘sting’)
ant (white)  sa²⁴⁴pʰo⁴⁴
bedbug  lya⁴⁴sa⁵², lya⁴⁴sy⁴⁴
turtle shell
(turtle shell
(large)
(large)
(turtle / tortoise

Animal Parts, Products, Calls

bark (dog)  hi⁴⁴twom⁴⁴
egg  o⁴⁴ti⁴⁴ (o⁴⁴ ‘bird’;
ti⁵² ‘water / juice’)
eggshell  o⁴⁴ti⁴⁴kʰwop⁴⁴
feather  o⁴⁴kʰwi⁴⁴
growl (dog)  tse⁴¹
honey  naʔ⁴⁴ti⁵²
horn  məy⁴⁴zon⁵² (zon⁴⁴
‘point / corner’)
nest  o⁴⁴məy⁴⁴kwa⁴⁴,
o⁴⁴kwa⁴⁴ (o⁴⁴ ‘bird’;
məy⁴⁴kwa⁴⁴ ‘tail’)
tail  məy⁴⁴kwa⁴⁴ (cf.
kwa⁴⁴dwo⁴⁴
‘buttocks’)

³ This is perhaps the same species as
Lahu ci-nu-be ‘shiny blue-green
millipede that rolls into a snail-like ball
when touched’ (J. Matisoff [1988],
Dictionary of Lahu, University of
<table>
<thead>
<tr>
<th>trunk</th>
<th>lwak⁴⁴sa⁴⁴ɓay⁴⁴*</th>
</tr>
</thead>
<tbody>
<tr>
<td>(elephant)</td>
<td>lwak⁴⁴ɓa⁴⁴</td>
</tr>
<tr>
<td>tusk (elephant)</td>
<td>lwak⁴⁴zoŋ⁴⁴ (lwak⁴⁴ 'elephant'; ɓa⁴⁴ 'tooth'; zoŋ⁴⁴ 'horn /point /corner')</td>
</tr>
<tr>
<td>wing</td>
<td>o⁴⁴zaŋ⁴⁴</td>
</tr>
</tbody>
</table>

**PLANTS, FOODS**

**Trees, Forest, Fruit**

| forest / jungle  | phaw⁴⁴  |
| group of trees  | ho⁴⁴ham⁵²  |
| tree  | pən⁵²  |
| tree (large)  | pən⁵²nu⁴⁴  |
| tree (small) | ko⁴⁴ɓay⁵²  |
| areca nut  | uət⁵²  |
| bamboo  | nə⁴⁴  |
| banana  | ɓa⁴⁴  |
| jackfruit  | pən⁴⁴çoŋ⁵²  |
| lichee  | sa⁴⁴zyak⁴⁴  |
| lime  | tsa⁴⁴nom⁴⁴  |
| mango  | ma⁴⁴mum⁴⁴  |
| orange  | çaw⁴¹pha⁴⁴, sut⁴⁴ti⁴⁴  |
| papaya  | təw⁴⁴  |
| pomelo  | nom⁵²pe⁴⁴  |

**Grain**

| maize  | so⁴⁴zam⁴⁴  |
| maize (popcorn)  | ɓam⁴⁴pa⁴⁴  |
| millet  | hi⁴⁴kəə⁵²  |
| rice (cooked)  | sa⁴⁴  |
| rice (husked)  | boŋ⁴⁴  |
| rice (sticky) | zam⁴⁴lo⁴⁴  |
| rice / paddy (unhusked) | tsa⁴⁴jəŋ⁴⁴  |
| rice liquor  | ʒu⁴⁴nu⁴⁴  |
| rice plant | təs⁴⁴  |

**Tubers**

| arum  | twa⁴⁴  |
| ginger | tsya⁵²  |
| manioc / tapioca  | pən⁴⁴kəən⁵²  |
| sweet potato | kəən⁴⁴ti⁴⁴  |
| tuber (general term) | kəən⁵²  |

**Vegetables and Plants**

| bamboo shoots (fresh) | me⁴⁴  |
| bamboo shoots (preserved) | ma⁴⁴tham⁵², ma⁴⁴tham⁴⁴  |
| beans (long green) | phə⁴⁴lo⁴⁴ (lo⁴⁴ 'long')  |
| beans (small green) | phə⁴⁴sa⁴⁴ (sa⁴⁴ 'small')  |
| cane  | ze⁴⁴  |
| cauliflower  | phə⁴¹kəə⁴⁴bi⁴⁴  |
| chili pepper | hiŋ⁴⁴bu⁵²  |
| cotton  | pay⁴⁴  |
| garlic  | te⁴⁴bo⁴⁴  |
| grass  | hiŋ⁴⁴zaŋ⁵²  |
| mushroom  | pwa⁴⁴  |
| mustard  | swə⁴⁴li⁴⁴  |
| onion  | o⁴⁴te⁴⁴  |
| peas  | phə⁴⁴  |
| sugarcane  | ɓə⁴⁴də⁵²  |
| vine (general) | zu⁴⁴  |
| watermelon  | may⁴⁴kwə⁴⁴  |

**Foods**

| chicken soup | o⁴⁴ti⁵² (o⁴⁴ 'bird', ti⁵² 'water')  |
| curry | swə⁴⁴  |
| dried fish | nə⁴⁴zan⁴⁴  |
| meat / animal  | mə⁴⁴  |
| milk | tsə⁴⁴ti⁴⁴ (tsə⁴⁴ 'breast'; ti⁵² 'water')  |
oil \(\text{man}^{44}\eta^{52}\)  
salt \(\text{hum}^{44}\)

**Plant Parts**

bark (of tree) \(\text{pan}^{44}\text{kbwon}^{52}\)  
branch \(\text{pan}^{44}\text{k} \text{an}^{44}\)  
flower \(\text{may}^{44}\text{p} \text{wa}^{44}\)  
fruit \(\text{pan}^{44}\text{zyak}^{44}\)  
joint (bamboo) \(\eta \text{la}^{44}\text{ku}^{44}\) (cf. neck)  
juice \(\text{ho}^{44}\text{ti}^{52}\)  
leaf \(\text{pan}^{44}\text{chak}^{52}\)  
root \(\text{pan}^{44}\text{tsinj}^{52}\)  
seed \(\text{pan}^{44}\text{tsanj}^{44}\)  
stick \(\text{kay}^{44}\text{twa}^{44}\)  
thorn \(\text{hu}^{44}\)  
trunk / stem / stalk \(\text{po}^{44}\text{nu}^{44}\)

**BODY PARTS**

**Head**

cheek \(\text{na}^{44}\text{mya}^{52}\)  
chin \(\text{ka}^{44}\text{za}^{44}\)  
ear \(\text{na}^{44}\)  
eye \(\text{mik}^{52}\)  
face \(\text{th} \text{a}^{52}\)  
forehead \(\text{k} \text{an}^{44}\text{p} \text{on}^{44}\)  
gums \(\text{ba}^{44}\text{nyen}^{44}\)  
head \(\text{ka}^{44}\text{an}^{52}\)  
lip \(\text{tu}^{44}\text{pan}^{44}\)  
mouth \(\beta^{44}\text{k} \text{ba}^{44}\)  
nose \(\text{na}^{11}\text{kwa}^{44}\)  
tartar / dirt on teeth \(\beta^{44}\text{di}^{44}\)  
tongue \(\text{le}^{52}\)  
tooth \(\beta^{44}\)

**Torso**

back \(\text{tok}^{52}\)  
belly \(\beta^{52}\)  
body \(\text{tom}^{44}\text{po}^{44}\), \(\text{tsan}^{44}\text{tsa}^{52}\)  

**Arms, Hands**

arm \(\text{swak}^{52}\)  
armpit \(\text{ph} \text{ak}^{44}\text{ph} \text{an}^{52}\)  
elbow \(\text{čak}^{52}\text{z} \text{onj}^{44}\) (\(\text{z} \text{onj}^{44}\) ‘point / corner’)  
finger \(\text{čak}^{52}\text{k} \text{hi}^{44}\)  
hand \(\text{čak}^{52}\)  
nail / finger \(\text{čak}^{52}\text{kin}^{44}\)  
palm of hand \(\text{čak}^{52}\text{ph} \text{a}^{44}\)  
shoulder \(\text{swak}^{52}\text{kan}^{44}\), \(\text{swak}^{52}\text{to}^{44}\)

**Legs, Feet**

foot \(\text{sat}^{44}\)  
heel \(\text{či}^{44}\text{dwa}^{44}\), \(\text{cit}^{44}\text{dwa}^{44}\)

---

knee  če44ku44
leg  čya44
sole  či44pba44, či44pa44
thigh  bæ44ho52
toe  če44kbi44, či44kbi44

Hair
bald  kba44hwa44
beard  ka44may44mun52
braid  kba44an44
eyebrow  mik44zyen44
hair (body)  mun44
hair (head)  kba44
mustache  tun44mun52
         (tun44 ‘lip’)
underarm hair  phak44phan44mun52
         (cf. phak44phan44
           ‘armpit’)

Liquids and Miscellaneous
blood  a523i44
excrement / dung  di744, phaw44
fart  di744puk44
pus  a44cut44
skin  kba44
snot / nose dirt  bwi44
spit / saliva  twa44
sweat  zan44muk44,
        zan44kham44ti44 (zan44
        ‘hot’; ti44 ‘water’)
tears  mik44ph44
       (mik44 ‘eye’)
urine / urinate  hip44
vomit  phat44

Internal Organs, Bones
bladder  zu44
brain  kba44zi44
fat / grease  ho44zaw44
gall  zu11kba44
heart  mon52, mon52tom44
(intom52 ‘classifier for round things’)
intestines  če44
liver  kba44
flesh / meat /
animal placenta  zem44
stomach  bok52
womb / uterus  naw44pom44nwi44
            (naw44 ‘baby’;
pom44nwi44 ‘seat’)
backbone  tok52zi44ta44
bone  za44
jawbone  ka44
marrow  zia44zaw44
rib  sam44lap44za44
skull  kba44za44

PEOPLE
Pronouns
I / my  ku44
you (sg.)  nan44
he  či44
she  je44
we  kwom44
us (1 pl. obj.)  kwom51
you (pl.)  hau44zhom52
they  hwom52

Age, Gender, Occupational Categories
adolescent boy  naw44san52
adolescent girl  naw44cy44
baby  naw44
boy  kw44ka52naw44sa44
child (young person)  naw44som44, naw44sa44
female  je44ko52
girl fẹkọ52naẉ44sạ44
doughnut in-law ạ52p̣ẹ744naṃ44čạ52*
king ūṇ44ḥoṃ52
son kụ44sạ44ḷ44čạ52*
man (male) mị?44ṣaṇ52
son-in-law / nephew ạ44poṇ44naṃ44čạ52*
old man ạ44zụ44pạ44, zụ44pạ44
grandchild kụ44sụ44
(ạ44zụ44 ‘aged’)
cooking pot tiḳ52
old woman ạ44zụ44nụ44, zụ44nụ44
mortar (for rice) toṃ51
(ạ44zụ44 ‘aged’)
pestle maṇ52
person khạ52naḳ52
Basketry, Cloth, Clothing
widow zoṃ44nụ44
basket tsəŋ̣44
widower zoṃ44pạ44
basket (to carry birds) ọ44tsəwəṇ44
woman mị?44čạ44
basket woṇ52
KINSHIP TERMS
(grandfather) họ52pụ44, ạ52pụ44
(winnowing) paḳ52
grandmother ạ52pị44, họ52pị44
carrying strap paḳ52
father ạ52pạ44
cloth ṇị54
mother ạ52nụ44, họ52nụ44
mat doṃ52
mother’s ạ44họ44čəŋ̣44*,
plastic string ṇạ52zị44
brother ạ44họ44lị44*
fishing line ʒạḳ44zị44
(elder) ạ44tə̣ỵ52
mat doṃ52
elder brother ạ44tə̣ỵ44lị52
plastic string ṇạ52zị44
(not eldest) ạ44tə̣ỵ44lị52
pocket họ44khạ52
elder sister ạ52nạ44
rope / vine zụ44
husband sạ44pạ44
string / thread zị44, luŋ̣52
husband kạ44kọ44pạ44* (more
wire ʒạṇ44zị44
for sạ44pạ44)
Tools and Weapons
wife sẹ44nụ44, sạ44nụ44,
arrow saṇ52
wife’s brother kạ52kọ44nụ44*
axe bạ11
younger ạ52poŋ̣44
bow (with arrow) hap̣44nụ44
younger brother ạ44lị52
Buildings and their Parts
youngest ạ44lị52suḳ44*
child (kin term) kụ44sạ44
bird coop ọ44kuṇ44
daughter kụ44sạ44jẹ44kọ44*
door phə̣44loṃ44
grandad son kụ44sạ44ḷ44čạ52*
fireplace  pʰoŋ⁴⁴kʰa⁴⁴,
            ha⁴⁴top⁴⁴
granary    puŋ⁵²
house      hom⁵²
roof       hom⁴⁴tok⁵², loʔ⁴⁴tok⁴⁴
            (tok⁵² ‘back of
            body’; loʔ⁴⁴
            ‘thatch’)
sleeping  pom¹¹sa⁴⁴
    place for boys
stairs /  diʔ⁴⁴twa⁴⁴
ladder     loʔ⁴⁴
thatch (n.)
window    tʰan⁴⁴mik⁵²
young men’s
    dormitory  pa⁴⁴

Village, Countryside, Fields
fence      tsa⁴⁶bat⁴⁴
field      haʔ⁴⁴tok⁴⁴, zaŋ⁴⁴
            (haʔ⁴⁴ ‘earth / soil’;
            tok⁵² ‘back’)
road / path lom⁵²
village    nok⁴⁴, tin⁴⁴

Miscellaneous Artifacts
boat       kʰwa⁵²
daolarge   čan⁴⁴
knife      drum
flute      tʰwa⁴⁴put⁴⁴
iron       ʒan⁵²
knife
needle    maɾ⁵²kwii⁴⁴,
            maɾ⁴⁴kwii⁵²
paper      nam⁵²
silver     kʰop⁵²
spade      kʰo¹¹
tongs      kʰap⁵²

NOUNS, ABSTRACT AND MISCHELaneous
ashes  βaŋ⁴⁴diʔ⁴⁴, la⁴⁴bu⁴⁴
        (βaŋ⁴⁴ ‘fire’; diʔ⁴⁴
        ‘dung’; la⁴⁴bu⁴⁴ ‘dust’)
corpse  maŋ⁵²
court (of law)  kʰwa¹¹
ever spirit  baw⁵²
fire  βaŋ⁴⁴
firewood  ha⁴⁴
footprint    ča⁴⁴man⁴⁴
god      zaŋ⁵²
hole      (downward into ground)
hole (horizontal)  o⁴⁴kʰa⁵²
hole (round, as in cloth)  βo⁴⁴kya⁴⁴
injury    mak⁴⁴laʔ⁴⁴
language  kaʔ⁴⁴
life  tsan⁴⁴
medicine  hŋ⁴⁴hay⁵²
name (n.)  maŋ¹¹
place  nwi¹¹
point / corner  zoŋ⁴⁴
poison     zik⁴⁴hŋ⁴⁴
price  ho⁴⁴maŋ⁵²
puddle     ti⁴⁴tŋ⁵²
smoke      βaŋ⁴⁴kʰut⁴⁴
            (βaŋ⁴⁴ ‘fire’)
sore on body
soul     maŋ⁴⁴
spring (water)  tʰa⁴⁴mik⁵²
strength  zoŋ⁵²
water     ti⁵²
waterfall  ḥa⁴⁴
well      ṭa⁴⁴kʰa⁴⁴
### TIME EXPRESSIONS

<table>
<thead>
<tr>
<th>English</th>
<th>Wancho</th>
</tr>
</thead>
<tbody>
<tr>
<td>after</td>
<td>pʰaŋ⁴⁴ma⁴⁴</td>
</tr>
<tr>
<td>again</td>
<td>čaŋ⁴⁴le⁴⁴cu⁴⁴</td>
</tr>
<tr>
<td>before</td>
<td>tho⁴⁴ma⁴⁴</td>
</tr>
<tr>
<td>day (period of time)</td>
<td>nyi⁴⁴</td>
</tr>
<tr>
<td>daytime</td>
<td>a⁴⁴nyi⁴⁴nin⁴⁴</td>
</tr>
<tr>
<td>evening</td>
<td>han⁴⁴soŋ⁴⁴</td>
</tr>
<tr>
<td>month</td>
<td>lyet⁴⁴kwa⁴⁴</td>
</tr>
<tr>
<td>morning</td>
<td>a⁴⁴nop⁴⁴ninj⁴⁴</td>
</tr>
<tr>
<td>night / dark</td>
<td>zaŋ⁴⁴nak⁴⁴</td>
</tr>
<tr>
<td></td>
<td>(nak⁴⁴ ‘black’)</td>
</tr>
<tr>
<td>now</td>
<td>a⁴⁴tha⁴⁴</td>
</tr>
<tr>
<td>suddenly</td>
<td>a⁴⁴le⁴⁴le⁴⁴</td>
</tr>
<tr>
<td>then</td>
<td>he⁴⁴pʰaŋ¹¹ma⁴⁴*</td>
</tr>
<tr>
<td>today</td>
<td>a⁵²nyi⁷⁴⁴</td>
</tr>
<tr>
<td>tomorrow</td>
<td>ḳay⁵²nyi⁷⁴⁴</td>
</tr>
<tr>
<td>year</td>
<td>zaŋ⁴⁴pwa⁴⁴</td>
</tr>
<tr>
<td>yesterday</td>
<td>ma⁴⁴nyi⁷⁴⁴</td>
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### NUMERALS

<table>
<thead>
<tr>
<th>English</th>
<th>Wancho</th>
</tr>
</thead>
<tbody>
<tr>
<td>one</td>
<td>a⁴⁴ta⁵²</td>
</tr>
<tr>
<td>two</td>
<td>a⁴⁴nyi⁴⁴</td>
</tr>
<tr>
<td>three</td>
<td>a⁴⁴zom⁵²</td>
</tr>
<tr>
<td>four</td>
<td>a⁴⁴li⁴⁴</td>
</tr>
<tr>
<td>five</td>
<td>a⁴⁴ga⁴⁴</td>
</tr>
<tr>
<td>six</td>
<td>a⁴⁴zok⁵²</td>
</tr>
<tr>
<td>seven</td>
<td>a⁴⁴naŋ⁵²</td>
</tr>
<tr>
<td>eight</td>
<td>a⁴⁴cyet⁵²</td>
</tr>
<tr>
<td>nine</td>
<td>a⁴⁴ku⁵²</td>
</tr>
<tr>
<td>ten</td>
<td>bân⁵²</td>
</tr>
<tr>
<td>twenty</td>
<td>tsə⁵²</td>
</tr>
<tr>
<td>one hundred</td>
<td>ho⁴⁴ta⁴⁴ (a⁴⁴ta⁵² ‘one’)</td>
</tr>
</tbody>
</table>

### ADJECTIVES

#### Color

<table>
<thead>
<tr>
<th>English</th>
<th>Wancho</th>
</tr>
</thead>
<tbody>
<tr>
<td>black</td>
<td>nak⁵²</td>
</tr>
<tr>
<td>blue</td>
<td>hok⁴⁴khwi⁴⁴</td>
</tr>
<tr>
<td>green</td>
<td>ho⁴⁴hinj⁵²</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>English</th>
<th>Wancho</th>
</tr>
</thead>
<tbody>
<tr>
<td>light (not dark)</td>
<td>zaŋ⁴⁴naŋ⁴⁴</td>
</tr>
<tr>
<td>red</td>
<td>ho⁴⁴khik⁵²</td>
</tr>
<tr>
<td>white</td>
<td>tse⁴⁴</td>
</tr>
<tr>
<td>yellow</td>
<td>ho⁴⁴naŋ⁴⁴</td>
</tr>
</tbody>
</table>

#### Taste

<table>
<thead>
<tr>
<th>English</th>
<th>Wancho</th>
</tr>
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<tbody>
<tr>
<td>bitter</td>
<td>ho⁴⁴kʰu⁴⁴</td>
</tr>
<tr>
<td>chili-hot</td>
<td>ho⁴⁴buk⁵², ho⁴⁴kʰam⁴⁴</td>
</tr>
<tr>
<td>sour</td>
<td>ho⁴⁴sik⁵²</td>
</tr>
<tr>
<td>sweet</td>
<td>ho⁴⁴tik⁵²</td>
</tr>
</tbody>
</table>

#### Size

<table>
<thead>
<tr>
<th>English</th>
<th>Wancho</th>
</tr>
</thead>
<tbody>
<tr>
<td>big</td>
<td>čon⁵²</td>
</tr>
<tr>
<td>deep</td>
<td>zu⁴⁴</td>
</tr>
<tr>
<td>far</td>
<td>tsay⁴⁴lo⁴⁴</td>
</tr>
<tr>
<td>long</td>
<td>lo⁴⁴</td>
</tr>
<tr>
<td>long (road)</td>
<td>lom⁴⁴lo⁴⁴ (lom⁵² ‘road’)</td>
</tr>
<tr>
<td>long (time)</td>
<td>zu⁴⁴lo⁴⁴</td>
</tr>
<tr>
<td>long (time, road)</td>
<td>kay¹¹pon⁴⁴ma⁴⁴*</td>
</tr>
<tr>
<td>narrow</td>
<td>syep⁵²</td>
</tr>
<tr>
<td>near</td>
<td>nwi¹¹so²⁴⁴</td>
</tr>
<tr>
<td>shallow</td>
<td>pak⁴⁴zwi⁵²</td>
</tr>
<tr>
<td>short</td>
<td>mo⁴⁴</td>
</tr>
<tr>
<td>short (people)</td>
<td>mi⁴⁴mo⁴⁴</td>
</tr>
<tr>
<td>small</td>
<td>hi⁴⁴</td>
</tr>
<tr>
<td>tall (people)</td>
<td>mi⁴⁴lo⁴⁴</td>
</tr>
<tr>
<td>thick</td>
<td>tət⁴⁴</td>
</tr>
<tr>
<td>thin (not thick)</td>
<td>pak⁴⁴</td>
</tr>
<tr>
<td>wide</td>
<td>khaw⁴⁴</td>
</tr>
</tbody>
</table>

#### Miscellaneous Adjectives

<table>
<thead>
<tr>
<th>English</th>
<th>Wancho</th>
</tr>
</thead>
<tbody>
<tr>
<td>afraid / frightened</td>
<td>za¹¹</td>
</tr>
<tr>
<td>alive / living</td>
<td>ho⁴⁴zan⁴⁴, o⁴⁴zan⁴⁴</td>
</tr>
<tr>
<td>all / every</td>
<td>paŋ⁴⁴nu⁴⁴</td>
</tr>
<tr>
<td>angry</td>
<td>mon⁴⁴tsik⁵²</td>
</tr>
<tr>
<td>ashamed</td>
<td>a⁴⁴zak⁴⁴</td>
</tr>
<tr>
<td>bad</td>
<td>ho⁴⁴ma⁴⁴</td>
</tr>
</tbody>
</table>
bent / zig-zag  kwom⁴⁴kwom⁴⁴ke⁷⁴⁴, kon⁴⁴kon⁴⁴ke⁷⁴⁴  
blunt / dull  a⁴⁴ne⁵²  
clean  tsaw⁴⁴tha⁴⁴  
close by  nam⁵²  
cold  ho⁴⁴kon⁴⁴  
crazy / mad  ŋa⁴⁴, ŋat⁴⁴, ŋa⁴⁴le⁴⁴  
different  ma⁴⁴li⁵²li⁴⁴*  
dirty  zyak⁴⁴zyak⁴⁴ti⁵²  
easy  ho⁴⁴čwon⁵²  
empty  ho⁴⁴hwa⁴⁴  
fast / quick  a⁴⁴kʰaŋ⁵²le⁴⁴, mom⁴⁴le⁴⁴  
fat (people)  nut⁵²  
few  mwa⁴⁴le⁴⁴  
flexible  nun⁴⁴nay⁴⁴  
full  ho⁴⁴man⁴⁴  
good  ma⁴⁴, ho⁴⁴ma⁴⁴⁵²  
happy / joyful  mon⁴⁴ma⁴⁴⁴⁴  (mon⁵² ‘heart’)  
heavy  li⁴⁴  
hot / warm  ho⁴⁴kʰam⁴⁴  
hungry  βok⁵²no⁴⁴  
lazy  za⁴⁴kak⁴⁴  
left (side)  mon⁴⁴či⁴⁴  
light (weight)  ča⁴⁴  
many  hwa⁴⁴nu⁴⁴ma¹¹¹¹, lwi¹¹  
new  ho⁴⁴zan⁵²  
old (of people)  a⁴⁴zu⁴⁴  
old (of things)  ho⁴⁴zan⁴⁴  
other  ma⁴⁴ma⁴⁴  
poor  mi⁴⁴ji⁴⁴⁴⁴, za⁵²sa⁴⁴  
pregnant  nāw⁵²bok⁵²  
rich / wealthy  hak⁵²pa⁴⁴, lwa⁴⁴pa⁴⁴  
right (side)  tsa⁴⁴či⁴⁴  
right / correct  čaŋ⁴⁴le⁴⁴  
ripe  ho⁴⁴sum⁴⁴  
rough  pʰwön⁴⁴zan⁴⁴  
round  ho⁴⁴tom⁵²  
same  ta⁴⁴lay⁴⁴lay⁴⁴  
sharp  a⁵²na⁷⁴⁴  
sick / ill  kak⁴⁴  
slippery  nān⁴⁴kya⁴⁴  
slow  za⁴⁴se⁵²le⁴⁴⁴⁴*  
smart  zan⁴⁴paŋ⁴⁴  
soft  nay⁴⁴  
some  zay⁴⁴zay⁴⁴  
sticky  a⁴⁴tsam⁵²  
straight  tan⁴⁴tho⁴⁴  
strong / firm / hard  tsak⁴⁴  
stupid  ho⁴⁴nā, a⁴⁴nja⁴⁴  
tired  na⁴⁴  
unhappy  mon⁴⁴na¹¹  
(unhappy)  (mon⁵² ‘heart’)  
unripe / raw  a⁴⁴zan⁵²  
very  ho⁴⁵ta⁴⁴⁴⁴  
weak  nay⁴⁴jo⁵²  
whole / entire  kom⁴⁴le¹¹  
young (of people)  khɔ⁴⁴se⁵²  

VERBS
able  tho¹¹¹¹le⁴⁴  
arrive / reach  a⁴⁴loŋ⁴⁴, n̆wi⁴⁴  
ask question  a⁴⁴tay⁴⁴  
be born  naw⁵²pu⁴⁴⁴⁴  
beckon / wave  ʒep⁴⁴  
bend  kwom¹¹¹¹  
bite  tsa⁴⁴⁴⁴  
blow (with mouth)  mi⁴⁴ma⁴⁴  
boil  lum⁵²  
bounce (baby)  a⁴⁴cʰyeŋ⁴⁴  
(v.t.)  
break (as glass)  a⁵²ji⁴⁴⁴⁴  
(v.i. / v.t.)  
break (string)  a⁴⁴pʰaŋ⁴⁴  
breathe  zak⁵²daŋ⁴⁴  
bring  a⁴⁴paŋ⁴⁴
<table>
<thead>
<tr>
<th>English</th>
<th>Wanche phonology</th>
</tr>
</thead>
<tbody>
<tr>
<td>burn (v.i.)</td>
<td>βan⁴⁴jun⁴⁴ (βan⁴⁴ 'fire')</td>
</tr>
<tr>
<td>burn (v.t./v.i.)</td>
<td>zok⁵²</td>
</tr>
<tr>
<td>buy</td>
<td>jāk⁵²</td>
</tr>
<tr>
<td>call/cry out</td>
<td>nyak⁴⁴</td>
</tr>
<tr>
<td>carry (from tump line or in a vehicle)</td>
<td>hān⁴⁴</td>
</tr>
<tr>
<td>carry (in arms or on shoulder)</td>
<td>pay⁵²</td>
</tr>
<tr>
<td>carry (on head)</td>
<td>a⁴⁴khɔ⁵²</td>
</tr>
<tr>
<td>chew</td>
<td>jaw⁴⁴</td>
</tr>
<tr>
<td>clean/wipe</td>
<td>phwot⁵²</td>
</tr>
<tr>
<td>climb</td>
<td>ná¹¹le⁴⁴</td>
</tr>
<tr>
<td>climb/ascend</td>
<td>ná⁴⁴</td>
</tr>
<tr>
<td>close (container)</td>
<td>a⁴⁴hu⁸⁴⁴</td>
</tr>
<tr>
<td>come</td>
<td>nwi⁴⁴</td>
</tr>
<tr>
<td>cook</td>
<td>phon⁴⁴mok⁴⁴</td>
</tr>
<tr>
<td>cough</td>
<td>a⁴⁴hay⁵²</td>
</tr>
<tr>
<td>count</td>
<td>a⁴⁴kyak⁵²</td>
</tr>
<tr>
<td>cover</td>
<td>čwop⁴⁴</td>
</tr>
<tr>
<td>crawl</td>
<td>a⁴⁴khwom⁴⁴</td>
</tr>
<tr>
<td>cut down a tree</td>
<td>dak⁵²</td>
</tr>
<tr>
<td>cut with axe/chop</td>
<td>pop⁵²</td>
</tr>
<tr>
<td>cut with knife</td>
<td>zat⁵²</td>
</tr>
<tr>
<td>dance</td>
<td>jwōn⁴⁴</td>
</tr>
<tr>
<td>debate</td>
<td>a⁴⁴la⁵²</td>
</tr>
<tr>
<td>descend</td>
<td>jù⁴⁴</td>
</tr>
<tr>
<td>die</td>
<td>zi¹¹</td>
</tr>
<tr>
<td>dig</td>
<td>ha?⁴⁴bo⁴⁴, ha?⁴⁴twot⁴⁴ (ha? 'earth, soil')</td>
</tr>
<tr>
<td>dislike/hate</td>
<td>a⁴⁴nu⁴⁴</td>
</tr>
<tr>
<td>dive/sink</td>
<td>sin⁷⁴</td>
</tr>
<tr>
<td>do</td>
<td>mwot⁴⁴mok⁴⁴</td>
</tr>
<tr>
<td>dream</td>
<td>βan⁴⁴man⁴⁴</td>
</tr>
<tr>
<td>drill</td>
<td>zop¹¹</td>
</tr>
<tr>
<td>drill hole</td>
<td>zo¹¹</td>
</tr>
<tr>
<td>drink</td>
<td>liŋ⁵²</td>
</tr>
<tr>
<td>dry (of cloth) (v.i.)</td>
<td>ho⁴⁴zwa⁴⁴</td>
</tr>
<tr>
<td>dry (of soil, wood) (v.i.)</td>
<td>ho⁴⁴zan⁴⁴</td>
</tr>
<tr>
<td>dry by fire (v.t.)</td>
<td>han⁴⁴le⁴⁴a⁴⁴zwa⁴⁴*</td>
</tr>
<tr>
<td>dry in sun (v.t.)</td>
<td>lom⁵²le⁴⁴a⁴⁴zwa⁴⁴*</td>
</tr>
<tr>
<td>eat</td>
<td>sa⁴⁴</td>
</tr>
<tr>
<td>embrace</td>
<td>a⁴⁴kan⁴⁴</td>
</tr>
<tr>
<td>emerge/exit/go out</td>
<td>lay⁴⁴</td>
</tr>
<tr>
<td>enter</td>
<td>nɔp⁴⁴</td>
</tr>
<tr>
<td>erect, become extinguish</td>
<td>a⁴⁴la⁴⁴</td>
</tr>
<tr>
<td>fall</td>
<td>βan⁴⁴ma⁸⁴⁴mɔ⁴⁴ (βan⁴⁴ 'fire')</td>
</tr>
<tr>
<td>fight</td>
<td>a⁴⁴he⁵²</td>
</tr>
<tr>
<td>fight with stick</td>
<td>a⁴⁴cyet⁴⁴</td>
</tr>
<tr>
<td>float</td>
<td>phwa⁴⁴</td>
</tr>
<tr>
<td>flow (water)</td>
<td>ti⁴⁴jen⁴⁴</td>
</tr>
<tr>
<td>fly</td>
<td>os⁴⁴pik⁵², pi⁵²</td>
</tr>
<tr>
<td>forget</td>
<td>a⁴⁴lak⁵²</td>
</tr>
<tr>
<td>give</td>
<td>ko⁷⁴⁴, zun⁴⁴</td>
</tr>
<tr>
<td>give birth</td>
<td>naw⁴⁴nān⁵²</td>
</tr>
<tr>
<td>give me! (as when boys fight over sthg.)</td>
<td>a⁴⁴pa¹¹</td>
</tr>
<tr>
<td>go</td>
<td>kam⁴⁴, paw⁵²</td>
</tr>
<tr>
<td>grind</td>
<td>zut⁵²</td>
</tr>
<tr>
<td>hate</td>
<td>tsak⁵²</td>
</tr>
<tr>
<td>hear</td>
<td>a⁴⁴tat⁴⁴</td>
</tr>
<tr>
<td>hide (v.i.)</td>
<td>a⁴⁴zwon⁴⁴</td>
</tr>
<tr>
<td>hide (v.t.)</td>
<td>kʰom⁴⁴, pyen⁵²</td>
</tr>
<tr>
<td>hit</td>
<td>čyet⁴⁴, hoŋ⁴⁴, mə⁴⁴</td>
</tr>
<tr>
<td>imitate/learn</td>
<td>mi⁸⁴⁴hwon⁴⁴lɔ⁷⁴⁴*</td>
</tr>
<tr>
<td>English</td>
<td>Mandarin</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>insert (handle</td>
<td>tak⁴⁴</td>
</tr>
<tr>
<td>in tool, wood</td>
<td></td>
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<tr>
<td>into fire)</td>
<td></td>
</tr>
<tr>
<td>itch</td>
<td>bu⁵²</td>
</tr>
<tr>
<td>keep</td>
<td>thōm⁵²</td>
</tr>
<tr>
<td>kick</td>
<td>ho⁴⁴</td>
</tr>
<tr>
<td>kill</td>
<td>lan⁴⁴</td>
</tr>
<tr>
<td>know</td>
<td>a⁴⁴baŋ⁵²</td>
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<tr>
<td>laugh</td>
<td>nyi⁴⁴</td>
</tr>
<tr>
<td>lean</td>
<td>a⁴⁴na⁵²</td>
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<tr>
<td>let go / set free</td>
<td>dan⁴⁴</td>
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<tr>
<td>/ loosen</td>
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<tr>
<td>lick</td>
<td>čay⁴⁴</td>
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<tr>
<td>lie down</td>
<td>fwi⁵²</td>
</tr>
<tr>
<td>listen</td>
<td>a⁵²pà⁴⁴</td>
</tr>
<tr>
<td>load (v.t.)</td>
<td>hàn⁵²</td>
</tr>
<tr>
<td>look at</td>
<td>hu⁴⁴</td>
</tr>
<tr>
<td>meet</td>
<td>a⁴⁴pōŋ⁵²</td>
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<tr>
<td>melt / dissolve</td>
<td>ču⁵²</td>
</tr>
<tr>
<td>mix</td>
<td>a⁴⁴nàt⁴⁴</td>
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<tr>
<td>move roughly</td>
<td>lwak⁴⁴</td>
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<tr>
<td>moving</td>
<td>ho⁴⁴ham⁴⁴</td>
</tr>
<tr>
<td>name (v.t.)</td>
<td>ma⁴⁴ma⁴⁴</td>
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<tr>
<td>need</td>
<td>la⁴⁴lì⁴⁴</td>
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<tr>
<td>not spoil</td>
<td>ma₁¹ma⁴⁴</td>
</tr>
<tr>
<td>open</td>
<td>dap⁴⁴</td>
</tr>
<tr>
<td>play</td>
<td>a⁴⁴baŋ⁵², a⁴⁴zap⁵²</td>
</tr>
<tr>
<td>point</td>
<td>hi¹¹</td>
</tr>
<tr>
<td>pound (rice)</td>
<td>thù⁴⁴</td>
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<tr>
<td>pull</td>
<td>be⁴⁴</td>
</tr>
<tr>
<td>put / place</td>
<td>dan⁴⁴, ton⁴⁴</td>
</tr>
<tr>
<td>remember</td>
<td>mon⁵²ma⁴⁴kop⁵²</td>
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<tr>
<td>(mon⁵²ma⁴⁴ ‘in the</td>
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<tr>
<td>heart’; kop⁵² ‘keep’)</td>
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<tr>
<td>return</td>
<td>čat⁴⁴</td>
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<tr>
<td>rot</td>
<td>fān⁴⁴</td>
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<tr>
<td>rub</td>
<td>nun⁴⁴</td>
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<tr>
<td>rule over (as a</td>
<td>a⁴⁴kho⁵²</td>
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<tr>
<td>king)</td>
<td></td>
</tr>
<tr>
<td>run / flee</td>
<td>zik⁵²</td>
</tr>
<tr>
<td>say / speak / tell</td>
<td>zan⁴⁴baŋ⁴⁴</td>
</tr>
<tr>
<td>scratch to hurt</td>
<td>jìk⁵²</td>
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<tr>
<td>scratch to</td>
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<tr>
<td>soothe</td>
<td>sik⁴⁴</td>
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<tr>
<td>scream</td>
<td>a⁴⁴baŋ⁴⁴</td>
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<tr>
<td>search</td>
<td>lom⁴⁴</td>
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<tr>
<td>see</td>
<td>ēn⁵²</td>
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<tr>
<td>sell</td>
<td>hāŋ⁴⁴</td>
</tr>
<tr>
<td>sew / stitch</td>
<td>sēŋ⁵²</td>
</tr>
<tr>
<td>shade (v.t.)</td>
<td>hōm¹¹</td>
</tr>
<tr>
<td>shade / block</td>
<td>a⁴⁴ho⁵²</td>
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<tr>
<td>light</td>
<td></td>
</tr>
<tr>
<td>shake</td>
<td>si¹¹</td>
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<tr>
<td>shake (v.i.)</td>
<td>a⁴⁴čyen⁵²</td>
</tr>
<tr>
<td>shoot</td>
<td>hāp⁴⁴</td>
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<tr>
<td>show</td>
<td>a⁴⁴ho⁴⁴</td>
</tr>
<tr>
<td>sing</td>
<td>ēnəw⁴⁴</td>
</tr>
<tr>
<td>sit</td>
<td>thūŋ⁵²</td>
</tr>
<tr>
<td>sleep</td>
<td>sip⁴⁴</td>
</tr>
<tr>
<td>smell (notice</td>
<td>a⁴⁴tum⁴⁴</td>
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<tr>
<td>smell)</td>
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</tr>
<tr>
<td>smell bad</td>
<td>nom⁴⁴</td>
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<tr>
<td>smell good</td>
<td>zǐŋ¹¹</td>
</tr>
<tr>
<td>sneeze</td>
<td>a⁴⁴kēi⁵²</td>
</tr>
<tr>
<td>snore</td>
<td>na₁¹kwa⁴⁴ēn⁴⁴</td>
</tr>
<tr>
<td>soak (as rice)</td>
<td>a⁴⁴zom⁴⁴</td>
</tr>
<tr>
<td>split</td>
<td>a⁴⁴pì⁴⁴</td>
</tr>
<tr>
<td>squeeze</td>
<td>pʰyet⁵²</td>
</tr>
<tr>
<td>stab / pierce</td>
<td>top⁵²</td>
</tr>
<tr>
<td>stamp the foot</td>
<td>nak⁴⁴</td>
</tr>
<tr>
<td>stand</td>
<td>a⁴⁴ṣoŋ⁴⁴</td>
</tr>
<tr>
<td>steal silently</td>
<td>a⁵²hu⁷⁴⁴</td>
</tr>
<tr>
<td>(theft)</td>
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</tr>
<tr>
<td>stretch legs</td>
<td>ka⁵²</td>
</tr>
<tr>
<td>apart</td>
<td></td>
</tr>
<tr>
<td>suck</td>
<td>sip⁵²</td>
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<tr>
<td>swallow</td>
<td>zōk⁴⁴</td>
</tr>
<tr>
<td>swell up</td>
<td>pʰỳŋ⁵²</td>
</tr>
<tr>
<td>swim</td>
<td>a⁴⁴kʰャŋ⁵²</td>
</tr>
<tr>
<td>take</td>
<td>kop⁴⁴</td>
</tr>
</tbody>
</table>
take

tame (v.t.)

think

throw away

tickle

tie

tie hair in knot

tremble
	turn (v.t. / v.i.)

untie

wake up /

awaken

walk

want

wash (cloth, hands)

weave

weep / cry

wet

yawn

FUNCTION WORDS / AFFIXES

Conjunctions

and

because

if

not

Locations

here

that

there

this

Question Words

how much?

how?

what?

when?

where at?

where to?

who?

Noun Suffixes, Postpositions

from

in front of

inside

with

(instrumental)

locative suffix

suffix for large things

suffix for small things

to

(postposition)

under

with / together with

classifier:

animals and round things (e.g. eyes, balls)

classifier: leaves

classifier: men / males

classifier: thin things, paper

classifier: women / females

classifier: long things (e.g. fish, string)

tom

classifier:

tom

animals and round things (e.g. eyes, balls)

classifier: leaves

classifier: men / males

classifier: thin things, paper

classifier: women / females

classifier: long things (e.g. fish, string)