

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.¹ 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.

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.

p ^h	t ^h			k ^h
p	t	ts	č	k
		s	ʃ	
b	d	z	ʒ	(g)
m	n			ŋ
β	l			h

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/. /z/ 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 /y/. /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.

p ^h	p^ha⁴⁴	'tick' (insect)	d	da⁵²	'untie'
t ^h	t^haw⁴⁴	'papaya'	z	zaŋ¹¹	'field'
k ^h	k^haŋ⁵²	'head'	ʒ	ʒan⁵²	'iron'
p	puŋ⁵²	'granary'	g	a⁴⁴ga⁴⁴	'five'
t	ti⁵²	'water'	m	mak⁵²	'spider'
ts	tsa⁵²	'twenty'	n	nok⁴⁴	'village'
č	čoŋ⁴⁴	'worm'	ŋ	ŋo⁴⁴	'banana'
k	kya⁴⁴	'white'	β	βan⁴⁴	'fire'
s	saʔ⁴⁴	'cooked rice'	l	le⁵²	'tongue'
f	fa⁴⁴	'rot'	h	ham¹¹	'walk'
b	ban⁵²	'ten'			

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 [n̄] 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.

i		u	ay	ɰy	aw
	ʌ				
e		o	yi	ye	ya
	a				
			wi	wa	wo

Table 2. Vowels and diphthongs.

² We do not recognize a Wancho phoneme /n̄/. 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. **hi**⁴⁴ 'dog'.

/ʌ/. Mid central unrounded. This vowel is not unlike 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 /ʌ/ 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. **maŋ**¹¹ '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. **bu**⁵² 'itch'.

/e/. Mid front unrounded. This vowel is considerably less common than the other five simple vowels. **le**⁵² 'tongue'.

/a/. Low central unrounded. This is just slightly to the front of most pronunciations of the English "a" in *father*. **ha**⁴⁴ 'firewood'. Wangsu has a nasal /ã/ in the word **a**⁵²**pã**⁴⁴ '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.

/o/. 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 /ʌ/. /ʌ/ and /o/ 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 /o/. Wangsu's strong intuition is that it should be grouped with /o/ rather than /ʌ/, so that is the way we transcribe it. Except when occurring before /m/ or /p/, /o/ 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*. **ho**⁴⁴ 'kick'; **a**⁴⁴**zom**⁵² '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. **pay**⁴⁴ 'cotton'.

/ʌy/. 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 /ʌy/. **maɣ**⁴⁴ '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**⁵² ‘evil spirit’.

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

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

/ya/. A diphthong that begins with a palatal approximant and moves toward a low central unrounded vowel. **mya**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. **lwi**¹¹ ‘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. **k^hwa**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. **fwon**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.

-p	-t	-k	-ʔ
-m	-n	-ŋ	

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	k^hap⁵²	‘tongs’	-m	tsom¹¹	‘tame’
-t	dʌt⁴⁴	‘fall’	-n	mun⁵²	‘body hair’
-k	čak⁵²	‘hand’	-ŋ	naŋ⁴⁴	‘you’ (sg.)
-ʔ	mi^{ʔ44}mo^{ʔ44}	‘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/: unstopped⁴⁴, unstopped⁵², unstopped¹¹, S⁴⁴, S⁵², ʔ⁴⁴.

^{/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 -ŋ/, 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 /ʔ/ 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/}. **čɔŋ**⁴⁴ ‘worm’; **nok**⁴⁴ ‘village’; **saʔ**⁴⁴ ‘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. **kʰo**⁵² ‘hair of head’; **lom**⁵² ‘road’; **nak**⁵² ‘black’; **lwak**⁵² ‘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. **kʰo**¹¹ ‘spade’; **man**¹¹ ‘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.

a⁴⁴li⁴⁴	‘four’	nak⁴⁴kya⁴⁴	‘stamp the foot’
a⁴⁴zom⁴⁴	‘soak’	a⁴⁴hu?⁴⁴	‘close (a container)’
ha?⁴⁴t^{ho}⁴⁴	‘dig’	a⁴⁴nat⁴⁴	‘mix’
zo⁴⁴kya⁴⁴	‘wake up’		

/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.

a⁴⁴li⁵²	‘elder brother’	a⁴⁴nat⁵²	‘seven’
a⁴⁴zom⁵²	‘three’	hiŋ⁴⁴zaŋ⁵²	‘grass’
ho⁴⁴man⁵²	‘price’	a⁴⁴poŋ⁵²	‘meet’

/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.)

o⁴⁴ti¹¹	‘chicken soup’	č^u44ya¹¹	‘that’
moŋ⁴⁴ma¹¹	‘unhappy’	a⁴⁴pa¹¹	‘give me!’
ko^m44le¹¹	‘whole, entire’		

/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 /-ʔ/. Ordinarily, syllables ending in /ʔ/ show no tone differences at all, but the second syllable of /a⁵²hu^{ʔ44}/ ‘steal, move silently’, for example, is distinctly higher than the second syllable of /a⁴⁴hu^{ʔ44}/ ‘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^{ʔ44}/ often have tone /52/ when used as monosyllables. The first syllables

of words with the tone pattern of /a⁴⁴hu⁴⁴/ generally have tone /⁴⁴/ when used as monosyllables. Thus there can be no doubt that these should be interpreted as having /⁵²/ 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 /-ʔ/, something that is otherwise unnecessary. The different pitches found in syllables ending in /-ʔ/ 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.

moŋ⁵²ma⁴⁴	‘in the heart’	a⁵²hu⁴⁴ʔ⁴⁴	‘steal, go silently’
a⁵²nu⁴⁴	‘mother’	a⁵²yi⁴⁴	‘blood’
nak⁵²kyā⁴⁴	‘black’	a⁵²poŋ⁴⁴	‘wife’s brother’

/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.

t^ho¹¹le⁴⁴	‘able’	ma^y11k^hi⁴⁴	‘barking deer’
ŋa¹¹le⁴⁴	‘climb’	po^m11sa⁴⁴	‘sleeping place for boys’
zo¹¹kyā⁴⁴	‘drill hole’		

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:

tsom⁴⁴ti⁴⁴	'milk'	<	tsom⁴⁴	'breast';
			ti⁵²	'water'
ti⁴⁴lo⁵², t⁴⁴lo⁵²	'sea'	<	ti⁵²	'water'
na[?]ti⁵²	'honey'	<	na[?]	'bee';
			ti⁵²	'water'
moŋ⁴⁴tsik⁵²	'angry'	<	moŋ⁵²	'heart'
ce⁴⁴ku[?]	'knee'	<	cya⁴⁴	'leg'
ci⁴⁴p^ha⁴⁴	'sole of foot'	<	cya⁴⁴	'leg'
m⁴⁴thom⁴⁴	'preserved	<	me⁴⁴	'newly picked
	bamboo			bamboo
	shoots'			shoots'
k^haŋ⁴⁴poŋ⁴⁴	'forehead'	<	k^haŋ⁵²	'head'

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.

a⁴⁴cyen⁵²	'shake' (v.i.)	a⁴⁴cyen⁴⁴	'bounce (a baby)'
a⁴⁴pay⁵²	'come'	a⁴⁴pay⁴⁴	'bring'

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:

kwom⁴⁴ ‘we’ **kwom¹¹** ‘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:

yu⁴⁴nu⁴⁴ ‘rice liquor’ **Bi⁴⁴k^ha⁴⁴** ‘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/:

ci⁴⁴p^ha⁴⁴	‘sole of the foot’	>	cʌp⁴⁴p^ha⁴⁴
ci⁴⁴dwa⁴⁴	‘heel’	>	cʌt⁴⁴dwa⁴⁴
sʌ⁴⁴k^ha⁴⁴	‘gibbon’	>	sʌk⁴⁴k^ha⁴⁴

she⁴⁴ko⁵²	‘female’	>	shΛk⁴⁴ko⁵²
lΛ⁴⁴ka⁵²	‘male’	>	lΛk⁴⁴ka⁵²
sΛ⁴⁴nu⁴⁴	‘wife’	>	sΛn⁴⁴nu⁴⁴

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.

ok⁴⁴kun⁴⁴	‘vulture’	hom⁴⁴moŋ⁵²	‘inside’
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Nevertheless, /o⁴⁴/ appears as the initial syllable of many names for birds (see §7 below), so /ok⁴⁴kun⁴⁴/ 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:

•/o⁴⁴/ 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: **o⁴⁴la⁴⁴** ‘hawk’; **o⁴⁴k^ha⁴⁴** ‘crow’; **o⁴⁴pwa⁵²** ‘peacock’; **o⁴⁴zaŋ⁴⁴** ‘wing’; **o⁴⁴maɣ⁴⁴** ‘nest’; **o⁴⁴ti⁴⁴** ‘egg’.

•A number of words concerning the sky or the weather begin with the syllable /zaŋ⁴⁴/: **zaŋ⁴⁴han⁵²** ‘sun’; **zaŋ⁴⁴vat⁴⁴** ‘rain’; **zaŋ⁴⁴vin⁴⁴** ‘wind’; **zaŋ⁴⁴k^ho⁵²** ‘sky’.

•The majority of kinship terms, at least in their most common citation form, begin with /a⁵²/: **a⁵²pu⁴⁴** ‘grandfather’; **a⁵²nu⁴⁴** ‘mother’; **a⁵²p^heʔ⁴⁴** ‘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. **a⁴⁴tha[?]44** ‘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 (**ho⁴⁴k^hik⁵²** ‘red’, **ho⁴⁴koŋ⁴⁴** ‘cold’, **ho⁴⁴zan⁴⁴** ‘old’), but it is also used in many words whose meanings defy simple classification: **ho⁴⁴ti⁵²** ‘juice’, **ho⁴⁴k^hat⁵²** ‘pocket’, **ho⁴⁴man⁵²** ‘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. /ʌ/ 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); **ʌn**⁴⁴**to?**⁴⁴ 'and'; and **ok**⁴⁴**kun**⁴⁴ 'vulture'. (This last word may look like an error, since the names of many birds have /o⁴⁴-/ 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:

Vowel	Final Consonant								Total
	-p	-t	-k	-ʔ	-m	-n	-ŋ	-#	
i	5	1	15	12		2	14	41	90
e	3			6	2	1		27	39
ʌ		17				37		12	66
a	7	6	31	22	17	23	38	116	260
u		7	8	9	5	14	8	43	94
o	15		13	10	34	1	26	48	147
aw								17	17
ay								24	24
ʌy								54	54
wa			10					32	42
wi								15	15
wo	3	5			10	10			28
ya				1	4			14	19
ye	1	5			7				13
yi				1				3	4

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)	zan ⁵² βin ⁴⁴ le ^{44*}
cloud	zan ⁴⁴ p ^h wom ⁴⁴
dew	nyen ⁴⁴ ti ⁵²
earthquake	ba ⁴⁴ ti ⁷⁴⁴ si ⁴⁴
fog / mist	zan ⁴⁴ p ^h wom ⁵² a ⁴⁴ tyen ^{44*}
ice / snow / hail	zun ⁵²
lightning	zan ⁵² tsaŋ ⁴⁴ ʒep ^{44*}
moon	lyet ⁴⁴ nu ⁴⁴
rain (n.)	zan ⁴⁴ βat ⁴⁴
rain (vb.)	zan ⁴⁴ βat ⁴⁴ le ⁴⁴
shade / shadow	zan ⁴⁴ k ^h uŋ ⁴⁴
sky	diŋ ⁴⁴ , zan ⁴⁴ k ^h o ⁵²
star	lyet ⁴⁴ tsi ⁴⁴
sun	zan ⁴⁴ han ⁵²
thunder	zan ⁴⁴ duŋ ⁴⁴
wind (air)	zan ⁴⁴ βin ⁴⁴

Land and Water

dust	la ⁴⁴ bu ⁵² , la ⁴⁴ bu ⁴⁴
earth	ha ⁷⁴⁴ βan ⁵²
lake	thom ⁴⁴ nu ⁴⁴
mountain	ha ⁷⁴⁴ hwa ⁵²
mud	ha ⁷⁴⁴ tham ⁵²
river	fwa ⁴⁴
sand	sak ⁵²
sea / ocean	ta ⁴⁴ lo ⁵² , ti ⁴⁴ lo ⁵²
stone	lon ⁴⁴
valley	ha ⁷⁴⁴ may ⁵²

ANIMALS

Mammals (Domestic)

animal / meat	ma ^y ⁴⁴
cat	mya ⁵²
cow / ox	may ⁴⁴ hu ⁴⁴ , may ⁴⁴ hu ⁵²
dog	hi ⁴⁴

goat	zwon ⁵²
horse	man ⁴⁴
mithun	nya ⁴⁴
pig	βak ⁵²
water buffalo	lwi ⁵²

Mammals (Wild)

bat (animal)	pak ⁵² pe ⁴⁴
bat (large sp.)	o ⁴⁴ pak ⁵²
bear	čep ⁵²
deer	ma ^y ¹¹ kh ⁱ ⁴⁴
deer (large-horned)	čok ⁵²
elephant	lwak ⁵²
gibbon	sa ⁴⁴ kh ^a ⁴⁴
jackal	hi ⁴⁴ zan ⁴⁴
macaque	ma ^y ⁴⁴ nak ⁴⁴
mongoose	zu ⁷⁴⁴ zan ⁵²
monkey (long-tailed langur)	ma ^y ⁴⁴ ʒo ⁴⁴
mountain goat	ma ^y ⁴⁴ ʒa ⁷⁴⁴
otter	za ⁴⁴ zom ⁵²
rabbit	zu ⁷⁴⁴ hon ⁴⁴ na ⁴⁴ lo ^{44*} (zu ⁷⁴⁴ hon ⁴⁴ 'large rat'; na ⁴⁴ 'ear'; lo ⁴⁴ 'long')
rat	zu ⁷⁴⁴
squirrel	zu ⁴⁴ zut ⁴⁴
tiger	ča ⁷⁴⁴

Birds

bird / chick	o ⁴⁴ sa ⁴⁴ (sa ⁴⁴ 'suffix for small things')
bird / fowl	o ⁴⁴
crow	o ⁴⁴ kh ^a ⁴⁴
dove	o ⁴⁴ su ⁴⁴
duck	o ⁴⁴ pak ⁴⁴
goose	han ⁴⁴ o ⁴⁴

hawk / kite	o ⁴⁴ la ⁴⁴
jungle fowl	o ⁴⁴ hɛn ⁴⁴
myna bird	o ⁴⁴ ɕwa ⁵²
owl	o ⁴⁴ khɯ ⁴⁴
peacock	o ⁴⁴ pwa ⁵²
stork	o ⁵² lo ⁴⁴ βaŋ ⁴⁴ hom ^{44*}
vulture	ok ⁴⁴ kun ⁴⁴
woodpecker	zop ⁴⁴ tan ⁵²

Reptiles, Fish, and Miscellaneous

eel	nyaŋ ⁴⁴ pu ⁴⁴ (nyaŋ ⁴⁴ 'fish'; pu ⁴⁴ 'snake')
fish	nyaŋ ⁴⁴
frog	luk ⁵²
house lizard	man ⁴⁴ pɛ ⁴⁴ lok ⁴⁴ , man ⁴⁴ pu ⁴⁴ lwak ⁴⁴ sa ^{44*}
lizard (big or small; not house lizard)	phwot ⁴⁴
shrimp (freshwater)	huk ⁴⁴ za ⁴ , huk ⁴⁴ za ⁵²
snail	khop ⁵² twā ⁴⁴
snake	pu ⁴⁴
turtle shell (large)	thwak ⁴⁴
turtle shell (small)	khop ⁵² twā ⁴⁴
turtle / tortoise	thun ⁴⁴ khwa ⁵²

Insects and Worms

ant	sa ⁴⁴ khɪ ⁴⁴
ant (red)	tsik ⁴⁴ bwak ⁵² (tsik ⁴⁴ 'sting')
ant (white)	saŋ ⁴⁴ pho ⁴⁴
bedbug	lya ⁴⁴ sa ⁵² , lya ⁴⁴ sa ⁵²
bee	na ⁴⁴
butterfly	pi ⁴⁴ fwak ⁴⁴
centipede	pu ¹¹ si ⁴⁴
cockroach	lip ⁵² la ⁴⁴

curling	bɛt ⁴⁴ ti ⁷⁴⁴
centipede ³	
dragonfly	na ⁴⁴ kay ⁵²
dung beetle	diŋ ⁴⁴ thu ⁴⁴ (diŋ ⁴⁴ 'dung')
firefly	thaj ⁴⁴ sa ⁴⁴
fly	hwot ⁴⁴
grasshopper	kuk ⁵²
insect / bug	kuk ⁵² sa ⁴⁴ Bay ⁵² sa ⁴⁴
leech (land)	βɛt ⁴⁴
leech (water)	βay ⁴⁴
louse	khaj ⁴⁴ tsɛy ⁴⁴
mosquito	mun ⁴⁴ tswa ⁴⁴
spider	mak ⁵²
spider web	mak ⁵² zi ⁴⁴
sting	tsik ⁵²
tick (insect)	pha ⁴⁴
worm	čonj ⁴⁴

Animal Parts, Products, Calls

bark (dog)	hi ⁴⁴ twom ⁴⁴
egg	o ⁴⁴ ti ⁴⁴ (o ⁴⁴ 'bird'; ti ⁵² 'water / juice')
eggshell	o ⁴⁴ ti ⁴⁴ khwop ⁴⁴
feather	o ⁴⁴ kwɪ ⁴⁴
growl (dog)	tse ¹¹
honey	naŋ ⁴⁴ ti ⁵²
horn	mɛy ⁴⁴ zonj ⁵² (zonj ⁴⁴ 'point / corner')
nest	o ⁴⁴ mɛy ⁴⁴ kwa ⁴⁴ , o ⁴⁴ kwa ⁴⁴ (o ⁴⁴ 'bird'; mɛy ⁴⁴ kwa ⁴⁴ 'tail')
tail	mɛy ⁴⁴ kwa ⁴⁴ (cf. kwa ⁴⁴ dwon ⁴⁴ '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 California Press, p. 459). [Ed.]

trunk	lwak ⁵² saʔ ⁴⁴ βay ⁴⁴ *
(elephant)	
tusk (elephant)	lwak ⁵² βa ⁴⁴ , lwak ⁵² zon ⁴⁴ (lwak ⁵² 'elephant'; βa ⁴⁴ 'tooth'; zon ⁴⁴ 'horn' /point /corner')
wing	o ⁴⁴ zan ⁴⁴

PLANTS, FOODS

Trees, Forest, Fruit

forest / jungle	p ^h aw ⁴⁴
group of trees	ho ⁴⁴ ham ⁵²
tree	p ^h an ⁵²
tree (large)	p ^h an ⁵² nu ⁴⁴
tree (small)	p ^h an ⁵² sa ⁴⁴
areca nut	ko ⁴⁴ βay ⁵²
bamboo	ʔ ^h at ⁵²
banana	ŋo ⁴⁴
jackfruit	p ^h an ⁴⁴ ʔon ⁵²
lichee	sa ⁴⁴ zyak ⁴⁴
lime	t ^h sa ⁴⁴ nom ⁴⁴
mango	ma ⁴⁴ mum ⁴⁴
orange	čaw ¹¹ p ^h a ⁴⁴ , sut ⁴⁴ ti ⁴⁴
papaya	t ^h aw ⁴⁴
pomelo	nom ⁵² peʔ ⁴⁴

Grain

maize	so ⁴⁴ zam ⁴⁴
maize	βam ⁴⁴ pa ⁴⁴
(popcorn)	
millet	hi ⁴⁴ k ^h a ⁵²
rice (cooked)	saʔ ⁴⁴
rice (husked)	βon ⁵²
rice (sticky)	zam ⁴⁴ lo ⁴⁴
rice / paddy	t ^h saʔ ⁴⁴ ʔun ⁴⁴
(unhusked)	
rice liquor	ʔu ⁴⁴ nu ⁴⁴
rice plant	t ^h saʔ ⁴⁴

Tubers

arum	twa ⁴⁴
ginger	tsya ⁵²
manioc / tapioca	p ^h an ⁴⁴ k ^h an ⁵²
sweet potato	k ^h an ⁴⁴ ti ⁴⁴
tuber (general term)	k ^h an ⁵²

Vegetables and Plants

bamboo shoots	me ⁴⁴
(fresh)	
bamboo shoots	m ^h at ⁴⁴ tham ⁴⁴ ,
(preserved)	m ^h at ⁴⁴ tham ⁴⁴
beans (long green)	p ^h ya ⁴⁴ lo ⁴⁴ (lo ⁴⁴ 'long')
beans (small green)	p ^h ya ⁴⁴ sa ⁴⁴ (sa ⁴⁴ 'small')
cane	ze ⁵²
cauliflower	p ^h ul ⁴⁴ k ^h o ⁴⁴ bi ⁴⁴
chili pepper	hiŋ ⁴⁴ bu ⁵²
cotton	pay ⁴⁴
garlic	teʔ ⁴⁴ tho ⁴⁴
grass	hiŋ ⁴⁴ zan ⁵²
mushroom	pwa ⁴⁴
mustard	swi ⁴⁴ li ⁴⁴
onion	o ⁴⁴ teʔ ⁴⁴
peas	p ^h ya ⁵²
sugarcane	β ^h ay ⁴⁴ dwa ⁵²
vine (general)	zu ⁴⁴
watermelon	may ⁴⁴ kwak ⁴⁴

Foods

chicken soup	o ⁴⁴ ti ¹¹ (o ⁴⁴ 'bird', ti ⁵² 'water')
curry	swi ⁴⁴
dried fish	nya ⁴⁴ zan ⁴⁴
meat / animal	m ^h ay ⁴⁴
milk	tsom ⁴⁴ ti ⁴⁴ (tsom ⁴⁴ 'breast'; ti ⁵² 'water')

oil mʌn⁴⁴ŋa⁵²
salt hum⁴⁴

Plant Parts

bark (of tree) pʌn⁴⁴kʰwɔn⁵²
branch pʌn⁴⁴kaŋ⁴⁴
flower may⁴⁴pwa⁴⁴
fruit pʌn⁴⁴zyak⁴⁴
joint (bamboo) ŋʌt⁴⁴ku⁷⁴⁴ (cf. *neck*)
juice ho⁴⁴ti⁵²
leaf pʌn⁴⁴čak⁵²
root pʌn⁴⁴tsiŋ⁵²
seed pʌn⁴⁴tsaŋ⁴⁴
stick kay⁴⁴twa⁴⁴
thorn hu⁷⁴⁴
trunk / stem /
stalk po⁴⁴nu⁴⁴

BODY PARTS

Head

cheek na⁴⁴mya⁵²
chin ka⁷⁴⁴za⁴⁴
ear na⁴⁴
eye mik⁵²
face tʰʌn⁵²
forehead kʰaŋ⁴⁴poŋ⁴⁴
gums βa⁴⁴nyen⁴⁴
head kʰaŋ⁵²
lip tun⁴⁴pʌn⁴⁴
mouth βi⁴⁴kʰa⁴⁴
nose na¹¹kwa⁴⁴
tartar / dirt on
teeth βa⁴⁴di⁷⁴⁴
tongue le⁵²
tooth βa⁴⁴

Torso

back tok⁵²
belly βok⁵²
body tom⁴⁴po⁴⁴, tsan⁴⁴tsa⁵²

breast tsom⁴⁴
chest kʰa⁷⁴⁴tok⁴⁴
navel suŋ⁴⁴
neck diŋ⁴⁴ku⁷⁴⁴ (cf. *joint of bamboo*)
nipple tsom⁴⁴tun⁴⁴ (tsom⁴⁴ 'breast', tun⁴⁴pʌn⁴⁴ 'lip')
side (of body) sam⁴⁴
thin a⁴⁴tsya⁵²
throat diŋ⁴⁴dwa⁴⁴
(diŋ⁴⁴ku⁷⁴⁴ 'neck')
waist kʰya⁴⁴da⁷⁴⁴
anus ʒo⁷⁴⁴
buttocks /
rump⁴ kwa⁴⁴dwon⁴⁴
crotch bak⁵²
penis kʰo⁷⁴⁴
testicle bwa⁵²
vulva tʰu⁷⁴⁴

Arms, Hands

arm swak⁵²
armpit pʰak⁴⁴phaŋ⁵²
elbow čak⁵²ʒoŋ⁴⁴ (ʒoŋ⁴⁴ 'point / corner')
finger čak⁵²kʰi⁴⁴
hand čak⁵²
nail / finger čak⁵²kʰin⁴⁴
palm of hand čak⁵²pʰa⁴⁴
shoulder swak⁵²kaŋ⁴⁴,
swak⁵²to⁴⁴

Legs, Feet

foot sa⁴⁴
heel či⁴⁴dwa⁴⁴, cit⁴⁴dwa⁴⁴

⁴ This form is clearly related to Wancho **chi-dun** 'heel', cited in Matisoff (1994), "How dull can you get? *buttock* and *heel* in Sino-Tibetan" (*LTBA* 17.2:139). [Ed.]

knee	če ⁴⁴ ku ⁷⁴⁴
leg	čya ⁴⁴
sole	či ⁴⁴ p ⁴⁴ a ⁴⁴ , čip ⁴⁴ pa ⁴⁴
thigh	βe ⁴⁴ ho ⁵²
toe	če ⁴⁴ kh ⁴⁴ i ⁴⁴ , ci ⁴⁴ kh ⁴⁴ i ⁴⁴

Hair

bald	k ^h aŋ ⁴⁴ hwo ⁵²
beard	ka ⁷⁴⁴ ma ⁴⁴ mun ⁵²
braid	kh ^o ⁴⁴ na ^y ⁴⁴
eyebrow	mik ⁵² zyen ⁴⁴
hair (body)	mun ⁵²
hair (head)	kh ^o ⁵²
mustache	tun ⁴⁴ mun ⁵² (tun ⁴⁴ 'lip')
underarm hair	p ^h ak ⁴⁴ p ^h aŋ ⁴⁴ mun ⁵² (cf. p ^h ak ⁴⁴ p ^h aŋ ⁵² 'armpit')

Liquids and Miscellaneous

blood	a ⁵² zi ⁴⁴
excrement / dung	di ⁷⁴⁴ , p ^h aw ⁴⁴
fart	di ⁷⁴⁴ puk ⁴⁴
pus	a ⁴⁴ čut ⁴⁴
skin	k ^h won ⁵²
snot / nose dirt	βwi ⁴⁴
spit / saliva	t ^h wak ⁵²
sweat	zan ⁴⁴ muk ⁴⁴ , zan ⁴⁴ k ^h am ⁴⁴ ti ⁴⁴ (zan ⁴⁴ 'hot'; ti ⁴⁴ 'water')
tears	mik ⁵² p ^h i ⁴⁴ (mik ⁵² 'eye')
urine / urinate	hip ⁴⁴
vomit	p ^h at ⁴⁴

Internal Organs, Bones

bladder	zu ⁴⁴
brain	k ^h Λ ⁴⁴ zi ⁴⁴
fat / grease	ho ⁴⁴ zaw ⁴⁴

gall	zu ¹¹ k ^h a ⁷⁴⁴
heart	moŋ ⁵² , moŋ ⁵² tom ⁴⁴ (tom ⁵² 'classifier for round things')
intestines	če ⁴⁴
liver	k ^h a ⁷⁴⁴
flesh / meat / animal	ma ^y ⁴⁴
placenta	zem ⁴⁴
stomach	βok ⁵²
womb / uterus	naw ⁴⁴ pom ⁴⁴ nwi ⁴⁴ (naw ⁴⁴ 'baby'; pom ⁴⁴ nwi ⁴⁴ 'seat')
backbone	tok ⁵² zi ⁴⁴ za ⁴⁴ *
bone	za ⁴⁴
jawbone	ka ⁷⁴⁴
marrow	zi ⁴⁴ zaw ⁴⁴
rib	sam ⁴⁴ lap ⁴⁴ za ⁴⁴
skull	k ^h aŋ ⁴⁴ za ⁴⁴

PEOPLE

Pronouns

I / my	ku ⁴⁴
you (sg.)	naŋ ⁴⁴
he	či ⁷⁴⁴
she	ʃe ⁴⁴
we	kwom ⁴⁴
us (1 pl. obj.)	kwom ¹¹
you (pl.)	hΛ ⁿ ⁴⁴ zom ⁵²
they	hwom ⁵²

Age, Gender, Occupational Categories

adolescent boy	naw ⁴⁴ sΛ ⁿ ⁵²
adolescent girl	naw ⁴⁴ čya ⁵²
baby	naw ⁴⁴
boy	lΛ ⁴⁴ ka ⁵² naw ⁴⁴ sa ⁴⁴
child (young person)	naw ⁴⁴ som ⁴⁴ , naw ⁴⁴ sa ⁴⁴
female	ʃe ⁴⁴ ko ⁵²

girl	je ⁴⁴ ko ⁵² naw ⁴⁴ sa ⁴⁴
king	βaŋ ⁴⁴ hom ⁵²
male	lɛ ⁴⁴ ka ⁵²
man (male person)	mi ⁷⁴⁴ sɛn ⁴⁴
old man	a ⁴⁴ zu ⁴⁴ pa ⁴⁴ , zu ⁴⁴ pa ⁴⁴ (a ⁴⁴ zu ⁴⁴ 'aged')
old woman	a ⁴⁴ zu ⁴⁴ nu ⁴⁴ , zu ⁴⁴ nu ⁴⁴ (a ⁴⁴ zu ⁴⁴ 'aged')
person	khɛ ⁴⁴ nak ⁵²
widow	zom ⁴⁴ nu ⁴⁴
widower	zom ⁴⁴ pa ⁴⁴
woman	mi ⁷⁴⁴ ʒa ⁴⁴

Kinship Terms

grandfather	ho ⁵² pu ⁴⁴ , a ⁵² pu ⁴⁴
grandmother	a ⁵² pi ⁴⁴ , ho ⁵² pi ⁴⁴
father	a ⁵² pa ⁴⁴
mother	a ⁵² nu ⁴⁴ , ho ⁵² nu ⁴⁴
mother's brother	a ⁴⁴ ho ⁴⁴ ʒoŋ ^{44*} , a ⁴⁴ ho ⁴⁴ li ^{44*}
(eldest)	
elder brother	a ⁴⁴ tɛy ⁵²
elder brother (not eldest)	a ⁴⁴ tɛy ⁴⁴ li ⁵²
elder sister	a ⁵² na ⁴⁴
husband	sɛ ⁴⁴ pa ⁴⁴
husband	ka ⁴⁴ ko ⁴⁴ pa ^{44*} (more formal than sɛ ⁴⁴ pa ⁴⁴)
wife	se ⁴⁴ nu ⁴⁴ , sɛ ⁴⁴ nu ⁴⁴ , ka ⁵² ko ⁴⁴ nu ^{44*}
wife's brother	a ⁵² poŋ ⁴⁴
younger brother	a ⁴⁴ li ⁵²
youngest brother	a ⁴⁴ li ⁵² suk ^{44*}
younger sister	a ⁵² phe ⁷⁴⁴
child (kin term)	ku ⁴⁴ sa ⁴⁴
daughter	ku ⁴⁴ sa ⁴⁴ je ⁴⁴ ko ^{44*}

daughter-in-law	a ⁵² phe ⁷⁴⁴ nam ⁴⁴ ʒa ^{52*}
son	ku ⁴⁴ sa ⁴⁴ lɛ ⁴⁴ ka ^{44*}
son-in-law / nephew	a ⁴⁴ poŋ ⁴⁴ nam ⁴⁴ ʒa ^{52*}
grandchild	ku ⁴⁴ su ⁴⁴

ARTIFACTS

Cooking and Eating Equipment

cooking pot	tik ⁵²
mortar (for rice)	tbom ¹¹
pestle	mɛn ⁵²

Basketry, Cloth, Clothing

basket	tsoŋ ⁴⁴
basket (to carry birds)	o ⁴⁴ tswon ⁴⁴
basket (winnowing)	won ⁵²
carrying strap	pak ⁵²
cloth	nyi ⁴⁴
fishing line	ʒak ⁴⁴ zi ⁴⁴
mat	dom ⁵²
plastic string	nɛy ⁴⁴ zi ⁴⁴
pocket	ho ⁴⁴ khɛ ⁵²
rope / vine	zu ⁴⁴
string / thread	zi ⁴⁴ , luŋ ⁵²
wire	ʒan ⁴⁴ zi ⁴⁴

Tools and Weapons

arrow	san ⁵²
axe	βa ¹¹
bow (with arrow)	hap ⁴⁴ nu ⁴⁴

Buildings and their Parts

bird coop	o ⁴⁴ kun ⁴⁴
door	pɛ ⁴⁴ lom ⁴⁴

fireplace	phoŋ ⁴⁴ khā ⁴⁴ , ha ⁷⁴⁴ top ⁴⁴
granary	puŋ ⁵²
house	hom ⁵²
roof	hom ⁴⁴ tok ⁵² , lo ⁷⁴⁴ tok ⁴⁴ (tok ⁵² 'back of body'; lo ⁷⁴⁴ 'thatch')
sleeping place for boys	pom ¹¹ sa ⁴⁴
stairs / ladder	di ⁷⁴⁴ twa ⁴⁴
thatch (n.)	lo ⁷⁴⁴
window	thaj ⁴⁴ mik ⁵²
young men's dormitory	pa ⁴⁴

Village, Countryside, Fields

fence	tša ⁴⁴ bat ⁴⁴
field	ha ⁷⁴⁴ tok ⁴⁴ , zaŋ ⁴⁴ (ha ⁷⁴⁴ 'earth / soil'; tok ⁵² 'back')
road / path	lom ⁵²
village	nok ⁴⁴ , tiŋ ⁴⁴

Miscellaneous Artifacts

boat	khwa ⁵²
dao / large knife	čaj ⁴⁴
drum	sam ⁴⁴
flute	thwa ⁴⁴ put ⁴⁴
iron	zan ⁵²
knife	bit ⁵²
needle	mat ⁵² kwi ⁴⁴ , mat ⁴⁴ kwi ⁵²
paper	nam ⁵²
silver	khop ⁵²
spade	khō ¹¹
tongs	khap ⁵²

NOUNS, ABSTRACT AND MISCELLANEOUS

ashes	βan ⁴⁴ di ⁷⁴⁴ , la ⁴⁴ bu ⁴⁴ (βan ⁴⁴ 'fire'; di ⁷⁴⁴ 'dung'; la ⁴⁴ bu ⁴⁴ 'dust')
corpse	maŋ ⁵²
court (of law)	khwa ¹¹
evil spirit	baw ⁵²
fire	βan ⁴⁴
firewood	ha ⁴⁴
footprint	ča ⁴⁴ man ⁴⁴
god	zaŋ ⁵²
hole (downward into ground)	tswom ⁵²
hole (horizontal)	o ⁴⁴ khā ⁵²
hole (round, as in cloth)	βo ⁴⁴ kya ⁴⁴
injury	mak ⁴⁴ la ⁷⁴⁴
language	ka ⁷⁴⁴
life	tsan ⁴⁴
medicine	hiŋ ⁴⁴ hay ⁵²
name (n.)	man ¹¹
place	nwi ¹¹
point / corner	zoŋ ⁴⁴
poison	zik ⁴⁴ hiŋ ⁴⁴
price	ho ⁴⁴ man ⁵²
puddle	ti ⁴⁴ tun ⁵²
smoke	βan ⁴⁴ khut ⁴⁴ (βan ⁴⁴ 'fire')
sore on body	mak ⁴⁴
soul	ča ⁴⁴ sa ⁴⁴
spring (water)	ta ⁴⁴ mik ⁵²
strength	zoŋ ⁵²
water	ti ⁵²
waterfall	ʃap ⁵²
well	ta ⁴⁴ kay ⁴⁴

TIME EXPRESSIONS

after	ph ⁴⁴ Λy ⁴⁴ ma ⁴⁴
again	čat ⁴⁴ le ⁴⁴ ču ⁴⁴
before	tho ⁴⁴ ma ⁴⁴
day (period of time)	nyi ⁷⁴⁴
daytime	a ⁴⁴ nyi ⁷⁴⁴ niŋ ⁴⁴
evening	han ⁴⁴ soŋ ⁴⁴
month	lyet ⁴⁴ kwa ⁴⁴
morning	a ⁴⁴ nop ⁴⁴ niŋ ⁴⁴
night / dark	zaŋ ⁴⁴ nak ⁴⁴ (nak ⁴⁴ ‘black’)
now	a ⁴⁴ tha ⁷⁴⁴
suddenly	a ⁴⁴ le ⁴⁴ le ⁴⁴
then	he ⁴⁴ ph ⁴⁴ Λy ¹¹ ma ⁴⁴ *
today	a ⁵² nyi ⁷⁴⁴
tomorrow	ŋay ⁵² nyi ⁷⁴⁴
year	zaŋ ⁴⁴ pwa ⁴⁴
yesterday	ma ⁴⁴ nyi ⁷⁴⁴

NUMERALS

one	a ⁴⁴ ta ⁵²
two	a ⁴⁴ nyi ⁴⁴
three	a ⁴⁴ zom ⁵²
four	a ⁴⁴ li ⁴⁴
five	a ⁴⁴ ga ⁴⁴
six	a ⁴⁴ zok ⁵²
seven	a ⁴⁴ nΛ ⁵²
eight	a ⁴⁴ čyet ⁵²
nine	a ⁴⁴ ku ⁵²
ten	bΛn ⁵²
twenty	tsa ⁵²
one hundred	ho ⁴⁴ ta ⁴⁴ (a ⁴⁴ ta ⁵² ‘one’)

ADJECTIVES**Color**

black	nak ⁵²
blue	hok ⁴⁴ k ^h wi ⁴⁴
green	ho ⁴⁴ hiŋ ⁵²

light (not dark)	zaŋ ⁴⁴ ŋay ⁴⁴
red	ho ⁴⁴ k ^h ik ⁵²
white	tse ⁴⁴
yellow	ho ⁴⁴ nan ⁴⁴

Taste

bitter	ho ⁴⁴ k ^h Λt ⁴⁴
chili-hot	ho ⁴⁴ buk ⁵² , ho ⁴⁴ k ^h am ⁴⁴
sour	ho ⁴⁴ sik ⁵²
sweet	ho ⁴⁴ tik ⁵²

Size

big	čon ⁵²
deep	zu ⁴⁴
far	tsay ⁴⁴ lo ⁴⁴
long	lo ⁴⁴
long (road)	lom ⁴⁴ lo ⁴⁴ (lom ⁵² ‘road’)
long (time)	zu ⁴⁴ lo ⁴⁴
long (time, road)	kay ¹¹ poŋ ⁴⁴ ma ⁴⁴ *
narrow	syep ⁵²
near	nwi ¹¹ so ⁷⁴⁴
shallow	pak ⁴⁴ zwi ⁵²
short	mo ⁷⁴⁴
short (people)	mi ⁷⁴⁴ mo ⁷⁴⁴
small	hi ⁷⁴⁴
tall (people)	mi ⁷⁴⁴ lo ⁴⁴
thick	tΛt ⁴⁴
thin (not thick)	pak ⁴⁴
wide	k ^h aw ⁴⁴

Miscellaneous Adjectives

afraid / frightened	za ¹¹
alive / living	ho ⁴⁴ zΛn ⁴⁴ , o ⁴⁴ zΛn ⁴⁴
all / every	paŋ ⁴⁴ nu ⁴⁴
angry	moŋ ⁴⁴ tsik ⁵²
ashamed	a ⁴⁴ zak ⁴⁴
bad	ho ⁴⁴ ma ⁴⁴

bent / zig-zag	kwom ⁴⁴ kwom ⁴⁴ ke ⁷⁴⁴ , kon ⁴⁴ kon ⁴⁴ ke ⁷⁴⁴	sharp	a ⁵² na ⁷⁴⁴
blunt / dull	a ⁴⁴ ne ⁵²	sick / ill	kak ⁴⁴
clean	tsaw ⁴⁴ tha ⁴⁴	slippery	na ⁴⁴ ky ⁴⁴
close by	nam ⁵²	slow	za ⁴⁴ se ⁵² le ^{44*}
cold	ho ⁴⁴ ko ⁴⁴	smart	za ⁴⁴ pa ⁴⁴
crazy / mad	ŋa ⁴⁴ , ŋat ⁴⁴ , ŋa ⁴⁴ le ⁴⁴	soft	nay ⁴⁴
different	ma ⁴⁴ li ⁵² i ^{44*}	some	za ⁴⁴ le ⁴⁴
dirty	zyak ⁴⁴ zyak ⁴⁴ ti ⁵²	sticky	a ⁴⁴ tsam ⁵²
easy	ho ⁴⁴ čwon ⁵²	straight	ta ⁴⁴ ho ⁴⁴
empty	ho ⁴⁴ hwa ⁴⁴	strong / firm / hard	tsak ⁴⁴
fast / quick	a ⁴⁴ kha ⁵² le ⁴⁴ , mom ⁴⁴ le ⁴⁴	stupid	ho ⁴⁴ ŋat ⁴⁴ , a ⁴⁴ ŋa ⁴⁴
fat (people)	nut ⁵²	tired	na ⁴⁴
few	mwa ⁴⁴ le ⁴⁴	unhappy	mo ⁴⁴ ma ¹¹ (mo ⁵² 'heart')
flexible	nu ⁴⁴ nay ⁴⁴	unripe / raw	a ⁴⁴ za ⁵²
full	ho ⁴⁴ ma ⁴⁴	very	ho ⁵² ta ⁷⁴⁴
good	ma ⁴⁴ , ho ⁴⁴ ma ⁵²	weak	nay ⁴⁴ fo ⁵²
happy / joyful	mo ⁴⁴ ma ⁴⁴ (mo ⁵² 'heart')	whole / entire	ko ⁴⁴ le ¹¹
heavy	li ⁷⁴⁴	young (of people)	kh ⁴⁴ se ⁵²
hot / warm	ho ⁴⁴ kham ⁴⁴	VERBS	
hungry	βok ⁵² no ⁴⁴	able	tho ¹¹ le ⁴⁴
lazy	za ⁷⁴⁴ kak ⁴⁴	arrive / reach	a ⁴⁴ lop ⁴⁴ , ŋwi ⁴⁴
left (side)	no ⁴⁴ či ⁴⁴	ask question	a ⁴⁴ ta ⁴⁴
light (weight)	ča ⁴⁴	be born	naw ⁵² pu ⁷⁴⁴
many	hwa ⁴⁴ nu ⁴⁴ ma ^{11*} , lwi ¹¹	beckon / wave	zep ⁴⁴
new	ho ⁴⁴ za ⁵²	bend	kwom ¹¹
old (of people)	a ⁴⁴ zu ⁴⁴	bite	tsat ⁵²
old (of things)	ho ⁴⁴ za ⁴⁴	blow (with mouth)	mat ⁴⁴
other	ma ⁴⁴ ma ⁴⁴	boil	lum ⁵²
poor	mi ⁷⁴⁴ ji ⁷⁴⁴ , za ⁵² sa ⁴⁴	bounce (baby)	a ⁴⁴ čyen ⁴⁴
pregnant	naw ⁴⁴ βok ⁵²	(v.t.)	
rich / wealthy	hak ⁵² pa ⁴⁴ , lwa ⁴⁴ pa ⁴⁴	break (as glass)	a ⁵² ji ⁷⁴⁴
right (side)	tsa ⁷⁴⁴ či ⁴⁴	(v.i. / v.t.)	
right / correct	ča ⁴⁴ le ⁴⁴	break (string)	a ⁴⁴ ph ⁴⁴
ripe	ho ⁴⁴ zum ⁴⁴	breathe	zak ⁵² d ⁴⁴
rough	phwon ⁴⁴ zan ⁴⁴	bring	a ⁴⁴ pa ⁴⁴
round	ho ⁴⁴ tom ⁵²		
same	ta ⁴⁴ lay ⁴⁴ lay ⁴⁴		

burn (v.i.)	βΛn ⁴⁴ ʃun ⁴⁴ (βΛn ⁴⁴ 'fire')	drill hole	zo ¹¹
burn (v.t. / v.i.)	zok ⁵²	drink	liŋ ⁵²
buy	ʃak ⁵²	dry (of cloth) (v.i.)	ho ⁴⁴ zwa ⁴⁴
call / cry out	nyak ⁴⁴	dry (of soil, wood) (v.i.)	ho ⁴⁴ zan ⁴⁴
carry (from tump line or in a vehicle)	hΛn ⁴⁴	dry by fire (v.t.)	haŋ ⁴⁴ le ⁴⁴ a ⁴⁴ zwa ⁴⁴ *
carry (in arms or on shoulder)	pay ⁵²	dry in sun (v.t.)	lom ⁵² le ⁴⁴ a ⁴⁴ zwa ⁴⁴ *
carry (on head)	a ⁴⁴ kho ⁵²	eat	sa ⁷⁴⁴
chew	ʃaw ⁴⁴	embrace	a ⁴⁴ kΛn ⁴⁴
clean / wipe	pʰwot ⁵²	emerge / exit / go out	lay ⁴⁴
climb	ŋa ¹¹ le ⁴⁴	enter	nop ⁴⁴
climb / ascend	ŋa ⁴⁴	erect, become	a ⁴⁴ la ⁴⁴
close (container)	a ⁴⁴ hu ⁷⁴⁴	extinguish	βΛn ⁴⁴ a ⁴⁴ mΛt ⁴⁴ (βΛn ⁴⁴ 'fire')
come	ŋwi ⁴⁴	fall	dΛt ⁴⁴
cook	pʰoŋ ⁴⁴ mok ⁴⁴	fight	a ⁴⁴ he ⁵²
cough	a ⁴⁴ hay ⁵²	fight with stick	a ⁴⁴ çyet ⁴⁴
count	a ⁴⁴ kyak ⁵²	float	pʰwa ⁴⁴
cover	čwop ⁴⁴	flow (water)	ti ⁴⁴ ʒen ⁴⁴
crawl	a ⁴⁴ kʰwom ⁴⁴	fly	o ⁴⁴ pik ⁵² , pi ⁵²
cut down a tree	dak ⁵²	forget	a ⁴⁴ lak ⁵²
cut with axe / chop	pop ⁵²	give	ko ⁷⁴⁴ , zun ⁴⁴
cut with knife	zΛt ⁵²	give birth	naw ⁴⁴ ŋΛn ⁵²
dance	ʃwon ⁴⁴	give me! (as when boys fight over sthg.)	a ⁴⁴ pa ¹¹
debate	a ⁴⁴ la ⁵²	go	kam ⁴⁴ , paw ⁵²
descend	ʒu ⁴⁴	grind	zut ⁵²
die	zi ¹¹	hate	tsak ⁵²
dig	ha ⁷⁴⁴ tho ⁴⁴ , ha ⁷⁴⁴ twot ⁴⁴ (ha ⁷⁴⁴ 'earth, soil')	hear	a ⁴⁴ tat ⁴⁴
dislike / hate	a ⁴⁴ nu ⁴⁴	hide (v.i.)	a ⁴⁴ zwon ⁴⁴
dive / sink	siŋ ⁴⁴	hide (v.t.)	kʰom ⁴⁴ , pyen ⁵²
do	mwo ⁴⁴ mok ⁴⁴	hit	çyet ⁴⁴ , hoŋ ⁴⁴ , mΛy ¹¹
dream	βΛn ⁴⁴ maŋ ⁴⁴	imitate / learn	mi ⁷⁴⁴ hwon ⁴⁴ la ⁷⁴⁴ *
drill	zop ¹¹		

insert (handle in tool, wood into fire)	tak ⁴⁴	say / speak / tell	zan ⁴⁴ βan ⁴⁴
itch	bu ⁵²	scratch to hurt	ʃik ⁵²
keep	thom ⁵²	scratch to	sik ⁴⁴
kick	ho ⁴⁴	soothe	
kill	laŋ ⁴⁴	scream	a ⁴⁴ βaw ⁴⁴
know	a ⁴⁴ βan ⁵²	search	lom ⁴⁴
laugh	nyi ⁴⁴	see	ŋan ⁵²
lean	a ⁴⁴ na ⁵²	sell	haŋ ⁴⁴
let go / set free	dan ⁴⁴	sew / stitch	siŋ ⁵²
/ loosen		shade (v.t.)	hom ¹¹
lick	čay ⁴⁴	shade / block	a ⁴⁴ ho ⁵²
lie down	ʃwi ⁵²	light	
listen	a ⁵² pā ⁴⁴	shake	si ¹¹
load (v.t.)	han ⁵²	shake (v.i.)	a ⁴⁴ čyen ⁵²
look at	hu ⁴⁴	shoot	hap ⁴⁴
meet	a ⁴⁴ poŋ ⁵²	show	a ⁴⁴ ho ⁴⁴
melt / dissolve	ču ⁵²	sing	ŋaw ⁴⁴
mix	a ⁴⁴ nat ⁴⁴	sit	thuŋ ⁵²
move roughly	lwak ⁴⁴	sleep	ʒip ⁴⁴
moving	ho ⁴⁴ ham ⁴⁴	smell (notice smell)	a ⁴⁴ tum ⁴⁴
name (v.t.)	man ⁴⁴ man ⁴⁴	smell bad	nom ⁴⁴
need	la ⁷⁴⁴ li ⁴⁴	smell good	ziŋ ¹¹
not spoil	ma ¹¹ ma ⁴⁴	sneeze	a ⁴⁴ kʰik ⁵²
open	dap ⁴⁴	snore	na ¹¹ kwa ⁴⁴ ŋaw ⁴⁴ *
play	a ⁴⁴ baw ⁵² , a ⁴⁴ zap ⁵²	soak (as rice)	a ⁴⁴ zom ⁴⁴
point	hi ¹¹	split	a ⁴⁴ ph ⁴⁴
pound (rice)	thu ⁴⁴	squeeze	phyet ⁵²
pull	be ⁴⁴	stab / pierce	top ⁵²
put / place	dan ⁴⁴ , toŋ ⁴⁴	stamp the foot	nak ⁴⁴
remember	moŋ ⁵² ma ⁴⁴ kop ⁵² (moŋ ⁵² ma ⁴⁴ 'in the heart'; kop ⁵² 'keep')	stand	a ⁴⁴ ʒoŋ ⁴⁴
return	čat ⁴⁴	steal silently (theft)	a ⁵² hu ⁷⁴⁴
rot	fan ⁴⁴	stretch legs apart	ka ⁵²
rub	nun ⁴⁴	suck	sip ⁵²
rule over (as a king)	a ⁴⁴ kʰo ⁵²	swallow	ʒok ⁴⁴
run / flee	zik ⁵²	swell up	ph ⁵²
		swim	a ⁴⁴ kʰay ⁵²
		take	kop ⁴⁴

take	laʔ ⁴⁴
tame (v.t.)	tsom ¹¹
think	a ⁴⁴ ʒaŋ ⁴⁴
throw away	a ⁴⁴ βat ⁵²
tickle	luk ⁵²
tie	kʰak ⁴⁴ , kʰa ⁴⁴
tie hair in knot	kʰe ⁴⁴ thwop ⁵²
tremble	a ⁴⁴ baŋ ⁵²
turn (v.t. / v.i.)	a ⁴⁴ ŋwi ⁵²
untie	da ⁵²
wake up / awaken	zo ⁴⁴
walk	ham ¹¹
want	tsu ⁵²
wash (cloth, hands)	so ¹¹
weave	nyi ⁴⁴ tak ⁴⁴
weep / cry	sop ⁴⁴
wet	ho ⁴⁴ ʃan ⁴⁴
yawn	βi ⁴⁴ kʰa ⁴⁴ ka ^{11*}

FUNCTION WORDS / AFFIXES

Classifiers

classifier:	tom ⁵²
animals and round things (e.g. eyes, balls)	
classifier: leaves	pha ⁵²
classifier: men / males	saŋ ⁵²
classifier: thin things, paper	kʰaw ⁴⁴
classifier:	ča ⁵²
women / females	
classifier : long things (e.g. fish, string)	ʒaŋ ⁴⁴

Conjunctions

and	ʌn ⁴⁴ toʔ ⁴⁴ le ⁴⁴
because	čem ⁴⁴ thʌy ⁵² loʔ ⁴⁴ le ^{44*}
if	thʌy ⁴⁴ ba ⁵²
not	maŋ ⁵²

Locations

here	i ⁴⁴ kʰa ⁴⁴ ma ⁴⁴
that	ču ⁴⁴ ʒa ¹¹
there	ču ⁴⁴ kʰa ¹¹ ma ⁴⁴
this	i ⁴⁴ ʒa ⁴⁴

Question Words

how much?	o ⁴⁴ bi ⁴⁴
how?	ba ⁴⁴ le ⁵²
what?	čem ⁵²
when?	o ⁴⁴ tu ⁴⁴ e ⁴⁴
where at?	o ⁴⁴ yon ⁴⁴ ma ⁴⁴
where to?	o ⁴⁴ ʒon ⁴⁴ to ⁴⁴
who?	o ⁴⁴ βa ⁵²

Noun Suffixes, Postpositions

from	ma ⁴⁴ kʰaŋ ⁴⁴ e ⁴⁴
in front of	thʌn ⁴⁴ tho ⁵²
inside	hom ⁴⁴ mon ⁵²
with	pha ⁵²
(instrumental)	
locative suffix	-ma ⁴⁴
suffix for large things	-nu ⁴⁴
suffix for small things	-sa ⁴⁴
to	to ⁵²
(postposition)	
under	phaŋ ⁵²
with / together with	pha ⁵² tom ⁴⁴ le ^{44*}