

Nahsi and Proto-Burmese-Lolo

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Abstract

Nahsi (¹Na-²khi in Rock's transcription, formerly called Moso by the Chinese) has been classified as a Loloish language by Shafer and others. Better Nahsi data, from the published works of Rock and of Fu, and further data which clarify Rock's transcription, and elucidate the orthography now used for Nahsi in China, do not support this grouping. While a large proportion of Nahsi vocabulary is plausibly cognate to Proto-Burmese-Lolo (*BL) and Proto-Loloish (*L) forms reconstructed in Bradley 1975, there is only limited systematic regularity of correspondence. Moreover, the tonal and other developments postulated for *BL and *L by Matisoff are not reflected in Nahsi. It thus seems that Nahsi is very close to *BL within Proto-Tibeto-Burman (*TB), but should not be included within *L. In fact, some similarities between Nahsi and Loloish languages may be due to areal convergence, e.g. the prenasalized stops, which occur now in adjacent Tibetan, Loloish, and Nahsi languages, but not in other Tibetan or Loloish languages.

Introduction

Nahsi is spoken by at least 150,000 people in northwestern Yunnan, China. The Chinese administrative center has been at Li-ch'iang, according to local chronicles for as long as 1200 years - though this may be exaggerated. Nahsi live mainly to the north and west of Li-ch'iang, which is a largely Chinese town. Most Nahsi live to the south of the Yangtse, in a Nahsi autonomous district; those living to the west have come under Tibetan influence, while those living to the northeast, around Yungning, may have come under less Chinese influence. There are considerable dialect differences within Nahsi; in fact, the name [na²¹ɕi³³] or 'black people' is sometimes applied only to the Nahsi living around Li-ch'iang, while the Yungning Nahsi call themselves [li³³ɕi³³]. Rock¹ suggests that these two groups were originally distinct, but have been confused by the Chinese under the name 'Moso' - which, like most Chinese names, is underspecific and derogatory, and is not officially used in China now.

Some French sources confuse the Nahsi with the Lahu, far to the south, because the Chinese name for the Nahsi and the Shan name for the Lahu ('Muhso') are similarly transliterated. The Nahsi should also not be confused with the far more numerous Nasu or Nosu, called by the Chinese 'Lolo' formerly, and 'Yi' now; nor should the [li³³ɕi³³] be confused with the Lisu. It is interesting, though, that the most prestigious, central subgroup of all these groups is 'black', and that Nasu/Nosu also means 'black people'.

Nahsi tradition, according to Rock², suggests that the Nahsi were driven southwestwards into their present area by Chinese expansion. He thinks that the Nahsi and Ch'iang, pastoralists in Szechwan, were formerly one group. On the other hand, there has been considerable friction between the Nahsi and the adjacent Nasu/Nosu, with bandit raids

and destruction of forests in the Nahsi area by slash-and-burn Nasu/Mosu agriculture. By contrast, there are harmonious relationships, feelings of kinship, and intermarriage among many Loloish groups.

There is a large Nahsi literature, mostly religious, which is written in a pictographic script completely independent of the Chinese and Nasu/Mosu scripts. This literature has been very extensively studied, beginning with the work of Recot³. The most numerous studies of Nahsi literature are those of Rock⁴; a great deal of work has also been done by Li Lin-ts'an, Chang K'un, and Ho Tshai⁵. Wen has also done some work on Nahsi writing⁶, comparing the pictographic system with a syllabic system which Rock also provides information on. Both Nahsi writing systems are now going out of use, as the Nahsi religious practitioners, the main users, are not encouraged by the present Chinese administration.

Dialects and Data

Voluminous data on several varieties of the 'standard' Nahsi as spoken near Li-ch'iang are available. Rock provides a massive dictionary of what he takes to be the 'purest' Nahsi, as spoken to the north and west of Li-ch'iang. Fu⁷ provides considerable material on Weihsu 'Moso', the same dialect as Li/Chang/Ho's informant, as spoken in an area about 100 miles WNW of Li-ch'iang, very near the border of Tibet. I was fortunate to meet, in 1973, a cadre who had worked in the Nahsi literacy program for a number of years, Chan Fook-chuen; he was able to provide information on the new orthography used for Nahsi in China, and a large number of forms were elicited from him⁸. In addition, a small number of forms are cited in Hu/Tai 1964 in this orthography. Rock suggests that Li's data shows strong Tibetan influence; and that the Nahsi spoken in Li-ch'iang town, as by Chan, shows considerable Chinese influence. He also provides fifty forms in the Yungning dialect, called ²Li²-khin by the Nahsi (¹Na-²khi in his transcription), and [li³³ɸi³³] by the speakers, which seem to show that that dialect is much more divergent, but still certainly Nahsi; as opposed to 'Haifan' as spoken in Muli, which in some cases shows more similarities to Loloish in its vocabulary⁹. These forms from Rock, and the forms from Hu/Tai 1964, are cited in an appendix; forms from Rock 1963a, Fu 1943, and Bradley/Chan 1973 are cited in a wordlist drawn from Bradley 1975, along with *BL and *L forms, in order to provide data for comparison. Bradley/Chan 1973 elucidates the rather idiosyncratic transcription used by Rock, as well as filling some gaps in Rock's data.

There are various dialectal differences between Weihsu, Li-ch'iang town, Li-ch'iang district, and orthographic forms. Most notably, Fu's Weihsu data shows a number of instances of a low-to-high rising tone, [15], in lexical items that have the low-falling

tone, [21], elsewhere; e.g. 'pig'(21) [bu 15]. A somewhat larger number of instances occur with Weihsí high-to-low falling tone, [51], in lexical items that have the mid-level tone, [33], elsewhere; e.g. 'horse'(6) [qua 51]. Far more numerous examples show mid-level tone, or low-falling tone, in both Weihsí and other dialects of Nahsí. The conditioning factors for these tonal splits are not clear; they result in the occurrence of native lexical material in the Weihsí rising tone¹⁰, and of an additional high-to-low falling tone in Weihsí that does not occur elsewhere¹¹.

Another striking dialectal difference is that lexical items showing the rhyme [ua], which are thus realized in Fu's and Rock's material, and thus written in the orthography are normally realized with [ɔ] instead in Li-ch'iang town, according to Chan. Rock says that Li-ch'iang town speakers do not make all of the distinctions made in 'pure' Nahsí; there are also apparently differences in the phonetic realizations of some phonological units between different dialects. For example, Rock's kh or [ç], which is also thus transcribed in Fu's materials, is written [ç] in the orthography, and thus pronounced by Chan.

Rock's transcription is rather idiosyncratic, using combinations of roman letters rather than phonetic symbols; for example, t'gky represents orthographic [tç], or Fu's [cç]. It also seems that Rock's transcription is too narrow, making distinctions that are not phonologically contrastive. The orthography, and Chan's pronunciation, can be used to elucidate some of the more obscure combinations that Rock uses. Fu's transcription, which uses IPA symbols and Chao tone-letters, also appears to be too narrow. The orthography, like most modern orthographies in China, uses IPA symbols; like some other orthographies in Yunnan, it may be underspecific, although it is intended as a broad transcription. The three systems are presented successively below; the charts are arranged so that corresponding symbols are in the same position. In Rock's transcription tones are indicated by a superscript number (1 to 4) to the left of the syllable, while Fu and the orthography use Chao's tone-letters following the syllable.

Rock	Fu	orthography
1 -	- ˥ (or - ˨)	21
2 -	- ˨˥ (or - ˨˩)	33
3 -	- ˩˥	55
(4 -)	- ˩˨	(13)

As noted above, the rising tone occurs only in a loanword secondary system in dialects other than Weihsí. There are thus three-tone (high, mid, and low) systems for native vocabulary in Li-ch'iang dialects, and a five-tone system in Weihsí: high, mid, low, rising, and falling tones.

Rock's initials

bp	dt	ds	ch	tgky	gk	
p'	t'	ts'	ch'	t'kh	k'	
bb	dd	dz	dsh	gky	gg	
b	d'	dz'	ds'		g	
mb	nd	ndz	ndsh		ngg	
mb'	nd'	ndz'				
m	n/nn		ny		ng	
ff	ll	ss/sz	sh	kh	kh	h
w	l	z	zh	y/z'	gh	

Orthographic initials

p	t	ts	tʂ	tɕ	k	voiceless unaspirated stops/affricates
ph	th	tsh	tʂh	tɕh	kh	voiceless aspirated stops/affricates
b	d	dz	dʒ	dʑ	g	voiced stops/affricates
mb	nd	ndz	ndʒ	ndʑ	ŋg	prenasalized stops/affricates
m	n			ŋ	ŋ	nasals
f		s	s		x	voiceless fricatives
v	l	z	ʒ	j	ɣ	voiced fricatives, lateral

Weihsui initials

p	t	t	ts	tʂ	cɕ	k
p'	t'	t'	ts'	tʂ'	cɕ'	k'
b	d	d	dz	dʒ	ʃʃ	g
mp	nt	ŋl	nts	ŋlɕ	ʃcɕ	ŋk
m	n			ŋ	ŋ	
f	t	s	ʂ	ɕ	x	h
v	l	z	ʒ	j	ɣ	h

It can be noted that the orthography does not distinguish between alveolar and retroflex stops or affricates, as occur in Weihsui and possibly in Rock's material. There is also reported distinction of fortis versus lenis voiced stops by Rock, not seen elsewhere. This distinction also appears for prenasalized stops, which are voiceless in Weihsui, and voiced in Li-ch'iang town and the orthography. A distinction between voiceless and voiced laterals occurs in the Weihsui material, and in Rock's material, but not in the orthography or in Li-ch'iang town. The distinctions separated by ' / ' in Rock's material appear not to contrast phonologically, as they are complementarily distributed with initials.

Rock's vowels

i	ü	ĩ	ũ	v	u	ua	un
e	ö		ěr		o	ou	iu
			ı		ō		
ä	a	ɛ		aw		u̠a	(ang)

Two vowels occur nasalized in native words: un and u̠a̠; [aŋ] occurs in loanwords.

orthography

i	y	ɿ	ʅ	u	y	u	ua
e			ər			o	io

[e] and [o] are phonetically realized as half-close or half-open vowels.

Weihsi vowels

i	y	ɿ	ʅ	u	u	ua	ĩ	ỹ	ũ
		ɔ	ɻ	ir	y	o	io	ĩ	ō
ix	ɛ			ia	ʌ	ɔ		ĩ	
				a	ia			ũ	ĩũ

Most nasalized vowels occur syllable-initially or after [h], and nasality is thus not contrastive; but [ĩ] corresponds to Rock's ä, and orthographic [ɛ], and [ũ] also occurs in contrast with [a] after initial consonants. In general, vowels have [-i-] after the palatal affricate or fricative initials in Fu's data; phonological palatal affricates or fricatives seem to have alveolar affricate or fricative allophones before [ɿ] and [ʌ]. Also, it seems possible to account for most lip-spread vowels within one phonological unit, perhaps /i/, with allophones as follows:

- [ĩ] vowel-initial
- [ɿ] after alveolar affricates and fricatives
- [ʅ] after retroflex stops, affricates, or fricatives
- [u̠] after velar stops or fricatives
- [i] elsewhere: after bilabials, alveolar stops, laterals, and so on.

See Fu 1941 and 1942 for further phonological statements; his data does not include a phonology, but instead gives phonetically transcribed forms.

Rock's data is also overdistant in its vowel transcriptions: a, ä, and aw all appear to correspond to [a] in the orthography, and [a] in Weihsi; e.g. 'bitter' (550) ²k'aw, orthographic kha 33, Weihsi [k'a 51]. Rock's o/ou/ō distinction may represent a dif-

ference analogous to the Weihsai [o]-[ɣ]-[ɔ] distinction, which does not appear in the orthography.

Comparison

Shafer, using data from early, unreliable works, classified Nahsi as a Loloish language, one of various coordinate subgroups within Loloish; other subgroups included Ch'iang, Northern Loloish, Central Loloish, and Southern Loloish¹². The inclusion of Nahsi has been assumed by various later reconstructors of *L, such as Matisoff. However, better Nahsi data, and the much better *L and *BL reconstructions which have been expanded and solidified by Burling¹³, and especially by Matisoff¹⁴, cast doubt on Shafer's conclusion.

When Nahsi forms are compared directly with the *L and *BL reconstructions in Bradley 1975, cited here, systematic regularity of correspondence is not difficult to see. On the other hand, much of this regularity may be attributed to residual, shared *TB factors; and some of it may be due to areal convergence, a result of living in the same area and coming into contact. Here, several instances which may be seen as characteristically *BL or *L are examined more closely, and it becomes clear that Nahsi may in fact be very close to *BL within *TB, but it is certainly not a Loloish language, and probably not a Burmish language either.

To begin with the tonal system, it seems possible to agree with Benedict: for *ST and *TB - a two-tone system should be posited. These *Tones are regularly reflected in *BL Proto-Tone 1 and Proto-Tone 2, and in Nahsi low-falling tone and mid-level tone. Thus, such similarity is residual, and not an argument for Nahsi and *BL relationship. The divergent development in the *BL tonal system is Proto-Tone 3 (*T3). Although the number of lexical items reconstructed with *T3 for *BL is smaller than the number reconstructed with other *Tones, there are numerous good *styma* which have regular cognates throughout BL. Of the 64 examples in Bradley 1975, 37 have likely cognates in Nahsi. Twelve examples are particularly solid, both in *BL and in the certainty that the Nahsi form is related. Of these, two have low-falling tone in Nahsi ('egg'(86) and 'fall'(692A)); six have mid-level tone ('thumb'(114)/'female'(174)/'mother'(200); 'father'(201); 'day'(461); 'clear'(556); and 'open'(714)); and four have high-level tone ('breast'(119B)/'milk'(155B); 'heart'(142); 'forget'(591); and 'ripe'(764B)) in their Nahsi cognates. Thus, the most frequent reflex in Nahsi, if we insist on including Nahsi within *BL, is identical to the reflex of *T2. On the other hand, there does exist a derivational process, whereby Nahsi forms with mid-level tone have forms with high-level tone as well: causative pairs, among others. Thus, while the exact *BL development seems not to have occurred, a similar development has.

Looking at the question from the Nahsi point of view, it may be asked what the conditioning factors for the development of the high-level tone were. Of 83 examples with possible *BL or *L cognates, 53 are *stop-final syllables; consideration will be deferred until the question of *stop-final syllables is discussed. Twelve examples are reconstructed with *BL *T2; ten with *T1; seven with *T3, including the four very secure examples cited above; and two examples cannot securely be attributed to a *BL Proto-Tone. Some of these examples are area words - that is, they occur in phonetically similar form in various languages, genetically related or not - and thus should not be used for genetic classification. Twenty of the remaining examples are reconstructed with some *BL prefix: *ʔ, *k, *s, and so on; the four examples securely representing *BL *T3 by inference also support some kind of *prefix, which led to the development of *T3. The causative pairs, intransitive verb with mid-level tone and transitive verb with high-level tone in Nahsi, can be reconstructed with *s-prefix. Thus, it appears that the Nahsi high-level tone results from a separate, but similarly conditioned, tonal split to the *BL *T3.

The *L tonal split in *stop-final syllables, brilliantly explained in Matisoff 1972, is not seen in Nahsi, as Okrand has observed. Instead, there is a split conditioned along generally similar lines, much as the splits observed by Burling in some Burmish languages, or by Matisoff in Jinghpaw. That is, syllables with *voiced initials tend to develop lower-pitched tones, while syllables with other kinds of initials, *voiceless or *prefixed, tend to develop higher-pitched tones. In each case, the general trend is similar, but the details differ - and thus parallel, independent developments must be admitted, based on universal phonetic tendencies, reinforced by areal phonological tendencies¹⁶. In the case of Nahsi, *voiced stops, fricatives, nasals, and resonants, and *ʔ in initial position with *stop-final syllables have Nahsi reflexes with low-falling tone; *voiceless (aspirated) stops, and some kinds of *prefixed *voiced stops, resonants and fricatives, as well as *s/ʔ-prefixed *nasals, and vowel-initial *stop-final syllables have Nahsi reflexes with high-level tone (the 53 examples cited above). Thus, high-level tone in Nahsi seems to be conditioned by certain kinds of *prefixation, whether the *syllable is *stop-final or not. There are also 34 examples of *stop-final syllables showing Nahsi mid-level tone reflexes; these seem to involve *prefixed voiceless stops, and *resonants, *fricatives, and *nasals with kinds of prefixes other than those which trigger the development of high-level tone. However, such environments are less numerous than those which result in the development of the high-level tone. In view of the relative lack of systematic correspondence between *initial manners of articulation as reconstructed for *BL or *L, and the Nahsi initials, it is not possible to categorize the exact conditioning environments for the Nahsi developments in terms of *BL reconstructed *initials and *prefixes.

Comparison of Nahsi forms according to *BL or *L initials reveals some suggestive similarities, but little systematic, regular correspondence. To begin with *manner of articulation, it is instructive to look at the *L *h-prefixed stops, which are a distinctive characteristic of Matisoff's *L reconstruction¹⁷. There are 26 Nahsi forms which appear to be cognate with *L forms reconstructed with *N-prefixed stops in *L; of these, nine have prenasalized stop initials in Nahsi; five have voiced stops; five have voiceless aspirated stops; five have voiceless unaspirated stops; and four have fricative initials¹⁸. The nine examples which are prenasalized both in *L and in Nahsi are 'sparrow'(55); 'urine'(149A); 'wet'(335); 'pillow'(330); 'think'(587); 'walk'(648A); 'hunt'(702); 'shoot'(704); and 'play'(726A). Several of these examples, e.g. 149A and 702, show differences of position of articulation, so they may not in fact be cognates. Again, looking at the question from the point of view of Nahsi, it is useful to see which cognates in Nahsi have prenasalized stop initials. There are 43 examples with suggestive similarities; of these 43 plausible cognates, 16 may correspond to *BL/*L *voiced stop initials; ten to *voiced stops with some *prefixes: *ʔ, *ʕ, or the various *stop-prefixes which Matisoff includes in the cover symbol *C¹⁹; the abovementioned nine, including a few dubious cognates, correspond to *BL/*L *N-prefixed stops, *voiced or *voiceless; the remaining eight examples are reconstructed with various *initials in *BL - *voiceless prefixed or unprefixed, two *prefixed nasals, and three *C-prefixed resonants, in which prefix-fusion may be involved. Thus, it seems that the most frequent source of Nahsi prenasalized initials, if Nahsi is taken to be a *BL language, are the *voiced stops. Returning once again to *BL/*L, it is instructive to look at the Nahsi cognates of *voiced stops. Here, 39 examples appear; of the 39, the above sixteen have Nahsi cognates with prenasalized stop initials; thirteen have voiced stop initials; six have voiceless stop initials; two have voiceless aspirated stop initials; and two vary between dialects, some dialects showing voiced stop reflexes, others showing prenasalized stop reflexes. Thus, although *BL cognates of *voiced stops tend to have Nahsi reflexes with prenasalized stops, again there is no absolutely regular pattern. Further discussion of this problem in the light of diachronic and areal factors will be found below (p.11).

The development of other *manners of articulation shows similar patterning. There are some striking subregularities within Nahsi; for example, a number of lexical items reconstructed with *w-initial in *BL/*L have Nahsi cognates with [b] initial: 'pig'(21); 'palm'(112); 'elder brother'(202-1); 'flower'(301); 'wear'(681); and possibly 'intestine'(146), though this last lexical item is reconstructed with *ʔ-initial for *BL. There are also some interesting developments of lexical items which are reconstructed with *nasal-initials for *BL/*L; some involve reanalysis of *nasal-initial + *medial so that the *medial is initial in the Nahsi form; others may indicate a fusional origin for the corresponding *BL/*L forms. Several examples are cited by Okrand;

examples herein include 'horse'(6); 'monkey'(23); 'bird'(48); 'knife'(257/8/9B); 'grass'(302); 'lick'(630); 'swallow'(636)²⁰; 'hungry'(637); and 'raise an animal'(725). There are some instances in which Burmish languages have fusional **m*-prefix, but Nahsi (and Loloish) fricative or lateral initials: 'snake'(60A) and 'grandchild'(208). 'husband'(217) shows both the fused etymon's reflex, [mo 33], and a reflex not showing the **m*-, Rock's form *2*lv 'dead husband'.

There are possibly parallel instances of voiceless fricative initials in cognates of **L* etyma with **ʔ*-prefixed nasals: 'feathers'(85); 'ear'(102-1); 'brain'(140); 'red'(102); 'green'(508); and 'deep'(526). Other unusual developments with **nasal* initials have to do with sequences reconstructed as **ŋa*: 'five'(480) has varying forms in different dialects, including [wua] and [ɲua]; 'I'(438) has a reflex [ɲo]; but two other instances, 'fish'(70) and 'borrow'(600), as well as 'nose'(93-1) **sna*¹ and 'breast/milk'(119B/155B) **no*³, have reflexes [ɲi], all with the regular tonal reflex.

As in the case of **initials*, there are differences in the **rhymes*²¹ between Nahsi and **BL*, which result in the absence of a single regular correspondence pattern between Nahsi forms and **BL*/**L* forms reconstructed without reference to Nahsi. Three **rhymes* will be examined: one **vowel-final*, **a*; one *nasal-final*, **aŋ*; and one **stop-final*, **ak*. The development of **a* has been taken as a principal sound change for subcategorizing **L* by Matisoff, much as the **High*/**Low* distinction in **stop-final* syllables, or the **prenasalized stops*, have been used in the case of **tones* and **initials*.

The Nahsi cognates of **BL*/**L* **a* rhymes provide 63 likely cognates; of these 63, 29 show the regular tonal reflex, and a plausible initial reflex, and eight are **T3* in **BL*, for which there is no regular Nahsi reflex. Taking these 37 examples, there are no fewer than thirteen different reflexes of **a*; three of these reflexes are supported by five or more examples, while some appear only after certain initials. In order of number of examples,

[e] 'thumb'(114)
 [e] 'nose'(93-1); 'female'(174); 'pants'(228); 'moon'(318); 'salt'(408); 'many'(752);
 'mother'(200)

[α] 'tiger'(13); 'frog'(66); 'father'(201); 'strength'(423); 'bitter'(550); 'yawn'(574)

[o] 'armpit'(116A); 'son'(206); 'between'(453); 'I'(438); 'tobacco'(406)

[i] 'fish'(70); 'tongue'(96A); 'right'(445); 'borrow'(600)

[u] 'medicine'(413B-2); 'chew'(635A); 'fall'(692A)

[ɿ] 'bee'(77); 'cloth'(405) [ɿ] 'people(classifier) '(496); 'saw'(392)

[u] 'clear/bright'(556); 'look for'(595)

[ɿ] 'meat'(135); 'eat'(629) [ɿ] 'earth'(323-2)

[ua] '5'(482); 'help'(696) [oa]/[o] 'palm'(112) [ə] 'not'(801)

There is rather more regularity in the reflexes of the other two *rhymes considered; however, all three *rhymes would be expected to show residual similarity, as a result of *TB origin, whether Nahsi is a BL language or not. Of 23 examples showing Nahsi cognates of *BL/*L forms with *a₁, 19 show the regular tonal correspondence, and all have plausible initial correspondences. The four tonal exceptions have the Nahsi high-level tone. There are four main reflexes, much less diverse phonetically than those of *a: 8 examples of [o], five examples of [u], four examples of [ɣ], and three examples of [ʷ]; there is also one instance each with [ua], [i], and [a]. Of 36 examples showing probable cognates of *ak in Nahsi, [a] and [u] are supported by eight examples each; [o] is supported by five examples; [ə] and [ɛ] are supported by three examples each; [y], [ɣ], and [io] are supported by two examples each; and [ʷ], [i], and [ua] are each supported by one cognate example.

In the area of morphology, the only clear instance which relates to *TB, and is reflected in some forms, both in *BL and in Nahsi, is *s-prefix for causative verbs, i.e. intransitive verbs without the *prefix, and transitive verbs with the *prefix. This prefix is rather productive in Jinghpaw, and is often observed in Burmese verb pairs as aspirated or breathy-initial verbs. Matisoff has pointed out the occurrence of such pairs in Lahu, and in fact some such pairs seem to occur in nearly every Loloish language: differences in tones or initials occur, which are in part the reflexes of the *TB *s-. In Nahsi, a similar alternation between mid-level and high-level tones occurs:

² t'u 'come out'(656)	² zhěr 'afraid'(689)
³ t'u 'take out'(656)	³ chěr 'frighten'(689)
	¹ ndshěr 'frightened'(689)

This alternation provides a possible key to the conditioning factors involved in the development of high-level tone in Nahsi. The additional possibility of an *N prefix is not limited to the above item; see also 'burn'(772) [ʃɿ 55] 'set on fire', [ɲtɕɿ 33] 'be lit'.

There is some tone sandhi which occurs in Nahsi, which must be taken into account before making tonal comparisons. In the Li-ch'iang town dialect, a sequence of two low-falling tones is realized as [33 + 21], rather than [21 + 21]; a sequence of two high-level tones is realized as [33 + 55], rather than [55 + 55] - in both cases, within a word, the first of two identical non-mid tones is realized phonetically as a mid-level pitch. For example, 'flower'(301) [ba 33 ba 21] or [ba 21]; 'hand'(111) [la 21], 'palm'(112) [la 33 bo 21]. Also, the final syllable in nonfinal clauses has a high-to-low falling pitch and contour in the same dialect.

despite the rather negative conclusions that the relative irregularity of correspondence between Nahsi and *BL or *L might imply, it is certainly true that there is a very considerable similarity, which is not due to residual *TB factors alone. One way to measure this similarity is in terms of shared vocabulary. Using an 866-item list²², 835 *syllables are reconstructed for various stages of *BL or *L; 688 of these have cognates in three or more BL languages, and are thus more likely to be reliable cognates between *BL and other subgroups of *TB. Of the 835 *syllables, 456 (54.6%) have possible Nahsi cognates; of the 688, a higher proportion, 415 (60.3%) have possible Nahsi cognates. This proportion of cognacy is almost certainly higher than that between, e.g. Tibetan and *BL. While I do not claim to quantify 'time depth', it seems likely that the proportion of shared, cognate vocabulary is an excellent criterion for linguistic subgrouping.

Phylogenetic Speculations

As Wolfenden²³ pointed out long ago, we must suppose that a large amount of *prefix morphology existed at the *TB and later stages which preceded *BL and *L. Some *prefixes were found throughout *TB, and are reflected in most TB languages - for example, the *ʔ pronominal or kinship *prefix. Some of the *prefixes had clear morphological functions, such as the *s 'causative' *prefix with verbs. Some *prefixes had such functions in some TB languages, but not in others; e.g. the Tibetan m-prefix with body-parts. In some instances, a prefix has remained productive, e.g. *s in Jinghpaw; in other instances, regular sound change has eliminated the actual *prefix, but left traces elsewhere in the syllable: Burmese initial alternations, and tonal alternations in some Loloish languages, reflect the *s-prefix in a fossilized way, in a restricted subset of the lexical items to which the *prefix might have been attachable. TB languages can sometimes be subgrouped according to which *prefixes are reflected or present in the languages, particularly when a *prefix is reconstructed only for some subgroup, e.g. *BL. Thus, Bradley 1971 proposes that there were four *prefixes that were productive at the *BL stage - that is, which could be prefixed to any lexical item within the appropriate semantic class. Two of them, *ʔ and *s, are also reconstructed for *TB; but two seem to represent *BL innovations: a *k animal prefix²⁴, and an *f body-part prefix, used with internal body parts²⁵.

Katisoff 1973a discusses the various ways in which *prefixes can affect the development of *initials and *tones in BL languages. The *prefixes can be lost without trace; they may affect the manner of articulation of the *initial, i.e. fuse in a more or less suprasegmental way; or they may fuse with the *initial in a segmental way, thus becoming the initial and leaving the former *initial as the medial, or becoming the first element in an initial cluster, e.g. prenasalized stops; or, when the *prefix system is in an unstable condition, an *initial + *medial can even be reanalyzed as

a *prefix + *initial, leaving the former *initial vulnerable to loss when that *prefix is lost - as in the case of the examples cited above (p.9, top) in Nahsi. Of course, the same *etymon may develop in different ways in different languages - as in the case of 'snake'(604) or 'grandchild'(208) in Burmish, with initial *m by *prefix-fusion (segmental), versus Loloish (and Nahsi) with initial *resonants. Even within subgroups, there is often some alternation of *prefixes: presence versus absence, or one *prefix versus another, for particular *etyma. Thus, Hatisoff 1972 discovers considerable alternation even within *L, when the conditioning factors in the *stop-final syllable tonal split are examined.

One may suggest an earlier stage than *BL, with various *prefixes reconstructed for *BL freely productive - including those prefixes which have fused suprasegmentally by the later, *BL stage. Thus, *stops (voiceless and voiced) may have been prefixed by *s, by *ʔ, by *N, or by *C²⁶, some with semantic or morphological functions, and others fossilized, derived from *TB. Thus, if we include Nahsi within this stage, in Proto-Nahsi/Burmese-Lolo (*NBL), the absence of absolute regularity of correspondence observed above becomes much less difficult to understand. The distribution of the *N-prefix may have been freer, and then become fossilized at a later stage, Proto-Nahsi or *BL, with different lexical distributions, as observed, showing partial overlap. It should also be recalled that the process of *prefix development must have been a gradual process, and while some prefixes had already fused in one way or another, others, e.g. the four *BL prefixes noted above, were still productive, and may have been prefixed to lexical items having fossilized *prefixes already. Thus, differences in the lexical distribution of productive *prefixes may account for observed 'irregularity' of correspondence patterns.

The development of tonal systems in BL and other TB languages is closely connected with the *prefix systems, but there is a basic, perhaps universal factor involved in most of the tonal splits. Syllables with voiced initials are lower-pitched, and syllables with voiceless initials are higher-pitched. The general tendency is, in Southeast Asian languages to devoice *voiced stops; as a result, contrast is transferred from a syllable-initial feature to a pitch feature. This is the basic mechanism underlying the tonal splits, along generally parallel lines, in Tibetan; in Jinghpaw, Nahsi, Burmish (e.g. Maru) and *L *stop-final syllables - in all cases, syllable types in which tonal contrasts did not occur at earlier stages. In instances that occur with syllable-types already having *tonal contrasts, the results are more complex, typically involving contour as well as pitch - as in various Chinese 'dialects' or in some Loloish languages²⁷; or involving other kinds of suprasegmentals, e.g. phonation-type, with the *BL *T3.

Another factor that may be involved here is the tendency for languages in contact to converge in various ways. Such convergence - phonetic, phonological, morphological, and syntactic - has been observed in detail in Southeast Asia by Henderson²⁸. This may be involved in the proliferation of tones and the devoicing of voiced stops. A suggestive example, on a smaller scale, which has immediate relevance to Nahsi is the development of prenasalized stops in southeastern TB languages.

At present, southeastern dialects of Tibetan, such as Golok, are the only ones in which orthographic a-chung and m-prefixes are reflected in word-initial, colloquial prenasalized stops, affricates, fricatives, and nasals²⁹. Western dialects of Nasu/Nosu in western Szechwan and northwestern Yunnan are the only Loloish languages in which the *L *N-prefixed stops are realized as prenasalized stops. Ch'iang, to the northeast, also has prenasalized stops in some dialects. And Nahsi, spoken between these various languages, also has prenasalized stops. Thus, within a limited geographic area, all the major languages have prenasalized stops; while languages genetically related to at least two of these languages outside this area do not now have prenasalized stops³⁰.

Moreover, when actual cognates, rather than similar phonological or phonetic forms are sought, there appears to be relatively little genetic relationship in the distribution of prenasalized forms. As will be recalled, there were only nine Nahsi forms directly cognate to *L forms reconstructed with *N-prefix that have prenasalized initials in Nahsi. These forms are outnumbered by the cognates of *L *N-prefixed forms with other reflexes in Nahsi, and by the number of Nahsi forms with prenasalized initials that have *L cognates other than *N-prefixed initial. If anything, the situation when comparing the more distantly related Golok is worse: none of the 66 examples of Golok prenasalized initials that Sprigg collected³¹ has a plausible *L *N-prefixed, or Nahsi prenasalized, cognate. Looking at the question from the other point of view, of 23 Nahsi prenasalized forms cited by Okrand, Sprigg cites seven examples with Tibetan orthographic a-chung prefix in some forms, nine examples with Tibetan orthographic forms not compatible with prenasalized forms in Golok; and of the seven possible cognate forms, only one, 'blow' (690), has a prenasalized Golok form; but the Nahsi and *L initial in this instance is *nasal, *smut^H; [mu 21]. The predominant productive source of Golok forms with prenasalized initials is the Tibetan m- body-part prefix, not present in Nahsi or *BL; thus, the historical sources of the prenasalized initials are different, and the lexical distribution of the prenasalized initials is different, in the different languages of the area. Whether such a situation represents a typical result of areal convergence is difficult to determine; but it certainly represents one possible result of such convergence.

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Footnotes

1. Rock 1963a xxvii-xcix
2. Rock 1963b 19
3. Bacot 1913
4. Rock 1937 and elsewhere; see Rock 1963a for full bibliography
5. Li/Chang/Ho 1944 through 1970
6. Wen 1946
7. Fu 1941, 1942, 1943; my thanks to C. Wong for translating Fu 1943.
8. I acknowledge with pleasure the provision of an NSF travel grant to attend the

th Sino-Tibetan Conference, San Diego 1973. I would like to thank Prof. B.K. 'ou and Cheung Yat-shing of the Department of Linguistics, UCSD, and especially Chan Fook-chuen, without whose assistance much of the data in this paper could not have been available.

se, for example, 'ear'(102), *BL *(C)na²ba¹, Muli napàh. There are several other dialects of Nahsi, on which no data are available. Rock reports that the Zhër-khin ('people who are afraid') live in the low-lying river valleys of the Yangtse, and speak a different dialect; also, the Shu-khin (tones not given) live in the northwest of the Nahsi range - and are perhaps speakers of Gyarung Tibetan. I have unfortunately been unable to consult the excellent works of Prof. Chang K'un on Gyarung during the writing of this paper.

the low-to-high rising tone [15] occurs in loanwords in other dialects, and thus is not in the primary, native-word tonal system in those dialects. See p.10 on the subject of sandhi in the Li-ch'iang dialect.

ut a [51] pitch and contour occurs in the Li-ch'iang town dialect as a syntactic marker of the last syllable of a nonfinal clause.

hafer 1955

urling 1967

atisoff 1969, 1970, 1971, 1972, 1973b, 1974

urling 1967; Bradley 1971 and Benedict 1972b suggest possible origins for *T3, e.g. *TB *s-prefixes or suffixes.

atisoff 1973a; Henderson 1965

atisoff 1971

the presence of fricative reflexes is not too suprising. There are several *etyma noted in Matisoff 1969, and more examples in Bradley 1975, which appear to vary between *affricate and *fricative initials. Also, *velar stops sometimes have fricative reflexes, e.g. *k in Akha.

atisoff 1972

the Nahsi form suggests a revised *BL/*L reconstruction, *m-lo(k), for this somewhat uncertain *etymon, supported only in Burmese and Akha.

Rhyme includes the *vowel, and the *final (stop or nasal) if any.

n Bradley 1975, cognates were sought for 866 forms, glossed as in the appendix here. In most instances, a single, monosyllabic *etymon was reconstructed for the stage of *L or *BL to which it is supported in the data there. In some instances, disyllabic *etyma ('ashamed'(520)) or up to four different *etyma ('village'(355)) were reconstructed. In some instances, the same *etymon was reconstructed for different glosses, and in such cases only one *etymon, presumably with alternative meanings or functions, is counted in the totals cited ('grass'(n)(302)/'weed'(v)(621)). In some instances, no *etymon was reconstructed for *L or *BL; some such cases showed loanwords, or area words, which should probably not be attributed to *BL/*L alone; for example, 'elephant'(11) has a form derived from [tshar] in Burmese, Nahsi, the Dai languages, and some AA languages as well.

the methodology of comparison was, as far as possible, within the usual bounds of regular correspondences being reconstructed with formulaic symbols - though I refer to make the symbols represent a phonetically reasonable source for the observed reflexes. *Syllables were reconstructed in three parts, *initial (with prefixes and *medials, if any); *rhyme (*vowel and *finals if any); and *tone. *Etyma were regarded as reasonably secure when cognate forms were available from three or more BL languages from the following list: Burmese (orthography); Lisu; Akha; Bisu/Phunoi; Nasu/Nosu; Lahu (including dialect forms); and two poorly-

attested Loloish languages of Thailand, Kanburi Lawa and Mpi/KO. Nahsi forms are taken as plausible cognates with the *BL/*L forms when the *initial and/or the *rhyme have a phonetically reasonable reflex in the attested Nahsi form: an alveolar stop for *t, or a close vowel for *i, and so on. A regular tonal correspondence alone, however, is not sufficient grounds for such a postulation but a regular tonal correspondence supports the postulation that the Nahsi form is etymologically related to the *BL/*L form, when other parts of the form are similar too. The *BL/*L *etyma with possible Nahsi cognates, as counted and qualified here, are underlined in the fifth column of the charts.

23. Wolfenden 1929
24. Matisoff 1969; see Bradley 1971 for Loloish evidence, e.g. Akha [xa 21] prefix
25. Bradley 1971; the 'meat'(135) *etymon may have been the source of the *BL *prefix, which is observed in Akha as [ʃa 21], and also in Maru.
26. Matisoff 1972. *C is Matisoff's cover term which here represents the *prefix(es) reflected in Tibetan by orthographic b-, d-, g-, r-, (and l-).
27. Especially in Lahu and Lisu. In Lahu, for example, Bradley 1975 suggests a tonal split in *T2, followed by a flip-flop of pitch in *open syllables, followed by a split in *T1 and a split in the *L *LS (low stopped) tone; all three splits are conditioned by similar factors, involving *prefixes fused into the initial but in each case the exact details of the conditioning differ. The situation in Lisu is not quite so complex.
28. Henderson 1965
29. Sprigg 1968, 1972.
30. Except word-medially or in reading-style Tibetan.
31. Sprigg personal communication 1975. My thanks to Dr. Sprigg for the care and time he put into this and other comments he has made to me.

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Appendix: [li³³ɿ³³], 'Hsifan' (Muli), and 'Nahsi' vocabularies

	[li ³³ ɿ ³³] (Yünnning)	Muli	'Nahsi'	(Li-ch'iang Nahsi)
sheep	tz	ch'ü		[jy ²¹]
horse	shrua	wuēn	qua-ɿ	[ʔ ³³]
bear	gki'h	gwuen		[ɣv ²¹]
cat	hua-li	mats'ü		[xɔ ⁵⁵ le ²¹]
dog	k'u(r)	kadrah		[khu ³³]
pig	bu	djwe		[bu ²¹]
bird	vu-szi	djre		[vu ⁵⁵ zɿ ³³]
chicken	'an	ru		[ɣɿ ²¹]
duck	a	(ya tzu) (Cse)		[a ⁵⁵]
wild duck	ba-mi			[mba ³³]
head	ghu-lu	k'ubleōn		[kv ³³]
hair	ghun-hun	k'umäē		[fv ³³]
eye	nye-lü	nyüēh		[mio ²¹]
nose	nyi-ga	khnyihon		[ni ⁵⁵ mɿ ²¹]
mouth	k'wa-djra	khnyü		[nv ⁵⁵ ta ³³]
tongue	shi-mi	khleä		[ɕ ²¹]
ear	khli-pi	napäh		[le ³³ tsɿ ²¹]
hand	lo-k'ua	je	laɿ	[la ²¹]
finger	lo-nyi	hladzu		[la ³³ ni ²¹]
meat			ɣɿ-ɿ	[ɣɿ ³³]
person	szi	zo-khi		[ɕi ³³]
child	zun-hün	nyi chōn		[zy ⁵⁵]
woman	mua	mumbäh		[mi ⁵⁵ tshy ³³]
clothes	ɕi-lu	brä (bre)		[bɿ ³³ le ²¹]
shoe	ɕi-k'ua	djuwi		[za ³³]
table	surräh	srä		[tso ²¹ tsɿ ⁵⁵]
tree	(ɕo-lzu) (Cse)	sambon		[ndzɿ ²¹]
river	ɕxi-dshi	ch'ü		[ji ³³ oi ²¹]
stream	dshi-mi	se-cl'ü		[dɕi ²¹]
lake	chi-na-mi	ch'wue		[xu ⁵⁵]
fire	mu	mōn		[mi ³³]
house	ji-k'wuh	djōn		[dɕi ²¹]
room	dru-ts'o	dzu		[kɔ ²¹]
door	ki'	gōn		[khu ³³]

Appendix	[li ³³ ɸi ³³]	Muli	'Nahsi'	(Li-ch'iang)
414. field	lūr	hyin		[lw ³³]
477. year			khu ㄣ	[khu ⁵⁵]
478. one	dr	tenyōn		[dw ²¹]
479. two	nyi	nyōn		[yi ²¹]
480. three	ssu	sonyōn		[sɿ ²¹]
481. four	shu	shreyōn		[lu ³³]
482. five	ngea	wōnyōn		[wua ³³]
483. six	khar	t'echuyōn	təhua ㄣ	[təhɿ ⁵⁵]
484. seven	sh	hniyōn		[gər ³³]
485. eight	khu	shweiyōn		[xo ⁵⁵]
486. nine	gku	kh'yiyōn		[ŋgu ³³]
487. ten	ts'e	gutenyōn		[tshe ²¹]
488. hundred	dr-shi	dtarəh		[ɸi ³³]
489. thousand	dr-t'u	dtiyōn		[tv ²¹]
514. cold	dkhù	kyōntra		[təhi ⁵⁵]
516. warm	dtz	tzətra		[tshər ³³](517)
533. thin			mbe ㄣ	[mbe ³³]
541. dry	pwɿ	dtughùgh		[pv ²¹]
550. bitter			kha ㄣ	[kha ³³]
590. know			sɿ ㄣ	[sɿ ³³]
619. dig			ndu ㄣ	[ndv ³³]
621. weed			zua ㄣ	[zə ²¹]
629. eat			ndzɿ ㄣ	[ndzɿ ³³]
637. hungry			zu ㄣ	[zu ²¹]
639. boil			tɿ ㄣ	[tə ⁵⁵]
653. descend			za ㄣ	[za ²¹]
657. jump			tsho ㄣ	[tsho ³³]
677. wash			tshər ㄣ	[tshər ³³]
687. stand			xy ㄣ	[xy ⁵⁵]
706. kill			sy ㄣ	[sy ⁵⁵]
753. few			nw ㄣ	-
801. not			mə ㄣ	[mə ³³]

[li³³ɸi³³], Muli forms from Rock 1963a xxv-xxvi

'Nahsi' forms from Hu/Tai 1964 (glosses translated by Matisoff)

Li-ch'iang forms from Chan personal communication

Vocabulary from Li/Chang/Ho 1967 (gloss in parentheses, if different)

5. sheep	jo ¹¹	406. tobacco	ja ¹¹	629. eat	ndz ³³
6. horse	zwa ³³	440. (his)	t'a ¹³	634. bite	ts'a ⁵⁵
9. (ox)	u ³³	445. right	i ¹¹	648. walk	ndzi ³³
14. leopard	ŋdʒu ³³	446. left	wɛ ³³	652. ascend	py ¹¹
20. (fox)	ŋdʒ ³³	481. four	ro ³³	661. carry	tsa ³³
31. rat	fu ⁵⁵	483. six	ts'wa ⁵⁵	672. write	pur ⁵⁵
48. bird	vu ⁵⁵ zi ³³	jar	bi ³³	677. wash	ts'ar ³³
50. chicken	ɛ ¹¹	whirlwind	hɛ ³³ twa ³³ rwa ¹¹	692. fall	mbja ¹¹
57. pheasant	hwa ³³	bunch	ndwa ³³ rwa ¹¹	695. fold	f ⁵⁵
66. frog	pa ³³	wheat	dze ³³	703. hang up	ts'ar ³³
70. fish	ji ³³	hemp	sa ³³	712. weave	da ¹¹
82. horn	k'wa ³³	bed	tɕwa ³³	718. (collide)	f ⁵⁵
91. face	p'a ³³	yoke	rwa ¹¹	720. send	pu ⁵⁵
92. eye	mja ¹¹	plough	tɕwa ³³	729. spin	tsu ³³
105. neck	ke ⁵⁵	coral	ɕwa ³³ rwa ¹¹	732. (deteriorate)	p'ja ⁵⁵
111. hand	la ¹¹	wine bottle	t'a ¹¹	735. sleep	ji ⁵⁵
115. (claw)	tɕu ¹¹	lime	hɛ ⁵⁵	740. swell	o ³³
135. meat	pa ³³	noise	dʒi ³³ dʒwɛ ³³	743. (accomplish)	pja ³³
body	gu ³³	503. black	na ¹¹	746. (assemble)	a ¹¹
tumor/neck	mbe ³³	510. same	gwe ⁵⁵ gwe ¹¹	757. small	tɕi ⁵⁵
156. person	ɕi ³³	514. cold	tɕ'ɪ ⁵⁵	758. high	swa ¹¹
167. headman	swe ³³	523. tired	xno ⁵⁵	buzzing	zwa ³³
201. father	ba ³³	530. thin	ndza ³³	lose soul	tɕ'wa ³³
230. shoe	za ³³	543. sharp	t'a ⁵⁵	make a rubbing	t'a ³³
261. hoe	ŋdʒwa ³³	550. bitter	k'a ³³		
263. sickle	nda ¹¹	563. good	ka ³³		
281. cooked rice	ha ³³	570. (satiated)	gu ³³		
287. liquor	ɕu ³³	571. blind	ŋgwa ³³		
295. (bamboo)	ʒjwe ³³ tɕ'w ¹¹	clumsy	ŋɕwa ³³		
303. tree	ndz ¹¹	competent	dɕ ¹¹		
323. earth	tau ³³	of mixed flavor	f'wa ³³ f'wa ¹¹		
336. water	dʒi ¹¹	579. belch	ɛ ¹¹		
357. market	dʒu ³³	595. look for	me ⁵⁵		
384. oil	ma ³³	615. (cheat)	kwa ³³		
386. box	ta ⁵⁵	618. (split)	ŋgu ³³		
401. silver	ju ¹¹				

	Rock	DB	Fu	Proto BL
Nahsi	¹ Na - ² kk ⁱ	Na ²¹ ɸ ⁱ ³³	Mo ²¹ so ⁵⁵	
1. antelope	¹ ssä 'goral'	-	-	* <u>hya</u> ²
2. barking deer	¹ t'khi 'brown deer'	-	-	* <u>kye</u> ¹
3. sambbar deer	³ ch'wua	tɕhua ³³	tɕ'ue ⁵⁵	* <u>k - tsar</u> ^{LS}
4. goat	³ d'sɿ	tɕhɿ ⁵⁵	ts'ɿ ⁵⁵	* <u>k - cit</u> ^{LS}
5. sheep	¹ yü	jy ²¹	jio ²¹	* <u>zo</u> ¹
6. horse	² zhwua	ʒua ³³ [ɔ]	ʒue ⁵¹	* <u>waɔ</u> ²
7. mule	¹ dgyü 'donkey'	dər ²¹ ə ³³ sər ²¹	t'ɛ ²¹ ʒue ³³ 'donkey'	* <u>law</u> ² (Cse)
8. buffalo	-	dɕi ²¹ ɣw ³³	fɕ ²¹ 'mule'	8A * ʔo ² 8B * ɲa ²) 9A * nwa ² 9B * ʔmyaŋ ¹ (*na ²) * hya ³
9. cattle	¹ mun/ ² non	na ²¹	ɣw ³³	[tshaŋ] (area)
10. gaur	¹ mber 'yak'	na ²¹ ɣw ³³		* <u>k - dwam</u> ¹
11. elephant	¹ ts'o	tsho ²¹	ts'o ²¹	* <u>k - la</u> ² * <u>k - zik</u> ^{LS} (* Nge ¹) * <u>k - ron</u> ¹ * mi ¹ /ni ¹ * <u>kwe</u> ² * <u>k - wan</u> ¹ * ʔbya ² Cwi ² * <u>wak</u> ^{LS} - * <u>myok</u> ^{LS} * a ¹ (*Clway ²) (*ko ^{2/1}) - * Clo ¹
12. bear	¹ gv	gv ²¹	gu ²¹	
13. tiger	² la	la ³³	la ⁵¹	
14. leopard	¹ zhër/ ² ndshi.	tɕɿ ³³	ɲtɕɿ ³³	
15. Temminck's cat	¹ dtu	-	-	
16. leopard cat	³ khü - ¹ lä	-	-	
17. cat	³ hoa - ² lä	xua ⁵⁵ le ²¹	xua ²¹ le ²¹	
18. dog	² k'ö	khw ³³	k'w ⁵¹	
19. dhole	² ndzɿ/ ¹ p'a	pha ²¹ khw ³³	-	
20. civet	² nd'a 'fox'	bu ²¹	ntɕ ⁵¹ 'fox'	
21. pig	¹ bu	bu ²¹	bo ¹⁵	
22. boar	¹ bu ² gkyi	bu ²¹ tɕi ³³	-	
23. monkey	¹ yü	-	ɛ ⁵⁵ ji ²¹	
24. leaf monkey	-	-	-	
25. gibbon				
26. rhesus				
27. langur				
28. loris				
29. otter	{ ¹ shu - ² zo ¹ ssu - ² zo			* <u>ɣyam</u> ¹ /ʔpyam ¹

	Rock	DB	Fu	Proto BL
30. porcupine	¹ bpö - ² szĩ	²¹ bu ³³ ³³ tphĩ		* <u>2pru</u> ²
31. rat	³ ffũ	⁵⁵ fv	⁵⁵ fu	* k - rwak ^{HS}
32. squirrel	³ hoa ² zhwua ² dsä			(* tok ^{HS})
33. bamboo rat	³ müen ³ ffũ			* pi ²
34. pangolin				* krap ^{HS}
35. brushtailed rat				-
36. weasel	³ ffũ - ² la			-
37. ground squirrel				-
38. raja rat				-
39. shrew				(39 - 1 * bi ¹) 39 - 2 * Cce ³
40. longtailed shrew				-
41. chipmunk				-
42. ferret				-
43. large flying squirrel				(* ʃu ¹)
44. red-cheeked ground squirrel				* hro ³
45. small flying squirrel				-
46. rabbit	-	³³ tho ³³ ³³ le	⁵⁵ t'o ²¹ ²¹ le	(46 - 1 * ta ²) (46 - 2 * lo ^{2/1})
47. animal	¹ nnü/ ² hö 'wild animal' 'domestic animal'			* <u>zan/zaw/zan</u> ²
48. bird	³ vu - ² szĩ	⁵⁵ v ³³ ⁵⁵ zĩ	⁵⁵ vu ²¹ ²¹ zĩ	* <u>5 - nyak</u> ^{HS}
49. hawk	³ gko/ ² nyi ³ zä	⁵⁵ kə ⁵⁵ ⁵⁵ mu	⁵⁵ kv ²¹ ²¹ nto	'eagle' * <u>k - Ccwar</u> ¹
50. chicken	¹ ʃa	²¹ æ ²¹ / ²¹ ŋæ	²¹ hẽ	* <u>k - rak</u> ^{HS}
51. dove	³ dsĩ - ² t'lo - ¹¹ li	²¹ kə ³³ ³³ tsĩ	⁵⁵ t'o ¹⁵ ¹⁵ fĩ	'pigeon' 51A * k - ?ko ² 51B * k - Ngu ²
52. crow	² lä ¹ gk'a	⁵⁵ le ²¹ ²¹ kə	³³ lẽ ³³ ³³ kẽ	* <u>ʔak</u> ^{LS}
53. duck	³ aw (domestic) ² mb'a (wild)	³³ a	⁵⁵ ā	<u>53A * ʔbay</u> ² (53B * gap ^{LS}) * k - gye ²
54. parrot		³³ ndzæ ³³ ³³ zo		
55. sparrow	² ndz'a - ² zo ³ llü ² ts a	³³ ndzæ ³³ ³³ zo		
56. owl	¹ bũ - ² ffũ		²¹ xua ³³ ³³ zĩ 'swallow' ²¹ ntĩ ¹⁵ bo ³³ ³³ fu	* <u>Nja</u> ²

	Rock	DB	Fu	Proto BL
1. partridge	² hoa/ ¹ khü/ ² ffü fv ³³ /xu ²¹			<u>*rək^h</u>
		'stone pheasant'		
8. rooster	¹ ra ¹ p'ər	²¹ phər ²¹	(p'u ⁵⁵ , mule)/hē ²¹ animal' p'o ²¹ 'cock'	<u>*pɕ¹</u>
9. bat	² dzi - ¹ boa	bi ³³ bo ²¹	p'i ²¹ pa ⁵⁵ ba ²¹	<u>59 - 1 *bo¹</u> (59 - 2 *no/na ³)
10. snake	¹ zhi	ʒl ²¹	ʒl ⁵¹	<u>60A *m - rwe¹</u> (60B * laŋ ¹) 60C * hlok ^{LS}
11. green viper				
12. black viper				
13. cobra				
14. python				(* lay ¹)
15. king cobra		ʒl ²¹ mu ⁵⁵		-
16. frog	² bpa/ ⁴ bpa	pa ³³	pa ⁵¹	<u>*k - ʔpa²</u>
17. toad	² non - ¹ mbbu ² bpa pa ³³			<u>*ʔbrut^{HS}</u>
	milk-exhude frog			
18. crab				68A *ga ³ 68B *ji/yi ³) (69 - 1 * da ¹) 69 - 2 (*Cgruk ^{LS}) (* ʔkruk ^H)
19. turtle				
20. fish	² nyi	ni ³³	ni ⁵⁵ dze ²¹	<u>*na²</u>
21. insect	² ba - ¹ di	mbər ³³ di ²¹ /	bu ³³ di ²¹	<u>*bi/bo²</u>
	² mbər - ¹ dzi 'mosquito'		mpē ³³ ts ³³ , mosquito'	
	¹ mbər - ³ lē/ ³ mun mbi ²¹		mpo ²¹ lo ⁵⁵	<u>*Cbrut^{LS}</u>
	³ khü - ² mä			
22. ant	³ t'khyo - ² lo		t'ua ⁵⁵ lua ²¹	<u>*p - rwak^{HS}</u>
23. louse	² shu	ʃu ³³	(ʃo ²¹ 'flea'	<u>*xan¹</u>
24. leech	³ bpō/ ³ llü			<u>*k - rwat^{LS}</u>
25. termite	-	bi ³³ di ²¹		<u>*k - ru²</u>
26. bee	² mb'a	mbə ³³	mpē ³³	<u>*bya²</u>
27. butterfly	² p'ä - ¹ lä	phe ³³ le ²¹	p'ε ³³ le ²¹	<u>*Clu³</u>
28. spider	³ ch'wua - ¹ ma		(ba ²¹ kw ⁵⁵ kw ²¹)	<u>79A *baŋ³</u>
	² la - ¹ ma		'kind of insect' kē ⁵¹ ʃē ²¹ , dragon	<u>79B * Ngu/a^{1/2}</u>
			nts ²¹ l ³³ bo ²¹ ʃjio ³³	
			'beetle'	
			t'c'pa ⁵¹ lo ²¹ mpa ⁵¹ 'spider'	

	Rock	DB	Fu	Proto BL
80. worm	² bā ¹ di	bi ³³ di ²¹	nta ³³ di ³³ 'silkworm'	80 - 1 * bu ^{1/2} 80 - 2 * di ¹
81. roach				(* pi/?pya ³)
82. horn	² k'o	ko ³³		* kro ¹
83. wing	² ndu	mbi ³³ ze ²¹		* doŋ ¹
84. tail	² man	mæ ³³		84 - 1 * daŋ ¹ 84 - 2 * ?mri ² * ?mwe ³ * ?u ³
85. feathers	-	fv ³³		[lan] 88A * ?u ² 88B * ?du ² 88C * ?koŋ ²
86. egg	² gkv/ ² gv	kv ³³	ku ²¹	
87. saddle	³ gkyi	ndz ²¹ kv ³³	cɕi ⁵⁵ k'uē ²¹	
88. head	² gkv	kv ³³ ly ³³	ko ³³ ly ³³	
89. hair (head)	² ffu	fv ³³	ko ³³ fu ³³	89 - 1 * ndzam ^{1/} * tsaŋ ¹ 89 - 2 * kriŋ ¹
90. hair (body)	³ ts'ä	mu ³³	la ²¹ fu ³³ 'arm (hand-hair')	
91. face	² p'a	pha ³³ me ³³	p'a ³³ mæ ⁵¹	* pyu ²
92. eye	¹ niu/ ¹ miu	mio ²¹ y ³³	miy ¹⁵ (~ ²¹)	* (C) myak ^{HS}
93. nose	³ nyi - ¹ mien	ɣi ⁵⁵ mæ ²¹	ni ⁵⁵ mæ ²¹	93 - 1 * sna ¹ 93 - 2 * kaŋ ² * (C) me ² /mok ^{LS}
94. mouth	² k'u	nv ⁵⁵ ta ³³	ni ⁵⁵ ta ²¹	
95. lips	³ nun - ¹ bi	nv ⁵⁵ bi ³³	ni ³³ mpe ²¹	-
96. teeth	² khü/ ² s'ü	xw ³³	xw ⁵¹	96A * swa ² (, i ¹) 96B * ?ci ¹ * ?1(y)a ¹ (* ?ko ³) * ba ²
97. tongue	³ kh1	ɕi ⁵⁵	ɕi ³³	
98. gums	-	xw ³³ dzo ²¹		
99. cheeks	-	be ²¹		
100. chin	¹ lo			100A * ?pi ¹ 100B * do ² * ?tsit ^{HS} 102-1 * (C) na ² 102-2 * baŋ ¹ (* ra ² /roŋ ¹)
101. beard	-	mu ³³ ts1 ²¹	mu ²¹ ts1 ³³	
102. ear	² hā ¹ dsu	xe ³³ ts1 ²¹	he ³³ ts1 ³³	
103. fontanelle				
104. larynx	² lo/ ² tgkye	tɕær ³³ tɕær ⁵⁵	cɕiɛ ³³ pɛ ⁵¹ 'neck'	* liŋ ¹
105. throat	² gkv - ¹ ngu (head-behind)	tɕær ³³	tɕ'ɔ ⁵⁵ k'ɔ ²¹ tɕ'ɔ ⁵⁵	105A * kroŋ ² 'throat' (105B * byiŋ ²)

	Rock	DB	Fu	Proto B
106. chest	¹ gkaw	ku ³³ mu ²¹	ne ⁵⁵ me ²¹ ku ²¹	* <u>kon</u> ²
107. shoulder	¹ p'i		k'ui ³³ p'i ²¹	* <u>Crum</u> ²
108. arm	¹ la	la ²¹ phi ²¹		-
109. elbow		la ²¹ mu ⁵⁵ thu ²¹		109/110 *C
110. wrist	¹ la- ³ cher	la ²¹ tɕər ⁵⁵		
111. hand	¹ la	la ²¹	la ²¹ (vs. 'tiger' <u>la</u> ⁵¹)	* <u>lak</u> ^{LS}
112. palm	² boa/ ² p'u	la ³³ bo ²¹	tsɿ ⁵¹ /la ²¹ mpiv ³³	* <u>k - wa</u> ²
113. finger	-	la ³³ pi ²¹	la ²¹ ni ³³	* <u>sno</u> ¹
114. thumb		la ²¹ me ³³	la ²¹ me ³³	* <u>Cma</u> ³
115. fingernail	¹ la- ¹ dshi 'claw' ² la- ¹ dzu- ³ gkv	la ²¹ ni ³³ kv ³³	la ²¹ ni ³³ ku ³³ tɕu ³³	* <u>siŋ</u> ²
116. armpit		la ²¹ ko ⁵⁵		(116A *?ga 116B * li
117. upper back			sɿ ²¹ mpa ²¹	-
118. waist/lower back	³ t'ü	thw ⁵⁵	tɕ ⁵⁵	* <u>gyaw</u> ²
119. breast		ɲi ⁵⁵	ni ⁵⁵ ni ²¹ (=milk)	119A * lo ² 119B * no ³
120. navel				120A * (Ck 120B * ?do
121. thigh	¹ ndo	ndo ²¹ pa ⁵⁵	nto ²¹ 'arse' kɔ ⁵¹ 'thigh'	121A * Cp 121B * Cta
122. penis	¹ nyi			* <u>n - li</u> ²
123. vulva	³ a ⁴ bpa/ ³ bi/ ² yu- ¹ k'o	ɲi ²¹ pi ⁵⁵	pi ⁵¹	* <u>bat</u> ^{LS}
124. leg	-	khw ³³		-
125. knee	² ndaw- ¹ k'o	tɕər ⁵⁵	tsɿ ⁵⁵ tsɿ ²¹	* <u>du</u> ³
126. calf				* <u>bay</u> ¹
127. foot	² k'ö	khw ³³	k'w ³³	* <u>kre</u> ¹
128. ankle				-
129. heel				* <u>ni</u> ²
130. sole	² boa	khw ³³ bo ³³		130B * Cpa
131. bigtoe		khw ³³ ɲi ³³ me ³³		-
132. toe		khw ³³ ɲi ³³	k'w ³³ mu ²¹ ni ³³	-
133. belly	¹ dtv	dv ²¹ me ³³	dɛ ²¹ me ³³	* <u>wam</u> ²
134. skin	² ghüh	ɣw ³³	ɣw ³³ (or) ua ²¹ ɕv ³³	* <u>re</u> ¹

(human)

	Rock	DB	Fu	Proto BL
135. meat	² shi	³³ ɛ̃ ¹	⁵¹ ɛ̃ ⁵¹	* <u>xa</u> ²
136. bone	² / _o	³³ o ³³	⁵⁵ ɛ̃ ⁵⁵ ²¹ ɛ̃ ²¹ (or) ⁵⁵ ɛ̃ ⁵⁵	* <u>[-ro]</u> ²
137. tendon	² ngv	²¹ mba	⁵¹ ŋku ⁵¹	* <u>[-gru]</u> ²
138. breath	³ ssaw	²¹ sa	⁵⁵ sa	* <u>Csak</u> ^{LS}
139. life		³³ khv	⁵⁵ k'u ⁵⁵ , age'	* <u>sak</u> ^{HS}
140. brain	² gkv ³ ffu	³³ kv ³³ ⁵⁵ fv ⁵⁵	³³ ko ³³ ³³ fu ³³ ²¹ fj ²¹	* <u>(C)nok</u> ^{LS}
141. lungs	³ ch'ər	⁵⁵ tɕhər ⁵⁵	⁵⁵ tɕ' ⁵⁵ ɔ ⁵⁵	141A * <u>[-pap]</u> ^{LS} 141B * <u>ci</u> ²
142. heart	² nnü	⁵⁵ nv ⁵⁵ ³³ me ³³	⁵⁵ nɛ ⁵⁵ ²¹ mɛ ²¹	* <u>ni</u> ³
143. liver	³ ss	⁵⁵ sər ⁵⁵	⁵⁵ sʌ ⁵⁵	* <u>[-siŋ]</u> ²
144. kidney	² mbö- ² lü	³³ jau ³³ ³³ tsɿ ³³	³³ mpy ³³ ³³ ly ³³	* <u>ʔbin</u> ¹
145. stomach	³ hu	⁵⁵ xu ⁵⁵	²¹ di ²¹	* <u>[-wut]</u> ^{LS}
146. intestine	² bbü	³³ bu ³³	³³ bu ³³	* <u>ʔu</u> ¹
147. blood	² ssan	³³ sɛ ³³	⁵¹ ʃɛ̃ ⁵¹	* <u>se</u> ²
148. bile	¹ gkü	²¹ kw ²¹	²¹ kw ²¹	* <u>b - ʔkre</u> ¹
149. urine	² mbi	³³ mbi ³³		149A * <u>Nji</u> ² (149B * <u>i</u>) ²
150. feces	² t'khye/ ³ ch'ou	³³ tɕhər ³³	⁵⁵ cɕ' ⁵⁵ iɿ ⁵⁵	* <u>(k(y))e</u> ²
151. sweat	-	²¹ tɕl ²¹	⁵⁵ ɕʰ ⁵⁵	* <u>krwe</u> ²
152. mucus	-	⁵⁵ ni ⁵⁵		* <u>snap</u> ^{LS}
153. spittle	³ gkyi/ ³ gyi- ¹ ddər	³³ tɕər ³³ ⁵⁵ phi ⁵⁵	⁵¹ kɔ ⁵¹	* <u>kan</u> ²
154. pus	¹ mbər	³³ mu ³³		* <u>Nbriŋ</u> ¹
155. milk	² non(cow) ³ nyi (human)	³³ no ³³	⁵⁵ ni ⁵⁵ ²¹ ni ²¹ (= 'breast')	155A * <u>co</u> ¹ Q55B * <u>no</u> ³
156. person	¹ ts'o/ ² khi	³³ ɸi ³³	⁵⁵ ɕi ⁵⁵	* <u>tsaŋ</u> ¹
157. baby	-	⁵⁵ zy ⁵⁵ ³³ zy ³³	⁵⁵ zy ⁵⁵ , child'	*
158. youth	² bö	⁵⁵ pha ⁵⁵ ³³ tɕi ³³ ³³ me ³³		-
159. bachelor	¹ yu- ² mba	⁵⁵ khv ⁵⁵ ³³ pha ³³ ⁵⁵ tɕi ⁵⁵		* <u>ʔlak</u> ^{LS}
160. maiden		⁵⁵ pha ⁵⁵ ³³ tɕi ³³ ³³ me ³³		
161. man	¹ chwua	³³ zo ³³ ³³ tshy ³³	⁵⁵ j iɛ̃ ⁵⁵ ²¹ kɛ̃ ²¹ ³³ zɿ ³³	* <u>hyok</u> ^{LS}
162. woman		⁵⁵ mi ⁵⁵ ³³ tshy ³³		* <u>Cmi</u> ²
163. elder		³³ ɸi ³³ ⁵⁵ mu ⁵⁵	⁵⁵ mɛ̃ ⁵⁵ ⁵⁵ tɕ' ⁵⁵ ɔ ⁵⁵	(ɕ35)
		'ancestor'		
164. friend		³³ dzu ³³	²¹ ɕzu ²¹ ²¹ zo ²¹	* <u>kyaŋ</u> ²
165. slave	¹ wu/ ¹ zä ¹ p'er	²¹ tɕər ²¹ ²¹ yu ²¹	³³ tɕər ³³ ⁵⁵ ɕi ⁵⁵	* <u>Ckywan</u> ¹

	Rock	DB	Fu	Proto BL
166. widow	² ch'ər	tshər ²¹ thu ³³		*mum ²
167. headman	² ndzɿ' eater' (² swue- ² p)ä 'owner')	kv ³³ ly ³³ dy ²¹	sy ⁵¹ , govt official'	*siŋ ¹
168. priest	² dto ¹ mba ² bpö- ¹ mba - ¹ mbö	to ³³ mba ²¹	to ⁵⁵ mpa ²¹	*do ³
169. shaman	² llü- ¹ bu	(=168)	ɕɛ ³³ tsʌ ³³ 'fortuneteller'	(*maw ²)
170. doctor	-	tshər ³³ kua ³³	tɕ ⁵⁵ ɣw ⁵⁵ kua ²¹	-
171. blacksmith	-	su ²¹ ty ³³ pu ⁵⁵	tsʌ ²¹ ɕo ²¹ ty ³³ pu ⁵⁵	dʒɿ ²¹
172. soldier	¹ mun	mu ²¹ ka ³³	liɛ ²¹ ntsʌ ³³	*Cmak ^{LS}
173. male suffix	² p'u		p'u ⁵⁵	*ʔpa ²
174. female suffix	² mä	me ³³	mɛ ³³	*Cma ³
176. Lisu	² llü- ³ ssu	li ³³ sɿ ⁵⁵		[liɿ]ɿɿ
180. Shan	² B'a- ¹ yi(Cse)			*bi ² cam ²
182. Chinese	² Ha- ¹ bpa	ɣa ³³ pa ²¹	ɣa ⁵⁵ pa ²¹	*hyak ^{HS}
Lolo	² Lo- ² lo	ji ²¹		
Tibetan	² Gv- ¹ dzu	Gu ³³ dʒɿ ²¹		
Minchua	² Lä- ² bbu	Le ³³ bv ³³		
Golok	² Ggö- ³ lo	-		
Yungning Moso	² Lu- ² khɿ	-		
(Hli-khin)				
190. grandfather	¹ ä- ² p'u	ə ²¹ phu ³³	ɛ ⁵⁵ p'u ⁵⁵	*ʔəpo ²
191. grandmother	¹ ä- ² dzi	ə ²¹ dʒɿ ³³	ɛ ⁵⁵ dʒɿ ³³	*ʔəpi ¹
192. FeB		ta ⁵⁵ di ³³	ɛ ⁵⁵ po ²¹ dʒɿ ²¹	{ *ʔəʔu ²
193. FyB		ə ³³ su ¹³	ɛ ⁵⁵ po ²¹ cɕi ⁵⁵	
194. FeS	¹ ä ² nyi	ta ⁵⁵ mo ³³	ɛ ⁵⁵ gu ³³	{ (*ʔəkay ²)
195. FyS		ta ⁵⁵ mo ³³	ɛ ⁵⁵ cɕi ⁵⁵	
196. MeB	² ä- ² gv ¹ ddü	ə ²¹ tsiu ⁵⁵	ɛ ⁵⁵ gu ³³	{ *ʔəri ¹
197. MyB		ə ²¹ tsiu ⁵⁵	ɛ ⁵⁵ cɕi ⁵⁵	
198. MeS	¹ ä ² nyi	ta ⁵⁵ mo ³³	ɛ ⁵⁵ ni ³³	{ (*ʔəCme ¹ /
199. MyS		ta ⁵⁵ mo ³³	ɛ ⁵⁵ cɕi ⁵⁵	
200. Mo	¹ ä ² mä	ə ²¹ me ³³ /mo ³³	(ɛ ⁵⁵)mɛ ³³	200A *ʔəC
				(200B *ʔəy.
201. Fa	¹ ä- ² bpa(colloq)	ə ²¹ di ³³	(ɛ ⁵⁵)mpa ⁵¹	*ʔəpa ³

	Rock	DB	Fu	Proto-BL
2. eB	² ā- ¹ bbū	³³ ə ²¹ bv/ ³³ ko	⁵⁵ ɛ ²¹ bu/ ⁵⁵ ko ²¹ (ko ²¹)	* <u>?əwɪk^{LS}ko¹</u>
3. yB	² gü- ² szɿ	³³ gw ³³ zɿ	³³ gw ³³ zɿ	* ?əpɪ ¹
4. eS	² ma- ¹ ma	³³ ə ²¹ bv/ ³³ gw ³³ me ³³	⁵⁵ mɛ ³³ hy	204B * ?ətsɪ ³
5. yS	² gu- ² ma	³³ me ³³ me ²¹	⁵⁵ mɛ ³³ me ²¹	* ?əsna ¹ m
6. son	² zo	³³ zo	³³ zo	* <u>ʒa²</u>
7. Da	³ mi	⁵⁵ mi	³³ mi	* <u>Cmɪ²</u>
8. GrCh	³ llü/ ² lv ² bbu	(³³ zo ³³ mi ⁵⁵)	(³³ ʃu ³³ pu ³³ me ³³)	* <u>m-le²</u>
9. G GrCh	³ lv- ² bbū			(* ?lak ^{HS})
10. GGGGrCh				-
1. GGGGrCh				-
2. nephew/niece	² dze/ ² ghühg ² ma	³³ dze ³³ yw	²¹ tsɛ ²¹ yw ²¹ me ²¹	212A *Ndu ¹
3. stepmother				(* Nbam ¹)
4. stepfather				-
5. relatives	¹ k'o paternal r. ² nddü maternal r.	²¹ ə ²¹ bu ²¹ gw ³³ zɿ ³³		
6. wife	² mi/ ¹ bu	³³ ni ³³ nv ²¹	²¹ zɛ ²¹ mo ³³ / ³³ ʃɛ ³³ me ³³	* ya ²
7. husband	¹ lv/ ² yan/ ² yu/ (¹ dənd') ¹ gkan	³³ jə ³³ kə ²¹ zɿ ³³	²¹ mo ³³ yw ²¹	* <u>m-lay/plaŋ¹</u>
8. WiFa	¹ ndsū ¹ yü- ² p'ä	²¹ y ²¹ phe ³³	⁵⁵ ɛ ³³ gu ³³ (=MoBr)	-
9. WiMo	¹ yü- ² mä	²¹ y ²¹ me ³³		-
10. SoWi	² ch'ər- ² mä	⁵⁵ mi ⁵⁵ (=Da)	²¹ tsɛ ²¹ me ²¹	* <u>krwe²</u>
1. DaHu	³ mun- ² ghühg	³³ zo ³³ (=son)	²¹ tsɛ ²¹ yw ²¹	* <u>ʒəmak^{LS}</u>
2. descendants	² dsaw 'clan'	³³ zo ³³ mi ⁵⁵		
3. generation	³ ch'ər/ ¹ szɿ	⁵⁵ tɕhər ⁵⁵ /zɿ ³³		223A * ?jo ³ (223B * zɪ ¹)
4. clothes	² ba- ¹ la/ ² baw- ¹ la	³³ ba ³³ la ²¹	³³ pa ³³ la ²¹	-
5. hat	² gu- ¹ mun	³³ ku ³³ mu ³³	³³ ku ³³ mu ⁵¹	(* ?tsɪ ²)
6. turban	² gkv- ¹ ghugh			-
7. shirt		³³ sə ³³ tsɿ ³³		*bun ¹ (loan?)
3. pants	² lä	³³ le ³³ or le ²¹	³³ le ³³	* <u>?la²</u>

	Rock	DB	Fu	Proto-BL
229. leggings		21 ³³ xo ²¹ la ³³	21 ²¹ ko ²¹ 'sock'	* Ndaŋ/Ctaŋ ²
230. shoes	2 ^{zaw}	33 ^{za}	33 ^{zā}	* nap ^{LS}
231. skirt	2 ^{lā-1} gyi		21 ^t	231A *(C)ti ³
232. belt	33 ^{bo} ku ⁵⁵		21 ^{pu} ku ⁵⁵	231B *Ndu ^I
233. shoulderbag		33 ^{khw} tsh ³³		*(C)mit ^{LS} /ut ^H
234. earring	2 ^{hā-3} k ¹ v	33 ^{xe} tɕy ²¹	21 ^{he} k ¹ u ⁵⁵	* <u>k-wa</u> ²
235. ring	3 ^{dta} 2 ^{mā}	21 ^{la} pər ⁵⁵	'ear' (he ³³) 21 ^{la} pē ⁵⁵	* ?ban ²
	'thumbring'			
	1 ^{la-3} bpū			
	'fingerring'			
236. bracelet	1 ^{la-1} dgyü	21 ^{la} tɕy ²¹		* (C) gon ¹
237. necklace				-
238. button		33 ^{zy} ly ³³	33 ^z ly ³³	* Cdup ^{LS}
239. cowrie	2 ^{zhwua/1} b ¹ a			* <u>k-rwe</u> ¹
	2 ^{man}			
240. mortar	1 ^{dsu-3} lo	33 ^{lv} tha ⁵⁵		(240A * toŋ ²) 240B * tsum ¹ (240C * (?)kr
241. winnowing basket	1 ^{mun}			* ?wa/?ra
242. pot	2 ^{bbū}	55 ^{khua} me ³³	21 ^{fu} 'pot'	* o ²
			33 ^{bu} 'fryingpan'	
243. tripod	1 ^{gkwua} 'hearth'	33 ^{sl} khw ²¹		-
244. ladle	2 ^{bbū-1} dze	55 ^{pa}		*(?)luk ^{LS} ku ¹
245. spoon				-
246. bamboo water carrier	1 ^t v	21 ^{dɕi} thv ²¹	51 ^{ŋku} 'water container'	*(?) Ntiŋ/diŋ
247. gourd w.c.	1 ^{bā-1} p ¹ ö			* (?ə)pu ²
248. chopstick	2 ^{aw} 1 ^{shēr}	33 ^ə sər ²¹	55 ^ɛ sər ²¹	(Cse)
249. stool		21 ^{ndz} kv ³³	55 ^{sɛ} lɛ ²¹	* kum ²
250. table		21 ^{tsua} tsɿ ⁵⁵	21 ^{tso} tsɿ ³³	-
251. dish		55 ^{pu} /khua ⁵⁵	55 ^k 'ua ⁵⁵ 'bowl' / 21 ^{ŋkɛ} pɛ ⁵⁵ 'dish'	* ?byap ^{HS}
252. cup (clf)	3 ^k wua	33 ^{tɕər}	55 ^{cɕi}	* ?kok ^{HS}
253. flat basket	1 ^{la-2} yu	55 ^{khə}	55 ^k 'y	253/4/5A *kra
254. high basket	3 ^k o	55 ^{khə}	"	253/4/5B * ka
255. shoulder basket		55 ^{khə}	"	253-2/255 *Ng

	Rock	DB	Fu	Proto-BL
256. mat				(256A * Ngu ²) 256B * ?pu ³ 257/8/9A * ta ² 257/8/9B * smi(a) ¹
257. triaṅg.knife	² deä		³³ k'o ³³ ³³ lo ³³	
258. curved knife	¹ ng'a 'sword' ² zhër 'short sword'	³³ the ³³	³³ zɔ ⁵¹ // ²¹ zɔ ²¹ // ³³ zɔ ³³	
259. sml. knife			⁵¹ t'ε ⁵⁵ / ²¹ la ²¹	(247/8/9C * tan ¹)
260. axe	² mbä ³ dsä- ² mbe	²¹ la ²¹ ³³ be ³³ / ³³ mbe ³³ ⁵⁵ mpε ⁵⁵ ⁵⁵ mpε ⁵⁵	⁵⁵ t'ε ⁵⁵ 'spear'	* cin ²
261. (lg.) hoe				(* guk ^{HS})
262. (sml.) hoe				(* ɲök ^{HS/LS})
263. hand sickle	¹ ndaw/ ³ ssu- ² gkv	⁵⁵ sɿ ⁵⁵ kv ³³	⁵⁵ t'ε ⁵⁵ gu ²¹	(* Cgag ^{LS})
264. bow	² llü- ² mä	³³ lu ³³ sɿ ³³	²¹ ta ²¹ ³³ na ³³ // ³³ tɿ ³³ me ³³ * ² le ²	
265. crossbow (cf. 'shoot' 704)	¹ dta ² nan	³³ lu ³³ nda ²¹		* kra ^{HS}
266. arrow	² llü- ¹ esi 'arrow' ³³ lu ³³ me ³³ ² ssan ¹ mb'ä 'arrowhead'		³³ tɿ ³³ sɿ ³³	266A * Cmla ² 266B * Ccan ¹
267. gun	¹ dzhu	³³ mi ³³ mbu ²¹		(loan) [sənat ⁷]
268. anvil	¹ dtër	²¹ tɿ ²¹ ty ³³ tso ³³		* bi ¹
269. hammer	² ndaw- ² dtv	²¹ yu ²¹ tso ³³	⁵¹ ntsɿ ⁵¹	(269A * Ctu ¹) (269B * kaŋ ¹)
270. tongs		²¹ ɲgæ ²¹		* ?nap ^{HS}
271. bellows	³ gv- ¹ ddv	³³ xər ³³ ta ²¹ tso ³³		(* (C) yut ^{LS})
272. dibbling stick		²¹ ndy ²¹ (cf. 'dig')		(* ?pay ²)
273. muzzleloader	¹ dzhu			-
274. food	¹ t' khi/ ² haw	²¹ ɲgæ ²¹ / ³³ ndzɿ ³³ tso ³³		* dza ¹
275. banana				275A * p(y)aw ² 275B * sɲak ^{HS} 276A * sɲök ^{HS} 276B * ?bay ² lat ^{HS}
276. bean	¹ nun	²¹ nv ²¹	⁵⁵ tɿ ⁵⁵ ('kind of bean') ¹⁵ ni ¹⁵ (= '2')	
277. chillie			²¹ gu ²¹ 'pepper' ²¹ la ²¹ tsɿ ³³ (<Cse?)	* Cpat ^{LS} (area)
278. fruit	² lü			* si ²
279. rice (grain)	² ch'wua	²¹ ɲi ²¹	⁵⁵ tɿ ⁵⁵ 'rice plant' ⁵⁵ t'ε ⁵⁵ 'u ⁵⁵ 'rice grain' ²¹ ɲi ²¹ 'rice plant'	(* (C) kaw ³) (loan)

	Rock	DB	Fu	Proto-BL
280. rice (paddy)	¹ khi	t ³³ ghua ³³		* <u>can</u> ¹
281. rice (cooked)		xa ³³	xa ³³	281B *haŋ ²
282. cabbage	² ngyü- ¹ p'ər	ndəy ³³ phər ²¹	ncɕio ³³ p'ɔ ²¹	282/3 *raŋ ²
			'Cse cabbage'	
			ncɕio ³³	
283. mustard green			tɕ'o ⁵⁵ tɕ'o ⁵⁵	
			'vegetable'	
284. taro		thu ²¹ tw ⁵⁵		* ʔmun ¹
285. caladium		le ³³ by ²¹	na ²¹ ɬɿ ³³ 'swede'	* <u>blim</u> ²
286. garlic	³ gkv	ta ⁵⁵ suæ ⁵⁵	ts'o ¹⁵ (grn.onion, Cse?)	* <u>swan</u> ^{1/2}
287. liquor	² zhi	zɿ ³³	zɿ ²¹	* <u>Nji</u> ¹
288. mushroom		mu ⁵⁵	mo ¹⁵ ɿ ³³ 'k.of m.'	* <u>smo</u> ¹
289. sesame	³ o- ¹ mb'a			* <u>snam</u> ²
290. corn	² dze 'wheat'	kha ²¹ dze ³³	('wheat' (mu ³³))	* ʃa ¹ Ckok ^{LS}
	² haw- ² lü 'grains'		dzɛ ¹⁵ Cse?)	
291. yeast	² ngyi	tɕhər ³³		* Ndi ²
292. potato		jɕ ²¹ ɿ ⁵⁵ (ɿ.)		-
293. pumpkin	² nyjü / ² ä- ¹ k'ö 'turnip'	-	na ²¹ kui ³³	* pe ^{2/3}
294. curry		-		-
295. bamboo	³ müen(- ¹ ts'ä)	mu ⁵⁵	mə ⁵⁵	295A *wa ² (29
296. b.shoot	² k'o 'sprout'	mu ⁵⁵ tər ⁵⁵	mə ⁵⁵ ɿ ⁵¹	LS/H
297. b. tie			sa ⁵¹	*sne ^{2/1}
298. chaff	³ p'ue		p ɛ ⁵¹ 'husk'	* <u>pway</u> ²
299. thatch	¹ zhou/ ² szɿ	zɿ ³³	z ³³	* <u>ze</u> ²
300. fern	² ndi(- ³ li)/ ¹ ndü			* <u>Nda</u> ¹ Ckra ¹
301. flower	¹ bə/ ¹ baw	ba ³³ ba ²¹	ba ³³ ba ²¹ /ba ²¹	*Cwat ^{HS}
302. grass	² szi/ ¹ zhou	bər ²¹ /ɿua ²¹		* (C) mrok ^{LS}
303. tree	² ss/ ¹ ndzɛr	sɿ ³³ /ndzər ²¹	ntsɿ ²¹ /sɿ ³³ 'wood'	303A *sik ^{HS}
	'wood' 'tree'			303B *baŋ ²)
				303C *dzin ¹
304. branch	³ gko	kə ⁵⁵	ŋkv ⁵⁵	*Cgak ^{LS}
305. leaf	³ ts'ä	phio ⁵⁵	p'ir ⁵⁵	*Cpak ^{LS}
306. root		khw ³³ (≈ 'foot')		306A *Nje ¹
				306B */ml1k ¹
				{ g-11
307. thorn		tɕhi ³³		*cu ²
308. seed	³ bbüe 'kernel'	lər ⁵⁵	pɛ ⁵⁵ (edible seed)	308A *yo ²
			tɿ ²¹ (sprout)	308B *je ²

	Rock	DB	Fu	Proto-BL
309. bark	³ gkv	yw ³³ phi ²¹		* Cguk ^{LS}
310. ayo tree				(*ʒaŋ ¹)
311. pine tree	² t'o ¹ da ¹ ndžer 'oak' ² ndaw ¹ ndžer 'evergreen' ³ t'o 'pineboard' ¹ dtv 'pine'	ɸy ⁵⁵	se ²¹ mi ³³ 'pine tree' tɕu 'laquer' t'o ⁵¹ ntsʌ ²¹ 'pine tree' xua ²¹ ji ⁵⁵ mo ²¹ 'evergreen tree'	311A 'lac' * Cgrip ^{LS} 311B 'pine' * tan ² (311C * ?maŋ ²)
312. mountain	¹ mbu/ ¹ ngyu	ndzy ²¹	ncɕi ²¹	* kaŋ ¹
313. valley	¹ lo 'ravine'	dy ²¹	ncɕi ²¹ kuẽ ⁵⁵ gw ²¹ / 'mtn- ...' fɛ ²¹ (cɪf.)	* Ckuk ^{LS}
314. river	² yi- ¹ bi ³ khü 'lake'	xw ⁵⁵ 'lake'		* laŋ ¹
315. stream	² k'a 'gully'			* lɕj ³
316. bank	² k'u	khu ³³	ʃji ²¹ ko ⁵⁵	(* bya ²)
317. sun	² bi// ² nyi- ² mä	ni ³³ me ³³	ni ³³ me ³³	* mo ² (?)ne ¹
318. moon	² hä ² mä/ ¹ lä	e ³³ me ³³	he ³³ me ³³	* bola ³
319. star	¹ gkü	kw ²¹	kw ²¹	* Ckray ¹
320. cloud	¹ gkyi/ ³ t'khi	tɕi ²¹	cɕi ²¹	* mo ¹ Ctim ¹
321. sky	² muan/ ² mun	mw ³³	mu ⁵¹	* mo ²
322. rainbow	² muan ³ llü ³ khü ¹ gyi- ¹ t'ü/ ¹ zhou	xw ²¹ lw ³³ dzi ³³ ka ⁵⁵ mbv ²¹	mu ²¹ ɕio ⁵⁵ dji ²¹ tɕ ²¹	* ji ³
323. earth	² dshi/ ¹ dü	mw ³³ dy ²¹	dy ²¹ /tsɿ ³³	* ?m(r)e ¹ (tsa ³)
324. rain	¹ khü	xw ²¹	mpe ³³ 'snow' xw ²¹ 'rain'	* ywa/ywe ¹
325. hail	² ndso	ndzo ²¹		* wa ² (=bamboo')
326. wind	² här	xər ³³	hɿ ⁵¹	* le ¹
327. thunder	² muan ² ngv	mw ³³ ŋgv ³³	mu ²¹ ŋku ²¹	* gro ²
328. lightning	² gka/ ² ng'a ¹ miu	ŋgæ ³³ mio ²¹ tse ⁵⁵	mo ⁵¹ zu ¹⁵ (tse ³³)	* b-lyap ^{LS}
329. fire	² mi	mi ³³	mi ⁵¹	* Cmi ²
330. flame	² mi- ³ ts'ä	mi ³³		-
331. ashes	³ ghügh	yw ⁵⁵	yw ⁵⁵	* Ckap ^{LS} Clā ¹
332. charcoal	² boa- ² mun 'soot' ³ ffü- ¹ gyi/ ³ khü	khw ³³ xw ⁵⁵ tsi ³³ xw ⁵⁵		* swe ² rut ^{LS}

	Rock	DB	Fu	Proto-BL
333. smoke	³ mun- ¹ k'v	mu ⁵⁵ khw ²¹	jiv ³³ (<Cse?)	* <u>ko</u> ²
334. sand	² lv- ¹ dze/ ¹ shou- ² bö	ʒə ²¹	ʒv ²¹	* <u>say</u> ²
335. mud		ndzə ²¹	tər ³³ /ntɛ ¹⁵	* Ncat ^{HS} /Njat ^L
336. water	¹ gyi	dʒi ²¹	fji ²¹	336A *re ¹ grak ^{HS} 336B *lan ¹ 337A *k-lok ^{LS} (337B *Crak ^{LS} 338A *tsa ¹ (338B *pu ¹)
337. stone	² lv	lv ³³		-
338. sunshine	³ k'a/ ¹ o			-
339. waterfall		dʒi ³³ kho ²¹ ('spring'		
340. powder		ka ³³	p'o ²¹ tɛ ⁵⁵	* (s)mun ¹
341. house	¹ gyi/ ² wua (=village, pile)	dʒi ²¹	ts'o ⁵¹ 'building' ji ²¹ 'house'	* <u>yim</u> ¹
342. "		"	ts'o ⁵¹	(* rap ^{LS})
343. room	³ chwua	kua ²¹	kɛ ²¹ (cif.)	(* Nban ²)
344. door		khu ³³	k'o ⁵¹	344A *ya ¹ mik ^L 344B *ko ^{2/3}
345. slat			ti ⁵⁵ pɛ ⁵¹ 'floor'	(* pi ²)
346. wall	² dzu	tɕə ³³ tv ²¹	py ²¹	* (C) rap ^{HS}
347. roof		dzi ²¹ kv ³³	fji ²¹ ko ⁵⁵ pa ⁵⁵	*kuk ^{HS} /kon
348. beam (main)	² gkv- ² lv	ʒər ²¹	ku ⁵⁵ lu ²¹	-
349. beam (sml.)		-		(* ʔcok ^{HS})
350. post (lg.)	³ dtv/ ¹ zhər	-		* Ndo ^{1/2}
351. steps	² lä- ¹ gyi	tsho ³³		351A *(N)tsa ¹ (351B *Ngu ^{1/2})
352. granary		gv ²¹		* ʔgyi ¹
353. fence		kho ²¹	lɛ ²¹ kɛ ²¹ (Cse?) k'uɛ ²¹	* <u>kram</u> ¹
354. board	¹ b'a/ ² dto	to ³³		* C-Nbrak ^{LS}
355. village	² mbe/ ² wua (=pile, house)	mbe ³³		355A *k ak ^{HS} (355B *kon ³) (355C *rwa ¹) (355D *pu ³)
356. town		dza ²¹	dʒɛ ²¹	

	Rock	DB	Fu	Proto-BL
357. market	² dzhi	³³ dʒi/ ³³ tʃi		¹ *je
358. country	¹ dü	¹³ kwo (Cse)		¹ smi/ ¹ pri
359. temple		-	²¹ hẽ ²¹ fji	-
360. God	¹ hü/ ¹ dü/ ³ üü		²¹ hẽ	¹ *re ¹ sa
	² ɕ/ ¹ ɕaw			
361. spirit	¹ ndo/ ¹ ddv/ ¹ ndu		²¹ ts'ɿ 'ghost'	^{LS} * Cnat
	³ non ('sp. of domestic animal')			
362. soul	¹ o- ² hä			¹ *ʔla
363. blessing				(363A * maŋ ²)
364. custom	³ kwuo/ ² ndu			[liɿ] Cse
365. lord	¹ bu 'power'		⁵⁵ ntẽ ⁴⁵ xa	² 365A *Ndzo
366. pillar				-
367. flag	² t'ä/ ³ dta- ³ dgyu	²¹ dæ		² * to
368. tree (ritual)				-
369. (invocation)	¹ bpö 'pray'			[ʃaɿ], [ʃɔɿ]
370. rice cake	¹ ddv/ ² dto- ² ma			^{LS} * Cpuk
371. altar	¹ ndu- ² lv (altar of rocks)			-
372. rest house		²¹ ə ³³ phu ³³ dzɿ ⁵⁵ ky ³³ kv		[saɿrapɿ]
373. dancing ground				
374. bell	{ ¹ dgkyü- ² szɿ ¹ dau	²¹ tʃɿ/ ³³ lo	³³ ma ²¹ lo 'gong' ³³ tʃɿ 'bell' ²¹ tsɿ ³³ zɿ 'bell' ³³ nda ²¹ ku ²¹ mpo ³³ k'o	374A * { ¹ kyu ¹ Nju ¹ loŋ ¹
375. drum	² dshi- ¹ ddv	³³ nda ³³ kv	²¹ nta ²¹ ku ²¹ mpo ³³ k'o	² *tum/jum (* spaŋ ²)
376. gourd flute	³ muen- ² mi		'kind of wind instr.' ⁵⁵ py ⁵⁵ ly	
377. flute	² bpi- ¹ li	³³ bi ²¹ li		(* Cka ²)
378. jewsharp	³ k'a- ² kwuo- ² kwuo	³³ khwo ²¹ khwo		(* ta ²)
379. blanket			³³ ji ²¹ k'u	[boɿ] area
380. pillow		³³ kv ³³ ngw	³³ ko ³³ ŋkw	² *Ngum
381. loom	¹ ddaw/ ¹ p'ä		⁵¹ sa ³³ po ³³ tʃɿ (Cse)	^{LS} * rak
382. needle	¹ gko	²¹ ko	²¹ ko	^{LS} * rap

	Rock	DB	Fu	Proto-BL
3. thread	¹ k'ö	khw ²¹	k'w ²¹	* k ¹ riŋ ¹ (-89-2)
34. fat/oil	¹ ch'ər 'fat'		ma ²¹ 'oil'	* tsɿ ¹
35. pipe		jo ³³ kwo ⁵⁵	tsa ²¹ jiv ²¹ kui ⁵⁵	385A *ʔgu ¹
			(Cse?)	
			ʃui ²¹ jiv ²¹ kui ⁵⁵	385B ʃuk ^{LS}
			(water, Cse.)	
6. box	² dta/ ¹ ngu	gv ²¹	xo ²¹ tsɿ ⁵⁵ (Cse?)	(*Cta ¹)
7. fan			ʃi ⁵⁵ tsɿ ²¹	(387A *pay ²) (387B *bya ^{1/3})
8. top				[khaɿ]
9. chain	¹ shu- ¹ bbər	ʃu ³³ ər ²¹	ʃuɛ ³³ jiv ²¹	* ʔcak ^{HS}
10. trap	³ ts'o ³ dso/ ¹ dgyu/ ¹ dgyü	ʃi ²¹		390A *wa ³ 390B *(C) toŋ ¹
11. poison	¹ ndv	ndv ²¹		*(C)dok ^{LS}
12. saw	² ffü	xər ³³ mu ²¹ tso ³³ / fu ²¹		*hlwa ³
		fv ³³		
13. bridge	¹ ndso	ndzo ²¹	ntso ²¹	* dzam ¹
14. prison				(394A * Ctaŋ ²) (394B * kruk ^H)
15. broom			mpɛ ⁵⁵ ko ³³	-
16. cart				* Cləŋ ² /Clɿŋ ²
17. car				-
18. boat	¹ llu	lw ²¹	fɿ ²¹	* ʔli ¹
19. train				-
20. plane				-
21. silver	(¹ nv) ² ngv	ŋv ³³	ŋu ⁵¹	401A *plu ¹
2. gold	¹ ha(- ¹ shi)	χæ ²¹	hɛ ²¹ 'gold'	(401B *Cŋwe ¹) 402A *hrwe ¹
3. iron	¹ shu	ʃu ²¹	ʃo ⁵¹ 'iron'	* xam ¹
4. copper	² boa- ² mun- ¹ shi 'brass'	ʃ ²¹	ʔ ³³	* gre ²
	² ər			
15. cloth	¹ p'ä 'hemp cloth'	tho ³³ pv ⁵⁵	to ²¹ pu ⁵⁵	*pa ¹ (Dai)
16. tobacco		jo ³³		406A *ya ³ 406B *ʃuk ^{LS}

	Rock	DB	Fu	Proto-BL
7. tea	3lä	1e ³³	1e ⁵⁵	*1a ¹ (area)
8. salt	2ts'ä	tshe ³³	ts'ε ⁵¹	*(t)sa ²
9. sugar		mbæ ²¹ (= 'bee')	mpa ⁵¹	-
10. opium		jæ ³³ phe ⁵⁵	jir ²¹ p'ir ⁵⁵ jir ²¹	[yaɿpyinɿ]
11. rupee		tr ⁵⁵ jo ³³	{εu ⁵⁵ jir ²¹	(411A *tsam ¹)
			'money' /	
			{u ²¹ yε ²¹ 'silver	
			dollar'	
12. soap		tsho ³³ pio ³³		
13. medicine	2ch'ər (2ghügh)	tshər ³³ yw ³³	tε ⁵⁵ yw ⁵⁵	413A *Cnak ^{HS} (tsip ^{LS} {tse ²
				(413B *Cyak ^{HS} ga ²)
14. dry field	2llü	lw ³³	{l ⁵¹	*hya ¹
15. wet field				*ʔdɿn ³ Cmi ¹
16. path	2zhi	ʔl ³³ gv ³³ /kv ³³	{ʔl ⁵¹ 'street'	*ga/ga ¹
17. conversation		kw ³³ ʔl ²¹	dʔ ³³ gu ³³ 'road'	*ʔuk ^{LS}
18. language	2k'o/2gkü-1dshi		k'ɔ ⁵¹ 'sound'	418A *daŋ ²
	'voice'		kw ⁵⁵ tʔl ²¹ 'speech'	418B *ka/ka ¹
19. name	1mi	mi ²¹	(i ⁵⁵ <Cse)	*ʔm(y) iŋ ¹
20. pair	2dzu		dzɿ ³³	*ʔdzum ¹
21. price	2p'u	phv ³³		*po ²
22. light/shadow	1ndaw' shade'			
	2o	o ²¹	jio ²¹	422A *Crip ^{HS}
				422B ʃum ¹
23. strength	1bu'power'	ka ³³ ji ³³		*ra ²
	2gkaw 'strength'			
24. thing	2dso		lo ⁵⁵ tse ²¹	(424A *Cm(y)u ^{2/3})
25. time	1dzhi/2mba	kha ²¹	pə ³³ 'fois' dʔl ²¹	[yam -ɿ]
	'temps' 'fois'		'temps'	
26. work		mbe ³³	lo ²¹	426A *mi(aw) ²
27. government (Bse)				(Bse)
28. government (Thai)				(Dai)
29. tone			k'ɔ ⁵¹ 'sound'	*sa/sam ¹
30. who?	1nä/1ssü	ə ³³ ne ²¹		*ʔəsu ¹
31. what?	1.. 2a-dzɿ	ə ³³ tsɿ ³³		A *ʔəʒe/je ²
32. when?		ze ³³ kha ²¹	ze ³³ dʔl ²¹	*ʔətak ^{HS}
33. where?	1zä	ze ³³	ze ²¹ ba ³³	(*ʔəlam ³)

	Rock	DB	Fu	Proto-BL
434 how much?		$Ze^{33} ta^{21}$		*ʔəCmya ²
435 how many?			$Ze^{21} + clf$	*ʔəsnɪ ²
436 why?		$ə^{21} tsɿ^{33} be^{33} be^{33}$		
437 which?				
438 I	$\overset{1}{n}go$	ηo^{21}	ηa^{21}	*Cɲa ¹
439 you	$\overset{2}{nn}ü$	nwa^{21}/u^{33}	no^{21} (ɲō55 familiar	*nan ¹
440 he (pres)	$\overset{2}{ss}ɪ/\overset{2}{t}'ü$			*ʔan ²
441 he (rem)		thw^{33}	$t'ɿ^{33}$	*su ¹
442/443 (plural)	$\overset{1}{ä}-\overset{2}{gg}ö'we$ (superior)	$\overset{21}{ng}w^{21}$		*hway ^{2/3}
445 right	$\overset{1}{yi}$	$\overset{21}{ɹ}i^{21}$	$ji^{33} jir^{33} (ba^{21})$	*ʔya ¹
446 left	$\overset{2}{wan}/\overset{2}{wuan}$	$wæ^{33}$	$ue^{21} jir^{33} (ba^{21})$	*446A b-way ¹
447 in front		$kæ^{33}$	$kɛ^{33} ba^{21}$	*ʔru ² hre ³
448 behind	$\overset{2}{k}'o-\overset{1}{t}'o/\overset{1}{ngu}$	$mæ^{33}$	$mɛ^{33} ba^{21}$	*ka ² /kɔk ^{hs} ʔnok ^{hs}
449 above	$\overset{1}{gg}ö$	$go^{21} to^{55}$	$ku^{33} 'on'$ $ko^{55} pa^{55} top' (gr^{21} 'upper' (t$	*takhs
450 below	$\overset{2}{t}'an$ 'bottom'	$mwa^{21} thæ^{55}$	$bu^{15} (nwa^{21} 'lower teeth)$	*ʔok ¹
451 inside	$\overset{1}{j}o/\overset{1}{k}'v/\overset{1}{gku}$	khv^{21}	$jo^{21}/k'u^{21} ba^{21}$	*k(l)o ¹
452 outside	$3gkv$	$my^{21} ty^{55}$	ty^{55}	(452A * nba ¹ 452B * sni ¹
453 between	$\overset{3}{gkaw}/\overset{2}{gko}-\overset{2}{nggü}$		$le^{33} ku^{21} 'in middle'$	*Ckra ¹
454 this	$\overset{2}{ch}'i$	$tɕhɿ^{33}$	$tɕɿ^{33}/tsɿ^{33}$	*ci ¹ /ti ¹ /ʔn ¹
455/6/7/8 that	$\overset{2}{gkv}$ 'that'	thw^{33} (= 'he')	$t'ɿ^{33}$	455B *to ³ 455Aho ¹ /(gk ¹)
	$\overset{1}{o}$ 'there'			
	$\overset{1}{t}'ä$ 'that'			
459 here	$\overset{2}{ch}'ou-\overset{1}{nyu}$	$tɕhɿ^{33} jo^{21}$		
460 side		$bo^{21}/tɕy^{21}$	$p'a^{51}/b'a^{21}$	*paŋ ²
461 day	$\overset{2}{nyi}$	ηi^{33}	ji^{33}	*(?)ne ³
462 night	$\overset{1}{khu}$	$Xu^{21} kho^{33}$	qa^{21} 'evening'	*ʔrak ^{1s}

	Rock	DB	Fu	Proto-BL
463 morning (early)	¹ sso	³³ s ₁ ⁵⁵	¹⁵ t _r ²¹	*Cn~k ^{1s}
464 (dawn)	² la-'dzhi (tiger hour')	²¹ t _h shu	⁵¹ t _s 'u ³³ nts ₁ ³³	*{aw ²
465 dusk	³ k'v - dgyü	²¹ xu		*(C)put ^{1s/hs}
466 today	² ch'i- ² nyi	³³ t _h sh ³³ ³³ ni		*yak ^{1s} (2)ne ³
	² nä- ¹ dzhi- ² nyi			
467 this morning				
468 this evening			³³ ts'o ²¹ ua ²¹ , evening' (*?put ^{1s})	
			³³ ts' ₁	
469 tonight			²¹ mu ^k u ⁵⁵	
470 yesterday	¹ ä- ² nyi	²¹ ni ³³	²¹ ni ³³	*?əmi ¹
471 last night			²¹ u ²¹ a ²¹	
472 day bef. yest.		²¹ ɣər ⁵⁵ ni ³³	³³ ɣ _r ni ³³	*?{ik ^{hs}
473 tomorrow	¹ sso- ² nyi	²¹ so ³³ ni ³³	²¹ so ³³ j _r ³³	*?pran ¹ /aŋ ²
474 day aft.tom.		⁵⁵ ko ⁵⁵ s ₁ ⁵⁵	⁵⁵ ko ⁵⁵ so ²¹ ni ³³	*pak ^{hs}
475 day aft.d.a.t.		⁵⁵ ko ⁵⁵ d _u ³³ s ₁ ⁵⁵	⁵⁵ ko ⁵⁵ q ₁ ²¹ ni ³³	*pin ²
476 month	² hä =	³³ xe	²¹ me	*bɕla ³)
477 year	² bā/ ³ k'v =	⁵⁵ khu	³³ be ³³ /k'cu(in Cse. cycle)	477A * sni(k) ² 477B * Ckok ^{1s}
478 1	¹ ddü/ ² ddü + clf. du	²¹ (ti ⁵⁵ j _i ²¹ , l _s t') q ₁ ³³ /q _r ³³		*(?)ti ²
479 2	¹ nyi	²¹ ni ²¹ (ti ⁵⁵ ə ⁵⁵ , 2 nd) ni ¹⁵		*sni(k) ²
480 3	¹ ssü/ ¹ ssu	²¹ ɣ ₁ (ti ⁵⁵ sɛ ²¹ , 3 rd) s ₁ ³³		*Csum ^{2/1}
481 4	² lu	³³ lu ³³ (ti ⁵⁵ s ₁ ⁵⁵ , 4 th) lo ³³		*b-le ²
482 5	² wuä	³³ wa ³³ (ti ⁵⁵ u ²¹ , 5 th) ŋua ⁵⁵		*ŋa ²

	Rock	DB	Fu	Proto-BL
483. 6	³ ch ³ wua	tʃhua ⁵⁵	tʃuē ⁵⁵ (ti ⁵⁵ u ²¹ , 6th')	* Ckrok ^{LS}
484. 7	² shēr	ʃər ³³	ʃər ³³ (ti ⁵⁵ cɿ ²¹ '7th')	* Cʃi(k) ^{2/1s}
485. 8	³ ho	xo ⁵⁵	xo ⁵⁵ (ti ⁵⁵ pa ²¹ , 8th')	* Cyet ^{1s}
486. 9	² ngv	ŋgu ³³	ŋku ³³ (ti ⁵⁵ cɿo ⁵¹ '9th')	* go ²
487. 10	² ts ³ ä/ ¹ ts ³ ēr	tshe ²¹	tsΛ ²¹ (ti ⁵⁵ ɿ ²¹ , 10th') (ts ³ Λ ²¹ 40 80) (ts ³ ε ²¹ with '20')	* tsay ¹ * Cra ¹ (* ?ton ¹)
488. 100	² khī	ɸi ³³	ɸi ³³	[mǝʈ]
489. 1000	¹ dtv	tv ²¹	ti ²¹	[sǝʈ]
490. 10,000	² muan	mu ³³	mə ³³ / a ²¹	[lamʈ]
491. 100,000	¹ aw			[laiʈ]
492. 1,000,000	¹ gkü		ɸi ³³ mə ³³	* ma ¹
493. many		lw ³³		* lum ¹
494. Clf(gen)	³ lv	ly ³³	ly ³³	* ra ²
495. " " (3,4,9)				
496. Clf.people	² gkv (2,3,4) ³ gkv (5,6,8) ³ gkv (9,10,11)	kv ³³	gu ³³	
497. Clf.animals		me ³³	mε ³³ (insects)	* ka/koŋ/ku
498. Clf. round		ly ³³	ly ³³	* si ²
499. half	N + ² k'o	ŋgw ³³	ŋkv ³³	499B *pak ^{hs}
500. more than	¹ ssu	t ər ²¹		* pak ^{hs}

	Rock	DB	Fu	Proto-BL	
501	colour		za ⁵⁵ {ʃ'g ²¹		
502	red	¹ hö	xy ²¹	hy ²¹	*ʔni ¹
503	black	¹ na	na ²¹	na ²¹	*Cnak ^{hs}
504	jetblack		na ²¹ fu ⁵⁵		
505	skyblue		pfo ³³	mu ⁵¹ na ²¹	(*bra ^{1/3})
506	yellow	¹ shi	ʃl ²¹	ʃl ²¹	*hrwe ¹
507	white	¹ p'ər/(² p'u)	phər ²¹	p'ɔ ²¹	*plu ¹
508	green/blue	¹ här	xər ²¹	hər ²¹	*ʔno ¹
509	grey	² mun	dzæ ¹³ phər ²¹	ɣu ³³	*pe ¹
510	same	¹ ssaw/ ³ ddü- ² ddü/ ³ ddv- ¹ ddv			*du ¹ /ʃu ¹
511	different	² muàn ³ nyi ¹ nyi			[pəŋ ɿ] (Dəi)
512	smell(good)		ʃy ²¹ nv ²¹	ʃia ⁵¹ (<Cse?)	[hən ɿ] (Dəi)
513	" (bad)	¹ nun	tʃhər ³³ nv ²¹	pu ³³ nv ²¹	*ʔnam ²
514	cold	³ t'khi	tʃhi ⁵⁵	cɕi ³³	*Cgrak ^{hs}
515	cool	² ssä- ¹ ssä		bɛ ²¹	*(C)Ngaw ¹
516	warm	¹ lv		fɯ ²¹	*lum ¹
517	hot	² ts'ər	tshər ³³	ts'ʌ ⁵¹	*ʔloŋ ¹
518	burning hot		"		*kyik ^{hs}
519	freezing cold	³ t'khi	tʃhi ⁵⁵	cɕi ⁵⁵ (cɕi ⁵⁵ dʒɿ'ice')	
520	ashamed	³ shou- ¹ ndo	ʃə ⁵⁵ ndo ²¹	ʃɿ ⁵⁵ nto ²¹	*srak ^{1s} ʔdan ¹
521	happy	¹ b'a		bɛ ²¹	*byaw ^{1/2}
522	sad	(² nnü) ³ t'khi		lɿ ⁵⁵ /ma ³³ tsa ²¹ /cɕi ⁵⁵	*hra ²

	Rock	DB	Fu	Proto-BL	
523	tired	¹ dtü	ka ²¹	ka ²¹	[həʔ](Daï)
524	angry	¹ khü	mə ²¹ xu ²¹	ma ³³ xu ²¹	*ʔ(d)zup ^{hs}
525	correct	¹ shu/ ¹ dtv/ ² mba/ ² ssu	xo ¹³		*Ct(s)a(w) ¹
526	narrow	3ho 'deep/narrow'		xo ⁵⁵ 'deep'	* <u>2nak</u> ^{1s}
527	wide	¹ bpa	pa ²¹	pa ²¹	*g(1)ay ¹
528	soft		(mə ³³ ko ²¹)	mpi ¹⁵	*Cnu ²
529	hard	¹ dto- ² ngyu	ko ²¹		529A * krok
530	flat/thin		mbe ²¹	pʔi ²¹ 'flat' mpɛ ⁵¹ 'thin, shallow'	* <u>ʔbra</u> ²
531	thick	¹ la	la ⁵⁵ /du ²¹	la ⁵⁵	*tu ¹
532	fat		ka ³³ tu ²¹	kɛ ²¹ tɿ ²¹	*tsu ¹
533	thin (person)	² mbe	ndza ³³		533A *ba ² 533B *Cjok
534	young (")	³ t'a	kə ³³ ɲio ²¹	ɕi ⁵⁵	*nay ^{2/1}
535	old (")	³ mun	mu ⁵⁵	mo ⁵⁵	*maŋ ²
536	new (thing)	¹ t'khi/ ³ shi	ɛɿ ⁵⁵		* <u>Cɸik</u> ^{1s}
537	old (thing)	¹ la/ ¹ lu	lv ²¹		* <u>ʔbi</u> ²
538	straight	¹ dtv/ ² mba	tv ⁵⁵ tv ³³		538A*(C)dw (538B*te ²)
539	crooked	¹ gv	xu ⁵⁵	gu ³³ gu ²¹	* <u>gok</u> ^{1s}
540	wet	² ds'ɿ	ndzər ³³	ɲtɕɔ ⁵¹	540A *(C)n 540B *jwap
541	dry	² ng'a/ ¹ bpü/ ³ gko	pv ²¹	pu ²¹	*s/g-we ^{2/3}
542	blunt	³ dtv	(mə ²¹ tha ⁵⁵)	ma ³³ t'a ⁵⁵	*dum ²

	Rock	DB	Fu	Proto-BL
43 sharp	³ t'a	tha ⁵⁵	t'a ⁵⁵ /ku ³³ ly ³³	*tak ^{hs} (544A *kak ^{hs})
44 difficult		ndpo ²¹		(544B *hra ²)
45 easy		xw ²¹		*sa ¹
46 empty	³ nyi/ ² dzhw(v.t.)/ ¹ k'wua			(*gaŋ ²)
47 full	¹ ggü/ ³ shër	žər ⁵⁵	gw ³³ (full of food, satiated)	*Nbliŋ ³
48 spicy		pi ²¹	pi ²¹	[phet ʔ] (Dai)
49 sour	² gkyi	tɕi ²¹	cɕi ²¹	*ʔkyin ¹
50 bitter	² k'aw	pi ²¹	k'a ⁵¹	*ka ²
51 sweet	¹ t'khi	tɕhi ²¹	ɕio ⁵¹	*kyo ¹
52 rotten	² ch'ër/ ¹ ggø	khua ²¹		552A *Nbup ^{1s} 552B *ʔkri ² *dat ^{1s}
53 alive	³ dta/ ³ hü	si ³³ si ²¹		
54 beautiful	¹ gyu 'handsome' / ² ndshi	lo ²¹	lv ¹⁵	
55 brave	¹ d'a/ ¹ szü- ² mi- ³ t'u	by ³³	zuẽ ⁵¹	
56 clear/bright	² mbu/ ³ ts'aw	mbu ³³ /ɕu ²¹	mpo ⁵¹	*ba ³
57 crazy	² nun	nv ³³	mpi ³³ /pi ²¹	ʔ ʔA *ru ² (557B *ʔbot ^{hs})
58 dirty	³ ch'ou (= 'shit') tæ ⁵⁵		ɲtɕ ²¹ (dirty liquid)/ma ³³ ɕo ²¹	558A *kre ² (558B *kyit ^{hs}) (558C * (C) cak ^{hs/1s})
59 drunk	¹ gko ² ndzi (inside-ko ²¹ eat)			*yet ^{1s}
60 enough	¹ lv	mu ⁵⁵ (= 'old')		*lok ^{1s}
61 expensive		phu ³³ jy ²¹ (price-big)		561A *kak ^{hs} /koŋ ¹
62 fast	¹ yü	tɕhu ²¹		(562A *Ngi ¹)
63 good	² gkaw/ ¹ gv	ka ³³	gu ³³ /ka ⁵¹	563A *ʔmin ^{1/2/3}

	Rock	DB	Fu	Proto-BL
564 heavy	² ü	³³ nu _w	f _l ⁵¹ /k ³³ t ⁵⁵ i	*Cle ²
565 late	¹ ho/ ³ man	xo ²¹		*1(y)ay ³
566 lazy		ka ³³ la ³³	la ⁵⁵ ŋcɕi ²¹	*Nbyaŋ ^{1/2}
567 round	¹ ü- ² ü	xw ⁵⁵		*woŋ ² (are)
	² dtv- ¹ v			
568 striped	³ bbɛr(cf. 'write') ⁴ ndz'a/ ¹ ndsà ('spotted')	ndzà ²¹		*b/g-yak ¹
569 strong				[hen ɿ](U)
570 abundant	³ haw	gaw ³³ /baw ²¹		*Npup/ok ¹
571 blind		mio ²¹ ŋgo ³³	ŋkuɛ ³³	(*Cjuk ^{1s}
572 dumb		lo ³³	nto ²¹	(*a ^{2/3})
573 deaf		xe ³³ mbu ³³	mpo ³³	*baŋ ²
574 yawn		xā ⁵⁵ xā ³³ ɿ ²¹		*ha ^{2/3} (m)
575 sneeze		xā ⁵⁵ thi ³³		(*ha ¹)
576 cough		tɕhər ³³	tɕɿ ⁵¹	576A*tso (576B*?k
577 vomit/spit	³ p ³ u 'vomit' (³ gki) ³ p ³ i 'spit'	phy ⁵⁵	p ⁵⁵ ɿ ⁵⁵	*Cpat ^{1s}
578 hiccup		kə ³³ /xā ⁵⁵ xā ³³ ɿ ²¹		*ut ^{hs}
579 belch		kə ³³		*?ut ^{1s} /?
580 defecate	² t ² kye	khw ⁵⁵		(*?ko ²)
581 urinate	(² mbi) ³ llü	ko ⁵⁵		*ɿ ²
582 fart		(tɕhər ³³)?	cɕiɿ ⁵¹ ('a fart') cɕiɿ ⁵¹ k ⁵⁵ 'fart'	582A*p() 582B*de
583 hear	² mi	kho ³³ mi ³³		*gra ²

	Rock	DB	Fu	Proto-BL
84 itch		tshue ⁵⁵	kɛ ²¹ kɛ ⁵⁵	584A*g-ya ² 584B*Ntsik ^{hs}
85 scratch	³ dsaw	tʃə ²¹		*Nk/prak ^{hs}
86 dream	³ yi ² mun	ji ⁵⁵ mu ³³		*Cmak ^{hs}
87 think	¹ bu- ² mi ³ gkyi- ² mi	sɿ ³³ ndv ³³	vu ⁵¹ 'suspect/ think'	*Ndan ²
88 wonder				
89 remember		sɿ ³³ ndv ³³	cɕio ⁵⁵ ty ²¹	
90 know	² sɿ'wise'	sɿ ³³		*si ²
91 forget	ʃä- ³ mi	le ³³ mi ⁵⁵	le ⁵⁵ mi ⁵⁵	*?me ³
92 hope				
93 understand				*liŋ ¹
94 look at	¹ ʃü		bu ²¹	594A*Cpi ¹ (594B*ha ³)
95 look for	³ səw/ ¹ shu/(³ khi) sɿ ²¹		ɕo ⁵⁵ ɕo ²¹	*k-ra ¹
96 see	¹ ddo	ɿy ²¹	do ²¹	*?mraŋ ¹
97 be born	¹ khi/ ¹ yu/ ² gkyi- ¹ kho	sɿ ²¹		*baw ³
98 live	¹ ndsu(='sɿt')	xy ²¹		*cya ² /jya ²
99 die	² shi	ɕɿ ³³		*ʃe ¹
00 borrow(thing)		ɿɿ ³³ /ŋæ ²¹	ɿi ⁵⁵ 'borrow'	*sŋa ²
01 " (money)			ts'ɿ ⁵⁵ 'return (money, thing) tɕi ⁵¹ 'borrow, money'	*k-ye ²
02 exchange	² gkan 'exchange' ² bbüe/ ¹ k'a	pɿo ⁵⁵	pɿɿ ⁵⁵	*?pa ¹
03 buy	¹ ha	xæ ²¹	hɛ ²¹	*way ¹
04 sell	¹ t' khi	tɕhi ³³	cɕi ⁵¹	*?ron ²
05 give	¹ gku/ ¹ bbü/ ³ k ö/ ³ yu	jo ⁵⁵	jiɿ ³³ / kɕ ²¹	*be ²
	'give medicine'			

	Rock	DB	Fu	Proto-BL
606 take	³ bbü/ ³ k'a	jy ²¹		*yu ¹
607 put in	³ bpa	khu ⁵⁵		*?kun ^{3/2}
608 take out	¹ bbēr/ ² k'o	jy ²¹		*?dok ^{hs}
609 get	² ddü	du ³³	tl ⁵¹	*ra ³
610 have	² dgyu/ ¹ dgyü/ ¹ dzu dzy ³³		fjio ³³ /ji ³³	*jaŋ ¹
611 be	³ pio/ ² biu ³ bpiu	wa ²¹ /pio ⁵⁵	ji ³³	*Cprek ^{1s}
612 marry			zu ¹⁵ (male)	
613 remain			hy ⁵⁵ nty ⁵⁵ (stand +)	[lə ɿ](Da;)
614 return			ko ⁵⁵	*Ckok ^{1s}
615 steal	¹ dz 'rob'	khv ³³	ntsa ²¹ 'rob'	*ko ²
	² k'v 'steal'		k'u ⁵¹ 'steal'	
616 destroy	³ p'üe		p'o ⁵⁵ p'o ⁵⁵	*pyak ^{hs}
617 clear field	² lv- ¹ p'u	zj ³³ pər ²¹		
618 chop (trees)	² k'o/ ³ ndaw/ = ³ ts'ēr	ær ⁵⁵		618A*Ncik ^h (618B*?byak)
619 dig	³ t'u/ ³ ch'i (plow)/ ³ dsaw	ndv ³³	p'ē ⁵⁵ p'ē ²¹ 'loosensoil' mpu ⁵⁵ mpu ²¹ cçia ⁵⁵	*Ndu ²
620 plant	¹ dtv	tv ²¹		*Cmi ¹
621 weed	¹ zhou	zua ²¹ /zj ³³ pər ²¹		
622 reap	³ k'v	khv ³³		*rit ^{1s}
623 cut	¹ ndaw/ ³ ts'ēr/ ³ här 'slice'	ær ⁵⁵		*?dök ^{hs}
624 pick (fruit)		pha ⁵⁵		*Cxak ^{1s}

	Rock	DB	Fu	Proto-BL
15 winnow	² hər- ¹ l̥ər			*h ¹ ra ¹ /h ¹ la ³
16 pound	² dtü 'husk'	ty ³³		626A*ʔdɪ ² (626B*ʔtoŋ ²)
17 pile up	² wua	to ³³ to ³³		627A*byum ¹ (627B*pop ^{hs} /puk ^{hs})
18 grind		tha ⁵⁵		*Nkrit ^{hs}
19 eat	² ndzɿ	ndzɿ ³³	ntsɿ ³³	*dza ²
20 lick	¹ yu	jo ²¹		*m-lyak ^{hs}
21 drink	¹ t'ü	thw ²¹	l̥ɿ ²¹	*Ndan ¹
22 smoke		ʔ	ʃɿ ³³ t̥ɿ ²¹	*ʃuk ^{1s}
23 suck		/		*Ccut ^{1s}
24 bite	³ ts'aw/ ² k'a	ŋw ³³	ts'a ⁵⁵	634A*Ctsa ^{1s} 634B*Ckuk ^{1s} -
25 chew	² nggü		ŋkw ²¹ ŋkw ³³	635A*gwə ² (635B*Nbay ²)
26 swallow		lo ⁵⁵		*myo ¹ /myok ^{1s}
27 hungry	¹ zhu	zu ²¹	zuɿ ²¹	*Cmwat ^{1s}
28 thirsty	¹ bpü('dry')	pu ²¹ (thirsty) (=dry)	pu ²¹	*Csip ^{1s}
29 boil	³ dyu	thv ⁵⁵ /tɕə ⁵⁵		639A*Cdzak ^{hs} (639B*Nbi ^{1/2})
30 fry		tɕhu ³³	ŋtɕə ⁵¹	*g-raw ¹ /ʔraw ¹
31 roast (over fire)	³ gkü	ndʒɿ ⁵⁵	neɕɿ ⁵⁵	*ʔgaŋ ¹
32 roast (in fire)	² mber ³ ngyi			(642A*put ^{hs}) 642B*cit/et ^{hs}
33 smoke				
34 steam	³ la/ ³ ssaw =	sa ²¹ /tɕə ⁵⁵	pu ⁵⁵	*Csak ^{1s}
35 stir	¹ ts'aw	xw ⁵⁵ xw ³³		* <u>(N)</u> kok ^{hs}
36 pour	³ -o	phu ⁵⁵		*xwan ² /xwat ^h
37 go	² bbüə/ ² bi Northern dial	bw ³³	k'w ³³ /xw ³³ / bi ³³ /fu ⁵¹	*ʔay ¹
38 walk	² ngyi	ndʒɿ ³³	neɕɿ ⁵¹	648A*Nju/oŋ ²

		Rock	DB	Fu	Proto-BL
649	come	¹ ds'Y	lv ³³	ts'ɿ ^{21/1ɛ} ³³ 'come back' ʃɿ ³³ 'come'	*la ¹
650	run	² gyu	dʒə ²¹	mu ²¹ tɿ'ɿ ²¹ 'rushin'	*p-re ²
651	ride	² ndza	ndzɿ ³³		*dzi ²
652	climb	² ndo/ ² dtü	go ²¹ ndo ²¹	t'ɿ ³³ 'rise'	*Cdak ^{hs}
653	descend	¹ za/ ¹ zaw	za ²¹	gu ²¹	*zak ^{1s}
654	arrive	² t'u	tshɿ ²¹	pa ³³	(*Nga ¹)
655	enter		khv ²¹ bv ²¹	k'u ²¹ bu ²¹	655A*waŋ ¹ (655B*luk/a)
656	come out	³ bbüe ² t'u/ ³ t'u/ ³ v.i v.t. ³ p'u		t'ɿ ³³ 'come out of/rise'	656*?dwak ^{hs}
657	jump	³ yü ² yü/ ² ts'o	tsɿ ³³	ts'o ⁵¹	*?bok ^{hs}
658	dance	² ts'o			*ga ³ gun/ut k(r)un/ut
659	fly	¹ mbi/ ¹ ndzɿ	mbi ²¹	mpɿ ²¹ l ⁵⁵ / k'u ⁵⁵	*b-yam ¹
660	flee	³ ü	phu ²¹	p'o ²¹	*paw ¹
661	carry	² bpa- ¹ pa (c.on.back) ³ gkyi/ ¹ mbu (shoulder)	pa ³³ pa ²¹	po ⁵⁵ (in hand) mpo ¹⁵ (on shoulder)	*bo ²
662	say	² k'aw- ² k'aw/ ³ shou	ʃə ⁵⁵	ʃy ⁵⁵ 'talk' çɿi ⁵⁵ kuə ⁵⁵ kuə ⁵⁵	*uk ^{hs}
663	speak	³ dta		ʃɿ ⁵⁵ 'answer, tell' 'speak publicly'	663A *yaw 663b *dzɿ
664	ask	³ mi- ² ddo/ ² mä- ¹ mä/ ² k'u- ³ t'u	mi ⁵⁵ do ³³	mi ⁵⁵ do ²¹	

	Rock	DB	Fu	Proto-BL
665 call	¹ lɛr	lɛr ²¹	lɛ ⁵⁵	*ku/aw ¹
666 sing	¹ bpø 'chant' ¹ hō 'sing' ² ndzər	py ²¹ /ndzər ³³	(ko ⁵⁵) ntsʌ ⁵⁵	(*mi ¹)
667 listen	² mi	kho ³³ mi ³³	k'o ⁵⁵ mi ⁵⁵	*ʔna ¹
668 laugh	¹ z'a	zæ ²¹	ʒɛ ²¹	*ray ¹
669 beg		ndzə ²¹	(xa ³³ mə ⁵⁵ 'beggar')	[1ɔɪ](Da)
670 cry	¹ nv	mba ²¹ /ŋv ²¹	ŋu ⁵¹	*ŋo ¹
671 count/ read	¹ dzi 'count' ² dzi		tʃ'o ⁵⁵ so ⁵⁵ 'read' ly ²¹ 'read'	*k-raw ¹
672 write	³ bbər- ² bbər	bə ²¹ / pər ²¹	pɔ ⁵⁵	*Nbok ^{1s}
673 lie	² ndu 'pretend'	ɸi ³³ kua ³³	p'io ⁵⁵ 'cheat'	[heɪ](Da)
674 bark	¹ er 'croak'/ ¹ v 'bark'	lu ²¹		*(h)loŋ ¹
675 roar	² ɛr/ ¹ gkü/ 'roar', 'growl' ¹ mbaw 'bellow'	lɛr ²¹		*mu ¹ /Nbu ¹
676 repeat		tɕɛ ²¹		676A*ɕtəp ^{1s} 676B*tu ²
677 wash(person)	² ch'ər	} tɕhər ³³	ʃji ²¹ tsɛ ⁵¹	*tse ²
678 "(thing)	¹ dsä		'wash face'	*gyo ²

	Rock	DB	Fu	Proto-BL
679 comb	³ bb̥ər	po ⁵⁵	po ⁵⁵	*?pi ²
680 sew		²¹ ʔl̥	kuɛ ⁵⁵ gu ²¹	680A*gyup (680B*dap ¹)
681 wear (clothes)	² ba	ba ³³ /mu ²¹	mu ⁵¹	*wat ^{1s}
682 " (hat)	³ gkü(shoes, trousers, girdles)			*up ^{hs}
683 " (turban)	¹ mun 'dress, apron)			*(?nit/ik
684 " (shirt)	² t'an(hat)			*Ndu ¹
685 sit	¹ ndsu	ndz ²¹	nts ²¹	*(C)ni ¹ /?
686 be standing		tu ³³		*?tu/oŋ ¹
687 stand up	³ hö	xy ⁵⁵	hy ⁵⁵	*?ryap ^{1s}
688 free		khw ⁵⁵	k'w ⁵⁵	*k-lwat ^{1s}
689 fear	² zh̥ər/ ³ gkyi 'afraid'	ʔər ³³	ʔər ³³ 'afraid'	*(s)-grok
	³ ch̥ər 'frighten'			
	¹ ndsh̥ər 'frightened'			
690 blow	¹ mun	mu ²¹	mu ²¹	*smut ^{hs}
691 break/ interrupt	² k'o	ŋgw ³³	ɕɕi ⁵⁵	*cit ^{hs}
692 fall	³ ndo/ ¹ ggü	ndo ³³	mpiv ¹⁵ /gu ²¹ 'fall' 692A*g. 'tumble'	(692B*('
			nto ⁵⁵ 'fall'	
			ŋtso ²¹ 'fall, wither'	
693 lift	¹ lv	lv ²¹	ka ⁵⁵ ta ²¹ 'pick up'	*kyi ²
694 lean	³ lo- ² lo/ ¹ t'o	ti ⁵⁵ ti ²¹		*snwe ^{2/3}
695 fold	³ lv/ ¹ ndü	to ³³ to ³³	tr ⁵⁵	*tup ^{hs}

	Rock	DB	Fu	Proto-BL
696 help	² k ¹ wa/ ³ lo- ² lo			*gra ³
697 hit	² dtu/ ³ k'a	la ⁵⁵ /ty ³³	tse ³³ 'brush against'	697A*Ntok ^{hs}
698 be the case	³ hu/ ¹ o	⁵⁵ s ¹ _{ua} ⁵⁵ be ³³ / ₂₁	le ⁵⁵ 'hit'	697B*Ndi ² *hut ^{hs}
699 join	³ chung ¹ ngu ¹ k'o			*?tsak ¹
700 separate	² mbɛ/ ² ngu- ² lu	ŋj ⁵⁵ ŋj ⁵⁵		700A*bay ¹ 700B* <u>k(i)ay</u> ^{1/3}
701 catch	¹ a/ ³ ddo- ² ddü	tɛ ²¹	ɬɛ ²¹	*smi ¹
702 hunt	¹ a/ ² dzhu	ndy ⁵⁵	nty ⁵⁵ 'chase'	*Ngak ^{ls}
703 hang	² ch'i/ ¹ ha	xæ ⁵⁵	hɛ ⁵⁵	*Cg(y)it ^{ls}
704 shoot	³ k'a	mbu ²¹ /khæ ⁵⁵	k'ɛ ⁵⁵	*(?)Npök ^{hs}
705 stab	¹ ngv	tʃhu ⁵⁵	k'ɛ ⁵¹	705A*?dzap ^{hs} (705B*Ngay ²)
706 kill	³ kb/ ¹ dsä (an animal)	sy ⁵⁵		*Csat ^{ls}
707 pierce	³ ssä (people)	tɛhu ⁵⁵		*Nkyap ^{hs}
708 tie	² p'a/ ³ dtɛr/ ² dzɪ	tsɿ ³³		*pay ¹
709 untie	¹ p'ɛr	pər ⁵⁵		*pre ¹
710 use	¹ dsä	tse ²¹	tse ⁵¹	*ɰum ²
711 wait	² khu		le ⁵⁵ xu ⁵⁵	*Cloŋ ³
712 weave	¹ ddaw	da ²¹	po ³³ /nta ¹⁵	*rak ^{ls}
713 weigh	² ch'i/ ¹ gkyi	nuw ³³		*kyin ¹
714 open	{ ¹ ba(of flowers)/ ² p'u	phu ³³	p'o ⁵¹	*p-wan ³
715 close	³ dtɛr/ ¹ dtɛr	tər ⁵⁵	tə ⁵⁵	(*hap ^{hs})

	Rock	DB	Fu	Proto-BL
716 spread out	³ l'ü/ ¹ ch'ou/ ² k'u	phu ³³		*sɲak ^{1s}
717 kick	² ts'u	tsh ³³	ts'ɿ ³³	*tek ^{hs}
718 butt	³ dtv/ ¹ t'o		ts'ɿ ⁵⁵ 'knee (vt)'	(718A*Nkrap ^h) (718B*?Ncoŋ ³)
719 grasp (talons)	² szü			(719*na ²)
720 send	³ k'ö/ ³ nyi	ɲi ³³		(*Cpo ³)
721 teach	³ mä		ɕiɛ ⁵⁵ sə ⁵⁵ 'teacher' (Cse)	<u>*sma²</u>
722 study			ɕio ²¹ sə ⁵⁵ (student' (Cse))	722A[hen 'ɿ] 722B*Ndzan/a
723 learn	¹ sso			<u>723*san¹</u>
724 spend ...ht		xy ⁵⁵		(*?rak ^{1s})
725 raise animal	¹ khi/ ² zhou			*m-yu ¹
726 play	² ngwɔa ² ng'a- ² khü	ŋgæ ³³ xu ³³	ŋkɛ ³³ xu ³³ 'game'	(726A*Ngre ²) <u>726B*?ɿ</u>
727 swim	¹ lu	ndzər ³³		(Dai)
728 pull	¹ dt'a/ ¹ dtan/ ¹ shēr		tɛ ⁵¹ /ɕu ²¹	728A*Nga ¹ (728B*cway ²)
729 spin	¹ ndv/ ¹ ddv/ ¹ dtv	wo ⁵⁵ wo ²¹	zɿ ²¹ ɬɿ ²¹	g-wan ¹ (area)
730 roll	² bpi- ¹ li(=flute')		nty ²¹ ly ⁵⁵	* <u>(C)lim³</u>
731 throw	³ gku/ ³ dto/ ³ p'u	lo ⁵⁵	kui ⁵⁵	*Nba ¹
732 rot		khua ²¹		*Nbup ^{1s}
733 rub	³ ssu- ² ssu/ ¹ nyi	sɿ ⁵⁵ sɿ ³³	mpɛ ²¹ 'sweep' sɿ ³³ 'brush'	<u>*sut^{hs}</u>

	Rock	DB	Fu	Proto-BL
734 sharpen	³ t'a		s ₁ ³³	*si ²
735 sleep	³ yi	ji ⁵⁵	ji ³³	*yip ^{1s}
736 shiver	³ dshi- ² dshi 'shake' ³ nyu- ² nyu 'wiggle'	kw ²¹ kw ³³	ly ⁵⁵ ly ²¹ xo ⁵⁵ xo ²¹ (tree branches)	736A*h-yut ^{hs} 736B*kyway ²
737 malaria		tshy ³³ tshy ²¹ phɿ ⁵⁵		*pyu(t) ^{2/hs}
738 squeeze	¹ ng'a		nə ³³ 'press' dɿ ²¹ d ₁ ³³ 'hold tight in hand'	738A*snit ^{1s} 738B*Cnap ^{hs} 738C*tsit ^{hs}
739 stop	² hu		ŋfə ⁵¹	739A*tso ² /tsup ^{hs} (739B*Njay ²)
740 swell up	² bö	mbu ³³ ji ³³		740A*roŋ ² (740B*Cpwam/p ^{2/1s})
741 touch				741*to ²
742 twist	¹ bi/ ³ ssɿ		nɿ ⁵⁵ nɿ ²¹	742*hret ^{1s}
743 do	² bä/ ³ t'ä- ² t'ä			(743A*?tan ¹)
744 destroy			p'o ⁵⁵ p'o ⁵⁵	[lu ɿ] (Dai)
745 love	¹ gko/ ² ssu	phio ²¹	p'io ²¹	[hak ɿ] (Dai)
746 meet	¹ ca/ ¹ bu ² gko ³ bpü		ku ²¹ pu ⁵⁵	(746A*dzo ^{1/2}) 746B*Ctoŋ ²
747 whittle	³ ts'ü			*di ^{1/3}
748 crush				*(g)yit ^{1s}
749 finish	¹ dz'a	se ³³ se ²¹		*bran ¹
750 far	² k'o/ ³ wu	khw ³³ kho ³³	k'w ³³ k'o ³³ / k'w ³³ k'ua ³³	*we ²

	Rock	DB	Fu	Proto-BL
751 near	³ nun/ ³ dtv- ² dtü	nv ⁵⁵ nv ³³	ni ⁵⁵ ni ²¹	*Cni ²
752 many	^{2..2} a-bpä/ ² dzu		pe ²¹	*Cmya ²
753 few		nu ³³ Hu/Tai		*nay ²
754 long	³ haw(^{time}) ¹ shër(length)	ser ²¹	se ⁵¹	*m-rin ¹
755 short	² ndër	ndər ³³		*?n(y)um/sn(y)u
756 big	¹ ddü/ ³ k'wuo	ji ³³	ql ²¹	*k-ri ²
757 little	³ gkyl/ ² nnü	ji ³³	nr ³³ (cɕi ⁵⁵ 'young') 'small')	*n-yay ¹
758 high	¹ shwua	ɕua ²¹	ɕue ²¹ 'tall'	*(?mroy) ^{3/1}
759 low		ndər ³³	hy ²¹ (=red)	*?n-yim ³
761A put/place	³ tsa			*?ta ²
763 ill	¹ ngu	gu ²¹	ŋko ²¹	*Cna ¹
764A delicious		ji ²¹		*may ¹
764B ripe	² mä/ ³ mi	mi ⁵⁵		*smiŋ ³
765 dwarf				*s-nay ¹
767 awake(n)		no ⁵⁵	no ³³ no ³³	* (C)no ³
771 hide	³ dzɿ	næ ³³		*wak ^{1s}
772 born	¹ dtü 'put on fire' ¹ t'u ³ dshi 'light'	ndzi ⁵⁵	tɿl ⁵⁵ 'set on fire' ŋtɿl ³³ 'be lit' ɲɕɕi ⁵⁵ 'burn'	*duk ^{1s}
774 bend	¹ gu	mbu ²¹		s-gok ^{1s}
775 must V	V ¹ a/V ⁴ na	V la ²¹		(=609)
776 again V				(=539)
777 begin to V		wo ³³ tshe ³³ V		(=761A)
778 go and V				(=595)

	Rock	DR	Fu	Proto-BL
help to V			pa ³³ pa ²¹	(=696)
together V				(=627B)
secretly V	¹ na V			(=615)
beg to V				(=669)
take + V				(=606)
again V				(=680C)
may V		t ⁵ her ²¹		(=611)
can V		γ ³³	z c ²¹	(*?put ^{1s})
(well)				
can V	³ gkv	tha ⁵⁵	t ⁵ ē ²¹	(=654)
barely				(=609)
ought to V			vgu	(=525)
a lot/very	³ gkü- ³ llü	jo ³³ /dzæ ²¹	jič ¹⁵ + v	*Ndza ²
continue		ne ²¹		(=598)
cause to	v ³ mä			*Ctse ¹
finish				(=749)
try to				(=594)
Venough		mu ⁵⁵		(=560)
now	² ch'i(='this')	ə ²¹ ji ³³	ē ²¹ ji ³³	(796A *Nbut ^{1s})
formerly	² ddü ² nyi			(796B*?əmay ¹)
first	² ā/ ¹ bu ² gkv		ts'ε ³³ do ²¹	798A *u ²
slowly	¹ ho	xo ²¹	ē ⁵⁵ tsē ²¹	798B *Clok ^{1s}
carefully	² gko- ¹ gko	-		799/800 *ya ³ /yak ^{1s}
not	² muàn	mə ³³ v	ma ³³	*ma ²
don't		vm ³³ γ ²¹		*ta ² /da ²
nothing				(*dat ^{1s} Ccit/k ^{1s})
a great deal		t ⁵ hi ³³ t ⁵ hi ³³	ji ⁵⁵ t ⁵ l ²¹	(*?ci ² Cjik ^{1s})
			'often'	
quickly	¹ ch'ung	Vt ⁵ hu ²¹	t ⁵ ε ³³ bε ³³ b ³³	(805A *mran ²)
			'in a hurry'	
			l ³³ k'a ²¹	
			'suddenly'	

	Rock	DB	Fu	Proto-BL
806	a little bit	V nu ³³	4 ³³ 21/ 33 mr 21/ ze ta	*?əcik ^{1s}
807	almost	¹ gkaw- ² gkaw ² k'aw- ¹ k'aw		(*?əla ¹)
808	only	ta ⁵⁵		*Cdat ^{1s}
809	well	γu ³³	ku ³³ gu ³³	*Ndyak ^{1s}
810	completely			
811	(V ₁)ly	V ₁ V ₁		*a ¹
812	inside house	² boa- ² mun ko ²¹	ko ³³ ji ³³ / ji ²¹ k'u ²¹ ba ²¹	*a ¹
813	in front of house			(*Cg ^{hs} ak)
814	but	² mā		(*ka(w) ²)
815	for example			
816	therefore	² mā- ² nnü		(*lo ³)
817	in that case			(*kay ³ 'like)
818	lest			(*?əmu ¹)
819	My God!			(Da ⁱ)
820	reciprocal			*Ndak ^{1s}
821	away	³ man V		*we ³ (cf. 750)
822	away			(822B *?kay ³)
823	towards		le ³³	*la ^{1/3} (cf. 64)
824	completed	se ²¹		(=761A)
825	for 3rd p.			(=605)
826	for 1/2 p.			*la ²
827	want to V	² dti- ³ mun / V ¹ ggō/N ³ mā	ɿ ²¹ bu ³³ (ɿ ³³ 'want')	(827A *Nga ²) (827B *map ^{1s})
828	repeatedly			*kay ¹

	Rock	DB	Fu	Proto-BL
829 have Ved				*Njaw/aŋ ³
830 future		tso ³³ /b ³³		830A *du ¹ (
831 place to V	¹ ndv			(*?krwe ¹)
832 still be Ving				(*ʃaw ²)
833 (not)V yet		se ²¹		*se ²
834 completed	² ssä	se ²¹		(*?o ¹)
835 let us V				(835A *Ckra ^{3/1})
				(835B *ʃa ²)
836 let me V	V ³ ho			(*uk ^{hs})
837 (polite)				(*Cmay ²)
838 declarative				*way ³
839 emphatic				
840 if	¹ - ² yo	se ⁵³		*g-lyan ¹
841 time when		p: ³³ se ⁵³ /phi ⁵³		(*ta ²)
842 altho				(*taw/aŋ ²)
843 because		ndz ³³ ts ³³		(*lo ³)
		gui ²¹ nu ⁵³		
Pn				
844 genitive	ø/ ² ggò	ø/a ¹³		*way ^{3/2}
845 objective	² dtu(indir. obj)	ø	yw ²¹ indir.obj.	*(Ctak ^{is})
846 locative		lo ²¹	ku ³³	846A*?oŋ ³
				(846B *lum ³)
847 subject		ø		*Clay ²
848 topic		ø		*?aw/aŋ ²
849 accompaniment	¹ tgkye	ne ¹³ /ko ⁵⁵		(*Ngum ³)
850 instrument	¹ nä	mu ³³ /nu ³³		*nay ³
851 cause				(*?pa ^{1/3} ?taw/aŋ ^{1/3})
852 concessive				(*ga(k) ^{3/1s})
853 as much as		nu ³³		*?kyin ^{2/3,1}
854 and	¹ nä	la ³³		*lay ^{2/3}

	Rock	DB	Fu	Proto-BL
<u>Pf</u>				
855 affirmative		∅		*ya ^{3/1}
856 dubious	¹ ddaw			(856A *hyak (856B *ʔpa ² (*nay ¹) *la ² *lay ^{2/3} *ʔna ² *jay ^{1/2/3}
857 probable				
858 yes/no?	³ la	la ⁵⁵ /le ³³		
859 substance?		le ³³ / ∅		
860 indirect?		na ²¹		
861 quotative				
862 really				*N)day ¹
863 Yəz	² wuä- ³ mä	ua ²¹		863A(=855) 863B *ʔay ^{1/}
864 Nə		mə ²¹ ua ²¹		(801 + 698)
865 Huh?				*hay ^{3/1}
866 adverbializer				866A *ʔa(η) (866B * ya