

## APPENDIX

# Approaching the historical phonology of three highly eroded Sino-Tibetan languages

Naxi, Na and Laze

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### Appendix 1. Background data about the Naish languages

This Appendix provides (i) information on the geographic coordinates of Naxi, Na and Laze, and a brief review of the literature; (ii) phylogenetic reflections on the Naish group and its position within Sino-Tibetan; and (iii) reasons why no comparison with languages closely related to the Naish languages was attempted in the present research.

#### *Geographic coordinates and a brief review of the literature*

Naxi is the best-documented of the three languages studied in the present article. This is due in part to the scholarly attention devoted to the Naxi scripts (pictographic and syllabic), which indirectly stimulated linguistic work (Fang Guoyu & He Zhiwu 1995, Li Lincan, Zhang Kun et al. 1953, Rock 1963–1972). Annotated editions of Naxi ritual texts also constitute important resources for linguists (see in particular Fu Maoji 1981–1984 and the 100-volume *Annotated collection of Naxi Dongba manuscripts*, 1999–2000). Specialised linguistic work includes reflections on the position of Naxi relative to the Yi (a.k.a. Ngwi, Lolo) subgroup of Tibeto-Burman (Okrand 1974, Bradley 1975); preliminary field notes by Hashimoto Mantaro (Hashimoto 1988); and a book-length glossary (Pinson 1998) which provides data on several dialects (see Pinson 1996). Finally, the rudimentary word lists collected at the turn of the 20th century provide a few useful hints: on this topic, see Michaud & Jacques 2010.

The specific language varieties studied here are indicated on the map (Figure 1):

- i. Naxi (autonym: /naʎhi/), as spoken in the hamlet of A-she (/aʎʂəʎ/); Chinese coordinates: Wenhua township, Lijiang Municipality, Yunnan, China.
- ii. Yongning Na (autonym: /naʎ/), as spoken in Yongning township, Lijiang municipality, Yunnan, China.<sup>1</sup> A neighbouring dialect is described by Lidz (2006, 2007, forthcoming).
- iii. Laze (autonym: /laʎze/; referred to in China as Muli Shuitian 木里水田 or Lare 拉热), as spoken in Xiangjiao township, Muli prefecture, Sichuan, China. (See Huang Bufan 2009 for a general overview of a neighbouring dialect.)

The present research essentially relies on first-hand data collected by Alexis Michaud from 2002 to 2009. With apologies for self-references, here is a list of published results: analyses of the phonemic system of Naxi (Michailovsky & Michaud 2006, Michaud 2006a) and of its tone system (Michaud 2006b, Michaud & He Xueguang 2007); a phonemic and tonal analysis of Yongning Na (Michaud 2008); and a tonal analysis of Laze (Michaud 2009).

### *The Naish group and its position within Sino-Tibetan*

Although language classification is not the main focus of the present paper, it is essential to provide evidence of the close phylogenetic relatedness of Na, Laze and Naxi in order to legitimate the attempt made in the present article: to contribute to the reconstruction of their common ancestor, ‘Proto-Naish’, and to document the evolution from this common ancestor to Naxi, Na and Laze, which are referred to as ‘Naish languages’.

It is widely accepted in Chinese scholarship that Naxi and Na are closely related. He Jiren & Jiang Zhuoyi (1985: 107) consider them as dialects of the same language, which they call “Naxi”, even though speakers of Na do not call their own language ‘Naxi’. The boundaries of ‘Naxi’ as defined by He & Jiang are so broad that they actually coincide with what we call Naish languages. ‘Naxi’ in the sense used in the present article (i.e. restricting its extent to the area where speakers use the name ‘Naxi’ for their own language) coincides with what He & Jiang refer to as ‘Western Naxi’ (纳西语西部方言), whereas they consider Na as part of a looser set of dialects to which they refer as ‘Eastern Naxi’ (纳西语东部方言). Laze is not mentioned in He & Jiang (*ibid.*); the question of its inclusion within Naish (‘Naxi’ as defined by He & Jiang) has been the object of some controversy in Chinese scholarship. With fewer than 300 proficient speakers, Laze is less well documented than the other two varieties. In their *History of the Naxi People*, Guo Dalie and He

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1. This language is also known as ‘Mosuo’; for a discussion of this exonym, see Yang Fuquan 2006.

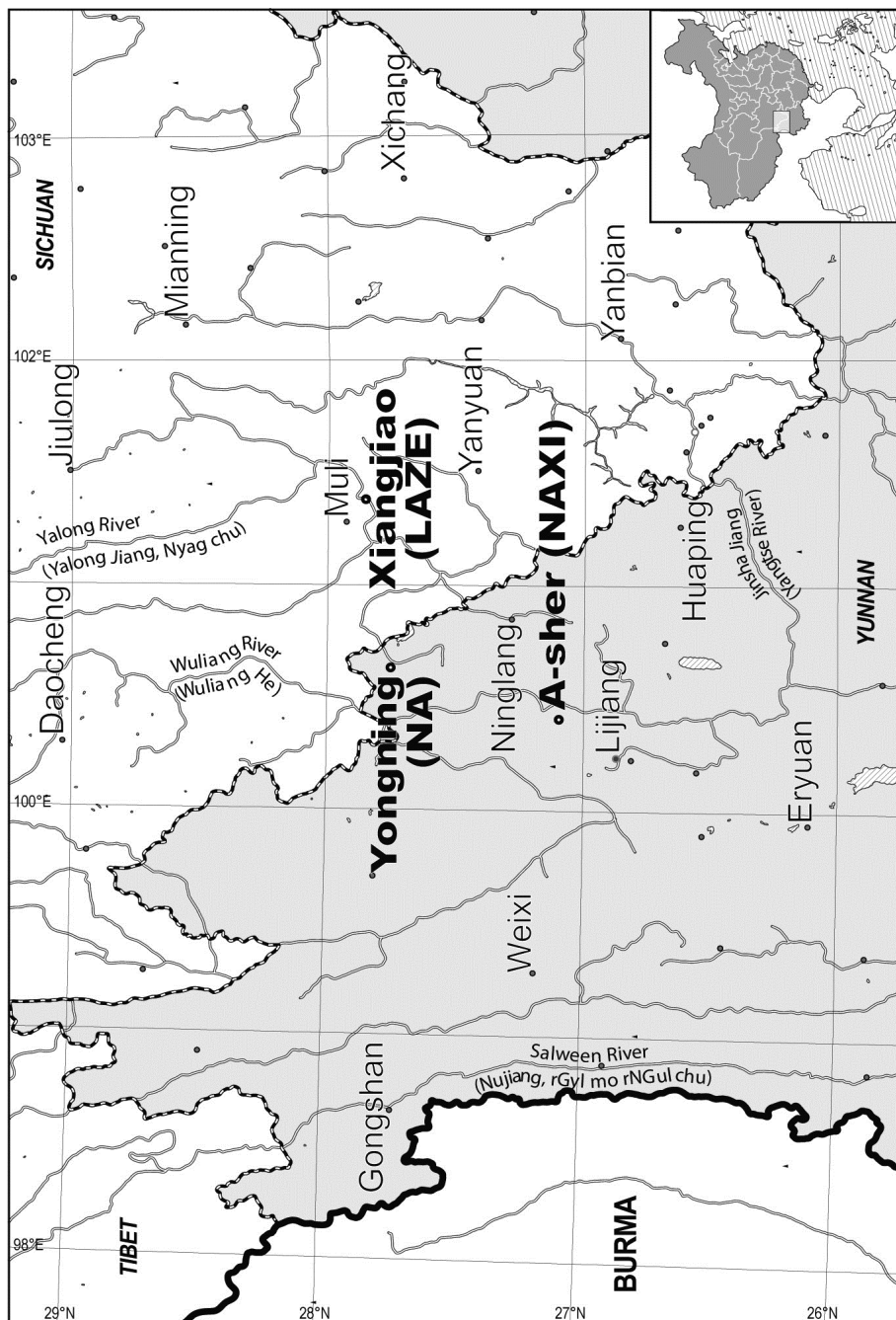


Figure 1. Map showing the locations of fieldwork on Naxi, Na and Laze (in bold). The shaded area corresponds to the province of Yunnan.

**BURMA** state  
**YUNNAN** province  
 Eryuan city

— state boundary  
 - - - province boundary  
 0 55.2 km

Zhiwu, adopting the same broad understanding of the term ‘Naxi’ as He & Jiang, classify the Laze as one out of eight subgroups within the Naxi ethnic group on the basis of cultural and linguistic similarities with another proposed Naxi subgroup, the Nari 纳日 (Guo Dalie & He Zhiwu 1994 [2nd ed. 1999]: 6–7). Huang Bufan (2009: 55) expresses reservations on this topic, concluding that “...the relationship [of Laze] with Naxi, and its position within Tibeto-Burman, call for more in-depth investigation”. Our own research results point to a degree of closeness between Naxi, Na and Laze which is clearly greater than with other languages of the area. In addition to a fair amount of basic vocabulary, they share some lexical innovations. A short list of such probable innovations is provided in Table 18, including two disyllables: “medicine” and “noble”. Not all the words in the list belong to the basic vocabulary, witness the word for the Bai ethnic group. On the other hand, their correspondences for initials and rhymes all coincide with one of the regular phonetic correspondences brought out in this article, suggesting that they may all be actual cognates.

Table 18. A short list of probable Naish lexical innovations.<sup>[2]</sup>

meaning	Naxi	Na	Laze	Proto-Naish
to stumble	peɭ	k <sup>h</sup> u.pi <sup>M</sup>		*(S)pa
cloud <sup>2</sup>	kiɭ	tɕiɭ	tɕiɭsuɭ	*ki
village	hiɪmbɛɭ	fɥ.bi <sup>L</sup>	ɕuɪɪbieɭ	*mba
Bai ( <i>ethnic group</i> )	leɪbyɪɭ	ɬi.by <sup>M</sup>		*Sla
noble		su.p <sup>h</sup> i <sup>M</sup>	suɪp <sup>h</sup> ieɭ	*si p <sup>h</sup> a
medicine (2nd syllable)	ʈs <sup>h</sup> əɪwɪɭ	ʈs <sup>h</sup> æ.u <sup>#H</sup>	ts <sup>h</sup> uɪfɪɭ	*rts <sup>h</sup> i Swri

Moreover, Laze, Na and Naxi share structural properties of numeral-plus-classifier determiners which are not found in other languages of the area (Michaud forthcoming)

The boundaries of the Naish branch remain to be worked out in detail; the list of «subfamilies» (支系) of the “Naxi nationality” (纳西族) provided by Guo & He (1999: 5–9) can serve as a starting-point, keeping in mind that this list was essentially based on anthropological criteria, and that the inclusion of a language in the Naish branch requires a systematic comparative study such as the present one.

2. Lookalikes to this etymon are found in Lizu: /tɕe<sup>35</sup>/, Shangyou Shixing: /tɕi<sup>55</sup>rō<sup>21</sup>/, and Xiayou Shixing: /ti<sup>55</sup>rō<sup>21</sup>/, as pointed out by Katia Chirkova (p.c.). The Shixing form, however, is more profitably compared instead to Proto-Lolo-Burmese \*C-dim<sup>1</sup> and Rgyalrong /zdum/. As for Lizu /tɕe<sup>35</sup>/, more research is needed to determine whether or not this could be an external cognate.

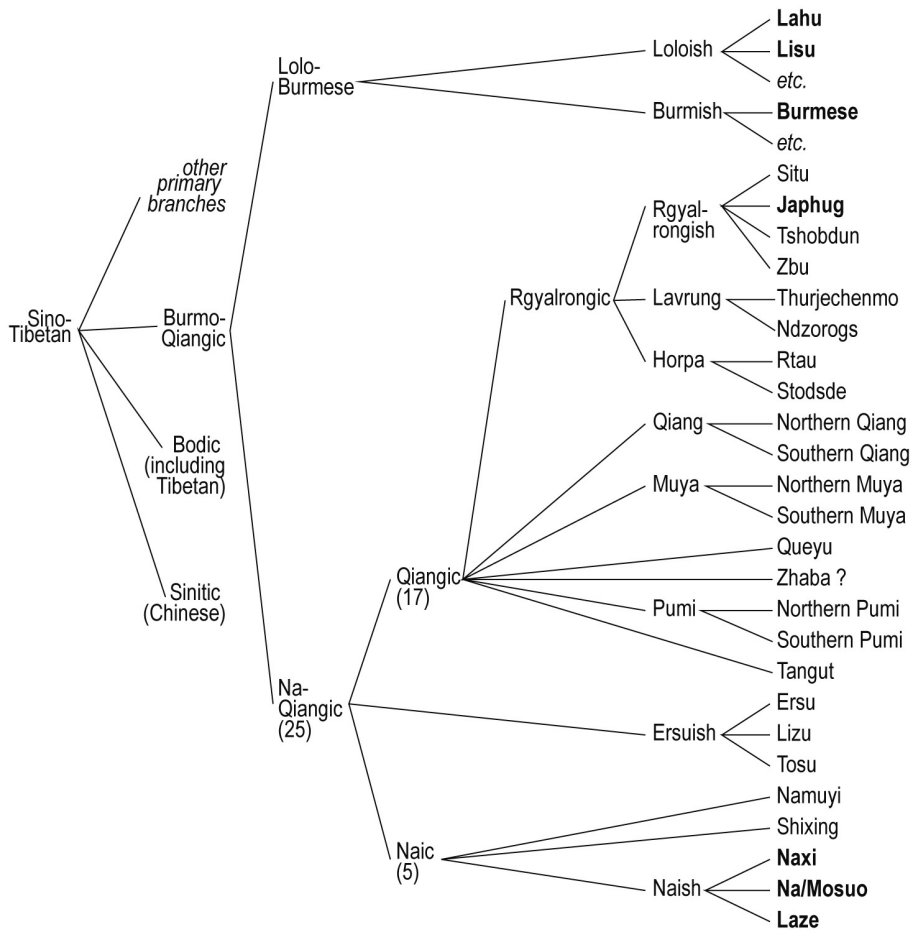
As for the position of the Naish languages within the Sino-Tibetan family, it remains controversial. Naxi was initially classified within the Loloish branch of Tibeto-Burman (Shafer 1955); however, Bradley (1975:6) shows that it does not share the innovations that characterise this group and concludes that Naxi is “certainly not a Loloish language, and probably not a Burmish language either”. Thurgood (2003: 19) lists Naxi among the unsubgrouped languages of the Sino-Tibetan family. This issue links up with more general uncertainties about subgroupings within a relatively large portion of the family, which encompasses Lolo-Burmese and Qiangic. The Naish languages appear closely related to the Shixing language, spoken in Muli county, Sichuan, and which was initially classified by Sun Hongkai 2001 within a ‘Southern Qiangic’ branch on purely typological grounds. A relatively close relationship with other languages likewise classified as ‘Southern Qiangic’, such as Namuyi (a.k.a. Namuzi, Namzi) and Ersu, Tosu and Lizu, is also plausible; specific investigations are required to ascertain the degree of closeness between these languages. Bradley (2008) proposes the following set of hypotheses: Naxi and Na are closest to Namuyi, the second closest is Shixing, and the third closest is Ersu. In the family tree proposed in Figure 2, the name “Naic” is proposed for a node grouping Naish with Shixing and Namuyi.

Some of the groupings in Figure 2 are by now well-established, in particular the Rgyalrongic group (Sun 2000a). Higher-level groupings are more controversial. Under the present proposal, the Qiangic group only includes Rgyalrongic, Tangut, Pumi (a.k.a. Prinmi), Muya and Qiang, i.e. languages that can be shown to have an extensive amount of uniquely shared vocabulary (there remain doubts concerning Zhaba). Ersu, Tosu and Lizu are generally considered to be Qiangic languages, following Sun Hongkai’s 1983 classification (see e.g., Yu 2009), but evidence for their inclusion in this subbranch is weak; our hypothesis is that these languages may in fact belong to the Burmo-Qiangic group but not to Qiangic proper; more research is needed before any conclusion can be reached on this issue.<sup>3</sup>

The family tree outlined in Figure 2 reflects the hypothesis that Naish is closely related to Lolo-Burmese and Qiangic, and that it belongs in an independent branch of a larger Burmo-Qiangic group. This Burmo-Qiangic group is close to ‘Eastern Tibeto-Burman’ as proposed by Bradley 1997. This hypothesis will be briefly defended here on the basis of lexical evidence, since Lolo-Burmese and Naic languages have not preserved much morphology.

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3. Fieldwork on these languages is underway, so that the necessary basis for comparative studies should become available in the near future: see in particular Chirkova 2008, 2009. Further research will also be necessary to clarify the relationship of Guiqiong and Tujia to the Burmo-Qiangic group as defined here.



**Figure 2.** A tentative family tree showing the position of Naxi, Na and Laze within a Burmo-Qiangic branch of Sino-Tibetan.

One such piece of evidence is the suppletion found for the noun “year”, with a labial-initial root (Proto-Tangut \*C-pja) in “this year, next year, last year” and a different root (Proto-Tangut \*kjuk) with numerals: see Table 19. Rgyalrong has generalized the labial form (“next year” is innovative) and the velar root was lost. In Lolo-Burmese languages, only the root related to Tangut \*kjuk is found.

**Table 19.** Suppletion for the noun “year” in several Burmo-Qiangic languages. About the Proto-Naish forms, see Appendix 2, items a7.20 and u3.14

meaning	Tangut	Rgyalrong	Shuiluo Pumi	Muya	Proto-Naish
last year	.ji <sup>2</sup> .wji <sup>1</sup>	japa	zɛ́pə	jø <sup>33</sup> za <sup>24</sup>	... *C-ba
this year	pji <sup>1</sup> .wji <sup>1</sup>	ɣuɰpa	pəpá	pə <sup>33</sup> βə <sup>53</sup>	... *C-ba
next year	sjij <sup>1</sup> .wji <sup>1</sup>	fsvq <sup>h</sup> e < *psaŋ-q <sup>h</sup> o-j	zek <sup>h</sup> iú	sæ <sup>33</sup> βə <sup>53</sup>	... *C-ba
one year	.a-kjiw <sup>1</sup>	tu-xpa	tʰ-kó	tɛ <sup>55</sup> -kui <sup>53</sup>	... *k <sup>h</sup> u
two years	nji <sup>1</sup> -kjiw <sup>1</sup>	ɰnu-xpa	ji <sup>1</sup> -kó		... *k <sup>h</sup> u

Table 20 presents a preliminary list of common etyma between Qiangic, Naish and LB not found elsewhere in ST (to the best of our knowledge). It should be kept in mind that finding uniquely shared lexical innovations is a difficult task. This short list will require revision in future; if the hypothesis is correct, it is expected that an increasing number of cognates and uniquely shared lexical innovations will come to light.

**Table 20.** Correspondences for lexical items that may constitute Burmese-Qiangic innovations. The Naish forms are Na, apart from those marked as NX, which are from Naxi. Achang belongs to Burmish, and Hani to Loloish.

meaning	Rgyalrong (S=Situ)	Tangut	Naish (NX=Naxi)	Proto- Naish	Burmese	Achang	Hani
copula	ɲu	ɲwu <sup>2</sup>	ɲiɻ	?			ɲu <sup>31</sup>
star	zɲgri	gji <sup>1</sup>	kuɻ	*kri	kray <sup>2</sup>	k <sup>h</sup> zə <sup>55</sup>	a <sup>31</sup> gu <sup>55</sup>
forget	jmut	mji <sup>2</sup>	my.p <sup>h</sup> æ <sup>L+MH#</sup>	*mi	me <sup>1</sup>	ji <sup>35</sup>	ji <sup>55</sup>
be ill	ngo < *ngaj	ɲo <sup>2</sup>	guɻ	*go			
flint	ɤduɻtsa		tse.mi <sup>H#</sup>	*tsa			
to hide	nytsu		tsuɻ NX	*tsu			
to swallow	mqlaɻ		ɣɻɻ	*NqU < *Nqak			
dry	spu		pɻɻ	*Spu			
thick	jaɻ	laa <sup>1</sup>	loɻ	*laC <sub>2</sub>			
jump	mtsəɻ		t <sup>h</sup> oɻ	*t <sup>h</sup> aC <sub>2</sub>			
winter	qartsu	tsur <sup>1</sup>	t <sup>h</sup> iɻ	*t <sup>h</sup> u	c <sup>h</sup> oŋ <sup>3</sup>	tɕ <sup>h</sup> ɔŋ <sup>31</sup>	t <sup>h</sup> ɔ <sup>31</sup> l ga <sup>33</sup>
knee	tə-mɲa S	ɲwer <sup>2</sup>	ɲwɻ.ko <sup>H#</sup>	*ɲwa			
sun	ɰmbyi	be <sup>2</sup>	biɻ NX	*bi			

Note that the inclusion of Rgyalrongic within Qiangic contradicts LaPolla's hypothesis of a Rung group, distinct from Qiangic, that would include Rgyalrongic as well as Kiranti and Dulong/Rawang. LaPolla's proposed grouping is based on the hypothesis that the morphology found across these languages is a common innovation (LaPolla 2003: 30 and references therein). However, the comparison of Rgyalrong to Kiranti reveals very little common vocabulary: a careful examination of Boyd Michailovsky's unpublished Kiranti etymological dictionary brought out less than 150 potential cognates, which are too widespread within the Sino-Tibetan family to be convincing instances of shared innovation. If Rgyalrong and Kiranti were closely related in the Sino-Tibetan family tree, one would expect more cognate vocabulary, including some lexical innovations.

The view of the Sino-Tibetan family presented in Figure 2 has the important implication that any morphology that is found in both Rgyalrong and Kiranti, or Rgyalrong and Tibetan, must be of great antiquity (predating the split between Proto-Burmo-Qiangic and other branches), and that it was lost almost without traces in Lolo-Burmese and Naish. In this light, vestigial phenomena such as the traces of vowel alternation found in the Naic language Shixing (Chirkova 2009) deserve special attention: they may point to an earlier verb conjugation system.

*Why no comparison with languages closely related to the Naish languages was attempted in the present research*

The phylogenetic distance between Naish, Rgyalrong and Burmese is relatively great — although we believe that they belong together with the Naish languages in a Burmo-Qiangic branch of Sino-Tibetan, as explained above. The distance between Naish and Tibetan is even greater. Some justifications must be provided for referring to these distant languages in the reconstruction of Proto-Naish, instead of relying on data from Shixing, Namuyi and Ersu/Tosu/Lizu, which, while they do not belong to the Naish branch by our criteria, appear to be its closest relatives and could belong in a Naic group (see Figure 2). There are in fact three pressing reasons not to attempt to incorporate data from these languages at the present stage. (i) Available phonemic analyses for these languages are not fully satisfactory. A thorough synchronic description, including a complete inventory of syllables, is required before these languages can be put to use in historical comparison. In the case of the Naish languages, a preliminary to the present research consisted in elaborating a comprehensive synchronic phonological analysis. By 'comprehensive', we mean an analysis which, in addition to the inventory of vowel and consonant phonemes in the language, comprises a list of all attested syllables. As the Naish languages tend to present many phonological contrasts in restricted contexts, the inventory of syllables is necessary to study the full extent of gaps



in the combinations of onsets and rhymes. For Shixing, Namuyi and Ersu, such inventories are not yet available. (ii) In addition to this practical reason, there is a methodological reason for postponing comparison with these languages: they are almost as eroded as the Naish languages, and therefore extremely difficult to use for comparative purposes. Naish, Shixing, Namuyi and Ersu have undergone an enormous amount of phonological changes independently from one another, and do not share most of their phonological innovations. Comparing them directly to one another only yields a lengthy list of opaque correspondences, offering precious few insights as to how these correspondences should be sorted out and reconstructed. Since these languages are mostly isolating and have almost no inflections (except in their tonology), we cannot rely on the reconstruction of vowel alternations to solve these issues. (iii) Last but not least, areal diffusion has had a conspicuous influence on Shixing and Namuyi, whose speakers are currently multilingual, raising with extreme acuteness the classical issue of inheritance versus borrowing (about which see Aikhenvald & Dixon 2001, among others).

## **Appendix 2. Examples of five rhymes of Proto-Naish (\*a, \*i, \*o, \*u and \*aC<sub>1</sub>/\*aC<sub>2</sub>) with comparanda in the conservative languages and proposed reconstructions.**

The question mark after a reconstructed form indicates that this form has other possible origins, and that the form indicated is a rule-of-thumb hypothesis. The “Ref[erence]” consists of (i) the proto-vowel, (ii) the number assigned to the vowel correspondence among the three Naish languages under study, and (iii) the number assigned to the cognate set. In the “HTB” column, we indicate the page number corresponding to the etymon in Matisoff’s handbook (2003). The words provided in the “Rgyalrong” column are Japhug Rgyalrong forms, except those with the mention “(Situ)”, which are Situ Rgyalrong forms from Huang Liangrong & Sun Hongkai 2002. The notation of the tones for Na disyllables follows the conventions set out in Michaud (2008). Finally, it must be emphasised that the data in the “other languages” column are not part of the comparative study carried out here: these potential cognates are provided solely as stepping-stones for future comparative work with these languages (Tangut, Pumi and Lisu). For Pumi, SL refers to the Shuiluo dialect (unpublished fieldwork data), and LP to the Lanping dialect (Lu Shaozun 2001). Personal communications from James Matisoff are labelled “(JAM)”.

Table 21. Rhyme \*-a

meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	other languages	Naxi	Na	Laze	Proto-Naish
to win	a1.01		βka				ŋaɪ	ɣaɪ		ŋga/aC <sub>1</sub>
strength <sup>4</sup>	a1.02	170–4				Tangut yie <*C-ka	kaɪtuɪ	ɣaɪ	kaɪziɪ	Nka/aC <sub>1</sub>
bitter	a1.03	164–8		kha <sup>3</sup>	k <sup>h</sup> a		k <sup>h</sup> aɪ	q <sup>h</sup> aɪ	k <sup>h</sup> aɪ	k <sup>h</sup> a/aC <sub>1</sub>
to step ac- cross	a1.04		mɕla					ɣaɪ	(ɕɪut) ɣaɪ	ŋga/aC <sub>1</sub> (or Nka/aC <sub>1</sub> )
difficult <sup>5</sup>	a1.05		nqa		dka			lo.lha <sup>M</sup>	luɪɪhaɪ	Cka/aC <sub>1</sub>
knee <sup>6</sup>	a2.01		tə-mɲa (Situ)			Tangut ɲweɪ <sup>2</sup> <*ɲɲwa		ɲɲɪ.ko <sup>H#</sup>	ɲɲa.ltuɪ	ɲɲa
bowl	a2.02					Pumi k <sup>h</sup> wá	k <sup>h</sup> waɪ	q <sup>h</sup> wɪɪ	k <sup>h</sup> wɪɪ	k <sup>h</sup> wa
hoof	a2.03	170	tu-qa			Pumi kwá	k <sup>h</sup> waɪ	q <sup>h</sup> wɪ.ɕeɪ <sup>L#</sup>	k <sup>h</sup> wɪɪɪɪɪɪ	k <sup>h</sup> wa
a pair	a3.01							dzeɪ	dzeɪ	dza
to lock	a3.02							tseɪ	tseɪ	tse
wheat <sup>7</sup>	a3.03	162–5	ndza	ca <sup>3</sup>	za		dzeɪ	dze.lɪuɪ <sup>M</sup>	dzeɪ	dza
naemorhe- dus goral	a3.04						seɪ	seɪ	seɪ	sa
steel (for flint)	a3.05		ɪduɪɪtsa				tseɪɪmaɪ	tse.mi <sup>H#</sup>	tseɪɪɪɪɪɪ	tse
salt	a3.06	172		cha <sup>3</sup>	ts <sup>h</sup> wa		ts <sup>h</sup> ɪɪ	ts <sup>h</sup> ɪɪ	ts <sup>h</sup> ɪɪ	ts <sup>h</sup> a

meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	other languages	Naxi	Na	Laze	Proto-Naish
nephew	a3.07	171-2	tu-fisa		ts <sup>h</sup> a-bo		dze-tuɿ	ze.y <sup>L</sup>	zeɿ	Cdza
to walk	a3.08							seɿ	seɿseɿ	sa
to borrow	a4.01	162-5		hɿa <sup>3</sup>	rpa		ɿɿ	ɿɿ	ɿɿ	ɿi/a
fish	a4.02	162		ɿa <sup>3</sup>	ɿa		ɿɿ	ɿi.zu <sup>#H</sup>	ɿi.zel	ɿi/a
span	a5.01		tu-tya	thwa <sup>2</sup>	m <sup>h</sup> o < *mtwa			ɿɿ		twa
tooth	a5.02	171-2	tu-cya	swa <sup>3</sup>	so < *swa		huɿ	hiɿ	fi <sup>h</sup> ɿɿ	Swa
rain	a5.03	171-3		rwa <sup>2</sup>			huɿ	hiɿ	fi	Swa
lake	a5.04				m <sup>h</sup> o < *m-swa		huɿ	hi.na. mi <sup>LM+#H</sup>	fi	Swa
cow	a5.05					Tangut ɿwe <sup>2</sup> < *ɿwa	uɿ	ɿɿ	viɿ	wa
to fall (rain)	a6.01		ɿgra <sup>1</sup> fall <sup>1</sup>	kya <sup>1</sup>			guɿ	giɿ		gra
meat	a6.02			sa <sup>3</sup>	ça		ʃuɿ	ʃel	ʃuɿ	ça
earth <sup>8</sup>	a6.03						ʃuɿ	ʃel	ʃuɿ	tra
axe	a7.01	171-2	tu-rpa				la.lmbeɿ	bi.mi <sup>L</sup>		(S)m̄ba
to stumble	a7.02						peɿ	k <sup>h</sup> u.pi <sup>M</sup>		(S)pa
Bai ( <i>ethnic group</i> )	a7.03						leɿbyɿ	fi.by <sup>M</sup>		Sla
linen	a7.04						peɿ	piɿ		(S)p <sup>h</sup> a

meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	other languages	Naxi	Na	Laze	Proto-Naish
knife	a7.05	162		dha <sup>3</sup>			zuɾtʰeɪ	su.ɿi <sup>L</sup>	suɿpʰieɪ	tʰa
noble	a7.06							su.ɿi <sup>M</sup>		pʰa
soul <sup>9</sup>	a7.07	162	tu-rɿa	see footnote	bla/bɿla		oɬeɪ	æ.ɦɿ <sup>L+H</sup>	ɾoɦieɪ	ɿa
thin	a7.08	162	mba	pa <sup>3</sup>			mbeɪ	biɿ	tʰaɪ biɪɪ	mba
snow	a7.09	172	tv-jpa				mbeɪ	biɿ	viɪɪ	Smba
village	a7.10						ɦimbeɪ	ɦy.bi <sup>L</sup>	ɟurbieɪ	mba
to do	a7.11		pa		byed		beɪ	iɿ	viɪɪ	Cba
tea	a7.12	48					leɪ	liɿ	lieɪ	la
moon	a7.13	162-4	tu-sla	la <sup>1</sup>	zla-ba		leɪ	ɦi.mi <sup>M</sup>	ɦieɦmieɪ	Sla
ear	a7.14	162-5	tu-rna	na <sup>3</sup>	rna		ɦeɦtsuɿ	ɦi.pi <sup>L#</sup>	ɦieɦtuɿ	ɿa
trousers	a7.15	163-5				Tangut ɦjii <sup>1</sup> < *ɦjaa	ɦeɪ	ɦi.q <sup>ɦ</sup> wy <sup>L</sup>	ɦieɦk <sup>ɦ</sup> wyɿ	Sla
female	a7.16	175			ma (suffix)		meɪ	mi	mie	ma
ask for	a7.17						meɪ	miɿ	mieɿ	ma
butterfly	a7.18		qambalula				pʰeɪleɪ	pʰi.ɦi <sup>L#</sup>	pʰieɦlieɪ	pʰa ɿa
rabbit <sup>10</sup>	a7.19		qala				tʰoɦeɪ	tʰu.ɦi <sup>M</sup>	tʰuɦlieɪ	ɿa
this year	a7.20		tu-xpa				[ʃ <sup>ɦ</sup> uɦbeɪ	tsʰi.ɦi <sup>(M)</sup>	tsʰuɦvieɪ	Cba
who	a7.21						ɦeɦneɪ	niɿ		na

4. It is likely that “to win” \*nga/aC<sub>1</sub> and “strength” \*Nka/aC<sub>1</sub> originally belong to the same root, but they need to be distinguished at the Proto-Naish stage. A relationship with Burmese a<sup>3</sup> and its Lolo-Burmese cognates (Matisoff 2003:170) is possible.

5. We also find forms such as Lahu /ha<sup>11</sup>/ “difficult” (Matisoff 1988:1066), which could point to an alternative etymology.

6. The Na word is pronounced [ɲwv]. Since the combination of an initial velar and a rhyme /wa/ is not attested in Na, one may consider that the contrast between the rhymes /wv/ and /wa/ is neutralised in this context, and hence compare Na [ɲwv] with Laze [ɲwa].
7. This was originally a nominalised form of the verb ‘to eat’; a semantic change from ‘food’ to ‘wheat’ occurred in this etymon. The free verb ‘to eat’ in Naish, /dzuul/ in Na and /ndzuul/ in Naxi, points to a reconstruction \*ndzi in Proto-Naish, which is not compatible with the vowel in the languages of reference. The \*-a / \*-i alternation found in this pair of words can only be a trace of morphology. The rhyme \*-i of the verb might be the result of the fusion of the root with a suffix. Such a phenomenon is found in Rgyalrongic languages: in Japhug Rgyalrong, transitive verbs with open-syllable *-a* final (including *ndza* ‘to eat’, the cognate of Proto-Naish \*ndzi) have a non-past form singular stem in *-e* (for instance /ndze/ ‘he eats’) that results from the fusion of the root vowel with a suffix \*-jə attested as a free form in other Rgyalrongic languages (Jacques 2004:356). An explanation for the form \*ndzi in Naish is that it represents the generalisation of the non-past form of the verb, thereby preserving a trace of a historical stage when Naish languages had verbal morphology of the type that Rgyalrong preserves to this day.
8. This form is perhaps relatable to the second syllable of Lahu /mi<sup>21</sup>cha<sup>53</sup>/ ‘earth’ (JAM).
9. Two competing Burmese etymologies exist for this etymon: *lip pra* ‘soul’ and *hla* ‘beautiful’ (Matisoff 2003:62).
10. Similar names are found in other languages, for instance Lahu /tʰ<sup>53</sup>la<sup>21</sup>/ ‘year of the rabbit’ (JAM).

Table 22. Vowel \*-i

meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	Other languages	Naxi	Na	Laze	Proto-Naish
goat	i1.01	315	ts <sup>h</sup> yt	chit			ts <sup>h</sup> u]	ts <sup>h</sup> u]	ts <sup>h</sup> u]	ts <sup>h</sup> i
oat <sup>11</sup>	i1.02	189					mu]	my]	my]	zi
south	i1.03						i[ts <sup>h</sup> u]r]muu]	i.[s <sup>h</sup> u].mi MHL	i[ts <sup>h</sup> u]r]mie]	tɕ <sup>h</sup> i
grass	i1.04						zu]	zu]	zu]	zi
skin	i1.05	189	tu-ndzi	re <sup>2</sup>			u]p <sup>h</sup> i]	u]	zu]	ri
yellow	i1.06	191					ɕu]	ɕu]	ɕu]	ci
to know	i1.07	206	sus	si <sup>1</sup>	ɕes		su]	su]	su]	si
to die <sup>12</sup>	i1.08	189	si	se <sup>2</sup>	ci		ɕu]	ɕu]	su]	rsi
to thread (beads)	i1.09					Lisu suu <sup>3,3</sup>	su]	su]	su]	si
new	i1.10	344	ɕy	sac			ɕu]	ɕu]	ɕu]	ci
to tie	i1.11		ts <sup>h</sup> ik <sup>3,3</sup> (Situ)				tsu]	tsu]	tsu]	tsi
morning	i1.12						my]su]	my].su L+MH#		si
girl	i2.01	187	tu-me	min <sup>3</sup>			mi]	my]	my]	mi
fire	i2.01	206	sni	mi <sup>3</sup>	me		mi]	my]	my]	mi
to hear	i2.02					Pumi mɛ <sup>3</sup>	k <sup>h</sup> odmi]	my]	my]	mi

meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	Other languages	Naxi	Na	Laze	Proto-Naish
to forget	i2.03		jmūt	mɛ¹			lelmi¹	my.pʰæ L+MH#	ləlmyɿ	mi
lower side	i2.04							my.tʰæᵐ	vʰ[æ]	mi
name	i2.05	296	ty-rmi	map²	ming		miɿ	my.[sæ <sup>MH#</sup>		mi
star <sup>13</sup>	i3.01	212	zngri	kray²			kuɿ	kuɿ	tʰɿ	kri
gallbladder	i3.02	189	tuo-čkruut	sap³ khre²	mkʰris		kuɿ	kuɿ	tʰɿ	kri
medicine	i3.03	189		che³	rtsi		[ʃʰəɬuɬ	[ʃʰæ.uu <sup>#H</sup>	tʰuɿft	rtsʰiSwri
tight	i3.04	305			grim-po		kuɿ	kuɿ	tʰɿ	kri
liver	i4.01	297	tuo-mtsʰi	sap³	mtɕʰin		səɿ	siɿ	sɿ	siN
wood	i4.02	347	si	sac	ɕiŋ		səɿ	siɿ	sɿ	siN
to shave	i4.03							siɿ	sɿsɿ	siN
hot	i4.04							tsʰɛɿ	tʰɿ	tsʰiN
to plane down	i5.01						tʰiɿ	tʰiɿ	tʰi	tʰi
water	i5.02		tuo-ci				giɿ	dziɿ		gi
to flow	i5.03		jit				iɿ	ziɿ		ji
tongue	i5.04	215		lhya²	ltce		hiɿ	hi.mi <sup>L</sup>	ɕiɿmieɿ	hi
two	i5.05	434	ɳuus	hnac	gnis		ŋiɿ	ŋiɿ	ŋiɿgyɿ	ŋi/a
sweet <sup>14</sup>	i5.06		ɕʰi				kʰiɿ	tʰɕʰiɿ	tʰɕʰi	kʰi
to sell	i5.07		ntsye					tʰɕʰi	tʰɕʰi	tʰɕʰi
thorn	i5.08						kʰɿ	tʰɕʰiɿ	tʰɕʰiɿtuɿ	tʰɕʰi

meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	Other languages	Naxi	Na	Laze	Proto-Naish
muntjac	i5.09	189		khye <sup>2</sup>		kʰi˥	tɕʰi˥	tɕʰi˥	tɕʰi˥	kʰi
saliva <sup>15</sup>	i5.10		tu mci			ki˥	tɕi˥	tɕi˥	tɕi˥	tɕi
saddle	i5.11					Pumi: stʃɛ tʃhɔ̄ (LP), ci <sup>2</sup> (SL)	ʒwa˥ki˥ kʰo˥	tɕi˥	tɕi˥qʰɔ̄	tɕi
small	i5.12		xɕi			ki˥	tɕi˥	tɕi˥	tɕi˥	tɕi
to sleep <sup>16</sup>	i5.13	500	nuzuuw	ʔip		i˥	zi˥	zi˥	zi˥	ji
to walk	i5.14		ŋke			ŋgʰ				ŋgi
to lose	i5.15						ŋi˥			ni
cloud	i5.16					ki˥	tɕi˥	tɕi˥	tɕi˥suu˥	tɕi
urine	i5.17		tu-rmbi			mbi˥				mbi
pus	i6.01			praŋ <sup>2</sup>		mbə˥	bə˥	bə˥	bə˥	pri˥N
short	i6.02					ndə˥	də˥	də˥	də˥	rdi˥N
grain	i6.03					lə˥	ɬə˥	ɬə˥	ɬə˥	rii˥N
neck <sup>17</sup>	i6.04				mgrin	Pumi kɛ <sup>2</sup> (SL)	kjə˥pə˥	ɬə˥ɬy˥H#	ɬə˥-tsur˥pə˥	C-Nkri˥N
resin	i6.05					thorŋjə˥	tʰo.ɬə˥	tʰo.ɬə˥	thurɬə˥	C-ŋgri˥N
rope	i6.06		tu-mbri		mbreŋ		bə˥	bə˥		bri˥N
guest	i6.07		tu-pi			bə˥	hi.bə˥#H	hi.bə˥#H		bri˥N



meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	Other languages	Naxi	Na	Laze	Proto-Naish
long	i6.08	280-2	zri		riŋ	Pumi ʃɛ¹ (SL)	ʃəɹ	ʃæɹ		ɕiN
hunt	i6.09						ʃəɹ	kʰyʷʃæɹ		ɕiN
articulation	i7.01		tu-rtsvy	chac	tsʰigs		ʃəɹ	ʃæɹ	tsuɹ	rtʂi
wash	i7.02		χci (Situ rtci)				ʃʰəɹ	ʃʰæɹ	bəlləɹ tsʰuɹ	rtʂʰi
medicine	i7.03			che²	rtʂi		ʃʰəɹluɹ	ʃʰæ.uɹʰ	tsʰuɹɹ fi	rtʂʰi
waist	i7.04							i.ʃʰæ.L+MH#	iɹtsuɹ	rtʂi

11. Proto-Lolo-Burmese \*zay² ‘barley’ (JAM).

12. The reconstruction of the cluster \*rs for this word results from the application of the same principle as for other cases where a retroflex initial in Na and Naxi corresponds with a dental initial in Laze. This reconstruction is not supported by comparative evidence from the conservative languages. The cluster in \*rsi could be a trace of morphology that had developed in Proto-Naish.

13. Matisoff (1980) has proposed a detailed etymology for this etymon common to Naish, Lolo-Burmese and Qiangic languages.

14. This etymon is perhaps related to Burmese *khyui²* (cf. Matisoff 2003: 182).

15. This root could be related to ‘water’ (cf. Matisoff 2003: 451).

16. The correspondence of initials for this item is problematic. The reconstruction proposed here rests on the hypothesis that \*ji changed to /zi/ in Laze. Crucial evidence would come from other instances of the correspondence /i:zi:zi/.

17. The rhyme in the Naxi dialect studied here is /æ:/ /kjæpəɹ/; however, this is due to an innovation found in this dialect: the merger of /ə/ and /æ/ (to /æ/) after S-, TS- and Kʃ-, where S- stands for coronal fricatives, TS- for coronal affricates, and K for velar stops. The conservative form is /kjəpəɹ/, as found in the variety of Naxi spoken in the city of Lijiang (Fang Guoyu & He Zhiwu 1995: 432), where the contrast between /ə/ and /æ/ is preserved in these contexts. Note that \*NkriN and \*ngriN do not follow the same phonetic evolution as \*kri, otherwise one would expect the correspondence ngu:ku:ndzi.

Table 23. Vowel \*-o

meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	Other	Naxi	Na	Laze	Proto-Naish
bright <sup>18</sup>	o1.01						mbuɬ	buɬ		mbo
dike	o1.02						mbuɬ	buɬ	buɬtuɬ	mbo
home	o1.03						miɬuɬ	a.ɣu <sup>L,M</sup>	aɬuɬ	o
younger sister	o1.04						gutmeɬ	gu.mi <sup>M</sup>	gutmiɬ	go
winnowing fan	o1.05						muɬ	p <sup>h</sup> i.mu <sup>L#</sup>	muɬ	mo
lunch	o1.06						zuɬ	zu.dzu <sup>L</sup>	zuɬ	Cro
cold (weather)	o1.07	262	yɛndzo		graŋ-mo		zuɬ	dzuɬ	dzuɬ	ndro
this morn- ing	o1.08							[ʂ <sup>h</sup> u.u.ʂu <sup>(M)</sup>	ts <sup>h</sup> iɬʂuɬ	co
to run away	o1.09	294	p <sup>h</sup> yo		mbros		p <sup>h</sup> uɬ	p <sup>h</sup> uɬ	p <sup>h</sup> uɬ	p <sup>h</sup> o
head <sup>19</sup>	o1.10		tu-ku		mgo		kuɬɬɬ	ɣu.q <sup>h</sup> wy <sup>L#</sup>	uɬtuɬ	SNko
corpse	o1.11	265				Tangut mijj <sup>2</sup>	ʂuɬmuɬ	hi.mu <sup>L#</sup>	hiɬmuɬ	mo
to spread	o1.12		ɕk <sup>h</sup> o	khaŋ <sup>3</sup>			k <sup>h</sup> uɬ	k <sup>h</sup> oɬ	k <sup>h</sup> uɬ	k <sup>h</sup> o
tomorrow <sup>20</sup>	o1.13		fso		saŋ pin		soɬɬɬ	so.ŋi <sup>H#</sup>	miɬsuɬ	so
pine	o1.14	264	ty <sup>h</sup> o	thaŋ <sup>3</sup>	t <sup>h</sup> aŋ		t <sup>h</sup> oɬndzæɬ	t <sup>h</sup> o.dzi <sup>L#</sup>	t <sup>h</sup> uɬsiɬ	t <sup>h</sup> o
be ill	o1.15		ngo				ŋguɬ	goɬ		ŋgo
mushroom	o1.16	183-4	ty jmyy	hmui <sup>2</sup>	mog ca		muɬ	muɬ	muɬ[ʂ <sup>h</sup> wyɬ	mo

- 18. Possibly related to Lahu /ba<sup>33</sup>/ “bright”, though the vowel correspondences are problematic.
- 19. A comparison with Tibetan *dbu* “head” and Burmese *u<sup>2</sup>* “head” is tempting, but the vowels do not match.
- 20. In Lolo-Burmese, one finds cognates that point to a rhyme \* -ak rather than \* -aŋ as do the Naish and Tibetan forms.

Table 24. Vowel \*u

meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	Other	Naxi	Na	Laze	Proto-Naish
ring <sup>21</sup>	u1.01						laɰpəɭ	lo.pɰ <sup>L+MH#</sup>	laɰ <sup>h</sup> uuɰ	pru
comb <sup>22</sup>	u1.02						pəɭ	py.mi <sup>L</sup>		pru
yak	u1.03		qambruu		mbrɪ		bəɭ	byɰ	byɰ	bru
white <sup>23</sup>	u1.04		wyrum		mp <sup>h</sup> rum		p <sup>h</sup> əɰ	p <sup>h</sup> ɰ	p <sup>h</sup> ɰ	p <sup>h</sup> ru
to hoe up	u1.05						pəɰ	pyɰ	pyɰ	pru
vertical	u2.01						tsuuɰ	gy.tsi <sup>LM</sup>		tsu
to sit	u2.02		mdzoo				ndzooɰ	dziɰ	dzyɰ	ndzu
winter	u2.03		qartsuu	chon <sup>3</sup>			muɰts <sup>h</sup> uɰ	ts <sup>h</sup> ɰ	muɰts <sup>h</sup> yɰbieɰ	ts <sup>h</sup> u
to hide	u2.04		nytsuu				tsuuɰ			tsu
bald	u3.01						bi <sup>h</sup> ɰɰ	ɰu.by <sup>MH#</sup>	byɰ	bu
bug	u3.01			pui <sup>3</sup>	mbu		byɰ	byɰ		bu
to lay eggs	u3.02	57				Pumi pə <sup>3</sup> (SL)	byɰ	byɰ		bu
pan	u3.03				Tangut .wju <sup>1</sup> < Cpo		byɰ	ɰ	ɰɰmieɰ	Cbu
maternal uncle	u3.04			u <sup>3</sup>	a-k <sup>h</sup> u		əɰgyɰ	ə.y <sup>MH#</sup>	æɰɰ	Cgu

meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	Other	Naxi	Na	Laze	Proto-Naish
to sew	u3.05	141	tʂuʂ	khyup	ndrub		ʒɿ	ʒɿ	ʒɿ	C-ru
creased, wrinkled	u3.06		akruuʂru					lə.ʒɿ.ʒɿ <sup>H</sup>		C-ru
to pass (time)	u3.07						gɿ	gɿ	gɿ	gu
body	u3.08	198	tuu-sk <sup>h</sup> ruu	kuiy <sup>2</sup>	sku		gɿ	gɿ.mi <sup>M</sup>	ɕuŋgɿd ur dzɿ	gu
plow	u3.09							æ.gɿ <sup>L</sup>	[ɕ]gɿ	gu
to fix <sup>24</sup>	u3.10			ku <sup>1</sup>				gɿ	gɿ	gu
nice	u3.11						gɿ	gɿ		gu
bent	u3.12	357	ŋgɿ		gug		gɿ	la.gɿ <sup>LM</sup>	la gɿ	gu
owl	u3.13		pɿɿ-k <sup>h</sup> u				bu fɿ		bu lu-ffɿ	hu
year	u3.14		fsɿq <sup>e</sup>			Pumi ko <sup>2</sup> (SL)	k <sup>h</sup> ɿ	k <sup>h</sup> ɿ	k <sup>h</sup> ɿ	k <sup>h</sup> u
to steal	u3.15	182	muurkuu	khui <sup>3</sup>	rku		k <sup>h</sup> ɿ	k <sup>h</sup> ɿ	k <sup>h</sup> ɿ	k <sup>h</sup> u
classifier (men)	u3.16						kɿ	kɿ	kɿ	ku
Bai ethnic group	u3.17						le bɿ	ʂi.bɿ <sup>M</sup>		la bu
to bark <sup>25</sup>	u3.18						lɿ	lɿ	k <sup>h</sup> u lɿ	lu
enough	u3.19	357		lok			lɿ	lɿ	lɿ	lu
to wind (thread) <sup>26</sup>	u3.20						ndɿ	lɿ		lu
larva	u3.21		qajuu				lɿ		mu k <sup>h</sup> ɿ lɿ	lu
to graze	u3.22		lɿ				lɿ	lɿ	lɿ	lu

meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	Other	Naxi	Na	Laze	Proto-Naish
beard	u3.23						myʰtʂuʷ	myʰtʂuʷ <sup>MH#</sup>	myʰtʂuʷ	mu
to dig	u3.24	184		tu <sup>3</sup>			ndyʰ	dyʰ		ndu
poison	u3.25	357	tv-ndvy		dug		ndvʰ	dyʰ	dyʰ	ndu
wing	u3.26	285				Pumi diō <sup>3</sup> (SL)	ndyʰpʰiʰ	dyʰ	dyʰtʂʰuʷ	ndu
sickle	u3.27						ʂyʰlkvʰ	ʂvʰgyʰ <sup>L</sup>	hūʰgyʰ	Nku
to steam	u3.28					Pumi bu <sup>3</sup> (SL)	pyʰ	byʰ	byʰ	Npu
saddlecloth	u3.29						kilʰnyʰ	tci.nyʰ <sup>L+MH#</sup>		nu
thunder	u3.30						muʰŋgyʰ	myʰgyʰ <sup>#H</sup>	muʰgyʰ	ŋu
sinew	u3.31		tu-ŋgru				ŋgyʰ			ŋu
nine	u3.32	182	kungut	kui <sup>3</sup>	dgu		ŋgyʰ	gyʰ(d)	gyʰgyʰ	ŋu
to cry	u3.33	182	yvwu	ŋui <sup>2</sup>	ŋu		ŋyʰ	ŋyʰ	ŋyʰ	ŋu
silver	u3.34	414– 415		ŋwe <sup>2</sup>	dŋul		ŋyʰ	ŋyʰ	ŋyʰ	ŋu
price	u3.35	183– 184	u pʰu	pʰui <sup>3</sup>			kəʰpʰyʰ	kəʰpʰyʰ <sup>#H</sup>	kəʰpʰyʰ	pʰu
male	u3.36				pʰo		pʰyʰ			pʰu
uncle's uncle	u3.37		tu-rpu				pʰyʰ	ə.pʰyʰ <sup>M</sup>	əpʰyʰ	pʰu
bladder	u3.38					Lisu si <sup>31</sup> pʰu <sup>31</sup>	suʰpyʰ	su.pʰyʰ <sup>L#</sup>	suʰpyʰ	pu
amber	u3.39						pyʰʂuʷ	pyʰʂuʷ <sup>L#</sup>	?	pu

meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	Other	Naxi	Na	Laze	Proto-Naish
rock	u3.40				rdo (?)			æ.ty <sup>LML</sup>		rtu
intestine	u3.41	180	tuu-pu	u <sup>2</sup>	p <sup>h</sup> o-ba			by <sup>h</sup>	ɣinaɪ	Sbu
garlic	u3.42		cku		sgog		kɣ <sup>h</sup>	kɣ <sup>h</sup>	fɣ <sup>h</sup>	Sku
kidneys	u3.43		tuu- mbyttum			mbyd <sup>h</sup> ɣ <sup>h</sup>		by.luɪ <sup>L</sup>	ɣ.liɪ	Smbu
dry	u3.44		spu			pɣ <sup>h</sup>		pɣ <sup>h</sup>	lae.fɣ <sup>h</sup>	Spu
to go out <sup>27</sup>	u3.45			thut		t <sup>h</sup> ɣ <sup>h</sup>		t <sup>h</sup> ɣ <sup>h</sup>	t <sup>h</sup> ɣ <sup>h</sup>	t <sup>h</sup> u
to contaminate	u3.46					ty <sup>h</sup>		[sɣ <sup>h</sup> ]	[sɣ <sup>h</sup> ] > [sɣ <sup>h</sup> ][sɣ <sup>h</sup> ]	tru
to plant	u3.47					ty <sup>h</sup>		ty <sup>h</sup>	ty <sup>h</sup>	Stu
straight	u3.48		astu			ty <sup>h</sup>		ty.ty <sup>L</sup>	[ɣ <sup>h</sup> ][ɣ <sup>h</sup> ][ae]	Stu
thousand	u3.49	294		thon	ston			ty <sup>h</sup>	ty <sup>h</sup>	Stu
hole	u3.50			don					paɪ ty <sup>h</sup>	tu
sleeve	u4.01					laɪjɣ <sup>h</sup> lk <sup>h</sup> oɪ		i.q <sup>h</sup> ɣ <sup>L</sup>	jaɪq <sup>h</sup> ɔɪ	q <sup>h</sup> U
swallow	u4.02		mqlaɛ			koɪ		ɣɣ <sup>h</sup>	ɛɔɪ	NqU
cave	u4.03	285				ŋɣɣ <sup>h</sup> lk <sup>h</sup> oɪ		ɣɣɣ <sup>h</sup> .q <sup>h</sup> ɣ <sup>M</sup>	lae.q <sup>h</sup> ɔɪ	q <sup>h</sup> U
throat	u4.04		tuu-rqo		lkog			qɣ <sup>h</sup> .[sæ <sup>MH#</sup>	qɔ <sup>h</sup> tsuuɪ	qU
horn	u4.05	182	ta-ɛruu	khyui <sup>2</sup>	ru	k <sup>h</sup> oɪ		q <sup>h</sup> ɣ <sup>h</sup>	q <sup>h</sup> ɔɪ	q <sup>h</sup> U
fly	u5.01	255				mbæ-læɪ		by.tɰ <sup>#H</sup>	bɔ <sup>h</sup> [ɔɪ]	bu r <sup>28</sup>
to hold	u6.01					[s <sup>h</sup> ɣ <sup>h</sup> ɔɪ]		[s <sup>h</sup> ɣ <sup>h</sup> ɔɪ]	ts <sup>h</sup> ɣ <sup>h</sup>	*rts <sup>h</sup> U
lungs	u6.02		tuu-rts <sup>h</sup> ɣs <*rts <sup>h</sup> ɔs)	chut		[s <sup>h</sup> ɣ <sup>h</sup> ɔɪ]		[s <sup>h</sup> ɣ <sup>h</sup> ɔɪ]	ts <sup>h</sup> ɣ <sup>h</sup>	*rts <sup>h</sup> U

meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	Other	Naxi	Na	Laze	Proto-Naish
to cough	u6.03						[ʃʰə]	[ʃɹ]	tsyɿ	*rtsU

Table 25. Rhymes \*aC<sub>1</sub> and \*aC<sub>2</sub>

meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	Other	Naxi	Na	Laze	Proto-Naish
chest	C1.01					Tangut yar <*C-r- kaC	kaɿ	ɣaɿ (ɣa. py <sup>M</sup> )		Nka/aC <sub>1</sub>
to fell (a tree)	C1.02						ndaɿ	daɿ	daɿ	ndaC <sub>1</sub>
drum	C1.03						ndaɿk <sup>h</sup> yɿ	da.k <sup>h</sup> yɿ	daɿk <sup>h</sup> yɿ	ndaC <sub>1</sub>
all	C1.04						taɿ	ta <sup>MH#</sup> (q <sup>u</sup> . ta <sup>MH#</sup> )	taɿ (q <sup>u</sup> ɿ taɿ)	taC <sub>1</sub>
slanted	C1.05							la.ta <sup>L</sup> M	laɿtaɿ	laC <sub>1</sub> taC <sub>1</sub>
how much	C1.06							q <sup>h</sup> a.ky <sup>MH#</sup>	k <sup>h</sup> ɿɿ	k <sup>h</sup> a/aC <sub>1</sub>
in front of	C1.07							ɣu.da <sup>M</sup>	uɿdaɿ	daC <sub>1</sub>
to cover	C1.08		fkaβ		rgebs bkab		kaɿ	qaɿ	qaɿ	ka/aC <sub>1</sub>
to weave	C1.09	318	taɣ	rak	btags			daɿ	daɿ	daC <sub>1</sub>
black	C1.10	317	ɲaɣ	nak	nag po			naɿ	naɿ	naC <sub>1</sub>
sharp	C1.11	318–319		thak			t <sup>h</sup> ɿɿ	t <sup>h</sup> ɿɿ	t <sup>h</sup> ɿɿ	t <sup>h</sup> aC <sub>1</sub>
to hit	C1.12		lyt				laɿ	laɿ	laɿ	laC <sub>1</sub>
wolf <sup>29</sup>	C1.13		qapar		mp <sup>h</sup> ar		p <sup>h</sup> aɿk <sup>h</sup> ɿɿ		p <sup>h</sup> ɿɿ	p <sup>h</sup> aC <sub>1</sub>

meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	Other	Naxi	Na	Laze	Proto-Naish
vat, wooden basin	C2.01						loʔ	loʔ	luʔ	laC <sub>2</sub>
to be ashamed <sup>28</sup>	C2.01					ʃyʔndoʔ	ʃy.do <sup>MH#</sup>		hæʔduʔ	ndaC <sub>2</sub>
tasty	C2.02					soʔ	soʔ	suʔ	suʔ	saC <sub>2</sub>
to lean against	C2.03					tʰoʔ	tʰoʔ	tʰuʔ	tʰuʔ	tʰaC <sub>2</sub>
slope	C2.04					toʔ	toʔ	turbieʔ	turbieʔ	taC <sub>2</sub>
to hug	C2.05					toʔtoʔ	to.to <sup>M</sup>	tuʔ	tuʔ	taC <sub>2</sub>
gruel	C2.06						hoʔ	huʔ	huʔ	haC <sub>2</sub>
to see	C2.07					doʔ	doʔ	doʔ	doʔ	daC <sub>2</sub>
valley	C2.08					loʔ	loʔ	loʔ	loʔ	laC <sub>2</sub>
to climb	C2.09					ndoʔ	doʔ	gyʔduʔ	gyʔduʔ	ndaC <sub>2</sub>
to jump	C2.10		mtsax			tsʰoʔ	tsʰoʔ	tsʰuʔ	tsʰuʔ	tsʰaC <sub>2</sub>
needle	C2.11	342	taqaβ	ap	kʰab	koʔ	ɣuʔ	uʔ	uʔ	NkaC <sub>2</sub>
to study	C2.12					soʔ	soʔ	suʔ	suʔ	saC <sub>2</sub>
to work	C2.13			lup		loʔbeʔ	lo.i <sup>M</sup>	lutvieʔ	lutvieʔ	laC <sub>2</sub>
pig		318–319	paɹ	wak	pʰag	buʔ	buʔ	wyʔ	wyʔ	SbaC
hand		319	tu-jaɹ	lak	lag	laʔoʔ	lo.qʰwy <sup>LM</sup>	laʔpʰieʔ	laʔpʰieʔ	laC <sub>1</sub> /laC <sub>2</sub>
breath		317		sak	srog	saʔ	soʔ	saʔ	saʔ	saC <sub>1</sub> /saC <sub>2</sub>
thick			jaɹ			laʔ	loʔ	aʔpyʔ luʔ	aʔpyʔ luʔ	laC <sub>1</sub> /laC <sub>2</sub>



meaning	Ref	HTB	Rgyalrong	Burmese	Tibetan	Other	Naxi	Na	Laze	Proto-Naish
deep		317	rnaɣ	nak			hoɿ	ʃoɿ	haɿ	laC <sub>1</sub> /laC <sub>2</sub> / SnaC <sub>1</sub>
to kill								q <sup>h</sup> oɿ	k <sup>h</sup> uɿ	k <sup>h</sup> aC <sub>1</sub> /aC <sub>2</sub>

21. Matisoff (2003:69, ft.101) cites Lahu and Pumi words that could be cognate to this root.
22. This form is probably related to Burmese *phri<sup>3</sup>* and other comparanda cited in Matisoff (2003:25–26), though the vowel correspondence remains to be explained.
23. Another possible etymology for this etymon is Burmese *phru<sup>2</sup>* and its Lolo-Burmese cognates (JAM). However, the Naish data do not allow to choose between these two hypotheses.
24. The corresponding Lolo-Burmese root means ‘recover from illness’ (JAM).
25. A comparison with Proto-Lolo-Burmese \*lan (Matisoff 2003:495) is tempting, but the vowels do not match, as Proto-Naish \*lo would be expected.
26. Plausibly related to Lahu /lɔʔ/ ‘spindle’ (JAM).
27. The Burmese form means ‘to take out’.
28. We suspect that the forms for ‘fly’ in Laze and Naxi result from right-to-left vowel harmony, a sporadic phenomenon in disyllables (the more frequent a word, the more propensity it has towards vowel harmony), likewise for ‘kidneys’ in Naxi.
29. The Tibetan and Rgyalrong cognates actually mean ‘dhole (Cyon alpinus)’.
30. A relation with the forms cited in Matisoff (2003:317) is possible but requires further research.