

A phonological and lexical profile of Sastod

A non-Amdo Tibetic language of Khrochu (Sichuan)

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Sastod is a previously undescribed form of Tibetic located in the far-western corner of Khrochu County in northern Sichuan. This first publication on the language features a detailed treatment of the Sastod sound system and its evolution, drawing on primary fieldwork data. The special phonological and lexical traits of Sastod presented here bear out its distinct identity from the regionally dominant Amdo language. The diagnostic Sastod sound changes shared across varieties of Khrochu Tibetan further reveal Sastod's close affinity with its Tibetic neighbors inside the county.

Keywords: Tibetic dialectology, phonological typology, sound change, subgrouping

1. Introduction

The great diversity of modern Tibetic languages still remains to be fully fathomed, despite the comprehensive lexical and general surveys of recent years (Tournadre 2014; Bielmeier et al. 2018; Tournadre & Suzuki 2023). One little explored Tibetic-speaking area within China is Khrochu 黑水, a county in northern Sichuan that straddles Tibetic, Qiang, and Rgyalrong borders.

The mundane portrayal of the Tibetan spoken in this county as “dialects of Amdo” in one gazetteer (Anonymous 1993:609), later echoed in a major publication on the minority languages of China (Institute of Linguistics, Chinese Academy of Social Sciences et al. 2012) was belied by our recent documentation endeavors, which have identified several distinct Tibetic forms dissimilar to Amdo.¹ These language-like dialects include Sastod, spoken in the western corner

1. Preliminary data on Sastod and other obscure Khrochu Tibetic languages were first reported in Sun (2014; 2018); Sun & Tian (2019). To the best of our knowledge, we are the only linguists to have done continuous, in-depth research on these Tibetic languages.

of the county where Tibetan, Qiang, and Rgyalrong come into direct contact. Known locally as *stotma ske?* (<stod.ma.skad>), Sastod Tibetan is distributed in G.yagchad 雅克夏² and Glingtshang 奶子溝 Villages of Sastod Township 沙石多在 southwestern Khrochu, as shown in the following map:

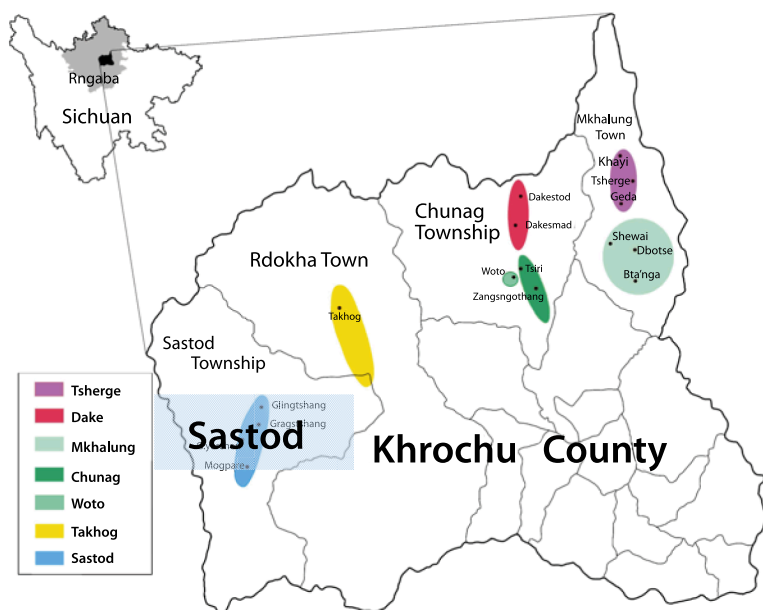


Figure 1. Distribution map of Tibetan varieties in Khrochu County

Despite its geographical affinity to the Amdo-speaking Rkakhog 紅原 County, Sastod is not readily intercommunicable with mainstream Amdo, owing to its distinctive vocabulary, phonology, and grammar.

While certain peculiar Sastod lexical forms are direct loans from Qiang³ and Rgyalrong,⁴ a good number of common words from various semantic classes are of obscure origin. Verbal evidentiality, furthermore, exemplifies a grammatical category where almost all the Sastod markers are unrelatable to the functionally equivalent Amdo forms. A sample of common content and functional meanings instantiated by distinct Sastod and Amdo forms is given below:⁵

2. In 2020, the three villages Mogpare 馬河壩, G.yerchen 銀真 and Gragtshang 甘市壩 merged into a new village called G.yagchad 雅克夏.

3. For example: *тово* 'fiddlehead', cf. Mawo 麻窩 Qiang *mu^uɸwə*.

4. For example: *tapri* 'supper', cf. Sastod Rgyalrong (Nyagnyokhyu 楊柳秋 variety, own field-work data) *te-pri?*

5. Unless otherwise noted, the Amdo data cited in this paper are from Byamsme 轄曼 of Mdzodde 若兒蓋 County (personal fieldwork).

Table 1. Contrasting Sastod and Amdo lexical forms

	Sastod	Amdo
stomach	<i>q^haʔ-za</i> <?>	<i>hɔ</i> <pho-ba>
sweat	<i>tʂa-tu</i> <?>	<i>h^hju</i> <rngul>
back (body part)	<i>ju-rtʂa</i> <?>	<i>dzɛp</i> <rgyab>
horn	<i>rga</i> <?>	<i>rɛ</i> <rwa>
pheasant	<i>to-po</i> <?>	<i>nak-te</i> <nags.de>
spider	<i>ⁿba-rja</i> <?> ^a	<i>dom</i> <sdom>
leaf	<i>ba:lop</i> <?>	<i>lo-me</i> <lo.ma>
noodle soup	<i>fəp</i> <?>	<i>ɛɛ-t^hək</i> <phye-thug>
clothes	<i>ko-lo</i> <?>	<i>kon-dzə</i> <gon.rgyu>
awl	<i>ʂɲō</i> <snyung.bu>	<i>ⁿbək</i> <'bug>
left(-hand)	<i>ɣjo-ma</i> <?>	<i>h^hjon</i> <g.yon>
right(-hand)	<i>ɣjo-spa</i> <?> ^b	<i>h^hji</i> <g.yas>
muddy	<i>sqa</i> <?>	<i>h^hnok</i> <rnyog>
hard	<i>ⁿk^hrō</i> <?> ^c	<i>ʂɛ</i> <sra>
arrive	<i>rtsop</i> <slebs>	<i>t^hon</i> <thon>
beat	<i>ⁿbrop</i> <'brab>	<i>doŋ</i> <rdung>
dare	<i>spop</i> <spobs>	<i>t^həp</i> <thub>
erase	<i>rdzeʔ</i> <?>	<i>səp</i> <sub>
run	<i>ɣdzar</i> <?>	<i>dzək</i> <rgyug>
sing	<i>car</i> <gyer> ^d	<i>len</i> <len>
wipe	<i>mt^haʔ</i> <'phyag>	<i>ɛ^hə</i> <phyi>
egophoric evidential	-∅	- <i>nə</i>
direct evidential (punctual events)	- <i>t^he</i>	- <i>t^he</i>
direct evidential	- <i>wʂaʔ</i>	
indirect evidential	- <i>skə</i>	- <i>zək</i>
hearsay evidential	- <i>dzeji</i>	- <i>se</i>
restrictive only ^e	- <i>fə</i>	- <i>mə</i>
exhortative marker ^f	- <i>fāʔ</i>	- <i>ɛ</i>
comparative marker	- <i>wo:kə</i>	- <i>h^htine</i>
causative complementizer ^g	- <i>ŋə</i>	- <i>ɛen</i>

- a. One reviewer suggested a relatable etymon <ba.rgya> ‘spider’s web’ for ⁿba-rja ‘spider’. The semantic link is indeed plausible, but the first syllable contains an unexplained prenasalized onset.
- b. One reviewer offered possible etyma <†g.yon.ma> (> kjo-ma) ‘left’ and <†g.yas.pa> (> kjo-spa) ‘right’. Albeit phonologically doubtful (re-syllabification in the case of <†g.yas.pa> would have given *kja-spa), the suggested possibility is intriguing in implying the use of opposing gender suffixes to differentiate two basic spatial orientation terms.
- c. The Sastod form may suggest <mkhregs> ‘be hard’, but both onset and rhyme fail to correspond.
- d. The rhyme is irregular.

e. E.g. **Sastod** **Amdo**
 ŋa: p^hru k^horo-fə mŋeʔ ŋa ɛəzi ^htɛək-mə met
 1SG:DAT child one-except not.exist 1SG:DAT child one-except not.exist
 ‘I have only one child.’

f. E.g. **Sastod** **Amdo**
 oŋi tʃa ⁿt^hō-faʔ əŋe tɛɛ ⁿt^hoŋ-e
 1DU:INCL tea drink-EXH 1DU:INCL tea drink-EXH
 ‘Let’s drink tea!’

g. E.g. **Sastod** **Amdo**
 ti ŋa ɛō-ŋə ma-wʒaʔ k^hu ŋe joŋ-ben ma-ⁿdzək-the
 3SG:ERG 1SG come-CAUS PROH-let 3SG:ERG 1SG come-CAUS PROH-let-DIR
 ‘He did not let me come.’

Above all, the non-Amdo nature of Sastod is best manifested by its divergent phonological traits which render cognate forms hard to recognize for speakers of Amdo. It will be the aim of this article to examine in detail the phonological system of Sastod Tibetan and the sound changes that brought it about, based on our field notes and sound recordings collected over the past few years on the speech of Mogpare 馬河壩 Village of Sastod Town.

The main body of this paper is organized as follows. In §2, the Sastod phonological system is systematically described in a historically informed context, and the attested modern onsets and rhymes are presented with their Classical Tibetan (CT) sources.⁶ In §3, the non-Amdo typological traits of Sastod phonology are identified. The primary Sastod sound changes that deviate from what is typically expected of Amdo are discussed in §4. Our findings are summed up in the concluding section, with implications for Tibetic dialectology and subgrouping. The paper closes with an Appendix containing an English-Sastod vocabulary of around fifteen hundred words.

6. The Classical Tibetan forms in this article are given in the Wylie standard transliteration, enclosed in angular brackets. Unless otherwise noted, the comparative data are from my own field data. Abbreviated glosses generally follow the Leipzig Glossing Rules.

2. Synchronic phonology presented in historical light

2.1 Syllable canon

A well-formed Sastod syllable may be open or closed. The onset slot may be filled by zero, a single consonant, or a cluster of up to three consonants. The rhyme types include a short oral vowel (V), a long oral vowel (VV), a nasal vowel (\tilde{V}), or a short oral vowel closed by a coda consonant (VC). The attested syllable types are shown below:

(1) V	<i>a-</i>	‘kin prefix’
VC	<i>uk-pa</i>	‘owl’
\tilde{V}	<i>ō-krō</i>	‘windpipe’
CV	<i>so</i>	‘tooth’
CVV	<i>se:-rə</i>	‘some’
C \tilde{V}	<i>sō</i>	‘go _[IMP] ’
CVC	<i>seʔ</i>	‘frost damage’
CCV	<i>sme</i>	‘horsetail pine’
CCVV	<i>sma:</i>	‘mole (on skin)’
CC \tilde{V}	<i>smē</i>	‘medicine’
CCVC	<i>smeʔ</i>	‘lower part’
CCCV	<i>zgra</i>	‘sound’
CCCV \tilde{V}	<i>zbjō</i>	‘be tortured by pain or a chronic disease’
CCCVVC	<i>zbjar</i>	‘paste _[TR] ’

2.2 Onsets

Sastod has an elaborate system of onsets, containing both simplex consonants and clusters made up of two to three consonants.

2.2.1 Simplex onsets

Fifty unitary consonants are recorded, which comprise stops, affricates, fricatives, nasals, liquids, and approximants articulated at (bi)labial, dental, post-alveolar, retroflex, palatal, velar, uvular, and glottal places of articulation. Stops and affricates are further differentiated by glottal states. While voiceless and voiceless aspirated stops/affricates are in robust opposition, plain-voiced stops/affricates occur only infrequently due to historical reasons.⁷ All voiceless and voiced stops/

7. All CT simplex voiced stop/affricates were devoiced in Sastod. The modern day voiced stop/affricates are due to intervocalic voicing (e.g. *k^ha-daʔ* <kha.btags> ‘ceremonial scarf’), irregular

affricates (except uvulars) may be distinctively prenasalized. Fricatives (except /h/) subdivide only into voiced and voiceless sets. All sonorant consonants (nasals, liquids, and approximants) are voiced.

The attested simplex onsets are summarized in Table 2 and exemplified in (2) below:

Table 2. Simplex onset consonants

	Labial	Dental	Post-alveolar	Retroflex	Palatal	Velar	Uvular	Glottal
Stop	<i>p p^h</i> <i>ⁿp^h</i> <i>b ⁿb</i>	<i>t t^h ⁿt^h</i> <i>d ⁿd</i>			<i>c c^h ⁿc^h</i> <i>ⁿɟ</i>	<i>k k^h</i> <i>ⁿk^h</i> <i>g ⁿg</i>	<i>q q^h</i>	
Affricate		<i>ts ts^h</i> <i>ⁿts^h</i> <i>ⁿdz</i>	<i>tʃ tʃ^h ⁿtʃ^h</i> <i>dʒ ⁿdʒ</i>	<i>tʂ tʂ^h</i> <i>ⁿdʒ</i>				
Fricative		<i>s</i> <i>z</i>	<i>ʃ</i> <i>ʒ</i>	<i>ʂ</i>			<i>χ</i> <i>ʁ</i>	<i>h</i>
Nasal	<i>m</i>	<i>n</i>	<i>ɲ</i>			<i>ŋ</i>		
Rhotic		<i>r</i>						
Lateral		<i>ɭ</i> <i>l</i>						
Approximant	<i>w</i>				<i>j</i>			

- (2) *p* <p> *pə-smo* <pus.mo> ‘knee’
 pa-cuʔ <ba.ʔ> ‘cow’
p^h <ph> *p^ha* <pha> ‘father’
ⁿp^h <‘ph> *ⁿp^haʔ* <‘phag> ‘struggle’
b <-p-> *sɲor-ba* <sngur.pa> ‘snoring’
ⁿb <‘b> *ⁿba* <‘ba> ‘call (of an animal)’
m <m> *a-ma* <a.ma> ‘mother’
w <-p-> *tʂa-wa* <grwa.pa> ‘apprentice monk’
 <-b-> *so-wa* <so.ba> ‘barley’
t <t> *tuʔ* <tog> ‘rounded top’

cluster simplification (*dʒe-mō* <rjes.mo> ‘after (temporal adverbial)’), or found in loans (e.g. *la-dʒu* ‘hot pepper’, from Chinese 辣椒). The infrequently attested onset consonants *tʂ^h*, *q*, *h* are of uncertain or extraneous origins (e.g. *ɲa-tʂ^hə* ‘calf (body part)’ <nywa.ʔ>; *qa-lo* ‘blind person’; from Nyagnyokhyu Rgyalrong *qe-lo*; *ha-na* ‘all’).

	<d>	<i>ta</i> <da> ‘now’
<i>t^h</i>	<th>	<i>t^ha-ɣfa</i> <thags.ʔ> ‘loom’
<i>nth</i>	<'th>	<i>nthaʔ</i> <'thag> ‘reduce by boiling’
<i>d</i>	(uncertain)	<i>ɲa-dəm</i> <nywa-ʔ> ‘shank’
<i>n^d</i>	<'d>	<i>n^{da}</i> : <'dal> ‘sink down’
<i>ts</i>	<ts>	<i>ne-tso</i> <ne.tso> ‘parrot’
	<-tsh->	<i>k^hə-tʂə</i> <khu.tshur> ‘fist’
<i>ts^h</i>	<tsh>	<i>ts^ha</i> <tsha> ‘be hot’
	<tshw>	<i>ts^ha</i> <tshwa> ‘salt’
<i>n^{ts^h}</i>	<'tsh>	<i>n^{ts^haʔ}</i> <'tshag> ‘sift; filter’
<i>n^{dz}</i>	<'dz>	<i>n^{dzən}</i> <'dzin> ‘hold’
<i>s</i>	<s>	<i>sa</i> <sa> ‘earth’
<i>z</i>	<z>	<i>za</i> <za> ‘eat’
<i>n</i>	<n>	<i>na</i> <na> ‘if’
<i>r</i>	<r>	<i>ra-ma</i> <ra.ma> ‘goat’
<i>ʔ</i>	<lh>	<i>ʔa</i> <lha> ‘deity’
<i>l</i>	<l>	<i>la</i> <la> ‘acclivity’
<i>ʃ</i>	<c>	<i>ʃō</i> <cang> ‘anything’
	<j>	<i>ʃa</i> <ja> ‘tea’
<i>ʃ^h</i>	<ch>	<i>ʃ^ha</i> <cha> ‘pair’
<i>n^{ʃ^h}</i>	<'ch>	<i>n^{ʃ^haʔ}</i> <'chag> ‘break (of something stiff)’
<i>dʒ</i>	<-j->	<i>tʂi-dʒa</i> <dros.ja> ‘afternoon meal’
<i>n^{dʒ}</i>	<'j>	<i>n^{dʒa}</i> <'ja> ‘rainbow’
<i>f</i>	<sh>	<i>fa</i> <sha> ‘meat’
<i>ʒ</i>	<zh>	<i>ʒa</i> <zha> ‘hat’
<i>ɲ</i>	<ny>	<i>ɲa</i> <nya> ‘fish’
<i>tʂ</i>	<dr>	<i>tʂaʔ</i> <drag> ‘recover’
<i>tʂ^h</i>	(uncertain)	<i>tʂ^ha-tʂ^ha</i> <ʔ> ‘meshless sieve’
<i>n^{dʒ}</i>	<'dr>	<i>n^{dʒa}</i> <'dra> ‘cut with scissors’
<i>ʂ</i>	<sr>	<i>ʂa</i> <sra> ‘be sturdy’
<i>c</i>	<gy>	<i>car</i> <gyer> ‘sing’
<i>c^h</i>	<khy>	<i>c^har</i> <khyer> ‘take away _[PST] ’
<i>n^{c^h}</i>	<'khy>	<i>n^{c^haʔ}</i> <'khyag> ‘be cold’
<i>n^ʃ</i>	<'gy>	<i>n^{ʃər}</i> <'gyur> ‘change _[INTR] ’
<i>j</i>	<y>	<i>ja</i> : <yal> ‘disappear’
<i>k</i>	<k>	<i>ka</i> : <ka.ba> ‘pillar’
	<g>	<i>ko</i> <go> ‘hear’
<i>k^h</i>	<kh>	<i>k^ha</i> <kha> ‘mouth’
<i>n^{k^h}</i>	<'kh>	<i>n^{k^həm}</i> <'khum> ‘curl up’

<i>g</i>	<dg>	<i>go</i> <dgos> ‘need’
ⁿ <i>g</i>	<‘g>	ⁿ <i>gam</i> <‘gam> ‘eat powdery food’
<i>ŋ</i>	<ng>	<i>ŋa</i> <nga> ‘1sG’
<i>q</i>	<-kh-> (irregular)	<i>praʔ-qō</i> <brag.khung> ‘cave’
<i>q^h</i>	<khw>	<i>q^ha</i> <khwa> ‘bitter’
<i>χ</i>	<h>	<i>χa ko</i> <ha go> ‘understand’
<i>ʁ</i>	<w>	<i>ʁa</i> <wa> ‘fox’
<i>h</i>	(uncertain)	<i>ha-na</i> <?> ‘all’

2.2.2 Cluster onsets

Sastod boasts a full range of two-member and even three-member consonant clusters at the syllable onset position. Two-member clusters fall under two types: those combining a consonant with a preceding continuant (*s/z-*, *f/ʒ-*, *χ/ʁ-*, *r-*, *m-*, *w-*), and those combining a consonant with a following sonorant (*r*, *j*). Some of the above may be further preceded by *w-* to form a small set of three-member clusters, in addition to miscellaneous others like *zgr-* and *zbj-*. These attested complex clusters are tabulated and exemplified below:

Table 3. Continuant + C clusters

	<i>s</i>	<i>z</i>	<i>f</i>	<i>ʒ</i>	<i>χ</i>	<i>ʁ</i>	<i>r</i>	<i>m</i>	<i>w</i>
<i>p</i>	<i>sp</i>				<i>χp</i>				
<i>b</i>		<i>zb</i>					<i>rb</i>		
<i>m</i>	<i>sm</i>					<i>ʁm</i>	<i>rm</i>		
<i>t</i>	<i>st</i>				<i>χt</i>		<i>rt</i>		<i>wt</i>
<i>t^h</i>								<i>mt^h</i>	
<i>d</i>		<i>zd</i>				<i>ʁd</i>	<i>rd</i>	<i>md</i>	<i>wd</i>
<i>ts</i>					<i>χts</i>		<i>rts</i>		<i>wts</i>
<i>ts^h</i>								<i>mts^h</i>	
<i>dz</i>							<i>rdz</i>	<i>mdz</i>	<i>wdz</i>
<i>s</i>					<i>χs</i>				<i>ws</i>
<i>z</i>						<i>ʁz</i>			<i>wz</i>
<i>n</i>	<i>sn</i>					<i>ʁn</i>	<i>rn</i>	<i>mn</i>	
<i>l</i>					<i>χl</i>	<i>ʁl</i>	<i>rl</i>		<i>wl</i>
<i>l̥</i>									<i>wl̥</i>
<i>tʃ</i>					<i>χtʃ</i>		<i>rtʃ</i>		<i>wtʃ</i>

Table 3. (continued)

<i>tʰ</i>				<i>mitʰ</i>	<i>wtʰ</i>
<i>dʒ</i>			<i>rdʒ</i>	<i>mdʒ</i>	<i>wdʒ</i>
<i>f</i>		<i>ɣf</i>			<i>wf</i>
<i>ʒ</i>			<i>ɛʒ</i>		<i>wʒ</i>
<i>ɲ</i>	<i>sɲ</i>		<i>ɛɲ</i>	<i>rɲ</i>	<i>mɲ</i>
<i>tʂ</i>		<i>ɣtʂ</i>			
<i>c</i>	<i>sc</i>	<i>ɣc</i>	<i>rc</i>		<i>wc</i>
<i>ʃ</i>	<i>zʃ</i>		<i>rʃ</i>	<i>mʃ</i>	<i>wʃ</i>
<i>j</i>			<i>ɛj</i>		
<i>k</i>	<i>sk</i>	<i>ʃk</i>	<i>rk</i>		<i>wk</i>
<i>ᵏkʰ</i>					<i>wᵏkʰ</i>
<i>g</i>	<i>zg</i>	<i>ʒg</i>	<i>rg</i>		<i>wg</i>
<i>ᵑg</i>					<i>wᵑg</i>
<i>ɲ</i>	<i>sɲ</i>		<i>rɲ</i>		<i>wɲ</i>

- (3) *sp* <sp> *spə* <spu> 'hair'
 <spy> *spən* <spyin> 'glue'
 <spr> *spi* <spre'u> 'monkey'
sm <sm> *smē* <sman> 'medicine'
st <st> *staʔ* <stag> 'tiger'
sn <sn> *sna* <sna> 'nose'
sc <sky> *scə* <skyi> 'borrow'
 <bsky> *sci* <bskyis> 'borrow_[PST]'
sɲ <sny> *sɲi* <snyi> 'be soft'
sk <sk> *skeʔ* <skad> 'language'
sɲ <sng> *sɲaʔ* <sngags> 'mantra'
zb <sb> *zbō* <sbang> 'soak'
 <sbr> *zba* <sbra> 'yak-hair tent'
zd <sd> *zdeʔ* <sdod> 'sit_[IMP]'
zʃ <sgy> *zʃe* <sgye> 'yak-hair bag'
zg <sg> *zga* <sga> 'saddle'
ʃk <skr> *ʃkaʔ* <skrag> 'fear'
 <dkr> *ʃkə* <dkri> 'wind_[TR]'
ʒg <sgr> *ʒgo:* <sgro.ba> 'leather bag'
ɣp <dp> *ɣpe-tʰa* <dpe.cha> 'book'

<i>χt</i>	<gt>	<i>χtō</i> <gtong> ‘release’
<i>χts</i>	<gts>	<i>χtsō</i> <gtsang> ‘be clean’
<i>χs</i>	<gs>	<i>χsəm</i> <gsum> ‘three’
<i>χl</i>	<kl>	<i>χlē</i> <klan> ‘patch’
	<lh>	<i>χlo</i> <lho> ‘south’
<i>χtʃ</i>	<gc>	<i>χtʃiʔ</i> <gcig> ‘one’
	<dpy>	<i>χtʃə</i> <dpyi> ‘hip’
<i>χʃ</i>	<gsh>	<i>χʃu</i> <gshol> ‘plough (tool)’
<i>χtʂ</i>	<dpr>	<i>χtʂə-bo</i> <dpri.o> ‘colostrum’
	<hr>	<i>χtʂa:</i> <hral> ‘tear up’
<i>χc</i>	<dky>	<i>χci</i> <dkiyl> ‘center’
<i>ɛm</i>	<dm>	<i>ɛma</i> <dmaʔ> ‘be low’
<i>ɛd</i>	<gd>	<i>ɛduʔ</i> <gdugs> ‘umbrella’
<i>ɛz</i>	<gz>	<i>ɛziʔ</i> <gzig> ‘leopard’
<i>ɛn</i>	<gn>	<i>ɛnam</i> <gnam> ‘sky’
<i>ɛl</i>	<gl>	<i>ɛla</i> <gla> ‘wages’
<i>ɛʒ</i>	<gzh>	<i>ɛʒə</i> <gzhu> ‘bow (weapon)’
<i>ɛɲ</i>	<gny>	<i>ɛɲi</i> <gnis> ‘two’
<i>ɛj</i>	<g.y>	<i>ɛjaʔ</i> <g.yag> ‘yak’
	<dby>	<i>ɛjuʔ</i> <dbyug> ‘throw away’
<i>rb</i>	<lb>	<i>rba:</i> <lba.ba> ‘goiter’
<i>rm</i>	<rm>	<i>rma</i> <rma> ‘wound’
<i>rt</i>	<rt>	<i>rta</i> <rta> ‘horse’
	<lt>	<i>rta</i> <lta> ‘look’
<i>rd</i>	<rd>	<i>rdo</i> <rdo> ‘stone’
	<ld>	<i>ldaʔ</i> <ldag> ‘lick’
<i>rn</i>	<rn>	<i>rnaʔ</i> <rnags> ‘pus’
<i>rts</i>	<rts>	<i>rtsa</i> <rtsa> ‘pulse’
	<sl>	<i>rtsop</i> <slebs> ‘arrive’
<i>rdz</i>	<rdz>	<i>rdzo:</i> <rdzi.bo> ‘header’
	<zl>	<i>rdza:</i> <zla.ba> ‘moon’
<i>rl</i>	<rl>	<i>rlō</i> <rlung> ‘wind’
<i>rtʃ</i>	<lc>	<i>rtʃe</i> <lce> ‘tongue’
<i>rdʒ</i>	<rj>	<i>rdʒe</i> <rje> ‘barter’
	<lj>	<i>rdʒo:</i> <lji.ba> ‘flea’
<i>rɲ</i>	<rny>	<i>so-rɲiʔ</i> <so.rnyil> ‘gums’
	<rm (before i/e)>	<i>rɲək-pa</i> <rmig.pa> ‘hoof’
<i>rc</i>	<rky>	<i>rca:</i> <rkyal> ‘swim’
<i>rj</i>	<rgy>	<i>rja</i> <rgya> ‘Chinese’

<i>rk</i>	<dk>	<i>rka</i> <dka'> 'difficult'
	<rk>	<i>rkō</i> <rkang> 'marrow'
	<lk>	<i>rkək-pa</i> <lkugs.pa> 'stutterer'
<i>rg</i>	<dg>	<i>rgə</i> <dgu> 'nine'
	<rg>	<i>rgi</i> <rgas> 'be old'
	<rw>	<i>rga</i> <rwa> 'horn'
<i>rŋ</i>	<dng>	<i>rŋu</i> <dngul> 'silver'
	<rng>	<i>rŋa</i> <rnga> 'drum'
	<lng>	<i>rŋa</i> <lnga> 'five'
<i>mt^h</i>	<mth>	<i>mt^ho</i> <mtho> 'span'
<i>md</i>	<md>	<i>mda</i> <mda'> 'arrow'
<i>mts^h</i>	<mtsh>	<i>mtsho</i> <mtsho> 'lake'
<i>mdz</i>	<mdz>	<i>mdzo</i> <mdzo> 'dzo'
<i>mn</i>	<mn>	<i>mna</i> <mna'> 'oath'
<i>mt^h</i>	<mch>	<i>mt^hə</i> <mchu> 'lip'
<i>mdʒ</i>	<mj>	<i>mdʒe</i> <mje> 'penis'
	<'by>	<i>mdʒar</i> <'byar> 'stick to'
<i>mɲ</i>	<m (before i/e)>	<i>mɲe</i> <me> 'fire'
	<my>	<i>mɲō</i> <myong> 'experience; taste'
	<mny>	<i>mɲe?</i> <mnyed> 'rub'
<i>mʃ</i>	<mgy>	<i>mʃu?</i> <mgyogs> 'be swift'
<i>wt</i>	<bt>	<i>wtəm</i> <btums> 'wrap _[PST] '
<i>wd</i>	<bd>	<i>wda</i> <bda'> 'chase'
	<brd>	<i>la[?]wda</i> <lag.brd> 'gesture'
	<bld>	<i>wda[?]</i> <bldad> 'chew _[PST] '
<i>wts</i>	<bts>	<i>wtsa</i> <btsa'> 'rust'
<i>wdz</i>	<brdz>	<i>wdzi</i> <brdzis> 'tread _[PST] '
	<bzl>	<i>wdzu?</i> <bzlogs> 'return (sth) _[PST] '
<i>ws</i>	<bs>	<i>wsō</i> <bsangs> 'burning of incense'
<i>wz</i>	<bz>	<i>wzə</i> <bzi> 'be drunk'
<i>wl</i>	<bl>	<i>wlo</i> <blo> 'mind'
	<brl>	<i>wla</i> <brla> 'thigh'
<i>wł</i>	<bsl>	<i>wła</i> <bsla _[FUT] > 'weave'
<i>wf</i>	<bc>	<i>wfə</i> <bcu> 'ten'
	<by>	<i>wfə</i> <bya> 'bird'
<i>wf^h</i>	<phy>	<i>wf^hu?</i> <phyug> 'be rich'
<i>wdʒ</i>	<brj>	<i>wdʒe?</i> <brjed> 'forget'
<i>wf</i>	<bsh>	<i>wfa</i> <bsha'> 'slaughter'
<i>wʒ</i>	<bzh>	<i>wʒə</i> <bzhi> 'four'

	<sby>	<i>wʒən</i> <sbyin> ‘give’
<i>wc</i>	<bky>	<i>wcaʔ</i> <bkyags> ‘lift _[PST] ’
<i>wj</i>	<brgy>	<i>wja</i> <brgya> ‘hundred’
<i>wk</i>	<bk>	<i>wka</i> <bka’> ‘decree’
<i>wⁿk^h</i>	<mkh>	<i>wⁿk^har</i> <mkhar> ‘fortress’
<i>wg</i>	<bg>	<i>wgo</i> <bgo> ‘distribute’
<i>wⁿg</i>	<mg>	<i>wⁿga-ra</i> <mgar.ba> ‘smith’
<i>wŋ</i>	<mng>	<i>wŋaʔ</i> <mngag> ‘dispatch’

Table 4. C + sonorant clusters

	<i>p</i>	<i>p^h</i>	<i>ⁿb</i>	<i>k</i>	<i>k^h</i>	<i>g</i>	<i>ⁿg</i>
<i>r</i>	<i>pr</i>	<i>p^hr</i>	<i>ⁿbr</i>	<i>kr</i>	<i>k^hr</i>	<i>gr</i>	<i>ⁿgr</i>
<i>j</i>	<i>pj</i>						

(4)	<i>pr</i>	 	<i>praʔ</i> <brag> ‘rock’
	<i>p^hr</i>	<phr>	<i>p^hruʔ</i> <phrug> ‘young animal’
	<i>ⁿp^hr</i>	<’phr>	<i>ⁿp^hruʔ</i> <’phrug> ‘scratch oneself’
	<i>ⁿbr</i>	<’br>	<i>ⁿbri</i> <’bras> ‘rice’
	<i>kr</i>	<gr>	<i>kro</i> <gro> ‘wheat’
		<grw>	<i>kra-pa</i> <grwa.pa> ‘attendant monk’
	<i>k^hr</i>	<khr>	<i>k^hra</i> <khra> ‘falcon’
		<mkhr>	<i>k^hrə-spa</i> <mkhris.pa> ‘gall’
	<i>gr</i>	<dgr>	<i>gra</i> <dgra> ‘enemy’
	<i>ⁿgr</i>	<’gr>	<i>ⁿgra-ⁿba</i> <’gram.pa> ‘cheek’
		<mgr>	<i>ⁿgrē</i> <mgron> ‘guest’
	<i>pj</i>	<by>	<i>pja-ma</i> <bye.ma> ‘sand’

Table 5. Three-member clusters

	<i>w</i>	<i>z</i>
<i>bj</i>		<i>zbj</i>
<i>kr</i>	<i>wkr</i>	
<i>rt</i>	<i>wrt</i>	
<i>rk</i>	<i>wrk</i>	
<i>rts</i>	<i>wrts</i>	
<i>rdz</i>	<i>wrdz</i>	
<i>gr</i>		<i>zgr</i>

(5) <i>wkr</i>	<bkr>	<i>wkri</i> <bkrus> ‘wash _[PST] ’
<i>wrt</i>	<blt>	<i>wrti</i> <bltas> ‘look _[PST] ’
<i>wrk</i>	<brk>	<i>wrki</i> <brkos> ‘dig _[PST] ’
<i>wrts</i>	<brts>	<i>wrtsi?</i> <brtsigs> ‘stack up _[PST] ’
<i>wrts</i>	<bsr>	<i>wrtsē</i> <bsran> ‘endure’
<i>wrdz</i>	<brdz>	<i>wrdzi</i> <brdzis> ‘knead _[PST] ’
<i>zbj</i>	<sby>	<i>zbjar</i> <sbyar> ‘paste _[PST] ’
<i>zgr</i>	<sgr>	<i>zgra</i> <sgra> ‘sound’

2.3 Rhymes

The Sastod rhyme inventory is relatively simple. Subsumed under the open rhymes are eight oral rhymes and two nasal rhymes. The ten closed rhymes end in a stop, a nasal, or a rhotic coda.

2.3.1 Open rhymes

Open rhymes in Sastod consist of eight oral vowels and two nasal vowels. All oral vowels are monophthongal, of which *e* and *ə* are always pronounced short, *i* and *u* can be indifferently long or short, whereas *o* and *a* contrast in length. The contrastive status of *a* and *o* versus their long counterparts *a:* and *o:* is borne out by the minimal sets below:

(6) <i>ɸla</i>	‘wages’	<i>ɸla:</i>	‘muskdeer’
<i>rdza</i>	‘follow’	<i>rdza:</i>	‘moon’
<i>la</i>	‘acclivity’	<i>la:</i>	‘cloak’
<i>ko</i>	‘hear’	<i>ko:</i>	‘hide; leather’
<i>p^ho</i>	‘male’	<i>p^ho:</i>	‘belly’
<i>to</i>	‘win’	<i>to:</i>	‘smoke’

Contrastive vowel nasality is an important feature of Sastod. The nasal vowels *ē*, *ō* and *ā* are long by default. The vowel *ā* is marginal, found only in literary words (e.g. *ɸlā* ‘ox (zodiac animal)’) and loanwords (e.g. *kā* ‘steel’ < Chinese 鋼). Nasalization in the vowel *ō* [ō:] is quite slight, but *ō* is still distinct from the oral vowel *o:* [ɔ:] as seen in these minimal pairs:

(7) <i>kō</i>	‘price’	<i>ko:</i>	‘hide; leather’
<i>p^hō</i>	‘regret loss’	<i>p^ho:</i>	‘belly’

The Sastod oral and nasal vowels are shown in the diagram below, followed by their CT origins and illustrative examples:

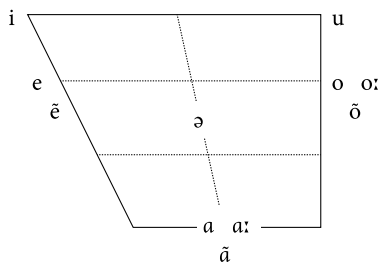


Figure 2. Sastod distinctive oral and nasal vowels

(8)	<i>a</i>	<a>	<i>sa</i> <sa> ‘earth’
	<i>a:</i>	<ar>	<i>sa:</i> <sar> ‘toward the ground’
		<al>	<i>th^ha:</i> <thal> ‘ashes’
		<a.ba>	<i>ka:</i> <ka.ba> ‘pillar’
		<e.ba>	<i>mt^ha:</i> <mche.ba> ‘canine, fang’
	<i>ã</i>	<ang _[LIT] >	<i>ha-jã</i> <ha.yang> ‘aluminum’
	<i>i</i>	<a’i>	<i>ŋi</i> <nga’i> ‘my’
		<i’u>	<i>wfⁱ-tjõ</i> <byi’u.chung> ‘small bird’
		<e’u>	<i>sⁱ</i> <spre’u> ‘monkey’
		<as>	<i>sⁱ</i> <skas> ‘ladder’
		<is>	<i>pri</i> <bris> ‘write _[PST/IMP] ’
		<us>	<i>wsi</i> <bsus> ‘meet (sb. arriving) _[PST/IMP] ’
		<os>	<i>sⁱ</i> <spos> ‘incense’
		<il>	<i>si-tu?</i> <sil.tog> ‘fruit’
		<el>	<i>t^ʃi</i> <drel> ‘mule’
	<i>u</i>		<i>rŋu</i> <dngul> ‘silver’
			<i>su</i> <sol> ‘pick out _[IMP] ’
		<a.bo>	<i>ts^hu</i> <tsha.bo> ‘nephew’
		<u.gu>	<i>p^hru</i> <phru.gu> ‘child’
	<i>e</i>	<e>	<i>ske</i> <ske> ‘neck’
	<i>ẽ</i>	<ing(s)>	<i>fẽ</i> <shing> ‘wood; firewood’
		<eng(s)>	<i>n^hrẽ</i> <’phreng> ‘string (beads)’
		<an>	<i>nẽ</i> <nyan> ‘listen’
		<un>	<i>stak-fẽ</i> <stag.shun> ‘tiger-skin’
		<en>	<i>thẽ</i> <then> ‘pull (invariant stem)’
		<on>	<i>stẽ</i> <ston> ‘show’
	<i>o</i>	<o>	<i>so</i> <so> ‘tooth’
	<i>o:</i>	<i.ba>	<i>wf^o:</i> <byi.ba> ‘mouse’
		<u.ba>	<i>to:</i> <du.ba> ‘smoke’
		<o.ba>	<i>th^o:</i> <tho.ba> ‘hammer’

	<i.bo>	<i>rdzo:</i> <rdzi.bo> ‘herder’
	<ol.ba>	<i>so:</i> <sol.ba> ‘charcoal’
<i>õ</i>	<ang(s)>	<i>mõ</i> <mang> ‘be many/much’
	<ung(s)>	<i>nthõ</i> <‘thung> ‘drink’
	<ong(s)>	<i>kõ</i> <gong> ‘price’
<i>ə</i>	<i>	<i>fə</i> <shi> ‘die _[PST] ’
	<u>	<i>sə</i> <su> ‘who’

2.3.2 Closed rhymes

In Sastod, syllables may be closed either by a stop (*-p, -k, -ʔ*) or sonorant (*-m, -n, -r*) coda. The velar coda *-k* is typically restricted to word-internal position,⁸ exhibiting alternation with word-final glottal stop *-ʔ*. This phenomenon of *position-driven rhyme shift* is observed in word formation (*rta-rniʔ* ‘horse’s hoof’ vs. *rɲək-pa* ‘hoof’; *mjuʔ* ‘be swift’ vs. *mɲək-po* ‘be swift_[NMLZ]’)⁹ as well as inflection (*zuʔ* ‘bark (as of a dog)’ vs. *zək-kə* ‘bark + immediate evidential suffix’). Rhyme pairs participating in phonological alternation of this type are tabulated as follows:

Table 6. Position-driven rhyme alternation

Alternating rhymes	Examples	
	Word-final	Word-internal
<i>-aʔ ~ -ak-</i>	<i>k^hraʔ</i> ‘blood’	<i>k^hrak-taʔ</i> ‘blood vessel’
<i>-iʔ ~ -ək-</i>	<i>Ɂziʔ</i> ‘leopard’	<i>Ɂzək-fɛ</i> ‘leopard-skin’
<i>-uʔ ~ -ək-</i>	<i>tʂuʔ</i> ‘six’	<i>tʂək-tfə</i> ‘sixty’
<i>-uʔ ~ -ok-</i>	<i>Ɂluʔ</i> ‘electricity’	<i>Ɂlok-kar</i> ‘electric light’

The closed rhymes in our data are summed with their CT sources and examples below:

8. One rare exception is *cak-cak*, an onomatopoeic word for ‘magpie’.

9. Rhyme alternation is not completely steadfast, as both alternants are acceptable in some cases, e.g. *Ɂlok-kar~Ɂluʔ-kar* ‘lamp’.

Table 7. Closed rhymes

	<i>a</i>	<i>i</i>	<i>u</i>	<i>e</i>	<i>o</i>	<i>ə</i>
<i>p</i>					<i>op</i>	<i>əp</i>
<i>k</i>	<i>-ak-</i>				<i>-ok-</i> <i>ok</i> ^a	<i>-ək-</i>
<i>ʔ</i>	<i>aʔ</i>	<i>iʔ</i>	<i>uʔ</i>	<i>eʔ</i>		
<i>m</i>	<i>am</i>			<i>em</i>	<i>om</i>	<i>əm</i>
<i>n</i>						<i>ən</i>
<i>r</i>	<i>ar</i>			<i>er</i>	<i>or</i>	<i>ər</i>

a. This checked rhyme is attested in Amdo loans, e.g. *ho-rok* <pho.rog> ‘large-billed crow’; cf. *wtʃa-ruʔ* <bya.rog> ‘crow’.

(9) <i>op</i>	<ab(s)>	<i>k^hop</i> <khab> ‘needle’
	<eb(s)>	<i>lop-lop</i> <leb.leb> ‘be flat’
	<ob(s)>	<i>t^hop</i> <thob> ‘get’
<i>əp</i>	<ib(s)>	<i>ⁿdʒəp</i> <‘jib> ‘suck’
	<ub(s)>	<i>nəp</i> <nub> ‘west’
<i>-ak-</i>	<ag(s)>	<i>k^hrak-rtsa</i> <khrag.rtsa> ‘blood vessel’
<i>-ok-</i>	<og(s)>	<i>ʁlok-kar</i> <glog.dkar> ‘electric light’
<i>ok</i>	<og(s)>	<i>ho-rok</i> <pho.rog> ‘large-billed crow’
<i>-ək-</i>	<ig(s)>	<i>ʁzək-ʃē</i> <gzig.shun> ‘leopard-skin’
	<ug(s)>	<i>tʂək-tʃə</i> <drug.cu> ‘sixty’
<i>aʔ</i>	<ag(s)>	<i>p^haʔ</i> <pʰag> ‘pig’
	<eg(s)>	<i>rtsaʔ</i> <sreg> ‘burn; roast’
<i>iʔ</i>	<ig(s)>	<i>ʁziʔ</i> <gzig> ‘leopard’
	<id>	<i>zbiʔ</i> <sbrid> ‘be numb’
	<ud>	<i>t^hiʔ</i> <thud> ‘cheese sweets’
<i>uʔ</i>	<ug(s)>	<i>tʂuʔ</i> <drug> ‘six’
	<og(s)>	<i>ʂuʔ</i> <srog> ‘life’
<i>eʔ</i>	<ad>	<i>seʔ</i> <sad> ‘frost damage’
	<ed>	<i>reʔ</i> <red> ‘copula verb’
	<od>	<i>peʔ</i> <bod> ‘Tibetan’
<i>am</i>	<am(s)>	<i>lam</i> <lam> ‘road’
	<om(s)>	<i>tam</i> <dom> ‘black bear’
<i>əm</i>	<im(s)>	<i>c^həm</i> <khyim> ‘home’
	<um(s)>	<i>snəm</i> <snum> ‘oil’
<i>em</i>	<em(s)>	<i>sem</i> <sems> ‘heart; mind’
<i>om</i>	<om(s)>	<i>ⁿc^hom</i> <‘khyoms> ‘roam _[IMP] ’

<i>ən</i>	<in>	<i>jən</i> <yin> ‘egophoric copula verb’
	<un>	<i>rgən</i> <dgun> ‘winter’
<i>ar</i>	<ar>	<i>mar</i> <mar> ‘butter’
<i>er</i>	<er>	<i>χser</i> <gser> ‘gold’
<i>or</i>	<or>	ⁿ <i>k^hor</i> <‘khor> ‘spin _[INTR] ’
<i>ər</i>	<ir>	<i>wtsər</i> <btsir> ‘squeeze’
	<ur>	<i>scər</i> <skyr> ‘be sour’

3. Non-Amdo phonological traits

The Sastod phonological system profiled in the section above departs in several important respects from a typical Amdo system.

3.1 Elaborate complex onsets

As shown in §2.2.2 above, Sastod possesses a far richer inventory of cluster onsets than in mainstream Amdo (Hua 1989: 107–110; Wang 2012: 108). These include various types of two-member and even three-member clusters alien to Amdo, as shown in the comparative table below:

3.2 Reduced coda inventory

Word-finally, only two stops (*-p*, *-ʔ*), two nasals (*-m*, *-n*) and a liquid (*-r*) are distinguished in the Sastod system of consonantal codas. Unlike in a typical Amdo system with up to seven consonantal codas (*-p*, *-t*, *-k*, *-m*, *-n*, *-ŋ*, *-r*; Qu 1991: 47; Wang 2012: §6.5), the velar and dental stops are conspicuously absent. Also dissimilar to Amdo is the non-existence of the velar nasal *-ŋ*, a phonemic coda found in most documented Amdo varieties. These important discrepancies bearing on syllable codas are illustrated below:

3.3 *Vʔ* and *Ṽ* rhymes

As seen above, Amdo dental and velar stop codas correspond to Sastod glottal coda *-ʔ*, and rhymes taking the velar nasal coda *-ŋ* correspond to Sastod nasal vowels *ã*, *ẽ*, and *õ*. Rhymes checked by *-ʔ* and nasal rhymes are generally unknown in Amdo (Hua 1989; Qu 1991: 69–88; Wang 2012: §6.5, 373), while both rhyme types are lexically contrastive in Sastod:

Table 8. Complex onsets

	Sastod	Amdo
Stop + <i>r</i> clusters	<i>praʔ</i> <brag> ‘rock’	<i>tʂak</i>
	<i>ᵑpʰruʔ</i> <phrug> ‘scratch’	<i>tʂʰək</i>
	<i>kʰraʔ</i> <khrag> ‘blood’	<i>tɕʰak</i>
	<i>gra</i> <dgra> ‘enemy’	<i>dzɤ-wo</i>
<i>s/z</i> + C clusters	<i>staʔ</i> <stag> ‘tiger’	<i>ʰtak</i>
	<i>sna</i> <sna> ‘nose’	<i>ʰnɛ</i>
	<i>zder</i> <sder> ‘plate’	<i>der</i>
	<i>zbaː-pa</i> <sbal.ba> ‘frog’	<i>ʰwa-wɛ</i>
<i>f/ʒ</i> + C clusters	<i>fkaʔ</i> <skrag> ‘be afraid’	<i>ʰtɕak</i>
	<i>ʒgoː</i> <sgro.ba> ‘leather bag’	<i>dzɔ</i>
<i>p</i> + <i>j</i> clusters	<i>pja-ma</i> <bye.ma> ‘sand’	<i>ɕɛ</i>
	<i>pji-ruʔ</i> <byu.ru> ‘coral’	<i>ɕə-rə</i>
CCC clusters	<i>zgra</i> <sgra> ‘sound’	<i>dzɤ</i>
	<i>zbjar</i> <sbyar> ‘paste _[TR] ’	<i>dzɤr</i>

Table 9. Reduced codas

	Sastod	Amdo
Absence of velar and dental stop codas	<i>pʰaʔ</i> <phag> ‘pig’	<i>hak</i>
	<i>ʃiʔ</i> <shig> ‘louse’	<i>ɕʰək</i>
	<i>luʔ</i> <lug> ‘sheep’	<i>lək</i>
	<i>peʔ</i> <bod> ‘Tibetan’	<i>wot</i>
	<i>zbiʔ</i> <sbrid> ‘be numb’	<i>ʰwət</i>
	<i>liʔ</i> <lud> ‘manure’	<i>lət</i>
Absence of velar nasal coda	<i>rɛ̃</i> <ring> ‘be long’	<i>raŋ</i>
	<i>tʰõ</i> <thang> ‘plain’	<i>tʰaŋ</i>
	<i>tʰõ</i> <thung> ‘be short’	<i>tʰoŋ</i>

Table 10. $V\text{?}$ and \tilde{V} rhymes

	Sastod	Amdo
Phonemic glottal stop coda	<i>rta</i> <rta> ‘horse’	<i>^htɛ</i>
	<i>rtaʔ</i> <rtaʔ> ‘mark’	<i>^htak</i>
	<i>ske</i> <ske> ‘neck’	<i>^hkɛ</i>
	<i>skeʔ</i> <skad> ‘voice; language’	<i>^hket</i>
Phonemic nasal vowels	<i>ja</i> <ya> ‘one of a pair’	<i>jɛ</i>
	<i>ha-jā</i> <ha.yang> ‘aluminum’	<i>jaŋ</i>
	<i>mɲɛ</i> <me> ‘fire’	<i>jɛ</i>
	<i>mɲē</i> <ming> ‘name’	<i>jaŋ</i>
	<i>rdo</i> <rdo> ‘stone’	<i>do</i>
	<i>rdō</i> <rdung> ‘pound, beat’	<i>doŋ</i>

3.4 Vowel length

Another salient phonological trait setting Sastod apart from mainstream Amdo is vowel length. Vocalic duration, rarely documented in Amdo dialects,¹⁰ is however an important parameter of Sastod vowels:

Table 11. Contrastive vowel length

	Sastod	Amdo
Phonemic short vowels	<i>ɛa</i> <wa> ‘fox’	<i>ɛɛ</i>
	<i>ʃa</i> <sha> ‘meat’	<i>x^hɛ</i>
	<i>so</i> <so> ‘tooth’	<i>s^ho</i>
	<i>p^ho</i> <p ^h o> ‘male’	<i>ho</i>
Phonemic long vowels	<i>ɛa:</i> <khal> ‘load _[N] ’	<i>ɛa</i>
	<i>ʃa:</i> <shwa.ba> ‘deer’	<i>x^ha</i>
	<i>so:</i> <sol.ba> ‘charcoal’	<i>s^hɔ</i>
	<i>p^ho:</i> <p ^h o.ba> ‘belly’	<i>hɔ</i>

10. Nevertheless, ‘Bumyag Amdo of Lithang County has long *a*: opposed to short *a*, forming the only vowel pair distinguished by vocalic duration (Sun & Lin 2023).

4. Non-Amdo phonological developments

The Sastod synchronic phonology, especial with regards to its conservative onset system, may at first blush strike one as resembling Amdo. This illusion is quickly dispelled when one carefully traces the disparate phonological developments that gave rise to their respective modern sound systems. In what follows, we discuss in turn the primary Amdo sound changes that Sastod did not participate in (§4.1) and, conversely, the distinctive non-Amdo sound changes that Sastod went through (§4.2).

4.1 Primary Amdo sound changes not shared by Sastod

4.1.1 Labial stop lenition

Across Amdo dialects, an important innovation transformed CT simplex labial stops into spirants or approximants. CT voiced and voiceless unaspirated stops *b/p* softened as a rule to *v* or *w*, and CT voiceless aspirated stops *ph* became glottal *h*. Depending on dialect, spirantization was carried further through to various CT cluster onsets containing labial stops, producing modern forms with miscellaneous spirant onsets. Sastod, remarkably conservative with regard to retaining CT complex onsets, shunned such sweeping lenition processes at word-initial position,¹¹ and CT labial stops are either kept as stops or changed into affricates, as seen in:

Table 12. CT labial stops in Sastod and Amdo

	Sastod	Amdo
CT labial stops	<i>pō</i>	<i>wəŋ</i> <pang> ‘hold in arms; brood’
	<i>pa:</i>	<i>wa</i> <bal> ‘wool’
	<i>ph^haʔ</i>	<i>hak</i> <phag> ‘pig’
CT labial stop clusters	<i>spə</i>	<i>fə</i> <spu> ‘hair’
	<i>spaⁿk^hə</i>	<i>fəŋ-k^hə</i> <spyang.khu> ‘wolf’
	<i>spi</i>	<i>fi-gen</i> <spre’u.rgan> ‘monkey’
	<i>wt^huʔ</i>	<i>ɕ^hək</i> <phyug> ‘be rich’
	<i>wt^hfa</i>	<i>ɕe</i> <bya> ‘bird’

11. As pointed out by one reviewer, lenition of labial stops did occur word-internally, as for example *χpa-wo* <dpə’po> ‘hero’.

4.1.2 CT *Kr* and *Ky*

In a majority of Tibetic languages, CT stop initials plus the medial *r* fused into affricates. A salient Amdo sound change merged CT *Kr* clusters into *Ky* (Hua 1983:44–45)¹² and produced palatal affricates, which in certain Amdo varieties (e.g., Themchen, Byamsme) were further conflated with postalveolar affricates. This did not happen in Sastod, where *Kr* survived as such, ranking Sastod among a handful of Tibetic languages of China known to keep these onset clusters intact.¹³

Table 13. CT *Kr* and *Ky* in Sastod and Amdo

	Sastod	Amdo
CT <i>Kr</i>	<i>wkri</i>	<i>tɕu</i> <bkrus> ‘wash _[PST] ’
	<i>k^hra</i>	<i>tɕ^hv</i> <khra> ‘falcon’
	<i>kro</i>	<i>tɕo</i> <gro> ‘wheat’
	<i>zgro</i>	<i>dzo</i> <sgro> ‘feather’ ^a
	<i>ⁿgra-ⁿba</i>	<i>ⁿdzɛ-ⁿbɛ</i> <gram.pa> ‘cheek’
CT <i>Ky</i>	<i>c^hə</i>	<i>tɕ^hə</i> <khyi> ‘dog’
	<i>ⁿc^haʔ</i>	<i>ⁿtɕ^hak</i> <‘khyag> ‘be cold’
	<i>rjop</i>	<i>dzɛp</i> <rgyab> ‘back’
	<i>ⁿjər</i>	<i>ⁿdzər</i> <‘gyur> ‘change _[INTR] ’

a. Occurring in the compound word *wʈʃa-zgro* <bya.sgro> ‘bird feather’.

4.1.3 CT *ang* and *ing*

A striking phonological innovation attested in all recorded Amdo dialects is the merger of CT rhymes *ang* and *ing*.¹⁴ However, the two proto rhymes remain separate in Sastod:

12. The capital letter *K* here denotes a velar stop regardless of manner of articulation (same usage hereinafter).

13. CT *Pr* clusters, which generally yielded retroflexed affricates in Amdo as well as many other Tibetic languages, are likewise kept as such in Sastod, e.g., Amdo *tʂak*, Sastod *praʔ* <brag> ‘rock, cliff’.

14. The realization of the merged modern rhyme differs from dialect to dialect, e.g. ‘Bumyag *ē* (Sun & Lin 2023), Byamsme *an*, G.yukhog 玉科 of Rta’u 道孚 County *ən*.

Table 14. CT *ang* and *ing* in Sastod and Amdo

	Sastod	Amdo
CT <i>ang</i>	<i>a-ʒō</i>	<i>a-zaŋ</i> <a.zhang> ‘maternal uncle’
	<i>rō</i>	<i>raŋ</i> <rang> ‘self’
CT <i>ing</i>	<i>ʒē</i>	<i>ɛaŋ</i> <zhing> ‘field’
	<i>rē</i>	<i>raŋ</i> <ring> ‘be long’

4.1.4 CT *i* and *u*

A prevalent phonological development attested across the Amdo and Khams areas is the sweeping merger of CT high vowels *i* and *u* into schwa. In a majority of Amdo dialects, this sound change affected all rhymes except those taking *-ng*, *-s*, and *-l* codas.¹⁵ The merger of CT *i/u* to ə is also found to some extent in Sastod, but in a way sharply distinct from Amdo. First of all, CT *ig(s)* and *ug(s)* gave Sastod reflexes *iʔ* and *uʔ*, directly continuing the original vowel qualities. Second, when CT *id* and *ud* did fall together, the result is a *non-central* vowel *iʔ*. These disparate sound changes are summed up in Table 15:

Table 15. CT *i* and *u* before *g(s)* and *d* in Sastod and Amdo

	Sastod	Amdo
CT <i>ig(s)</i> and <i>ug(s)</i>	<i>ɪziʔ</i>	<i>ʰzək</i> <gzig> ‘leopard’
	<i>luʔ</i>	<i>lək</i> <lug> ‘sheep’
CT <i>id</i> and <i>ud</i>	<i>zbiʔ</i>	<i>ʰwət</i> <sbrid> ‘be numb’
	<i>wdiʔ</i>	<i>dət</i> <bdud> ‘demon’

4.2 Sastod sound changes not shared by Amdo

Among the key innovations that set Sastod onto divergent phonological paths from Amdo are those that introduced long vowels into the syllable canon (§4.2.1), those that produced new segmental contrasts at both onset and coda positions (§4.2.2), and those that led to distinctive rhyme mergers (§4.2.3). Comparisons are drawn from the more conservative Rta’u variety of Sichuan and the more innovative Themchen variety of Qinghai.¹⁶

15. In certain Amdo dialects of Qinghai, CT *u* before *g(s)* retains lip rounding (e.g. Arig *ʰʱuk* <thug> ‘meet’; Qu 1991: 86).

16. The Themchen forms are taken from Hua (2002); the Rta’u forms are from personal fieldwork.

4.2.1 Genesis of long vowels

As seen above in §2.3, an innovative type VV emerged in the Sastod rhyme system with the introduction of long vowel phonemes *a:* and *o:* from CT *al* (in the case of *a:*) and coalescence of CT root syllables plus the defunct nominal suffixes *-ba* and *-bo*. Long vowels are rarely reported in Amdo, and distinctive Sastod vowel length corresponds to vowel-quality differences (e.g. Rta'u) or even identical vowels (e.g. Themchen) in Amdo:

Table 16. Origins of long vowels in Sastod

	Sastod	Amdo (Rta'u)	Amdo (Themchen)
CT <i>a > a</i>	<i>ja</i> <nya> 'fish'	<i>jv</i>	<i>ja</i>
CT <i>al, a.ba, e.ba > a:</i>	<i>ja:</i> <nyal> 'go to bed'	<i>jv</i>	<i>ja</i>
	<i>ra</i> <rwa> 'horn'	<i>rv</i>	<i>ra</i>
	<i>ra:</i> <ra.ba> 'fence; enclosure'	<i>rv</i>	<i>ra</i>
CT <i>o > o</i>	<i>p^ho</i> <pho> 'male'	<i>ho</i>	<i>ho</i>
CT <i>i.ba, u.ba, o.ba, i.bo, ol.ba > o:</i>	<i>p^ho:</i> <pho.ba> 'belly'	<i>hv</i>	<i>ho</i>
	<i>ɣlo</i> <glo> 'saddle girth'	<i>ɣlo</i>	<i>ɣlo</i>
	<i>ɣlo:</i> <glo.ba> 'lungs'	<i>ɣlv</i>	<i>ɣlo</i>

4.2.2 New segmental distinctions

Other noteworthy phonological developments in Sastod gave rise to segmental types unrecognized in Amdo, including the glottal coda ʔ, as well as highly unusual onset clusters *ʃk/zg* and *wⁿg/wⁿk^h*.

The Sastod glottal coda *-ʔ* stems from debuccalizing CT velar and dental stop codas, which typically survive as distinct oral codas across Amdo dialects. The onset clusters *ʃk/zg* and *wⁿg/wⁿk^h* are probably the most iconic sounds of Sastod. Complex onsets consisting of post-alveolar spirants *ʃ/z* plus velar stops *k/g* evolved from CT *dkr/skr* and *sgr*; in Amdo, these CT onset clusters are reflected by affricates instead. The other set of remarkable onset clusters *wⁿg/wⁿk^h* were created by transposing nasality of the labial nasal in the CT *mkh* and *mg* clusters onto the following velar stops, turning them into prenasalized consonants.

Table 17. Innovative segmental contrasts in Sastod

	Sastod	Amdo(Rta'u)	Amdo(Themchen)
CT <i>dkr, skr > ʃk</i>	<i>ʃkə</i> <dkri> 'wind; wrap around'	<i>rci</i>	<i>rtɕə</i>
	<i>ʃkuʔ</i> <dkrug> 'stir, churn'	<i>rcək</i>	<i>htɕək</i>
	<i>ʃkaʔ</i> <skrag> 'be afraid'	<i>rcak</i>	<i>rtɕak</i>
	<i>ʃkō</i> <skrang> 'be swollen'	<i>rcəŋ</i>	<i>rtɕəŋ</i>

Table 17. (continued)

	Sastod	Amdo(Rta'u)	Amdo(Themchen)
CT <i>sgr</i> > <i>ʒg</i> ^a	<i>ʒgo:</i> <sgro.ba> 'leather bag'	<i>rjɔ</i>	<i>rdzo</i>
CT <i>mkh</i> > <i>wⁿkh</i>	<i>wⁿkh^{ar}</i> <mkhar> 'fortress'	<i>mk^her</i>	<i>mkhwar</i>
	<i>wⁿkh^{az}-ma</i> <mkhal.ma> 'kidney'	<i>mk^hi-lə</i>	<i>mkhwa-ma</i>
CT <i>mg</i> > <i>wⁿg</i>	<i>wⁿga-ra</i> <mgar.ba> 'smith'	<i>mgɛ-rɛ</i>	<i>mgwa-ra</i>

a. A rare onset cluster. Some words containing *ʒg-* are loanwords from Rgyalrong (*ʒgolo* 'walnut', cf. Cacu 甲足 Rgyalrong *ʒgolo*). The word *ʒgu?* 'bangle' reflects CT <sgrog>, but the lexical choice may be due to Rgyalrong influence, cf. Cacu Rgyalrong *ʒgrog* 'bangle', from <sgrog-gdub> 'bangle'—the word <sgrog> by itself usually means 'strap'. The common Amdo word for 'bangle' is *ʒdɔʒə* <gdub.bu>, a diminutive of <gdub> 'ring, bracelet'.

4.2.3 Characteristic mergers

CT onsets and rhymes underwent considerable reduction in Sastod. Significant mergers distinct from those observed in Amdo include the collapse of CT *sr*, *sl* clusters, and the unique ways in which various CT closed rhymes fell together.

Table 18. Characteristic mergers in Sastod

	Sastod	Amdo(Rta'u)	Amdo(Themchen)
CT <i>sr</i> , <i>sl</i> > <i>rts</i>	<i>rtsō</i> <srung> 'guard'	<i>ʂoŋ</i>	<i>ʂoŋ</i>
	<i>rtsē-ma</i> <srana.ma> 'beans'	<i>ʂan-ma</i>	<i>ʂan-ma</i>
	<i>rtsa</i> <sla> 'be easy'	<i>rtsa</i>	<i>rtsa</i>
	<i>rtsop</i> <slob> 'teach'	<i>rtsop</i>	<i>rtsop</i>
CT <i>a/o</i> + <i>ng</i> > <i>ō</i>	<i>kō</i> <gang> 'be full'	<i>kəŋ</i>	<i>kaŋ</i>
	<i>kō</i> <gong> 'price'	<i>koŋ</i>	<i>koŋ</i>
CT <i>a/o</i> + <i>n</i> > <i>ē</i>	<i>tṣē</i> <dran> 'think of'	<i>tṣan</i>	<i>tṣan</i>
	<i>stē</i> <ston> 'show _[v] '	<i>rton</i>	<i>rton</i>
CT <i>a/o</i> + <i>m</i> > <i>am</i>	<i>skam</i> <skam> 'be dry'	<i>rkam</i>	<i>rkam</i>
	<i>skam</i> <skom> 'be thirsty'	<i>rkom</i>	<i>rkom</i>
CT <i>a/o</i> + <i>d</i> > <i>e?</i>	<i>ske?</i> <skad> 'language'	<i>rkat</i>	<i>rkal</i>
	<i>pe?</i> <bod> 'Tibetan'	<i>wot</i>	<i>wol</i>
CT <i>a/e/o</i> + <i>b</i> > <i>op</i>	<i>k^hop</i> <khab> 'needle'	<i>k^hap</i>	<i>k^hap</i>
	<i>ᵑgop</i> <'gebs> 'cover up'	<i>ᵑgep</i>	<i>ᵑgep</i>
	<i>lop</i> <lob> 'be accustomed'	<i>lop</i>	<i>lop</i>
CT <i>u/o</i> + <i>g</i> > <i>u?</i>	<i>lu?</i> <lug> 'sheep'	<i>lək</i>	<i>lək</i>
	<i>lu?</i> <log> 'tumble down'	<i>lok</i>	<i>lok</i>

5. Summary and conclusions

The hidden linguistic diversity of multilingual Khrochu County in northern Sichuan has gradually come to light. The obscure varieties of Tibetic distributed in the county used to be lumped uncritically under Amdo, the major Tibetic language of the area. This unwarranted assumption cannot withstand scrutiny, as demonstrated elsewhere (Sun 2014; 2018) and by the present study devoted to Sastod. The special lexical and phonological features highlighted herein provide compelling support for Sastod's separate identity from Amdo. The phonological evidence arrayed in the foregoing sections falls under two types. On the one hand, Sastod synchronic phonology displays a typological profile atypical for Amdo:

- (10)
1. Elaborate onset canon, with cluster types alien to prototypical Amdo;
 2. Conspicuous absence of word-final velar and dental stop codas;
 3. Phonemic glottal stop coda;
 4. Phonemic nasal rhymes;
 5. Phonemic long vowels.

The phonological history of Sastod, with circumvention of major Amdo sound changes (11) and initiation of specific innovations not shared with Amdo (12), argues even more cogently against a close affiliation with Amdo:

- (11)
1. CT labial stops did not lenite;
 2. CT *Kr* & *Ky* remained distinct;
 3. CT *ang* & *ing* remained distinct;
 4. Before CT coda *g*, CT high vowels *i* & *u* survived as such;
 5. Before CT coda *d*, CT high vowels *i* & *u* merged in favor of *i* instead of both centralizing to *ə*.
- (12)
1. Vowel length arose through *l*-coda elision and disyllable coalescence;
 2. CT *skr/dkr* and *sgr* turned into highly unusual clusters *ʃk* and *ʒg*;
 3. CT *sr*, *sl* merged as *rts*;
 4. CT *ang*, *ong* merged as *ō*;
 5. CT *an*, *on* merged as *ē*;
 6. CT *am*, *om* merged as *am*;
 7. CT *ad*, *od* merged as *eʔ*;
 8. CT *ab*, *ob* merged as *op*;
 9. CT *og*, *ug* merged as *uʔ*.

Our findings naturally bring up the question of Sastod's linguistic position. What are its closest kin within Tibetic, if not Amdo? Could it be that its nearest relatives are to be sought amongst neighbors in the same county?

To investigate this possibility, fourteen non-Amdo traits in Sastod historical phonology are tabulated below and evaluated against comparative data from six other Tibetic varieties of Khrochu, namely Takhog 達古, E(astern) Chunag 東晴朗, Woto 俄多, S(outhern) Metsa 南麥札, Tsherge 才蓋, and Dhake 達蓋.¹⁷

The tables that follow probe whether these six targeted Tibetic varieties side with Sastod in eschewing the focused Amdo sound changes (Table 19), and to what extent they align with Sastod with respect to its diagnostic phonological developments (Table 20):¹⁸

Table 19. Amdo phonological innovations in Khrochu County

	Amdo	Sastod	Takhog	E. Chunag	Woto	S. Metsa	Tsherge	Dhake
Labial Lenition	+	-	-	-	-	-	-	-
<phag> 'pig'	<i>hak</i>	<i>p^haʔ</i>	<i>p^haʔ</i>	<i>p^ha</i>	<i>p^ha</i>	<i>p^ha-ŋe</i>	<i>p^ha</i>	<i>p^haʔ</i>
<bal> 'wool'	<i>wa</i>	<i>pa:</i>	<i>pe:</i>	<i>pi:</i>	<i>pe:</i>	<i>pi</i>	<i>pe:</i>	<i>pe:</i>
Merger of CT <i>Kr</i> and <i>Ky</i>	+	-	+	-	-	-	+	+
<gro> 'wheat'	<i>tɕo</i>	<i>kro</i>	<i>tfo</i>	<i>kɿo</i>	<i>kjo</i>	<i>tfo</i>	<i>tfo</i>	<i>tfo</i>
<khyi> 'dog'	<i>tɕ^hə</i>	<i>c^hə</i>	<i>tʃ^hə-ʒə</i>	<i>tʃ^hi-ɣu</i>	<i>tʃ^hi- ɣu</i>	<i>tʃ^hə-ŋe</i>	<i>tʃ^hə-ŋɛ̃</i>	<i>tʃ^hi-ɣə</i>

17. Takhog (=Taku in Sun 2018) is spoken at Takhog Tshogsum 三達古 <ta.khog.tsho.gsum> Village in Rdokha 蘆花 <rdo.kha> Town. Eastern Chunag is spoken at Zangsnogthang 仁恩塘 <zangs.ngo.thang> and Tsiri 知爾 <tsi.ri > Villages in Chunag 晴朗 <chu.nag> Township; data are from Tsiri Village. Woto <wo.to> is spoken at Jibu Village in Chunag Township; data are from Woto Hamlet. Southern Metsa is spoken at Dhanga 達安 <dha.nga >, Sheba'i 色灣 <she.ba'i> and Dbortse 俄寨 <dbo.rtse> Villages in Mkhalong 卡龍 <mkha.lung> Town; data are from Dhanga Village. Tsherge is spoken at Tsherge <tsh.e.rge> Village in Mkhalong Town. Dhake is spoken at Upper and Lower Dhake 達蓋 <dha.ke> Villages in Chunag Township; data are from Lower Dhake Village.

18. The plus and minus signs denote presence or absence of a given innovation; the sign ± denotes **partial presence** of the innovation. Positive attestation of an innovation is highlighted additionally by blue shading. Merger of CT *i/u* to *ə* before coda *g* was incomplete in Eastern Chunag, Woto, and Southern Metsa due to a conditioned split. In Eastern Chunag and Woto, CT *ug(s)* turned into *i* after dentals and palatals, *u* after gutturals, and *ə* elsewhere; in S(outhern) Metsa, CT *ug(s)* became *i* after dentals and palatals and *ə* elsewhere. In E(astern) Chunag, furthermore, loss of CT coda *l* did not lead to consistent vowel lengthening.

Table 19. (continued)

	Amdo	Sastod	Takhog	E. Chunag	Woto	S. Metsa	Tsherge	Dhake
Merger of CT <i>ang</i> and <i>ing</i>	+	-	-	-	-	-	-	-
<thang> 'plain'	<i>thɑŋ</i>	<i>thō</i>	<i>thā</i>	<i>thā</i>	<i>thā</i>	<i>thɔ</i>	<i>thɔ</i>	<i>thā</i>
<ring> 'be long'	<i>raŋ</i>	<i>rē</i>	<i>ɿē</i>	<i>ɿē</i>	<i>ɿē</i>	<i>ɿe</i>	<i>rē</i>	<i>ɿē</i>
CT <i>i, u > ə</i> before <i>g</i>	+	-	-	±	±	±	+	-
<gzig> 'leopard'	<i>zək</i>	<i>ʁziʔ</i>	<i>ʁziʔ</i>	<i>ʁzə</i>	<i>ʁzə</i>	<i>ʁzə</i>	<i>ʁzə</i>	<i>ʁzi</i>
<lug> 'sheep'	<i>lək</i>	<i>luʔ</i>	<i>luʔ</i>	<i>lji</i>	<i>ɿe-li</i>	<i>li</i>	<i>lə</i>	<i>lu</i>
CT <i>i, u > ə</i> before <i>d</i>	+	-	-	-	-	-	-	-
<sbrid> 'be numb'	<i>hwət</i>	<i>zbiʔ</i>	<i>hbiʔ</i>	<i>bji</i>	<i>bi</i>	<i>bi</i>	<i>bɿ</i>	<i>bi</i>
<bdud> 'demon'	<i>dət</i>	<i>wdiʔ</i>	<i>hdiʔ</i>	<i>dji</i>	<i>di</i>	<i>di</i>	<i>də</i>	<i>di</i>

Table 20. Sastod phonological innovations in Khrochu County

	Sastod	Takhog	E. Chunag	Woto	S. Metsa	Tsherge	Dhake
Merger of CT <i>ang</i> , <i>ong</i>	+	-	-	-	-	-	-
<gang> 'be full'	<i>kō</i>	<i>kā</i>	<i>ti-kā</i>	<i>kā</i>	<i>kɔ</i>	<i>kɔ</i>	<i>kā</i>
<gong> 'price'	<i>kō</i>	<i>kō</i>	<i>kō</i>	<i>kō</i>	<i>ko</i>	<i>kō</i>	<i>kō</i>
Rise of / <i>fk</i> /3 <i>g</i> clusters	+	-	-	-	-	-	-
<skrag> 'fear'	<i>ʃkaʔ</i>	<i>htaʔ</i>	<i>hfa</i>	<i>hsa</i>	<i>fa</i>	<i>htfa</i>	<i>htfaʔ</i>
<sgro.ba> 'leather bag'	<i>ʒgo:</i>	<i>hdo:</i>	<i>dzu:</i>	<i>dzo:</i>	<i>zu</i>	<i>dzo</i>	<i>dzo:</i>
Rise of long vowels	+	+	±	±	-	-	+
<bal> 'wool'	<i>pa:</i>	<i>pe:</i>	<i>pɿ</i>	<i>pe:</i>	<i>pi</i>	<i>pe</i>	<i>pe:</i>
<ra.ba> 'fence'	<i>ra:</i>	<i>ɿa:</i>	<i>ɿa:</i>	<i>ɿa:</i>	<i>ɿa</i>	<i>ra</i>	<i>ɿa:</i>
<du.ba> 'smoke'	<i>to:</i>	<i>to:</i>	<i>tju:</i>	<i>to:</i>	<i>tu-wu</i>	<i>to</i>	<i>to:</i>

Table 20. (continued)

	Sastod	Takhog	E. Chunag	Woto	S. Metsa	Tsherge	Dhake
CT <i>sr, sl</i> > <i>rts</i>	+	+	+	+	+	+	–
<srung> ‘guard’	<i>rtsō</i>	<i>^htsō</i>	<i>^htsō</i>	<i>^htsō</i>	<i>^htso</i>	<i>^htsō</i>	<i>ṣō</i>
<sla> ‘be easy’	<i>rtsa</i>	<i>^htse</i>	<i>^htɕa</i>	<i>^htse</i>	<i>^htɕa</i>	<i>^htɕa</i>	<i>^htɕa</i>
Merger of CT <i>an, on</i>	+	+	+	+	+	+	+
<dran> ‘think of’	<i>tṣē</i>	<i>tṣē</i>	<i>tṣē</i>	<i>tṣē</i>	<i>tṣe</i>	<i>tṣē</i>	<i>tṣē</i>
<ston> ‘show’	<i>stē</i>	<i>^htē</i>	<i>^htē</i>	<i>^htē</i>	<i>^hte</i>	<i>^htē</i>	<i>^htē</i>
Merger of CT <i>am, om</i>	+	+	+	+	+	+	+
<skam> ‘be dry’	<i>skam</i>	<i>^hkā</i>	<i>^hkō</i>	<i>^hkjā</i>	<i>^hko</i>	<i>^hkɔ</i>	<i>^hkō</i>
<skom> ‘be thirsty’	<i>skam</i>	<i>^hkā</i>	<i>^hkō</i>	<i>^hkā</i>	<i>^hko</i>	<i>^hkɔ</i>	<i>^hkō</i>
Merger of CT <i>ad, od</i>	+	+	+	+	+	+	+
<skad> ‘language’	<i>ske?</i>	<i>^hke?</i>	<i>^hkɿ</i>	<i>^hke</i>	<i>^hki</i>	<i>^hki</i>	<i>^hke?</i>
<bod> ‘Tibetan’	<i>pe?</i>	<i>^hpe?</i>	<i>^hpɿ</i>	<i>^hpe</i>	<i>^hpi</i>	<i>^hpi</i>	<i>^hpe?</i>
Merger of CT <i>ab, ob</i>	+	+	+	+	+	+	+
<khab> ‘needle’	<i>^hop</i>	<i>^ho?</i>	<i>^hhu</i>	<i>^hhu</i>	<i>^hhu</i>	<i>^hhu</i>	<i>^ho?</i>
<lob> ‘be accustomed to’	<i>lop</i>	<i>lo?</i>	<i>lu</i>	<i>lu</i>	<i>lu</i>	<i>lu</i>	<i>lo?</i>
Merger of CT <i>ug, og</i>	+	–	–	–	–	–	–
<lug> ‘sheep’	<i>lu?</i>	<i>lu?</i>	<i>lji</i>	<i>ɬv-li</i>	<i>li</i>	<i>lə</i>	<i>lu</i>
<log> ‘tumble down’	<i>lu?</i>	<i>lu?</i>	<i>lu</i>	<i>lu</i>	<i>lu</i>	<i>lu</i>	<i>lo?</i>

A number of observations are deducible from the above tables:

- (13) 1. Three major Amdo phonological innovations – Labial Lenition, *ang/ing* Merger, *id/ud* Merger – are bypassed all across Khrochu Tibetan; two others – *Kr/Ky* Merger and *ig/ug* Merger – are sporadically attested;
2. Three Sastod innovations – *ang/ong* Merger, *ug/og* Merger, and Rise of */k/ɕg* clusters – are unique;
3. Two Sastod innovations – Rise of long vowels and *sr/sl* Merger – are widespread in Khrochu;
4. The four Sastod innovations involving merger of *a/o* before dental and labial codas are universally shared by (and thus emblematic of) Khrochu Tibetan as a whole.

Our findings suggest that, contrary to common belief, none of the Khrochu Tibetan varieties may be subsumed under Amdo without imposing a Procrustean fit. On the other hand, the presence of characteristic Sastod sound changes in a

range of Khrochu varieties provides a compelling indication that Sastod shares deep roots with its Tibetan neighbors inside the county.

One must hasten to add a caveat—the internal diversity among Tibetan varieties of Khrochu is substantial, and peculiar sound changes like CT *skr* > Sastod /*k* are paralleled by idiosyncratic phonological developments in other Tibetan forms of the county.¹⁹ Our future research agenda will attempt to document each of these obscure language-like Tibetan dialects to identify a full repertoire of linguistic innovations and their distribution in this area. Only on such a basis can a network of their phylogenetic affinities be reliably established.

Funding

This study has been funded by a National Science and Technology Council grant MOST 104-2410-H-001-067-MY3 and my home institute's grant LING-112-003-01.

Acknowledgements

Over the years, my extended field research in Khrochu County would not have been possible without the collaboration of Kejin Nan, Qianzi Tian, Mian Zhang, and dedicated assistance from our language teachers. Particular gratitude is due to our editors and anonymous reviewers for providing helpful comments and etymological suggestions. Any errors that remain are my own responsibility.

List of abbreviations

CAUS	causative	GEN	genitive
Ch.	Chinese	HON	honorific
COMP	complementizer	IMP	imperative
CT	Classical Tibetan	INCL	inclusive
DAT	dative	INNV	innovated
DIR	direct evidential	INTR	intransitive
EGO	egophoric evidential	LIT	literary vocabulary
ERG	ergative	N	noun
EXCL	exclusive	NMLZ	nominalizer
EXH	exhortative	OT	Old Tibetan
FUT	future	PFV	perfective

19. Examples of these include CT *skr/sky* > ^{*h*}*t*, CT *sgr/sgy* > ^{*h*}*d* in Takhog, CT *skr* > ^{*h*}*ʂ*, CT *sky* > ^{*h*}*f* in Eastern Chunag, and merger of CT vowels *a* and *e* into *a* in Southern Metsa.

PL plural
 PROH prohibitive
 PST past
 RDPL reduplicated

Rgy. Rgyalrong
 SG singular
 TR transitive
 V verb

Appendix. English-Sastod vocabulary

This vocabulary contains around 1,500 selected lemmas in the Mogpare variety of Sastod, with syllable breaks to facilitate morpheme identification. Chinese glosses are added to clarify the meanings of certain lexical items. Classical Tibetan etyma of the Sastod words suggested by sound correspondences — rather than random CT forms listed in dictionaries — are provided in angle brackets (e.g. *nō-sŋa* <nang.snga> ‘tomorrow’). The same principle applies to multi-stem verbs. The present stem *χtʃaʔ* of ‘break (something stiff)’, for example, must go back to the CT future <gcag> rather than present <gcog>, in light of Sastod sound laws. Irregular reflexes of CT syllable elements are in boldface followed by notes in square brackets; e.g. ‘flour’ *mʃʰe* <**phye**> [onset!]. Secondary stem forms deviating from normal CT etyma are indicated with INNV (short for *innovated*) as seen in *ʋō/ʋē/ʃuʔ* <‘ong/INNV/shog> ‘come’, where the past stem *ʋē* shows an innovated rhyme *ē* at odds with the prevalent CT past stem <‘ongs>. Inferable (but unattested) etyma are marked with a dagger sign †, ²⁰ a case in point being the present stem of ‘build (a fire)’ *nʋi*, which may trace back to a plausible but unattested proto form <†ʋus>.

a while; *top-tsiʔ*
 acclivity; *la* <la>
 accumulate, mass; *wsuʔ* <gsog> [onset!]
 (cf. <bsag>_[PST])
 ache; *na* <na>
 Adam’s apple; *mɲiʔ-rba* <mid.lba>
 add; *snē* <snon>
 admit; *tʃō-wʃeʔ jeʔ* <drang.bshad byed>
 adore; love dearly; *ʃa-na jeʔ* <sha.na byed>;
 (cherish something valuable) *ʃa-tʃʰa jeʔ*
 <sha.tsha byed>
 after (temporal adverbial); *dʒe-mō*;
 <rjes.mo> [onset!][rhyme!]
 afternoon; *wʃʰə-tʃo* <phyi.dro>
 afternoon meal; *tʃi-dʒa* <dros.ja>
 again; *ʋor-ma* <‘or.ma>; (once more) *jō*
 <yang>
 agree; consent; *nʰeʔ* <‘thad>; *kʰa nē*
 <kha.nyan>
 aim; *tʃʰeʔ* <tshad>; *ʋzə/ʋzi/ʋzi*

air; breath; (air inside a balloon) *rbuʔ*
 <dbug>; (breath) *rbuʔ(-kʰa)* <dbug.kha>
 all; *ha-na*; (with emphasis on complete-
 ness) *tʃʰō-mō* <tshang.mo> [rhyme!];
kʰa-tʃʰō <kha.tshang>
 alone by oneself; *kʰer-rcō* <kher.rkyang>
 aluminum; *ha-jā* <ha.yang>
 amber; *spo-fol* <spos.shel>
 amulet box; *ka-wu* <ga’u>
 and; *ta* <dang> [rhyme!]
 angle; *zər-ngo* <zur.go>
 ankle; *rkō-pa ɲiʔ-rdo*
 <rkang.pa.dmyig.rdo>
 answer; reply; *kʰa-lē jeʔ* <kha.lan byed>
 ant; *kruʔ-mō* <grog.ma> [rhyme!]
 anus; *rtsa-zgo* <rtsa.sgo>
 anvil; *te-tse*
 anything; anyone; *tʃō tʃəʔ-kaʔ* <cang.ʔ>
 (e.g. *ŋa: ~ mə-go* ‘I don’t want anything.’)
 apply; smear; *skiʔ* <skud>

20. This represents expected but unattested forms, a usage introduced by Guillaume Jacques.

- approach; get close; *χtʃar/χtʃar/χtʃor*
<gcar_[FUT]/gcar_[FUT]/gcor>²¹
- arm; *lak-pa* <lag.pa>; (upper arm) *a-kə sca-pa?*; (forearm) *rdʒē-ŋa* <rje-ngar> [rhyme!]; [HON] *mtʃaʔ-laʔ* <phyag.lag> [onset!]
- armpit; *mtʃē-ʒop* <mchan.zhabs>
- arrive; *rtsop* <slebs>
- arrow; *mda* <mdaʔ>
- ask (a question); *ndzə/tʃi/tʃi* <dri/dris/dris>
- assess; estimate; *tʃeʔ jeʔ* <tshad byed>
- at all 根本; *ʁde*
- awl; *spō* <snjung.bu>
- awn of wheat; *mdza-rŋaʔ*
- axe; *star* <sta.re>
- baby; *pʰruʔ na-ba* <phrug.ʔ> (Cf. Nyag-nyokhyu Rgy. *naʒa*; cf. also <nyag.nyog> 'child (dialectal form)')
- back; (body part) *juʔ-rtsa*; (back side) *juʔ-rtsa:~rjop-ka*: <rgyab.kha>; (area behind sth) *dʒe* <rjes> [onset!][rhyme!] (e.g. *ŋi dʒe zdeʔ-juʔ* 'He sits behind me.')
- bad; *ŋē* <ngan>
- bag; (big ~) *zje* <sgye>; (made of thick yak-hair) *fo-zje* (? .sgye)
- bake; roast; burn sth up; *rtsaʔ/wrtsaʔ/rtsuʔ* <sreg/bsregs/†srogs>
- baldhead; *bleʔ-mar* <klad.dmar> [onset!]; (person with a clean-shaved head) *pa-lə*
- ball; *rgō-pə* <lgang.bu>
- bamboo; *spiiʔ-mō* <smyug.ma> [rhyme!]
- banded onyx; *ʁzə(-kʰra)* <gzi.khra>
- bandit; *wʃak-pa* <jag.pa> [onset!]
- barefoot; *rkō-rdʒē* <rkang.rjen>
- bark [v]; *zuʔ* <zug>
- barley; *so-wa* <so.ba>; highland barley 青稞; *nē* <nas> [rhyme!]
- basket carried on back; *sə-po* <sel.po> [rhyme!]
- bastard; *kʰri-pʰruʔ* <?.phrug>
- bat; *nʰō* (cf. <pha.wang>; <sga.phong>)
- be; copula; *reʔ* <red>; (EGO) *jan* <yin>
- be able, can; *wa*
- be able to hold or contain; *tʃiʔ* <chud>
- be accomplished; *ngrəp* <'grub>; (CAUS) *zgrəp* <sgrub>
- be accustomed to; *lop* <lobs>
- be alive, be living; *χso-nʰbo* <gson.po>
- be allowed; may; *tʃuʔ* <chog>; *tʃa*
- be angry; *spo lō* <spo lang> (e.g. *chʰu ŋa:/ŋi tʰoka spo ma-lō* 'Don't be angry with me.')
- be ashamed; *ʁnō* <gnong>
- be askew; wry; slanting; *jo* <yo>; *wsaʔ*
- be at a place; *juʔ* <yod>; *zdeʔ juʔ* <bsdad.yod>
- be beautiful; (referring to jewelry or decorations) *mdza* (cf. <mdzaʔ>);²² (of people or clothing) *mtʃor* <'phyor>
- be big; large; *tʃe* <che>; (NMLZ) *tʃe-tə* <che.ʔ>
- be bitter; *qʰa* <khwa>; (NMLZ) *qʰa-nʰdə* ~ *qʰa-nʰde* <khwa.ʔ>
- be black; *naʔ* <nag>; (NMLZ) *nak-po* <nag.po>
- be blind; *zar* <zhar>
- be blue; *sjo* <sngo>; (NMLZ) *sjo-nʰbo* <sngon.po>
- be bright; *kar* <dkar>
- be brittle; *nʰrop*; (NMLZ) *nʰrop-po*
- be burnt, scorched; *ntʃiʔ/tʃiʔ* <'tshig/tshig>
- be capable; *ŋar*; (NMLZ) *ŋar-cʰo*
- be careful; be meticulous; *zəp-mo* <zhib.mo>
- be clean; *χtsō* <gtsang>; (NMLZ) *χtsō-ma* <gtsang.ma>
- be clear (of water); *tō* <dwangs>; (NMLZ) *tō-mō* <dwangs.mo>; (in meaning) *taʔ-mō* <dag.mo> [rhyme!]

21. In dictionaries, this verb is usually glossed as 'come to the presence of'.

22. The etymon <mdzaʔ> was offered by one reviewer, which normally means 'be affectionate; be intimate'.

- be clever; bright; *ʒge*; (NMLZ) *ʒge-mō*
<?.mo> [rhyme!]
- be cloudy; *ʁnam* ^{nthap} <gnam.thib>
- be coarse-grained; *ʒa* <sra>; (NMLZ) *ʒa-n^{dē}*
<sra.l^{dan}>²³ [onset!]
- be cold; feel cold; ^{n^chaʔ} <'khyag>; (NMLZ)
^{n^chak-po} <'khyag.po>
- be comfortable; *wsor*; (NMLZ) *wsor-mō*
<?.mo> [rhyme!]
- be complete; *ts^hō* <tshang>
- be crazy; be insane; *sjo* <smyo>
- be deaf; *rna-ʁē* <rna.on>
- be deep; *ʁnak* (< Rgy.²⁴)
- be dizzy; giddy; ^{n^{go} k^hor} <'go.'khor>
- be drunk; *wzə* <bzi>
- be dry; *skam* <skam>; (NMLZ) *ska-n^{bo}*
<skam.po>
- be easy; *rtsa* <sla>; (NMLZ) *rtsa-mō*
<sla.mo> [rhyme!]
- be effective; *p^hē* <phan>
- be empty; ^{h^tō} <stong>; (NMLZ) ^{h^tō-pa}
<stong.pa>
- be enough; ^{n^dō} <'dang>
- be far; distant; ^{t^haʔ rē} <thag.ring>
- be fast, be swift; *mjuʔ* <mgyogs>; (NMLZ)
mjok-po <mgyogs.po>
- be fat; *ts^ho* <tsho>; (NMLZ) *ts^ho-n^{bo}*
<tshon.po>
- be few; little; *nō* <nyung>; (NMLZ) *nō-mō*
<nyung.mo> [rhyme!]
- be fierce; ferocious; *wtsē-n^{bo}* <btsan.po>
- be fine-grained; *ʒu* <zhib> [rhyme!]²⁵
- be flustered; *zop*
- be full; *kō* <gang>
- be full from eating; *wjaʔ* <rgyags>
- be glad; *rga* <dgaʔ>
- be good; *wzō* <bzang>
- be green; *rdʒā-kə* <ljang.khu>
- be happy; be comfortable; *sciʔ* <skyid>;
(NMLZ) *scək-po* <skyid.po> [rhyme!]
- be hard; difficult; tired; *rka* <dkaʔ>; *rka-mo*
<dka.mo>
- be hard 硬; ^{n^krō}; (NMLZ) ^{n^krō-spo} <?.po>
(cf. <mkhregs>)
- be hard of hearing; *rna ʒa* <rna.sra>²⁶
- be heavy; *rdʒiʔ* <ljid>; (NMLZ) *rdʒək-po*
<ljid.po> [rhyme!]
- be high, be tall; *m^ho* <mtho>; (NMLZ)
m^ho-n^{bo} <mthon.po>
- be hot; *tʂo* <dro>; (NMLZ) *tʂo-n^{bo}*
<dron.po>
- be hungry; *rtuʔ* <ltogs>
- be ill; *na* <na>
- be in the way 妨害; *ʁneʔ* <gnod>
- be jealous; *rə-tʂaʔ jeʔ* <? byed>
- be late; come late; *təʔ/taʔ/tuʔ*; *mt^hi*
<'phis_[PST]>
- be left behind; *təʔ* <lhang>
- be level; flat; ^{ntham}; (NMLZ) ^{ntham-mō}
<?.mo> [rhyme!]
- be light-weight; *jō* <yang>; (NMLZ) *jō-mō*
<yang.mo> [rhyme!]
- be long; *rē* <ring>; (NMLZ) *rē-po* <ring.po>
- be loose; *təʔ* <lhod>; (NMLZ) *təʔ-po*
<lhod.po>; (become loose, of a knot) *ʒiʔ*
<zhig>
- be low; *ʁma* <dmaʔ>; (NMLZ) *ʁma-mō*
<dma.mo> [rhyme!]
- be many; much; *mō* <mang>; *mō-po*
<mang.po>
- be narrow; *tuʔ* <dog>
- be new; *so-ma* <so.ma>
- be numb; *zbiʔ* <sbrid>; (suffer from partial
loss of sensation) *bop* (-bop)

23. The etymon <ldan> 'exist (of an object or quality)' of the common Sastod stative verb nominalizer ^{n^{dē}} was offered by one reviewer.

24. Nyagnyokhyu *rna*, Tshobdun *rna*.

25. This exceptional form is in contrast with *ʒuʔ* <zhog(s)> 'put_[IMP]'.

26. One reviewer pointed out that in one Tibetan dialect the word for 'be hard of hearing' comes from <rna.pa.sra.mo>.

- be obliterated; *rdap* <rdib>
 be old, age; *rgi* <rgas>; *lo-lē* <lo.lon>
 be old (of objects); *rynē* <rnying>; (NMLZ) *rynē-pa* <rnying.pa>
 be plentiful; *mop*
 be pointed; *rno* <rno>; (NMLZ) *rno-nbo* <rnon.po>
 be poor; *me-po* <med.po>; *mṅa-po*
 be propitious 吉祥; *kra-fi* <bkra.shis>
 be red; *ḅmar* <dmar>; (NMLZ) *ḅmar-po* <dmar.po>
 be rich; *wtʰuʔ* <phyug>; (NMLZ) *wtʰək-po* <phyug.po>
 be ripe; *tʰi* <tshos>
 be rough; coarse; *rtsəp* <rtsub>; (NMLZ) *rtsəp-po* <rtsub.po>
 be round; *sər-sər*; (spherical; cylindrical) *rə-lə* <ril.lu>
 be sharp; *rno* <rno>; (NMLZ) *rno-nbo* <rnon.po>
 be short; *tʰō* <thung>; (NMLZ) *tʰō-tʰō* <thung (RDPL)>
 be shy; be bashful; *ṅor-tʰa* <ngo.tsha> [rhyme!]
 be sleepy; *ḅṅiʔ qʰa* <gnyid.ʔ>; *ḅṅiʔ ḅō* <gnyid.ong>
 be slippery; *ṅreʔ* <'gred>
 be slow; *ta*: <dal>; (NMLZ) *ta-mō* <dal.mo> [rhyme!]; *ho-li*
 be small; *tʰō* <chung>; (NMLZ) *tʰō-tʰō* <chung.chung>
 be soft; *sṅi* <snyi>; (NMLZ) *sṅi-nde* <snyi.ʔ>
 be soft and smooth; *nḅzam* <'jam>; *nḅza-nbo* <'jam.po>
 be sour; *scər* <skyur>; (NMLZ) *scər-po* <skyur.po>
 be spacious; *jō* <yangs>; (NMLZ) *jō-mō* <yangs.mo> [rhyme!]
 be stained; *ṅgi* <'gos>
 be startled and run; *nḅzuʔ* <'drog>
 be steep; *la-ḅzar* <la.gzar>
 be sticky; be thick (of porridge); *sqa*; (NMLZ) *sqa-nḅē* <?.ldan> [onset!]
- be stingy; *wser* <bser>
 be straight; *tʰō* <drang>; (NMLZ) *tʰō-mō* <drang.mo> [rhyme!]
 be strange, unusual; *ṅo-mtsʰar* <ngo.mtshar>
 be stupid; foolish; *ḅlē-wʒeʔ* <glen.ʔ>
 be sturdy; *ṣa* <sra>; (NMLZ) *ṣa-nḅē* <sra.ldan> [onset!]
 be suitable; be right; *nḅreʔ* <'phrod>; (NMLZ) *nḅreʔ-mō* <'phrod.mo> [rhyme!]; *nḅem*
 be sunken; dent; *qo*
 be suspicious of; *sem-nḅriʔ jeʔ* <sems'phrigs byed>; e.g. *ṅa*: *sem-nḅriʔ ma-jeʔ* 'Don't be suspicious of me.'
 be sweet; *wṅar* <mngar>; (NMLZ) *wṅar-po* <mngar.po>
 be tasty, delicious; *zəm* <zhim>; (NMLZ) *zəm-nbo* <zhim.po>
 be tender 嫩; *ju-ma* <?.ma>
 be the usual way (of doing things); be in the habit of; *ḅpe* <dpe> (e.g. *tə tʰō-wza ḅpe-ji* 'He has been into drinking.')
- be thick 厚; *nḅuʔ* <'thug>; (NMLZ) *nḅək-po* <'thug.po>
 be thick (in diameter) 粗; *zḅam* <sbom>; (NMLZ) *zḅa-nbo* <sbam.po>
 be thick, be dense 密; *nḅuʔ* <'mthug> [onset!]; (NMLZ) *nḅək-po* <'mthug.po>
 be thin 薄; be sparse 稀疏; be shallow 淺; *ṣop* <srab>; (NMLZ) *ṣop-mō* <srab.mo> [rhyme!]
 be thin (in diameter) 細; *pʰra* <phra>; (NMLZ) *pʰra-wu* <phra.po>
 be thin; (of people) *jeʔ ṅē* <shed.ngan>; (become thin) *leʔ* <lad>
 be thirsty; *kʰa skam* <kha.skom>
 be ticklish; *ṣa wtʰeʔ* <sha.ʔ>
 be tight; *zdam* <sdam>; (NMLZ) *zdam-mo* <sdam.mo>;²⁷ (of boots) *tʰəm*; (of clothing) *rdzō*
 be tired; fatigued; *rka* <dka'>

27. Detransitivized form from <sdom> 'tighten', cf. <dam> 'tight' in other Tibetic languages.

- be to blame; *lē* <lan>; (e.g. *n di rta n tʰor-jitā tʰo lē* ‘You are to blame for letting the horse escape.’)
- be torn; *ra*: <ral>
- be turbid; *sqa-n dē* <?.ldan> [onset!]
- be unoccupied; have free time; *kʰam* <khom>
- be watery (of porridge); *χfar*; (NMLZ) *χfar-n dē* <?.ldan> [onset!]
- be wet; *rlē* <rлон>; (NMLZ) *rlē-n ba* <rлон-pa>
- be white; *kar* <dkar> [onset!]; (NMLZ) *kar-po* <dkar.po>
- be wild; untamed; *rgeʔ* <rgod>; (NMLZ) *rgo-po* <rgod.po>
- be willing; *n tʰeʔ* <tʰad>
- be worn off; *zeʔ* <zad>
- be wounded, be injured; *rma jeʔ* <rma byed>; (suffer a serious wound) *smē*
- be wrong; be in error; *nor* <nor>
- be yellow; *ser* <ser>; (NMLZ) *ser-po* <ser-po>
- beam; (main ~) *bə-tʰiʔ*; (smaller) *ɣdō-ma* <gdung-ma>
- bear (fruit); *n duʔ/ptaʔ* <‘dogs/btags>
- bear; (black bear, *Ursus thibetanus*) *tam* <dom>; (brown bear, *Ursus arctos*) *tʂeʔ-mō* <dred.mong>
- beard; moustache; *kʰa-spə* <kha.spu>; *mtʰə-spə* <mchu.spu>
- beard lichen, tree moss 松蘿; *na-we*
- bearded vulture (*Gypaetus barbatus* 胡兀鷲); *kə-n go-se* <go.go.gser> [rhyme!]
- beast of prey; *χtʰē-n dzē* <gcan.gzan> [onset!]
- beat (a drum); *rdō* <rdung>
- beat (of pulse); *n pʰar* <‘phar>
- beat up; *n brop/prop/prop* <‘brab/brabs/ brob(s)>
- become reduced; (of liquid being boiled) *n tʰaʔ* <‘thag>; (become thicker and reduced in quantity) *qʰar*
- become scattered; *n tʰor* <‘thor>
- become separated; be spread open; *qa*:
bed; *ɲa-kʰrə* <nyal.khri>
- bedbug; *n dze-fiʔ* <‘dre.shig>
- bee; *zbā-n ɲa-n dza* <sbrang.ʔ> (cf. Sastod Rgy. *je-n dzə*)
- beer; *tʰō* <chang>
- before (temporal adverbial); *tse* (cf. <tshe> ‘when’)²⁸
- beg (for food); *spō* <sprang>
- beggar; *spō-po* <sprang.po>
- belch; burp; *zgaʔ-ri jeʔ* <sgag.ʔ byed>
- believe; *wdē-ɲa rē* <bden.pa.ʔ>
- bell; *tʂə-lu* <dril.bu>
- bell metal; *lə*
- belly; *pʰo*: <pho.ba>
- belt; *tʰot-ma*
- bend (body); *zgar* <sgur>
- bharal, blue sheep (*Pseudois nayaur*); *luʔ-rgeʔ* <lug.rgod>
- bind; tie up (~ a person or animal); *n cʰiʔ/wciʔ/cʰiʔ* <‘khyig/bkyigs/khyigs>; (~ objects tightly) *zdam/zdam/zdom* <sdom/bsdams/sdoms>
- birch; *kro*: <gro.ga>²⁹
- birch-bark ladle; *tʂo-qo*
- bird; *wfə* <bya>; (small-size bird) *wfi-tfō* <bye’u.chung>
- black kite (*Milvus migrans* 黑鷲); *ɣo-ru*
- blacksmith; *wn ga-ra* <mgar.ba>
- bladder; *rgō-pə* <lgang-pa> [rhyme!]
- blind person; *qa-lo*; (in one eye) *qa-zar* <?.zhar>; *ɣɲiʔ-zar* <dmyig.zhar>
- blink; wink; *ɣɲiʔ rdop* <dmyig.rdeb>
- blister; *tʰə-ru* <chu.ʔ>
- block; obstruct; *zgaʔ/zgaʔ/zguʔ* (cf. <bgag> ‘block’; <sgog> ‘restrict; compel’)
- blood; *kʰraʔ* <khrag>

28. The etymon <tshe> was offered by one reviewer, which denotes ‘(the time) when’.

29. The obviously relatable etymon <gro.ga> (glossed as ‘bark, such as birch bark’ in Rnam rgyal tshe ring 2001: 86) was suggested by one reviewer.

- blood pheasant (*Ithaginis cruentus* 血雉);
wza-ra
- blood vessel; *k^hrak-ta?* <khrag.??>; *k^hrak-rtsa* <khrag.rtsa>
- blow; *χpər* <dpur??>³⁰
- blow (of wind); *rlō je?* <rlung byed>
- blow whistle; *wfə-spa je?* <shu.? byed> [onset!]
- boar; *p^ha?~χtō* <phag.??>
- boat; *tšə* <gru>; (made of oxhide) *ko-tšə* <ko.ba.gru>
- bodhisattva 菩薩, *sā-rji* <sangs.rgyas>
- body; *lə-spo* <lus.po>; (HON) *skə* <sku>; (upper~) *k^hu?~ste?* <khog.stod>; (lower~) *k^hu?~sme?* <khog.smad>
- body dirt 體垢; *tšə-ma?* <dri.†mag>
- boil [TR]; (~ liquid) *sku* <skol>; (~ for a long time) *bdə/bdi/bdi* <gdu/gdus/gdus> (~ solid food) *n^{tsh}e?/wtsi/tshⁱ* <'tshod/btsos/tshos>
- boil [INTR], come to a boil; *k^hu* <khol>; (continue in a boiling state) *bdə/bdi* <gdu/gdus>; *tut*
- boil over; *mtf^hər*
- Bon; *χpon-nbo* <bon.po> [onset!]
- bone; *rə-spa* <rus.pa>
- book; *je-ge* <yi.ge>
- borrow; (e.g. money) *scə/sci/sci* <skyi/bskyis/skyis>; (e.g. tools) *ɕjar/ɕjar/ɕjor* <g.yar/g.yar/g.yor>
- botfly, gadfly; *fa-zbō* <sha.sbrang>; (its larva) *rtəp*
- bottle; *for-rdza* <shel.dza>
- bottom part of objects; *rkəp* <rkub>
- boundary line; demarcation line; *zē-tsi?* <zhing.??>; (between villages) *sa-n^{tsh}am* <sa.mtshams> [onset!]
- bovine 牛類; (collective) *nor* <nor>; (male) *p^ho-zu?* <pho.zog>; (female) *mo-zu?* <mo.zog>; (calf) *pa-wu* <ba.??>; (fetus) *pi* <be'u>.
- bow (weapon); *ɕzə* <gzhu>
- bowl; *tfa-ni* <ca.ne>; (porcelain bowl) *kar-ju* <dkar.yol> [onset!]
- box; case; *rgam* <sgam>; *rga-nbə* <sgam.bu> [onset!]
- bracelet; *zgu?* <sgrog>
- braid; plait [N]; (of a man) *tə-pa* <†sla.pa>; (of a woman) *pja-la* (< Rgy.); (smaller braids in front of sides of face) *tfa-tsa?*
- braid, plait; *wta/wti/wti* <bsla_{[FUT]}/bslas/bslas_{[PST]}}> [onset!]}
- brain; *rde?~pa* ~ *ble?~pa* <klad.pa> [onset!]
- brass; *rak-χser* <rag.gser>
- bread; *kor-rtə* <gor.??>
- break (pliable objects); [TR] *χtfe?/wtfe?/χtfe?* <gcod/bcad/gcod>; (of pliable objects) [INTR] *n^{tsh}e?/t^he?* <'chad/chad>
- break; (~ stiff objects) [TR]; *χtfa?/wtfa?/χtfa?* <gcag_{[FUT]}/bcag/gcog>; (of stiff objects) [INTR, process] *n^{tsh}a?/t^ha?* <'chag/chag>; [INTR, state] be broken; *t^hak* <chag>; (NMLZ) *t^hak-po* <chag.po>}
- breakfast; *zar-tfa*³¹
- breast; *nə-ma* <nu.ma>
- breastfeed; suckle; *nə-ma rdu?/wdu?/rdu?* <nu.ma.ldug/†bldug/ldugs>
- breath; *rbu?* <dbugs>
- breathe; *rbu? χtō/wtō/χtō* <dbugs gtong/btang/gtong_{[PRS]}}>
- brewer's yeast; *p^hop* <phabs>; *rə-ma*
- brick; *sa-p^ha?* <sa.phag>
- bride; *mna-ma* <mna.ma>
- bridge; *n^{dza}-n^{ba}* <zam.pa> [onset!]; (cf. log bridge *fo-ko-n^{dzam}*)
- bridle; *šop* <srab>
- bring; *n^{dzan}-ji* *bō* <'dzin.nas'ong>; *k^hər-ji* *bō* <khur_{[FUT]}.nas'ong>}
- broom; *pu*

30. Probably related to <spur> 'cause to fly, send off'.

31. Cf. Tshobdun Rgyalrong *zər-tfe* 'dawn; breakfast', the second morpheme ultimately from <ja> 'tea', cf. Amdo <nang.ja> 'breakfast'.

- brother; (of men) *fa-nē* <sha.ming>
[onset!]; (of women) *mjē-po*
<ming.bo>; (sworn ~) *mna-ja* <mna'ya>
- bucket; barrel; (water barrel) *tʰə-zo*
<chu.zo>; (milk bucket) *wzo-zi*
<bzho.zə'u>
- buckwheat; *pru* <bra.bo>
- build (house); *li* <las>; *ʰdeʔ/wteʔ/teʔ*
<ded/INNV/ded>
- build a fire; *mje* *ʰbi/pi/pi* <me.ʰ'bus/bus/
bus>
- bully; mistreat; *zdō* <sdang>
- burn [INTR]; *ʰbar* <'bar>
- burnt offering; *rdzi* <rdzas>
- bury; *sa-zop* *ʰdzuʔ/wzaʔ/zuʔ* <sa.zhabs
'jog/bzhag/zhogs>; *sa-zop* *ʰnē/mnē/ʰnē*
<gnon/mnan/gnon>
- butter; *mar* <mar>; (melted ~) *mar-kʰə*
<mar.khu>
- butterfly; *tʰa-ma-ʰlop* <phye.ma.leb>
- buttocks; *tʰə-ʰra* <tshang.ra>; (buttock
cheek) *tʰə-ʰra*-*n*go <tshang.ra'go>
- button; *go-ʰo* (cf. <sgro-gu>)
- buxom; *rəm* <rum>
- buy; *no/ni/ni* <nyo/nyos/nyos>
- buzzard (*Buteo buteo* 鵟); *wfē-rlaʔ*
- calculate; *rtsə-krō jeʔ* <rtsi.grangs byed>
- call; ask to come; *ʰbeʔ/pi/pi* <'bod/bos/
bos>
- candle; *la-tʰo* (< Ch. 蠟燭)
- carpenter; *fē-wzo* <shing.bzo>
- carry (money; ~ on back); *kʰər* <khur_[FUT]>
- carve; *rko/wrki/rki* <rko/brkos/rkos>
- cast light on; *kar* <dkar> [onset!]
- cat; *lo-lo*; *li-li*
- catch; hold; *ʰdzē/wzō/zō* <'dzin/bzungs/
zungs>
- caterpillar; *qu-spu za-ma*
- cattle raised for meat; *skam* <skam>
- cause; make [+COMP clause]; *ʰdzuʔ/wzaʔ/
zuʔ* <'jog/bzhag/zhogs>³²
- cave; *praʔ-qō* <brag.khung>
- cave in; *qo*
- center; *χci* <dkiyl>
- ceremonial scarf 哈達; *kʰa-daʔ*
<kha.btags> [onset!]
- chaff; bran; *ʰlə-ba*
- change [INTR]; *ʰjər* <'gyur>; (change from
good to bad; deteriorate) *leʔ* <lad>
- change [TR]; *zjər* <sgyur>
- change, transform into sth; *luʔ* <log>
- chant (mantra), incant; *ʰjaʔ/ʰjaʔ/ʰjuʔ*
<sngag/bsngags/sngog>
- charcoal; *so* <sol.ba>; (live charcoal) *mje-
kʰrop* <me.ʔ>
- chase; pursue; *wda/wdi/wdi* <bdā/bdas/
bdas_[PST]>
- cheek; *ʰgra-ʰba* <'gram-pa>
- cheese; *tʰə-ʰra* <chur.ba>
- cherry tree; *kʰri-pa*
- chest; *prō-ʰja* <brang.ʔ>
- chew; *rdeʔ/wdeʔ/rdeʔ* <ldad/bldad/ldad>
- chicken; *ʰə-wja* <khyim.byā> [rhyme!]
[onset!]; (rooster) *ʰo-wja* <pho.byā>;
(hen) *mo-wja* <mo.byā> [onset!]; [LIT]
*pja*³³
- child; *ʰhru* <phru.gu>
- chin; *ma-ʰgə* <ma.ʔ> (cf. <ma.ne> ~
<ma.le>)
- Chinese; *rja* <rgya>
- Chinese monal (*Lophophorus lhuysii* 綠尾
虹雉); *ne-te* <?.de>
- Chinese prickly ash 花椒; *ʰjar-ma*
<g.yer.ma> [rhyme!]
- Chinese red birch (*Betula albosinensis* 紅
樺); *kro-mar* <gro.dmar>
- Chinese red pine 油松; *sma*: ~ *sme*
- Chinese spruce 雲杉; *rtsaʔ*
- Chinese zokor (*Eospalax fontanierii* 中華
鼯鼠); *wfə-lō* <byi.long>
- chive 小蔥; *tsʰu*

32. The CT verb <'jog/bzhag/zhogs> 'put, place' is pressed into service as the syntactic causative verb. The CT verb <'jug> 'cause' has fallen out of use.

33. This literary reading is used only by monks performing fortune-telling.

- choke; (on solid food); *m̄niʔ-pa tʰuʔ/zgaʔ*
<mid.pa.ʔ>; (choke on liquid); *mnō*³⁴
- choose; select; *wdam/wdam/wdom*
<bdam/bdams/†bdoms>
- chop; *χtsop* <gtsab>
- chopper 柴刀; *do-ʋo* (< Rgy.)³⁵
- chopsticks; *ʃē-tʰəʔ* <shing.thur>; *za-tʰəʔ*
<za.thur>
- claw; grasping hand; *zbar-mō* <sbar.mo>
[rhyme!]
- cliff; *praʔ* <brag>
- climb up; *mdzar/mdzar/mdzor*;
n̄kʰra/n̄kʰri/kʰri
- cloak (of coarse woolen cloth); *la*: <lwa-
ba>
- clog up 堵塞; *skar/skar/skor*; *rdzō/wdzō*/
rdzō
- close; (~ door) *rjaʔ/wjop/rjop* <rgyag/
brgyabs/rgyob>; (~ eye/mouth) *ntsʰəm*/
wtsəm/tsʰəm <'tshum/btsums/tshums>
- cloth; *ri* <ras>
- clothes; *ko-lo*
- cloud; *ʃnək-pa* <smug.pa> [onset!]³⁶
- coil around; *n̄chi* <'khyil>; *n̄kʰri* <'khril>
- collapse; *luʔ* <lug>; (fall apart) *n̄jiʔ/iʔ* <'jig/
zhig>; (of a dilapidated house) *rdəb*
<rdib>
- collar; *kō-ŋa* <gong.ba>
- collide; run into; *χti*
- color; *mduʔ* <mdog>; *m̄do-ʋa* <mdog.kha>
- colostrum; first milk; *χtʃə-ʋo* <dpri.o>
- comb; *ta-ʃeʔ* (< Rgy.)
- comb [v]; *wʃeʔ* <bshad_[PST]>
- come; *ʋō/ʋē/ʃuʔ* <'ong/INNV/shog>
- commend; praise; *stot-ra jeʔ* <bstod.ra
byed>
- common cattle; *ʋlō* <glang>; (ox) *ʋlō-n̄bi*
<glang.be'u (?)>; (cow) *pa-cuʔ* <ba.ʔ>;³⁷
(male calf) *ʋlō-pʰruʔ* <glang.phrug>
- common people; *m̄s-sər* <mi.ser> [rhyme!]
- common silverweed (*Potentilla ansrina* 鵝
絨委陵菜, 人參果); *kro-ma* <gro.ma>
- compare; *χʃəp* <gshib>
- conch shell; *tō-kar* <dung.dkar> [onset!]
- connect, link; *m̄thiʔ* <mthud>
- consult; discuss; *kre-ska jeʔ* <gros.ka byed>
[rhyme!]
- copper; *zō-smar* <zangs.dmar>
- coral; *pji-ruʔ* <byu.ru> ~ <byi.ru>
[rhyme!]
- corner (in a room); *nō-zər* <nang.zur>
- corpse; *ro* <ro>
- cough [v]; *lə-pa jeʔ* <lu.ba byed>
- count; *rtsə/wrtsi/rtsi* <rtsi/brtsis/rtsis>;
ʃŋo/wʃŋi/ʃŋi <sngo/bsngos/sngos>
- courage, boldnes; *χa-n̄ba* <ham.pa>
- cover; (hide from view) *n̄gop/wkop/kʰop*
<'gebs/bkab/khobs>; (~ mouth); *m̄tʃʰə*
n̄tʰəm/wtəm/tʰəm <mchu 'thum/btums/
thums>
- cow dung; *nor-rcaʔ* <nor.skyag> [onset!];
(dried) (*nor-*)*rtfo*: <nor.lci.ba>
- cranium 頭蓋骨; *ʋleʔ-por* <glad.phor>
- crawl; *n̄bər-gi jeʔ* <? byed>
- cream; *kʰa-χtʃə* <†kha.spri>
- cremation ground; *tər-ma* <†dur.ma>
- crops; *lo-tʰuʔ* <lo.thog>; *tʰuʔ-spə* <thog.ʔ>
- cross (a river); *rop rjaʔ/wjop/rjop*
<rab.rgyag/brgyabs/rgyob>
- crossbow; *ʃe-pa ʋzə* <?.gzhu>
- crow; *wʃa-ruʔ* <bya.rog>; (large-billed
crow; *Corvus macrorhynchos* 巨嘴鴉)
ho-rok <pho.rog> (< Amdo)
crupper-strap 後鞵; *ʃneʔ* <smed>

34. Cf. CT <rnong>.

35. Cf. Nyagnyokhyu Rgyalrong *doʋo*.

36. Note the semantic shift. This word also means 'fog, mist'.

37. One reviewer suggested the etymon <kyog> 'be crooked' for the second compound element, alluding to a pejorative term <ba.sgu.glang.kyog> referring to the common cattle in a Kham dialect.

- cry, call, utter a sound; *kraʔ* ~ *caʔ* <grag>
 cry; shout, yell; *kə jeʔ* <? byed>
 cry; weep; *ŋə/wŋi/ŋi* <ngu/INNV/ngus>
 cuckoo; *qu-spu* (< Rgy.); (large hawk
 cuckoo) *mi-pi-hō*
 cuddle; *rəm* <rum>
 curl up; shrink; contract; [INTR] *ᵐkʰəm*
 <'khum>; [TR] (e.g. take in one's
 stretched legs) *skəm* <skum>
 curry; dish; *spaʔ* <spags>
 curse; *ʋmo/ʋmi/ʋmi*³⁸
 cushion; *stē* <stan>
 cut; (~ butter or meat) *χtfeʔ/wtfeʔ/χtfeʔ*
 <gcod/bcad/gcod>, (~ grass, reap);
ᵐbraʔ/prəʔ/pruʔ <'breg/bregs/brogs>; (~
 with sliding motion) *χtəp* <gtub>; (~
 into pieces) *χtsəp* <gtsab>; (~ with scis-
 sors) *ᵐdza/tʂi/tʂi* <'dra/dras/dros>; (~ off
 a part) *ʋdəm*
 dance; *tʂo mtʂhō* <bro mchong>; (old term)
targa jeʔ <(Rgy.) byed>
 dare; *spop* <spobs>
 darken; (z) *gō ᵐdzəp* <?'grib>; (z) *gō rəp*
 <?'rub> (cf. <dgon> 'evening')
 daughter; *po-mo* <bu.mo> [rhyme!]
 daughter-in-law; *mna-ma* <mna.ma>
 daytime; *ŋē-miʰeʔ* <nyin.?'>; *ŋə-ma-kō*
 <nyi.ma.gung>
 deaf person; *rna-ʋē* <rna.on>
 debt; *tom* <dom>
 deceive; cheat; *ᵐgo ʋjuʔ* <'go.gyug>
 decide; *ᵐaʔ χtfeʔ/wtfeʔ/χtfeʔ* <thag.gcod/
 bcad/gcod>
 decline; *ʋŋam* <nyams> [onset!]
 declivity; *ᵐhər* <thur>
 decree; command; order [HON]; *wka*
 <bkā>
 deer; *fa*: <shwa-ba>; (white-lipped deer,
Cervus albirostris 白唇鹿) *fa-mar*
 <shwa.dmar> [onset!]; (red deer, *Cervus*
elaphus 馬鹿) *fa-sca* <shwa.skya>
- defecate; *rcak-pa χtō/wtō/χtō* <skyag.pa
 gtong/btang/gtong_[PRS]> [onset!]
 deity; god; *ta* <lha>
 demon; *wdiʔ* <bdud>
 deposit; entrust; *ᵐtʰu/wtʰu/tʰu* <'chol/
 bcol/chol>
 destiny; *li* <las>
 destory; *rtsa-mjeʔ jeʔ* <rtsa.med byed>
 develop; increase in number; *ᵐpʰi* <'phel>
 dew; *zi-pa* <zil.pa>
 dharma; *tʰu* <chos>
 dhole; red dog; *ᵐpʰa-ra* <'phar.ba>
 diaphragm; *mtʰəm-tʂə* <mchin.dri>
 [rhyme!]
 dice; card; gambling tool; *fo* <sho>
 die; *ᵐtʰə/ʃə* <'chi/shi>
 difference; *ᵐheʔ-par* <khyad.par>
 dig; *rko/wrki/rki* <rko/brkos/rkos>
 dig or gouge out; *tʂi* <drus>
 dike; embankment; *tʰə-ra* <chu.rags>
 [rhyme!]
 dine; eat a meal; *za-ma za* <za.ma za>
 dip; *χlē*
 direction; orientation; *sa-wtʰuʔ* <sa-
 phyogs>
 disappear; vanish; *ja*: <yal>
 disciple; *slo-ma* <slob.ma> [rhyme!]
 dislike; *ᵐgri* <'gras>; *qʰa* (< Rgy.)³⁹
 dispatch; send for; *ŋŋaʔ/ŋŋaʔ/ŋŋuʔ*
 <mngag/mngags/mngogs>
 dissolve; melt [INTR]; subside (of swelling);
ʂə/ʂi <zhu/zhus>
 dissolve; melt [TR]; *wʂə/wʂi/wʂi* <bzhu/
 bzhus/ʔbzhus>
 distiller's yeast; *pʰop* <phabs>; *rə-ma*
 divide; distribute; *bgo-spa jeʔ* <bgos.pa
 byed>; *wgo/wgi/wgi* <bgo/bgos/bgos>
 do; (perform an act) *jeʔ/ji/tʂi*
 <byed/byas/byos> [onset!]; (~ a task)
to-ᵐdaʔ li <don.dag.las>; (do labor) *le-
 ska li* <las.ka.las>
 doctor; *smən-ᵐba* <sman.pa> [rhyme!]

38. Cf. <dmod> 'curse'.

39. Cf. Tshobdun *qʰə*, Japhug *qʰa* (Jacques 2008).

- dog; *c^hə* <khyi>
 donkey; *bō-lə* <bong.li> [onset!]
 door; *zgo* <sgo>
 doorway; *zgo-qo* <sgo.ʔ>
 downstairs; *tʂo:-ka:*
 downward; *ma-ra* <ma-ʔ>
 doze off; *wʃu jeʔ* <ʔ byed>
 dragon; *bruʔ* <'brug>
 drain; decant 滗; *dzar/ndzar/ndzor*
 dream [N]; *rjiʔ-lam* <rmi.lam> [rhyme!]
 dream [V]; *rjiʔ-lam mji*
 <rmi.lam.rmɪs_[PST]> [onset!]
 dregs; sediment; *sniʔ* <snɪgs>
 drink; *thō/ṁthē/ṁthō* <'thung/INNV/'thung>
 drive; urge forward; *deʔ/wteʔ/teʔ*
 <'ded/INNV/ded>
 drive out; *phīʔ/phīʔ/phīʔ* <'phud/phud/
 phud>
 drought; *wtset-pa*
 drum; *rja* <rnga>
 dry 弄乾; (make dry slowly) *zbaʔ*; (dry
 beside fire) *mje-ja ʋzi* <me.+DAT ʔ>; (air
 dry by sunlight) *thē, zi*; (air dry without
 sunlight) *wsi-skam* <bsil.skam>; (of
 things not completely wet) *ʂeʔ* <srad>
 drying rack; (~ over hearth) *χō-cē*; (~ for
 harvested grain) *ra-zə*
 dusk; *zgō-ska*
 dust; *rdu* <rdul>
 dye; *tshⁱ* <tshos>
 dzo (hybrid between the yak and domestic
 cattle); *rjam-re*; (male) *mdzo* <mdzo>;
 (female) *mdzo-mo* <mdzo.mo>; (calf)
zga-ma
 ear; *rna:* <rna.ba>
 ear (grain-bearing tip part of a cereal plant;
 spike 穗); *sɲək-ʃa:*; (flowering ear)
suiʔ-mō <snɪ.ma> [rhyme!]
 eared pheasant (*Crossoptilon crossoptilon*
 馬雞); *wʃa-bō* <bya.ʔ>
 earrings; *rna-ji* <rna.ʔ>⁴⁰
- earth, soil, ground; *sa* <sa>
 earthen jar; *rdza-ma* <rdza.ma> ~ *rdza-pə*
 <rdza.ʔ>
 earthquake; *saⁿgu* <sa'gul>
 earthworm; *sa-nbə* <sa'bu>
 earwax; *rna-rcaʔ* <rna.skyag> [onset!]
 east; *ʃar* <ʃar>
 eat; *za/zi/zo* <za/zos/zo>; (~ powdery
 food) *gam/gam/gom*
 <'gam/'gams/'goms>
 eaves; *gu-n^dop*
 edge; *mtha-kha* <mtha.kha>; *sne(-ke)*
 <sne.ʔ>
 egg; *zgo-ŋa* <sgo.nga>
 eight; *jeʔ* <brgyad>
 eighteen; *wʃo-rjeʔ* <bco.brgyad>
 eighty; *wja-tʃə* <brgyad-cu>
 elbow; *krəp-tʃuʔ* (cf. <gru.mo>)
 elderly person; *rga-rgē* <rgad.rgan>
 electricity; *bluʔ* <glog>
 eleven; *wʃo-χtsiʔ* <bcu.gcig>
 [rhyme!][onset!]
 embrace; *a-pōⁿdop/wtop/th^op* <†a.pang
 'debs/btab/thob>; *a-pō jeʔ* <†a.pang
 byed>
 end (farthest point of a long object); *sna-*
sne <†sna.sne>; *sne(-ka)* <sna.kha>
 end; be over; *tsh^har* <tshar>
 endure; tolerate (single stem); *wrtsē*
 <bsran_[PST]>
 enemy; *gra-wo* <dgra.bo>; *gra-χjeʔ*
 <dgra.gshed>
 entangle; confuse (numbers; chessmates);
snuʔ <snog>
 entangled; *nuʔ* <†nog>
 enter with body bent; *dzu* <'dzul>
 envy; *sco*
 escape; flee; *bri/pri/pri* <'bros/bros/bros>
 esophagus; *mjiʔ-taʔ* <mid.ʔ>
 even; *ra* (e.g. *ta-ra ma-bē-skə* 'Even he did
 not come.')

40. For the second compound element, cf. Nyagnyokhyu Rgyalrong *rne-ji*, Japhug *rnr-juu* (Jacques 2008). One reviewer suggested a possible origin, namely <byi>, as in <byi.ru> 'coral'. However, the first syllable of Sastod 'coral' has a distinct onset cluster *pji-*.

- every day; *ɲi-ɲi-se*
 every night; *nəp-nəp-se* <†nub.nub.ʔ>
 evil omen; *tʰē* <than>
 exchange; barter; *rdʒe/wdʒi/rdʒi* <rje/
 brjes/rjes>
 excrement; *rcak-pa* <skyag.pa> [onset!]
 exhortative suffix; *faʔ*
 exist; *juʔ* <yod> [rhyme!]; (of plants) *ⁿbaʔ*
 exit (of an animal), be expelled; *wtʰə-so*
ⁿbiʔ/piʔ/piʔ <'bud/bud/bud>
 experiential aspect; *mɲō* <myong>
 eye; *ɲɲiʔ* <dmyig>
 eyebrow; eyelash; *ɲɲiʔ-spə* <rdzi.spu>
 eyelid; *ɲɲiʔ-fa* <dmyig.sha>
 face; *ɲo* <ngo>
 faint; lose consciousness; *zər rjaʔ/wɲop*
 <?.rgyag/brgyabs>
 falcon; *kʰra* <khra>
 fall; autumn; *stē* <ston>
 fall; (~ from height) *tō* <lhung>; (~ down)
sa-rjaʔ jeʔ <sa.rgyag byed>
 fall asleep; *ɲɲiʔ* <gnyid>
 falling rock; *rdo-rbop* <rdo.rbab>
 family; *ɲza-tsʰō* <bza.tshang> [onset!];
 (family members) *ɲza-wa* <bza.ba>
 [onset!]
 famine; *mə-gi* <mu.ge> [rhyme!]
 farming area; agricultural area; *rō-sa*
 <rong.sa>
 fart; *rcak-tʂə* <skyag.dri>; [v] *rcak-tʂə jeʔ*
 <skyag.dri byed> [onset!]
 fasten (belt); *ⁿtʰē/wtʰē/tʰē* <'ching/bcings/
 chings>
 father; *a-pa* <a.pa>
 fear; be afraid; *ʃkaʔ* <skrag>
 feather; *wtʰa-spə* <bya.spu>; (of large
 birds) *wtʰa-zgro* <bya.sgro>
 feel bloated; *rbi* <sbos>
 feel for loss of something; regret loss; *pʰō*
 <phangs>
 fellow traveller; companion; *rok-po*
 <rogs.po>
- felt; *mtʰē* <'phyings>; (felt blanket) *mtʰē-*
pa <'phyings.pa>
 female; *mo* <mo>
 fence; *rcō-ra:* <?.ra.ba>; (of bamboo or
 wicker) *ra:* <ra.ba>
 ferment [TR]; *sɲa:sɲa:sɲu* <snyal/bsnyal/
 snyol>
 fiddlehead fern 蕨苔; *mo-ko* (< Qiang)⁴¹
 field; *zē* <zhing>
 fifteen; *wtʰo-rɲa* <bco.lnga> [rhyme!]⁴²
 fifty; *rɲa-wtʰə* <lnga.bcu>
 fight; come to blows; *rjaʔ-ri jeʔ* <rgyag.res
 byed>
 file; rasp 銼刀; *so-ɲdar* <sog.bdar>
 filter; strain; *ⁿtsʰaʔ/wtsaʔ/tsʰuʔ* <'tshag/
 btsags/tshogs>
 find; *sɲeʔ* <rnyed> [onset!]
 finger; *mdzu* <mdzu.gu>; (little finger)
mdzək-tfō <mdzug.chung>; (middle fin-
 ger) *mdzu χci* <mdzu.gu.dkyil>; (index
 finger) *mdzu ko:-ma* <mdzu.gu.ʔ>
 finger width; *sor* <sor>
 fingerspan (thumb tip to tip of middle fin-
 ger); *mtʰo* <mtho>
 fir 冷杉; *tʰa-we*
 fire; *mɲe* <me>
 firewood; *ʃē* <shing>
 fish; *ɲa* <nya>
 fist; *kʰə-tsə* <khu.tshur> [rhyme!]
 five; *rɲa* <lnga>
 flag; *tar* <dar>
 flame; *mɲe-rtʰaʔ* <me.ʔ>
 flat; *lop-lop* <leb-leb>
 flea; *rdʒo:* <lji.ba>
 flesh; muscle; *ʃa-mnuʔ* <sha.ʔ>
 flint; *rdo-ɲar* <rdo.dkar> [onset!]
 flood; *tʰə-zuʔ* <chu.ʔ>
 flour; *mtʰe* <phye> [onset!]
 flower; *me-tuʔ* <me.tog>
 fly 蒼蠅; *zba-ɲə* <sbrang.bu>
 fly; *ⁿpʰər/ᵐpʰər/ᵐpʰor* <'phur/'phur/†'phor>

41. Cf. Yunlinsi and Mawo Qiang *mu^xɲwə*.

42. Length is irregular here, as re-syllabification would have yielded **wtʰo-rɲa*.

flying squirrel 鼯鼠; *wfja-ma-wtʃi*
 <bya.ma.by'e'u>; *rʃa-lop*
 foam; bubble; *rbo*:<lbu.ba>
 fodder; *tʃʰaʔ* <chag>
 fog; mist; *ʃnək-pa* <smug.pa> [onset!]
 fold; *rtop* <lteb>
 fontanel; *ʃleʔ-qō* <glad.khung>
 food; *za-ʃə* <za.rgyu> [onset!]
 food taken for the road; *tʃo-ka* <bro.kha>
 foodstuff; grain; (harvested grain on dry-
 ing racks) *tʃʰuʔ* <thog>; (threshed grain)
zɡə-ⁿba
 fool; idiot; *ʃle-ⁿba* <glen.pa>
 foot; *rkō-ⁿgo* <rkang.mgo> [onset!]
 force; compel; *wtse-ⁿbo jeʔ* <btsan.po
 byed>
 forehead; *mtʰeʔ-pa* <thod.pa> [onset!]
 forest; *naʔ* <nags>; (virgin forest) *nak-tʃē*
 <nags.chen>
 forget; *wdʒeʔ* <brjed>
 fortress; *wⁿkʰar* <mkhar>; *ta-jō* (< Rgy.)
 fortune; luck; *kʰa-li* <?.las>
 forty; *ʒə-wtʃə* <bzhi.bcu> [onset!]
 foundation; *ʰkʰō-sa* <'khang.sa>
 four; *wʒə* <bzhi>
 fourteen; *wtʃu-ʒə* <bcu.bzhi> [rhyme!]
 [onset!]
 fox; *ʃa* <wa>
 freeze; *ʰcʰak-pa tʃʰaʔ/ⁿjo*
 <'khyags.pa.chags/'gro>; (of a body of
 water freezing over) *tar tʃʰaʔ* <dar.chags>
 friend; *rok-po* <rogs.po>; *staʔ-rge* <?.dgaʔ>
 frighten; *ʃnō rtsō/wrtsō/rtō* <sngang
 slong/bslang/slongs>; *ʃkaʔ rtsō/wrtsō/
 rtō* <skrag slong/bslang/slongs>
 frog; toad; *zba:-pa* <sbal.ba>
 from; *ʃni* <nas> [onset!]
 front; *ʃnō-nō* (cf. <snga>, <sngon> 'front')
 frost; *pa-mō* <ba.mo> [rhyme!]; (be dam-
 aged by frost) *seʔ* <sad>
 fruit; (growing on trees) *ʃē-tuʔ* <shing.tog>;
 (wild berries) *si-tuʔ* <sil.tog>

gall 樹癭; *zdō-rba* <sdong.lba>
 gall (bladder); *kʰrə-spa* <mkhris.pa>
 [onset!]
 garbage; rubbish; *ko-rdu* <?.rdul>
 garlic; *jə-zguʔ* <?.sgog>
 gather [INTR]; (come together) *ⁿdə/ⁿdi/ⁿdi*
 <'du/'dus/'dus>; (of liquids) *ⁿcʰi* <'khyil>
 gather [TR]; (assemble; summon) *zdə/zdi/
 zdi* <sdu/bsdus/sdus>; (~ firewood)
ⁿhə/wti/tʃi <'thu/btus/thus>
 gesture; sign; *laʔ-wda* <lag.bdaʔ>; gesticu-
 late *laʔ-wda jeʔ* <lag.bdaʔ byed>
 get; gain; *tʃop* <thob>
 get married; *kʰa-χtsiʔ jeʔ* <kha.ʔ byed>
 get ready to depart; *ⁿtʃʰaʔ* <'tshag>
 ghost; *ⁿdze* <'dre>
 gift; (brought by a visitor or one coming
 home) *cʰo-sma* <'khyos.ma> [onset!];
 (given to one going away) *ⁿdʒuʔ-sma*
 ginger; *tʃa-zga* <?.sga>
 girl; (below 15) *po-mo* <bu.mo> [rhyme!];
 (between 15 and 20) *pə-rtsē* <bu.sring>;
 girth 馬肚帶; *ʃlo* <glo>
 give; *wʒən/wtʃən/wtʃən* <sbyin/byin/byin>
 give birth; *sce/sci* <skye/skyes>
 give up; abandon; *scər* <skyr>
 glass; *ʃol-zgo* <shel.sgo> [rhyme!]
 glue; *ʃpən* <spyin>
 go; *ⁿjo/tʰe/sō* <'gro/thal/song>⁴³
 go in a file; *χfar* <gshar>
 go through; *χʃaʔ/χʃaʔ/χʃuʔ* <gshag/gshags/
 gshog>
 go to law against; sue; *χtuʔ* <gtug>
 goat; *ra-ma* <ra.ma>; (kid) *a-ŋa*; *ŋa-ŋa*
 goiter; *rba*: <lba.ba>
 gold; *χser(-naʔ)* <gser.nag>
 gong; *wⁿkʰa:-rŋa* <'khar.rnga> [onset!]
 goods; merchandise; *kop-wtʃa* <?.bya>;
wtʃa-ʃa <bya.ba>
 grab; seize; hold; *ⁿdʒən/wzō/zō* <'dzin/
 bzung(s)/zung(s)>
 grain; *ⁿbrə-ma* <'bru.ma>

43. As astutely noted by one reviewer, the present stem *ⁿjo* of 'go' may be an Amdo borrowing, as evidenced by its characteristic Amdo sound change *Kr > Ky*.

- grandfather; *a-wu*
 grandmother; *a-ji* <a.phyi> [onset!]
 grass; *rtfa* <rtswa> [onset!]
 grassland; meadow; *spō* <spang>
 gravy; *k^ho*: <khu.ba>
 grease; animal fat; *ts^hi* <tshil>
 grind 研磨; *wər*
 grind (mill); *mt^hi?* <*ntha?*/*wta?*/*t^hu?*> <mchig
 'thag/btags/thogs>
 grind (whet); *wdar/wdar/wdor* <bdar/
 bdar/bdor>
 grinder; (*ko-*)*mt^hi?* <(?.)mchig>
 gristle; cartilage; *k^hrəm-k^hrəm*
 <khrum.khrum>
 groan; *k^hə-nə je?* <? byed> (cf. <'khun>)
 grope; *la?*-*snop je?* <lag.snyob byed>;
 (grope in the dark) *lō-snop je?*
 <long.snyob byed>
 grow; *sce/sci* <skye/skyes>
 guard; defend; *rtsō* <srung>
 guest; *"grē* <mgron>; *"dzū-wa* <'grul.pa>
 gums; *so-rpi?* <so-rnyil> [rhyme!]
 gunpowder; *mə-zə* (< Rgy.)⁴⁴
 hail; *sa-ra* <ser.ba> [rhyme!]
 hair; *spə* <spu>
 hair of head; *tfo-to* <co-to>; *"go-tfo*
 <mgo.co> [onset!]
 hair whorl 髮旋; *spə-n^chi* <spu.'khyil>
 half; *k^he-ji*
 halter 籠頭; *mt^hər* <mtthur>
 hamlet; *krō-pa* <grong.pa>
 hammer; *t^ho*: <tho.ba>
 hand; *la?*-*"go* <lag.mgo> [onset!]
 handful; *spar* <spar>
 handle; *ju* <yu.ba> [rhyme!]; (of a knife)
ra-nthop
 hang; suspend 掛; *χtfō* <dpyong>
 hang oneself; *ɛɲa:/ske n^th^ē/wtfē/tf^hē*
 <gnya.ba/ske 'ching/bcings/chings>
 harvest; reap; *"bra?*/*pra?*/*pru?* <'breg/
 bregs/brogs>
 hat; *ʒa* <zhwa>
- have diarrhea; *wfa*: <bshal>
 have leg cramps; *ɲa lu?* <nywa.log>
 have sex; *ɲjop* <g.yob>
 he; she; *tə* <de> [rhyme!]; [ERG/GEN] *ti*
 <des>; [DAT] *te*: <der> [rhyme!]; (him-
 self; herself) *k^hən-ka*; *k^hə-rka*
 head; *"go* <mgo> [onset!]; (back of head)
rta?-ba <ltag.pa>
 headman; chieftain; *wⁿk^har-wda?*
 <mkhar.bdag>
 heap up; stack [v]; *spō* <spung>
 hear; *ko* <go> ~ *ts^hor* <tshor>; e.g. *c^ho bō-lə*
ko/ts^hor-wʒa? 'I heard that you will
 come.'
 heart; (body part) *snē* <snying>; (abstract
 meaning); *snē* <snying> (as in *snē wzō*
 <snying.bzang> 'be kind-hearted'); *sem*
 <sems> (as in *sem zdu?* <sems.sdug> 'be
 sad')
 hearth; *mɲe-qō* <me.khung (?)>
 heel; *wtf^hə-rtē* <phyi.rting>
 help; *ru?*-*k^ha je?* <rogs.? byed>
 hemp; *χso-ma* <gso.ma>
 herd, care for; *n^ts^ho^m/ts^hi^m/ts^hi*
 <'tsho/'tshos/'tshos>
 herder; *rdzo*: <rdzi.bo>
 here; *"dē* (cf. <'di.na>)
 hero; *χpa-wo* <dpa'.po>
 hiccup; *ske?-wzi je?* <? byed>
 hide; (~ sth) *zbe?* <sbed_[PRES]>
 hide oneself; *qop* <gab> [onset!]
 hip 臀側; *χtfə* <dpyi>
 hire; employ; *ɲla/ɲli/ɲli* <gla/glas/glas>
 hit; (strike, punch) *rja?*/*wjop*/*rjop* <rgyag/
 brgyabs/rgyob>; hit (target); *k^hi*
 hither; *ts^hər* <tshur>
 hoe; *ka?* (< Rgy.)⁴⁵
 hog badger; *krə-n^ba* <grum.pa>
 hold; *"dzən/wzō/zō* <'dzin/
 bzung(s)/zung(s)>; (hold tightly) *zdam/
 zdam/zdom* <sdom/bsdams/sdoms>
 hold in arms; *pō* <pang>

44. Cf. Tshobdun *mízi*, Showu *məzə*, ultimately from <me.rdzas>.

45. Cf. Cacu Rgyalrong *kaq*; Tshobdun *qa*.

- home; (dwelling place) *jo*: <yul> (e.g. *c^{hu} jo*: *kənə jən* ‘Where is your home?’); (family) *c^həm* <khyim>
- hometown; *jəp-t^hu?*; *p^ha-jul* <pha.yul>
- honey; sugar; (*zbā-*) *n^{ja}-ⁿdza* <sbrang.?⁴⁶>
- hoof; *rjək-pa* <rmig.pa>
- horizontal; *n^ph^re?* <‘phred>
- horn; *rga*
- horse; *rta* <rta>; (mare) *rgot-ma* <rgod.ma> [rhyme!]; (foal) *rtu* <rte’u> [rhyme!]
- horse’s hoof; *rta-rji?* <rta.rmig>
- host; master; *wdak-po* <bdag.po>
- hot pepper; *la-dzu* (< Ch. 辣椒)
- house; *n^khō-pa* <†’khang.pa>
- house keeper; *ɲer-pa* <gnyer.pa>
- household; *k^hak-po*; *c^həm-wtsō* <khyim.tshang> [onset!]
- how; *t^hə-ka je?* <ci.ga byed>
- how many; how much; *t^hə-ka-tə* <ci.ga.tsig>
- human; person; *mjə* <mi>
- hunchback; *tsu-pu* (< Qiang)⁴⁷
- hundred; *wja* <bryga>
- hundred thousand; *n^bəm* <‘bum>
- hunt; *wda-wa n^{jo}* <bda’ba.’gro> [onset!]
- hurry; *pri* <brel>
- husband; *sce-spa* <skyes.pa>; *rga-po* <rgad.po>
- I; *ɲa* <nga>; [ERG/GEN] *ɲi* <ngas/nga’i>; [DAT] *ɲa*; (myself) *ɲə-nə-ka* (usually realized as [ɲənka])
- ice; *n^ch^a?-pa* <‘khyags.pa>; (ice layer on frozen water) *tar* <dar>
- idea; *kop-pa*
- if; *na* <na>; (even if) *wəpi...na* <?.na> (e.g. *wəpi ɲnam pop-na, ɲa n^{jo} go* ‘I will go even if it rains.’)
- illness; *ne?* <nad>
- immerse; submerge; *zən*; *rtu*
- in a while; later; *ta:-ra*
- in olden times; formerly; *ɲna-ɲna-ske* <gna’gna.?’> (cf. <bskal> ‘time, period’)
- in passing; while doing sth else; *zor* <zhor>
- in the past; *sja*: <sgar>
- incense; *spi(-rē)* <spos.(ring)>
- incense smoke offering; *wsō* <bsang>
- increase [INTR]; *mō* <mang>
- increase [TR]; *snē* <snon>
- insect; worm; *n^bə-cu?* <‘bu.?’>
- inside; *nō(-ɲa)* <nang>
- install; *spe?* <sprod>
- interest 利息; *n^phi* <‘phel>⁴⁸
- intestines; *rjə-ma* <rgyu.ma>; (large ~); *rjə-zbam* <rgyu.sbom>; *rjə-ɲa*:<rgyu.?’>; (small ~) *rjə-p^hra* <rgyu.phra>; *rjə-na?* <rgyu.nag>
- iron; *rtfa?* <lcags>; pig iron; *k^hro* <khro>
- itch; *za* <za>
- ivory; *pa-so* <ba.so>
- jackdaw (*Coloeus monedula* 寒鴉); *stfa-ɲa c^ha-mō* <skya.ka ?.mo> [rhyme!]
- jew’s harp 口弦; *k^ha-χtfa?* <kha.?’>
- join; *n^ba?*/*n^ba?*/*n^bu?*
- joint; *ts^hi?* <tshigs>
- jump; *mt^hō* <mchong>; (of a horse, buck) *n^ph^a?* <‘phag>; (jump down, leap across) *rtfop*
- juniper; *ʃək-pa* <shug.pa>
- just now; *ta-ta*: <da.lta.ba (?)>
- key; *rdo*:*mji?*/*p^hru?* <?.mig.phrug>
- Khams; *k^ham* <Khams>
- kick; *rkō-to rja?*/*wjop*/*rjop* <rkang-t^ho rgyag/brygabs/rgyob>
- kidney; *wⁿk^ha*:*ma* <mkhal.ma>
- kill; *χse?*/*wse?*/*χse?* <gsod/bsad/sod>
- kindle; *zbar/zbar/zbor* <sbar/sbar/sbor>; (turn on a modern light) *mt^he*/*wt^hi*/*wt^hi* <†’phye/phyes/phyes>

46. Cf. Sastod Rgyalrong *jə-ⁿdzə*.47. Cf. Ronghong, and Mawo *tsupu*.

48. Semantic extension from original meaning ‘increase’.

- kindling 火引子; *fē-wɜu?* <shing.ʔ>
king; *rjal-pu* <rgyal.po>
kiss; *paʔ jeʔ* <ʔ byed>
kitchen; *tʃa-kō* <ja.khang>
knead; (mix flour and water to make
dough) *rdzə/wrdzi/rdzi* <rdzi/brdzis/
rdzis>; (knead dough) *wlē*
kneading basin; *ʔɜɔ-pa* <gzhong.pa>
kneading board; chopping board; *χtəp-lop*;
tsʰe-pe
knee; *pə-smō* <pus.mo> [rhyme!];
(kneecap) *pə-smō* *nʰhō-lo*
<pus.mo.phang.lo>
knife; *krə* <gri>
knot; *ʰdə-pa* <mdud-pa> [onset!]
know; (~ a fact; ~ how to do sth) *fi* <shes>;
(know after learning) *lop* <lob>
koklass pheasant (*Pucrasia macrolopha* 勺
雞); *ka-χō*
ladder; *ski* <skas>
ladle; *ʰə-nbə* <thom.bu> [rhyme!]
lake; *mtsʰo* <mtsho>
lama; (*w*)*la-ma* <bla.ma>⁴⁹
lame person; cripple; *ʒa-wo* <zha.bo>
land; alight; *nʰbop/pop/pop* <'bab/babs/
bab>
landslide; *sa-tʃeʔ* <sa.ʔ>
language; speech; voice; *skeʔ* <skad>
lap; *pō-ŋa* <pang.ʔ> ~ *pō-nō* <pang.nang>
larch; yellow pine (*Larix gmelinii* 落葉松);
ʰhō-mor <thang.ʔ>
lasso; *ʒaʔ-skar* <zhangs.ʔ>
latrine; *tʃʰaʔ-qō* <chab.khang>
[rhyme!][onset!]
laugh; *rgeʔ* <dgod>
laughing thrush; (Elliot's laughing thrush
Garrulax elliotii 橙翅噪眉) *nʰdzo-mō*
<'jol-mo> [rhyme!]; (giant laughing
thrush *Garrulax maximus* 大噪眉) *ʒa-
kʰriʔ*
law; *kʰrəm* <khirms>
- lay out; *kram/kram/krom*;⁵⁰ *nʰpʰrē jeʔ*
<'phreng byed>
lead (metal); *ʒa-ŋe* <zha.nye>
lead; guide; *nʰkʰriʔ/kʰriʔ/kʰriʔ* <'khrid/
khrid/khrid>
leaf; *ba-lop*; (on trees) *fē-lo* <shing.lo>
lean against; *kʰē* <khen>
learn; study; *rtsop* <slob>
learned/skilled person; *wʰkʰe-spa*
<mkhas.pa>
leather bag; *ʒgo*: <sgro.ba>
leather bellows; *kʰuʔ-mō* <khol.mo>
[rhyme!]
left (hand); *ʔjo-ma*
leg; *rkō-pa* <rkang.pa>
legend; *rʃoŋ* <sgrung(s)>
leopard; *ʔziʔ* <gzig>; (leopard skin) *ʒək-ʃē*
<gzig-shun>
leprosy; *mdze* <mdze>
letter; *je-ge* <yi.ge>
lever; *ta-ceʔ* (< Rgy.)
lick; *rdaʔ/wdaʔ/rduʔ* <ldag/bldags/ldogs>
lid; cover; *kʰa-lop* <kha.leb>
lie; *wjaʔ-ŋa: jeʔ* <?.nyal byed>
lie, falsehood; *kʰra-nba* <khram.pa>; *rdzən*
<rdzun>
lie; tell a lie; *kʰra-nba jeʔ* <khram.pa byed>;
rdzən jeʔ <rdzun byed>
life; *ʒuʔ* <srog>; (life-span) *tsʰe* <tshe>
light; *weʔ* <'od>; (beam of light) *op-ze*
<'od.zer> [rhyme!]
light (a fire); *mɲe zbar/zbar/zbor*
<me.sbar/sbar/sbor>
light; lamp; *ʔlok-kar* ~ *ʔluʔ-kar*
<glog.dkar> [onset!]
lightning [V]; *ʔluʔ* *nʰər* <glog.gyur>
like, love; *rga* <dga>; (love dearly) *χtʃi*
<gces>; (also used as a complement-
taking verb; e.g. *ti tʃʰō nʰhō-ʃi/le rga-ʃi* 'S/
he likes to drink booze.')
- line up; queue; *nʰpʰrē jeʔ* <'phreng byed>

49. Locally, this word refers to reincarnated lamas only.

50. Reflecting CT <gram>, anti-causative of the transitive <'grem/sbkram/khroms>. But this Sastod verb is transitive.

- linger; delay; ⁿgor <'gor>
lion; *se-nge* <seng.ge>
lip; *mtʰə-fa* <mchu.sha>
listen; *nē* <nyan>
live, dwell; *'duʔ/zdeʔ~wdeʔ/zdeʔ* <'dug/
bsdad/sdod>
liver; *mtʰə-nba* <mchin.pa>
livestock; domestic animals; *səm-wtʰē*
<*sems.can*> [rhyme!]; (referring only to
bovines, horses, sheep, and goats) *zuʔ*
<zog>
lizard; *rtʃa-zbu* <rtswa.sbrul>
load [N]; *ʋa:(-ma)* <*khal.(ma)*> [onset!]
lock; *rdo-mjiʔ* <?.mig>
loess; *sa-ʋar* <*sa.dkar*> [onset!]
log; *bdō-ma* <gdung.ma>
long-tailed goral (*Nemorhaedus caudatus*
長尾斑羚); *ra-rgeʔ* <*ra.rgod*>
look; *ria/wrti/rti* <lta/bltas/lto>
look like; resemble; ⁿdza; (e.g. *ŋa tɑ*
mə-n'dza 'I don't look like him.')
- loom; *tʰa-χfa* <thags.ʔ>
lose one's way; *lam nor* <lam.nor>
lose; be defeated; *pʰam* <pham>
lose; misplace; *ʋor/por* <'bor/bor>
lotus; *pat-ma* <pad.ma>
louse; *ʃiʔ* <shig>
lower (head); ⁿgo *sgər* <'go.sgur>
lower jaw; *ma-ka* <ma.kha>
lunatic; *sno-nba* <smyon.pa>
lunch; *mdza-ra*
lungs; *ʋlo* <glo.ba>
maggot; *ʃa-nbɑ* <sha.'bu>
magpie; *cak-cak*
maize; corn; *jə-ma* (< Ch. 玉麥)
make; (~ a piece of furniture) *wzo/wzi/wzi*
<*bzo/bzos/bzos*>; (~ bread, = 'knead')
rdzə/wrdzi/rdzi <*rdzi/brdzis/rdzis*>
make a fist; *kʰə-tsə zdam/zdam/zdom*
<*khu.tshur sdom/bsdams/sdoms*>
make an appointment 約定; *tʰiʔ-tʰaʔ χtʃeʔ/
wtʃeʔ/χtʃeʔ* <tshig.thag.gcod/bcad/gcod>
male; *pʰo* <pho>
malt; *zbō-ma* <sbang.ma>
man 男人; *pə-tsa* <bu.tsha>
- mane; *rjuʔ-ma* <rngog.ma>
mantra; *ŋaʔ* <sngags>; (six-syllable
mantra) *ma-ni* <ma.Ni>
manure; *liʔ* <lud>
mark; sign; *rtaʔ* <rtags>
mark; trace; *rdzi* <rjes>
marmot (*Marmota himalayana* 旱獭);
mtʰo: <'phyi.ba>
marrow; *rkō* <rkang>
marsh; *na*: <na.ba>
mask; *ʋbaʔ-n'go* <'bag-'go>
material, substance; *rdzi* <rdzas>
matter; affair; *to-n'daʔ* <don.dag>
meal; *za-ma* <za.ma>
measure; (~ length, distance) *tsʰeʔ*
<tshad>; (~ amount) ⁿdza:ⁿdza:ⁿdzu
<'jal/'jal_[PRS]/'jol>; *tsʰeʔ* <tshad>; (evalu-
ate sth in comparison with sth else) *χpaʔ*
<dpag>
meat; *ʃa* <sha>
medicine; *smē* <sman>
meet; come across; *tʰuʔ* <thug>
meet (someone coming to visit); *wsə/wsi/
wsi* <bsu/bsus/bsus>
meet [HON]; have an audience with 覲見;
ⁿdza: <*mjal*> [onset!]
memorize, commit to memory; *wlo* ⁿdzuʔ/
wzaʔ/zuʔ <blo 'jog/bzhag/zhogs>; *wlo*
ⁿdzan/wzō/zō <blo 'dzin/
bzung(s)/zung(s)>
message; *tʰa* <cha>; (carry a message) *tʰa*
jeʔ <cha byed>
midge 蠓; *mtʰə-tsi*
milk [N]; *ʋo-ma* <'o.ma>; (mother's milk)
ma-ma
milk [V]; *wzo/wzi/wzi* <*bzho*_[FUT]/*bzhos/
bzhos*_[PST]>
milk cow; *wzo-nbrə* <*bzho.'bri*>
millstone; *mtʰiʔ* <mchig>
mine; *χter* <gter>
mirror; *ʃol* <shel>
miss; *tʃē* <dran>
mix, blend; *ʃi* <sres>; *wteʔ* <bslad>
mole (on skin); *sma*: <sme.ba>
monastery; *rgən-nba* <dgon.pa>

- money; *kor-mō* <gor.mo> [rhyme!]; (paper money) *fuʔ-kor* <shog.gor>
 Mongolian; *sok-po* <sog.po>
 Mongolian gazelle (*Pracapra picticaudata*);
rgo: <dgo.ba>
 monk; *a-ku* <a.khu>; (attendant monk)
kra-pa <grwa.pa>
 monkey; (*a*-) *spi* <spre'u>; (golden snub-nosed monkey *Rhinopithecus roxellana* 金絲猴); *spi-kar* <spre'u.dkak> [onset!]
 moon; *rdza*: <zla.ba>
 morning; (daybreak, dawn) *nam-steʔ-ka* <nam.ʔ.ʔ>; (early morning till breakfast time) *zar-naʔ* (< Rgy.); (till noon) *ɣja-tʂo* <snga.dro>
 mortar; *tʂak-bu*
 mosquito; *a-jō tsi*
 mother; *a-ma* <a.ma>
 mountain; hill; *rə* <ri>; (sunny side of mountain) *nən-ka* <nyin.kha>; (shady side of mountain) *rtsəp-ka* <rtsəp-ka>; (higher reaches of a mountain) *kʰi-kʰa*; (mountain pass) *na-ʋa*; (col) *nak-taʔ*; (mountain ridge) *ʋdō*
 mouse; *wfō*: <byi.ba>; (referring to the zodiac animal) *pje-wa* <byi.ba>
 mouth, opening; *kʰa* <kha>; (outer mouth) *mtʰə* <mchu>
 move [INTR]; *ʔgu* <'gul>
 move [TR]; *spar/spar/spor* <spar/spar/spor>
 move backwards; *wfʰə-nər* <phyir nur>
 mud; *ʔda-ʔba* <'dam.pa>; (puddle of mud) *ʔdam* <'dam>
 mudflow; *tʰə-zuʔ* <chu.ʔ>
 mule; *tʂi* <drel>
 mushroom; *fa-mō* <sha.mo> [rhyme!]
 musk; *ʋla-ʰtʂə* <gla.rtsi>
 musk deer; *ʋla*: <gla.ba>
 mute person; *ʋle-ʔba* <glen.pa>
 Naga; *χlə* <klu>
 nail 指甲; *seʔ-mō* <sen.mo> [rhyme!]
- nail (tool); *mdzar-ma* <'dzer.ma> [onset!] [rhyme!]
 name; *mɣē* <ming>
 nape; *ske-fo* <ske.ʔ>; *ʋna-fo* <gnya.ʔ>
 navel; umbilical cord; *rtē* <lte.ba> [rhyme!]
 neck; *ske* <ske> ~ *qʰe*
 necklace; *ʔgo-rtəʔ* <'go.rtags>
 need; *go* <dgos> [onset!] [rhyme!]; e.g. *ɣa: zdi ruʔ mə-go* 'I don't need help from others'
 needle; *kʰop* <khab>; (eye of needle) *kʰop-rna* <khab-rna>
 negator; [PFV] *ma:* <ma> [rhyme!]; [TPFV] *mə* <mi>
 neighbor; *čəm-tsiʔ* <khyim.mtshes> [rhyme!]
 nephew; *tʂu* <tsha.bo>
 nettle; *mdzə-lu* (< Rgy.)⁵¹
 New Year; *lo-sar* <lo-gsar>
 niece; *tʂa-mo* <tsha.mo>
 night; *nə-meʔ*; *mtsʰē-ɣa* <mtshan.ʔ>; (midnight) *mtsʰē-χci* <mtshan.dkyil>; (last night) *mdō* <mdang>; (tonight) *tə-nəp* <do.nub> [rhyme!]; (tomorrow night) *sō-nəp* <sang.nub>
 nine; *rgə* <dgu>
 nineteen; *wfə-rgə* <bcu.dgu>
 ninety; *rgə-wfə* <dgu.bcu>
 nit 蠟子; *rtsə-mō* <sro.ma> [rhyme!]
 noise; *ʋər* <'ur>
 nomadic Tibetan; *ʔbrok-pa* <'brog.pa>
 noodles; (generic) *χəp* ~ *χop* ~ *fəp*; (prepared for monks) *tʰək-pa* <thug.pa>; (hand-torn noodle soup 麵塊湯) *pe-ta-fəp* (< Rgy.)⁵²
 noon; *nē-mtʰeʔ-χci* <nyin.ʔ.dkyil>
 north; *pjā* <byang>
 nose; *sna* <sna>
 nostril; *sna-χō* <sna-khung>
 not be; *ma-reʔ* <ma.red>; (EGO) *mən* <min>
 not exist; *mjeʔ* <med>

51. Cf. Sastod Rgyalrong *mdzolor*, Tshobdun *mtsholoʔ*.

52. Cf. Showu Rgyalrong *pət̪iχ*.

- now; *ta(-ⁿde)* <da.ʔ>
 nun; *tʃo-mo* <jo.mo>
 oak, ring-cupped oak 青剛櫟; *pe-fē*
 <be.shing>
 oath; *mna* <mnaʔ>
 oats; *ʁo-mō*; (wild oats) *jək-po* <yug.po>
 occur; happen; *ʔbiʔ/piʔ* <'bud/†bud>
 odor; smell; *tʂə-maʔ* <dri.ma> [rhyme!]
 offering; remuneration; *ʔbo*: <'bul.ba>
 official; *χpon-ⁿbo* <dpon.po>
 often; *jē-rē*
 oil; *snəm* <snum>; (vegetable oil) *snəm-naʔ*
 <snum.nag>
 oil film; *k^ha-ʒaʔ* <kha.zhag>; (when taken
 out and congealed) *ʒaʔ* <zhag>
 old person; (old man) *rga-po* <rgad.po>;
 (old woman) *rga-mo* <rgad.mo>
 one; *χtʃiʔ* <gcig>; *k^ho-ro*; (with a numeral
 classifier) *tsiʔ*
 open [INTR]; *wtʃ^hi* <†phyes>
 open [TR]; (~ a door) *mtʃ^he/wtʃ^hi/wtʃ^hi*
 <†'phye/phyes/phyes>; (~ mouth, eye)
ʁdō <gdang>; (~ an umbrella)
*ʔp^huʔ/p^huʔ/p^huʔ*⁵³
 open water conduit; *ʁa* <wa>
 orphan; *ta-wu* <dwa.bu> [rhyme!]
 otter; *ʒam* <sram>
 outside; *wtʃ^hə-so* <phyi.ʔ>
 overflow; flow over the brim of container;
mtʃ^hər <'phyur>; *mjam*
 owl; *uk-pa* <'ug.pa>
 ox hair; *k^hu* <khul>; (long ox hair) *rtsək-pa*
 <rtsid.pa> [rhyme!]
 oxhide; *ko*: <ko.ba>
 pack animal; beast of burden; *wka-zuʔ*
 <bkal.zog> [rhyme!]
 pad; *stēⁿdē/wtē/t^hē* <stan.'ding/btings/
 things>
 palate; *ja-rkō* <ya.rkan> [rhyme!]
 Pallas's squirrel (*Callosciurus erythraeus* 赤
 腹松鼠); *fo-ko* *wtfa-ra*
 palm; *t^he-rtʃaʔ*; (center of palm) *laʔ-m^hiʔ*
 <lag-mthil>
 pant; *χar* <hal> [rhyme!]
 pants; trousers; *rkō-snam* <rkang.snam>
 paper; *fok-fuʔ* <shog.shog>
 parch; *rŋo/rŋi/rŋi* <rngo/brngos/rngos>
 parching pan 炒青稞鍋; *gə*
 parent; *p^ha-ma* <pha.ma>
 parrot; *ne-tso* <ne.tso>
 paste; make stick together; *zbjar/zbjar/
 zbjar* <sbyar_[PST]/sbyar/sbyor>; [INTR]
 (be pasted or stuck to sth); *mdʒar*
 <'byar>
 pastoral area; *ʔbrok-sa* <'brog.sa>
 patch [N] 補丁; *χle-ⁿba* <klan.pa>
 patch, mend; *χlē* <klan>; *χle-ⁿba rjaʔ/wjop/
 rjop* <klan.pa rgyag/brgyabs/rgyob>
 patient; *neʔ-pa* <nad.pa>
 patina 銅鏽; *ʁja* <g.yaʔ>
 pave; lay; spread out; *ʔdē/wtē/t^hē* <'ding/
 btings/things>
 pay back debt; *scə-ⁿba wʒan*
 <skyin.pa.sbyin>
 peach; *dza-ti* (cf. Cacu Rgyalrong *dzeti*)
 peacock; *rmo-wja* <rma.bya> [rhyme!]
 peas, bean; *rtsē-ma* <srana.ma>
 peel, remove shell; *wʃə/wʃi/wʃi* <bshu/
 bshu/bshu>
 penis; *mdʒe* <mje>; (of a small boy) *ko-ko*
 perform mask dance; *ʔtʃam jeʔ* <'cham
 byed>
 pestle; *rdo-mdiʔ* <rdo.ʔ>
 pheasant; *to-po*
 pick; (berries) *ʔt^huʔ/wtuʔ/t^huʔ* <'thog/
 btogs/thogs>; (~ flowers) *χtʃēʔ/wtʃēʔ/χtʃēʔ*
 <gcod/bcad/gcod>
 pick out; *sə/wsaʔ/su* <ʔ/bsal/sol>
 pick up, gather (scattered objects); *zdə/zdi/
 zdi* <sdu/bsdus/sdus>
 pierce, bore; *ʔp^huʔ/p^huʔ/p^huʔ* <†'phug/
 phugs/phugs>
 pig; *p^haʔ* <phag>; (piglet) *ko-pe*; *p^hə-gə*

53. Cf. <phub>, but the rhyme does not correspond.

- pigeon; ⁿ*phi-rō*⁵⁴
 pika 藏鼠兔; *pra* <bra>
 pillar; *ka*: <ka-ba>
 pillow; ⁿ*go-sjē* <'go.sngas>
 pinch; *se?*ⁿ*du χtjē?*/*wtjē?*/*χtjē?* <sen.?.gcod/
 bcad/gcod>
 pipit (Indian Tree Pipit *Anthus hodgsoni* 樹
 鵲); *wtji-blē* <bye'u.glen>
 pit; *tō* <dong>
 place; *sa-tj^ha* <sa.cha>
 placenta; *rok-po* <rogs.?)>
 plain; flatland; *t^hō* <thang>
 plant (by sowing seeds); ⁿ*dop/wtop/t^hop*
 <'debs/btab/thob>
 plant (set a plant in the ground); thrust
 into; ⁿ*dzu?*/*wtsu?*/*ts^hu?* <'dzug/btsugs/
 tshugs>
 plant ash; *t^ha*: <thal>
 plate; *zder* <sder>; *ka-do-ra*
 plough [N]; *χfu* <gshol>; (ploughshare)
rmi-rtja? <rmos.lcags>
 plough; till [V]; *rmo/rmi/rmi* <rmo/rmos/
 rmos>
 point [V]; *mdzək-tər je?* <mdzug.? byed>
 point; tip; ⁿ*go* <'go>
 poison; *tu?* <dug>
 polecat; *bla-spar*
 poplar; (species growing on riverside) *βzō*;
 (high elevation species grown on sunny
 sides of mountains) *la-pə*
 popped grain; *ji* <yos>
 pork; *p^hak-fa* <phag.sha>
 pot (small); *wa:ma*
 potato; *ja-kro* <rgya.gro> [onset!]
 pouch; *k^hu?-mō* <khug-ma> [rhyme!]
 pound [V]; *rdō* <rdung>
 pour into; *rdu?*/*wdu?*/*rdu?* <ldug/†bldug/
 ldugs>; (~ out sth unwanted)
ⁿ*p^he?*/*p^he?*/*p^he?*; (~ out with great force)
wtfo
 power; *βō(-tj^ha)* <dbang.cha>; *rō-βō*
 <rang.dbang>
- press; *βnē/mnē/βnē* <gnon/mnan/gnon>;
 (press tight) *zdam/zdam/zdom* <sdom/
 bsdams/sdoms>
 price; *kō* <gong>
 prison; *wtsē-kō* <btson.khang>
 prohibitive prefix; *ma:*- <ma> [rhyme!]
 promise; *k^hi lē/wlō/lō* <khas.len/blangs/
 longs>
 pull; draw; *t^hē* <then>
 pull up; ⁿ*ba:pa:pu* <'bal/bal/bol>
 pulse; *rtsa* <rtsa>
 purposive clause connective; *ni*
 pus; *rna?* <rnaɡ>
 push; ⁿ*p^hu/p^hu/p^hu* <'phul/†phul/†phul>;
 (~ sth closer to sth) *χte?*; (~smaller
 objects) *snər* <snur>
 put; place; ⁿ*dzu?*/*wza?*/*zu?* <'jog/bzhag/
 zhog(s)>
 put (lid) on, cover; ⁿ*gop/wkop/k^hop* <'gebs/
 bkab/khob(s)>
 put in (tea leaves); ⁿ*dop/wtop/t^hop* <'debs/
 btab/thob>
 put in order; tidy up; *wda?* *je?* <bdag
 byed>
 put into container, pen in; ⁿ*dzu?*/*wza?*/*zu?*
 <'jog/bzhag/zhogs>
 put load on (pack animals); *βa:ma*
ⁿ*ga:wka:/ku* <khal.ma 'gel/bkal/khol>
 [rhyme!] [onset!]
 quarrel; ⁿ*k^hro-ri je?* <'khro.res byed>; ⁿ*dze-*
ri je? <?.res byed> (cf. <'dzing> 'quarrel')
 quill; *wtfa-zgro* <bya.sgro>
 rabbit; hare; *ro-βō* <ri.bong> [rhyme!]
 [onset!]
 rain [N]; *βnam* <gnam>; (in springtime)
tj^har-pa <char.pa>
 rain [V]; *βnam* ⁿ*bop/pop/pop* <gnam 'bab/
 babs/bab>
 rainbow; ⁿ*dza* <'ja>
 raise, lift; ⁿ*ju?*/*wca?*/*ch^hu?* <'gyog/bkyags/
 khyogs>

54. Cf. <phug.ron>.

- raise; nurture; (~ an animal) $\chi so/\chi si/\chi si$
<gso/gsos/gsos>; (~ a child) $sc\ddot{o}$ <sky-
ong>
- read; $^n d\ddot{e}/wt\ddot{e}/t^h\ddot{e}$ <'don/bton/thon>
- recall; remember 想起; ze $^n bop/pop$ <zhe
'bab/babs>
- recite; wlo $^n d\ddot{e}/wt\ddot{e}/t^h\ddot{e}$ <blo 'don/bton/
thon>
- recognize; $\eta o z\ddot{a}n$ <ngo zin>; (be
acquainted with) $\eta o fi$ <ngo shes>
- recount (a happening); $k^h a-wda je?$
<kha.brda byed>
- recover, heal; $t\ddot{s}a?$ <drag>
- red-billed chough (*Pyrrhocorax pyrrhoco-
rax* 紅嘴山鴉); $stfan-ka?$ ~ $stfan-qa?$
(cf. <lung.ka>)
- reincarnate lama; $spr\ddot{a}-sku?$ <sprul.sku>
- reins; $sop-scor$ <srab.?'>
- relative; $k^h a-^n k^h or$ <?.khor>
- release; set free; $\chi t\ddot{o}/wt\ddot{o}/\chi t\ddot{o}$ <gtong/
btang/gtong_[PRS]>
- remember; (stative 記得) $ze-n\ddot{o} ju?$
<zhe.nang yod>; (make an effort to
retain in memory 記住) $ze^n dz\ddot{a}n$
<zhe.'dzin>
- remove outer skin; peel off; $^n gu?$ /
 $wka?$ / $k^h u?$ <'gog/bkog/khog> [rhyme!]
- repair; li <las>
- resin; colophony; $t^h \ddot{o}-t\ddot{f}\ddot{a}$ <thang.chu>
- rest; $rtso/wrtsi/rtsi$ <sro/bsros/sros>
- return (sth borrowed); $rdzu?$ / $wdzu?$ / $rdzu?$
<zlog/bzlog(s)/zlog(s)>
- rhododendron; dwarf rhododendron 杜鵑;
 $s\ddot{a}r$ <sur>
- rhubarb; $rtf\ddot{a}m$ <lcum>
- ribs; $rtsu$ <rtsig.gu>
- rice; $^n bri$ <'bras>; $k^h ri$ (< Rgy.)⁵⁵
- ride; $je?$ <byed>
- ridge, raised ground 坎; $ke? -pa$ <gad.pa>
- right(hand); $\varepsilon jo-spa$
- rim; $k^h i-ra$
- ring; $s\ddot{a}r-la?$
- rinse; flush; $wfa:/wfa:/wfu$ <bshal/bshal/
bshol>
- rise (of the sun); $j\ddot{a}-ma$ $^n bi?$ / $pi?$ <nyi.ma
'bud/†bud>
- rise; stand up; $ja-ra l\ddot{o}$ <yar.lang>
- river; $t^h \ddot{a}-t\ddot{f}\ddot{e}$ <chu.chen>
- road; lam <lam>
- roam; stroll; $^n c^h am/^n c^h am/^n c^h om$
<'khyam/'khyams/'khyoms>
- robber; $wts\ddot{e}-^n p^h ru?$ <btsan.phrog>
- rock; $pra?$ <brag>
- rod; stick; $\varepsilon j\ddot{a}k-pa$ <dbyug.pa>
- roe deer (*Capreolus pygargus* 狍子); $k^h a-fa$
<kha.sha>
- roll [TR]; $wdzi$ <bsgril_[PST]>; (~ out dough);
 $^n t^h ar/^n t^h ar/^n t^h or$
- room; $k^h o$ (< Rgy.)
- root; $f\ddot{e}-rtsa$ <shing.rtsa>; (fibrous root)
 $rj\ddot{a}-spa$
- root; source; $rtsa-ka$ <rtsa.?'>; $rtsa-rk\ddot{o}$
<rtsa.rkang>
- rope; $^n br\ddot{e}-\eta a$ <'bren.g.pa>
- rosary; $wts^h \ddot{e}-\eta \varepsilon$ <'phreng.ba>
- rot; ru <rul>
- rounded top; tok <tog>
- rub; $^n p^h \ddot{a}r/p^h \ddot{a}r/p^h \ddot{a}r$ <'phur/phur/phur>;
(~ hide with a rubbing frame) $mje?$
<mnyed>
- ruminate; $rde?$ $je?$ <ldad byed>
- run; $\varepsilon d\ddot{z}ar$
- rust; $^n tsa$ <btsa'>; [v] $^n tsa$ $t^h \ddot{a}?$
<btsa'.chags>
- sacred place with healing power; $\varepsilon n\ddot{e}$
<gnas>
- saddle; zga <sga>
- salamander; $t^h \ddot{a}-zbu$ <chu.sbrul>
- salary; $f\ddot{a}$
- saliva; $mt^h i-m\ddot{o}$ <mtshil.ma> [rhyme!]
- salt; $t^h a$ <tshwa>
- same; identical; $^n dza-^n dza$ <'dra.'dra>
- sand; $pja-ma$ <bye.ma> [rhyme!]
- sandalwood; $wts\ddot{e}-^n d\ddot{e}$ <tsan.dan> [onset!]

55. Cf. Sastod Rgyalrong $k^h i$ 'rice'; cf. also Mawo and Yunlinsi Qiang $q^h i$ 'rice'.

- sapling; *rdzã-ŋə* <ljang.bu>
 sausage; *ɸjə-rdʒə* <?.rgyu>⁵⁶
 saw; *suʔ-lə ~ sok-lə* <sog.le> [rhyme!]
 say; *dzo/wdzi/dzi* <zlo/bzlas/zlos>
 [onset!]
 scabies 疥癬; *ŋjo* <rngo>
 scar; *rma-rdʒi* <rma.rjes>
 scatter, become scattered; *ⁿthor* <'thor>
 scatter [TR]; *χtor* <gtor>
 scissors; *tsən-tuʔ* (< Ch. 剪刀)
 scold; *ⁿkʰro/wⁿkʰri/ⁿkʰri* (cf. <khro> 'be
 angry')
 scrape; *æʔ*
 scratch (to stop an itch);
ⁿpʰruʔ/pʰruʔ/pʰruʔ ('phrug/phrugs/
 phrugs)
 scrotum; *tək-pa* <rliḡ-pa>
 sea buckthorn 沙棘; *rla-qe*
 seal; stamp; *thiʔ* <thel> [rhyme!]
 see; *riʔ* <rig>
 see off; *sca:/sca:/scu* <bskyaal_[PST]/bskyaal/
 skyol>
 seed; *sa-ɸē* <sa.bon> [onset!]
 seek; look for; *tsʰu/wtsa:/tsʰu*
 <tshol_[FUT]/btsal/tshol>
 seep into; *zən*
 sell; *ⁿtsʰō/wtsō/ⁿtsʰō* <'tshong/
 btsongs/tshongs> [onset!]
 send (a letter); *skər* <skur>
 sequentializer; *ɲə*
 serow; mainland serow (*Capricornis suma-
 traensis* 鬣羚); *sa-rja* <shwa.rgya>
 servant; *ɸjok-po* <g.yog.po>
 set (of the sun) 日落; *ⁿgra:*
 set on fire; *ⁿnye ⁿdʒuʔ/wʒaʔ/zuʔ* <me 'jog/
 bzhang/zhogs>
 seven; *wdən* <bdun>
 seventeen; *wtfu-wdən* <bcu.bdun>
 seventy; *wdən-tfə* <bdun.cu>
 sew; *ⁿdʒəp/tʂəp/tʂəp* <drub/drubs/drubs>
 shade; *wsil* <bsil>
- shadow; *wsil-kruʔ* <bsil.ʔ> (cf. <bsil.grib>
 'shade')
 shake, sway [INTR]; *ⁿgu* <'gul>
 shake, sway [TR]; *zgu* <sgul>
 shank 小腿; *ɲa-dəm* <nywa.ʔ>; (shin 脛
 骨) *rdʒe-ŋa*; (calf 小腿肚); *ɲa-tʂʰə*
 <nywa.ʔ>
 share [N]; *wgi-ska:* <bgos.skāl>
 shave; shear; *wʒar/wʒar/wʒor* <bzhar/
 bzhar/bzhor>
 sheath; *fəp* <shubs>
 sheep; *luʔ* <lug>; (lamb) *a-ɲa*; *ɲa-ɲa*
 sheepskin; *lək-fē* <lug.shun>
 shin; *ŋa-ɸdō* <nywa.gdong> [onset!]
 shine (of the sun); *ⁿtʰar/far* <shar>
 shoe, boot; *χam* <lham>
 shoot; *ⁿpʰō* <'phangs_[PST]>
 shoulder; *ⁿpʰrok-pa* <'phrag.pa> [rhyme!];
 (shoulder joint) *χpō-mɲiʔ* <dpung.mig>;
 (shoulder blade) *wsuʔ-spa* <sogs.pa>
 [onset!]; *pʰe-fo*
 show; *stē* <ston>
 shrew 鼯鼠; *qam-tsər* (< Rgy.)
 shrine; *mtʰo-kō* <mchod.khang> [onset!]
 shrivel; wither; *ɲpiʔ* <ɾnyid>
 shudder; *haʔ ⁿdar* <?'dar>
 sibling; (elder sibling) *a-ja*; (all male) *pə-
 spən* <bu.spun>; (all female) *mo-spən*
 <mo.spun>; (both sexes) *ɲɲē-rtʂē*
 <ming-sring>
 sickle; *wzo-ra ~ wza-ra* <zor-ba> [onset!]
 [rhyme!]
 side 脅部; *ɸlo-ji* <glo.ʔ>
 sieve; *ⁿtsʰaʔ* <tshags>; (meshless) *tʂʰa-tʂʰa*
 <ʔ>
 silver; *ɲju* <dnḡul>
 sing; *car/car/cor* <gyer/gyer/ʔgyor>
 single; unmarried; *ɲɲə-rcō* <mi.rkyang>
 sink; *ⁿda:* <'dal>
 sister; (man's ~) *rtʂē-mo* <sring-mo>;
 (woman's ~) *mo-spən* <mo.spun>

56. For the first compound element, cf. Amdo ^hju. One reviewer proffered the etymon <g.yo>, but the rhyme correspondence is off.

sit; *ⁿduʔ/zdeʔ~wdeʔ/zdeʔ* <'dug/bsdad/sdod>
 sit on (egg); *rəm* <rum>
 six; *tʂuʔ* <drug>
 sixteen; *tʂək-tʂə* <drug.cu>
 sixty; *wʃə-tʂuʔ* <bcu.drug>
 skin; *ʃə-ⁿbaʔ* (-*ʃē* in compounds) <shun.pa>
 skull; *ⁿgo-ri* <'go-rus>
 sky; *ʃnam* <gnam>; *ʃnam-kʰa* ~ *ʃnam-ŋa* <*nam.mkhaʔ*> [onset!]
 slaughter; *wʃa/wʃi/wʃi* <bsha/bshas/bshas>
 sleep, go to bed; *ŋa:ŋa:ŋu* <nyal/nyal/nyol>; (CAUS) *ʃna:ʃna:ʃnu* <snyal/bsnyal/snyol>
 sleeve; *ⁿpʰō-rō* <**phu.rung**> [onset!]
 [rhyme!]
 sling 甩石器; *wər-rdo* <'ur.rdo>
 slip; *ⁿtʰor/ʃor* <'chor/shor>
 smallpox; *ⁿbrəm-tʃō* <'brum.chung>
 smell, sniff; *snəm* <†snum> (cf. <snom>)
 smoke [N]; *to:* <du.ba>
 smoke [V]; (~ a cigarette) *ⁿthō* <'thung>
 smolder (fire); *mpe qʰrop* <me.ʔ>
 snake; *zbu* <sbrul>
 snare; trap; *ⁿgu*
 snatch; rob; *ⁿpʰruʔ/pʰruʔ/pʰruʔ* <'phrog/phrogs/phrogs>
 sneeze; *zbrət-pa jeʔ* <sbrid.pa byed>
 snore; *ʃjor-ba jeʔ* <sngur.pa byed>
 [rhyme!]
 snot; nasal mucus; *snop* <snabs>
 snow; *kʰa:* <kha.ba>
 soak; *zbō* <sbang>
 soldier; army; *ʃmaʔ* <dmag>
 sole; *rkō-zop* <rkang.zhabs>
 some 一些; *se:rə*
 something; *tʰə-tʂə* <ci.tsig> [onset!]
 somewhere; *tə-ske-ske*
 son; *pə-tsa* <bu.tsha>
 son-in-law; *ʃmak-pa* <dmag.pa>⁵⁷

song; (generic) *car-mo* <gyer.mo> [rhyme!]; (traditional song) *ʃlə* <glu>; (love song sung outdoors) *la-ji* <la.gzhas> [onset!]
 soot 鍋煙; *tʂʰo-kʰə*
 soul; *rnəm-ʃē* <rnəm.shes> [rhyme!]; (spirit, life force) *wla* <bla>
 sound; *zgra* <sgra>
 south; *χlo* ~ *to* <lho>
 spark; *mpe-staʔ* <me.stag>; (anvil ~) *tʂʰa-la*
 spear; *mdō* <mdung>
 speech; utterance; *ska-tʃa* <skad.cha>
 spend; use; *ⁿtʰō*
 spend the night; *zaʔⁿduʔ/zdeʔ~wdeʔ/zdeʔ* <zhag 'dug/bsdad/sdod>
 spider; *ⁿba-rja*
 spin (yarn); *ⁿkʰə/wke:~wka/kʰi*
 spindle; *ⁿpʰō* <'phang>; (spindle whorl) *ⁿpʰō-lo* <'phang.lo>
 spine; backbone; *zge-tsiʔ* <sgal.tshigs> [rhyme!]
 spit (sputum); *kʰa-liʔⁿpʰiʔ/pʰiʔ/pʰiʔ* <kha.lud 'phud/phud/phud>
 spittle 唾沫; *kʰa-rbo:* <kha.lbu.ba>
 spleen; *mtsʰer-pa* <mtsher.pa>
 split (firewood); *wkeʔ*; (~ bamboo) *χʃar/χʃar/χʃor*
 spoon; *kə-dza*
 spouse; *ra-ji*
 spring; *rdza-tʰə* <rdza.chu>
 spring(-time); *χʃiʔ-ka* <dpyid-kha>; (in compounds) *χʃiʔ* <dpyid>
 sputum; *kʰa-liʔ* <kha.lud>
 squeeze out; wring out; *ⁿtsʰər/wtsər/tsʰər* <'tshir/btsir/tshir>
 stab; *χtsaʔ/χtsaʔ/χtsuʔ* <gtsag/gtsags/gtsags>; (~ once); *χtər*
 stack up; *rtsiʔ/wrtsiʔ/rtsiʔ* <rtsig/brtsigs/rtsigs>; *wrtʃaʔ/wrtʃaʔ/wrtʃuʔ*
 stallion; *χsop* <gseb>
 stand; *lō* <lang>
 star; *skar-ma* <skar.ma>
 steal; *rkə/wrki/rki* <rku/brkus/rkus>

57. A variant O(ld) T(ibetan) form suggested by one reviewer, see Bialek (2022: 112).

- steam; *rlō-spa* <rlangs.pa>
 steel; *kā* (< Ch. 鋼)
 steel (part of a fire striker); *mnye-tfa*
 <me.cha>
 step across; *wga:wga:gu*
 <brgal_[PST]/brgal/rgol> [onset!]
 step on; tread; trample; *rdzə/wdzi/rdzi*
 <rdzi/brdzis/rdzis>
 still, yet; *tō* (cf. <da.dung>)
 stir; *fkū?* <dkrug>
 stir-fry; *χsər* <gsir>
 stirrup; *jop-tfē* <yob.chen>
 stomach; *q^ha?-za*
 stone; *rdo* <rdo>
 stop; (when going) *ⁿdu?/zde?/zde?* <'dug/
 bsdad/stod>; (when doing sth) *rtso/rtsi/
 rtsi*
 storm; gale; *rlō-zbə* <rlung.??>
 story; *Ɂna-wfē?* <gna.bshad>; *k^ha-χpe*
 <kha.dpe>
 stove; kitchen range 灶; *t^hop-ka* <thab.ka>
 ~ *rja-t^hop* <rgya.thab>
 strap; *t^hak-pa* <thag.pa>
 street; *ka:ⁿt^ha?* (< Ch. 趕場)
 strength; effort; *χfē?* <shed> [onset!]
 stretch out (hand); *rcō* <rkyong>
 strike (iron); smith; *wⁿgar/wⁿgar/ wⁿgor*
 <mgar/mgar/mgor>
 string (classifier); *ⁿp^hrē* <'phreng>
 struggle 掙扎; *ⁿp^ha?/^mp^ha?/^mp^hu?*
 <'phag/'phags/'phogs>
 stupa 塔; *mt^ho-rtē* <mchod.rten>
 stutterer; *rkək-pa* <lkugs.pa>
 suck; *ⁿdʒəp* <'jib>
 suddenly; *Ɂlu?-rja? ~ Ɂlo-rja?* <glog.rgyag>
 [rhyme!]
 sue against; *χtu?* <gtug>; *ʒu*
 suffer frost damage 遭霜害; *se?* <sad>
 summer; *Ɂjar* <dbyar>
 sun; *Ɂə-ma* <nyi.ma>
- sunbathe; *Ɂə-ma Ɂzi* <nyi.ma.??>
 supper; *ta-pri* (< Rgy.)
 support sb. with one's hand; *scor* <skyor>
 surrender; *ⁿgo ⁿdu?/wtā?/t^hu?* <'go 'dogs/
 btags/thogs>
 surroundings; *mt^ha-k^ha* <mtha.kha> ~ *k^ha-
 mt^ha* <kha.mtha'>
 swallow; *mɁi?* <mid>
 sweat; *tsa-tu*⁵⁸
 sweep; *mt^ha?/wt^ha?/wt^hu?* <'phyag/
 phyags/phyogs>
 sweets made from cheese; *t^hi?* <thud>
 swell; become swollen; *fkō* <skrang>
 swim; *t^hə-rca: je?* <chu.rkyl byed>; *t^hə-
 ʒa? je?* <chu.? byed>; (swim across river)
rca: <rkyal>
 swing; sway; *Ɂju?* <g.yug>
 tail; *rɁa-ma* <rnga.ma>
 tailor; *wzo-wa* <bzo.ba>
 take; *lē/wlō/lō* <len/blangs/longs>; (take
 out) *ⁿp^hi?/p^hi?/p^hi?* <'phud/phud/phud>;
 (take away) *ⁿch^{ar}/c^har/c^hor*
 <'khyer/khyer/†khyor> [rhyme!]
 take a step; stride; *ka:ⁿbo spar/spar/spor*
 <gom.pa spar_[PST]/spar/spor> [rhyme!]
 take down (tent); *ⁿp^hop/p^hop/p^hop*
 <'phebs/phab/phob>
 take revenge; *χti rtse?* (cf. <rtsod> 'quar-
 relling')
 takin 犛牛; *nə-Ɂa-rɁa*
 talk, chat, hold a conversation; *k^ha-wda je?*
 <kha.bda byed>
 target; *ⁿbē-t^he?* <'ben.tshad(?)>
 tartar; *so-rca?* <so.skyag> [onset!]
 tea; *tfa* <ja>
 teach; *rtsop* <slob>
 teacher; *slo-χpən* <slob.dpon>
 tear apart; *χfar/χfar/χfor*; cf. (tear open)
χtʂa:/wtʂa:/χtʂu <hral?/hrol>
 tear up; *χtsop* <gtsab>⁵⁹

58. One reviewer suggested an etymon <tsha.dug>, tantalizingly plausible, but incompatible with known sound changes regarding both onsets and rhymes—the would-be CT proto-form should have yielded **t^ha-tu?*.

59. Semantic extension from a more common meaning 'cut to pieces'.

- tears; *ŋə-tʃə* <ngu.chu>
tease (wool); *seʔ* <sed>
tell; recount; *wʃeʔ* <bshad>; (tell a story)
χpe-wʃeʔ jeʔ <dpe.bshad byed>; (recount
happenings in the past) *ʋna-wʃeʔ jeʔ*
<gna.bshad byed>
temple 太陽穴; *za-mər-mər*
ten; *wʃə(-tʰa-ⁿba)* <bcu.tham.pa>
ten thousand; *kʰrə-tsō* <khri.tshang>
tendon; sinew; *fō*
tent; (white ~) *zgar* <sgar>; (yak-hair tent)
zba <sbra>; *nak-tsʰop* <nag.ʔ>; (Mongolian
tent) *kər* <gur>; (makeshift tent) *so-
kʰo*
testicle; *tək-rdo* <rliḡ.rdo>
tether; *ⁿduʔ ~ⁿdaʔ/wtaʔ/tʰuʔ* <'dogs/btags/
thogs>⁶⁰
that; *tə* <de> [rhyme!]; (PL) *tə-fa-ka*
<de.cha.kha> [onset!]
then; afterwards; *ti-dʒe* <de'i.rjes>; *ti-ⁿpʰro*
<de's.phro>
there (demonstrative adverbial with 3-way
distance contrast); *te* <der> [rhyme!];
(more distant) *pʰə-te*; (even more dis-
tant) *pʰə-ni pʰə-te*
thief; *rkə-ma* <ʔrku.ma>
thigh; *wla* <brla>
thimble; *rtʃək-mō* <lcug.mo> [rhyme!]
thing; object; *kop-tʃa*; *wʃa-ʋa*
think; hold an opinion; *wsam* <bsam>
thirteen; *wʃə-χsəm* <bcu.gsum>
thirty; *səm-wʃə* <sum.cu> [onset!]
this; *ⁿdə* <'di>; (PL) *ⁿdə-rə* <'di.ʔ>
thorn; *mtsʰer-mo ~ tʰer-mo* <tsher.ma>
[rhyme!]
thousand; *stō* <stong>
thread; *ri-skiʔ* <ras.skud>; (oxhair thread)
rtsə-skiʔ <rtsid.skud>; (coarse yarn
thread) *skə-pa* <skud.pa>
- thread (a needle); *kʰop-rna rʃə/rʃi/rʃi*
<khhab.rna rgyu/brgyus/rgyus>
three; *χsəm* <gsum>
thresher 連枷; *ⁿkʰor-ma* <'khor.ma>
throat; *mʃiʔ-pa* <mid.pa>
throw away; *ʋjuʔ* <dbyug> ~ <g.yug>
thumb; *mtʰeʔ-mō* <mthe.mo> [rhyme!];
mtʰe-tʃē <mthe.chen>
thunder; *ⁿbruʔ* <'brug>; [v] *ⁿbruʔ kraʔ*
<'brug.grag>
thunderbolt; *tʰuʔ* <thog>
Tibetan; *peʔ* <bod>
Tibetan antelope; chiru (*Pantholops hodg-
sonii* 藏羚); *χtsu* <gtsod>⁶¹
Tibetan language; *po-skeʔ ~ peʔ-skeʔ*
<bod.skad>
Tibetan macaque (*Macaca thibetana* 藏酋
猴); *spi-ʋmar* <spre'u.dmar>
Tibetan partridge (*Perdix hodgsoniae* 高原
山鶉); *rtsak-pa* <sreg.pa>
Tibetan snowcock (*Tetraogallus tibetanus*
藏雪雞); *ku-mu* <gong.mo> [rhyme!]
Tibetan wild ass (*Equus kiang* 藏野驢);
rtʃoŋ <rkyang>
Tibetan woolen cloth 氈氍; *ⁿpʰruʔ*
<phrug> [onset!]
Tibetan writing; *peʔ-jiʔ* <bod.yig>
tickle; *qə-tə-qə-lə jeʔ* <?. byed>
tiger; *staʔ* <stag>; (tiger skin) *stak-fē*
<stag.shun>
time; *nam-rtsa* <nam.ʔ>
times; *te-tʰē* <?.thengs>
tinder; spunk (made from cudweed 火絨);
spa: <spra-ba>
tip; end of a long object; *sne(-ka)*
<sne.kha>
today; *tə-re* <de.ring> [rhyme!]
together; *hē-ska*
tomb; *tər-sa* <dur.sa>

60. The rhyme of the variant present form *ⁿdaʔ* could be secondarily derived from the past stem *wtaʔ*.

61. No chirus were found in Khrochu County, so this form is in all likelihood an Amdo loan; one reviewer suggested a CT form *gtsos* which perfectly matches the Amdo rhymes (Upper Likhogma *χtse*, where CT *os* > *e*; Byamsme *ʰtsu*, where CT *os* > *u*).

- tomorrow; *nō-sja* <nang.snga>; (day after tomorrow) *ʁnō-yi* <gnangs.nyin> [rhyme!]
- tongs; *ska-nba* <skam.pa>
- tongue; *rtfe* <lce>; (uvula) *rtfe-tfō* <lce.chung>
- tooth; *so* <so>; (incisor) *sne-so* <sgnon (?)>.so [onset!] [rhyme!]; (molar) *ngram-so* <'gram.so>
- topple; *lu?* <log>; (cause to topple); *rdzu?* <zlog>
- torch; *mye-zge* <me.sgron> [rhyme!]
- touch; *ra?* <reg>; *χlē*
- tow; drag; *n dzi?/tši?/tši?* <'drud/drud/drud>
- trace of an object where it used to be; *rdzi* <rjes>; (its original location) *k^ha-me*
- transport; *sce?* <skyel> [rhyme!]
- tree; (conifer) *zdō-pā* ~ *zdō-pu* <sdong.po> [rhyme!]; (non-coniferous tree) *fē-na?* <shing.nag>
- tremble; *n dar* <'dar>
- tribute in grains; tax; *k^hra*: <khral>
- trivet; *rtfa?-zje?* <lcsags.sgyed>; (made with three stones) *rdo zje?-pā* <rdo.sgyed.pu>
- trough for water or animal feed; *c^hā-rko* <?.rko>
- tsampa; parched barley flour; *rtsa-nba* <rtsam.pa>
- tufted deer (*Elophodus cephalophus* 毛冠鹿); *na?-zbi* <nags.ʔ>⁶²
- turn; spin [INTR]; *n^hor* <'khor>
- turn [TR]; *skor* <skor>
- turn around; *ʁor-se n^hor* <?.?.khor>
- turn in; hand to; *spe?* <sprod>
- turn over; *zjər rdzu?(-lu?)* <sgyur.zlog.log>
- turnip; *lo-ma* <lo.ma>;⁶³ (~ tuber) *ju-rdu?*
- turquoise; *ʁjə(-kar)* <g.yu.dkar> [onset!]
- turtle; *rā-zba*: <rus.sbal>
- turtledove; *du-du-pe-pe* (< Rgy.)
- tusk; fang; canine; *mtf^ha*: <mche.ba>
- twelve; *wtfək-yi* <bcu.gnyis>
- twenty; *yi-fā* <nyi.shu>
- twist; (wring) *χtfā/χtfi/χtfi* <gcu/gcus/gcus>; (twist threads together); *zga/zgi/zgi* (cf. <sgrim>)
- two; *ʁyi* <gnyis>
- umbrella; *ʁdu?* <gdugs>
- uncle; (maternal) *a-zō* <a-zhang>; (paternal) *a-ku* <a.khu>
- underside; *zop(-ka)* <zhab.s.kha>
- understand; know; *fī* <shes>; *χa ko* <ha go>
- untie; unwind; *wfi?* <bshigs_[PST]>
- upstairs; *k^ho-to*
- upward; *jar* <yar>
- urine; *χtfē* <gcin>
- use; *n^hō/wtfō/tf^hō*;⁶⁴ [N] *ka*:
- valley; (small~) *lō-la?* <lung.lag> (~with villages inside) *lō-k^hu?* <lung.khug>; (lower part of valley) *mdo(-k^ha)* <mdo.kha>
- vegetable; *lo-ma* <lo.ma>⁶⁵
- vertical surface; *ŋo(-lop)* <ngo.ʔ>
- very; *ŋo-ma* <ngo.ma>; *mā-n dza* <mi.dra>
- victory; *rja*: <rgyal>
- village; *ts^ho-pa* <tsho.ba>; (villager) *zde-pa* <sde.pa>
- voice; *ske?* <skad>
- vomit; *scu?* <skyug>
- vow; make a vow; swear; *mna sca/sci/scu* <mna' bskyal_[PST]/†skyel/skyol> [rhyme!]

62. An interesting etymological suggestion <nags.be'u> ('calf of the forest') was offered by one reviewer. However, the Sastod word for 'calf' is *pa-wu* <ba-bu>, whereas *pi* <be'u> refers to 'calf fetus'.

63. From CT 'leaf'. In all other Tibetic varieties of Khrochu, the name for the turnip plant is simply *lo*.

64. Probably a loan from Rgyalrongic; cf. Showu *ntf^hē*; Tshobdun *ntf^hi*; Northern Horpa *nts^hò*, Western Horpa *mtf^hò*.

65. Note the semantic change from the original meaning 'leaf'.

- vulva; *ʁʒō* <gzhang>
wade across; *tʰə wga:/wga:/gu* <chu
brgal_[PST]/brgal/†brgol>
wages; *ʁla* <gla>
waist; *rkeʔ-pa* <rked.pa>
wait; *zguʔ* <sguy>
wake up; (INTR) *seʔ* <sad>; (TR) *wfuʔ*
wall; *cō* <gyang>
walnut; *ʒgo-lo* (< Rgy.)
want; *wsam* <bsam> (e.g. *ŋa ʰjo* (go)
wsam-ŋə 'I want to go.')
- warm oneself by fire; *mɲe ʁzi* <me.ʔ>
warp 經線; *rjə* <rgyu>
wart; *mdza-ra* <mdzer.pa> [rhyme!]
wash; *ʰkʰrə/wkri/kʰri* <'khru/bkrus/
khrus>
water; *tʰə* <chu>
we [DU]; (INCL) *o-ŋi* <?.nyis> (EXCL) *ŋə-ŋi*
<?.nyis> [onset!]
we [PL]; (INCL) *o-tʰa-ka~o-fa-ka*
<?.cha.kha>; (EXCL) *ŋə-tʰa-ka~ŋə-fa-ka*
<?.cha.kha>
wear; (~ a garment/hat) *kē* <gon>; (~ a
bracelet, earrings, etc.) *ʰduʔ ~ʰdaʔ/
wtaʔ/tʰuʔ* <'dogs/btags/thogs>; (a belt)
ʰtʰē/ptʰe/tʰē <'ching/bcings/chings>; (~
a turban) *ʃka* <dkri>
weasel; *rti-lo* (< Rgy.)
weather; *ʁnam-luʔ* <gnam.log>
weave; *tʰaʔ ʰtʰaʔ/wtaʔ/tʰuʔ* <thags 'thag/
btags/thogs>; (~ a basket); *wta/wti/wti*
<bsla_[FUT]/bslas/bslas_[PST]>
wedge 楔子; *cʰə* <†khyi> (cf. <khyi'u>)
weeds; *rdə-ʰbə* <ldum.bu>
weft 緯線; *spən* <spun>
weigh; *rja-ma ʰjuʔ/wcaʔ/cʰuʔ* <rgya.ma
'gyog/bkyags/khyogs>
west; *nəp* <nub>
what; *tʰə(-tsə)* <ci.(tsig)> [onset!]
wheat; *kro* <gro>
wheat straw; *suʔ-mu* <sog.ma> [rhyme!]
wheat stubble; *suʔ-ju* <sog.yu>
wheel; *ʰkʰor-lo* <'khor-lo>
- when (interrogative adverb); *nam-ske*
<nam.ʔ>
when (temporal conjunction); *ti* <dus>
(e.g. *zama za juʔ-ti kʰawda ma-jeʔ* 'Don't
talk while eating.')
- where (interrogative adverb) *kə-nə* <ga.na>
[rhyme!]
whey 乳清; *tʰə-rkə* <phyur-khu>
which (interrogative pronoun); *kə-tə*
<ga.de> [rhyme!]
while; *dʒor~ʒor* <zhor> [onset!] (e.g. *ʰjo
dʒor za dʒor* 'walking while eating')
- whip; *rtʃak-tsʰē* <lcag.tshan>
white grub 蠟蟻; *sa-ʰdop-ʰbə-cuʔ*
<sa.ʔ!bu.ʔ>
who; *sə* <su>; (ERG/GEN) *si* <sus/su'i>;
(DAT) *so*:
why; *tʰe*; (e.g. *tə tʰe: mə-bō-la* 'Why
doesn't he come?')
- wield; raise (e.g. a stick) to strike;
mtʰar/mtʰar/mtʰor
<'phyar/phyar/'phyor>
wife; *mna-mo* <mna.mo>; *rga-mo*
<rgad.mo>
wild ass (*Equus kiang* 藏野驢); *rcō*
<rkyang>
wild beast; *rə-taʔ* <ri.dwags>
wild boar; *ʰhaʔ-rgeʔ* <phag-rgod>
wild cat; *təʳ*⁶⁶
wild goose; *cʰō-cʰō* <khrung.khrung>
[onset!]
wild yak; *ʰbrō* <'brong>
will-o'-the-wisp 鬼火; *ʰdze-mɲe* <'dre.me>
willow (*Salix zangica* 藏柳); *χtʃō-mō* (cf.
<lcang.ma>) [onset!] [rhyme!]
win; be victorious; (in gambling) *rja:*
<rgyal>; (in fighting) *wa*
wind; *rlō* <rlung>
wind (thread); *ʃkə/ʃki/ʃki* <dkri/dkris/
dkris>
window; *ka-rkō* <dkar.khung> [onset!]
windpipe; *ō-krō*
wing; *ʃok-pa* <(g)shog-pa>

66. Cf. Yunlinsi Rma *taʰ-ɬaʰ* 'wild cat'.

| | |
|--|---|
| winnow; <i>rlō χtō/wtō/χtō</i> <rlung gtong/
btang/gtong _[PRS] > | yak; (generic) <i>zuʔ-naʔ</i> <zog.nag>; (male ~)
<i>ɕjaʔ</i> <g.yag>; (female ~) <i>ʳbrə</i> <'bri>; (~
calf) <i>ja-rə</i> |
| winter; <i>rgən</i> <dgun> | yarn; <i>ke-taʔ</i> ; (on spindle) <i>ba-tʂʰə</i> |
| wipe; <i>mtʃʰaʔ/wtʃʰaʔ/wtʃʰuʔ</i> <'phyag/
phyags/phyogs> ⁶⁷ | yawn; <i>bla:-wu jeʔ</i> <glal.? byed> |
| wipe off; erase; <i>rdzeʔ/wdzeʔ/rdzeʔ</i> | year; <i>lo</i> <lo>; (this year) <i>to-tsiʔ</i>
<do.tshigs>; (last year) <i>na-nē</i> <na-ning>;
(next year) <i>sō-peʔ</i> <sang.phod> |
| wither; <i>rɲiʔ</i> <rnyid> | yesterday; <i>kʰa-rtsō</i> <kha-rtasang>; (day
before yesterday) <i>kʰa-rɲi</i>
(cf. <khas.nyin>) |
| wolf; <i>spa-ʳkʰə</i> <spyang.ki> | yield (right of way); <i>wzər</i> <bzur _[PST] > |
| woman; <i>po-mo</i> <bu.mo> [rhyme!] | yogurt; <i>ʒo</i> <zho> |
| wood; <i>fě</i> <shing> | you [DU]; <i>čʰə-ɲi</i> <?.nyis> |
| woodpecker; <i>fě-sta-mo</i> <shing.rta.mo>
[onset!] | you [SG]; <i>čʰo</i> <khyod> [rhyme!]; [ERG/
GEN] <i>čʰu</i> ; [DAT] <i>čʰo</i> ; (yourself) <i>čʰən-ka</i> |
| wool; fleece; <i>pa</i> : <bal> | you [PL]; <i>čʰə-fa-ka</i> ~ <i>čʰə-tʃʰa-ka</i>
<?.cha.kha> [onset!]; (yourselves) <i>čʰor-
ka</i> |
| woolen cloak (of coarse wool); <i>la</i> : <la.ba> | young animal; <i>pʰruʔ</i> <phrug> |
| woolen cloth; <i>sna-ʳbə</i> <snam.bu> | zipline; <i>zaʔ</i> |
| wound; <i>rma-kʰa</i> <rma.kha> | |
| wrap; <i>ʳtʰəm/wtəm/ʳtʰəm</i> <'thum/btums/
thums> | |
| wrinkle; <i>si-mō</i> <sul.mo> [rhyme!] | |
| wrist; <i>laʔ-ske</i> <lag.ske> | |
| write; <i>ʳbrə/pri/pri</i> <'bri/bris/bris> | |

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67. The meanings ‘wipe’ and ‘sweep’ are conveyed by the same verb forms stemming from CT ‘sweep’ via semantic broadening.

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Publication history

Date received: 27 October 2023

Date accepted: 9 May 2024

Published online: 8 August 2025