

Dàyáng Pumi phonology and adumbrations of comparative Qiangic¹

James A. MATISOFF
University of California, Berkeley

1. Introduction²

I worked on Pumi phonology in Kunming from March 7th to 29th, 1996, with a consultant named Hé Shùkāi, a young woman in her early twenties. Ms. Hé, a student in the Foreign Languages Department (Waiyuxi) of the Yunnan Minzu Xueyuan (Yunnan Institute of Nationality Studies), speaks excellent Mandarin, but despite having lived in Kunming for several years, she retains a perfect command of Pumi, since she makes frequent trips home and stays in close touch with her family. She is from Dàyáng Village, in northern Lanping County, Yunnan.³

Like the other Qiangic languages,⁴ Pumi has an extremely complex phonology, and shows considerable internal dialectal diversification.⁵ Several other dialects have been described in the literature. The *Pumi-yu jianzhi* (Lu Shaozun 1983) contains data from Jinghua (also spoken in Lanping County, Yunnan) and Taoba (Muli County, Sichuan). Dàyáng is different from them both, but closer to Jinghua than to Taoba. The Taoba and Jinghua dialects also represent Pumi in “ZMYYC” (Sun et al., 1991), where they appear as languages #10 and

¹This paper is affectionately dedicated to Paul K. Benedict, my mentor and inspiration for the past thirty years. An earlier version was presented at the 29th International Conference on Sino-Tibetan Languages and Linguistics, Noordwijkerhout, Netherlands, in October 1996.

²My thanks to Joshua Guenter for entering my fieldnotes into the computer during the summer of 1996, and to Picus Ding, Zev Handel, Elisabeth Hsu, and Randy J. La Polla for helpful comments on the first version of this paper.

³This is quite close to the Naxi /Moso area in Lijiang County; Ms. Hé claims that she can understand spoken Moso without difficulty. Hé Shùkāi has also worked briefly as a consultant with Dai Qingxia, as well as with Picus Ding, a student at Australian National University in Canberra, who has worked mostly on the Niuwozi dialect.

⁴The Qiangic group of languages, formerly vaguely known to Western linguists under the pejorative name of *Xifan* (“Western barbarian”) or *Dzorgaic* (R. Shafer), and regarded as a “residual type of Loloish”, have only come into sharp focus within the last 15 years or so, thanks to the work of Chinese linguists like Sun Hongkai, Dai Qingxia, and Huang Bufan, who have demonstrated that they constitute an independent branch of Tibeto-Burman, with about a dozen members, including Ergong, Ersu, Guiqiong, Muya, Namuyi, Pumi, Qiang, Queyu, Rgyalrong (=Jiarong = rGyarong), Shixing, and Zhaba, as well as the extinct Xixia or Tangut (see below 6.1).

⁵The total number of Pumi speakers is only about 30,000. They earn their livelihood mostly as orchardists, cultivating a wide variety of fruit- and nut-trees.

#11 respectively. In “TBL” (Dai et al, 1992) data is presented from the “Lanping” dialect (identical to ZMYYC’s “Jinghua”) and Jiulong (from Ganzi Prefecture, Sichuan), #9 and #10, respectively.

The name “Pumi” is a Chinese exonym that more or less approximates the pronunciation of the autonym, pronounced pshén-mí in the Dàyáng dialect, which clearly means ‘White People’ (pshén ‘white’). This morpheme seems to go back to Proto-Qiangic *pram (cf. Rgyalrong kəpram), distinct from the much more widely attested TB root *plu ‘white; silver’. Other authors have called the language “Primi” or “Prinmi”, but for the moment we are sticking with the better-known exonym.

This paper is far from a definitive treatment of the Dàyáng dialect, and merely represents work in progress. In particular, many problems remain with respect to the details of tone sandhi in polysyllabic words and collocations. I hope soon to undertake a more systematic study of comparative Qiangic phonology.

2. Syllable structure

Syllable canon

$$(F) C_i (G) \overset{T}{V} (y/w) (N)$$

G = y w ĩ/s/z ʃ/ʒ

F	-->	ϕ	/_____	Labial
	-->	s	/_____	Dental
	-->	ʃ	/_____	Palatals
	-->	χ	/_____	Postvelars

F --> [+voiced] /_____ [+voiced]
i.e. ϕ > β; s > z; ʃ > ʒ; χ > ʁ

Reduced stress syllables

Dàyáng has many sesquisyllabic words, with schwa vocalism in the minor syllable. I usually separate these toneless presyllables from the following root by a hyphen.

- An important subset are verb roots preceded by directional prefixes (see below 5.022).
- Also reduced first syllables in N-N compounds (which generally tend to have iambic stress patterns in TB languages):

ϕpĩ ‘belly’ > ϕpə-tʃou ‘navel’
tʃf ‘water’ > tʃə-ϕpá ‘boiled water’

- Sometimes (especially before liquids or nasals) the schwa is elided, leading to secondary phonetic clusters like [vr]. See below 3.04.

Nasalized vowels

There are no final buccal consonants in Pumi syllables, though nasalization of the vowel is usually a reliable indicator of an earlier syllable-final *nasal. Occasionally one has the impression of hearing a real consonantal -n or -ŋ (but never -m) at the end of a syllable, though this is unreliable and disappears on repetition.

3. Initial Consonants

Qiangic is a “consonant-prominent” subgroup of TB, with a rich proliferation of syllable onsets reminiscent, e.g. of Hmongic languages. Within Qiangic, the most elaborate consonantal repertoires are to be found in the many dialects of the Rgyalrong and Ergong languages, which can have as many as 200-300 initial contrasts. Dàyáng Pumi, while not quite in that league, still has at least 125 syllable onsets.

3.01 Simple consonants

p	t	ts	ʈ	tɕ	tʃ	tɕ	k	q
ph	th	tsh	ʈh	tɕh	tʃh	tɕh	kh	qh
b	d	dz	ɖ	dʑ	dʒ		g	
ɸ		s		ɣ	ʃ	ɕ	x	h
v		z		ʐ			ɣ	fi
m	n					ɳ	ŋ	
ṃ								
w	l			r		y		
	ɭ							

3.02 Clusters with -w-

tw	stw	ʈw	tsw	tɕw		ɕtɕw	kw	qw	χqw
[thw]	sthw	ʈhw	tshw	tɕhw	tʃhw	ɕtɕhw	khw	qhw	χqhw
[dw?]	zdw	ɖw	dzw	dʑw	dʒw	zdʑw	gw		
sw	sʃw			ɣw	ʃw	ɕʃw	xw		
				ʐw			ɣw		
lw				rw					
ɭw									

Several different phonemic scenarios are possible with respect to medial [-w-]:

(a) Restrictions in terms of preceding consonant: if the -w- only occurs after consonants at a certain position of articulation, e.g. velars, it may be best to

consider the labialization as part of the Ci. Thus Proto-Hlai is reconstructed with a series of *labiovelars.⁶

(b) Restrictions in terms of following vowel: the *-w-* occurs after Ci's at several positions of articulation (perhaps excluding labials), but only before certain vowels. This is the case, e.g. with Written Burmese and Mzieme (Angamoid Branch of Naga)⁷, where *-w-* occurs only before *-a* and *-e*, so that it is best regarded as part of the rhyme.

(c) Relatively unrestricted either in terms of the Ci or the following vowel. This is the situation in Pumi, where *-w-* occurs freely after all consonantal positions except labials, and before all vowels except back rounded /u o ou/. However, the vowel /-o/ is automatically pronounced with labialization of the preceding consonant, e.g. /ro/ 'chicken' [r^wo].⁸ This is in fact the chief auditory clue for distinguishing the rhymes /-o/ and /-ou/, since labialization of the Ci does NOT take place before /-ou/.

In general, then, Pumi [-w-] can be considered to be relatively independent of the preceding and following segments, constituting a separate structural part of the syllable.

In some words with high front vowel, the glide [w] is realized as a non-syllabic rounded glide [ɥ], similar to that in French *nuit* [nɥi]:

'liver'	tswǐN [tsɥiN]	< PTB *m-sin
'handspan'	tɕhwí [tɕɥi]	< PTB *m-twa
'pull/drag'	tswíN [tsɥiN]	
'shoe'	tswǐ [tsɥi]	

3.03 Clusters with -y-

py	ɸpy	ty	[sty]	tsy	
phy	ɸphy	thy		tshy	ʃtʃhy
by	βby	dy		dzy	
		sy			xy
		zy			
my		ly			
		ɬy			

Note the absence of velar-plus-y clusters.

⁶See Matisoff 1988b:291

⁷Namkung, ed. 1996:309-10.

⁸See below 4.0, *Vowels*. There are a number of words where *w-* occurs as the Ci before the vowel /-o/, e.g. *wǒ* 'tiger', *wǝ-mí* 'guest', *wó* 'mouse'. These words could be analyzed as having zero-initial, but there seems little point to this, since it complicates the syllable canon, and initial *w-* occurs freely before other vowels as well, including /-ou/.

3.04 Reflexes of liquid clusters

Tibeto-Burman medial liquids */-r- -l-/ have left more indirect traces in Dàyáng Pumi:

(a) Labials plus liquids.

Although the details are still far from clear, *labial-plus-liquid clusters have developed into two series of labial affricates: one retroflex and one palatal. The palatal series is redundantly (and optionally) pronounced with an epenthetic stop between the labial and fricative elements. This epenthetic stop is the most salient feature distinguishing the two series, and the recording linguist is grateful for it. The offglides in the aspirated and voiced members of the retroflex series /pʂh bʂ/ are ʂ and ʂ respectively; in the plain member of this series, the offglide varies between [ʂ] and a fricative r-sound similar to Czech /ř/:

pʂ [př]	pʃ [ptʃ]
pʂh	pʃh [ptʃh]
bʂ	bʂ [bdʂ]

The distinction between TB medial */-r- and */-l- is fragile at best, and it would be too much to suppose that the two Pumi series reflect different proto-liquid medials. There is too much variability; nothing is this neat.

There is at least one excellent example of TB *pw- > Dàyáng p(t)ʃh:
 PIG PTB *p-wak > Dàyáng ptʃhǎ

False labial-plus-liquid clusters

Sometimes the optional elision of schwa from the minor syllable of a sesquisyllabic word gives rise to a secondary phonetic cluster that does not yet have systemic status, e.g.:

[vr]	‘scar’	vrè-tʂhǎ ~ vərè-tʂhǎ
[pr]	‘foodstuff’	prǎ ~ pərǎ
[br]	‘snake’	brá ~ bərá
[bl]	‘lip’	xyòN-blǎ ~ xyòN-bəlǎ

In these cases the schwa returns in careful speech.⁹

(b) Velars plus liquids

Dàyáng Pumi has a full series of retroflex stops, which do not occur in other known Pumi dialects, even the closely related Jinghua.

t	[w
th	[hw
d	d[w

⁹Similar elision of the schwa may also occur before nasals: BODY gəmú ~ gmú.

These usually derive from TB clusters of *velars-plus-liquid, e.g.

	<i>PTB</i>	<i>Dàyáng</i>	<i>Jinghua</i>	<i>Taoba</i>	<i>Lahu</i>
'daughter-in-law'	*krwəy	tḥ	tṣhə ¹³	tsũ ⁵⁵ tṣhə ⁵³	ò-khî-ma
'foot'	*krəy	tḥí	tṣhə ⁵⁵	tṣhə ⁵³	khɿ
'gall'	*m-kris	tí	tṣə ⁵⁵	tṣə ⁵⁵	kī
'garden'	*kram	tḥǎ			kho
'hawk/eagle'	*glaŋ	tḥ	tṣp ¹³	tṣe ³⁵	
'horn'	*krəw	tḥé	tṣhy ⁵⁵	tṣhũ ⁵³	khɔ
'six'	*d-krok	tḥú	tṣhu ¹³	tṣhu ³⁵	khò?
'star'	*ʔgrəy (PLB)	dḥ	dzə ¹³	dzə ³⁵	məʔ-kə
'thread'	*kriŋ	dḥ	dzy ⁵⁵	dzũ ⁵³	khe

This is not the whole story, however. These retroflexes (especially the voiced member **d**) also seem to have other sources, e.g. *pw- and *ly-:

'chaff'	PTB *pwaay > Dàyáng dḥwǎ
'lick'	PTB *m-lyak > Dàyáng dḥ

The word for DIG is interesting: Dàyáng **tḥ** looks as if it is related to the widespread TB root *du (STC #258); but PTB *-u usually goes to Dàyáng -u, and we have seen that the Dàyáng retroflexes do not derive from plain *dental stops. Perhaps a better comparison here is PTB *klaw 'dig out, weed' (STC #269).

3.05 Clusters with fricative prefix

F	-->	ϕ, β	/_____	Labial
	-->	s, z	/_____	Dental
	-->	ʃ, ʒ	/_____	Palatals
	-->	χ, ʁ	/_____	(Post)velars

Like the Jinghua dialect,¹⁰ Dàyáng has a fricative preinitial or prefix that is homorganic to the following stop or affricate Ci and that agrees with it in voicing. This prefix occurs before root-initials at all positions of articulation (except that the velar/postvelar, retroflex/palatal, and alveo-/lamino-palatal contrasts are neutralized after the prefix). The prefixed root-initial may also be followed by a glide, yielding clusters of three consonants (F + Ci + G):

ϕp	ϕpy	st	stw	ʃtʃ	ʃtʃw	χq	χqw
ϕph	ϕphy	sth	sthw	ʃtʃh	ʃtʃhw	ʃtʃhy	χqh
βb	βby	zd	zdw	ʒdʒ	ʒdʒw	ʁg	χqhw

Before the laminopalatal (or "grooved") fricatives there is a shaky contrast between a dental and a palatal onset:

sf	sfw	ɕʃ	ɕʃw
zʒ			

¹⁰See Namkung, ed. 1996:371-2.

With respect to nasals, TB *s- seems to have left an overt trace in Dàyáng Pumi only in the shape of voiceless /'m/, as in mǐ 'medicine' (compare WT sman). Other Pumi dialects preserve *s + nasal clusters better: Jinghua has both /m/ and /ŋ/, while Taoba has a full set at four positions of articulation: /m, ŋ, ɲ, ŋ̃/.

3.06 Composite chart of Dàyáng Pumi initial consonants

p	py		ɸp	ɸpy		pʐ	[p̚]	pʃ	[ptʃ]		
ph	phy		ɸph	ɸphy		pʃh		pʃh	[ptʃh]		
b	by		βb	βby		bʐ		bʒ	[bdʒ]		
t	ty	tw	st	[sty]	stw						
th	thy	[thw]	sth		sthw						
d	dy	[dw?]	zd		zdw						
k		kw									
kh		khw									
g		gw									
q		qw	χq		χqw						?
qh		qhw	χqh		χqhw						
			κG								
t̥		t̥w	ts	tsy	tsw	tʂ	tʂw				
th̥		t̥hw	tsh	tshy	tshw	tʂh	tʂhw				
d̥		d̥w	dz	dzy	dzw	dʐ					
tʃ			ʃtʃ		ʃtʃw					tɕ	
tʃh		tʃhw	ʃtʃh		ʃtʃhw	ʃtʃhy				tɕh	tɕhw
dʒ		dʒw	ʒdʒ		ʒdʒw						
s	sy	sw	sʃ		sʃw	ɕ	ɕw	ʃ	ʃw	ɕ	ɕʃ
	ɕʃw										
z	zy		zʒ			ʐ	ʐw				
ɸ										x	xw xy
	h										
v										ɣ	ɣw
	ɦ										
m	my	mr/mʐ		m̥		n		ɲ		l̥	
w				l	lw	ly	ĩ	ĩw	y ¹¹		
				l̥	l̥w	l̥y					

¹¹Sometimes phonetically fricativized, /ʃ̥/.

3.1 Labials

p	py	ɸp	ɸpy	pʷ [pʷ]	pʃ [ptʃ]
ph	phy	ɸph	ɸphy	pʃh	pʃh [ptʃh]
b	by	βb	βby	bʷ	bʒ [bdʒ]

Simple labial stops

p pǔ pǔuN pǔuN	‘bucket’ ‘father's younger brother’	pǔ pě	‘lower part’ ‘flour’
pà tyé pí pó pé pǔ	‘stool’ ‘liter container’ ‘wolf’ ‘ancestor’	pìN ʒdʒí pí pì pú	‘wild animal’ ‘this year’ ‘ladle’
ph phǔ phà lǎ ~ phà lá ʒdʒòuN phú	‘price’ ‘butterfly’ ‘grass mat’	phǎ-lyǔu phǎ-tǎ	‘hat’ ‘rip seam’
b bǎ bè ñá bá ʃhwó ʃhwò bíN bú bəsě	‘chaff’ ‘snake’ ‘rough; coarse’ ‘busy’ ‘insect’ ‘peach’	bǔuN bá ʒǎw béiN bóuN bə-dóuN	‘cold’ ‘dirty; a slob’ ‘coarse’ ‘have’ ‘soul’

This phoneme is allophonically trilled [ḃ] before barred-i:

ḃí	‘sun’	ḃí	‘bee’
ḃí	‘thin/sparse’	ḃí lyò lyō	‘thin’

Palatalized labial stops

py pyé gə-pyé	‘pick out with a tool’ ‘plank’	ɲè pyé	‘sickly’
phy phyé phyé	‘testicle’		
by byě lè byě tʃhə byé	‘collapse’ ‘radish’ ‘stick; cane’	myóN thǎ-byé gà byé	‘blind’ ‘plate/dish’

Prefixed labial stops

φp		φpǐ	‘stomach’
φpǔ	‘leaf’	φpǐ ~ φǐ	‘saw’ (n.)
φpǐ	‘pus’	φpǔw	‘begrudge’
φpǔ-tʃóu	‘navel’	φpǐ	‘axe’
φpó	‘frog’	φpóuN	‘government official’
φpí	‘snow’		
φpǔw	‘wide’		
φph		φphǐ	‘slanting’
φphǔ	‘kidney’		
φphě	‘sediment’		
βb		βbǔ	‘sore; boil’
βbǐ	‘bloated (from eating)’	βbǐ	‘pot (big)’
βbǐ	‘long-grained rice’	sìN βbóuN	‘tree’
βbǐN	‘urine’		

Prefixed palatalized labial stops

φpy			
φpyé	‘sacrifice’		
φphy			
φphyě	‘patch’ (v.)		
βby			
βbyě	‘scold’		

Labioretroflex affricates

pʒ [pǐ]		pʒéi wú	‘born in Monkey Year’
pʒěN	‘pour out’		
pʒé dzə	‘thigh’	pʒé pʒǔw	‘fight’
qhù pʒów	‘comb’	stáN tsǐ pʒè	‘lizard’
		tyòuN	
pʂh		pʂhě	‘chop’
pʂhǎ	‘age’	pʂhéi	‘Pumi liquor’
pʂhá	‘(fruit) pit’	pʂhéN	‘white’
pʂhéN mí	‘Pumi’	pʂhǐ	‘core’
pʂhó βbòuN	‘cypress’	qhù pʂhě	‘braid’
pʂhé	‘news’		
stǐ pʂhǐ	‘testicle’		
bʒ		bʒǎN	‘near’
bʒǎ ~ bʒǔ	‘ladder’	bʒǎN	‘tears’
bʒǎN	‘root’	bʒě	‘snap’ (v.i.)
bʒěN	‘rope’		

bzɿ ŋɛ́N bzóN	‘water conduit’ ‘face’	bzɛ́ ʃtʃǒ zǎ-bzɛ́N	‘whip’ ‘ring (for finger)’
------------------	---------------------------	-----------------------	----------------------------------

Labiopalatal affricates
(with optional epenthetic stop)

pʃ ~ ptʃ ptʃǒ	‘blue’	ptʃí	‘intestine’
pʃh ~ ptʃh ptʃhǒ ptʃhě] ptʃhǐN ptʃhě ptʃhè tsí ptʃhè ɸpǐ mə ʒdʒíN ptʃhí	‘rot’ ‘direction’ ‘tomb’ ‘sharpen/whittle’ ‘fly’ (n.) ‘father-in-law’ ‘good’	ptʃhǒ ptʃhǐN ptʃhǒu ptʃhò ptʃhǒ ptʃhè ɸpǐ ptʃhè ɸpí	‘pig’ ‘escape’ ‘gourd ladle’ ‘bamboo fence’ ‘mosquito’ ‘castrated pig’
bʒ ~ bdʒ bdʒǐN bdʒě bdʒǐN bdʒɛ́ ʃtʃǒ	‘bright’ ‘flat’ ‘dawn’ ‘whip’	b(d)ʒǐN bdʒó bdʒě khə-bdʒǒu	‘run/fly’ (v.) ‘short’ ‘be severed’ ‘spurt forth’

3.2 Dentals

t	ty	tw	st	[sty]	stw
th	thy	[thw]	sth		sthw
d	dy	[dw?]	zd		zdw

Simple dental stops

t tǐw tǔ tá tó tóuN khwǒ tóuN tɛ dzǐ tə-tʂǎ ~ tǎ tʂǎ tə-ʂé	‘poke’ ‘animal oil’ ‘big’ ‘upper part’ ‘plow’ ‘yellow weasel’ ‘hour; while’ ‘tael (weight)’ ‘hang down’	tǐw tǒN nǒN tǐw tó kǒuN tó stù tí tǎ-tʂwǒ tə-tǎí tə-tǎ	‘Yi (impolite)’ ‘crossbow’ ‘plant’ (v.) ‘cabinet; box’ ‘threshold’ ‘honest’ ‘prop up’ ‘weigh’ ‘carry on pole’
th thǐ ~ sthǐ thǎ ɲǒN gə-thǒ thə-dzǒN thə-thǐ	‘sweet’ ‘stand idle’ ‘narrow-necked jar’ ‘be punctured’ ‘wipe’	thǐN thá dzǐ zə-thǒ thə-dǎiN [~dǎiN] thə-gú-ǎí	‘drink’ ‘persimmon’ ‘millstone’ ‘break’ (v.i.) ‘chat’

thə-nǐ	'hear'	thə-ʒdʒwí	'exchange'
thə-sthí-sthyǐw	'reverse'	thə-tʂhón	'open; make a hole'
thə-tchǐN	'give'	thə-xó	'be left over'
thə-zʒì stwáN sǐ	'fell asleep'	thə-tyóuN	'peel (fruit)'
thə-χqhǵă	'scoop out'	thə-çfú	'cover'
thə-kí	'reap'	thə-phfǐ	'grasp w/fingers'
thə-rí-fǐ	'skin (cattle)' [v.]	thə-tǔw	'laborious'
thə-tǐiN	'cause to snap /break (stick)'	thə-çfwé-çfú	'withhold facts'
d			
dǐN	'earth'	dǐ	'be'
dǒ	'back'	dǒ	'stupid'
mé dó	'a mute'	dǔ	'poison'
dìN χqwáN	'flatland'	dòuN qwó	'wing'
dù qhwó	'cucumber'	də-mzǐ	'ripe'
də-zǐ	'catch; keep'	də-sthǔ	'borrow'
qò dǒ	'pheasant'	fǐ-dǐ-dǐ	'thick'

Palatalized and labialized dental stops

tw			
twǵă	'put on hat'		
ty			
tshə-tyé	'scissors'	pà tyé	'stool'
stáN tsǐ pʒè tyòuN	'lizard'	tyú lú	'pot (medium size)'
tyú	'stomach' (e.g. chicken's)		
thy			
thyě	'silk'	thyé zǐ	'downward'
dy			
dyô	'or'	dyé dyé	'grandmother'
dyǔ	'nephew'	dyè dyǐw	'get along well'
gè-dyè món	'old woman'		

Prefixed dental stops

st			
stò món	'thumb'	stǐ	'purposive nominalizer'
stǔ zdǔ	'idea'	stè sǐN]	'fir'
stáN	'pillar'	stáN stáN	'locust'
stáN tsǐ pʒè tyòuN	'lizard'	stǐ pʂhǐ	'testicle'
stó	'look at'	stú	'straight'
stú tí	'honest'	nə-stǐN	'sink' (v.)
stò bú	'sore w/hard spot'		

sth			
sthǒ	‘drop’	sthě	‘borrow food’
sthě	‘cough’	sthǐ ~ thǐ	‘sweet’
khə-sthé	‘thread a needle’		
zd			
zdǎ	‘resin’	zdǐ	‘scatter seed’
zdè bóuN	‘deaf’	zdè réN	‘fog’
zdíN	‘cloud’	zdíN	‘stick’
zdú	‘blurt angrily’	zdé	‘wrong’
stè zdě	‘idea’		

Prefixed labialized and palatalized dental stops

stw			
stwě	‘fold’	è stwè stwé	‘wrinkle’
thə-zǝ̀ stwáN sǐ	‘fell asleep’		
sthw			
sthwê	‘phooey!’		
zdw			
zdwě	‘ask’		

sty

The stop in this cluster is pronounced quite fronted, sometimes approaching an interdental fricative: [sθy], [sty].

styě	‘clf. for long objects’	styé	‘tendon’
fiò styíwN	‘beard; goatee’		

3.3 Retroflexes

t	[w
[h	[hw
d	d w

Retroflex stops

t			
tǒ	‘hawk’	tě	‘dig’
tè tǎ	‘winnowing fan’	tǐ	‘gall’
té hìN	‘speak false’	tǎ tsǐ	‘sieve’
(thə-)tǐiN	‘cause to snap; break’		
th			
thǐ	‘daughter-in-law’	thǔ	‘six’
thě	‘half’	thǎ	‘garden’
thě ~ thə-thá	‘tear out’	thè-thá	‘multicolored’
thá	‘fan’ (v.)	thǐ	‘leg’
thóuN tsǐ	‘trap’ (n.)	thě	‘horn’

(nə-)tʰéi ʃtʃé tʰóuN tʰǎ	‘cut’ (e.g. meat) ‘saddle’ ‘shoot’	tʰěi tʰə-tʰǎ	‘crisp; brittle’ ‘wipe’
ɖ ɖǔ ɖǎN ɖěi ~ tə-ɖéi ɖǐ ɖǔ ɖǎ ɖǎ ~ tʰə-ɖǎ ɖán ɖěi	‘companion’ ‘go; walk’ ‘sew’ ‘star’ ‘companion’ ‘thread’ ‘be torn out’ ‘bed’ ‘song’	ɖǎ ɖě ɖěiN ɖǐ ɖǔ ɖǎ ɖòuN ɖé ɖó jí bəɖóuN	‘lick’ ‘song’ ‘watery’ ‘thin (person)’ ‘ruminate’ ‘write’ ‘garbage’ ‘bedbug’ ‘soul’

Labialized retroflex stops

tʷ tʷǎ	‘branch; clf. for flowers’	ʃán tʷé	‘trivet’
tʰw tʰwǎ tʰwǎ	‘abundant’	bá tʰwǎ tʰwǎ	‘rough; coarse’
ɖw ɖwǎ ɖwá	‘chaff/husk’ ‘stir’	ɖwǐ	‘shiver’

3.4 Affricates

ts	tsy	tsw	tʃ	tʃw	tʃ	ʃtʃ	ʃtʃw	tʃ	
tsh	tshy	tshw	tʃh	tʃhw	tʃh	tʃhw	ʃtʃh	ʃtʃhy	tʃh
dz	dzy	dzw	dʒ		dʒ	dʒw	ʒdʒ	ʒdʒw	

There is no particular problem with the dental and retroflex affricates. The situation with the palatal affricates is more complex, since there is a (rather marginal) contrast between two kinds of palatal affricates: a laminopalatal or grooved type (written here with the symbols *ʃ* and *ʒ*); and a more rarely occurring alveopalatal or slit type (symbolized with *ç* and *ʒ*). This contrast is neutralized after the sibilant prefix (here itself realized as *Δ*); I write these complex initials as *ʃtʃ*, *ʃtʃh*, *ʒdʒ*.

Looking more closely at the contrast between the two palatal series, we see just how shaky it is:¹²

(a) *tʃ* vs. *tç*. The voiceless unaspirated /*tʃ*/ is lexically much more common than /*tç*/, with the latter occurring in only two morphemes in our data:

¹²This contrast seems to be more firmly maintained in the Jinghua dialect, but to be absent altogether from Taoba. See 3.5 below for a discussion of the marginal distinction between the two types of Dàyáng palatal fricatives.

WEIGHT (for measuring) **tɕĩ** ≠ WEIGH (v.t.) **tətɕí**¹³ (< PTB *kyiin [STC #369])
 OBJECT PARTICLE **tɕí**

(b) **tʃh** vs. **tɕh**. This is a firmer contrast, but even here these initials are in near complementary distribution. /tʃh/ occurs before non-front vowels, and words with this initial include the reflex of a prime TB root: DOG *k^wəy > Dàyáng tʃhí. On the other hand, /tɕh/, while not rare, occurs mostly before non-low front vowels /i/ e/ and the semivowel /y/, though there is one good example before low back /-ɔ/: **tɕhǒ** ‘sharp, pointed’,¹⁴ where it contrasts with tʃhǒ-mǒN ‘mud’. There is also a good example of labialized /t^hw/: HANDSPAN **tɕhwí** [tɕhɥí] < PTB *m-twa; note that PTB *-a must have changed to Pumi -i before the palatalization of the initial.¹⁵

(c) There seems to be only a single voiced palatal affricate /dʒ/; i.e. *dz does not occur in this dialect.

(d) The prefixed affricates are particularly well attested, occurring in all three manners and with both -w- and -y- glides:

tʃ	tʃw	
tʃh	tʃhw	tʃhy
ɟ	ɟw	

There is a tendency in Hé Shùkǎi’s speech for these prefixed palatal affricates to vary with fricative clusters (e.g. *tʃ* ~ *ɕ*, *tʃh* ~ *s*, *tʃhw* ~ *ʃw*) [see 3.5 below], e.g.:

‘bring up’ (child)	tʃóu	~	ɕóu	(in this word Shukai prefers the fricative cluster)
‘key’	tʃhǐ	~	sǐ	
‘heart’	tʃhwé	~	ʃwé	
‘insert/poke into’	ətʃhwǎ	~	əʃwǎ	

(e) There is one good example of a prefixed palatal affricate followed by a palatal glide:

‘thief’ **tʃhyú**

Simple dental affricates

ts			
tsǎ	‘joint’	tsǝ tsǝ	‘little’
tsá	‘wash’	tsó	‘fat meat’

¹³Notice the change in tone of the verb root when it is preceded by a directional prefix. See below 5.022.

¹⁴This word looks cognate with Lahu **che** ‘make a point on; sharpen to a point’ < PLB *kywan^{1,2,3}. See Matisoff 1985:9, and 1988a:533.

¹⁵See 6.1 below.

tsó	'wedge'	JíN tsó	'nail ("iron wedge")'
tsú	'ghost; spirit' ¹⁶	tsé	'son'
tsé-tsě	'little'	tsé zǐ	'monkey'
tsé	'deer'	şóu tsà stì	'toothbrush'
ʃtʃí tsìN	'lean meat'	gú tsì	'larynx'
ptʃhè tsí	'fly' (n.)	ʃhóuN tsí	'trap' (n.)
tsh			
tshǐ	'salt'	tshǐ	'fat'
tshǐ	'goat'	dzə dzə tshǐ	'word'
tshě	'lung'	tshòw pyów	'soap'
tshè tshé	'pea'	tshó	'filter'
tshó tshǒ	'dance'	tshé lyú	'penis'
tshə-tyé	'scissors'		
dz			
dzǒ	'crowded'	dzǒuN	'bridge'
dzǔ	'do; make; work'	dzǐ	'edge; side'
dzó	'light; shadow'	dzáN	'drum'
dzí	'be good at'	dzí	'cooked rice'
dzí dzú stì	'kitchen'	lù dzǐ	'thing'

Labialized dental affricates

tsw			
tswǐN [tsqǐN]	'liver'	tswá	'cause and effect; karma'
tswó	'able to see'	mè tswí	'firetongs'
tshw			
tshwě	'return (an object)'	yó tshwǒ	'boundary'
dzw			
dzwǎN	'hoe'		

Palatalized dental affricates

tsy			
tsyě	'use'	tsyòuN gwí	'garment'
tsyú	'beat'	tsyé tsyǐw	'fight'
JíN tsyów mì	'blacksmith'	zǐ tsyóuN	'wool'
má qè tsyě	'mother's younger sister'		
tshy			
tshyòuN dzù mí	'merchant'	tshyòuN tshyòuN	'clumsy'
tshyé tshǐ	'dusk'	dó dó	
		tshyóuN	'short'

¹⁶Cf. Jingpho tsù 'disembodied spirit; shade; ghost' (Hanson 1954:674).

dzy
dzyú(?) 'invite to eat'

Simple retroflex affricates

tʂ tʂǒ tʂǎN tʂòN tʂó	'weave' 'child' 'orphan'	tʂě tʂò lí tʂú	'clf. for songs' 'donkey' 'deposit; check'
tʂáN qhú tʂì tǒ	'house' 'pillow'	ló tʂó	'rake'

tʂh tʂhǒ tʂhǔ tʂhǎN tʂhè byé nə-tʂhě	'sprout' (e.g. of wheat) 'place' 'pad' (v.) 'stick; cane' 'step on'	tʂhǒ tʂhǎ-mí mìn tʂhòN líN v(ə)rì tʂhǔ	'read' 'beggar' 'wait' 'scar'
--	---	---	--

dz dzǔ dzǎ dzè dzè tshǐ dzə-dzəN ɲí dzó	'hungry' 'tea' 'word' 'horizontal' 'ear'	dzǐ dzè dzǐ dzóN pʒě dzè sò-dzón	'waist' 'book' 'hole' 'thigh' 'anus'
---	--	--	--

Labialized retroflex affricates

tʂw tʂwǒ sǎN tǎ-tʂò	'robber' 'prop up'	tʂwín	'container'
tʂhw tʂhwě tʂhwó	'rice (harvested)' 'invite'	tʂhwè ftʂhwǐ	'gift'
dzw dzwě	'abundant' (e.g. fruit)	dzwɔ ⁵¹	'there! [interjection]'

Simple laminopalatal affricates

tʃ tʃǒ tʃǎ tʃán tʃí tʃóuN tʃó tʃán pé ɸpə-tʃóu	'dirty' 'move' 'relatives' 'water' 'hard' 'summer' 'roof' 'navel'	tʃěi tʃù zʒǎ ~ ʒdʒǎ tʃí qòN~tʃí qòuN tʃə-ɸpá tʃú tʃá ló lǒ tʃóu	'clf. for houses' 'water buffalo' 'well' 'boiled water' 'sour' 'mortar' 'turban'
---	--	---	--

tʃh tʃhǎ	‘take off clothes’	tʃhǒu	‘propitiate dead spirit’
tʃhò mǎN tʃhí tshě	‘mud’ ‘how much’	tʃhí tʃhóu	‘dog’ ‘gun’
dʒ dʒǎ dʒèrě dʒí dʒí rə-dʒǎ	‘vegetable oil’ ‘belt’ ‘fish’ ‘market’ ‘liquor’	dʒǎ dʒə wó dʒí rǎ (rí) dʒə-khǎ	‘tea’ ‘earring’ ‘fish scale’ ‘time’

Labialized and palatalized laminopalatal affricates

tʃhw nə-tʃhwǎ	‘add water; dilute’	tʃhwá	‘weep; bawl’ (3rd pers.)
dʒw dʒwó	‘comfortable’		
dʒy dʒyǎ	‘laborious’		

Simple alveopalatal affricates

tʃ tʃǎ tʃí	‘a weight’ ‘object particle’	tə-tʃí	‘weigh’
tʃh tʃhǎ tʃhé tʃhè thə-tʃhǎN nóuN tʃhè	‘sharp/pointed’ ‘vicinity’ ‘give’ ‘when’	tʃhè tʃhé zdí tʃhǎN tsǎ ʔú tʃhé	‘separate’ ‘kid’ ‘in the past’

Labialized alveopalatal affricates

tʃhw tʃhwǎ [tʃhǎ]	‘handspan’
----------------------	------------

Prefixed laminopalatal affricates

ʃtʃ ¹⁷ ʃtʃǎ ¹⁸ ʃtʃǎ	‘rice pounder’ ‘village’	ʃtʃǎ ʃtʃǎ	‘sell’ ‘afraid’
---	-----------------------------	--------------	--------------------

¹⁷This sound is similar to Russian **щ**, as in *bor«s«c* ‘borscht’ or *továřišc* ‘comrade’.

¹⁸From PTB **tsum* ≈ **tšrum* [STC #75].

ʃtʃǎ	‘matter; affair’	ʃtʃé	‘chase’
ʃtʃí	‘pull’	ʃtʃí	‘jump’
ʃtʃí	‘meat’	ʃtʃí	‘muntjac’
ʃtʃóuN ɬyé	‘clean’	ʃtʃé	‘warm’
ʃtʃé	‘carry (animal’s back)’	ʃtʃé ʈhóuN	‘saddle’
ʃtʃé	‘wheat’	ʃtʃǎ	‘go’
rə ʃtʃǐ	‘skin’	bzɛ ʃtʃǒ	‘whip’
ʃtʃh			
ʃtʃhǒ	‘ashamed’	ʃtʃhǐ ~ sʃí	‘key’
ʃtʃhǒ ʒdʒí	‘charcoal’	ʃtʃhǒ	‘pound’ (v.)
ʃtʃhǒuN	‘upper garment’	ʃtʃhǔ	‘bump into’
ʃtʃhìN píN	‘forest’	ʃtʃhò ʒdʒí	‘charcoal’
ʃtʃhó	‘ashamed’	ʃtʃhí(?) ¹⁹	‘sweat’
ʃtʃhí	‘kill (animal)’	(mè) ʃtʃhǐw	‘smoke’
ʃtʃhí tsǎ	‘nit’	ʃtʃhóuN qǎN	‘collar’
ʃtʃhé	‘play finger game’		
ʒdʒ			
ʒdʒǒ	‘cliff’	ʒdʒǐ ²⁰	‘(domestic) animal’
ʒdʒìN ʒdʒíN	‘measles’	ʒdʒǒu	‘stingy’
ʒdʒǒuN	‘grass’	ʒdʒǔ	‘stone’
ʒdʒǔ ~ ʒdʒwǐ	‘exchange’	ʒdʒě ²¹	‘four’
ʒdʒòuN phú	‘grass mat’	ʒdʒó	‘love’
ʒdʒí	‘get’	ʒdʒíN	‘hail’
ʒdʒóuN	‘slope’	mə-ʒdʒú	‘thunder’
má ʒdʒíN	‘old man’	ʃtʃhò ʒdʒí	‘charcoal’

Prefixed labialized laminopalatal affricates

ʃtʃw			
ʃtʃwǒ	‘meet bride’s family’	ʃtʃwǒ sǐN	‘mark/sign’
ʃtʃwǒ	‘shoulder’	ʃtʃwǐ	‘lead the way’
ʃtʃwǐN	‘send’	ɛ-ʃtʃwó	‘remember’
ʃtʃwǐN	‘lunch’	ʃtʃwé mɛN sǐ	‘regret’
ʃtʃhw			
ʃtʃhwǐ	‘pitiful’	ʃtʃhwě	‘lake’
ʃtʃhwé	‘heart’	nə-ʃtʃhwǎ	‘insert; poke into’
tʃhwè ʃtʃhwǐ	‘gift’		
ʒdʒw			
ʒdʒwǐN	‘horse’	ʒdʒwìN ɸpǒ	‘hoof’
ʒdʒwǐN	‘high; tall’	ʒdʒwé ʒdʒwí	‘mutually’
thə-ʒdʒwǐ	‘exchange’		

¹⁹From PTB ***krwəy** [STC p. 90; Matisoff 1988a, p. 353]. Contra STC this root is not restricted to Lolo-Burmese.

²⁰From PTB ***dzay** [Matisoff 1985, #'s 129 and 143].

²¹From PTB ***b-ləy** [STC #410].

Prefixed palatalized laminopalatal affricates

ʃtʃhy
ʃtʃhyú

thief

3.5 Fricatives

ϕ	s	sy	ç	ʃ	sʃ	çʃ	x	xy	h
	sw			ʃw		sʃw	çʃw	xw	
v	z	zy		ʒ	zʒ		ɣ		ɦ
				ʒw			ɣw		

The best phonetic description of the contrast between fricatives of types ʃ and ç, as well as of clusters of two sibilants (of the type F + S), i.e. sʃ vs. çʃ, must await instrumental analysis of my tapes. Instead of lamino- [ʃ] vs. alveo- [ç] palatal (i.e. focussing on the part of the tongue that touches the palate), perhaps a better characterization of the opposition would be groove [ʃ] vs. slit [ç] (i.e. focussing on the internal configuration of the top of the tongue).

As was the case with the affricates (above 3.4), the contrast between the two kinds of palatal fricatives in Dàyáng is less than robust:

(a) ʃ vs. ç:

ʃ is the better attested of the two, occurring in reflexes of several widely attested TB roots with *palatal sibilant or *r-cluster initials:

‘hundred’	ʃí	< PTB *r-gya; cf. PLB *ʔra ¹
‘iron’	ʃíN	< PTB *syam
‘louse’	ʃí	< PTB *s(y)rik
‘spend the night’	ʃǒ	< PTB *s-ryak

There are fewer examples of words with initial ç- (see below), and none of them have known TB etymologies. At least one of them seems to be a loan from Chinese: çé ‘heavenly being’, prob. < Chinese (Mand. xiān). Certain words show variation between ç and the prefixed affricate ʃtʃ:

‘corn/maize’	çè-çé ~ ʃtʃè-ʃtʃé
--------------	-------------------

(b) zʒ:

This voiced fricative cluster is well attested, and occurs in reflexes of a number of solid TB roots:

‘nail/claw’	zʒǎN	< PTB *m-tsyen
‘right side’	zʒí	< PTB *g-ya
‘sheep’	zʒóuN	< PTB *yaŋ
‘trousers’	zʒǐ	< PTB *s-la

However, since the Dàyáng dialect has no simple voiced palatal fricative phone [ʒ],²² one could treat [zʒ] as being phonemically /ʒ/.

There are also cases of **zʒ** varying with the prefixed affricate ʒdʒ:
 ‘water buffalo’ tʃù-zʒǐ ~ tʃù-ʒdʒǐ

(c) **ʃ** and **ʃ̣**:

Neither of these initials occurs in reflexes of well-known TB roots. The only solid example of simple **ʃ** is **ʃǔ** ‘carry on the back’, with two additional examples of the labialized version of this initial: SHOULDER **ʃwǔ**; LID/COVER **ʃwě**. **ʃ̣** is slightly better attested in my data, appearing in five or six morphemes [see below].

Both of these initials sometimes vary with sibilant-prefixed affricates:

‘key’ **ʃǐ** ~ **ʃtʃǐ**
 ‘bring up (child)’ **ʃ̣óu** ~ **ʃtʃóu**

The fricativality of the Pumi is demonstrated by the following nearly perfect minimal triplet: **syú** ‘paddy’ / **ʃǔ** ‘carry on back’ / **ʃ̣ǔ** ‘hide’.

Voiceless bilabial fricative

ɸ			
ɸǐ ~ ɸpǐ	‘saw’ (n.)	ɸǔ	‘bottle’
ǎ-ɸú	‘sunken; concave’		

Voiced labiodental fricative

v			
ví	‘old (of things)’	v(ə)rè tʃhǔ	‘scar’
vè dǎ (xyé) ~ βbè dǎ	‘belch’		

Voiceless dental fricative

s			
sǎ	‘blood’	sǒ	‘lock’
sǎN	‘king’	sǒw	‘hemp’
sǐ	‘copper; tin’	sǐN	‘wood’
sǐN ɛGí rǒu	‘chopper’	sǒuN	‘three’
sìN βbóuN	‘tree’	sò bú	‘buttock’
sò dzóN	‘anus’	sí sǐ	‘raw’
nò sǐN	‘morning’	nə-sí	‘press down’

Voiced dental fricative

z			
zí	‘male (animals)’	zíw(?)	‘face’
zé	‘pin down; entrap’	nə-zó ló	‘roll down’

²²Several words which I had originally transcribed with ʒ turned out actually to have the retroflex fricative ʒ: MIDDLE **gú ʒǐ**; CUT MEAT **ʒě**; HAVE FEVER **ʒóN**.

Labialized and palatalized dental fricatives

sw			
swǎ	‘calculate’	swǎN	‘father (not ego’s)’
swĩ	‘leopard’	swĩN	‘teach’
sy			
syǎN	‘tomorrow’	syě	‘hot pepper’
syé	‘miss someone’	syóN	‘coffin’
syú	‘paddy (in field)’	yé syě	‘arrow’

Plain retroflex fricatives

ʂ			
ʂǎ	‘laugh’	tə-ʂé	‘hang down’
ʂě	‘sweep’	ʂĩ	‘dew’
ʂè ʂwéi	‘sweep ground’	ʂì dǎ bá	‘jaggery’
ʂì ɸpĩ	‘frost’	ʂó ʂǎ	‘appearance’
ʂáN	‘long’	ʂí ʂĩ	‘new’
ʂóu	‘tooth’	ʂóu nǎN	‘gums’
ʂóu tsà stĩ	‘toothbrush’	ʂé	‘buy’
ʂǎN [wé] ²³	‘trivet’	χqá ʂáN	‘fart’
ʐ ²⁴			
ʐǎ	‘hand’	ʐə-rũ	‘arm’
ʐə-gǐw	‘bracelet’	ʐə-bú	‘armpit’
ʐə-bzǎN	‘ring’	ʐǎ-dǎlũ	‘fist’
ʐě	‘cut’ (e.g. meat, wood)	ʐǎN	‘fertilizer’
ʐə ná	‘stinking’	ʐóN	‘have fever’
ʐóuN ʐǎN	‘stir fry’	ʐé tí	‘well-behaved’
ʐǎN	‘tasty’	ʐə-thó	‘millstone’
ʐí	‘month’	ʐĩ	‘many’
ʐə-khǐw	‘next year’	tsé ʐĩ	‘monkey’
bá ʐǐw	‘dirty; a slob’	gú ʐĩ	‘middle’

Labialized retroflex fricatives

ʂw			
ʂwà tsǐ	‘broom’	ʂwé	‘nighttime’
ʂè ʂwéi	‘sweep ground’		
ʐw			
ʐwě	‘can hold (container)’	nə-ʐwǎ	‘scrub’
ə-ʐwǎ	‘owe’		

²³Perhaps this first syllable derives from ʃĩN ‘iron’. Cf. also ʂǎN tsǎ ~ ʃĩN tsǎ ‘nail’.

²⁴As just noted, several syllables previously transcribed with “ʐ” have been reanalyzed with ʐ.

Alveopalatal (slit) fricatives

ɕ ²⁵ [cf. ʃtʃ]			
ɕè ɕé ~ ʃtʃè-ʃtʃé	‘corn’	ɕò ɕó	‘magpie’
ɕé	‘celestial being’	ɕé tʂón	‘temple (to worship)’
ɕí	‘dragon’	rə-ɕú	‘flail’
ré ɕě	‘load’	thə-gú ɕí	‘chat’

Laminopalatal (grooved) fricatives

ʃ			
ʃó	‘old (people)’	ʃí	‘hundred’
ʃí	‘louse’	ʃín	‘iron’
ʃín tsó	‘nail (fastener)’	ʃé nón	‘mole (on skin)’ ²⁶
ʃə gíw	‘paper’	ʃə-khə-ʒdʒí	‘happen; come out’
ʃǒ	‘spend the night’	ʃě	‘Chinese’
wù ʃí	‘New Year’s day’	myé ʃó	‘eyebrow’

Labialized laminopalatal fricatives

ʃw			
ʃwě	‘eight’	ʃwě ʂú pə	‘wager’

Dentopalatal fricatives / Dentally prefixed palatal fricatives

sʃ			
sʃǔ	‘carry on back’	sʃǐ ~ ʃtʃǐ	‘key’
sʃw			
sʃwǒ	‘shoulder’	sʃwě	‘lid’
zŏ ²⁷			
zǎ	‘spit’ (v.)	zǎ rǎ	‘saliva’
zǒ	‘take with one’	zǎN	‘fingernail’
zǐ	‘sleep’	zǐ stí	‘bedroom’
zǐ	‘trousers’	zǐ	‘many’
zǐ	‘right side’	zǐóuN	‘sheep’
zǐ-tsyóuN	‘wool’	zǐ-tsí	‘lamb’
gù zǐ	‘chatterbox’	tʃù zǐ ~ tʃù ʒdʒǎ	‘water buffalo’

Alveolaminar palatal fricatives / Palatally prefixed palatal fricatives

ɕʃ			
ɕʃǔ	‘hide’	thə-ɕʃú	‘cover’
ɕʃóu ~ ʃtʃóu	‘bring up children’	ɕʃú	‘beautiful’

²⁵This initial sometimes varies with ʃtʃ-.²⁶Cf. nón ‘black’.²⁷This initial sometimes varies with ʒdʒ-.

ɕʃé è-ɕʃóuN	‘warm’ ‘enter’	gǎ-ɕʃǎN	‘chopsticks’
----------------	-------------------	---------	--------------

ɕʃw ɕʃwè ɕʃũ	‘withhold facts’	thə-ɕʃwé-ɕʃú	‘id.’
-----------------	------------------	--------------	-------

3.6 *Velars and postvelars*

k	kw	q	qw	χq	χqw	?
kh	khw	qh	qhw	χqh	χqhw	
g	gw			γG		

Like Lahu, Dàyáng (and Jinghua) Pumi have a contrast between plain velar and postvelar initials, with the postvelar series apparently reflecting the simple PTB *velars; although the details are not yet clear, the plain velars probably reflect older *velar clusters of some kind.²⁸

Simple velar stops

k			
kǒuN	‘door’	kǒuN tó	‘threshold’
ké pǔ	‘cuckoo’	kó lè	‘chest’
kó tsí	‘speech’	kó	‘year’
kóuN réN	‘ice’		
kh			
khǎ	‘emperor’	khú lyǔ	‘dove’
khə-bdʒɿ	‘hatch out’	khə-bdʒǒu	‘spurt forth’
khə-sthé	‘thread needle’	khə-zdǒ	‘elapse’
khə-thyóuN	‘give to drink/smoke’		
g			
gǎ	‘cut w/ scissors; snip’	gǎw	‘happy and excited’
gǒ	‘mountain’	gə-ɕʃǎN	‘chopsticks’
gə-thǎ	‘narrow-neck jar’	gè byé	‘plate; dish’
gə dyè món	‘old woman’	góuN	‘inside’
gú zɿ	‘middle’	gú tsɿ	‘larynx’
gú zʒɿ	‘chatterbox’	gə-byé ptʃhě	‘over there’
gə-mǒN	‘body’	gə-pyé	‘plank’
zə-gǎw	‘bracelet’		

Labialized velar stops

kw			
kwǐ	‘satiated’	kwǐN	‘y. sibling of same sex’
kwíN tsí	‘pony’		

²⁸The best TB velar roots have Pumi postvelars (e.g. BITTER, HEAD, NEEDLE); see below. It is the postvelars, not the plain velars, that can take the fricative prefix /χ/ or /ʁ/ (see below); this is perhaps another indication that the postvelars are historically more basic.

khw khwǝ́ tóuN	‘yellow weasel’	khwá rǎ	‘mouth’
gw gwě gwǐ	‘fireplace’ ‘wear clothes’	gwě gwób ‘protect	‘ground’ ‘field from birds’
gwí gwé ²⁹	‘rain’ ‘slave’	gwíN mǐ	‘cow’

Simple uvular (= postvelar) stops³⁰

q qǒ	‘strength’	qǝ́ lón	‘phlegm; sputum’
qǝ́ dǒ qǝ́ qǒ qáN qó(u)N ~ kóuN mǝ́ qǒ	‘pheasant’ ‘gingerly’ ‘neck’ ‘valley’ ‘chin’	qǝ́ dǔ qǒ qí rí rǝ́-qú má qǝ́ tsyě	‘walnut’ ‘nest’ ‘hook’ ‘egg’ ‘mother’s y. sister’

qh qhǒ qhěi qhú qhù yǝ́uN qhú néN~qhú nóN qhú tǐN	‘bitter’ ‘plant a garden’ ‘head’ ‘nod’ ‘brain’ ‘shake head’	qhá qhǒ qhù pǝ́w qhù pshě qhú tǝ́ tǒ	‘ditch; gully’ ‘needle’ ‘comb’ ‘braid’ ‘pillow’
--	--	--	---

Labialized uvular stops

qw qwǒ	‘headman’	qwǝ́ tsǐ	‘musical instrument’
qwób dòuN qwób	‘cattle’ ‘wing’	qwǝ́ xqá	‘cow dung’
qhw qhwǒ ³¹	‘bowl’	dù qhwób	‘cucumber’

Prefixed uvular stops

xq xqǎ xqǒ	‘be born’ ‘grassy slope’	xqǒ xqǒ	‘bite’ ‘breath’
-------------------------	-----------------------------	------------	--------------------

²⁹From PTB *gywan (cf WB kywan, Lahu cè).

³⁰Dàyáng Pumi apparently lacks a voiced uvular stop. Two words which I had thought to contain this sound (WALNUT; GINGERLY) actually have the plain uvular stop /q/ instead. Dàyáng does, however, have a number of words with prefixed voiced uvular stops (below).

³¹From PTB *kwak (cf. WB khwak, Mzieme hekwak).

χqá χqóuN χqóuN	‘dung’ ‘lunatic’	χqá sáN tè χqí	‘fart’ ‘hot pepper’
--------------------	---------------------	-------------------	------------------------

χqh χqhǒ	‘feel wronged and act rashly’		
-------------	-------------------------------	--	--

γG [γg] or [ɣG] γGǔ sǐN γGí ròu	‘dry’ ‘chopper’	γGí γGí ~ γGǐ ³²	‘chop’ ‘nine’
---------------------------------------	--------------------	--------------------------------	------------------

Prefixed labialized uvular stops

χqw χqwá ³³	‘weep’	dìN χqwáN	‘flatland’
---------------------------	--------	-----------	------------

χqhw thə-χqhwǎ	‘scoop out’	mǎ-χqhwǎ	‘rainbow’
-------------------	-------------	----------	-----------

Glottal stop onset

ʔ ʔáN ʔóN ʔə-zǒN	‘worry’ ‘goose’ ‘protect’	ʔó lyòu ʔú tché ʔə-món mǒ	‘baby’ ‘in the past’ ‘apply ointment’
---------------------------	---------------------------------	---------------------------------	---

Velar fricatives

x [x̣] ³⁴ xǒ xáN xí	‘be correct’ ‘bamboo flute’ ‘blow’	xòN bú bà xí thə-xó	‘woman’ ‘beat’ ‘be left over’
---	--	---------------------------	-------------------------------------

xw xwǎN təlán xwé xwè	‘naive; gullible’ ‘naive; gullible’	xwé	‘maggoty’
-----------------------------	--	-----	-----------

xy [x̣y] xyǒN xyěN	‘mouth’ ‘seven’	xyòN bəlǒ	‘lip’
--------------------------	--------------------	-----------	-------

γ γǒ ~ hǒ γò dí dǐ γə rí qhù γòuN zdǐ	‘thick’ ‘thick’ ‘lazy’ ‘lower head’ ³⁵		
---	--	--	--

³²From PTB *d-kəw ɤ *d-gaw [STC #13].

³³From PTB *krap [STC #116].

³⁴This sound is pronounced quite fronted [x̣].

³⁵Cf. also qhù hón ~ qhù γón.

ɣw ɣwǎ	‘corner; angle’		
h [~ ɟ] híN	‘tell’	ʈé híN	‘speak false’
ɸ³⁶ ɸì dǐ dǐ ɸì styíwN qhù ɸíóN~qhù ɸóN	‘thick’ ‘beard; goatee’ ‘lower the head’	ɸì pshò sǔ ɸiáN	‘grape’ ‘gold/yellow’

3.7 Nasals

	m ᵹ	my	mr/mz	n	ɳ	ŋ
m mǎN mǎ(N) mè ʃtʃhǐw mə-ʒdʒú mè qó			‘mother; fem. animal’ ‘fire’ ‘smoke’ ‘thunder’ ‘chin’	mǎN mè tswí mǎ mə-χqhwa má qè tsyě		‘gruel’ ‘firetongs’ ‘sky’ ‘rainbow’ ‘mother’s y. sister’
máN mí mú mǎ má qó dǐ dǐ má ɸyé gə-mǎN			‘hair’ ‘person’ ‘wind’ ‘split family property’ ‘tail’ ‘body’	máN mó dʒó mú pè má qó má dó		‘name’ ‘battered tea’ ‘throat’ ‘household’ ‘mute’
ᵹ³⁷ ᵹǐ ᵹì pǐ ᵹí nə-ᵹǐ			‘daughter’ ‘son-in-law’ ‘medicine’ ‘close mouth’	ᵹǎN ᵹìN bú bò è-ᵹǐ		‘blow’ ‘woman’ ‘beg’

mz/mr

The second element in this initial cluster varies in pronunciation from a retroflex [r] to a true voiced retroflex spirant.

mzǎN/mrǎN də-mzǎi	‘mushroom; fungus’ ‘ripe’	mzǎN	‘bamboo’
my myǎ myè myóN thə-byé	‘aunt (f’s bro’s wife)’ ‘blind’	myóN myé ʃó	‘eye’ ‘eyebrow’

³⁶This initial sometimes sounds like the Arabic “voiced pharyngeal fricative” ‘ain’. It sometimes varies with the voiced velar spirant [ɣ].

³⁷There are no other voiceless nasals in this dialect.

n			
nǎN	'milk (of animal)'	nǎN	'marrow'
něN ~ nǎN	'brain'	nèiN néiN	'few'
nò síN	'morning'	náN	'skirt'
né	'copper'	néiN	'cloth'
néN	'few; little'	ní ní	'aunt (m's bro's wife)'
nóuN	'rib'	nóuN tchè	'when'
şóu nòN	'gums'	thə-nǐ	'hear'
zə ná	'stinking'	nə-z wǎ	'scrub'
nə-thów	'scold'	nə-tsyíw	'whip; thrash'
nə-tshǎ	'step on'	nə-bǎ	'double'
nǎ-mǎ	'close mouth'	nə-zó ló	'roll down'
nə-stîN	'sink'	nə-sí	'press down'
nə-tshwǎ	'add water; dilute'	nə-yóuN	'lower head'
nə-tǐ	'twist hemp'	(n)ə-stshwǎ	'insert; poke into'
(nə-)théi	'cut' (e.g. meat)		
ŋ			
ŋǎN	'black'	ŋé ŋǎN	'mole (on skin)'
ŋǎN	'vegetable'	ŋǎwN	'breast; human milk'
ŋǎ	'breast'	ŋò dzóN dzòN	'dark'
ŋǎN tshíw tshìw pù	'keep silent'	ŋǎN ŋú	'means; solution'
ŋè pyé	'sickly'	ŋè stŋé	'hunt'
ŋé	'red'	ŋé(?)	'soybean'
ŋí dzó	'ear'	ŋí	'green'
ŋí	'ill'	ŋú	'steam'
ŋéN bzóN	'face'		
ŋ			
ŋǎN, thə-ŋóN	'stand idle'	ŋóuN	'silver; money'

3.8 Resonants

	w	r	rw	l	lw	ly	y ³⁸
				ɬ	ɬw	ɬy	
w							
wǎ				wǎ			'belong to'
wìN pǎ				wò mí			'guest'
wòN φpóN				wù jǐ			'New Year's Day'
wéN				wó			'mouse'
dʒə wó				yìN wón			'rake fields'

³⁸Sometimes phonetically fricativized, /ʃ/.

y			
yǐ	‘enough’	yǐN	‘soil; field’
yǐN wón	‘rake fields’	yìN yín	‘plow a field’
yó thín	‘smoke cigarette’	yí pǒ	‘pot (medium-sized)’
yó tshwǒ	‘boundary’	yé syě ~ yě sǐN	‘arrow’
yí tsǐ	‘grandson’	tshè yó	‘praise’
khə-yí	‘call someone out’	pà yǐ	‘sleeve’
r			
<i>This phoneme is strongly trilled.</i>			
rěi ~ ə-réi	‘be burned’	rǎ	‘scoop’ (n.)
rə-dzǐ	‘liquor’	rə-qú	‘egg’
ròN rǒu	‘careful’	rì rǎ dzù	‘work’
rè [tʃǐ]	‘skin’	rá	‘invite a guest’
rá	‘pot’	ró qǒ	‘bone’
ráN	‘soup’	ró	‘chicken’
róu	‘knife’	róuN	‘drying rack for wheat’
ré cǎ	‘load’	rǎ	‘skin’
rə-çú	‘flail’ (n.)	dzǐ rá	‘fish scale’
zdè réN	‘fog’	rǎ βbòuN	‘willow’
rw			
rwě	‘road’	rwéN	‘shout; yell’
rwé rwé	‘round’		
l			
lò dǒ	‘penis’	lá	‘heavy’
ló tşó	‘rake’	lóuN	‘maggot’
lá	‘river deer’	phò ló	‘butterfly’
lw			
lwǒ	‘play; fool around’	lwě	‘ash’
ly			
lyǔ	‘chicken stomach’	lyè lyě	‘sing’
lyòuN lí	‘sway’	bó lyò lyò	‘thin’
phə-lyǒu	‘hat’		
ʃ			
ʃǎ	‘open’	ʃǒN	‘snot’
ʃǐ	‘be in charge’	ʃǒ	‘forehead’
ʃǒ tşóu	‘turban’	ʃě	‘tongue’
ʃà dzǐ	‘finger’	ʃè byě	‘radish’
ʃù dzǐ	‘thing’	ʃù tsǐ	‘bladder’
ʃù tsǐ	‘rabbit’	ʃè xqǐ	‘hot pepper’
ʃá	‘flea’	ʃóN	‘late’
ʃé ʃè	‘speech’	ʃéiN ʃéiN	‘like to’
ʃí	‘moon’	ʃín	‘daytime’

lé tsǽ ~ lè tsǽ	‘uvula’	nə-ǎ	‘twist hemp fibers’
qò lón	‘sputum; phlegm’	qhú lín	‘shake head’
ɬw ɬwǎ	‘pull out (e.g. weeds)’	ɬwín	‘male’s younger sister’
ɬy ɬyé dú thə-ɬyóuN	‘friend’ ‘peel’ (fruit)	ɬyóuN lín mó ɬyé	‘overthrow’ ‘tail’

4. Vowels

Composite chart of Dàyáng Pumi rhymes

i	ĩ			[ɿ] [ɿ̃]		ʉ		u
		iw	ĩw	ɿ̃				
e	ẽ			ə	ã			o
		ey	ẽy	əw		ow	õw	õ
ɛ	ẽ			a	ã			ɒ
						ɒw		ɒ̃

Monophthongs

Oral

Nasal

i	[ɿ] [ɿ̃]	ʉ	u	ĩ
e	ə		o	ẽ
ɛ	a		ɒ	ã
				õ

Diphthongs

Oral

Nasal

iw	ɿw	ĩw
ey	ow	ẽy
	əw	õw
	ɒw	

i	3d3ĩ	‘intestine’	ptʃí
‘domestic animal’	ɲí dzó	‘good’	ptʃhí
‘ear’	ɸpĩ	‘moon’	ɦí
‘belly’			

‘sweat’	ʃtʃhí	‘rain’	gwí
‘wear clothes’	gwǐ	‘tin’	sǐ
‘waist’	dzǐ	‘charcoal’	ʃtʃhò ʒdzí
‘medicine’	mí	‘salt’	tshǐ
‘daughter’	mǐ	‘get’	ʒdzí
‘beg’	ə mǐ	‘enough’	yǐ
‘village’	ʃtʃǐ	‘ill’	ŋí
‘person’	mí	‘new’	ʃí ʃǐ
‘month’ ³⁹	zǐ	‘weight’	tɕǐ
iN [ĩ]			
‘male’s younger sister’	ʔwíN	‘earth’	dǐN
‘measles’	ʒdzǐN ʒdzíN	‘forest’	ʃtʃhîN pín
‘run’	bzǐN	‘urine’	βbín
‘dawn’	bzǐN	‘stick’	zdín
‘escape’	ptʃhǐN	‘liver’	tswǐN
‘tomb’	ptʃhǐN	‘drink’	thǐN
‘cloud’	zdín	‘plow a field’	yìN yín
‘soil; field’	yǐN	‘lean on’	ɛ-stǐN
‘hail’	ʒdzíN	‘teach’	swín
‘kid’	tɕhín tsǐ		
e			
‘tendon’	styé	‘return (an object)’	tshwě
‘miss someone’	syé	‘temple (of worship)’	ɕé tʃʰN
‘red’	ŋé	‘abundant (fruits)’	dzwě
‘testicle’	phyé phyé	‘maggoty’	xwé
‘soybean’	ŋé(?)	‘fireplace’	gwě
‘over there’	gəbyé ptʃhě	‘ground’	gwě
‘hot pepper’	syě	‘copper’	né
eN [ě]			
‘white’	pʃhén	‘pour out’	pzěN
‘Pumi’	pʃhénmí	‘ring’	zə bʰAleN
‘rope’	bzěN	‘shout’	rwén
‘fungus’	mzěN/mrěN	‘bear’ (n.)	wén
‘fog’	zdě réN	‘few; little’	néN
‘ice’	kóuN réN	‘leave behind’	khə-réN
ei			
‘Pumi liquor’	pʃhéi	‘crisp; brittle’	tʃhěi
‘be burned’	rěi ~ əréi	‘sew’	děi ~ tə-děi
‘song’	děi	‘arrive’	ɛ-péi ~ pěi
‘plant a garden’	qhěi	‘cut’ (e.g. meat)	(nə-)tʃhěi
‘person born in Year of Monkey’	pzěi wú		

³⁹The vowel /i/ is pronounced further back after palatal fricative or affricate initials, almost like a fronted barred-i [i̠]. Besides MONTH, cf. ʃí HUNDRED and kó tʃí SPEECH.

eiN [~ei]

'cause to snap, break'	(thə-)[éiN	'like to'	léiN ʒéiN
'break (by itself)'	thə-déiN [~dǎiN]	'watery'	dǎiN
'coarse'	béiN	'cloth'	néiN

ɛ

'braid'	qhù pṣhě	'chest'	kó lě
'chop'	pṣhě	'penis'	tshé lyú
'be severed'	bʒě	'fold'	stwě
'whip'	bʒé ʃtʃǒ	'wrinkle'	è stwè stwé
'thigh'	pʒé dʒə	'Chinese'	ʃě
'fire'	mě(N)	'mole (on skin)'	ʃé ɲóN°
'lake'	ʃtʃhwě	'tongue'	lě
'road'	rwě	'throat'	mú pè
'ash'	lwě	'heart'	ʃtʃhwé
'four'	ʒdʒě	'sediment'	ɸphě

ɛN [ĕ]

'face'	ɲéN bʒóN	'brain'	něN ~ nõN
'seven'	xyěN	'brain'	qhú néN ~ qhú nóN
'fire'	měN	'regret'	ʃtʃwé méN sɿ
'bamboo'	mʒěN	'smell'	è mɿ məN

u

'six'	thǔ	'middle'	gú ʒǐ
'animal oil'	tǔ	'fist'	ʒə-dəlǔ
'companion'	dǔ	'belong to'	wǔ
'deposit; check'	tʂú	'penis'	tshé lyú
'sour'	tʃú	'scar'	v(ə)rə tʂhǔ
'thunder'	mə-ʒdʒú	'place'	tʂhǔ
'stone'	ʒdʒǔ	'hard sore'	stò bú
'head'	qhú	'throat'	mú pè
'face'	zyú(?)	'larynx'	gú tsɿ
'armpit'	ʒə-bú	'rabbit'	lù tsɿ
'upper arm'	ʒə-rǔ	'wind'	mú mǒ
'animal stomach'	tyú	'hide'	ɕǔ
'dry'	ɤGǔ		

o [ʷo]⁴⁰

'read'	tʂhǒ	'chest'	kó lè
'sprout'	tʂhǒ	'buttock'	sò bú
'chicken'	ró	'hard sore'	stò bú
'breath'	χqǒ	'back (of body)'	dǒ
'mountain'	gǒ	'wind'	mú mǒ
'pound' (v.)	ʃtʃhǒ	'stupid'	dǒ

⁴⁰This vowel always induces labialization in the preceding consonant; viewed differently we could say that this vowel is always pronounced with a labial onglide. This labialization does not occur before the diphthong /ou/, which is the most salient perceptual clue for differentiating /o/ from /ou/.

‘charcoal’	ʃtʃhǒ ʒdʒí	‘year’	kó
‘eyebrow’	myé ʒó	‘elapse’	khə-zdǒ
‘ear’	ŋí dʒó	‘needle’	qhǒ
‘jaggery’	ʒɿ̀ dǒ bá		
oN [~o]⁴¹			
‘valley’	qóuN ~ qón	‘well’	tʃí qòN ~ tʃí-qòuN
‘dark’	ŋǒ dzón dzòN	‘have fever’	ʒón
‘protect’	?ǎ-zǒN	‘coffin’	syón
‘wait’	tʃhòN líN	‘knee’	wòN φpón
‘hole’	dzón	‘body’	gə-mǒN
‘be punctured’	thə-dzón	‘mouth’	xyǒN
‘open; make a hole’	thə-tʃhón	‘rake’ (v.)	yǐN wón
‘apply ointment’	?ə-món mǒ	‘anus’	sò-dzón
ou [əw]			
‘tooth’	ʒóu	‘hat’	phə-lyǒu
‘knife’	róu	‘stingy’	ʒdʒǒu
‘navel’	φpə-tʃóu	‘propitiate dead spirit’	tʃhǒu
‘turban’	łǒ tʃóu		
ouN [ãu]⁴²			
‘cold’	bǒuN	‘ice’	kóuN réN
‘have’	bóuN	‘valley’	qóuN ~ qón
‘sheep’	ʒʒóuN	‘upper garment’	ʃtʃhǒuN
‘slope’	ʒdʒóuN	‘collar’	ʃtʃhóuN qǎN
‘wheat drying rack’	róuN	‘give to drink/smoke’	khə-thyóuN
‘grass’	ʒdʒǒuN	‘nod’	qhò yǒuN
‘silver’	ŋóuN	‘lower head’	nə-yóuN
‘rib’	nóuN	‘short’	tshyóuN
‘bridge’	dzǒuN	‘garbage’	dòuN dǎ
‘enter’	è-ɕʃóuN		
ɒ⁴³			
‘shadow; light’	dzó	‘crowded’	dzǒ
‘pig’	ptʃhǒ	‘rot’	ptʃhǒ
‘lick’	dǒ	‘dirty’	tʃǒ
‘come live w/parents’	ʃtʃwǒ	‘sore; boil’	βbǒ
‘kidney’	φphǒ	‘cattle’	qwó
‘cliff’	ʒdʒǒ	‘bite’	χqǒ
‘mud’	tʃhǒ mǒN	‘household’	mǎ qó

⁴¹Some of these words were originally transcribed with nasalized u “[ũ]” but on rechecking that vowel was determined not really to exist in the Dàyáng dialect: i.e. there is no contrast between uN and oN.

⁴²This vowel is pronounced rather centralized.

⁴³There is a very firm contrast in Dàyáng (as in Jinghua) between back /ɒ/ and front /a/, though neither one of these vowels is the most frequent reflex of TB *-a. See below 6.1.

‘nest’	qó	‘chin’	mə qó
‘shoulder’	ʃtʃwǒ	‘bone’	ró qǒ
‘penis’	lò dǒ	‘laugh’	ʂǒ
‘weave’	tʂǒ	‘old’	ʃó
‘ashamed’	ʃtʃhǒ	‘hoof’	ʒdʒwìN ɸpó
‘leaf’	ɸpǒ	‘filter’	tshó
‘hand’	zǒ	‘bitter’	qhǒ
‘ladder’	bzǒ ~ bzǎ	‘lip’	xyòN b(ə)lǒ

ɒN⁴⁴

‘marrow’	nǒN	‘female animal’	mǒN
‘black’	ɲǒN	‘snot’	lǒN
‘phlegm’	qò lóN	‘mud’	tʃhò mǒN
‘eye’	myóN	‘gums’	ʂów nǒN

a

‘wash’	tsá	‘joint’	tsǎ
‘vegetable oil’	dʒǎ	‘shit’	χqá
‘weep’	χqwá	‘rainbow’	mə-χqhwǎ
‘(fruit) pit’	pʂhá	‘ditch’	qhá
‘mouth’	khwá rǎ	‘finger’	là dzǐ
‘spit’	zʒǎ	‘saliva’	zʃà rǎ
‘boiled water’	tʃə-ɸpá	‘blood’	sǎ
‘be born’	χqǎ	‘ladder’	bzǎ ~ bzǒ

aN

‘milk (of animal)’	nǎN	‘root’	bzǎN
‘tears’	bzǎN	‘fingernail’	ʂǎN
‘fart’	χqá ʂáN	‘neck’	qáN
‘hair’	máN	‘gold’	fiáN
‘go; walk’	qǎN	‘long’	ʂáN
‘flatland’	dìN χqwáN		

ɨ

This high central vowel has apical allophones after sibilant initials. After dental fricatives and affricates it is realized as [ɿ]; after retroflexes it is realized as [ɻ].⁴⁵

‘star’	qɨ	‘gall’	tɨ
‘leg’	ʃhɨ	‘meat’	ʃtʃɨ
‘jump’	ʃtʃɨ	‘daughter-in-law’	ʃhɨ
‘water’	tʃɨ	‘fish’	dʒɨ
‘market’	dʒɨ	‘dog’	tʃhɨ
‘frost’	ʂɿ ɸpɨ	‘kill’	ʃtʃhɨ
‘sun’	bɨ	‘snow’	ɸpɨ
‘many’	ʒɨ	‘pus’	ɸpɨ
‘hot pepper’	lè χqɨ	‘reap’	thə-kɨ
‘hook’	qɨ rɨ	‘happen; come out’	khə-ʒdʒɨ

⁴⁴This rhyme seems to be restricted to syllables with nasal initials, or laterals which derive from earlier *nasals (e.g. SNOT < PTB *s-nap).

⁴⁵Syllables of these types are sometimes transcribed allophonically in this paper.

'blow'	xí	'skin (cattle)' [v.]	thə-rí-fǐ
'grasp with fingers'	thə-phfǐ	'how much'	tʃhǐ tshě
'hour; while'	tè dzǐ	'this year'	pǐ pǐ
'right'	zǐ	'split family property'	má qó dé dǐ
'thin (of person)'	dǐ	'hatch out'	khə-bdzǐ
'lazy'	yə rǐ	'be'	dǐ

ɿ
This is the allophone of /i/ that occurs after dental fricatives and affricates.

'side'	dzǐ	'finger'	lǎ tsǐ
'larynx'	gú tsǐ	'fat'	tshǐ
'raw'	sǐ sǐ		

ɿ
This is the allophone of /Éi/ that occurs after retroflex fricatives and affricates.

'testicle'	stá pshǐ	'core'	pshǐ
'dew'	ʂǐ	'middle'	gú zǐ
'water conduit'	bzǐ	'work'	rǐ rǐ dzù

ɨ
This is a rounded high central vowel.

'hom'	[hɨ	'grape'	fǐd pshǐd sǐ
'uvula'	lé tsɨ ~ lè tsɨ ⁴⁶	'little'	tsɨ-tsɨ
'lung'	tshɨ	'poison'	dɨ
'thread'	dɨ	'son'	tsɨ
'hang'	təʂɨ	'well-behaved'	zɨ tí
'warm'	ʃtʃɨ	'idea'	stɨ zdɨ
'peach'	bəsɨ	'brother-in-law'	mǐ pɨ
'buy'	ʂɨ	'write'	dɨ
'cough'	sthɨ	'borrow'	dəsthɨ
'dig'	[ɨ		

This vowel is pronounced rather high, close to [ɨ].

'thigh'	pzɛ dzə	'tea'	dzə
'sky'	mə	'summer'	tʃə
'multicolored'	thə thə	'tael (weight)'	tə-tʂə ~ tá tʂə
'garden'	thə	'step on'	nə-tʂhə
'tear out'	thə ~ thə-thə	'be torn out'	də ~ thə-də
'scoop' (n.)	rə	'scoop out; dredge'	khə-rə ~ thə-rə
'move'	tʃə		

⁴⁶Literally "little tongue". This same formation for UVULA is found in Chinese (Mand. xiǎoshé), and in other TB languages, e.g. Written Tibetan lče-chung.

əN [ə]

This vowel occurs only after retroflex initials in my data.

‘house’	tʂə́N	‘pad’ (v.)	tʂhə́N
‘stir fry’	zə́uN zə́N	‘tasty’	zə́N
‘horizontal’	dzə-dzə́N	‘fertilizer’	zə́N

DW

‘soap’	tshə̀w pyów	‘laborious’	thə-tə̀w
‘scold’	nə-thów	‘hemp’	sə̀w
‘comb one’s hair’	qhǔ pzów		

iw

‘plant’ (v.)	tíw	‘poke’	tǐw
‘get along well’	dyè dyǐw	‘face’	zíw
‘reverse’	thə-sthí sthyǐw	‘fight’	tsyé tsyǐw
‘whip; thrash’	nə-tsyíw	‘Yi (impolite)’	tǐw

iwN

‘beard’	fið styíwN	‘steam’	ŋíwN
‘breast; milk’	ŋǐwN		

ǐw

‘smoke’	mè ʃtʂhǐw	‘bracelet’	zə-gǐw
‘happy and excited’	gǐw	‘next year’	zə-khǐw
‘dirty; a slob’	bá zǐw	‘paper’	ʃə-gǐw
‘keep silent’	ŋə̀N tshǐw tʂhǐw pù		

əw

‘wide’	φpə́w	‘begrudge’	φpə̀w
‘fight’	pzə́w pzə̀w		

A couple of miscellaneous points about Dàyáng vowels:

•*Marginal final -ʔ.* In a few words under the high tone a final glottal stop (or constriction on the vowel) is audible in some repetitions:

‘face’	zíw	~	zíwʔ
‘soybean’	ŋé	~	ŋéʔ
‘invite to eat’	dzyú	~	dzyúʔ
‘sweat’	ʃtʂhí	~	ʃtʂhíʔ
‘mouth’	khwá rǎ	~	khwá rǎʔ

•*Alternation between front and back high vowels.*

In at least one word, Dàyáng shows an alternation between -u and -wi.

‘exchange’	ʒdʒǔ	~	ʒdʒwǐ
------------	------	---	-------

This is very reminiscent of a similar phenomenon in Lahu, which I ultimately explained in terms of a palatal suffix.⁴⁷ It remains to be seen whether such an element should be posited for Pumi (or even for Qiangic in general).

5. Tones

The tones in this dialect are quite clear in monosyllables, with a basic opposition between high (H) and low (L). In dissyllabic collocations great complications arise.

5.01 Tones in monosyllables

Dàyáng Pumi monosyllables may be divided into two large tonal classes. Since the dialect shows no overt traces of previous *stopped finals in terms of prosodic features like constriction or creakiness, all Dàyáng syllables are synchronically *live* (in Thai terms). The Dàyáng tone system in monosyllables is thus of maximum simplicity, a two-way contrast between HIGH and LOW. The HIGH tone is realized as high-level (55), and is symbolized by an acute accent; the LOW tone is low-to-mid rising in isolation (13 or 24), where I write it with a ha«cek.

A special 51 tone occurs in a few interjections; I symbolize it with a circumflex:

dz wô⁵¹	there! here, take it!
sthwê	phooey!

Both tones occur synchronically in syllables with all manners of initial consonants:

	<i>HIGH</i>		<i>LOW</i>
'wide'	φpəw	'begrudge'	φpəw
'urine'	βbíN	'bloated'	βbí
'weep'	χqwá	'bite'	χqǒ
'copper'	né	'milk'	nǎN
'news'	pshé	'chop'	pshě
'pull'	ʃtʃí	'village'	ʃtʃí
'insect'	bú	'cold'	bǒN
'wolf'	pó	'bottom'	pǒ
'rain'	gwí	'wear clothes'	gwǐ
'mouse'	wó	'tiger'	wǒ

Although I have not yet undertaken a systematic comparison across the whole lexicon in the various dialects, it looks as if this basic two-way tonal contrast may be traced back to Proto-Pumi, since the Dàyáng tonal classes correspond well to those of Jinghua and Taoba:

⁴⁷See Matisoff 1995:58-9.

<i>HIGH</i>	<i>Dàyáng 55</i>	<i>Jinghua 55</i>	<i>Taoba 55 ~ 54</i>
'bear'	wén	uẽ ⁵⁵	guẽ ⁵⁵
'chicken'	ró	zɔ ⁵⁵	ro ⁵⁴
'mouse'	wó	yo ⁵⁵	yo ⁵⁴
<i>LOW</i>	<i>Dàyáng 13</i>	<i>Jinghua 13</i>	<i>Taoba 45</i>
'hawk'	tǔ	tʂɔ ¹³	tʂɛ ⁴⁵
'horse'	ʒdʒwǐN	sgyẽ ¹³	yuẽ ⁴⁵
'tiger'	wǒ	yo ¹³	yo ⁴⁵

5.02 Tones in dissyllabic collocations

All four mathematically possible sequences of tones occur in dissyllables: HH, HL, LH, LL. A LOW tone in the first syllable is realized as a simple low level tone with no noticeable rise in pitch.⁴⁸ However, when the first syllable is HIGH, a following LOW tone may be realized in two different ways: either with the usual low rising contour (13 or 24) that is found on monosyllables, or as a mid (33) or low tone (21 or 11).⁴⁹ These non-rising contours might be considered a kind of 'neutral' tone, but their occurrence seems unpredictable either in terms of stress or any kind of segmental conditioning factor, or in terms of the grammatical relationship between the constituents of the two syllables. It remains to be seen whether these variants of the LOW tone have any historical significance (i.e. whether they point to a possible 3-tone system for Proto-Pumi) or whether they represent (as I now believe) a secondary and sporadic development in the Dàyáng dialect.⁵⁰ A few examples:

Two kinds of HIGH-LOW sequences

High + Low Rising

'mouth'	khwá rǎ
'wind'	mú mǒ
'bone'	ró qǔ
'monkey'	tsé zǐ
'brothers'	pé tʂǎN

High + Very Low

'well' (n.)	tʂí qò(u)N
'throat'	mú pè
'middle'	gú zǐ
'testicle'	stá pʂhǐ
'chest'	kó lè

5.021 Sporadic tone sandhi in Noun + Noun compounds

In dissyllabic compounds, the underlying tones of the constituents are often retained. Sometimes, however, an assimilatory or dissimilatory development occurs. I have not been able to figure out any conditioning factor for these sporadic sandhi phenomena.

⁴⁸I usually write this variant of the LOW tone in initial syllables with a grave accent.

⁴⁹I sometimes write these variants of the LOW tone in non-initial syllables with a grave accent.

⁵⁰It must also be said that my consultant was not always consistent in subsequent repetitions of H + L sequences, frequently changing her mind as to the exact contour of the second syllable.

(A) *Underlying HH sequences*

- [1] H + H --> H + H (no change)
 cé 'god' tʂǎN 'house' > cé tʂǎN 'temple'
 mí 'person' qó 'nest' > mó qó 'household'
 myóN 'eye' χqá 'shit' > myóN χqá 'eyecrud'
- [2] H + H --> H + L (dissimilation)
 qhú 'head' máN 'hair' > qhú mǎN 'hair of the head'
 tʂí 'water' qó(u)N 'valley' > tʂí qò(u)N 'a well'
- [3] H + H --> L + H (dissimilation)
 qwó 'cattle' χqá 'shit' > qwò χqá 'cowshit'

(B) *Underlying HL sequences*

- [1] H + L --> H + L (no change)
 ʂóu 'tooth' nǎN 'marrow' > ʂóu nǎN 'gums'
- [2] H + L --> L + L (assimilation)
 qhú 'head' ptʂhě 'braid' > qhù ptʂhě 'braids'
- [3] H + L --> H + H (assimilation)
 ʂtʂhwé 'heart' nǎN 'black' > ʂtʂhwé nǎN 'blackhearted'
 ʂyé 'speech' qǔ 'companion' > ʂyé qú 'friend'
 ʂhá 'leg' φpǐ 'belly' > ʂhá φpí 'calf of leg'⁵¹
 ʂhá 'leg' tsǎ 'joint' > ʂhá tsá 'ankle'
 tʂǎN 'house' ʂdʂí 'animal' > tʂǎN ʂdʂí 'domestic animal'

As the number of examples shows, HL --> HH is perhaps the most frequent sandhi phenomenon to be found in Dàyáng compounds.

(C) *Underlying LH sequences*

- [1] L + H --> L + H (no change)
 ʂǐ 'dew' φpí 'snow' > ʂǐ φpí 'frost'
 xyǎN 'mouth' dʂóN 'hole' > xyùN dʂóN 'nose'
 ʂdʂwǐN 'horse' χqá 'shit' > ʂdʂwǐN χqá 'horseshit'
- [2] L + H --> L + L (assimilation)
 rǎ 'skin'⁵² ʂtʂí 'flesh' > rǎ ʂtʂí 'skin'

⁵¹For the same metaphor, cf. the medical name for the large muscle in the calf: *gastrocnemius* (< Gk. *gastēr* 'belly').

⁵²This morpheme seems to be tonally irregular across dialects. Jinghua has ʂv¹³ (i.e. LOW), but Taoba has rǎ⁵⁴ (i.e. HIGH).

(D) *Underlying LL sequences*

- [1] L + L --> L + L (no change)
 mě(N) 'fire' ftshǐw 'smoke' > mè ftshǐw 'smoke'
 ǎ 'tongue' bzǎN 'root' > ǎ bzǎN 'uvula'
 zǎ 'hand' tsǎ 'joint' > zè tsǎ 'wrist'
- [2] L + L --> L + H (dissimilation)
 ptshǎ 'pig' tswǐN 'liver' > ptshǎ tswǐN 'pig's liver'
 qǎ 'strength' ǎN 'snot' > qǎ ǎN 'phlegm'

Even more complicated patterns emerge in collocations of three or more syllables. These are well beyond the scope of the present study.

5.022 *L --> H tone sandhi in prefixed verb roots*

The Jinghua dialect has a well-developed system of directional prefixes that attach to verb roots: tǎ⁵⁵ 'upwards', nǎ¹³ 'downwards', thǎ¹³ 'away', dǎ¹³ 'towards', khǎ¹³ 'outwards; left to right', xǎ¹³ 'inwards; right to left' (Lu 1983:45).⁵³ Dàyáng has a very similar system. Although the vocalism of these prefixes is schwa in Dàyáng, they are often pronounced with enough stress to have a tone, most frequently the HIGH tone. In what appears to be the great majority of cases, a verb under the LOW tone acquires the HIGH tone after a directional prefix in Dàyáng:

'carry on shoulder'	tǎ	tǎ-tǎ
'collapse'	phyě	thǎ-phyé
'drop'	dǎ	nǎ-dǎ
'dry'	kyǔ	tǎ-kyú
'get'	zdzǐ	t(h)ǎ-zdzí 'grab'; but è-zdzǐ 'meet'
'hang'	şǎ	tǎ-şǎ
'hide'	nǎN	thǎ-nóN
'mislay'	mǎ	thǎ-mí
'pull out'	ǎwǎ	tǎ-ǎwǎ 'pull up', but thǎ-ǎwǎ 'pull away'
'rot'	bdzǐ	nǎ-bdzí
'satiated'	kwǐ	tǎ-kwí
'sew'	děi	tǎ-déi
'take with one'	zǎ	nǎ-zǎ 'take down' tǎ-zǎ 'take up' khǎ-zǎ 'take out' ǎ-zǎ 'take over; take in'
'understand'	tşǎ jǐ	thǎ-tşǎ-jí
'wear hat'	twǎ	tǎ-twǎ
'wear clothes'	gwǐ	tǎ-gwí

⁵³These correspond closely to the semantics of similar verb-prefixes in Indo-European.

6. Pumi's place in the Qiangic family: a preview of coming attractions

6.1 The fate of PTB *-a in Pumi

Tatsuo Nishida noticed long ago that the extinct Xixia language, as well as Tosu (a language known from an old bilingual Chinese wordlist,⁵⁴ and apparently the ancestor of the modern Qiangic language Ersu) show a striking development of TB *-a > -i or -ĩ, in some but not all cases.⁵⁵ He is inclined to set up separate PTB vowels to account for these divergent developments. I have found a similar situation in Pumi: there are many examples of PTB *-a > Pumi -i or -ĩ, but also a number of other developments. However, instead of rushing to set up distinct proto-vowels to explain this, I would prefer an explanation in terms of conditioning by the initial consonant, although many problems remain. Some examples:

*-a > -i

		Dàyáng Pumi
'borrow/lend'	PTB *r-ŋ(y)a ≈ *s-ŋ(y)a	də-nĩ ⁵⁶
'ear'	PTB *g-na ≈ *r-na	ŋĩ-dzɔ́
'listen'	PTB *-na	thə-nĩ
'moon'	PTB *s-(g)la	łí
'month'	PTB *s-(g)la	zı́
'hundred'	PTB *r-gya	ʃı́
'salt'	PTB *tsa	tshĩ
'ill/hurt'	PTB *na	ŋĩ
'rest'	PTB *na	khə-nı́
'buckwheat'	cf. PLB *g-ra ^{2 57}	(Taoba tɔ̃ ³⁵ tɕi ³⁵ , Jinghua tǎu tʃə ¹³)
'sparrow'	PTB *N-tsa ⁵⁸	(Taoba gue ³⁵ tɕi ³⁵ , Rgyalrong pa-tsa)
'rice'	PTB *dza ⁵⁹	dzı́ 'cooked rice'

*-wa > -wi

'handspan'	PTB *m-twa	tɕhwı́
'rain'	PTB *r-wa ≈ *s-wa ≈ *g-wa	gwı́
'satiated'	PTB *k-wa (cf. WB wa')	kwĩ
'wear clothes'	PTB *gwa	gwĩ

⁵⁴Nishida (1973:7) describes the composition of this work as fairly late with respect to the other bilingual glossaries known as *Hua-Yi*, dating from the early Qing; he used an 18th century untitled text which refers to Tosu as spoken in Sichuan.

⁵⁵See Nishida 1973, 1976. The examples of this evolution that he cites (1976) are FLESH, CHILD, FOOD, and SALT.

⁵⁶See also Ergong zɿŋi, N. Qiang ŋuə, Muya ŋu⁵⁵, Guiqiong ŋi⁵⁵, Namuyi ŋi³³.

⁵⁷Cf. Lahu ɣâ, Hani ɣa²¹, Lisu gua²¹ (Matisoff 1988a:1116).

⁵⁸Cf. Lahu ʃà, WB ca < PLB *Ndzya¹ (Matisoff 1988a:563).

⁵⁹Cf. Lahu cà 'paddy', Wancho tza, Newari ja (Matisoff 1988a:443).

*-wa > i		
'axe'	PTB *p-wa	ɸpí
'snow'	cf. PLB *wa ² 60	ɸpí
*-a > i		
	<i>mostly after palatals</i> ⁶¹	
'bee'	PTB *bya	bí
'thin'	PTB *ba	bí
'edge/side'	PTB *N-dzya ⁶²	dzǐ [dzǐ]
'eat'	PTB *dzya	dzí [dzí]
'rightside'	PTB *g-ya	z3í
'trousers'	PTB *s-la	z3ǐ
'meat/flesh'	PTB *sya	ʃtʃí
'child'	PTB *za ɹ *tsa	tʂǎN ⁶³
'fish'	PTB *s-ŋya	dʒí ⁶⁴
'many'	PTB *mya ɹ *mra	z3í
*-a > -ɒ		
	<i>after postvelars, labials, dental stops</i>	
'bitter'	PTB *ka	qhǒ
'chin'	PTB *m-ka	mǎ-qó
'open'	PTB *ka	tǎ-qó
'cattle'	PTB *ŋwa	qwó
'strength'	PLB *k-ra ² 65	qǒ
'hoof'	PTB *kwa ⁶⁶	ʒdʒwǐN ɸpǒ
'throw'	PTB *m-ba(y) ɹ *s-ba(y) ⁶⁷	βbó (Jinghua sba ⁵⁵)
'hammer'	PTB *m-t(w)a ɹ *s-ta ⁶⁸	stǒ
'box/cabinet'	PTB *ta ⁶⁹	tó
'father'	PTB *pa	bó
'five'	PTB *l/b-ŋa	wǒN ⁷⁰
'laugh'	PTB *rya	ʂǒ

⁶⁰Cf. Lahu *vâ* 'hail', *vâ-məy* 'snow' (Matisoff 1988a:1323).

⁶¹As we have seen (note 39), there is a tendency in Dàyáng to blur the distinction between /i/ and /ɨ/ after palatal initials.

⁶²Cf. Lahu *jɿa*, Akha *dz\ə*, Limbu *ja* (Matisoff 1988a:563).

⁶³This form apparently reflects the suffixal *-n that sometimes appears on kinship terms, as in Dhimal *tʂan* 'son', Lepcha *a-zon* 'grandchild' (cf. Benedict 1972: n. 86, p. 27; n. 284, p. 100). Cf. FIVE for a different source of a nasalized vowel. There is another Dàyáng word for 'son' that must be allofamically related: *tʂɿ*.

⁶⁴Note the development of PTB *palatalized nasals to Pumi affricates (FISH) or complex fricatives (MANY).

⁶⁵Cf. Written Burmese *ʔâ*, Lahu *ɣâ* (Matisoff 1988a:1116).

⁶⁶Cf. Written Burmese *khwa*. But see also SATIATED and WEAR CLOTHES (above), where a similar *labiovelar-plus-a combination becomes Pumi -i.

⁶⁷See Matisoff 1995:47-8.

⁶⁸Cf. Lahu *tha* 'strike with flat hand, slap, strike a sharp blow', *tha-tu* 'hammer' (Matisoff 1988a:671); also Written Tibetan (m)*tho-ba* 'large hammer' < *-twa.

⁶⁹Cf. Lahu *ta-qō* 'box', Naxi *to*⁵⁵, Tujia *tho*⁵³, Karen *dq*⁵⁵.

⁷⁰With secondary nasalization of the vowel, apparently reflecting the original *nasal root-initial. Cf. CHILD for a different source of a nasalized vowel.

*-a > -a 'ditch'	PTB *ka	qhá (Lahu qhâ)
*-wa > ou 'tooth'	PTB *swa	şóu
*-ya > -ε 'tongue'	PTB *s-lya	łě
*-a-t > -ε 'hot'	PTB *tsa-t ⁷¹	tsé
*-al > -ɒ 'frog'	PTB *sbal	φpó

Comparative Qiangic studies are still in their infancy. Much internal reconstruction will be necessary in each of these dialectally highly diversified languages before we can figure out the details of their complex initial- and rhyme-correspondences. The enterprise will be well worth the effort.

REFERENCES

- Benedict, Paul K. 1972. *Sino-Tibetan: a Conspectus*. Contributing editor: James A. Matisoff. Cambridge University Press.
- Dai Qingxia, et al. 1992. *Zang-Mian yuzu yuyan cihui* [A Tibeto-Burman Lexicon]. Beijing: Central Institute of Nationalities Press. ("ZMYYC")
- Hanson, Rev. Ola. 1906/1954. *A Dictionary of the Kachin Language*. Rangoon: Baptist Board of Publications.
- Lu Shaozun. 1983. *Pumi-yu jianzhi*. Beijing: Peoples Publishing Co.
- Matisoff, James A. 1985. "God and the Sino-Tibetan copula, with some good news concerning selected Tibeto-Burman rhymes." *Journal of Asian and African Studies* (Tokyo) 29:1-81.
- Matisoff, James A. 1988a. *The Dictionary of Lahu*. University of California Publications in Linguistics #111. Berkeley and Los Angeles: University of California Press.
- Matisoff, James A. 1988b. "Proto-Hlai initials and tones: a first approximation." In *Comparative Kadai: linguistic studies beyond Tai*, eds. J.A. Edmondson and D.B. Solnit, pp. 289-321. Arlington, TX: Summer Institute of Linguistics and University of Texas at Arlington.
- Matisoff, James A. 1995. "Sino-Tibetan palatal suffixes revisited." *Senri Ethnological Studies* (Osaka) 41:35-91.
- Namkung, Ju, ed. 1996. *Phonological Inventories of Tibeto-Burman Languages*. STEDT Monograph Series #3. Berkeley: University of California Center for Southeast Asia Studies.
- Nishida Tatsuo. 1973. *A Study of the Tosu-Chinese Vocabulary: Tosu I-yu*. Kyoto: Shōkadō.

⁷¹The basic root is *tsa, but several languages point to a dental suffix: WT tsha 'hot, illness', tshad-pa 'heat; fever'; Lushai ša ~ šat 'hot'. -ε seems to be the regular Dàyáng reflex of *-at: e.g. VOMIT *N-pat > φphé; KILL *sat > syě.

- Nishida Tatsuo. 1976. "Hsihsia, Tosu, and Lolo-Burmese." *Studia Phonologica* 10:1-15.
- Nishida Tatsuo. 1985. "The Hsihsia, Lolo, and Moso languages." In *Sino-Tibetan Linguistics: the state of the art*, eds. G. Thurgood, J. A. Matisoff, and D. Bradley, pp. 130-41. Pacific Linguistics C-87. Canberra: Australian National University.
- Sun Hongkai et al. 1991. *Zang-Mian Yuyin he Cihui*. [Tibeto-Burman Phonology and Lexicon]. Beijing: Chinese Social Sciences Press. ("TBL")

Received: 24 February 1997

University of California
Department of Linguistics
2337 Dwinelle Hall 2652
Berkeley CA #94720-2653
USA