

# Preliminary statement of Katu orthography in Lao script

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The Katu people are a group of approximately 52,000 people in Quang Nam province in Vietnam, and Xe Kong and Salavan Provinces in the Lao People's Democratic Republic. The language belongs to the Katuic branch of the Mon Khmer language family. The language was analysed in Vietnam by Nancy Costello and Judy Wallace, and 'Katu Phonemes' by Judith M. Wallace appeared in *Mon-Khmer Studies* 3-64-73 (1969).

Nancy Costello worked in Vietnam for thirteen years and published a reading primer in 1967, a revised primer in 1976, a Katu vocabulary in 1971, and a Katu dictionary in 1991. This dictionary contains over 3,500 entries. These used a romanised alphabet. Since 1991 she has worked in the Lao PDR under the Institute for Research on Lao Culture and the Ministry of Information and Culture. Three books on Katu culture have been produced: *Katu Folktales and Society*, *Belief and Practice in Katu Agriculture*, and *Katu Traditional Medicine*. These three books are in Lao, Katu, and English. This paper describes the Lao script used to write Katu in these culture books, which is an adaptation of the alphabet used for Katu in Vietnam. Further testing is being done since it has only been possible to work extensively with one Katu speaker in Lao PDR, although trips were made to the Katu area in 1993, 1994, and 1995.

This paper covers both the Katu Vietnam and Katu Lao PDR dialects, since there are only a few predictable phonetic differences. The greater differences are vocabulary. There are Lao villages near the Vietnamese border which speak the Vietnamese dialect.

The purpose of this paper is to show some of the complications involved in writing a Mon Khmer language in a Lao-based script and some of the solutions which are being tried. The aim was to produce an orthography which Katu speakers feel represents their language, one which can be typed on a Lao typewriter and which is readable by and acceptable to Lao speakers. The latter is very important. All stages of the orthography were checked with Dr. Thongpheth Kingsada of the Institute of Research on Lao Culture, and the Ministry of Information and Culture.

It is important in formulating any orthography to take note of the readers' reactions. The most scientific orthography may be rejected if the readers are not happy. The authors were constantly balancing the scientific solution with the readers' reactions.

### 1. Initial single consonant phonemes with suggested Lao script orthography.

	bilabial	alveolar	alveopalatal	velar	glottal
vl.	p ປ	t ຕ	c (tʃ) ຈ	k ກ	
stops aspirated	ph ພ	th ທ	s (s) ຊ	kh ກຸ	
vd.	b ບ	d ດ	j (dʒ) ງ		
preglottalized	ʔb ຜ	ʔd ຖ			ʔ ອ*
nasals	m ມ	n ນ	ɲ ຍ	ŋ ງ	
continuants					h ຮ
laterals		l ລ			
vibrants		r ຮ			
semivowels	v ວ		y ຍ		
			ʔy ງ		

\* Lao script for Katu marks all initial (and medial) glottal stops (ie. initial vowels) with ອ, following Lao conventions. Please refer to the vowel chart for presentation of final glottal stop.

#### Notes on single consonants:

/c/ [tʃ] is a voiceless alveopalatal affricate.

/s/ in the Lao dialect is a voiceless alveopalatal fricative. In the Vietnam dialect it is pronounced as /ch/ [tʃh], a voiceless aspirated alveopalatal affricate.

The Lao dialect does not have /g/, although the Vietnam dialect does.

Katu has four consonant sounds which Lao does not have. They are /ʔb/, /ʔd/, /ʔy/ and /j/. At first the authors thought of using existing Lao signs to represent these, and adding a feature, such as [--] for /ʔb/, but creating new signs causes problems when using typewriters. They therefore decided to use signs which are on Lao typewriters, and were the closest phonetically, and so are representing the new consonants as follows:

- /ʔb/ ຜ This sound is a preglottalized voiced bilabial stop. In Lao it is [ph].
- /ʔd/ ຖ This sound is a preglottalized voiced alveolar stop. In Lao it is [th].
- /ʔy/ ງ This is a preglottalized voiced alveopalatal affricate. In Lao it is [ia].
- /j/ ງ This is a voiced alveopalatal affricate [dʒ]. This sound is not found in Lao, so we have used a sign which is found on Lao typewriters, the sign for etc. since the Katu would probably not use it.

The sign for /ʎd/ was used in the past (1975) for the Love language, a Mon Khmer language close to Katu. The above signs are being checked with other speakers and may need to be changed later.

A word in Katu of Lao PDR has a maximum of two syllables, a main syllable and a presyllable which may be an affix. The main syllable may consist of C1C2V, C1V, C1VC, C1C2VC3. C1 may be filled by any initial consonant except in a C1C2 cluster. C2 can only be filled by /r/ or /ʎ/.

Examples of single initial consonant phonemes:

/p/	paʔ	ປະ	'to save'
/t/	tak	ຕັກ	'to spear'
/c/	cha	ຈາ	'to eat'
/k/	kianʔ	ກຽງ	'to want'
/b/	bas	ບັຊ	'to sacrifice'
/d/	di:k	ດິກ	'to wear headband'
/j/	jaʔt	ແຈັຕ	'ten'
/s/	sɛŋ	ແຊງ	'to hear'
/ʎb/	?bɔŋ	ຜັອ່ງ	'hole'
/ʎd/	?doŋ	ຖອງ	'tree'
/ʎy/	?yaŋ	ງາງ	'spirits in trees, air, ground'
/ph/	phare	ພະເຣ	'danger'
/th/	thiar	ເຫືອຣ	'generous'
/kh/	khe	ເຄ	'top end (of field)'
/ʎ/	?aʎap	ອະອາບ	'to yawn'
/m/	mɛh	ແມັຮ	'to wake up'
/n/	nak	ນັກ	'classifier for people'
/ñ/	ñan	ຍັນ	'to ask for something'
/ŋ/	ŋin	ງິນ	'wind'
/h/	hiap	ຮຽບ	'to cheat'
/ʎ/	ʎy	ແລ້ຍ	'to see'
/r/	riaʔ	ເຣັຍະ	'salty'
/v/	ve:l	ແວລ	'village'
/y/	yaʔ	ຢະ	'self'

## 2. Initial consonant clusters

A number of consonants may occur in clusters with /ʎ/ and /r/. They are:

/pr/	prah	ປຣັຮ	'to wash hand'
/br/	briaʔ	ເບຣັຍະ	'to hang up'
/tr/	trɔŋ	ຕຣັອ່ງ	'tomato'
/dr/	drɔ	ດຣອ	'one stringed violin'
/cr/	cruah	ຈຣວຮ	'to pound 2nd time'

/sr/	sraŋ	ຊຮາງ	'to lose way'
/pl/	plak	ປລັກ	'to snap'
/bl/	blɔ̃t	ບລັອ່ຕ	'dark'
/ʔbl/	ʔblɔ̃	ຜລອ່	'ashes'
/kl/	kla:ʔ	ກັລາ	'sunrise'
/khl/	khlun	ຄລຸງ	'flat ground'

### 3. Syllabic nasals

One of the most significant differences between the Vietnam and Lao dialects is in the use of syllabic nasals. In the Vietnam dialect, a number of consonants may occur with the syllabic nasals /m/, /n/ and /ŋ/. There can also be a syllabic nasal plus a consonant cluster, such as /mpr/, /ndr/, /ŋkl/. The Katu Lao dialect is losing the syllabic nasal. It is either very light or not pronounced. One Katu speaker does not hear it when he says it lightly, and does not want to write it. In the Lao dialect, the syllabic nasal is replaced by /am/, /an/ or /ang/. The following list shows syllabic nasals in the Vietnam dialect, followed by examples from the Lao dialect.

#### Vietnam dialect

/mp/	m̩paŋ	'maggot'
/mb/	m̩baŋ	'branch'
/mbl/	m̩blɔ̃:y	'young man'
/mm/	m̩ma	'seed'
/mph/	m̩phɛ:p	'kind, friendly'
/mr/	m̩rɛh	'sick with worms'
/mpr/	m̩prɛh	'to chop'
/nc/	n̩cay	'body louse'
/nd/	n̩diʔ	'where'
/ndr/	n̩draŋ	'stalk of plant'
/nʔd/	n̩ʔdɔ̃ŋ	'chaff'
/nj/	n̩jak	'French person'
/nk/	n̩kir	'to remember'
/nl/	n̩la	'afraid, worried'
/nt/	n̩tat	'torn'
/nth/	n̩tham	'greedy (eating)'
/ny/	n̩ya	'rice, manioc wine'
/nʔy/	n̩ʔyal	'loincloth'
/ŋh/	ŋhəŋ	'bone'
/ŋj/	ŋjiʔ	'to break crockery'
/ŋk/	ŋkal	'rotten'
/ŋkl/	ŋklə:c	'to cut notches in tree'

**Lao dialect**

ʔam	ʔambe:h	ອຳເບຮ	'goat'
ʔam	ʔammo	ອຳມໍ	'which'
ʔan	ʔandai	ອັນໄດ	'by self'
ʔaŋ	ʔaŋhi:l	ອັງຮີລ	'light (work)'
ʔaŋ	ʔaŋkar	ອັງກຮ	'skin'

**4. Final consonant phonemes with suggested Lao script orthography**

	bilabial	alveolar	alveopalatal	velar	glottal
stops	p ບ	t ດ	c ຈ	k ກ	ʔ ອ
nasals	m ມ	n ນ	ɲ ນຍ	ŋ ງ	
continuants			s ຊ		h ຮ
laterals		l ລ			
vibrants		r ຮ			
semivowels	w ວ wʔ ວ້ອວ		y ຍ yʔ ຍ້ອຍ		

Word initial and medial /s/ is complemented by /yh/ word finally. The final /s/ is realized phonetically in the Vietnam dialect by [ih], and in the Lao dialect by [s].

We follow Lao by using /b/ /b/ and /d/ /d/ for /p/ and /t/ word finally because there are no voiced stops word finally. \*

Khamluan is not altogether happy about using /ʂ/ for final /h/. He does not think of it as a consonant like other final consonants. It may be better to use a Lao tone for final /h/ as is done for a final glottal with a long vowel.

Lao does not have a final /ɲ/, but since Lao uses the symbol which represents /ɲ/ initially to represent /y/ finally, it was decided to represent the final /ɲ / differently from the initial /ɲ/.

In phonemic notation, a final glottal stop is denoted by *q*. In Lao script, a final glottal is inherent for short vowels where there is no following consonant and is thus marked only when it follows a long vowel or i-glide. Please refer to the vowel chart for details.

Examples of single final consonant phonemes:

/p/	kap	ກັບ	'to bite'
/t/	patət	ປະແຕັດ	'joint'
/c/	pac	ປັຈ	'to pull out weeds'
/k/	ʔasʌk	ອະແຂັກ	'taboo'
/m/	tam	ດຳ	'black'
/n/	ʔakan	ອະກັນ	'mother'
/ñ/	pañ	ປັນຍ	'to shoot'
/ŋ/	piŋ	ປິງ	'grave'
/h/	ranah	ຣະນັຮ	'waste'
/ʌ/	bə:l	ເບິລ	'to comfort'
/r/	par	ປັຣ	'to fly'
/u/	ralaw	ຣະເລົາ	'valuable'
/s/	carais	ຈະຣາຊ	'comb, to comb'
/wʔ/	radawʔ	ຣະເດົາ	'to arrange tidily'

## 5. Presyllables

The Katu word in Lao has a maximum of two syllables, a main syllable which can be preceded by one presyllable. In Vietnam there may be three presyllables, since affixes may be bound to the word as presyllables. In Lao, a presyllable may be filled by C1C2V, CVC or CV. A C1C2V presyllable may be filled by /pra/ or /tra/. A CVC presyllable may be filled by /bar, kar, mar, par, phar, sar, tar, or thar/ or by /ʌam, ʔan, ʔaŋ, ʔar/. In the Vietnam dialect this latter group is represented by a syllabic nasal (see Section 3). A CV presyllable may be filled by /ba, cha, ka, la, ma, sa, ta, ya, ʔa/. These are also used in Vietnam. The following are peculiar to the Lao dialect: /chi, li, mi, ni, pi, ri, si, ʔi/. A few words have a presyllable /ʌu/. An example of a word is /tarklaaq/ "to shine on."

The most difficult problem in the whole orthography has been how to write the presyllable vowel /a/ in a CV or V syllable. It is not glottalized and is short. At first we used *mai jattawa*, e.g. [ກັ], but have now decided not to use it any more because it is hard for people who read Lao to know how to read it, and it makes many words look different from Lao. Although it is not glottalized as in Lao, it was decided to use [ɛ] for the presyllable vowel in a CV syllable because this is a short vowel sign in Lao, and because Lao people write some unglottalized words with the presyllable this way although they do not say the presyllable with a glottal. For example ຕະຫຼາດ "market." For a CVC presyllable, *mai kan* is used for /a/.

Examples of presyllables:

/ʌa/	ʔachuy	ອະຈູຍ	'small waist basket'
/ʌar/	ʔarvay	ອັຣວາຍ	'soul'
/ʌam/	ʔamʔbamŋ	ອັມຜາງ	'sky'
/ʌan/	ʔansuar	ອັນຊວຣ	'folktale'
/ʌay/	ʔanghut	ອັງຮຸດ	'a forge'

/pa/	palu:s	ປະລູຊ	'to celebrate'
/par/	pardoṃ	ປັຣໂດງ	'method, way'
/phar/	pharna:y	ພັຣນາຍ	'word, speech'
/phan/	phandil	ພັນດິລ	'woman'
/ba/	babən	ບະເບັນຍ	'long fishnet'
/bar/	barbô:k	ບັຣໂບກ	'monkey'
/var/	varva:y	ວັຣວາຍ	'carefully'
/i/	idial	ອິດງລ	'wife'
/pi/	pikre	ປີແກຣ	'to make proper'
/di/	dida:i	ດິດາຍ	'to wear'
/si/	sisô:t	ຊິຊອ່ດ	'to harvest'
/tši /	cicat	ຈິແຈິດ	'to plant'
/ti/	tiraṃ	ຕີຣາງ	'coffin'
/mi/	misi:ʔ	ມີຊີ	'a short time'
/ka/	katas	ກະຕັຊ	'to call'
/kar/	karluh	ກັຣລຸ	'quickly'
/sar/	sarvət	ຊັຣເວັດ	'to throw'
/tar/	tarnuk	ຕັຣນຸກ	'to mix together'
/sar/	sarli	ຊັຣລີ	'even (size)'
/ca/	cabay	ຈະບາຍ	'to strike'
/sa/	salam	ຊະລາມ	'long digging stick'
/ya/	yayʌn	ຢະແຢນ	'to shake about'
/tra/	tratrah	ຕຣະຕຣັຮ	'to fish with net'
/thar/	tharlaṃ	ທັຣລາງ	'between'
/la/	laləw	ລະເລົວ	'young man'
/ra/	rava:y	ຣະວາຍ	'soul'
/ta/	tava:k	ຕະວາກ	'alcohol'
/va/	vava:y	ວັຣວາຍ	'carefully'
/ʔu/	ʔukək	ອຸເກັກ	'that'
/mar/	marmoṃ	ມັຣນີ	'characteristics of life'
/pra/	praprə	ປຣະເປຣີ	'crazy'

## 6. Vowel phonemes

Katu has 11 basic vowel phonemes, each of which can be short or long. Katu has two vowels which Lao does not have, /ʌ/ and /ɔ̃/. For /ʌ/ we chose the symbols which another language (Kmhmu) in Lao PDR is using. The /ɔ̃/ presented a problem. The first proposal was to use a symbol which was already on a Lao typewriter, so /ə̃/ was used. The current proposal is to use /ɔ̃/ because this symbol is closer to a Lao /ə̃/. This, of course, will need to be tested with readers. The following chart shows the basic vowels with the phonemic symbol and Lao script symbol.

All the Katu vowels can be short or long. Both short and long vowels may be final or non-final. The short final vowels are glottalized. Long vowels may be further divided into glottalised and non-glottalised. Long glottalised vowels are not found in Lao so it was a problem deciding how to symbolise them. The decision was made to use *mai thoo*, e.g. /᷑/ since the glottal is felt by Khamluan to be like a tone. Another Mon Khmer language, Kui, uses the same sign. Short vowels do not occur in open syllables.

	Lao script symbol				
Roman Sign	short and glottal final	short and non-final	long and final	long and non-final	long and glottal final
i i:	᷑	᷑᷀	᷑̄	᷑̄᷀	᷑̄᷑̄
e e:	᷂᷑	᷂᷑̄᷀	᷂᷑̄	᷂᷑̄᷀᷀	᷂᷑̄̄
ɛ ɛ:	᷑᷄	᷑̄᷀᷄	᷑̄᷄	᷑̄᷀᷄᷀	᷑̄᷄̄
i i:	᷑̄	᷑̄᷀	᷑̄̄	᷑̄̄᷀	᷑̄̄᷑̄
ə ə:	᷂᷑̄	᷂᷑̄᷀	᷂᷑̄̄	᷂᷑̄̄᷀᷀	᷂᷑̄̄̄
ʌ ʌ:	᷑̄᷄	᷑̄᷀᷄	᷑̄̄᷄	᷑̄̄᷀᷄᷀	᷑̄̄᷄̄
a a:	᷂᷑	᷂᷑̄᷀	᷂᷑̄᷀	᷂᷑̄᷀᷀᷀	᷂᷑̄̄᷀
u u:	᷂᷑̄	᷂᷑̄᷀	᷂᷑̄̄	᷂᷑̄̄᷀᷀	᷂᷑̄̄̄
o o:	᷂᷑̄᷀	᷂᷑̄᷀᷀	᷂᷑̄̄᷀	᷂᷑̄̄᷀᷀᷀	᷂᷑̄̄̄᷀
ɔ ɔ:	᷂᷂᷑̄᷀	᷂᷂᷑̄᷀᷀	᷂᷂᷑̄̄᷀	᷂᷂᷑̄̄᷀᷀᷀	᷂᷂᷑̄̄̄᷀
ɔ̄ ɔ̄:	᷂᷂᷑̄᷀	᷂᷂᷑̄᷀᷀	᷂᷂᷑̄̄᷀	᷂᷂᷑̄̄᷀᷀᷀	᷂᷂᷑̄̄̄᷀
Diphthongs	Final with glottal	final	non-final		
ia	᷂᷂᷑̄᷀᷀	᷂᷂᷑̄᷀	᷂᷂᷑̄᷀᷀		
ia	᷂᷂᷑̄᷀᷀	᷂᷂᷑̄᷀᷀	᷂᷂᷑̄᷀᷀᷀		
ua	᷂᷂᷑̄᷀	᷂᷂᷑̄᷀	᷂᷂᷑̄᷀᷀		



Examples of vowel phonemes:

/i/	piŋ	ប៊ិ	'grave
/iʔ/	piʔ	ប៊ិ	'to squeeze
/i:/	ri:l	រិ	'to peel
/i:ʔ/	pi:ʔ	ប៊ិ	'yellow fruit
/i:/	pi	ប៊ិ	'to speak
/e/	cet	ជេត	'to die
/eʔ/	neʔ	នេ	'that
/e:/	teŋ	តេ	'to do, work'
/e:ʔ/	pe:ʔ	ប៉េ	'banana'
/e:/	ʔire	ទិរេ	'to rub'
/ɛ/	pe:h	ប៉េ	'they'
/ɛʔ/	leʔ	លេ	'to, towards'
/ɛ:/	reŋ	រេ	'edge, border'
/ɛ:ʔ/	ambe:ʔ	អំប៉េ	'goat'
/i/	dih	ទិ	'quickly'
/i:ʔ/	kathiʔ	កាតិ	'occurrence'
/i:/	pi:k	ប៊ិក	'to hoe dry field'
/i:ʔ/	ti:ʔ	ទិ	'old'
/i:/	di:	ទិ	'east'
/ə/	ŋəh	ញេ	'edge, opening'
/əʔ/	yəʔ	យេ	'not'
/ə:/	və:c	វេ	'to go'
/ə:ʔ/	prə:ʔ	ប្រេ	'pepper'
/ə:/	də:	ទេ	'imperative'
/ʌ/	li	លើ	'to see'
/ʌʔ/	cʌʔ	ជើ	'to prevent'
/ʌ:/	ʔdʌŋ	ទើ	'to bring'
/ʌ:ʔ/	tʌ:ʔ	តើ	'from'
/ʌ:/	akʌ:	ខេ	'then'
/a/	ʔdah	ត័	'to eat meat'
/aʔ/	taʔ	តា	'to endure'
/a:/	kalaŋ	កា	'to worry'
/a:ʔ/	taka:ʔ	តា	'to walk, behave'
/a:/	ca:	ចា	'to eat'
/u/	yuŋ	យូ	'foot'
/uʔ/	luʔ	លូ	'to pull'
/u:/	katu	កាតូ	'Katu'
/u:/	kruŋ	ក្រូ	'vegetable stew'
/u:ʔ/	lu:ʔ	លូ	'puddle'
/o/	coh	ចូ	'to plant'
/oʔ/	loʔ	លូ	'good, beautiful'
/o/	mamon	មូ	'to be alive'

/oŋ/	aŋo:y?	ອະໂອ້ຍ	'chicken'
/oŋ/	co:	ໂຈ	'to return'
/ŋ/	dŋ	ດ້ອງ	'to give'
/ŋʔ/	kanŋʔ	ກະເມູາະ	'to think'
/ŋŋ/	mamŋŋ	ມະມໍ	'sister of brother'
/ŋŋ/	cŋ:m	ຈອມ	'to be able'
/ŋŋ/	bŋ:	ບອໍ	'rain'
/ŋ/	?yŋk	ງໍອໍກ	'to climb'
/ŋŋ/	?dŋʔ	ຖໍອໍຂ	'comparative'
/ŋ:y/	tamŋ:y	ຕະມອ້ຍ	'to visit, visitor'
/ŋŋ/	pathŋ:	ປະທອໍ	'to send message'
/ŋŋ/	lŋ:q	ລໍອໍ	'to peel, husk'
/ia/	d̄iar	ດຽຣ	'to go around'
/ia/	Bia	ເບ້ຍ	'name of mythological person'
/ia/	sia	ເຊືອ	'leftover'
/ia/	lian̄	ເລືອງ	'to turn, untwist'
/iaʔ/	ciaʔ	ເຈືອຂ	'pineapple'
/uaʔ/	aruʔ	ອະຣົວຂ	'painful'
/ua/	pathua	ປະທົວ	'to give in'
/ua/	athuan̄	ອະທວງ	'bean'

## 7. Irregular signs

The Katu phonemes have a parallel pattern in which word initial preglottalized /ʔy/ is complemented by post-glottalised /yʔ/. Word final /y/ and post-glottalised /yʔ/ can occur in Katu with both short and long vowels, as the following chart shows. The diphthongs /ia/ and /ua/ can also be followed word finally by /y/ and by /yʔ/. Most vowels followed by /y/ follow the normal convention for vowel plus consonant, except for /ay/ and /oy/.

short and non-final

short and glottal final

long and glottal final

		iyʔ	ᵿᵿ	i:yʔ	ᵿᵿ
		əyʔ	ᵿᵿ	ə:yʔ	ᵿᵿ
		ʌyʔ	ᵿᵿ	ʌ:yʔ	ᵿᵿ
ay	ໄᵿ	ayʔ	ໄᵿ	a:yʔ	ໄᵿ
		uyʔ	ᵿᵿ	u:yʔ	ᵿᵿ
oy	ໄᵿ	oyʔ	ໄᵿ	o:yʔ	ໄᵿ
		ŋyʔ	ᵿᵿ	ŋ:yʔ	ᵿᵿ
		ŋyʔ	ᵿᵿ	ŋ:yʔ	ᵿᵿ

Examples:

/i:y?/	katiy?	ກະຕືຍ	'small'
/i:y?/	masi:y?	ມະຂືຍ	'a short time'
/ə:y?/	ka?əy?	ກະເອຍ	'to burp'
/ə:y?/	kayə:y?	ກະເຍຍ	'honey'
/ʌy/	ʌy	ແລ້ຍ	'to see'
/ʌ:y?/	ñʌ:y?	ແຍ້ຍ	'to be humble, unafraid'
/ay/	pay	ໄປ	'to take'
/ay?/	malay?	ມະໄລ້	'wood for crossbow'
/a:y?/	tata:y?	ຕະຕ້າຍ	'anus'
/uy?/	payuy?	ປະຍັຍ	'orange bellied flower pecker'
/oy/	maloy	ມະໂລ້ຍ	'to strive for power'
/oy?/	tangtoy?	ຕັງໂຕ້ຍ	'dragonfly'
/o:y?/	hamo:y?	ຮະໂມ້ຍ	'instead'
/w̃:y?/	kl̃w̃:y?	ກູ້ອັຍ	'to tie up'
/w̃y?/	ṅṅy?	ງັອຍ	'buffalo'
/w̃:y?/	kad̃w̃:y?	ກະດັອຍ	'squash plant'

The diphthongs /ia/, /ua/ also occur with word final /y/ and post-glottalized /y?/ /am/ follows the Lao symbol /x̃/.

DIPHTHONGS

non-glottal                      glottal

ia	ເືອຍ	ia?	ເື້ອຍ
ua	xວຍ	ua?	x້ວຍ

/iay/	phiay	ເພືອຍ	'thatch'
/iay?/	ja?iay?	ງະເອ້ອຍ	'to burp'
/uay/	haruay	ຮະຣວຍ	'to leak'
/uay?/	mbuay?	ມບ້ວຍ	'to cut up (animal)'

The Katu phonemes fit a parallel pattern in which word initial /b/ and preglottalized /ʔb/ are complemented by word final /w/ and post-glottalised /w?/. /i/, /i/, /ə/ and /ʌ/ follow the normal pattern for vowel plus consonant. /aw/ and /ow/ do not follow the normal pattern.

Word final /w/ and post-glottalised /w?/ occur in Katu with the following vowel combinations:

short & non-final		short and glottal final		long and glottal final	
		ʌw?	ແ້ວ	ʌ:w?	ແ້ວ
aw	ເ້າ	aw?	ເ້າ	a:w?	້າວ
ow	ໂ້ວ	ow?	ໂ້ວ		

## Examples:

/ʌw?/	jarʌw?	ງະເ້າ	'to bury alive'
/ʌ:w?/	kʌ:w?	ແກ້ວ	'to pull'
/aw/	daraw	ດະເ້າ	'thing'
/aw?/	saw?	ເ້າ	'to tie'
/a:w?/	pada:w?	ປະດ້າວ	'to use people'
/ow/	ha?ow	ຮະໂອ້ວ	'to put up high'
/ow?/	?dow?	ໂຖ້ວ	'deep'

The diphthongs /ia/, /ia/ and /ua/ can also occur with word final /w/ and with post-glottalized /w?/. /am/ follows the Lao sign /xǎ/.

## DIPHTHONGS

non-glottal		glottal	
iaw	ຊງວ	iaw?	້ງວ
iaw	ເ້ອວ	iaw?	ເ້ອວ
uaw	ຂວວ	uaw?	້ວວ

## Examples:

iaw	hanjiaw	ຮະງງວ	'headcloth (men)'
iaw?	diaw?	ດ້ງວ	'glutinous (rice)'
iaw	janiaw	ງະເ້ອວ	'medicine'
uaw	luaw	ລວວ	'right speed'

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