PHUNOI OR CÔÔNG

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ABSTRACT

A substantial vocabulary of this Loloish Tibeto-Burman language follows some phonetic, phonological, and comparative observations. Phunoi usually has final /p/, /t/, /m/, or /n/ in reflexes of Proto-Loloish roots reconstructed with *-p, *-t, *-m, or *-n respectively. Phunoi is also conservative in preserving the three-tone system reconstructed for Proto-Loloish non-stopped syllables; in stopped syllables, the two-way tonal distinction has its southern Loloish phonetic reflex. Phunoi, like other Biscoid languages, has undergone a chain shift in manners of initials: *voiced stops have voiceless unaspirated reflexes, while *stop-prefixixed nasals have voiced stop reflexes.

PREVIOUS WORK

The first vocabulary of this language appears in Lefèvre-Pontalis 1892, under the name 'Khong'. An excellent vocabulary, with tones indicated, is in Roux 1924; there is also ethnographic and historical information in this source. Several linguists, including Shafer and Nishida, have used the Roux material in comparison. Nishida 1966-7 shows that Phunoi is closely related within Southern Loloish to Bisu, a language of northern Thailand, and to Pyen in Burma, reported in Scott/Hardiman 1900; Matisoff 1972 uses the term 'Bisoid' for this subgroup. Harris has more recently worked with several informants, including mine. Ferlus has also done work on the language, and some ethnographic information on the Cônông in Vietnam is found in Vuong 1973.
PHUNOI AND THEIR SETTING

The Phunoi live in Phongsaly Province, northeastern Laos; the Northwest Autonomous Region of Vietnam; and probably in China as well. In Vietnam, the Phunoi are called C ông, and speak a slightly different dialect; according to the 1960 census, there are about 6,500 in all. In Laos, the Phunoi live in a concentrated area around Phongsaly town; Roux reports a population of 10,000 in 1923, which is now probably far too low. There are, according to informants, five major clans, each with a dialect; Roux reports one, Ferlus another, and Harris and myself a third. Some Phunoi also now live in Luang Phrabang and Vientiane Provinces, as they were unable to return home after serving in the Royal Lao forces. 'Phunoi' means little man in various Dai languages including Ly, and is probably not the original name for this group; C ông [khôːŋ] is more likely to be the original name. The relatively small areas inhabited by the Phunoi, and the large population concentrated in these areas, are both unusual among Loloish groups — which tend to be geographically scattered, and intermingled with other groups.

According to Phunoi tradition, they were under Burmese rule in the Muong Sing area of northwestern Laos until five generations before 1923. This location is much closer to the modern Bisu and Pyen, so genetic comparison supports the tradition. Then, after a Chinese invasion, they fled to their present area; perhaps this invasion can be associated with Yung Li, the last Ming emperor, and his Manchu pursuers; or with the later upheavals associated with the Mohammedan rebellion in Yunnan. They were then involved, always on the losing side, in wars between the Burmese and the Vietnamese. The resettlement of populations after wars, in the territory of the victors, may account for the presence of Phunoi in Vietnam. The main concentration of Phunoi was in Muong U, a part of the Ly Federation [sîp sîŋ phān nāː], twelve thousand wet-rice fields, when the French entered the area; there are strong Ly cultural and lexical influences on the Phunoi in the area. For example, the Phunoi adopted Ly Buddhism.

The history of Muong U has been extremely turbulent in the last century. Various armies of Chinese bandits caused chaos for more than thirty years at the end of the nineteenth century. These Chinese, called [hp] in most Dai languages of the area, are called /huɔ̌ bɔː/ in Phunoi; several other Loloish languages have related forms, derived from *hek. These Chinese were eventually subdued by the Ly, who were in turn conquered by the French — who then received cession of the area from China, the nominal ruler, in 1895. There were major Ly revolts in 1908-10 and 1914-6; the French suspected the Phunoi of involvement
in at least the second of these. Between 1917 and 1924, the French built many roads in the area to consolidate their rule — using mainly Phunoi corvée labour. Most of the non-Phunoi population of the area went to China to avoid this work; thus, in 1921 the French moved their administrative centre to Phongsaly, in the Phunoi area of the province. There were constant bandit raids from China — one source lists ten between 1917 and 1930. The Phunoi began to serve in the French armies, and later benefitted from high opium prices, and Vichy government support of opium cultivation, during World War II. Anti-Japanese, Viet Minh, Pathet Lao, and CIA guerillas were active in the area at various times; the Royal Lao government also used the Phunoi in its forces. During a brief truce in 1958-9, the Royal Lao government tried to exterminate the Pathet Lao and Neutralist forces in the area. From 1959, Phongsaly Province became a Neutralist stronghold under Colonel Khammouane; he was supplied from China, and roads were built connecting northern Laos with adjacent areas of China. For about ten years, the area was subject to intensive US bombing. Now, at last, Laos has achieved peace; the Phunoi are certain to benefit.

TRANSCRIPTION: PHONETICS, PHONOLOGICAL INVENTORY

Items in brackets do not occur in the primary system, but only in the secondary system of loans. There are very many loans in Phunoi.

1. Minor Syllables (schwa vowel, pitch same as following syllable, with these initials)

    (t) c k Xh are voiceless aspirated
    ch kh stops. /t/, /d/ are dental; /f/ is a bilabial or
    b d j g labiodental fricative. /ʒ/ here is [dʒ].
    f s w l j

2. Initial Consonants (followed by full, tonal vowel)

    p ph t ch (kᵽ) (kⱼ) k ? As above, but /ʒ/ is a palatalized dental, weakly af-
    ph₁ th ch (kʰᵽ) /f/ is a palatalized dental, weakly af-
    b bj d j fricated. /b/, /bj/, /d/
    m m₁ n n are sometimes implosive.
    hm hm₁ n n /mj/ and /n/ occur only in
    (f) s (j) juncture in my data. /j/
    (x) h is a palatal continuant;
    w l j /hᵽ/ and /h₁/ are strongly
    h₁ hj articulated, voiceless-onset
    sh palatal and lateral continu-
    ants. /sh/ is an aspirated
dental spirant. hN are

voiceless nasals.
3. Vowels

\[
\begin{array}{cccc}
1 & \iota & u & \iota (\mathfrak{u}) \\
\varepsilon & e & \varepsilon (\mathfrak{e}) & \circled{\mathfrak{o}} \\
\varnothing & a & (\mathfrak{a}) & \mathfrak{a}
\end{array}
\]

All but two native vowels are non-diphthongal. The nonnative diphthongs are listed later.

4. Final Consonants

\[
\begin{array}{c}
p \\
t \\
(k) [?] \\
m \\
n \\
p (\mathfrak{n}) \\
y \\
\mathfrak{y} \\
\mathfrak{l}
\end{array}
\]

Occurring combinations of Vowel and Final Consonants are stated below. [?] is a juncture phenomenon in primary system.

5. Tones

\[
\begin{array}{c}
\mathfrak{u} \\
\mathfrak{e} \\
(\mathfrak{e}) \\
\mathfrak{a}
\end{array}
\]

High (level or slightly falling), low (level or slightly falling), mid (level), and rising, phonetically. The rising tone does not occur in the primary system.

PHONOLOGY

The phonological oppositions are subsumed in the charts above. Minor Syllable Consonants have a two-way opposition, stop (S) or continuant (C); Initial Consonants have a three-way opposition, with nasal (N) in addition to S and C. Vowels are oral (O) or nasalized (N).

The S and C group consonants are contrastively voiced (V), strongly articulated (H), or weakly articulated (W), the last non-voiced and non-aspirated. The N group are either strongly articulated (H) or voiced, weakly articulated (V); the values of H and V are different with N than with S or C. Borrowings have added a number of additional CW elements, and introduced one which formerly occurred only in Minor Syllables to Initial Consonant position (f). The following chart refers to Initial Consonants; Minor Syllables have several fewer possibilities, thus the opposition is more restricted; this reduction can sometimes be shown to be recent (either by comparisons with Roux materials, or with other languages).

The positions of articulation which are contrastive in primary phonological system (native words) are labial (L), dental (D), palatal (P), velar (X), and laryngeal (L). Labials also occur palatalized (LY), and velars occur labialized in secondary system (XL).
The final consonants have the same basic three-way manner opposition as initial consonants, S, C, or N; but there is no additional V/H/W opposition. Also, the position opposition in native syllables is two- or three-way, L/D for S, L/P for C, and L/D/P for N.

There are voiced fricative realizations of /b/, /d/, /g/, /w/, and /j/; they occur mainly in close-juncture; although /w/ sometimes has a [v] realization initially. As in Vietnamese and most Dai languages, but in few other Loloish languages, the voiced stops /b/ and /d/ tend to be implosive. Also like Vietnamese, final /m/ tends to have a simultaneous velar closure: [ŋm]. The Dai loanword element in Phunoi can hardly be overemphasized; several consonants, e.g. /f/ and /j/, occur only in loanwords; the vowels /e/ and /o/ appear to be distinct from /ɛ/ and /ɔ/ only in loanwords — although there is allophonic variation between [ɛ] and [ɛ] for native /e/, and [ɔ] and [ɔ] for native /o/.

In native words, and in assimilated or fortuitously canonical loanwords, the following combinations of vowel, and final occur — some are much more frequent than others.

-āp, -up, -op, -at, -ot, -it, -ot, -et
-ām, -um, -转入, -an, -on, -in, -an, -in
-āŋ, -ŋ

In addition to the two diphthongs shown, various possibilities occur across morpheme boundaries, and a very large number of possibilities occur in borrowed words, along with nearly every possible combination of O-vowel + final stop and N-vowel + final /m/, /n/ or /ŋ/. Many diphthongs, including [−ɑj, −ɔj, −oɪ, −eɡ, −ɛɡ, −iɡ, −u̯j] all appear to be secondary. Examples of Vowel plus Final Consonant combinations that are secondary include [−ip, −ep, −en, −en] and several others of which there are fewer examples. There are several vowels which do not
occur nasalized in native words, but which do in loanwords. All of
these changes involve utilizing sounds which occur in the language in
combinations that did not previously, but which may well have at some
previous stage in the language. A case in point are the velar finals.
These must be reconstructed for *Loloish, and are in fact attested in
Roux and in Bisu in the case of the velar nasal final; but sound
change has eliminated them from Phunoi. The possibility of a velar
final is then reintroduced by loanwords.

Several further juncture phenomena can also be tentatively stated
on the basis of my data. Within a word (for this purpose defined as
coextensive with the noun phrase or verb phrase, including particles
if any) there are various kinds of assimilation which affect the nasal
initials. Specifically, a nasalized vowel, or a vowel with following
n, or the glide -ṇ̣, all are realized with [m] when followed by a la-
bial; in the case of the vowel with following n, there is no longer an
n, but only an m; cf. *mouth below. Word finally, and particularly in
utterance-final or citation form, there is a possible final glottal
stop; when the Tone is low or mid in pitch, there may also or instead
be a constriction and laryngealization of the vowel (not, however,
corresponding to instances where comparative data would indicate a
final *-k for Loloish). In closer juncture than word juncture, the H
(voiceless, strongly articulated) nasals often become V (voiced), but
the conditions are difficult to state.

Many minor syllables in primary system words show a reduced form of
the first element in a compound: /bə-/ from /bə/ *hand, among others.
In such cases, the rhyme correspondence of the reduced syllable is, of
course, irregular. In cases of juncture or reduction differences, the
form which actually occurs is given in the vocabulary.

DIALECT DIFFERENCES

At least six dialects of Phunoi exist: five in Laos and one in
Vietnam. The transcription used by Lefèvre-Pontalis is not accurate
enough to show dialect characteristics, and Vuong does not give enough
forms, so much more data is needed on the Vietnam dialect. As noted,
Roux records one Laos dialect, Ferlus another, and herein a third is
presented. When they differ from my data, forms from Roux are includ-
ed in the vocabulary, in parentheses ( )

One striking difference is the presence of -ng, presumably represen-
ting final [ɲ̣], in Roux; while such forms simply have nasalized
vowels in my data. Perhaps the loss of final [-ŋ̣] has occurred in the
last fifty years. Another difference concerns reduced minor syllables
where /n/ initial would be expected etymologically, such as *bean or
nose. The Roux data shows an /n/, but my data shows a change to /ŋ/ – as there are no nasal-initial minor syllables. Another implied change parallels Lao: palatal affricates seem to have become aspirated dental spirants tchà là tɪɡɛr, my data /ʃʰələ/. Further differences include a possible retention of initial /ŋ/ in the Roux dialect, unlike its rather heterogeneous reflexes in my data.

Further study of Phuoni dialects is needed.

COMPARISON WITH *LOLOISH

As noted in the abstract above, Phuoni is similar to Bisu in many respects; in fact it is Bisoid in the sense of Matisoff 1972. *Loloish reconstructions have been the subject of much work lately, especially by Matisoff. I have adopted the labels used by Matisoff for various reconstructed categories; in some cases Phuoni does not supply data to differentiate them all. Following Matisoff 1971, I use the labial to represent all positions of articulation in correspondence charts when discussing *Manner of articulation; and the voiceless unaspirate to represent all manners when discussing *Position of articulation.

Prefixes

Some of the Minor Syllables in Phuoni are from *Southern Loloish prefixes. One example is mooŋ /fɔlə/, Akha /bala/, Lisu /haba/, Lahu /hapa/, the latter two with the order reversed (forms from data obtained in Thailand). In many other Loloish languages, this word has a voiceless lateral initial reflecting this prefix. In arrow /bələ/, Akha /mja/ Akha has fused the prefix to the initial as a nasal; other southern Loloish languages reflect this prefix in initial and/or tonal differences. An example that shows how these prefixes may have arisen is tear (n) /bələ/, from a reduced form of eye /bja/ plus water /lə/.

The *Lolo-Burmese prefixes *? causative, *k animal, and *ŋ body part have fused with the initial and been treated as a unit. With some *Resonant initials, there is a different development, resulting in a different correspondence, when the animal prefix is involved. The causative prefix, because of regular sound change, would not be observable with stop initials; with nasal initials, one might expect causative pairs of verbs one of which was a voiced stop and the other of which was a voiced or voiceless nasal. For further on these three prefixes elsewhere, see Bradley 1971 and 1975.
## Initials A. Manner

*Plain (formerly *Aspirated, and usually realized as such) and *Stop-prefixed stops are realized as voiceless aspirated stops in Phunoi. *Voiced and *Nasal-prefixed stops have reflexes with voiceless unaspirated stops. *Stop-prefixed nasals have reflexes with voiced stops; *Plain nasals have reflexes with voiced nasals; and *S- or *?-prefixed nasals have reflexes with voiceless nasals. This could be seen as an example of a drag type of chain shift: a merger among voiceless stops (to a phonetically aspirated stop) leaving room for voiced stops to become voiceless (phonetically unaspirated) stops; leaving room for some nasals (in fact, the *Stop-prefixed nasals) to become voiced stops, while other nasals remain nasal.¹⁰

### Initial Manner Chart

<table>
<thead>
<tr>
<th>Stops</th>
<th>Phunoi</th>
<th>Bisu</th>
<th>Examples (in Phunoi; sometimes the Bisu is not available)</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Lololish</td>
<td>ph</td>
<td>ph</td>
<td>above, bitter, dog, day after tomorrow, fear, goat, grey, horn, leaf, person, deer, paddy, silver, six, foot, thorn, tie, vomit, wash (person), sweet, spit, smoke, steal, (loans) pepper, Shan</td>
</tr>
<tr>
<td>*Stop-prefixed</td>
<td>ph</td>
<td>ph</td>
<td>change, dove, drum, frog, grandmother, grind, hawk, male suffix, sour, teeth, (possible causatives) fear, steal</td>
</tr>
<tr>
<td>*Voiced</td>
<td>p</td>
<td>p</td>
<td>alive, bee, branch, bark, caladium, give, head, have, poison, pile up, pound, drink, wing, vulva</td>
</tr>
<tr>
<td>*Nasal-prefixed</td>
<td>p</td>
<td>p</td>
<td>book/read, cowrie, dig, shoot</td>
</tr>
</tbody>
</table>

### Nasals

<table>
<thead>
<tr>
<th>Stems</th>
<th>Phunoi</th>
<th>Bisu</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Plain</td>
<td>m</td>
<td>m</td>
<td>horse, sky, you, old, oat, powder, heart father, husband, sit (proto-variation: *Plain vs. *Stop-prefixed)</td>
</tr>
<tr>
<td></td>
<td>m</td>
<td>b</td>
<td>eye, face, grass, wind (proto-variation: *Stop-prefixed vs. *Plain)</td>
</tr>
<tr>
<td>*Stop-prefixed</td>
<td>b</td>
<td>b</td>
<td>fire, hungry, lightning, round, mother, elephant, ² heart, ² thumb, son-in-law, dream, girl, monkey, ill, morning, near, black, spirit, gun, brain</td>
</tr>
<tr>
<td>*S- or *?-</td>
<td>hm</td>
<td>hm</td>
<td>blow, cow, mushroom, knife, hair, red, listen, name, see, ripe, snot, earth, forget, potato, tongue, tail, bamboo shoot, ear</td>
</tr>
</tbody>
</table>

### Spirants

<table>
<thead>
<tr>
<th>Stems</th>
<th>Phunoi</th>
<th>Bisu</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Plain</td>
<td>s</td>
<td>s</td>
<td>round thing, kill, louse, meat, pour, steam, (iron), tomorrow, die, blood, who, three, liver, rub/sharpen</td>
</tr>
<tr>
<td>*Prefix</td>
<td>j</td>
<td>j</td>
<td>child, he, go down</td>
</tr>
</tbody>
</table>
Resonants

*\(w\) \hspace{1em} w \hspace{1em} w \hspace{1em} hide, flower, palm, pig

*\(S\)-wat \hspace{1em} h1 \hspace{1em} - \hspace{1em} wear, clothes

*\(C\)-w \hspace{1em} ? \hspace{1em} ? \hspace{1em} bear, elder sibling

*\(r\) \hspace{1em} j \hspace{1em} g \hspace{1em} bone, chest, get pheasant, weave

*\(S\)-r \hspace{1em} hj \hspace{1em} count, sell, elf. people, ashamed

*\(?\)-r \hspace{1em} h \hspace{1em} chicken, stand up

*\(k\)-ra(t) \hspace{1em} h \hspace{1em} ant, bamboo, leech

*\(k\)-wa \hspace{1em} h \hspace{1em} h \hspace{1em} big, in front, rat, termite

*\(p\),\(k\)-r \hspace{1em} h \hspace{1em} h \hspace{1em} ashes, 2 laugh, Meß

*\(y\) \hspace{1em} j \hspace{1em} j \hspace{1em} field, horse, medicine, opium, sleep

*\(S\)-\(y\) \hspace{1em} hj \hspace{1em} antelope, itch, raise animal, tobacco

*\(C\)-\(y\) \hspace{1em} h \hspace{1em} bellows, drunk, rain

*\(l\) \hspace{1em} l \hspace{1em} l \hspace{1em} come, enough, hand, neck, warm etc.

*\(S\)-\(l\) \hspace{1em} hl \hspace{1em} hl \hspace{1em} tongue, pants, penis

*\(?\)-\(l\) \hspace{1em} l \hspace{1em} ashes, 1 boat

*\(C\)-\(l\) \hspace{1em} ? \hspace{1em} bark, beg, wind

*\(C\)-\(l\) \hspace{1em} ? \hspace{1em} ? \hspace{1em} grandchild

Fused *prefix becomes initial: free, husband, lick, lightning

Laryngeals

*? \hspace{1em} ? \hspace{1em} ? \hspace{1em} below, crow, egg, go, 1 intestines, noun/verb prefix

*\(h\) \hspace{1em} h, h \hspace{1em} be the case, belch, that, rice

The chart above summarizes developments of *Loloish initials of all *Manners, including *Spirants and all *Positions of *Resonants, in Bisoid. In some cases, the Bisu form is not available; perhaps Nishida can supply these forms from his notes. Some scarce *Resonants, e.g. *\(?\)-\(w\), have been omitted since Bisoid data is not available.

*Resonants have fairly regular developments reflected by their Phunoi reflexes. *r-type resonants and *Voiced spirants have merged with *y-type resonants with the same *prefixes in Phunoi (but not in Bisu). *S-\(w\) apparently (one example) merges with *S-\(l\). *Resonant *Manners are reflected quite well by Phunoi phonetics: *Plain are realized as Phunoi voiced continuants; *S-prefixed, strongly articulated continuants; *C-prefixed, Phunoi glottal stop initial; *\(?\)-prefixed *r/*y type resonants are realized as Phunoi voiceless, weakly articulated continuants (voiceless spirants), but *\(?\)-\(l\) has initial /l/ among its Phunoi reflexes. A couple of the *k-prefixed *r and one *k-prefixed *w are not realized as /\(l\)/ in Phunoi, but /h/ or /h/ depending on exact
environment. The *Laryngeal system is approximately as reconstructed elsewhere (Bradley 1971), but some *Nasals, particularly *prefix nasal velar nasals, and some *Resonants as just noted, also have become phonetic laryngeals in Phuoni. More on the *Spirants below.

**Initials B. Position**

The following chart is similar to several in Burling's and Matisoff's works.

<table>
<thead>
<tr>
<th>*Loloish</th>
<th>P</th>
<th>PY</th>
<th>T</th>
<th>TS</th>
<th>C</th>
<th>KY</th>
<th>KR</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisu (unasp.)</td>
<td>p</td>
<td>pj</td>
<td>t</td>
<td>ts</td>
<td>ts</td>
<td>kj</td>
<td>k</td>
<td></td>
</tr>
<tr>
<td>Phuoni (unasp.)</td>
<td>p</td>
<td>pj</td>
<td>t</td>
<td>c</td>
<td></td>
<td>k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(as.)</td>
<td>ph</td>
<td>ph</td>
<td>th</td>
<td>sh</td>
<td>ch</td>
<td>kh</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Examples for Phuoni follow.

*P* (unasp.) potato, chin, carry (shoulder), deaf, cheek, give, rot, roast, shoot, vulva

(as.) frog, grandmother, open vomit, leaf, grey

*PY* (unasp.) bee (as.) silver

*T* (unasp.) alive, dig, drink, hit, poison, think, wing

above, knot, sharp, thick

*TS*

*C* (unasp.) food, have, sparrow, suck,^2^ waist, hawk

*KY*

*TS* (as.) deer, salt, person, cough

*C* lift, thorn, paddy, Shan/Dai

*KY* (as.) sweet

*KR* (unasp.) hear, courie

/\ch/ sour, garden

(as.)\{/kh/ foot, hair, dove

*K*

bark, branch, neck,^2^ bitter, behind, dog, steal, smoke

The *Positions of articulation are from Matisoff. It is interesting to note that Bisu has almost the same number of positions as the reconstructed *Loloish system, and that their phonetic realization in Bisu supports the reconstruction. Phuoni is less conservative. Developments of *voiced stop-initials, which become phonetically unaspirated in Phuoni differ somewhat from developments of *voiceless stop-initials, which become aspirated.

*P* initials are realized as phonetic labials in Phuoni; *PY* as palatalized labials. *T* initials are dental, and *K* initials are velar stops (*Velar nasals have different kinds of reflexes, mostly laryngeal).
When *voiceless, *TS initials have reflexes with /sh/, *C and *KY with /ch/, and *KR with /ch/ or /kh/ depending on the *rhyme. When *voiced, *TS, *C, *KY and *KR initials all have reflexes with /c/.

*Nasals develop as *stops in some positions: *Labial, *Palatalized Labial, and *Dental as noted above. *Palatal nasals, of which there are comparatively few, are seen in green and finger; in Phunoi, these words have /hj/ initial and an irregular rhyme development with a nasalized vowel — perhaps partly involving metathesis. *Velar nasals sometimes follow the patterns seen elsewhere, but more often do not.

I has a voiced velar stop initial in Phunoi; this is regular, parallel to fire.

Five has a glottal stop initial and vowel nasalization (metathesis again?).

Fish has initial /j/, which is a reconstructable *medial in this root, and also has an unusual rhyme development and vowel nasalization.

Banana has a voiced laryngeal /h/ initial, from *Loloish *S-ŋ, rather than [ŋŋ] which does not occur in Phunoi, but would parallel the other voiceless nasals.

*Spirants, listed in the Initial Manner Chart above, are voiceless dental continuants in cognates of *Plain and *Prefixed spirants; and voiced palatal continuants in cognates of *Voiced spirants. Thus, the two *Positions of articulation for *Spirants have merged in Phunoi; in fact, the *Voiced have merged with the (*r- and) *y-type *Resonants. In Bisu, there is still a distinction between dental and palatal spirants, which corresponds to the *Loloish distinction. Unlike the *Voiced Spirants, *ŋ- prefixed *r-type and *y-type *Resonants are usually voiceless spirants in their Phunoi (and indeed all their southern Loloish) cognates.

*Tones

Phunoi tones (high, low and mid level pitches) correspond regularly with *Loloish *Tones I, II, and III respectively. *Loloish *High Stopped syllables have cognates in Phunoi with mid level pitch; *Low Stopped, low level pitch. In other words, Phunoi has merged *Tone III with *High Stopped, and *Tone II with *Low Stopped. Phunoi is thus similar to other southern Loloish languages in having a reflex of *Loloish *High Stopped which is phonetically higher in pitch than the reflex of *Loloish *Low Stopped. However, there is unfortunately no relation between presence of final glottal stop or of vowel laryngealization and the former presence of a final stop (*-k) which has been lost in Phunoi. In native words, syllables with final stops have only
two pitch possibilities, and syllables which one would wish to reconstruct (on the basis, for example, of orthographic Burmese forms, or forms in other Loloish languages) with final *-k also have only two pitch possibilities; but the *-k is not regularly reflected in Phunoi by a final construction or glottal stop.11

Rhymes

In Lolo-Burmese in general, the rhyme, or combination of vowel and possible final, can profitably be treated as a unit — as in fact is usually done in many Sino-Tibetan languages. Phunoi often supports previously postulated reconstructions of *Rhymes in *Loloish and Lolo-Burmese with reflexes that are phonetically very similar to what one might postulate for *Loloish. For this reason, the vocabulary following has been arranged according to rhymes.

One could make a chart similar to the following to represent schematically the possible developments from the *Rhyme system to the rhymes in any language. Arrows are used to show changes — a dotted arrow, a partial, conditioned change; a solid arrow, an unconditioned or 'otherwise' change. Where changes must be ordered, numbers are associated with the arrows that show those changes. When no arrows, or only dotted arrows, lead from a *Rhyme, then that *Rhyme is phonetically realized approximately as reconstructed. Thus, in Phunoi:

In summary: *Open-syllable rhymes remain open; *Nasal-final rhymes keep nasal finals, except for some *-ŋ finals, which show nasalized vowels but no nasal stop. *Stop-final rhymes with *-p or *-t retain the *stop, and some *-k have reflexes with /t/, but most *-k have been lost, leading to mergers with *open-syllable rhymes.
The developments of *front open-syllable rhymes are very heterogeneous; the conditioning factors are the *initial-consonant positions of articulation. The developments of *back open-syllable rhymes require ordered rules, as do the developments of *dental-final closed syllable rhymes. It can be noted that the developments of *labial-final *stop and *nasal are parallel, but *-t rhymes develop differently from *-n rhymes. However, the resulting systemic possibilities for final /t/ and /n/ are similar: both occur after /i/, /e/, /o/ and /o/ in primary-system words.

There are some subregularities of *Rhyme development additional to those shown in the diagram above, which are listed in the following table.

<table>
<thead>
<tr>
<th>*Loloish</th>
<th>Phunoi</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>*?i/?η+i</td>
<td>ə</td>
<td>boat, wind, yʊ (allophonic nasalization becomes contrastive after *-η loss)</td>
</tr>
<tr>
<td>*?mveɾi</td>
<td>in</td>
<td>name, tail, forget</td>
</tr>
<tr>
<td>*i</td>
<td>ø</td>
<td>MeB, know</td>
</tr>
<tr>
<td>*i</td>
<td>i</td>
<td>fat/oil, fire, fruit, daughter, grandmother, hit, lift, little, near, pound, sit</td>
</tr>
<tr>
<td>*P,KY+e</td>
<td>ə,ɪ</td>
<td>excrement, give (allophonic nasalization becomes contrastive after *-ŋ loss)</td>
</tr>
<tr>
<td>*e</td>
<td>ø</td>
<td>grey, MyZ, blood, die, liquor, what, leg, bite, snake</td>
</tr>
<tr>
<td>*e</td>
<td>i</td>
<td>earth, thatch, sun, day, cowrie, borrow</td>
</tr>
<tr>
<td>*i,e</td>
<td>e</td>
<td>go, penis, red</td>
</tr>
<tr>
<td>*ai</td>
<td>ø,i</td>
<td>now, star, laugh, pull</td>
</tr>
<tr>
<td></td>
<td>ø</td>
<td>sand</td>
</tr>
<tr>
<td>*a</td>
<td>ø</td>
<td>(many examples) eat, come, I, etc.</td>
</tr>
<tr>
<td>*wa</td>
<td>e</td>
<td>teeth</td>
</tr>
<tr>
<td></td>
<td>o</td>
<td>cattle, rain</td>
</tr>
<tr>
<td>*u</td>
<td>u</td>
<td>dig, egg, head, intestine, rooster, silver, take, thick, thorn etc.</td>
</tr>
<tr>
<td>*Po</td>
<td>u</td>
<td>mushroom, price, (sky /o/)</td>
</tr>
<tr>
<td>*ʔno</td>
<td>ɑ</td>
<td>finger, green</td>
</tr>
<tr>
<td>*o</td>
<td>ɑu</td>
<td>bone, count, cough, dove, horn, smoke, sweet, steal, wash</td>
</tr>
<tr>
<td>*aw</td>
<td>ɑu</td>
<td>call</td>
</tr>
<tr>
<td>*Loloish</td>
<td>Phunoi</td>
<td>Examples</td>
</tr>
<tr>
<td>----------</td>
<td>--------</td>
<td>------------------</td>
</tr>
<tr>
<td>*ip, up</td>
<td>L*op</td>
<td>book, rot</td>
</tr>
<tr>
<td></td>
<td>up</td>
<td>sleep</td>
</tr>
<tr>
<td>*ap</td>
<td>ap</td>
<td>duck, lightning, lungs, snot</td>
</tr>
<tr>
<td>*it</td>
<td>et</td>
<td>goat, grind</td>
</tr>
<tr>
<td>*et</td>
<td>et/it</td>
<td>drunk, bamboo shoot</td>
</tr>
<tr>
<td>*ut</td>
<td>ot</td>
<td>blow, body hair</td>
</tr>
<tr>
<td>*at</td>
<td>at</td>
<td>alive, clothes, b. deer, fear, flower, free, hungry, kill, leech, spirit, vomit</td>
</tr>
<tr>
<td>*ik</td>
<td>i</td>
<td>angry, joint, root, year</td>
</tr>
<tr>
<td></td>
<td>ø</td>
<td>kick, new</td>
</tr>
<tr>
<td>*ek/ök</td>
<td>ø</td>
<td>cut, shoot</td>
</tr>
<tr>
<td>*uk/ok</td>
<td>ot</td>
<td>born, crooked, (fear /at/)</td>
</tr>
<tr>
<td></td>
<td>o</td>
<td>back, bark, below, brain, enough, poison, waist</td>
</tr>
<tr>
<td>*ak</td>
<td>at</td>
<td>ant, day after tomorrow, hide</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>above, ashamed, ashes,² banana, bird, black, chicken, crow, dream, eye, hand, leaf, morning, pig, etc.</td>
</tr>
<tr>
<td>*wak</td>
<td>o</td>
<td>grass, rat</td>
</tr>
<tr>
<td>*im/um</td>
<td>um</td>
<td>drum, house, pile up, warm</td>
</tr>
<tr>
<td></td>
<td>m</td>
<td>caladium, three, thread</td>
</tr>
<tr>
<td>*am</td>
<td>am</td>
<td>bear, cloud, fence/garden, hair (head), iron, sheep, e²</td>
</tr>
<tr>
<td>*in</td>
<td>in</td>
<td>good, name, sour</td>
</tr>
<tr>
<td>*un</td>
<td>on</td>
<td>stomach/belly, breast</td>
</tr>
<tr>
<td>*an</td>
<td>en</td>
<td>louse, paddy</td>
</tr>
<tr>
<td></td>
<td>an</td>
<td>field (wet)</td>
</tr>
<tr>
<td>*wan</td>
<td>an</td>
<td>hawk, face, spittle</td>
</tr>
<tr>
<td>*iŋ</td>
<td>in</td>
<td>fingernail, full, neck</td>
</tr>
<tr>
<td></td>
<td>in</td>
<td>liver, tree</td>
</tr>
<tr>
<td>*oŋ</td>
<td>ø</td>
<td>wing</td>
</tr>
</tbody>
</table>
Vocabulary

The following vocabulary includes Roux, with no modification in transcription, within brackets (when the Roux form differs appreciably from the one I elicited). It also includes items from Harris' tapes, when those differed from the form (in this case mostly reflecting lexical differences) that I obtained. These are not bracketed, since the transcription is mine. Forms cited include all juncture and other morphophonemic processes.

-a
above thà o?  branch braoilet  hnd tän  divorces  chó hna p? (add ca law)  ñad  hna lâw  (go) down  yá lé o
adult së püp bà  brave?  ?á cá yá  dream  jüp ba ba ce
Akha khâ kô bà  bread hmaş phâu  dry (vt)  wôchá ját
animal sâ kâ yâ  break phâ o v' ce  dust  bôkha
art kat tsâ  black ?á da  ear  ?á hnd
antelope hjâ  burp khon bà kän ce  easy  ?á gâ eâ?
aviî cam ba wa?  button hna töl sm  eat?  că ce
arrow bôîa  carry (back) sà ce  (elder)  ja khoa
ascend phâ hnh  (shoulder) pà ce  elephant  jôba
ashamed ?á hjâ/sâ  (bring) hna lâw  electricity  fâl fâ T
ashes? kheâl  change phâ ce  empty  m thi că
ask hnd p?  cheek bo pâ  (enemy)  tô sa cha lân
awake ná nâ  chicken hjà  enough?  râja
baby jôkâ jâ  Chinese huo bà  evening  mô da eve chi cln
bachelor jôkâ  child ?á jâ  eye  ?á bia
banana fà sl  cloudy jà ê pè hnh  face  bôkâ?
bank ja ña  comb tchéa  fall  tâ ce
bat pé fà  come lâ  (farmer)  yá chr bà
(bear?) tô sa mÛt  cotton chápât  fast  ?á të wà jà
(ban hmut) oocíie pà sà  fat  bôpùn bâ jàu
beautiful ?á hna?  of, gen. mû  Fy B  wa
bell lôkâ sl  crâb wôchâ  female  ba
betel hna hna é  crâuû  lâ to  fem  kût kà
bitter ?á khâ  crâw  ?uâ?  few  je kâ jà
bird hjà  dark mô bîë?  (field)  yâ
blind ?á bia pò  deep ?á hnd  find  sa hndâ
-a (continued)

(forest fire  châp-pat/
  bì lông-piá)
fireplace  bì hmot jà
(fix hair  yà)
float  là thà faj ce
fly  fa/hya
(fly  mà ba)
food  là cà
forget  hùn là ce
frog  là ce
(foot  p'a vôa)
  (lì-khè)
garlic  phà thiem sl
get  jà ce
girl  jà bl
go up  phà

good smelling  ce sì là ca
  (thé wa dà)
god T  la thà bùn
government T  dò kha
granary2  u tsì chà
grease2  gà
hang  là
happy  là tê hmu
(hardworking  tsàng k'ha)
hate2  là tê nà
hear  cà ce
heart  là bà sl
(heart  ni ma)
hen  là bá
help  là bá sl ní?
hill  són pup jìa
honey  pìa chay là
hornbill  bás à
I  gà nóm
(immediately  chí a chà)
itich  là hìa
join1  kò nà ní?
jump  gá é me
hand  là-
knife  hìa
(lac  há tê)

lake  nun khàn bá
larynx  khon bá sì
late  fa nò?
leaf  zà phà
like  gã hò sì
dè khà
liquor  lì-lè
little2  sá
light (v)  là jà jà?
live  là ca
look for  sa ce
love T  là hà?
be loved  lom bá?
man  kò pìa
male  phà
marrow  là khat migli
khé bì la nì?
marry  phà sá
mattress  sá
meat  mà bò (cf. Roux)
medickein T  mà bò
(monarch  cam chà bá)
monkey  dà bò
moon  fìla
(moon  úlà)
morning  là sè dà
mother  bò
navel  mò chà?
never  m nì
(new  ya su)
no T  bo à
onion  phà kyò sì
opium  jà jên
ox  nà
palm  là wga
parrot  kìa
(phiasant  ya nè p'lu)
wig  wìa
plant (v)  kò nà ní?
mà po sì
pumpkin T  jà te jà
poor  là kù bá
porch  là só na nò
pour  là sò na nò
priest1 T  phà?
put2  kà na nò
rake (v)  là
refuse  m khà
remain  là ní?
rhyme  tà ní?
river  là bò
road  cò bà
rooster  hè phù
run  pìa hò nà
(saline crop  yà thà bá)
salt  shà
satisfied  là tê bò jà
scale  dà cè
scorpion  wò cha dot
scratch  chà ce
send  sà nò?
separate  là hè bò jìo
sharpen  sì jò thà ce
shelf  thà thà
shoulder  fà
bag  (short per-
  son)
thing  là nì mía
sick  dà ce
sky  khà
nò thà
skirt1  din kà
slath  bò ce (cf. knife)
slave  hmìa cè là ma
small  là nìa
(smell  good)
ce sì là ca
(bad)

nà mèl)

pà pin jà
soft
sole
spade
spade
(supper
(cà cà bò úm)
(continued)

spit phít da nǐ?

split thá

(split p'a)

spring lâ jâ

spinach sin phà

steam sà nǐ?

step T thi jâ?

straw lâ chi

sunrise mò nĩ sã khôn là ce

sunset mò nĩ sã ta wea

swallow (v) hna ce

sweat mò hût na

tea lâ

thin ?â hîâ jà

this one hîâ

(threaten khâ khât chû u)
thumb lôba

tiger shâ lâ

tobacco hja kòn

tongue ?â hîâ

tone sa mên

town khôn bá

trap hna tân

truck T lòc tò bá

understand ca kat (2nd T) (chì yíp lâ)

vegetable kây (m)bá phâ

wait gà hîâ ce

(walk quâ àu)

(waterfall yâ thà lâng)

wife khbâba

wind hà bôn (môn)

what ?a cã

(white a pa)

woman kh'biâ

((fire)wood bî xà thum)

son-in-law jôbâ

- l

(angry tsî)

beat tl

black magic cî n' só ce

blist er cî jo bê cê

bûry hnl ton a tê cê

buttocks hnl tã

coat mî

(charcoal bî chi)

chin, heel pi tûn

color T sî

courie cî là kâp

carry T kêtîf

daughter jêâl

day hi ni

dye hnl nî?

earth hnl tã

eat 2 cl ce

elbow lôshî ton

empty m thî cà

fat (n) ?â shîf

fight tl hîâ ce

fire bî

(formerly nî chêng)

four (cit) sî

(foyer bî giàp)

(gibbon nà lî)

go down jà li ce

(granary 2 có chî)

(grass 2 û tsî chà)

grandmother phî

(heart nî ba)(lôba)

(here nhû chî chê)

(indigo mî)

(jewelry chî nhu sî)

jungle lo dô di wê

(immediate- ly chî a chà)

(little ghi ê)

lift chî jô mû vìn

near ?â dî a

needle ci ke cûp

(one atsî a chôm)

(palm leaf dîn nî)

(pardon tsî là nhê)

peppers lôphî sî

pigeon dô ko kî ke

pound tl

(prevent m khà bî)

put 1 ci ce

rain mò hôt li ve

ride ta i hé o

root ?â hîl

round thing sî

sand T khî sâl

(scream hîông ê)

set (sun) nî u

sharpen sî jô tha ce

sit nî nî?

short (length) ?â hnl mîà

(skirt têng pl)

(sparrow chî chô)(têcô)

(square sf chê)

(straw là chî)

stretch ay hóm pi ce

sun mò nî sî

there hjok nî

today hîa mè nî

tulture cân bân hnl kôn

wide ?â tf

win kâ ci ce

(yesterday hû nî

verb part. nî?

verb part. lî
<table>
<thead>
<tr>
<th>English</th>
<th>Vietnamese</th>
<th>Pinyin</th>
</tr>
</thead>
<tbody>
<tr>
<td>-e</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>adverb</td>
<td>âm</td>
<td>âm</td>
</tr>
<tr>
<td>particle</td>
<td>ở</td>
<td>ở</td>
</tr>
<tr>
<td>always</td>
<td>thê lên</td>
<td>thê lê</td>
</tr>
<tr>
<td>appear</td>
<td>h'â tê</td>
<td>h’â tê</td>
</tr>
<tr>
<td>ampit</td>
<td>k'ê k'ê</td>
<td>k'ê k'ê</td>
</tr>
<tr>
<td>arrow²</td>
<td>she na sî</td>
<td>she na</td>
</tr>
<tr>
<td>ashes¹</td>
<td>khêlic</td>
<td>khêlic</td>
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<tr>
<td>bat</td>
<td>pê fê</td>
<td>pê fê</td>
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<tr>
<td>behind</td>
<td>lôkhyê h'ôê e</td>
<td>lôkhyê</td>
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<tr>
<td>bite</td>
<td>the ce</td>
<td>the ce</td>
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<tr>
<td>bear</td>
<td>wêthê</td>
<td>wêthê</td>
</tr>
<tr>
<td>buy</td>
<td>hne ce</td>
<td>hne ce</td>
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<tr>
<td>choose</td>
<td>shê ce</td>
<td>shê ce</td>
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<tr>
<td>close</td>
<td>phê nê</td>
<td>phê nê</td>
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<td>cloudy</td>
<td>jâ tê phê h'ôê nê</td>
<td>jâ tê phê h'ôê nê</td>
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<td>copper T</td>
<td>h'ôê nê</td>
<td>h'ôê nê</td>
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<td>cord²</td>
<td>cûrûng the</td>
<td>cûrûng the</td>
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<td>cross (v)</td>
<td>tê lê ce</td>
<td>tê lê ce</td>
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<tr>
<td>(out²)</td>
<td>te</td>
<td>te</td>
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<tr>
<td>dish T</td>
<td>kho phê</td>
<td>kho phê</td>
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<td>(dryness)</td>
<td>mû nî tê</td>
<td>mû nî tê</td>
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<tr>
<td>fast</td>
<td>tê là jê</td>
<td>tê là jê</td>
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<tr>
<td>(verb)</td>
<td>bê</td>
<td>bê</td>
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<tr>
<td>fish</td>
<td>jà te</td>
<td>jà te</td>
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<tr>
<td>forehead</td>
<td>bôtê se</td>
<td>bôtê se</td>
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<tr>
<td>go</td>
<td>tê lê</td>
<td>tê lê</td>
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<tr>
<td>god T</td>
<td>thê wa dà</td>
<td>thê wa dà</td>
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<tr>
<td>hawk</td>
<td>can tê ã</td>
<td>can tê ã</td>
</tr>
<tr>
<td>iron T</td>
<td>hle?</td>
<td>hle?</td>
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<tr>
<td>jump</td>
<td>ga e me</td>
<td>ga e me</td>
</tr>
<tr>
<td>(jungle</td>
<td>k'ê hia nhê)</td>
<td>k'ê hia nhê</td>
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<tr>
<td>fool</td>
<td></td>
<td></td>
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<tr>
<td>language</td>
<td>cê</td>
<td>cê</td>
</tr>
<tr>
<td>lazy</td>
<td>bê ce</td>
<td>bê ce</td>
</tr>
<tr>
<td>lick</td>
<td>bê ce</td>
<td>bê ce</td>
</tr>
<tr>
<td>light (fire)</td>
<td>bê h'ôn wè'ô</td>
<td>bê h'ôn wè'ô</td>
</tr>
<tr>
<td>low</td>
<td>tê bê biâ</td>
<td>tê bê biâ</td>
</tr>
<tr>
<td>many²</td>
<td>be h'ôù</td>
<td>be h'ôù</td>
</tr>
<tr>
<td>(measure)</td>
<td>tê û</td>
<td>tê û</td>
</tr>
<tr>
<td>middle</td>
<td>gô hniê</td>
<td>gô hniê</td>
</tr>
<tr>
<td>(monkey²)</td>
<td>a miêu</td>
<td>a miêu</td>
</tr>
<tr>
<td>MyB</td>
<td>che</td>
<td>che</td>
</tr>
<tr>
<td>needle</td>
<td>ci ke câp</td>
<td>ci ke câp</td>
</tr>
<tr>
<td>nine</td>
<td>tê</td>
<td>tê</td>
</tr>
<tr>
<td>penis</td>
<td>hîê</td>
<td>hîê</td>
</tr>
<tr>
<td>(pheasant)</td>
<td>ya nhê p'êû</td>
<td>ya nhê p'êû</td>
</tr>
<tr>
<td>pigeon</td>
<td>do ko k'ê ke</td>
<td>do ko k'ê ke</td>
</tr>
<tr>
<td>pine tree</td>
<td>té jun cn</td>
<td>té jun cn</td>
</tr>
<tr>
<td>red</td>
<td>tê hê</td>
<td>tê hê</td>
</tr>
<tr>
<td>roast</td>
<td>tê shê</td>
<td>tê shê</td>
</tr>
<tr>
<td>(square)</td>
<td>sf chê</td>
<td>sf chê</td>
</tr>
<tr>
<td>swim T</td>
<td>lô luê pî</td>
<td>lô luê pî</td>
</tr>
<tr>
<td>(talkative)</td>
<td>chê è lâmê</td>
<td>chê è lâmê</td>
</tr>
<tr>
<td>teeth</td>
<td>she phê</td>
<td>she phê</td>
</tr>
<tr>
<td>(ten)</td>
<td>tsê</td>
<td>tsê</td>
</tr>
<tr>
<td>thunder</td>
<td>mô ce ce ce</td>
<td>mô ce ce ce</td>
</tr>
<tr>
<td>today</td>
<td>hêa mè ni</td>
<td>hêa mè ni</td>
</tr>
<tr>
<td>top (mountain)</td>
<td>khên the</td>
<td>khên the</td>
</tr>
<tr>
<td>(try)</td>
<td>chûn nè cê bê</td>
<td>chûn nè cê bê</td>
</tr>
<tr>
<td>verb</td>
<td>particle ce</td>
<td>particle ce</td>
</tr>
<tr>
<td>(verb)</td>
<td>particle yê</td>
<td>particle yê</td>
</tr>
<tr>
<td>(verb)</td>
<td>particle bê</td>
<td>particle bê</td>
</tr>
<tr>
<td>beam (hor.)</td>
<td>kha</td>
<td>kha</td>
</tr>
<tr>
<td>(out)</td>
<td>te</td>
<td>te</td>
</tr>
<tr>
<td>dish T</td>
<td>kho phê</td>
<td>kho phê</td>
</tr>
<tr>
<td>(dryness)</td>
<td>mû nî tê</td>
<td>mû nî tê</td>
</tr>
<tr>
<td>fast</td>
<td>tê là jê</td>
<td>tê là jê</td>
</tr>
<tr>
<td>(verb)</td>
<td>bê</td>
<td>bê</td>
</tr>
<tr>
<td>fish</td>
<td>jà te</td>
<td>jà te</td>
</tr>
<tr>
<td>forehead</td>
<td>bôtê se</td>
<td>bôtê se</td>
</tr>
<tr>
<td>go</td>
<td>tê lê</td>
<td>tê lê</td>
</tr>
<tr>
<td>god T</td>
<td>thê wa dà</td>
<td>thê wa dà</td>
</tr>
<tr>
<td>hawk</td>
<td>can tê ã</td>
<td>can tê ã</td>
</tr>
<tr>
<td>iron T</td>
<td>hle?</td>
<td>hle?</td>
</tr>
<tr>
<td>jump</td>
<td>ga e me</td>
<td>ga e me</td>
</tr>
<tr>
<td>(jungle</td>
<td>k'ê hia nhê)</td>
<td>k'ê hia nhê</td>
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<tr>
<td>fool</td>
<td></td>
<td></td>
</tr>
<tr>
<td>language</td>
<td>cê</td>
<td>cê</td>
</tr>
<tr>
<td>lazy</td>
<td>bê ce</td>
<td>bê ce</td>
</tr>
<tr>
<td>lick</td>
<td>bê ce</td>
<td>bê ce</td>
</tr>
<tr>
<td>light (fire)</td>
<td>bê h'ôn wè'ô</td>
<td>bê h'ôn wè'ô</td>
</tr>
<tr>
<td>low</td>
<td>tê bê biâ</td>
<td>tê bê biâ</td>
</tr>
<tr>
<td>many²</td>
<td>be h'ôù</td>
<td>be h'ôù</td>
</tr>
<tr>
<td>(measure)</td>
<td>tê û</td>
<td>tê û</td>
</tr>
<tr>
<td>middle</td>
<td>gô hniê</td>
<td>gô hniê</td>
</tr>
<tr>
<td>(monkey²)</td>
<td>a miêu</td>
<td>a miêu</td>
</tr>
<tr>
<td>otter¹</td>
<td>tê bê</td>
<td>tê bê</td>
</tr>
<tr>
<td>Powder</td>
<td>mf</td>
<td>mf</td>
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<tr>
<td>-e</td>
<td>tha a?</td>
<td>tha a?</td>
</tr>
<tr>
<td>ampit</td>
<td>k'ê k'ê</td>
<td>k'ê k'ê</td>
</tr>
<tr>
<td>bark²</td>
<td>non ce ce le</td>
<td>non ce ce le</td>
</tr>
<tr>
<td>basket</td>
<td>khôn kô wa kân ce</td>
<td>khôn kô wa kân ce</td>
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<tr>
<td>(cry)</td>
<td>chûn nè cê bê</td>
<td>chûn nè cê bê</td>
</tr>
<tr>
<td>verb</td>
<td>particle ce</td>
<td>particle ce</td>
</tr>
<tr>
<td>(verb)</td>
<td>particle yê</td>
<td>particle yê</td>
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<tr>
<td>(verb)</td>
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<td>beam (hor.)</td>
<td>kha</td>
<td>kha</td>
</tr>
<tr>
<td>(out)</td>
<td>te</td>
<td>te</td>
</tr>
<tr>
<td>dance</td>
<td>jen ce</td>
<td>jen ce</td>
</tr>
<tr>
<td>die</td>
<td>sê ce</td>
<td>sê ce</td>
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<tr>
<td>dog</td>
<td>khê</td>
<td>khê</td>
</tr>
<tr>
<td>easy</td>
<td>tê bê (cf. big)</td>
<td>tê bê (cf. big)</td>
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<tr>
<td>FëB, FeS</td>
<td>tê</td>
<td>tê</td>
</tr>
<tr>
<td>fence</td>
<td>mû kô lô</td>
<td>mû kô lô</td>
</tr>
<tr>
<td>finish</td>
<td>pô (n)</td>
<td>pô (n)</td>
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<tr>
<td>fog</td>
<td>chô</td>
<td>chô</td>
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<td>foot</td>
<td>lôkhê</td>
<td>lôkhê</td>
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<tr>
<td>good</td>
<td></td>
<td></td>
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<tr>
<td>(smelling²)</td>
<td>co sô ca</td>
<td>co sô ca</td>
</tr>
<tr>
<td>laugh</td>
<td>tê nî?</td>
<td>tê nî?</td>
</tr>
<tr>
<td>(look at)</td>
<td>ciô</td>
<td>ciô</td>
</tr>
<tr>
<td>new moon</td>
<td>khâm nô</td>
<td>khâm nô</td>
</tr>
<tr>
<td>otter¹</td>
<td>tê bê</td>
<td>tê bê</td>
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<tr>
<td>gray</td>
<td>tê phê</td>
<td>tê phê</td>
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<tr>
<td>grow</td>
<td>bê ce (big)</td>
<td>bê ce (big)</td>
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<tr>
<td>gums</td>
<td>bôn khê</td>
<td>bôn khê</td>
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<tr>
<td>hiccup</td>
<td>hê? ce</td>
<td>hê? ce</td>
</tr>
</tbody>
</table>
* (continued) 

hoe T ke có? tie phè ce harvest ko ců ce
(how long asở nhóm mò) tomorrow lása head ?ă tu (atu)
how much T thé de day after tomorrow phất sa (heart mỉ tchu sỉ) (lờba)
hornbill bô sà top (toy) Thma khanh (here nhu chí chú)
in front gônhej where sâ gü intestines ?ă?u (hú sù) (when asởnham mê)
(ăn sự) use sâ (jewelry chi nhu sỉ)
inside thă a? (a sự) jungle lo dủ đi we
kick bôthô? knee bôtu khía tư
knee bôtô? (lacrade ládle)
leak ?a ce (o sự) mat tăpu
locative -? who sâ be hủ?
look at ke ce many2 make waves lă củ ce
man kôphô make waves lă củ ce
mat tăpu middle gũ hние?
mattress pha sô (u abandon tsiu) (milk nũ (n) lòng)
meat2 tâ kêng (arm lổp) (molasses pò tchâu p’u)
moan hàl ce blunt1 ?ă pû (moon ư lâ)
FeB, FeZ mò blunt2 bu cha (mosquito hàng pín bô cu)
mountain sê pup bô e B hu jã mushroom hmô
mule mò la lô y B hnu jã (new ya su)
night kha thâh (boil tsû lă ye) outside hnu
catch hlap bô su bô (panther tchâu là păm pông thû)
now hủ nà? cheap ?ă thu jâ tă kú thékù
noodle nó pillow phu nój
pleasant tâ cần hme cheap khyù dan thán thékù
plow lâ tâ stá sô ce shopetiok sâ Phunôi phu nój
pour sâ ce (cáso p’iû) (pot ư lông)
question se tâ hủ sô? close tutte ce sweet potato che kù hủ
tain mò hô daughter jú prices ?ă hủ?
roll hê bô nûn ce ē? in-law tû cel raise hiú
roof je mú dig tû ce roof jëmù
(separate tsô (n) lâu) dust bhôkha
shoot pân? egg hâ ?u? roof jia pu
soybeans wân tê rô every sù – sù – hâu mỉ
sparrow tâ cû jâ? father mû (shuck hu ré sô)
straight ?â dê fence mû kôlô (shock khù dû)
sweet potato che kù hủ short (person) shă thí phu jâ?
ten yiô grandchild jô ?ă ehalf2 tû?
thing ?a kăn khá ce happy ?ă tâ hmu silk cîng kû
(sâ, sê) (groves ú tsf chá) silver phiú
- u (continued)
silver coin phủ sỉ
skin ?ả hú?
skull ?ả tu jay
(sister a tsu)
stool tông khu
(student khu nhùm)
(straight a chu)
son’s wife jù
suck lả cû ní?
take? bu ce
tall ?ả mû e jà
tendon ỉgunakan
termite wû kêt
tecticles hỉgũ/shègũ
thick ?ả thû
thorn ?ả chû
twist T bftp dû
valley mû phap biâ
vein ?ả kû sê
(size) tu tsûi
yesterday hù ni

-butterfly ham pin tûlo
buy bo ce
 cole age kan bô
 catch hlap bô su bô
 cattle jô hmâjá
 chain shô sho
 change of state ỏ
 sheek bo pà
 chew kû ce
 Chinese hyo bû
 cloud mô thûm
 cold ?ả chô
 (come out) (do)
 cook ko ce
 oral lâ to
 cucumber T sâkhuô sî
 rhino shat nô
 rice plant ko
 right ?ả đên hno jà
 roll hûg bô nân ce è
 satisfied ?ả tê bô jà
 sent sa no
 separate ?ò hûn bôj
 (b. deer) hûn bô
 dish kho phê
 divorce chô hûn nî
 door lêk (û) o
 earring hûn
 enough lô
 feed hûn nî
 behind hûn hûn
 belly po pon
 below ?ả bê
 blind ?ả bê pô
 (blind bê chô)
 blister c’jô bê ce
 brain ?ả bô
 u. buffalo jô
 build sô nî
 harvest ko cû ce
 hate? lô e nà
 hate? lô e ja
 high ?à muô e jay
 (how much) a tso do
 join1 ko khat nî
 join2 ko nà nî
 jungle lo dû di we
 kapok tree ba lo cûn
 kidney kho sî
 (kneel p’at thô khau)
 (lese è)
 life T ?à jê?
 lift chî jô mû bêg
 pole (foot) pôwa lêkho
 spread out kô nî
 squirrel ho to
 stomach po pon
 stone lêsphô
 sweat mô hut nà
 (take cô)
 (light bî thô)
 lightning mû bêjâ
 lips ban kho
 little so - sa
 lose tê ce
 married woman kho bûjá
 medicine ja mô à
 mosquito bô kho
 mule c mô la lô
 no T bô a
 noisy so ce
 onion T pha kyo sî
 (open p’ô ú)
 otter1 ?î bô
 otter2 T cô nôm
 (oue a tsô a chô)
 pen so dûm
 g. pepper T fârâ sâkûs sî
-o (continued)

olf. person jho
pickle ʔa chén hńo
pigeon dō ko k̪i k̪e
pipe kó sli
plant (v) kó n̪a pń
poison ʔa tō
porch lō ko bă
priest² to pIÓN (break τau)
pumpkin T ma po sli
put in hńo no
put up tho ce
rain mō hō l̪e ce
rat ho tām
gread bō bo pń
rib ʔa čo jāu
upper side¹ hmiáʔi tho ʔi
verb thō se
(unhappy tōe p’ai nē)

window lōk<y>o jā
wash tā thâu ce
widow bōcháu
work miyŋ wän (2nd T)
yao jōy jǐn bā
house post jūm iń sāu

awn (break taw)
bad a hay
belt sāl hńa
be born saj tāj?
chain shāi sho
change (loc) giāy ò
electricity fāl fā T

dirty tsōo kʰi’hūng...
mark (v) māi
chau k ещ’T
sand kʰi sāl T
silk maì
spend chāi
step on nāl wän ce
striped ?ā plāj

(b) dark

step on nāl wän ce

sugar cane pón châu
(clothes) kʰuā tśē?
(nine cāu) tē

shirt choke jē sān ce
shoulder bōnńam
shout nńh ce
upper (cf. call male)

Upper bōc viņ

(s) necklace

smoke bākhńa

(b) dark

smoke bākhńa

(b) dark

(b) dark

(b) dark

(b) dark

(b) dark

(b) dark

(b) dark

(b) dark

(b) dark

(b) dark

(b) dark
-eg, -ẹg (secondary)

(agle téũ ŭ ẹ́)
(chooz̃ tséu)
cup kákēg
(destroy p'iéùu) adult sepúp bá
(fat ẹ́á te̛g̊ (answer tóp)
flaxe pẹ̛́̀ bí bedroom júp phía
go down jà liéo book pop
(immediately ất tâu ẹ́u) dream júp ba ba ce
(pantie T tě́o) look tsúp
(rattan ẹ́á te̛g̊ fist lásúp
(wither T hẹ̀̀g ce greet ợ̀́p ŭ)
hold súp ce

-ul, -ei, -ug (secondary) (mountain tu p'up)
(able T khat júg pen sleep júp ce
(faded pè́i) (prepare úp)
(fat lúl è) rot pop
( -ap

arrive lág lă yaem júp sà ká ce
(basket júp li p'up)
(fish) khôn kap
(catch hláp bó su bò -ip (secondary)
(cover cí Ĺón káp (adultery cẹ̣́̀, lăng p'iẹ̣́p
(duck káp lăng)
(fold płáhp bọ̣̄̀ box lág híp (area)
(foyer bì giàp) (understand chq yl p là)
goose kap lín cén
(hammer bČ́cháp -ep, -ep (secondary)
(hat/turban lágáp clever lág tęp
(healthy cẖáp bú ní bù Ĺé) (house (on ground) tèng bęp
(lid ọ́ cáp valley mù phap bńa
(lightning mò bǐàp valley
(lung ẹ́á hńap
(pierce tsụ̄́p ŭ)
(shoes bọ̣̄̀háp alive lág tát
(snot hńáp ant tát să
(stab tsụ̄́p p'lot (approach yát lăù)
(stand up hiąp baht T bat
(tongue cháp beans lópat

NTài me (m) băp (beans na pát)

NTài (cf. hammer)

breast pendant lópat

clear fields bò cat ce
clothing hlat să
cotton chápat
(cultivate k'hat bù)
day after tomorrow phat sé
b. deer shat
dry pat (cf. bean)
fear hát ce
(fight pat länge
(fire chá pát)
flower h讕 wat
free phó hát nǐ?
gun jin đạt
hát ce
hă bát
(hump 2 ygt àn-nú)
kill sàt ce
(kneel p'at thù khoa)
leech jin đạt
hat tślát
market T nălat
narrow ạ́ khat mǐà
(mix piat lăng)
narrow khat
(paper T kalat)
peanut pat thöm
rhino shat nō
shirt hlat
shrimp lōn thát
spirit dát
sweep T kyślát
thirsty là bát de
undress hlap hlat ce
vomit phat sé
wash (clothes) hlap cat nǐ?
waterfall là that
(wipe pát ŭ)
-ut (-ot)
beard bàn hmot
bellows piân hüt
bend khot ce
blow hmot ce
body hair ?ľa hmot
born toń nį?
(divide) put lāng
fern T kât kà
set on fire hmot ce
fireplace bì hmot jā
mosquito net jūt
(soft) a pôt
smoke (v) wōchā jūt
stump ?ă hüt
sweat mō hüt nā
(suffocate) mūt
throw ?ut ce
plug chūt pį?
(hot) mō hút dê

-soat
crasy ?ă pōst
liquid mud T (?ľ) pōst
spill lā kōst ce

-st (secondary)
car T lāt
train T lāt fāl
yeast bōt

-it
bamboo shoots hà hmit
spit phit đā nį?
twist bít dű

-εt
chest of drawers bōchēt Eng.
drunk hēt ce

(rhino hēt)(shat nį) oloth hnān
(eight T pēt) cloud mō thūm
(seven T chēt) coffin dau khām
cross T kham lē o
eight Vse. tām
(at night khūt thang) (feel nām mǔ)
dirty chūt fence chām
tot nį? fav hīm
be born kēt
eye chūt jā
goat chēt
grind khat
rakes (n) ?ă chēt
garden gold
(repair) lōt leu
sheep chēt ?am
hair sām
termite wū kēt
(keep) cu u chi lām ě
(toad) a pôt
lake nūn khām bā
understand ?ă ca kēt

-ak, -ok, āk (secondary)
(change clothes tsōng pāc)
difficult T hōk bā
leave T cāk pāj
coffin ?īn kēlōk wōn ce
loom (n) T ?ă hōk
(say T bōc)
there hjak ni

-cabbage (bok choy) phēk lām

-am
amīl cam ba wā?
axe T khīyam bō?
bad smelling ?ă hńām
bok choy kām bō
butterfly ham pin tōlo
oabbage phēk lām
carry (hand) hńam ce
chaff hām

Shan bōchām
sheep chēt ?ām
es hnām bā
stair sugar T
nām tān
(swamp) pīm p′rām
three (cit) sām T
tripod shām kūn sī
wail chām pǐā
(year) ni, ne(hi pl)
-um
ashes
(aaken)
w. basket
baccus
bury
beat (dream)
drum
(lum p'a)
(fiancée)
(flood)
house
(idiot)
(ico, short phum)
pus
(pick fruit
pile up
shoulder
(student
(swamp
(winate
(wr)unge
house post
warm
(wood
-bow head
-breath
burn
button
conversation
corn
(good smelling
I
be loved
meet
peanut
(gotchum)
(jup num bla)
(goddum)
(jum ce)
(thum ce)
(thum t'l ce)
(thum sl)
(lum ba)
(lang thum)
(tsum e)
(pum phum)
(chum ce)
(pum p'ram)
(chum ce)
(chum)
(jum ?n say)
(pum)
(lum)
(gom ce)
(lam)
(nhom bi a)
(hna t'on sl)
(lom nha phi)
(nhom phi)
(a hom)
(lam ba)
(pham nhia ce)
(pat thom)
(rice field lang bom m)
say
see T
swing
tired
untie
-lum
-caladium
-elder
-rock
-tick
-garlic
-Mti
-three
-thread
-an
-ashamed
(Go) back
-basket
-(soy) beans
-board
-bracelet
-burp
(burn
-carry away
-cave T
-chase
-embrace
-(enemy
-(farn)
-(field
-(flea
-government
-grandchild
-gums
(hawk
(heavy
(hole
(hemp
(jump
(yan than-nu)
(ut
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(late
(leggings
(lap
(lips
(ban kho)
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-in
bed tìn cén (wet) sprinkle lá sùn ce
chain² jìng bò nhé (stir²) kùn ce
coar² hìn hné -cn, -can (secondary) (storm T) hánh tẹn
evening mò da é vé chì (board²) pen
cln same T lèn -on
forget hìn là ce seed² T ʔá kẹn bark² (v) noun cỏce le pí?
glutinous rice hà hìn hard T ʔá kẹn basket khon kà we kán ce
good ?á hìn mix ʔión hàn ce beg jón dúvida
hope hìn cà me a -on belly po pon
house post jùm ?ín sàu boil ton ce
(lamp p'ányng màn) bloom hòn ce
learn (v) hìn hné (finish pón bá) (blue) a lòn
liter ?á sìn hundred burp khon bá kán ce
tone mà hìn hundred thousand bury hní ton a tè ce
tone (palm leaf dín nǐ) són cài T ?án thón
soaks T thòn tìn (cave T) (centepede u sòn)
sour ?á chín (plate hà(n)p'ùn) coffin ñìj kǎlók wóm ce
tail tà hìn poisoned ton són dove khon kâu
termite hú bIn) (wùket) sunrise móni sì khon elbow lǎshí tón
thunder¹ mò ce kà cín (tender a pón) fall² ton ce
tree cín (top (mt) khon thè fish basket khon kap
tripod shám kuýn sì (ugly bún ne) (forehead bo kón)
tail white ant hò bIn have fun ?á hınón
wood (tree) cín -in, -ien, -ien
Xiao jau jín bà (secondary) (alám bò khımı)
en (secondary)
-er (secondary)
be T bén (return khırn) middle nóm kòn kòn hnıá
blanket phén mirror T wíen mouth bám fón
(dumb a thém pén) right T ?á dín hó jà nipple lón sì
find² sa jèn hément ja soft ʔá pén jà hón hịa jón
flute T chén partridge thon ce
hang up chén ce poisoned ton són
(hang up) pén (rewite tsón lăng lóu)
(opium yàng yên) (ugly bún ne) round ?á bón
see T hìn ce (seller²) kòn ce
study T hìn hàn ce (chin, heel pí tún thon tín
swing chóm plen hién ce lake sòoks T
(stem T) sòoks T
márturbrate nè phun phun ce srimp thon tìn
márturbrate nè phun phun ce srimp thon tìn
-on (continued)

smoke -tn, -an, -on (secondary)
stand con pǐ? (divide)
stick (v) tā lǐn (put lǎng)
stick (n) cón (divorce
stomach (cf. belly) (còng lǎng)
sugar cane pón chǎy (tā sè)
village khon (earrings
wulture cón bàn hún kǒn (nǎ wǒăng)
water carrier jon (elder)
(weak pón nǐ) (fan)

-ǐn
(collar lín hōng (false)
(cook mǐnh yē) (fight
ingnail lǎshǐn (fight)
full tā pǐn (ti hún ce)
(headman khòng sinh) (ti lǎng (pat lǎng)
(king a(n)dāy a sinh) afternoon shā (tiān lǎng)
(lead tā shǐn) (spell)
roast pǐn ce (fly)
(narrow a lǐn) blue hǔ da (fool)
skirt dǐn kǎ (forehead)
bray hǔ ji (former)
spinach sīn phǎ (friend)
throat tā lǐn (forever)
(wrist lǐ lǐn) (liè)

-en, -un
ing lēn ce (ground)
country tā hún (ground)

-an (secondary)
bellow piāng hù (inclined)
top (toy) hǎo khán T (inside)

-in (secondary)
coffin tīng kǎlōk wǎn ce (join)
goose kǎp lǐn cèn (lamp)
silk cīng kǔ (light)

(conversation lǒn hún nǐ)
cooked rice hǎ (light)
cooking pot bǐ kǎhuá T (light)
copper tā hún (weight)
deaf hǎ ce (līpā)
defecate tī kǎ ce (līn chē-āng)
-à (continued)

meet  phöm hìnà ce  (X time  thàng)  pierce  thê ce  (skirt  tèng pl)
(mix)  piat lăng yè  tud  khan kha  (strong  hêng gê)
nation  khâ bâ wâ  tone /word  sê tô  -ì (allophonic + phonological
new?  tì já  word  tà khê  owing to secondary system)
night  khâ thê  true  já tà ce
nose  lêka  upper side  hìnà
nostril  lêka thê  verb  pre-
now  hân mà?  prefix, noun  mà
once  khâ thêcâ  (verb part.) làng
onion²  kù phà sì  (wait  tàng gi bàn)
open  phà nì?  water  là
foreign  fôrà T  weep  hà ce  (sing  to lo mung)
patch  tì tà tà ce  (weigh  chêng)
person  shà  you  nà
pick  là tà se ce  yam  jùp sà kà ce
poor  jà  rèjà -ù (secondary)
pot T  bôkýa -í (allophonic + phonolog-
prison  kôlâ ical owing to
proud  tì hà jà càn secondary system)
push (wood  hà nì?  brave  tì hà hà)
in fire)  (dirty  tsáp k'hùng k'hùng
quarrel  jà hà và ce  excrement  tì
question  sêtá hân và sà?  expensive T  tì pì  (flag T  tâ
(rainbow  là tà hyá)  flat²  tì ô
rest  hàn ce  flower  hì wat
(reunite  tsôn lăng lau)  full (moon)  hì ce  -ê
(right  hûng)  (water)  jug  là tì
roof  jûm mà  Meo  mì bà  (boat  tô
satisfied  là tì bo já  noon  hì kon à  yB  hôi jà
scale  dà câ  (offer  nî(n))  (in law  a sông)
sell  hjà  (slow  miêng â ê)  (bed  têng chông)
sink  là tà ce  strength  tì hì  (burn  bì lông)
yâ  hàn jà  (change  clothes  a tsông p'í)
(yawn  shà ce  clothing  hiat sô
(spinning  ông(n)cáng yè)  airplane T  jê hù
stick  tì • (allophonic + phonono-
spoiled  tì tê  clench  kṳe ce
tab  tì já thê ce  (flist)  kuê ce  (forest  têng kông)
(stir  sà  hìn  jàw?  (forest  fire
they  kháu che hà  give  pê ce
(throw  hiàng)  pickle (r)  tà chê hò nì
(horse  mọ)
APPENDIX: Counting

The citation forms used in counting by my informant are very different from numbers used in context, and also from the counting numbers that Roux was given. From one to ten, seven, eight and nine in the Roux list are from some Dai language; otherwise, the numbers appear to be regularly derived from *Loloish roots. In my data, on the other hand, one to four are from Dai; five and six look Tibeto-Burmans, but do not show regular Phunoi correspondences with *Loloish; seven and eight are from Vietnamese; and nine and ten are from some source unknown to me. In context, one to three at least are from *Loloish in my data.

Roux (1923)  Bradley (1972)  in context (1972)

(thl lüm)  niŋ  the-
(ni lüm)  sŋ  hna-
(sum lüm)  săm  săm
(hal lüm)  sì (cf. square)
(ngà lüm)  ?à
(khå lüm)  khá
(chêt lüm)  bò (bây)
(pät lüm)  tdm (tdm)
(câu lüm)  tè
(thl(t)tsê)  wël

In addition to Ly/Lao/Thai and Vietnamese, the Phunoi may have been in contact with other Tibeto-Burmans (Akha and Burmans); with mountain Mon-Khmer (Khmø? and possibly others); with Miao-Yao, and certainly with Chinese (southwestern Mandarin). There are some words in Bisoid, such as duck and lung, which do not occur to my knowledge outside Bisoid, but are perfectly regular within it; perhaps these are early borrowings into Bisoid.
NOTES

1. I would like to thank my informant, Kham sŏn, and J.G. Harris, who helped me to find him, and also generously gave me copies of his tapes of Phunoi. A few forms from Harris' tapes, which I did not elicit, are included in the vocabulary. I would also like to acknowledge an NSF grant to the Sixth International Sino-Tibetan conference, which permitted me to deliver an earlier version of this paper; and comments on the paper, particularly from R.K. Sprigg. Of course, all remaining shortcomings are my responsibility.


3. Adams, McCoy article p.76.


5. Adams, McCoy article p.89-91.

6. Aymé, p.87.

7. Adams, McCoy article p.83.


11. Contrary to my initial finding, reported in Matisoff 1973.
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