PALAUNGIC VOWELS
IN MON-KHMER PERSPECTIVE

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Thirteen years ago, H.L. Shorto pointed to the vowel system of Proto-Mon-Khmer as being the 'crux' in the historical phonology of this family (Shorto 1976). His assessment remains as valid today as it was then, even though some advances in reconstruction have been made; our data base has considerably expanded and improved, but the mirage of Proto-Mon-Khmer vowels continues to recede, even as we penetrate further into the past.

The solution proposed then: vowel variation in the proto-language, is consistent with certain facts which can be observed in several Mon-Khmer languages spoken today. In Bahnar, Sre, Khmu and Semai, to select but a few, whole families of Expressives (Diffloth 1979; in press) are often built on vowel permutations, and such Expressives occasionally find their way into the prosaic (Non-Expressive) vocabulary; conversely, prosaic words often serve as a starting point for building families of Expressives which differ, for example, only by their major vowel. This has surely contributed to the formation of word-families such as those identified in Shorto (1973). This explanation, however, has its limits: presumably, these processes would have affected a word here and a word there, at different times, but it is difficult to see how it could have pervaded the thousands of items which form the non-expressive lexicon of one language, not to speak of an entire family. Other factors are needed in order to account for the numerous vowel correspondences which have been detected so far.

For example, it may well be that the Proto-Mon-Khmer vowel system reconstructed until now, although sizable, is not rich enough for the purpose, and that we need to expand it with some additional phonological dimensions.

Tone has been practically ruled out for Proto-Mon-Khmer since the simple tone systems of Bûlăng and Riang, and the tone-cum-register system of Nyah Kur (Diffloth 1980, 1984) can all be explained as innovations; but the newly recorded Angkuic languages U and Man Met (see below) have four-tone and six-tone systems respectively, the origins of which remain partly unknown for the moment. Then again, Haudricourt's account of Vietnamese (VN) tonogenesis has generally been accepted, but it leaves out, as tonally irregular or unexplained, a large number of words which do belong to the indigenous Mon-Khmer stratum of the language. And the recently discovered Palyu language, called Lai in Chinese, also has six tones which may, or may not, turn out to be
recalcitrant—Palyu is apparently Mon-Khmer (Liang 1986, Benedict, in press), but its position in the family is still undecided.

Register is a better candidate. This is, typologically, a well-established feature of Mon-Khmer languages (Huffman 1976). The general consensus is that Register is a relatively recent phenomenon, and Shorto, accordingly, does not reconstruct it for Proto-Mon-Khmer. Ferlus (1979) described all Mon-Khmer register systems found until then as being the result of one type of evolution: devoicing of initial consonants. This explanation has long been accepted in the case of Spoken Mon (Blagden 1910) and of Modern Khmer (which ironically has now lost phonation-type distinctions), and it does account for the registers of several other newly recorded languages (e.g. Kuy, Bruu, Phalok). But it is inadequate in certain other languages: the Pacoh register system, admittedly an innovation, has nothing to do with the process of devoicing which has independently taken place in this language. It is also inapplicable to the North Bahnaric languages where no devoicing has taken place, except in Sedang. In Pacoh, the genesis of register is due to changes in vowel quality, namely, the fronting or backing of certain proto-central vowels (Diffloth 1982), and a similar innovation has apparently also taken place in North Bahnaric (Diffloth 1983). So, we do not have yet a case of reconstructing register as being ancient in Mon-Khmer.1

However, the Pearic branch might force us to do that: recently, Huffman (1985) has shown that Chong, a language of the Pearic branch, had a Clear vs. Breathy distinction, criss-crossing a Plain vs. Glottalised contrast, giving rise in effect to a four-register system. Theraphan (this volume) describes in detail the complex bundle of phonetic features these four registers contain. This phenomenon has no historical explanation, and Headley himself (1985) has abandoned to the sagacity of future historical linguists any attempt in this regard.

Gage (1985) has pointed out that certain unexpected occurrences of the sāc tone in Vietnamese seem to find an echo in the register system of Pearic. The tonogenesis of Vietnamese requires that the sāc tone occur with final proto-stops, and indeed cannot explain the tones of many VN words which have excellent Mon-Khmer etymologies, such as: bôn ‘four’, chin ‘cooked’, giô ‘wind’, or: ngâi ‘far’. Cognates to all four of these words happen to have glottalisation in Pearic. In Chong, as I have recorded it, the first three have the ‘tight’ register:2 /phọ'n/ ‘four’, /chจำ'n/ ‘cooked’, /kọa'y/ ‘wind’; the fourth word has a ‘breathy-creaky’ register: /ŋạ'y/ ‘far’. Other examples can be found, e.g. VN: cấm, Chong /kọả’am/ ‘rice-husk’, but there are counter-examples as well, e.g.: VN: chim, Chong /chị'm/ ‘bird’. Since the Pearic and the Việt-Mường branches are only distantly related, the implications of this fact could go back directly to Proto-Mon-Khmer.

1. Smith’s opinion to this effect (Smith 1972) was not based on the establishment of sound correspondences, but on statistical tendencies within a very small set of possible Mon-Khmer cognates, which a more thorough comparison does not confirm.
2. Clear voice plus glottalisation in Huffman’s (1985) analysis.
3. Huffman’s (1985) breathy voice plus glottalisation.
Palaungic vowels in Mon-Khmer perspective

There are also less exotic vowel features which have not been fully used in Mon-Khmer reconstruction. Diphthong systems can be much richer than the simple *ia and *ua usually proposed; I have reconstructed Proto-Katuic with five proto-diphthongs (Diffloth 1982), and Nancowry Nicobar (Radakrishnan 1981:25) is described even today as also having five diphthongs: /já/, /ja/, uá/, /uá/ and /úa/, which seem to correspond with what we can reconstruct for Proto-Aslian.

Some of these phonological features may have to be reconstructed back to Proto-Mon-Khmer, and could well explain a number of Shorto's variations as being regular outcomes of a much richer proto-vowel system. But then, the number of proposed Proto-Mon-Khmer etyma becomes a relevant issue, and what has been published so far can be said to represent only a sample.

In this paper, I will not explore these possibilities, but only prepare the comparative ground to do so; I will try to clarify some points in the history of vowel systems in the Palaungic branch, where recently recorded material allows us to make systematic reconstructions. This may seem at first to be somewhat irrelevant: if Waic and Palaung are notable for one thing, it is precisely the poverty of their vowel systems. The old vowel-length contrast was already lost in Proto-Waic, and the best source of information on Milne's Palaung (=Ta-ang)\(^4\) appears not to have a phonemic contrast of this kind.

But the Palaungic branch has an important role to play in reconstruction: it belongs to a distinct division of the family, the Northern Division, and it provides us with an independent testimony for the reconstruction of Proto-Mon-Khmer vowels. Besides, as I will try to show, Palaungic vowel systems are not as poor as they first seem to be.

1. **Proto-Waic**

The term 'Waic' covers (1) several Wa languages, e.g. Paraok, Aviia', La (Zhōu & Yán 1984) and their dialects; (2) the Phalok language,\(^5\) formerly referred to as Khaled or Mae Rim Lawa (Flatz 1970); (3) Lawa and its dialects (Mitani 1972); and (4) the Bulang-Phang complex with its many dialects\(^6\) (Diffloth 1980). Certain Waic languages, Lawa and Paraok in particular, have rich and complicated vowel systems\(^7\) but this is

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4. Professor Shorto has let me use his own notes from Riang and from the same Palaung language, 'Ta-ang, as described in (Milne 1931); this is the source of the 'Ta-ang' and 'Riang' words quoted here. Let the present article be a small token of appreciation for his kindness.

5. I collected the information on Phalok included here in two separate field trips, one in April 1981 with the help of Theraphan L. Thonsum, and the second by myself in July of the same year. This research was financed by a grant from the National Science Foundation (NSF) entitled 'An etymological lexicon of Mon-Khmer'. More information on Phalok will be made available in the forthcoming volume 'Wa-Lawa-Bulang'.

6. In that study, I called 'Samtow' a language which later turned out to be identical to that spoken by the Bulang National Minority in Yunnan, China. No linguistic information was available on Bulang at the time, as Zhōu & Yán (1983) had not yet appeared.

due, in part, to the influx of Tai borrowings\(^8\) and in part to recent processes of vowel warp, conditioned by Registers and final consonants. Only nine proto-vowels are needed at the Proto-Waic stage\(^9\)

**Proto-Waic Vowel system**

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This maximum system is found with most final consonants, but there are certain distributional gaps; for example, with final *-ʔ, only eight proto-vowels are found (all the above except *o); with final *-h, only seven are found (*γ and *o are excluded); and there are no open final syllables in Proto-Waic.

2. **Proto-Palaung-Rumai**

The term 'Palaung-Rumai' also covers several languages, the best known of which is Ta-ang, i.e. the Palaung of Nam Hsan described by Milne (1931). The Rumai language and its dialects, also belongs here\(^10\), as well as the dialects of Riang;\(^11\) it also includes another distinct group sometimes called 'Pålê', which contains at least Da-ang and Na-ang; and several other languages, like Ka-ang and Ra-ang\(^12\). Other Palaung-Rumai languages surely await description in Burma or Yunnan, and they may or may not belong to one of the seven groups mentioned here.

There is considerable diversity within Palaung-Rumai, but this is not the place to present all the phonological innovations which can now be documented. Mitani (1977, 1979) has already reconstructed the Palaung-

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8. Lawa has borrowed from Northern Thai and more recently from Standard Thai; Paraok has borrowed from Shan (referred to in China as 'Đêhông Đài'), Bülâng has borrowed from Lû (referred to in China as 'Xǐshūăngbān gà Đài', or Xi Đài for short).
9. This reconstruction was presented in (Diffloth 1980); since then, a Paraok-Chinese dictionary has been published (Yân et al. 1981), and, in 1984, I was fortunate to collect Waic linguistic material in China, with the help of Zhōu, Z.-Z., under another NSF grant entitled 'Comparison of the Mon-Khmer languages of China with other languages of the Mon-Khmer family'; with this new material, the number of reconstructed Proto-Waic words has now more than doubled, and the reconstruction of a few etyma given in Diffloth (1980) has been modified; this new information confirmed the nature of the Proto-Waic system I had reconstructed in 1980 with the help of Y. Mitani.
10. All the Rumai examples quoted here were collected in May 1981, with the help of a family of Rumai emigrants living in Chiang Mai at the time.
11. See note 4 above.
12. The information on Na-ang included here was kindly given to me by Yân, Q.-X. as part of a research programme in China (see n.9). She is the author of a valuable sketch on the Bênglıng language(s) (Yân 1983). I collected myself the Ka-ang data from a native speaker in Kùnnîng, in the course of the same research programme. The Da-ang and Ra-ang data were collected in 1981 (see n.5), and 1984, during my stays in Thailand. It was not possible for me to determine with precision the geographic spread of these languages, especially for those spoken in the Shan States (Burma) where there seems to be a lot of small-scale migrations. For China, Svantesson et al. (1981), Yân (1983), Zhōu & Yân (1983, 1984) provide geographic and demographic information.
Rumai vowel system, using older material; and even though none of the sources used had indicated the vowel length contrasts which are clearly present today in most of these languages, he did reconstruct vowel length contrasts at the Proto-Pal-Ru stage. Remarkably, his reconstructions, which he termed as tentative, are confirmed by the better material we now have; this is true at least for the presence of a proto-length contrast, and for the number of proto-vowels: 10 (although this represents a minimum); only the reconstructed quality of some of these vowels can now be improved upon.

Briefly, with only a few rare gaps and notation problems, we find the following correspondences in words having a proto final Velar Nasal:13

<table>
<thead>
<tr>
<th>Rumai</th>
<th>Na-ang</th>
<th>Da-ang</th>
<th>Ra-ang</th>
<th>Ta-ang</th>
<th>Ka-ang</th>
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</thead>
<tbody>
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<td>(1)</td>
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<td>(4)</td>
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<td>(5)</td>
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</table>

Phonetic values for reconstruction of these proto-rimes do not come to mind immediately, to say the least. But the first four are relatively easy: Mitani (1977) reconstructs *aa, *a, *uuw, and *uw respectively, for (1), (2), (3) and (4).

**Correspondence (1), includes items such as:**

- 'bone' Ru, Na, Da, Ra: /kɔʔaŋ/, Ta: /kɔʔan/, Ka: /kɔʔaŋ/.
- 'house' Ru: /gaŋ/, Na, Da, Ra: /kaŋ/, Ta: /gaŋ/, Ka: /gaŋ/.
- 'torch, lamp' Ru: /raaŋ/, Ta: /raŋ/.

Riang-Lang cognates have a back /a/ in these words:

/tsɔʔaŋ/ 'bone', /kłɔŋ/ 'kite', /si tsɔŋ/ 'elephant', /kɔŋ/ 'house, shrine', /prɔŋ/ 'sour, acid, rancid'.

Waic cognates always have Proto-Waic *a:

- *sɔʔaŋ (Diffoth 1980: N5) 'bone'; *kłɔŋ (N69) 'hawk'; kɔsaŋ (N79) 'elephant' *ŋ-gaŋ (N12) 'scabbard' (a derivate, from an earlier verb *gaŋ ('to cover, to protect'); *raŋ (N53) 'brilliant, bright'.

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13. Evidently, some vowels have caused PPal-Ru *-ŋ to palatalise to -n, and sometimes further merge with *-n; but both *-ŋ and *-n must be reconstructed at the proto-Palaung stage, in contrast with *-ŋ.
Lamet cognates have a long /aa/:

And in the Angkuic branch of Palaungic, Man Met\(^\text{14}\) has /-aŋ/ finals with a low-falling tone, and U\(^\text{14}\), which does not have vowel length contrasts, shows finals in /-äŋ/ with a high-falling tone:

Outside Palaungic, Mitani’s reconstruction of *-aŋ is confirmed, for instance, by Khmu:

Note that we will not be concerned here with the history of initial stops in these languages, interesting as that may be. In a nut-shell, Rumai and Taang have preserved the original values of proto-voiced and proto-voiceless stops; the same state of affairs also exists in Ka-ang, except that initial *p- and *t- have become implosive b- and d- respectively; in Ra-ang, *p- and *t- have followed the same evolution, and *k- has become a voiced stop g-, while all proto-voiced stops have become voiceless; Da-ang and Na-ang have followed the same course as Ra-ang, and, in addition, have lost the implosion of b- and d-, which then become ordinary b- and d-; Da-ang and Na-ang therefore show a total reversal of the voicing values of PPa-Ru stops: another illusion of ‘flip-flop’, with implosiveness as the point of transition in this game of musical chairs. Angkuic, on the other hand, has undergone a completely regular ‘Germanic’-type of sound change where proto-voiceless stops are now aspirated, and proto-voiced stops are now voiceless. But note that Angkuic tono-genesis is mainly due to vowel qualities and quantities, with some influence from the final consonant; it is unrelated to the earlier or the present voice features of initials.

**Correspondence (2)** includes:
‘bitter, gall’ Ru: /sɔŋ/, Na, Da: /sɔŋ/, Ra: /sɔŋ/, Ta: /sɔŋ/, Ka: /sɔŋ/
‘bamboo-shoot’ Ru: /bɔŋ/, Na: /pɔŋ/, Ta: /bɔŋ/, Ka: /bɔŋ/
‘house-pole’ Ru: /ɔŋ/, Na, Da: /ɔŋ/, Ka: /ɔŋ/
‘horse’ Ru: /mbyɔŋ/, Da: /mprɔŋ/, Ta: /braŋ/, Ka: /braŋ/
Riang-Lang cognates have a front /a/ in these words:

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\(^{14}\) I recorded Man Met and U from native speakers, in Yunnan, during the research project mentioned above (n.9); they were introduced to me as speaking ‘dialects’, or more exactly ‘fângyân’, of the Bülang language. The Chinese term ‘fângyân’ corresponds most of the time to what Western linguists consider to be different languages; this was true of these fângyân of Bülang which do not even belong to the Waiic branch of Palaungic, but to the little known Angkuic branch (Diffloth, 1974). The location of the U language is given in (Zhou & Yan 1973), Man Met is spoken a few miles from Jinghong, Xishuangbanna, Yunnan.
Proto-Waic cognates have *ŋ:

Lamet has a short /a/:
/cəŋ/ ‘bitter’; /pləŋ/ ‘thatch grass’; /təpəŋ/ ‘bamboo-shoot’; /mxəŋ/ ‘horse’.

And in the Angkuic branch, Man Met has /-ɑŋ/ rimes with a high-rising tone, and U has /-āk/ rimes with mid-rising tone:

Here again, Mitani’s reconstruction of a short *a is confirmed, outside Palaungic, by Khmu which regularly shows cognates with short /a/:

The contrast between correspondences (1) and (2) shows that length vs. shortness has been preserved everywhere in the Palaung-Rumai languages, at least for this pair of vowels, except in Ta-ang which does not show any length distinctions anywhere in its system.

It also shows that in the Angkuic branch, tonogenesis is directly due to vowel-length, and has nothing to do with the proto-voice feature of initials; this kind of tonogenesis is unique in the Mon-Khmer family, but, annoyingly, it accounts for only some of the tonal contrasts found in Angkuic languages. It should also be noted that Man Met does undergo this kind of tonogenesis even though the older length distinction is retained; in U however, the length contrast, before disappearing, leaves another trace in the final consonant; it de-nasalises final nasals after short vowels.

Another remark: if we only had the Waic and the Riang-Lang material at our disposal, it would appear that a so-called flip-flop has taken place: Waic has a front *-a- where Riang-Lang has a back /a/; and vice-versa: Waic has a back *-ɔ- for Riang-Lang’s front /a/. The former presence of a length contrast shows this apparent flip-flop to be nothing but a synchronic illusion.

Correspondences (3) includes:
‘high’ Na: /ẹẹŋ/, Ta: /hluŋ/, Ka: /hloŋ/
‘to dig (a hole)’ Ta: /kəŋ/
‘yarn’ Ru: /səʊŋ/, Na: /sẹẹŋ/, Ra: /səŋ/, Ta: /sʊŋ/, Ka: /sʊŋ/

Riang-Lang has an /ɔ/ reflex:
kəŋ/ ‘to dig’, /tsəŋ/ ‘foot’
and Proto-Waic shows *-o-:
*hloŋ (N77) ‘high’, *koŋ (N9) ‘to dig’, *jəŋ (N18) ‘foot’

Lamet has /eə/:

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In Angkuic, Man Met has long /ee/ with a low falling tone, U has /e/ with a high-falling tone and a final nasal:
Outside Palaungic, Khmu has cognates with /ia/:

**Correspondence (4):**
‘bamboo’ Ru: /hraŋ/, Na: /hraŋ/ (Vowel ?), Da: /hraŋ/, Ra: /hraŋ/, Ra: /hraŋ/, Ka: /hraŋ/
‘bed-bug’ Ru, Na, Ra: khan/, Ta (Milne, 1931): kōng
‘stalk, trunk, post’ Ru, Na: /tanj/, Ta: /tanj/ (Milne: tông, tōng), Ka: /tōeq/
‘meat’ Ru, Na: /yaŋ/, Ta: /yuŋ/, Ka: /yōeq/
The Riang reflex is /a/:
Proto-Waic has *-ya:-
*hyŋ (Paraok: /huŋ/, Drage’s Wa: hōng, Phalok: /huŋ/, Phang: /hūŋ/ ‘bed-bug’

Lamet has a short /a/:
/raŋ/ ‘bamboo’, /hōŋ/ ‘bed-bug’

In Angkuic, Man Met has a short /a/ with a high-rising tone (but the tone of ‘bed-bug’ seems to be low-rising), while U has a /a/ with a mid-rising tone and de-nasalisation of the final:
Outside Palaungic, Khmu has a short /u/:
/hūŋ/ ‘bed-bug’

Another etymology with the same proto-vowel, unfortunately without Palaung-Rumai attestations, is:

Mitani’s reconstruction of a length contrast, *uuu vs. *u, for these two proto-vowels is confirmed independently by the evidence of Lamet and Angkuic (both Man Met and U); in Palaung-Rumai, Na-ang and Rumai also display the same contrast, which appears to be a retention, not only from Proto-Palaungic, but from still earlier periods, as the Khmu evidence indicates.

For all four proto-vowels *aa, *a, *uuu and *u, Na-ang and Rumai have thus preserved the older length feature. I depart slightly from Mitani in terms of vowel-qualities: (3) and (4) were probably central mid-vowels, *əa and *ə. This would explain how (3) became *ee in both Lamet and Angkuic and *o in Proto-Waic, and why (4) has very open vowel quality reflexes throughout Palaung-Rumai, except in Ta-ang where (3) and (4) merged and were pushed higher to /u/ by the shift of *a to /a/. The original value of (4) is preserved in Riang, Lamet and Angkuic.
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For the remaining vowel correspondences, Mitani does not reconstruct any length contrast. For (5), (6) and (7) he proposes a back-rounded series: *u *o and *ə respectively.

Correspondence (5) includes:

‘big village, country’ Ru: /kəŋ/, Ta: /kəŋ/
‘drum’ Na: /grəŋ/, Ra: /grəŋ/, Ta: /kəŋ/, Ka: /kəŋ/
‘bamboo-strip mat’ Ru: /bləŋ/, Ta: /pləŋ/, Ta: /bləŋ/
‘love, like’ Ru, Da: */ŋ/, Ra: */ŋ/, Ta: */ŋ/
‘to bury’ Ta: /kəŋ/, Ka: /kəŋ/ (Vowel ?)
The corresponding PWaic vowel is *i:
*kiŋ (N10) ‘wet field, country’, *kriŋ (N63) ‘drum’, *kriŋ (N41) ‘to bury’

In Angkuic, Man Met has a short /u/ with high tone, and U has /u/ with a mid-rising tone and de-nasalisation of the final:
MM: /kʰuŋ/, U: /khûk/ ‘wet rice-field’
And outside Palaungic, Khmu has /u/: /kəŋ/ ‘village’

Lamet cognates are missing, although there are other etyma with apparently the same proto vowel, but without Palaung-Rumai attestations; these show the Lamet reflex to be short /u/:
‘to blow’ Lamet /pəŋ/, PWaic *piŋ (N40), Man Met: /phuŋ/, Khmu /puŋ/
‘a sprout’ Lamet: /pluŋ/ (tone ?), PWaic *bliŋ (Paako /plaŋ/), Khmu: /bluŋ/

For this correspondence, the evidence for proto-shortness is clear: in Palaung-Rumai, only Na-Ang has a long vowel (in a single item which could have been misrecorded); all other languages where a length contrast exists, Rumai, Da-ang, Ra-ang, Ka-ang, Lamet, Angkuic, Khmu, have a short reflex.

The other two correspondences (6) and (7), seem, by contrast, to be on the long side:

Correspondence (6)

‘male bird’ Ru: /kəŋ/, Ta: */ə-kəŋ/, Ka: /kəŋ/
‘Classifier: round objects’ Ru: /poŋ/, Ta: /poŋ/, Ka: /boŋ/
‘buttocks’ Na: /səpong/, Da: /səpong/, Ra: /səpong/, Ta: /əborn/ (my own recording, cf. Milne sə-bông which would indicate /səborn/)
‘far, long’ Ru: /dəŋ/-/nəŋ/, Na: /təŋ/, Ra: /təŋ/, Ka: /doŋ/
The Proto-Waic reflex is *o:
*səŋ (N61) ‘knee-cap’, *kon (N8) ‘peacock’
Lamet has a long /oo/ reflex:
/kəʊŋ/ ‘knee’

In Angkuic, Man Met has a long /oo/ with a low-falling tone, and U has an /o/ with high-falling tone but no denasalisation of the final:

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Correspondence (7) is well documented and contains well-known etyma; it also includes some surprising Front reflexes for what is certainly a proto Back vowel:

‘hornet’ Ru: /ɔeŋ/, Da /ɔŋ/, Ta /ɔŋ/, Ka: /ɔŋ/  
‘rainbow’ Ta: /ɔryɔŋ/, Ka: /ɔryɔŋ/  
‘back (of body, of knife)’ Ru: /kɔeŋ/, Ra: /gwɔŋ/, Ta: /kɔŋ/. Ka: /kɔŋ/  
‘stairs’ Ru: /ndɔŋ/, Na: /ntaŋ/, Ka: /dɔŋ/  
In Riang, the normal reflex is a diphthong /ua/ or /ua/:  
/ɔuŋ/ ‘hornet’, /pruŋŋ/ ‘rainbow’, /ɾəŋŋuŋ/ ‘stairs’
Proto-Waic regularly shows *ɔ:

*ɔŋ (N6) ‘hornet’, *prɔŋ (N84) ‘rainbow’, *kɾɔŋ (N60) ‘back’

Lamet has a long /ɔɔ/ reflex:

/ɔɔŋ/ ‘hornet’, /pɔɔŋŋ/ ‘rainbow’, /kɔɔŋ/ ‘back’  
In Angkuic, the Man Met reflex is a long /ɔɔ/ with a low falling tone, and the U reflex is a diphthong /ua/, with a high-falling tone and no denasalisation of the final:


Outside Palaungic, the Khmu reflex is regularly a long /ɔɔ/:


Mitani was certainly justified, on phonemic grounds, in leaving the feature of length unspecified in the back vowels series of Proto-Palaung-Rumai; but we can afford to be more precise now, and say that *u was probably short, while *o and *ɔ were probably long *oo and *ɔɔ. This will allow for an easier description of the gradual collapse of the older vowel-length system in languages like Ta-ang and Proto-Waic. And for Front vowels, the same line of reasoning will help us to solve a curious problem.  
The proto Front Vowel system was also left unspecified as to length by Mitani, who reconstructed *i, *e, and *ɛ for our correspondences (8), (9) and (10) respectively.

Correspondence (8):

‘to sew’ Ru: /jen/, Na: /ceen/, Ra: /cen/, Ta, Ka: /jin/  
‘head’ Ru: /kɛn/, Na: /geen/, Da: /giŋ/, Ra, Ta, Ka: /kiŋ/  
‘bamboo water-container’ Ru: /dæn/, Ra: /ten/, Ta, Ka: /dɪŋ/  
‘husband’ Ru: /mɛn/  
Riang has an /i/ reflex for this correspondence:  
/kig/ ‘head’, /kɔndiŋ/ ‘navel’

But PWaic has an *ɛ:


Lamet normally has a short /i/, except for one case of long /ii/:

This last item may actually be one of the many words Lamet has borrowed from the neighbouring Khmu; unfortunately, I have not yet found the expected word /hmiŋ/ in any dialect of it. But the Khmu reflex of correspondence (8) is indeed a long /ii/:

Khmu Yuan (Svantesson, personal notes): /kʰtiŋ]/ ‘navel’, /tiŋ]/ ‘bamboo water-container’

In Angkuic, Man Met has a short /i/ with a high-rising tone, and U has /i/ with a mid-rising tone and denasalisation of the final Nasal:

MM: /kʰiŋ/, U /kʰik/ ‘head’; MM: /mʈiŋ]/ (tone ?) ‘bamboo container’; MM: /-tiŋ]/ ‘the middle of (in a compound: /kæŋ-/); U: /hmik]/ ‘male of animal’

The Palaung-Rumai evidence, except for Na-ang, points to a proto-short vowel *i, and this is confirmed at the Proto-Palaung level by Lamet and Angkuic.

Correspondence (9):


‘yellow’ Ru: /t̪oŋ/, Na: /deŋ/, Da: /deŋ/, Ra: /deŋ/, Ta: /teŋ/, Ka: /deŋ/

‘wheel’ Ru: /k̪oŋ/, Ra: /k̪oŋ/, Ta: /k̪oŋ/ ‘equal amount’ Ta: /k̪rapeŋ/

Riang cognates have an /e/ vowel:


And Proto-Waic, surprisingly, has an *i:

*kləŋ (Paraok: /kliŋ/ ‘to spin (yarn)’; *mɾiŋ (Bo Luang and Umphai Lawa: /mbrŋ/ ‘to compare quantities, to match

The Lamet evidence is, unfortunately, limited to a single item: /t̪ompliŋ/ ‘sky’

In Angkuic, I do not have Man Met cognates, but U has the same reflex as in correspondence (8): /i/ with mid-rising tone and denasalisation:

U: /phl̪iŋ/ ‘sky’

This merger of (8) and (9) is specific to U and not general in Angkuic: there are other cognate sets, unfortunately without attestations in Palaung-Rumai, where this U rime corresponds to Man Met /-eŋ/ with middle tone, (and to Proto-Waic *-ŋ, as correspondence (9) requires):

‘to return home’ U: /ʔiŋ/, PWaic *ŋiŋ (N1)

‘wall, partition’ U: /ndhik/, Mok (a close relative of Man Met spoken in Thailand, Wenk’s (1965) ‘Ya Ang Lawa’): /theŋ/, PWaic *ntŋ (N21)


15. The initial /m-/ is probably a trace of the word /ʔoːm/ ‘water’ with which *ɖiŋ often forms compounds, e.g. Bûlûng /ʔʊm təŋ/ ‘bamboo water-container’.
I propose to reconstruct PPal-Ru *ee for correspondence (9), and for PPalaungic as well. The Palung-Rumai reflexes indicate a long vowel, even in Rumai, where the strange reflex, /-ɔn/, represents a merger with *-ɔŋ (correspondence 3), itself a proto-long vowel.

This reconstruction also provides a simple explanation for what would appear to be yet another case of flip-flop: if we kept Mitani's reconstruction, without length, the correspondences would be:

(8) *i-: PPal-Ru *i- = PWaic *e-
(9) *e-: PPal-Ru *e- = PWaic *i-

If, however, we reconstruct PPal-Ru *ee for (9), head-on collisions are easily averted, and gradual phonetic change can proceed smoothly.

In addition, we can also explain the Lamet and Angkuic reflexes: in those two sub-branches, Proto-Palaungic *ɔɔ (correspondence 3) was fronted to a long /ɛɛ/, pushing the older *ee (corr. 9) out of the way: in Lamet, this *ee was raised to /iː/, keeping its long feature and filling a gap in the vowel system; but in Angkuic, Man Met and U evolved differently: in Man Met *ee and *ɔɔ merged in terms of qualities and length, but seem to have acquired different tones, whereas in U, *ee simply merged with *i.

If this is correct, the movement of *ɔɔ to /ɛɛ/ is probably not an innovation shared by Lamet and Angkuic; it may have happened independently in these two sub-branches which do not appear to be especially closely related to each other.

The last correspondence, (10), poses a special problem in that it is difficult to decide if *ee or *i should be reconstructed, for either PPal-Ru or PPalaungic. In any event, a short *ɛ seems a very unlikely value for this correspondence in view of its reflexes:

‘oily, unctuous, delicious’ Ru: /pyoon̂/, Na: /brəŋ̂/, Ra: /brəŋ̂/, Ta: /preŋ̂/, Ka: /priəŋ̂/
‘wrist, ankle; bracelet’ Ru: /kyoŋ̂/, Na: /giəŋ/, Ta: /keəŋ̂/
The Riang reflex is a diphthong, usually transcribed /ie/: /teŋ̂/ ‘to drink’, /yoŋ̂/ ‘excrement’, /riəŋ̂/ ‘straw’, /priəŋ̂/ ‘delicious’

In PWaic, the reflex is *e:

*ɛŋ (N3) ‘excrement’

The normal Lamet reflex is a long /ɛɛ/, although ‘excrement’ has unexpected reflexes, possibly due to euphemistic deformation:


In Angkuic, the Man Met reflex is a short /e/, usually with a high tone, whereas in U, we find a diphthong /ia/ with a high-falling tone and a Nasal final; ‘excrement’ is irregular only in U, having what seems to be an otherwise unattested proto-short diphthong:

Only one cognate has been found so far in Khmu\textsuperscript{16}: /kian/ ‘elbow’.

For the sake of consistency with Mitani’s notation, I will arbitrarily reconstruct *ee for this correspondence at the PPal-Ru level.

The vowel system reconstructed for PPal-Ru now appears as follows:

\textit{Proto-Palaung-Rumai Vowel System}

\begin{tabular}{c c c c}
*\textbf{i} & *\textbf{oo} & *\textbf{o} & *\textbf{oo} \\
*\textbf{ee} & *\textbf{cc} & *\textbf{a} & *\textbf{a} \\
\end{tabular}

In contrast to the 9-vowel system shown above for Proto-Waic, this 10-vowel system shows the vowel length contrast to be still operating, but with a small functional load. I have not attempted here to reconstruct the Proto-Palaung state of affairs, because Lamet and Angkuic are still too poorly known; but it seems likely that the vowel system will be, if anything, richer at that stage, probably filling some of the gaps in the long vs. short contrasts.

The Proto-Palaung-Rumai vowel system appears to be, typologically, half-way between a full South-East Asian system, as found for example in Khmu or Standard Thai, and a more contracted system where vowel length has been lost, as found for example in Proto-Waic, and Modern Mon. This vowel-system contraction seems typical of the Burma-Yunnan linguistic sub-area. But what Palaung-Rumai shows is that areal pressure does not work like a stream-roller: Ta-ang did lose the length contrast, but Rumai, even with two mergers, maintains it systematically and even innovates in this respect with complete disregard for its more forceful neighbours.

Something similar can be said of U: while it did lose vowel-length and acquired tones, thus conforming to its neighbours, it did so in a way which is competely original since the tono-genesis of U is partly due to vowel length.

In the perspective of Proto-Mon-Khmer, we may have to cope with as many upheavals, during that long stretch of history which separates us from these ancient times, as we can see in the relatively short adventure of Palauic vowels.

REFERENCES


\textsuperscript{16} In spite of its conservative phonology, Khmu is not as useful for reconstructing Proto-Palaungic as it might appear at first glance; it is true that the Khmuic branch is closer to Palaungic than to other branches of Mon-Khmer, but the Khmu lexicon has undergone a great many replacements.

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Palaungic vowels in Mon-Khmer perspective


