

Proto-Karen (*k-rjaŋ^ʌ) Fauna

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Abstract

A wordlist consisting of 2,000 items with English and Thai glosses divided into 21 sections based on semantic fields was devised. The data on the six Karenic languages spoken in Thailand, i.e. Pa-O (two varieties), Kayan, Kayah, Kayaw, Pwo (two varieties) and Sgaw (two varieties) was collected by the author at many research sites in Thailand from January 2009 – January 2012. They represent Northern, Central and Southern Karen languages. The cognate words found in the Bwe Karen Dictionary (Henderson, 1997) were added. To analyse the patterns of sound correspondence, the comparative method was applied with an awareness of areal linguistic features due to language contact. A Proto-Karen (*k-rjaŋ^ʌ) phonology and lexicon were reconstructed. With regard to the Proto-Karen phonology, the relationship between the onsets and tones is quite straightforward, so it is not difficult to reconstruct, unlike the rhymes which, in some cases, are problematical resulting from vowel harmony and the loss of final consonants. The 73 reconstructed forms of Proto-Karen animals are presented and the Proto-Karen tones, onsets and rhymes are provided in the Appendix.

Introduction

The Karenic languages are spoken in Myanmar and Thailand. There are eighteen different groups of Karen in Myanmar: Pa-O, Lahta, Kayan, Bwe, Geko, Geba, Brek, Western Kayah, Eastern Kayah, Yinbaw, Yintale, Manumanaw, Paku, Sgaw, Wewaw, Zayein, Eastern Pwo and Western Pwo (Ethnologue: 16th Edition, 2009, SIL International). In Thailand, only six groups are known of: Pa-O, Kayan, Kayah, Kayaw, Sgaw and Pwo. Among Burmese refugees and labourers, there may also be other groups. The total population of Karen is still debatable due to the lack of good official records; however, 4.5 million seems to be a reasonable estimation.

With regard to the reconstruction of a Proto-Karen phonology and lexicon, there have been a few attempts: Haudricourt, 1946 and 1953; Jones, 1961; Burling, 1969; Solnit, 2001; Manson, 2009). A literature review of the previous works on Karen comparative and historical linguistics can be found in Manson (2009). The classifications of Karen have been done by Jones (1961), Burling (1969), Kauffman (1993), Bradley (1997), Manson (2001) and Shintani (2003). Detailed information on the external and internal classifications of the Karenic languages can also be found in Manson (2009 and 2011). Among these classifications, I have adopted Kauffman's because of its geographical base which quite well suits the starting point of my present research work. Even though Proto-Karen was reconstructed earlier by a few linguists and more data on many Karenic languages is available at present, I still feel that I should start from zero. An attempt to do a comparative study using fresh data solely collected by one experienced field linguist may be able to help obtain a better solution since the data is equal in quality and, thus, compatible.

Data

Funded by the Thailand Research Fund (TRF), the data on the six Karenic languages spoken in Thailand was collected at many research sites in Thailand from January 2009 – January 2012 with a devised wordlist of 2,000 items. The English and Thai glosses were divided into twenty-one sections based on semantic fields: action verbs, stative verbs, bodyparts and body secretions, health and disease, fauna, parts of plants, flora, natural objects and phenomenon, manmade objects and construction, food stuffs, culture and society, kinship terms, numerals, classifiers, measurements, colour terms, time, direction and location, pronouns, question words and miscellaneous. My personal corpus used for the reconstruction of a Proto-Karen phonology and lexicon consists of Northern Karen: two varieties of Pa-O; Central Karen: Kayan, Eastern Kayah, Kayaw; Southern Karen: two varieties of Sgaw and two varieties of Pwo. Clear cognates were selected for diachronic comparison. The cognate words found in the Bwe Karen Dictionary (Henderson, 1997) were added; therefore, altogether there are four Central Karen languages, i.e. Kayan, E. Kayah, Bwe (Blimaw) and Kayaw. The comparative method was applied with an awareness of language contact and areal linguistic features when analysing the patterns of sound correspondence.

With regard to the Proto-Karen (PK) phonology, the relationship between the onsets and tones is quite straightforward. Proto-Karen has three categories of initial consonants: Class-one consonants (voiceless aspirated stops, voiceless nasals, approximants and fricatives), Class-two consonants (voiceless unaspirated stops, preglottalised voiced stops or implosives, preglottalised nasals and approximants) and Class-three consonants (plain voiced stops, nasals and approximants). See the reconstructed PK three tones (*A *B *D) and onsets (*C- *CC-) in Figure 1 and Table 1, respectively, in the Appendix. The reconstruction of PK rhymes is more problematical resulting from vowel harmony and the loss of final consonants. The examples of the PK rhymes can be found in Table 2 of the Appendix. I have never had the opportunity of reading Haudricourt's original papers on comparative Karen written in French (Haudricourt 1946, 1953 and 1961), however, from the secondary sources, e.g. Matisoff's additional notes in Sino-Tibetan: A conspectus (Benedict, 1972), Luce (1959), Henderson (1979), Court (1972) and so on, I do appreciate Haudricourt's work on Proto-Karen the most.

*k-rjaŋ^A 'Karen'

Based on the autonames ka¹jaŋ⁵³ (Kayan), ke¹¹je¹¹ (E. Kayah), ko³³jo³³ (Kayaw), (pya³³) ka¹jo³³ (Sgaw) and names known among Thai people, i.e. Kariang, Karang (Central Thai) and Yang (Northern Thai), the protoform *k-rjaŋ^A was reconstructed. This etymon has regular sound changes like the other etyma with the *-aŋ rhyme; for example,

Ex.1 PK: *ʔbaŋ^B 'bamboo shoot'

Pa-O: baŋ⁵⁵ B2 (N.), baŋ³³ B2 (S.)

Kayan: baŋ¹¹ B

Kayah: be¹¹ B

Bwe: ɓa³³ B

Kayaw: bo¹¹ B

Ex.2 PK: *laŋ^A 'to descend'

Pa-O: laŋ³³ A3 (N.), laŋ⁵³ A3 (S.)

Kayan: laŋ³³ A3

Kayah: le¹¹ A3

Bwe: la³³ A3

Kayaw: lo³³ A3

Sgaw: bɔ^{31~} B2 (N.), bɔ^{45'} B2 (S.)
 Pwo: bɛ̃³³ B2 (N.), bɔ̃⁵⁵ B2 (S.)

Sgaw: lɔ³³ A3 (N.), lɔ³³ A3 (S.)
 Pwo: lɛ̃⁵⁵ A3 (N.), lɔ̃³¹ A3 (S.)

Ex.3 PK: *khaŋ^B ‘foot, leg’
 Pa-O: khaŋ⁵⁵ B1 (N.), khaŋ³³ B1 (S.)
 Kayan: haŋ¹¹ B
 Kayah: khe¹¹ B
 Bwe: kha³³ B
 Kayaw: khɔ¹¹ B
 Sgaw: khɔ^{31~} B1 (N.), khɔ^{45'} B1 (S.)
 Pwo: khɛ̃³³ B1 (N.), khɔ̃⁵⁵ B1 (S.)

Ex.4 PK: *thaŋ^B ‘to ascend’
 Pa-O: thaŋ⁵⁵ B1 (N.), thaŋ³³ B1 (S.)
 Kayan: thaŋ¹¹ B
 Kayah: the¹¹ B
 Bwe: tha³³ B
 Kayaw: hɔ¹¹ B
 Sgaw: thɔ^{31~} B1 (N.), thɔ^{45'} B1 (S.)
 Pwo: thɛ̃³³ B1 (N.), thɔ̃⁵⁵ B1 (S.)

Tonal development

How many tones should be reconstructed, two, three, four or six? There are different opinions, as follows:

Haudricourt (1972): two tones (A B)

Jones (1961): two tones (´ ̀)

Burling (1969): six tones (1 2 3 4 [?]1 [?]2)

Shintani (2003): four tones (1 2 2´ 3)

Manson (2009): four tones (*A *B *B´ *C)

To support my view that three tones, namely *A *B *D, should be reconstructed, the tone systems of Modern Karenic languages and their development will be discussed. Both of the Pa-O varieties have four tones in the smooth syllable and two tones in the checked syllable: 31^ˉ (A12), 33 (A3), 55 (B12), 53 (B3) and 21 (D12), 45 (D3) in Northern or Highland Pa-O; and 31^ˉ (A12), 53 (A3), 33 (B12), 55 (B3), 21 (D12) and 45 (D3) in Southern or Lowland Pa-O. This means that each of the proto-tones (*A *B *D) has split into two tones, i.e. *A > A12-3 or A1-23 *B > B12-3 and *D > D12-3 as shown in Figure 1 of the Appendix.

With regard to Central Karen, synchronically, Kayan and E. Kayah have four tones in the non-checked syllable and two tones in the checked one like Pa-O. However, the patterns of tone split and merger differ. It is also noticeable that the mid-falling tone in Kayan and E. Kayah rarely occurs and when it does, more often than not, the words turn out to be Burmese or Shan loanwords. Among the cognates, this tone has not been found. Perhaps, the mid-falling is a new-born tone in Kayan and E. Kayah. In Kayan, E. Kayah, Bwe and Kayaw, the *A tone has split into two tones, i.e. A12-3, and there is no split in the *B tone column. The *D tone in Kayan, E. Kayah and Bwe has split into *D12-3 while there is no split in the *D tone column in Kayaw. There is a merger between *A3 and *B in E. Kayah and Bwe. In Bwe, interestingly, there is also a merger between *B and *D12, more details can be found in Figure 1. While working with my E. Kayah and Kayaw language consultants at Huai Suea Thao village in Mae Hong Son province, I noticed that their low tones always occurred with a

breathy-voiced phonation and that, in the stressed position, the CV syllable always became CVʔ, or in other words, the -ʔ disappeared in the unstressed position no matter what tone that syllable had.

As for Sgaw, I worked on many varieties of the N. Sgaw especially those spoken in the provinces of Chiangrai, Chiangmai, Lamphun and Mae Hong Son. The varieties of S. Sgaw are the ones spoken in the provinces of Petchaburi and Prachuap Khiri Khan. Since the Sgaw Karen in these areas have lived together with the Pwo Karen (Phlong, Phlou), language contact cannot be avoided. Resulting from this fact, the Pa La-U Sgaw has four tones: 55 (A12), 33 (A3), 45' (B12), 31 (B3), 21 (D12) and 11'' (D3), see Sgaw (type 4) in Figure 1. Based on my fieldnotes, four patterns of tonal development have been found: *type 1*, no split in the *A and *B columns while *D > D12-3; *type 2*, no split in the *A column while *B > B12-3 and *D > D12-3; *type 3*: *A > A12-3 and *D > D12-3 while no split in the *B column; and *type 4*: there is a split in every column, i.e. *A > A12-3, *B > B12-3 and *D > D12-3. See the illustration of the patterns of tone split and merger in Figure 1.

Like Pa-O, all Pwo varieties have four tones with an unusual split in the *A column, i.e. *A > A1-23 while the split patterns in the *B and *D columns are typical, i.e. *B > B12-3 and *D > D12-3. In figure 1, Pwo (1) is Northern Pwo while Pwo (2) is Southern Pwo or Western Pwo (Phillips, 2002). The Pwo (2) varieties are mostly spoken in the western areas of Central Thailand, especially in the provinces of Kanchanaburi, Uthai Thani, Ratchaburi, Petchaburi and Prachuap Khirikhan. In the *D tone columns of Pwo (1) and Pwo (2), there is a tonal flip-flop: *D > D12 (high) – 3 (low) in Pwo (1) but *D > D12 (low) – 3 (high) in Pwo (2), as shown in Figure 1.

Fauna

Even though many protoforms in the twenty-one semantic fields (see details in the introductory part) were reconstructed, only the 73 etyma related to fauna or animals are presented in this paper. They are arranged in an alphabetical order A-Z started with the English gloss no. 1 ‘ant’ and ending with no. 73 ‘weevil’. For each etymon, following the English gloss, is the reconstructed protoform. In some cases, the protoforms of TB cognates drawn from Benedict (1972) or Matisoff (2003) are also given. Additional information is provided under *Note*.

1. ANT *dəŋ^B

Pa-O: thəŋ⁵³ (N.), təŋ⁵⁵ (S.)

Kayan: tə¹¹

Kayah: tə¹¹

Bwe: do³³

Kayaw: tə¹¹

Sgaw: tə¹¹ (N.), tə³¹ (S.)

Pwo: thã¹¹ (N.), thã³³ (S.)

Note: The plain voiced *d- was reconstructed because of the onset d- in Western Bwe (Blimaw, Geba) which has /d/ vs /d/ (Henderson, 1997). It is also noticeable that PK *ʔd- or *d- is always d- in Modern Karen (see no. 30 ‘frog’), while *d- has become t- or th-.

	*A	*B	*D
1	33	11 ^{..}	45
2	33	11 ^{..}	45
3	33	11 ^{..}	21

	*A	*B	*D
1	33	31~/21'	45
2	33	31~/21'	45
3	33	11	21/53

	*A	*B	*D
1	55	11 ^{..}	45
2	55	11 ^{..}	45
3	33	11 ^{..}	21

	*A	*B	*D
1	55	45'	21
2	55	45'	21
3	33	31	11 ^{..}

	*A	*B	*D
1	35	33	45
2	55	33	45
3	55	11 ^{..}	21

	*A	*B	*D
1	31/53	55	21
2	11 ^{..} /31 ^{..}	55	21
3	11 ^{..} /31 ^{..}	33	45

Figure 1 Development of Sgaw and Pwo tones

2. BAMBOO RAT **(jow^B)* khan^A

- Pa-O: (ju⁵³) khan³¹ (N.), - (S.)
- Kayan: (ju¹¹) khaŋ⁵³
- Kayah: -
- Bwe: khe⁵⁵
- Kayaw: (ju¹¹) khɔ̃⁵⁵
- Sgaw: khɔ̃³³ (N.), khɔ̃⁵⁵ (S.)
- Pwo: khɛ̃³⁵ (N.), khɔ̃⁵³ (S.)

Note: The Karen regard this rodent as a kind of rat or mouse (**jow^B*, see no. 47) as can be seen in Pa-O, Kayan and Kayaw. See also no.43 ‘mole’.

3. BAT **pla^A*, **p/bla^B*

- Pa-O: pla³¹ (N., S.)

Kayan:	bla ¹¹
Kayah:	ple ¹¹ , ple ³¹
Bwe:	ple ¹¹
Kayaw:	pla ¹¹
Sgaw:	bla ³³ (N.), bla ⁵⁵ (S.)
Pwo:	phla ³³ (N.), phla ⁵⁵ (S.)

Note: Pa-O and Sgaw have tone A while Kayan, Kayah, Kayaw and Pwo have tone B. In this etymon, the PK cluster *pl- has become bl- in Kayan and Sgaw but phl- in Pwo. The low tone (11) in Bwe suggests *D. The initials and tones of the word ‘bat’ in Modern Karen seem irregular. I suspect that its cause is language contact.

4. BEAR *tham^A

Pa-O:	tham ³¹ (N., S.)
Kayan:	thaj ⁵³
Kayah:	the ³³
Bwe:	the ⁵⁵
Kayaw:	thɔ ⁵⁵
Sgaw:	- (N., S.)
Pwo:	(phĩ ¹¹) thɔ̃ ³⁵ (N.), (phõu ⁵³) thɔ̃ ⁵³ (S.)

Note: This etymon has been lost in all of the Sgaw varieties. It was replaced by the word ta³³ su³³ or ta³³ θu⁵⁵ which can be a euphemism for ‘bear’. There are curses in Sgaw, for example, “ta³³ su³³ wa²⁴⁵ phyi³³ nə²⁴⁵ mɛ²⁴⁵ sa¹¹”, meaning ‘(I wish) a bear hits your face with its paws’. The generic term for ‘bear’ maybe regarded as a taboo word.

5. BEDBUG *jram^A

Pa-O:	sam ³³ (N.), sam ⁵³ ~ saŋ ⁵³ (S.)
Kayan:	caŋ ³³
Kayah:	khre ¹¹
Bwe:	-
Kayaw:	cɔ ³³
Sgaw:	xɔ ³³ (N.), xɔ ³³ (S.)
Pwo:	- (N., S.)

Note: This etymon was replaced by phɛ̃⁵³ (S. Pwo) and phã³⁵ (N. Pwo).

6. BEE (Apis cerana) *k(h)wat^D

Pa-O:	wat ²¹ (N.), wa ²²¹ (S.)
Kayan:	hwe ²⁴⁵
Kayah:	wɛ ⁵⁵

Bwe:	wɛ ³³
Kayaw:	hwɛ ³³ ~ khwɛ ³³
Sgaw:	kwɛ ²⁴⁵ , kwɛ ⁵⁵ (N.), kwɛ ⁵⁵ (S.)
Pwo:	kwɛ ⁵⁵ (N.), kwɛ ³¹ (S.)

Note: Pwo, S.Sgaw and some varieties of N.Sgaw have a smooth syllable with tone A instead of a checked syllable with tone D.

7. BEE (Apis dorsata) *k-hne^A

Pa-O:	ne ³¹ (N., S.)
Kayan:	nai ⁵³
Kayah:	ni ³³
Bwe:	gə-ni ³³
Kayaw:	ni ⁵⁵
Sgaw:	kə ¹¹ nɛ ³³ , kə ¹¹ nɛ ⁵⁵ (N.), nɛ ⁵⁵ (S.)
Pwo:	ni ³⁵ (N.), ni ⁵³ (S.)

8. BIRD *tho^B

Pa-O:	- (N.), - (S.)
Kayan:	thau ¹¹
Kayah:	thu ¹¹
Bwe:	tho ³³
Kayaw:	thu ¹¹
Sgaw:	tho ^{31~} , tho ¹¹ (N.), thu ^{45'} (S.)
Pwo:	thu ³³ (N.), thu ⁵⁵ (S.)

Note: In Pa-O, it is wa⁵³ (N.) or wa⁵⁵ (S.). This can be regarded as a retention from TB *wa (PB, JM) since the Pa-O branched out earlier than the rest of the Karenic peoples. It can also be interpreted as a loanword from the other TB language.

9. BOAR (wild ~) *tho^{2D} mi^A

Pa-O:	tho ²²¹ mi ³³ (N.), tho ²²¹ mi ⁵³ (S.)
Kayan:	thau ²⁴⁵ mi ³³
Kayah:	the ⁵⁵ mi ¹¹
Bwe:	-
Kayaw:	tho ³³ mi ³³
Sgaw:	tho ²⁴⁵ mi ³³ (N.), tho ²²¹ mi ³³ (S.)
Pwo:	tho ²⁴⁵ mei ⁵⁵ (N.), thu ²²¹ mei ³¹ , thu ²²¹ mei ¹¹ (S.)

Note: See also no.53 'pig'.

10. BUFFALO (water ~) *b-na^B

Pa-O:	pa ^{ʔ21} na ⁵³ (N.), pa ^{ʔ21} na ⁵⁵ (S.)
Kayan:	bu ^{ʔ45} na ¹¹
Kayah:	pe ⁵⁵ ne ¹¹
Bwe:	bə ³³ ne ³³
Kayaw:	pa ³³ na ¹¹
Sgaw:	pə ³³ na ¹¹ , pa ^{ʔ21} na ¹¹ , pə ^{ʔ45} na ¹¹ (N.), pə ¹¹ na ³¹ (S.)
Pwo:	pa ^{ʔ21} nɛ ¹¹ (N.), pə ^{ʔ21} na ³³ (S.)

Note: The reconstructed form *bo^B na^B is also possible because *bo^B was reconstructed for ‘ox’ (see no. 48). The meaning of *bo^B could be ‘bovine’ or ‘cattle’.

11. CATERPILLAR *si² ~ (?)

Pa-O:	se ^{ʔ21} (N.), si ^{ʔ21} (S.)
Kayan:	θi ^{ʔ45}
Kayah:	si ⁵⁵
Bwe:	θa ³³ (?)
Kayaw:	si ³³
Sgaw:	si ^{ʔ45} , si ^{ʔ45} (N.), sai ^{ʔ21} (S.)
Pwo:	si ³⁵ (N.), θei ³³ , θei ^{ʔ21} (S.)

Note: N.Pwo and some varieties of S.Pwo have tone A1 instead of D1. There is also an irregular vowel correspondence.

12. CATFISH * ~ ku^A, * ~ ku^B

Pa-O:	khu ³¹ (N., S.)
Kayan:	ku ⁵³
Kayah:	ku ¹¹
Bwe:	-
Kayaw:	ku ¹¹
Sgaw:	- (N.), ku ^{45ʹ} (S.)
Pwo:	- (N.), ku ⁵⁵ (S.)

Note: Pa-O and Kayan have tone A while Kayah, Kayaw, S.Sgaw and S.Pwo have tone B.

13. CENTIPEDE *ʔda-ʔbaŋ^A

Pa-O:	ta ^{ʔ45} baŋ ³¹ (N., S.)
Kayan:	ta ¹¹ baŋ ⁵³
Kayah:	-
Bwe:	-
Kayaw:	-

Sgaw: da²⁴⁵ bɔ³³, da²⁴⁵ bɔ⁵⁵ (N.), da¹¹ bɔ⁵⁵ (S.)

Pwo: - (N.), da²⁴⁵ bɔ̃³¹, da²⁴⁵ bɔ̃¹¹ (S.)

Note: *ʔbaŋ^A means ‘yellow’.

14. CHAMELEON, LIZARD *khwi^B

Pa-O: kwi⁵⁵ (N.) kwi³³ (S.)

Kayan: khwi¹¹

Kayah: khwi¹¹

Bwe: khwi³³

Kayaw: khi¹¹

Sgaw: khwi^{31~}, khwi¹¹ (N.), khwi⁴⁵ (S.)

Pwo: khwi³³ (N.), khwi⁵⁵ (S.)

Note: See also no.44 and no.45 ‘monitor lizard’.

15. CHICKEN *chjaX^A, *chjaN^A

Pa-O: ɕja³¹ (N., S.)

Kayan: ɕi⁵³

Kayah: cha³³

Bwe: ʃi⁵⁵

Kayaw: ɕi⁵⁵

Sgaw: chɔ³³, chɔ⁵⁵ (N.), chɔ⁵⁵ (S.)

Pwo: chẽ³⁵ (N.), chẽ⁵³ (S.)

Note: The final of this etymon cannot be reconstructed. The dummy *-X became *-N and then nasalised vowels in Pwo but was lost in the other Karenic languages. The pattern of vowel correspondence is rather unusual. If PK had the *-aN rhyme, the normal correspondence would be -aN (Pa-O, Kayan), -e (Kayah), -ɛ (Bwe), -ɔ (Kayaw, Sgaw), -ẽ (N.Pwo) and -õ (S.Pwo) as in no.2, no.4 and no.5. The second element of the initial cluster (*-j-) could also be the cause of vowel irregularity in this etymon. *chjaN^A could be another solution, i.e. it is a loanword from Proto-Monic *tyaŋ (> *chyaan in Proto-Nyah Kur) and > *cajn in Proto-Mon) as reconstructed by Diffloth (1984).

16. CICADA *ŋjaj^A

Pa-O: ŋja³³ (N.), - (S.)

Kayan: ji³³

Kayah: ja¹¹

Bwe: -

Kayaw: -

Sgaw: je³³, ze³³ (N.), - (S.)

Pwo: jai⁵⁵ (N.), jai³¹, jai¹¹ (S.)

Note: In some N. Sgaw varieties, *j- has become z-. The voiced palatal fricative [j] is, in fact, a variant of the onset j- in Karenic languages.

17.CIVET CAT *thu^B

Pa-O: - (N.), - (S.)

Kayan: thu¹¹ (mi³³)

Kayah: -

Bwe: thu³³

Kayaw: thu¹¹ (mi³³)

Sgaw: - (N.), - (S.)

Pwo: - (N.), thu⁵⁵ (th⁵⁵)

Note: Sgaw people call ‘civet cat’ th²⁴⁵ se^{31~} or th²⁴⁵ se¹¹ ‘tree pig’ (N.) or th²⁴⁵ tu³³ pə¹¹ ?i⁵⁵ ‘sticky-rice pig’ (S.).

18.CRAB *chwe^B

Pa-O: chwe⁵⁵ (N.), chwe³³ (S.)

Kayan: chwe¹¹

Kayah: chwa¹¹

Bwe: ʃwe³³

Kayaw: che¹¹

Sgaw: chwe^{31~}, chwe¹¹ (N.), chwe⁴⁵ (S.)

Pwo: chwe³³ (N.), chwe⁵⁵ (S.)

19.CRICKET *s-ki^A

Pa-O: ki⁵³ (N.), ki³¹ (S.)

Kayan: -

Kayah: ki³³

Bwe: -

Kayaw: dɛ¹¹ ki⁵⁵

Sgaw: sə¹¹ ki³³, θa²¹ ki³³, sə²¹ ki³³ (N.), tə¹¹ ki⁵⁵ (S.)

Pwo: - (N., S.)

Note: N.Pa-O has tone A3 while the rest have tone A2. It is kha²²¹ rai²⁴⁵ in S. Pwo which is not cognate.

20.CROCODILE *s-hma^B, *s-ʔma^B

Pa-O: - (N.), - (S.)

Kayan: -

Kayah: -

Bwe: θə³³ mɛ³³
 Kayaw: ma¹¹
 Sgaw: sə³³ ma^{31~}, θa³³ ma¹¹, sə⁵⁵ ma¹¹, sə²⁴⁵ ma¹¹ (N.), ma^{45'} (S.)
 Pwo: ma³³ (N.), ma⁵⁵ (S.)

21. DEER (barking ~) *d-khej^A (TB *d-key, *d-kəy)

Pa-O: khi³¹ (N., S.)
 Kayan: khi⁵³
 Kayah: khə³³
 Bwe: do¹¹ khi⁵⁵
 Kayaw: khi⁵⁵
 Sgaw: - (N.), - (S.)
 Pwo: - (N.), khi⁵³ bɔ̃³¹, khi⁵³ bɔ̃¹¹ (S.)

Note: In Sgaw, the etymon *d-khej^A had been lost and was replaced by the word ta³³ho³³, ta³³ho⁵⁵ (N. Sgaw).

22. DEER (sambha ~) *t-khro^{2D}, *t-gro^A (TB *d-yuk)

Pa-O: khjo²²¹ (N.), kjo²²¹ (S.)
 Kayan: khjɔ̃²⁴⁵
 Kayah: khro⁵⁵
 Bwe: kho³³
 Kayaw: khə³³
 Sgaw: ta³³ xo³³ (N.), tho⁵⁵ xo³³ (S.)
 Pwo: ta³³ xo⁵⁵ (N.), chə³³ xo³¹, chə³³ xo¹¹ (S.)

Note: Northern and Central Karen have tone D (D12) while Southern Karen (Sgaw, Pwo) has tone A (A3) which suggests a voiced initial.

23. DOG *thwi^B (TB *kwəy, *kwiy)

Pa-O: thwi⁵⁵ (N.), thwi³³ (S.)
 Kayan: thwi¹¹
 Kayah: thwi¹¹
 Bwe: thwi³³
 Kayaw: thi¹¹
 Sgaw: thwi^{31~}, thwi¹¹, chwi^{31~}, chwi¹¹ (N.), thwi^{45'} (S.)
 Pwo: thwi³³ (N.), thwi⁵⁵ (S.)

24. DOVE *(tho^B) lwi^B

Pa-O: (wa⁵³) lwi⁵³ (N.), (wa⁵⁵) lwi⁵⁵ (S.)
 Kayan: thau¹¹ lwi¹¹

Kayah:	thu ¹¹ lwi ¹¹
Bwe:	tho ³³ lwi ³³
Kayaw:	thu ¹¹ li ¹¹
Sgaw:	tho ^{31~} lwi ¹¹ , tho ¹¹ lwi ¹¹ (N.), thu ⁴⁵ lwi ³¹ (S.)
Pwo:	thu ³³ lei ¹¹ (N.), thu ⁵⁵ lwi ³³ (S.)

25.EARTHWORM *k-lje^{2D}

Pa-O:	je ²⁴⁵ (N., S.)
Kayan:	je ²²¹ (~ ca ²²¹ krɔ ⁵³)
Kayah:	ja ³³ (~ khro ³³)
Bwe:	-
Kayaw:	je ³³ (tha ⁵⁵ ~)
Sgaw:	kə ³³ le ²²¹ (thɔ ²⁴⁵ ~) (N.), kə ¹¹ le ¹¹ (tho ²²¹ ~) (S.)
Pwo:	ka ²²¹ le ²²¹ (chɛ ³⁵ ~) (N.), kə ¹¹ le ²⁴⁵ (chɔ ⁵³ ~) (S.)

Note: The first parts of the compounds in Sgaw and Pwo, i.e. thɔ²⁴⁵ or tho²²¹; chɛ³⁵ or chɔ⁵³ mean ‘pig’ and ‘chicken’, respectively.

26.ELEPHANT *k-chaŋ^A (TB *tshaŋ, *tsaŋ)

Pa-O:	chaŋ ³¹ (N., S.)
Kayan:	chaŋ ⁵³
Kayah:	chɛ ³³
Bwe:	gə-fa ⁵⁵
Kayaw:	rɔ ¹¹ chɔ ⁵⁵
Sgaw:	kə ¹¹ chɔ ³³ , kə ¹¹ chɔ ⁵⁵ (N.), kə ¹¹ chɔ ⁵⁵ (S.)
Pwo:	ka ¹¹ chɛ ³⁵ (N.), kə ¹¹ chɔ ⁵³ (S.)

Note: This etymon is an Austroasiatic loanword. The etyma meaning ‘elephant’ were reconstructed as *ksaŋ in Proto-Waic (Diffloth, 1980) and *ciij in Proto-Monic (Diffloth, 1984).

27.FISH *da^{2D}

Pa-O:	tha ²⁴⁵ (N.), ta ²⁴⁵ (S.)
Kayan:	ta ²²¹
Kayah:	te ³³
Bwe:	da ¹¹ (-pho ³³)
Kayaw:	tɔ ³³
Sgaw:	-
Pwo:	-

Note: This etymon has been kept in Northern and Central Karen but has been lost in Southern

Karen. A shared innovation in Sgaw and Pwo for ‘fish’ is ‘meat (animal) -offspring’, i.e. ja^{31~} pho³³, ja¹¹ pho³³ (N. Sgaw), ja⁴⁵, phu⁵⁵ (S. Sgaw); ja³³ phu³³ (N. Pwo), ja⁵⁵ phu⁵⁵ (S. Pwo).

28.FLEA *kli^A, *kli^{2D} (TB *s-liy, *s-ləy)

Pa-O: khli³¹ (N.), - (S.)

Kayan: khli²⁴⁵

Kayah: kla⁵⁵

Bwe: kle³³

Kayaw: kle³³

Sgaw: kli⁵⁵ (N., S.)

Pwo: khli³⁵ (N.), khli⁵³ (S.)

Note: The tones of Northern Karen (Pa-O) and Southern Karen (Sgaw, Pwo) suggest PK *A while the ones of Central Karen (Kayan, Kayah, Bwe, Kayaw) suggest PK *D.

29.FOX, WOLF *thwi^B mi^A

Pa-O: thwi⁵⁵ mi³³ (N.), thwi³³ mi⁵³ (S.)

Kayan: thwi¹¹ mi³³

Kayah: thwi¹¹ mi¹¹

Bwe: -

Kayaw: thi¹¹ mi³³

Sgaw: thi^{31~} mi³³, chwi¹¹ mi³³ (N.), thwi⁴⁵, mi³³ (S.)

Pwo: - (N.), thwi⁵⁵ mɛi³¹ (S.)

Note: This etymon is a compound meaning ‘wild dog’: thwi or chwi (B1-2) ‘dog’ and mi (A3) ‘wild’. See no. 23.

30.FROG *?de^B

Pa-O: de⁵⁵ (N.), de³³ (S.)

Kayan: dai¹¹

Kayah: di¹¹

Bwe: di³³

Kayaw: di³³

Sgaw: de^{31~}, de²²¹ (N.), de⁴⁵ (S.)

Pwo: di³³ (N.), di⁵⁵ (S.)

Note: See no. 69.

31.GRASSHOPPER *?dwe^B

Pa-O: dwe⁵⁵ (N.), dwe³³ (S.)

Kayan: dwe¹¹

Kayah: -

Bwe:	dɛ ³³
Kayaw:	dɛ ¹¹
Sgaw:	dwe ^{31~} , dwe ²²¹ (N.), dwe ^{45'} (S.)
Pwo:	thwe ¹¹ (N.), thwe ³³ (S.)

Note: There are some innovations in Pwo, i.e. PK *ʔd > *d > th and *B > B3 while *B > B12 in the other Karenic languages.

32.HAWK *lek^P

Pa-O:	le ²⁴⁵ (N.), lek ⁴⁵ (S.)
Kayan:	li ²²¹
Kayah:	la ³³
Bwe:	le ¹¹
Kayaw:	le ³³
Sgaw:	li ²²¹ , li ²⁴⁵ (N.), lai ¹¹ (S.)
Pwo:	lai ²²¹ (N.), lai ²⁴⁵ (S.)

33.HORNET *phrim^A, *phrin^A

Pa-O:	phrim ³¹ (N.), phrin ³¹ (S.)
Kayan:	phri ⁵³
Kayah:	phli ³³
Bwe:	phlu ⁵⁵ 'wasp'
Kayaw:	phri ⁵⁵
Sgaw:	phlə ³³ , phlə ⁵⁵ (N.), phli ⁵⁵ (S.)
Pwo:	phlã ³⁵ (N.), phlǎi ⁵³ (S.)

Note: In this etymon, *phr- remains phr- in Northern Karen (Pa-O) but becomes phl- in Southern Karen (Sgaw and Pwo). With regards to Central Karen, both clusters, phr- and phl- can be found.

34.HORSE *k-se()^T

Pa-O:	se ³¹ (N., S.)
Kayan:	θi ²⁴⁵
Kayah:	si ⁵⁵
Bwe:	θə-rɪ ³³ (?)
Kayaw:	si ³³ ri ³³ (?)
Sgaw:	kə ³³ se ¹¹ , ka ²²¹ θe ¹¹ (N.), kə ¹¹ se ^{45'} (S.)
Pwo:	ka ²²¹ si ³³ (N.), ke ¹¹ θi ⁵⁵ (S.)

Note: This etymon is an Austroasiatic loanword. The reconstructed form for 'horse' in Proto-Monic is *kseh (Diffloth, 1984). It is worth pointing out that the Modern Karenic languages have different tones, i.e. tone A in Northern Karen (Pa-O), tone D in Central Karen (Kayan, Kayah, Bwe,

Kayaw) but tone B in Southern Karen (Sgaw, Pwo). This fact suggests the idea that *-h was dropped in NK and SK but became -ʔ in CK.

35. LEECH (land ~) *swa^{2D}

Pa-O:	wa ²²¹ (N.), wa ²²¹ (S.)
Kayan:	θu ²⁴⁵
Kayah:	swa ⁵⁵
Bwe:	-
Kayaw:	su ³³
Sgaw:	su ²⁴⁵ , θu ²⁴⁵ (N.), sɔu ²²¹ (S.)
Pwo:	wa ²²¹ (N.), wa ²⁴⁵ , βwa ²⁴⁵ (S.)

Note: Pa-O, Kayan, Kayah and Sgaw have tone D1-2 which suggests a voiceless onset, while Pwo has tone D3 which indicates a voiced one, so *sw- seems to be a good solution for both ways of tonal development, i.e. *D > *D12 due to the first voiceless element *s- and *D > D3 due to the second element *-w- of the cluster onset which is a voiced sound.

36. LEECH (water ~) *k/s-lej^A

Pa-O:	leu ³³ (N.), ljeu ⁵³ (S.)
Kayan:	-
Kayah:	-
Bwe:	gə ³³ li ³³
Kayaw:	su ¹¹ li ³³
Sgaw:	sə ¹¹ li ³³ , θa ³³ li ³³ , θə ¹¹ li ³³ (N.), li ³³ (S.)
Pwo:	lei ⁵⁵ (N.), lei ³¹ , lei ¹¹ (S.)

Note: Pa-O seems to have a strange rhyme.

37. LEMUR (flying ~) *p/ble^{2D}

Pa-O:	phli ²²¹ (N.), - (S.)
Kayan:	-
Kayah:	pla ³³
Bwe:	bli ³³
Kayaw:	ple ³³
Sgaw:	phli ²⁴⁵ , phli ²²¹ (N.), plai ¹¹ (S.)
Pwo:	phlai ²²¹ (N.), phlai ²⁴⁵ (S.)

Note: Tone D12 in N. Pa-O, Bwe and some N. Sgaw varieties suggests PK *pl- but tone D3 in Kayah, both N. and S. Pwo and also S. Sgaw indicates *bl-. It is noticeable that both *pl- and *bl- become phl- in Modern Karen while *phl- is likely to remain phl-.

38. LORIS *k-ch()N^A

Pa-O:	- (N.), - (S.)
Kayan:	chə ⁵³
Kayah:	chɔ ³³
Bwe:	-
Kayaw:	chə ⁵⁵
Sgaw:	kə ¹¹ che ³³ (N.), chi ⁵⁵ (S.)
Pwo:	chāi ³⁵ (N.), chēi ⁵³ , kə ¹¹ chēi ⁵³ (S.)

Note: The rhyme of this etymon is problematical, due to the lack of data from Pa-O.

39. LOUSE, INSECT *gra^B

Pa-O:	sa ⁵³ (N.), ɕa ⁵⁵ (S.)
Kayan:	ca ¹¹
Kayah:	khre ¹¹
Bwe:	-
Kayaw:	ca ¹¹
Sgaw:	xa ¹¹ (N.), xa ³¹ (S.)
Pwo:	xa ¹¹ (N.), xa ³³ (S.)

Note: In Modern Karen, this etymon never occurs alone but always in compounds, such as chō⁵³ xa³³ ‘chicken louse’ (S.Pwo), ta¹¹ pho³³ xa¹¹ ‘insect’ (N. Sgaw) and so forth.

40. LOUSE (head ~) *swiX^B (TB *sar, śar)

Pa-O:	si ⁵⁵ (N.), si ³³ (S.)
Kayan:	θi ¹¹
Kayah:	so ¹¹
Bwe:	θo ¹¹
Kayaw:	si ¹¹
Sgaw:	su ^{31~} , su ¹¹ (N.), su ⁴⁵ (S.)
Pwo:	sã ³³ (N.), θãi ⁵⁵ (S.)

Note: Similar to the etymon ‘chicken’ (no. 15), the reconstructed final of the etymon ‘head louse’ is the dummy *-X. This PK *-X became *-N and then -Ṽ∅ in Pwo Karen while it was dropped in the other Karenic languages. The second element of the cluster onset (-w-) causes the lip rounding and backness of the vowels in Kayah, Bwe, Sgaw and N. Pwo.

41. MAGGOT *hl/?loŋ^B

Pa-O:	loŋ ⁵⁵ (N.), loŋ ³³ (S.)
Kayan:	lo ¹¹
Kayah:	lo ¹¹
Bwe:	lo ³³

Kayaw: lə¹¹
 Sgaw: lə^{31~}, lə¹¹ (N.), lɛ⁴⁵ (S.)
 Pwo: lãu³³ (N.), lōu⁵⁵ (S.)

Note: With regard to the *B column, there is no split as in Kayan, Kayah, Bwe, Kayaw and some Sgaw varieties, or a split between B12 and B3 as in Pa-O and Pwo. Due to the pattern of tone split in the *A column of Pwo Karen, i.e. between A1 and A23, three types of lateral sounds were reconstructed: voiceless (*hl), preglottalised (*ʔl) and voiced (*l). As for the split pattern of the *B tone, it is impossible to tell whether the onset of this etymon is *hl- or *ʔl.

42. MILLIPEDE *k/s-waj^A, *k/s-waj^B

Pa-O: cɔ⁵⁵ wɛ³³ (N.), cɔ¹¹ wɛ⁵³ (S.)
 Kayan: θa²²¹ kə¹¹ wi³³
 Kayah: si⁵⁵ kɔ⁵⁵ wi¹¹
 Bwe: -
 Kayaw: (te¹¹) we³³
 Sgaw: si²⁴⁵ wɔ¹¹ (de³³) (N.), si⁵⁵ wa³¹ (de⁵⁵) (S.)
 Pwo: wai¹¹ (N.), wai³¹, wai¹¹, βai¹¹ (S.)

Note: Pa-O, Central Karen and S. Pwo have tone A3 while Sgaw and N.Pwo have tone B3.

43. MOLE *(jow^B) wi^A (TB *bwiy, *bwəy)

Pa-O: (ju⁵³) wi³³ (N.), (ju⁵⁵) wi⁵³ (S.)
 Kayan: -
 Kayah: (jo¹¹) wi¹¹
 Bwe: wi³³
 Kayaw: (ju¹¹) wi³³
 Sgaw: wi³³ (N.), wi³³ (S.)
 Pwo: wei⁵⁵ (N.), wei³¹, wei¹¹, βei¹¹ (S.)

Note: To the Karen, a ‘mole’ is a kind of rat. See also no. 2 ‘bamboo rat’ and no. 47 ‘mouse, rat’. The Kayan use ju¹¹ ta¹¹ ha²⁴⁵ which is not a cognate word.

44. MONITOR LIZARD (land ~) *kho^{2D}

Pa-O: - (N.), - (S.)
 Kayan: (khwi¹¹ re³³) khɔ²⁴⁵
 Kayah: khwa⁵⁵
 Bwe: -
 Kayaw: (to³³) ko³³
 Sgaw: (tə¹¹) khu²⁴⁵ (N.), khɔu²²¹ (S.)
 Pwo: khau²⁴⁵ (N.), khɔu²²¹ (S.)

Note: The highland Pa-O (N. Pa-O) use $\text{lɛm}^{53} \sim \text{lɛn}^{53}$ and the lowland Pa-O (S. Pa-O) use lɛm^{33} which is a Tai loan. Unlike the other Karenic languages, Kayaw has unaspirated onset.

45. MONITOR LIZARD (water ~) * ~ kre^A

Pa-O:	- (N.), - (S.)
Kayan:	(khwi ¹¹) re ³³
Kayah:	(ta ¹¹ khwa ⁵⁵ ta ¹¹) re ³³
Bwe:	tre ⁵⁵
Kayaw:	(te ⁵⁵) re ⁵⁵
Sgaw:	kre ²⁴⁵ , kə ¹¹ re ⁵⁵ (N.), re ⁵⁵ (S.)
Pwo:	- (N.), yei ³¹ , yei ¹¹ (S.)

Note: Some varieties of N. Sgaw have tone D while most of the Karenic languages have tone A. In Bwe, *kr- becomes tr- and the first element of the cluster kr- is dropped (*kr- > r-) in Kayan, Kayah, Kayaw, Pwo and S. Sgaw.

46. MONKEY *k-jo^{2D}

Pa-O:	jo ²⁴⁵ (N.), ju ²⁴⁵ (S.)
Kayan:	jɔ ²²¹
Kayah:	jɔ ³³
Bwe:	jo ¹¹
Kayaw:	jə ³³
Sgaw:	-
Pwo:	-

Note: There are lexical innovations in Southern Karen, i.e. $\text{mɔ}^{11} \text{li}^{245}$, $\text{pha}^{35} \text{lai}^{221}$ and $\text{chə}^{55} \text{ʔɔu}^{31}$ in N. Sgaw, N. Pwo and S. Pwo, respectively, for ‘monkey’. Probably, the etymon *k-jo^{2D} is related to the word ‘gibbon’ in Sgaw and Pwo: $\text{kə}^{11} \text{ju}^{33}$, $\text{zu}^{33} \text{pɣa}^{11}$ (N. Sgaw), $\text{kə}^{11} \text{ju}^{33} \text{pha}^{31}$ (S. Sgaw), $\text{ka}^{221} \text{jɿ}^{33} \text{pha}^{33}$ (N. Pwo) and $\text{kə}^{33} \text{jɿ}^{53} \text{pha}^{33}$ (S. Pwo). In N. Sgaw, ju^{33} (A) means ‘to swing’ and pɣa^{11} (B) means ‘forest’; therefore, the literal meaning of the word ‘gibbon’ is ‘animal (*k-) swinging in the forest’.

47. MOUSE, RAT *jow^B (TB *b-yuw, *b-yəw)

Pa-O:	ju ⁵³ (N.), ju ⁵⁵ (S.)
Kayan:	ju ¹¹
Kayah:	jo ¹¹
Bwe:	ju ¹¹
Kayaw:	ju ¹¹
Sgaw:	jɿ ¹¹ , zɿ ¹¹ (N.), jɿ ³¹ (S.)
Pwo:	jou ¹¹ (N.), jou ³³ (S.)

Note: See also no. 2 ‘bamboo rat’ and no. 42 ‘mole’.

48.OX *bo^B

Pa-O: pho⁵³ (N.), po⁵⁵ (S.)

Kayan: pau¹¹

Kayah: pu¹¹

Bwe: bo³³

Kayaw: pu¹¹

Sgaw: -

Pwo: -

Note: Some groups of Pwo people call an ox “something having horns”, e.g. chə⁵⁵ ni⁵³ (S. Pwo). In N. Sgaw, ‘ox’ is ta¹¹ tɔ²⁴⁵ or klɔ¹¹. The word klɔ¹¹ could be a loanword from Mon, i.e. khlɔw (< Proto-Mon *klɛɔ̃ (Diffloth, 1984)).

49. PANGOLIN, ANTEATER *jo^A

Pa-O: ju³³ (N.), - (S.)

Kayan: jau³³

Kayah: ju¹¹, ju³¹

Bwe: jɔ³³ (-θo³³)

Kayaw: ju³³

Sgaw: jo³³ (hɔ³¹, hɔ¹¹), zo³³ (ho¹¹) (N.), ju³³ (hɔ²⁴⁵) (S.)

Pwo: - (N.), ji³¹, ji¹¹ (S.)

50. PARROT *(tho^B) ki^B

Pa-O: ki⁵⁵ (N.), - (S.)

Kayan: khi¹¹

Kayah: khwi¹¹ (?)

Bwe: k(h)i³³

Kayaw: ki¹¹, khi¹¹

Sgaw: ki²²¹ (N.), ki⁴⁵⁷ (S.)

Pwo: kei³³ (N.), kei⁵⁵ (S.)

Note: This etymon should be ki^{31~} or ki¹¹ (tone B12) instead of ki²²¹ (tone D3) as in N. Sgaw.

51. PEACOCK *(tho^B) bra^{2D}

Pa-O: - (N.), - (S.)

Kayan: pra²²¹

Kayah: phre³³

Bwe: (tho³³⁻) ba¹¹

Kayaw: prɔ³³

Sgaw: bya²²¹, phya²²¹, phra²²¹, pwa²²¹ (N.), pya¹¹ (S.)

Pwo: sja²²¹ (N.), chja²²¹ (S.)

52.PHEASANT *(tho^B) re^{2D}

Pa-O: - (N.), - (S.)

Kayan: -

Kayah: ra³³

Bwe: -

Kayaw: re³³

Sgaw: yi²²¹ (N.), yai¹¹ (S.)

Pwo: yai²²¹ (N.), yai²⁴⁵ (S.)

Note: It is chja³³ tham³¹ in S. Pa-O. chja³³, the first part of the compound, is in fact chja³¹ ‘chicken’ (31 > 33). This suggests that Southern Pa-O people view ‘pheasants’ as ‘chickens’ not ‘birds’.

53.PIG *tho^{2D}

Pa-O: tho²²¹ (N., S.)

Kayan: thau²⁴⁵

Kayah: the⁵⁵

Bwe: tho³³

Kayaw: tho³³

Sgaw: tho²⁴⁵ (N.), tho²²¹ (S.)

Pwo: tho²⁴⁵ (N.), thu²²¹ (S.)

Note: See also no. 9 ‘wild boar’.

54.PORCUPINE (big kind) *sun^B

Pa-O: sun⁵⁵ (N.), sum³³, sun³³ (S.)

Kayan: θwan¹¹

Kayah: si¹¹

Bwe: θu³³

Kayaw: su¹¹

Sgaw: - (N.), su⁴⁵ (S.)

Pwo: - (N.), - (S.)

Note: The lexical innovations in N. Sgaw, N. Pwo and S. Pwo are pɔ³³ dɔ²⁴⁵, pa²²¹ do²⁴⁵ and chə³³ yau²⁴⁵ chū⁵⁵ ‘something shaking off its hair (spine)’, respectively.

55.PORCUPINE (small kind) *s-?ba^A

Pa-O: - (N.), - (S.)

Kayan: bi⁵³ (?)

Kayah: se³³ be³³

Bwe: -
 Kayaw: sa⁵⁵ ba⁵⁵
 Sgaw: ba³³ (N.), ba⁵⁵ (S.)
 Pwo: - (N.), θə⁵⁵ ba³¹, θə⁵⁵ ba¹¹ (S.)

Note: Kayan has an irregular vowel.

56.QUAIL *(tho^B) hr/?rwi^T (?)

Pa-O: ri²⁴⁵ (N.)
 Kayan: rwi²⁴⁵
 Kayah: rwi⁵⁵
 Bwe: -
 Kayaw: ri³³
 Sgaw: pə¹¹ wi³³ (N.), pə¹¹ wi⁵⁵ (S.)
 Pwo: phu³³ wei³³ (N.), wei⁵⁵ (S.)

Note: The reconstruction of the tone of this etymon is problematical, due to tonal variation, i.e. tone D in Northern and Central Karen, tone A in Sgaw but tone B in Pwo.

57.RABBIT, HARE *p-?dε^A

Pa-O: - (N.), - (S.)
 Kayan: dε⁵³
 Kayah: dε³³
 Bwe: pə³³ dε³³
 Kayaw: dε⁵⁵
 Sgaw: pə¹¹ dε³³, pə¹¹ dε⁵⁵ (N.), pə¹¹ thε²²¹ (S.)
 Pwo: pa³³ dε⁵⁵, pə¹¹ de⁵³ (N.), pə³¹ dε³¹, pə³³ thε²²¹ (S.)

Note: In some S. Sgaw and S. Pwo varieties, *?d > *d > th- and tone *A > D.

58.SEROW, MOUNTAIN GOAT *jaj^A (TB *kye.l, *kyi[.l])

Pa-O: jai³³ (N.), - (S.)
 Kayan: jai³³
 Kayah: je¹¹
 Bwe: ji³³
 Kayaw: ji³³
 Sgaw: - (N.), - (S.)
 Pwo: - (N.), - (S.)

Note: There is a lexical innovation in Southern Karen: chə³³ pha²²¹ (S. Pwo) and ta³³ pha²⁴⁵ (N. Sgaw).

59.SHEEP *so^A, *so^B

Pa-O:	sə ⁵⁵ (N.), so ³³ (S.)
Kayan:	θɔ ³³
Kayah:	-
Bwe:	θu ⁵⁵
Kayaw:	so ⁵⁵
Sgaw:	so ³³ , so ⁵⁵ (N.), su ⁵⁵ (S.)
Pwo:	- (N.), θu ⁵⁵ (S.)

Note: This etymon has tone A in Kayan, Bwe, Kayaw and Sgaw but tone B in Pa-O and Pwo.

60.SKINK *blɛ^{2D}

Pa-O:	plɛ ²⁴⁵ (N.), plɛ ²⁴⁵ (S.)
Kayan:	plɛ ²²¹
Kayah:	pla ³³
Bwe:	bli ¹¹ (ca ⁵⁵)
Kayaw:	plɛ ³³
Sgaw:	plɛ ²²¹ , phlɛ ⁵³ (N.), plɛ ¹¹ (S.)
Pwo:	phlɛ ²²¹ (N.), phlɛ ²⁴⁵ (S.)

61.SNAIL (land ~) *khlo^B

Pa-O:	- (N.), - (S.)
Kayan:	khlo ⁵³ (?)
Kayah:	-
Bwe:	khlo ³³
Kayaw:	-
Sgaw:	khlo ^{31~} , khlo ¹¹ (N.), khlu ^{45p} (S.)
Pwo:	khlu ³³ (N.), khlu ⁵⁵ (S.)

Note: In Kayan, this etymon has tone A instead of tone B like the rest. Also, the vowel should be au not o. Language contact could be a cause of vowel and tone irregularity in Kayan. See also no. 62 'water snail'

62.SNAIL (water ~) *s-ŋwi^B

Pa-O:	ŋwi ⁵⁵ (N.), ŋwi ³³ (S.)
Kayan:	ŋwi ¹¹
Kayah:	-
Bwe:	θə ⁵⁵ mi ³³
Kayaw:	si ¹¹ mi ¹¹
Sgaw:	- (N.), - (S.)
Pwo:	- (N.), - (S.)

Note: This etymon has not been kept in Southern Karen. The word khlu (B12) is used for both ‘water snail’ and ‘land snail’ with different modifiers, for example, khlu⁵⁵ mĩ⁵⁵ ‘water snail’ and khlu⁵⁵ klai²⁴⁵ ‘land snail’ in S. Pwo. See also no. 60 ‘land snail’.

63.SNAKE *row^B (TB *b-ru.l)

Pa-O:	ru ⁵³ (N.), ru ⁵⁵ (S.)
Kayan:	rəu ¹¹ (?)
Kayah:	ro ¹¹ , ru ³¹
Bwe:	Ru ³³
Kayaw:	ru ¹¹
Sgaw:	ɣĩ ¹¹ (N.), ɣĩ ³¹ (S.)
Pwo:	ɣou ¹¹ , ɣou ³¹ (N.), βou ³³ , ɣũ ⁵⁵ (S.)

Note: Mostly, the PK final nasals were reconstructed from those that have been retained in Pa-O. This etymon in Pa-O has the CVØ syllable structure or open syllable. However, it is quite unusual that in some S. Sgaw and S. Pwo varieties, the word ‘snake’ has a nasalised vowel ɨ̃ (S. Sgaw) or the nasal vowel ũ (S. Pwo). Perhaps, the final *-w became nasal (*-N) and then a nasalised vowel (ɨ̃).

64.SPIDER *gaŋ^A

Pa-O:	(kuŋ ³³) kaŋ ³³ (N.), (jɔŋ ³¹) kaŋ ⁵³ (S.)
Kayan:	kaŋ ³³
Kayah:	-
Bwe:	ga ¹¹ - gu ¹¹
Kayaw:	kɔ ³³
Sgaw:	- (N.), - (S.)
Pwo:	pu ¹¹ khẽ ⁵⁵ , phu ⁵⁵ khã ⁵³ (N.), khɔ̃ ¹¹ , khɔ̃ ³¹ (S.)

Note: The etymon *gaŋ^A has been retained in almost all of the Karenic languages, except in Sgaw, ‘spider’ is an innovated word, i.e. kə¹¹ pɔ³³.

65.SQUIRREL *hl/?li^B, *hl/?li^D

Pa-O:	li ⁵⁵ (N.), li ³³ (S.)
Kayan:	-
Kayah:	-
Bwe:	li ¹¹ (?)
Kayaw:	-
Sgaw:	li ²⁴⁵ , li ²⁴⁵ lu ¹¹ (N.), li ⁴⁵ (S.)

Pwo: lei³³ (N.), lei⁵⁵ (S.)

Note: N. Sgaw has tone D12 and Bwe has tone D3 (suggesting *l-), while the rest have tone B12.

Tone B12 and tone D12 indicate a voiceless onset, *hl- or *ʔl.

66. TERMITE (winged ~) *bi^B

Pa-O: phi⁵³ (N.), pi⁵⁵ (S.)

Kayan: pi¹¹

Kayah: pi¹¹

Bwe: pə ʔi³³

Kayaw: pi¹¹ ʔi¹¹

Sgaw: pi¹¹ (N.), pi³¹ (S.)

Pwo: phai³³, phe³³ (N.), phe³¹ (S.)

Note: The B3 tone in Pa-O, S. Sgaw, some N. Sgaw varieties and S. Pwo indicate that the onset of this etymon should be *b-. Pwo vowels are irregular. S. Pwo has tone A23, while N. Pwo has tone B12. The reduction of the original compound into a monosyllabic word could have been the cause of these irregularities.

67. TICK *khej^B

Pa-O: ki⁵⁵ (N.), - (S.)

Kayan: khi¹¹

Kayah: khə¹¹

Bwe: khi¹¹

Kayaw: khi¹¹

Sgaw: khi^{31~}, khi¹¹ (N.), khi^{45'} (S.)

Pwo: khe³³ (N.), khe⁵⁵ (S.)

68. TIGER *khe^A (TB *d-key, *d-kəy, *k-key)

Pa-O: ke³¹ (N., S.)

Kayan: khai⁵³

Kayah: khi³³

Bwe: khi⁵⁵

Kayaw: khi⁵⁵

Sgaw: - (N.), - (S.)

Pwo: khi³⁵ (N.), khi⁵³ (S.)

Note: The word meaning 'tiger' in Sgaw Karen is bɔ^{ʔ21} so^{ʔ21}, bɔ^{ʔ21} θo¹¹, bɔ^{ʔ21} so⁵³, bɔ^{ʔ21} sə^{ʔ21} ʔo^{ʔ21} or bɔ¹¹ so^{ʔ45} ʔo^{ʔ21} depending upon each variety; however, khe³³ (A) is found in the compound meaning 'lion', i.e. khe³³ ji¹¹.

69. TOAD *(ʔde^B) sow^B

Pa-O:	de ⁵⁵ su ⁵⁵ (N.), de ³³ su ³³ (S.)
Kayan:	dai ¹¹ θu ³³
Kayah:	di ¹¹ so ¹¹
Bwe:	di ³³ θu ³³
Kayaw:	di ¹¹ su ¹¹
Sgaw:	de ^{31~} si ^{31~} (N.), de ²²¹ si ¹¹ (S.)
Pwo:	di ³³ sou ³³ , di ³³ θu ³³ (N.), di ⁵⁵ sou ⁵⁵ , di ⁵⁵ θou ⁵⁵ (S.)

70. TORTOISE *khli^{2D}

Pa-O:	kle ²²¹ (N.), kli ²²¹ (S.)
Kayan:	khli ²⁴⁵
Kayah:	kli ⁵⁵
Bwe:	khli ³³
Kayaw:	khli ³³
Sgaw:	khli ²⁴⁵ (N.), khlai ²²¹ (S.)
Pwo:	khlai ²⁴⁵ (N.), khlai ²²¹ , khlai ²³¹ (S.)

71. VULTURE *hl/?laŋ^A k-da^{2D}, *hl/?laŋ^B k-da^{2D}

Pa-O:	leŋ ⁵⁵ ta ²⁴⁵ (N.), ta ³³ loŋ ³³ ta ²⁴⁵ (S.)
Kayan:	-
Kayah:	le ¹¹ ta ³³
Bwe:	lə ³³ da ⁵⁵ (?)
Kayaw:	la ¹¹ ta ³³
Sgaw:	lɔ ³³ ka ²²¹ ta ²²¹ , lɔ ³³ kə ¹¹ ta ²²¹ (N.), lɔ ³³ kə ¹¹ ta ¹¹ (S.)
Pwo:	lɛ̃ ³⁵ ka ²²¹ tha ²²¹ (N.), lɔ̃ ⁵³ ka ²²¹ tha ²²¹ (S.)

Note: In some N. Sgaw varieties, vultures are called “tho^{31~} ta¹¹ ?i^{31~}, tho¹¹ ta¹¹ ?i²⁴⁵ or tho¹¹ ta²²¹ ?i²²¹”, literally this means ‘rotten-thing birds’. This could be an Austroasiatic loanword. In Praok-Wa, the word meaning ‘vulture’ is (sim) klaŋ cu² (from the author’s fieldnotes collected in December, 1995).

72. WASP *(dəŋ^B) ?de^A

Pa-O:	lak ⁴⁵ ka ²²¹ <u>de</u> ³¹ (N.), - (S.)
Kayan:	dau ²⁴⁵ dai ⁵³
Kayah:	di ³³
Bwe:	-
Kayaw:	di ⁵⁵
Sgaw:	tə ¹¹ de ³³ , tə ¹¹ de ⁵⁵ (N.), tɪ ³¹ de ⁵⁵ (S.)
Pwo:	thã ¹¹ di ⁵⁵ , thã̃ ¹¹ di ⁵³ (N.), thã̃ ³³ di ³¹ , thã̃ ³³ di ¹¹ (S.)

Note: To the Sgaw and Pwo, ‘wasp’ is a sub-species of ‘ant’. See also no. 1 ‘ant’.

73.WEEVIL *roŋ^B

Pa-O:	roŋ ⁵³ (N.), roŋ ⁵⁵ (S.)
Kayan:	ro ¹¹
Kayah:	rɔ ¹¹
Bwe:	-
Kayaw:	rə ¹¹
Sgaw:	ɣə ¹¹ (N.), ɣi ³¹ (S.)
Pwo:	ɣãu ¹¹ (N.), βõu ³³ , ɣõ ³³ (S.)

Conclusion and Discussion

Among the seventy-three etyma, twenty-one etyma, i.e. no. 1 ‘ant’, no.7 ‘bee’ (*Apis dorsata*), no. 8 ‘bird’, no. 10 ‘buffalo’, no. 14 ‘chameleon’, no. 17 ‘crab’, no. 23 ‘dog’, no.24 ‘dove’, ‘no. 26 ‘elephant’, no. 28 ‘flea’, no. 30 ‘frog’, no.32 ‘hawk’, no. 47 ‘rat’, no. 49 ‘pangolin’, no. 51 ‘peacock’, no. 53 ‘pig’, no. 57 ‘rabbit’, no. 60 ‘skink’, no. 67 ‘tick’, no. 69 ‘toad’ and no. 70 ‘tortoise’, are not problematical because of the availability of data for reconstruction from all of the languages selected as representatives of the three major branches of the Karenic languages. In addition, the Karen seemed to be familiar with these animals and could quickly recognise them when the pictures were shown to them during the interviews. It is also possible that some of the etyma are loanwords from Austroasiatic languages, especially Mon and Wa; for example, no. 15 ‘chicken’, no. 26 ‘elephant’, no. 34 ‘horse’ and no. 71 ‘vulture’. The names of some aggressive wild animals, such as no. 4 ‘bear’, no. 68 ‘tiger’ etc., have become taboo words and have been replaced by euphemisms as in Sgaw Karen. In the modernised mountainous areas of Thailand, I noticed that children remember fewer and fewer animal names in their own languages, especially non-domesticated animals, due to compulsory education with Thai as the medium of instruction, good transportation, the mass media and tourism. Sooner or later a similar phenomenon will occur in Myanmar. In the near future, only a few Karen animal names will be in the lexicon. A decrease of Karen words with an increase of Thai loanwords for animal names could provide a good case for studying “language change in progress” or “change in apparent time”, with regard to vocabulary loss and morphological change as well as sound change.

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Table 1 Proto-Karen onsets

3Proto-Karen		N. Pa-O	S. Pa-O	Kayan	Kayah	Bwe	Kayaw	N. Sgaw	S. Sgaw	N. Pwo	S. Pwo	Gloss
*ph-	*phe ^A	phe ³¹ (A12)	phe ³¹ (A12)	phai ⁵³ (A12)	phi ³³ (A12)	--	phi ⁵⁵ (A12)	phe ³³ (A)	phe ⁵⁵ (A12)	phi ³⁵ (A1)	phi ⁵³ (A1)	‘chaff, bran’
*th-	*thej ^A	thi ³¹ (A12)	thi ³¹ (A12)	thi ⁵³ (A12)	thə ³³ (A12)	chi ⁵⁵ (A12)	thi ⁵⁵ (A12)	thi ³³ (A)	thi ⁵⁵ (A12)	thei ³⁵ (A1)	thei ⁵³ (A1)	‘water’
*ch-	*cha ^A	cha ³¹ (A12)	cha ³¹ (A12)	cha ⁵³ (A12)	che ³³ (A12)	ʃe ⁵⁵ (A12)	cha ⁵⁵ (A12)	cha ³³ (A)	cha ⁵⁵ (A12)	cha ³⁵ (A1)	cha ⁵³ (A1)	‘ill, painful’
*kh-	*kha ^B	kha ⁵⁵ (B12)	kha ³³ (B12)	kha ¹¹ (B)	khe ¹¹ (B)	khe ³³ (B)	kha ¹¹ (B)	kha ^{31~} (B12)	kha ^{45'} (B12)	kha ³³ (B12)	kha ⁵⁵ (B12)	‘bitter’
*hm-	*hma ^A	ma ³¹ (A12)	ma ³¹ (A12)	ma ⁵³ (A12)	me ³³ (A12)	me ⁵⁵ (A12)	ma ⁵⁵ (A12)	ma ³³ (A)	ma ⁵⁵ (A12)	ma ³⁵ (A1)	ma ⁵³ (A1)	‘wife’
*hn-	*k-hne ^A	ne ³¹ (A12)	ne ³¹ (A12)	nai ⁵³ (A12)	ni ³³ (A12)	(gə) ni ³³ (A3)	ni ⁵⁵ (A12)	kə ¹¹ ne ³³ (A)	ne ⁵⁵ (A12)	ni ³⁵ (A1)	ni ⁵³ (A1)	‘bee (Apis dorsata)’
*hɲ-	*hɲaw ^A	jo ³¹ (A12)	jo ³¹ (A12)	jau ⁵³ (A12)	ju ³³ (A12)	jo ⁵⁵ (A12)	ju ⁵⁵ (A12)	ɲo ³³ (A)	ɲo ⁵⁵ (A12)	jo ³⁵ (A1)	jo ⁵³ (A1)	‘easy’
*hɲ/ʔɲ-	*hɲa ^A	ɲa ³¹ (A12)	ɲa ³¹ (A12)	ɲa ⁵³ (A12)	ɲe ³³ (A12)	--	--	ɲa ³³ (A)	ɲa ⁵⁵ (A12)	--	--	‘front’
*hw-	*hwa ^B	wa ⁵⁵ (B12)	wa ³³ (B12)	hwa ¹¹ (B)	we ¹¹ (B)	hu ³³ (B)	--	wa ^{31~} (B12)	wa ^{45'} (B12)	wa ³³ (B12)	wa ⁵⁵ (B12)	‘bamboo’
*hr/ʔr-	*hrun ^A	rən ³¹ (A12)	ruən ³¹ (A12)	rwan ⁵³ (A12)	ri ³³ (A12)	hu ⁵⁵ (A12)	ru ⁵⁵ (A12)	--	--	--	--	‘silver, money’
*hl/ʔl-	*hla ^B	la ⁵⁵ (B12)	la ³³ (B12)	la ¹¹ (B)	le ¹¹ (B)	le ³³ (B)	la ¹¹ (B)	la ^{31~} (B12)	la ^{45'} (B12)	la ³³ (B12)	la ⁵⁵ (B12)	‘leaf’
*s-	*sej ^A	si ³¹ (A12)	si ³¹ (A12)	θi ⁵³ (A12)	sə ³³ (A12)	θi ⁵⁵ (A12)	si ⁵⁵ (A12)	si ³³ (A)	si ⁵⁵ (A12)	sei ³⁵ (A1)	θei ⁵³ (A1)	‘dead, to die’
*ç	*ça ^B	cha ⁵⁵ (B12)	cha ³³ (B12)	cha ¹¹ (B)	che ¹¹ (B)	ʃe ³³ (B)	cha ¹¹ (B)	cha ^{31~} (B12)	cha ^{45'} (B12)	sja ³³ (B12)	çha ⁵⁵ (B12)	‘star’
*h-	* ~ ha ^{A~B}	~ ha ³¹ (A12)	~ ha ³³ (A12)	~ ha ¹¹ (B)	~ he ³³ (A12)	~ he ³³ (B)	~ ha ⁵⁵ (A12)	ha ^{33~} (A)	~ ha ⁵⁵ (A12)	--	ya ⁵⁵ (B12)	‘last night, yesterday’
*p-	*pə ^B	pə ⁵⁵ (B12)	pə ³³ (B12)	pəi ¹¹ (B)	po ¹¹ (B)	bo ³³ (B)	pə ¹¹ (B)	--	--	--	--	‘to look after (~ things)’
*t-	*tə ^B	tə ⁵⁵ (B12)	tə ³³ (B12)	təi ¹¹ (B)	to ¹¹ (B)	do ³³ (B)	tə ¹¹ (B)	--	--	--	--	‘to arrive’
*c-	*cə ^B	cau ⁵⁵ (B12)	cau ³³ (B12)	cau ¹¹ (B)	co ¹¹ (B)	cə ³³ (B)	co ¹¹ (B)	cə ^{31~} (B12)	cə ^{45'} (B12)	cə ³³ (B12)	co ⁵⁵ (B12)	‘wet’
*k-	*ka ^B	ka ⁵⁵ (B12)	ka ³³ (B12)	ka ¹¹ (B)	khe ¹¹ (B)	khe ³³ (B)	kha ¹¹ (B)	kha ^{31~} (B12)	kha ^{45'} (B12)	kha ³³ (B12)	kha ⁵⁵ (B12)	‘chin’
*ʔ-	*ʔe ^B	ʔe ⁵⁵ (B12)	ʔe ³³ (B12)	ʔai ¹¹ (B)	ʔi ¹¹ (B)	ri ¹¹ (D3?)	ʔi ¹¹ (B)	ʔe ^{31~} (B12)	ʔe ^{45'} (B12)	ʔi ³³ (B12)	ʔi ⁵⁵ (B12)	‘dung, excrement’
*ʔb-	*ʔbaɲ ^B	baɲ ⁵⁵ (B12)	baɲ ³³ (B12)	baɲ ¹¹ (B)	bɛ ¹¹ (B)	ʃa ³³ (B)	bɔ ¹¹ (B)	bɔ ^{31~} (B12)	bɔ ^{45'} (B12)	bɛ ³³ (B12)	bɔ ⁵⁵ (B12)	‘bamboo shoot’
*ʔd-	*ʔda ^A	da ³¹ (A12)	da ³¹ (A12)	da ⁵³ (A12)	de ³³ (A12)	dɛ ⁵⁵ (A12)	da ⁵⁵ (A12)	da ³³ (A)	da ⁵⁵ (A12)	da ³¹ (A23)	da ⁵⁵ (A23)	‘to spread out (mats)’
*hm/ʔm-	*hme ^B	me ⁵⁵ (B12)	me ³³ (B12)	mai ¹¹ (B)	mi ¹¹ (B)	mi ³³ (B)	mi ¹¹ (B)	me ^{31~} (B12)	me ^{45'} (B12)	mi ³³ (B12)	mi ⁵⁵ (B12)	‘fire’

Table 1 Proto-Karen onsets (continued)

3Proto-Karen		N. Pa-O	S. Pa-O	Kayan	Kayah	Bwe	Kayaw	N. Sgaw	S. Sgaw	N. Pwo	S. Pwo	Gloss
*ʔn-	*ʔneŋ ^B	neŋ ⁵⁵ (B12)	neŋ ³³ (B12)	ne ¹¹ (B)	na ¹¹ (B)	de ³³ (B)	de ¹¹ (B)	ni ^{31~} (B12)	ni ^{45'} (B12)	nāi ³³ (B12)	nēi ⁵⁵ (B12)	'year'
*ʔn/hŋ-	*ʔn/hŋa ^B	ja ⁵⁵ (B12)	ja ³³ (B12)	Ja ¹¹ (B)	ja ¹¹ (B)	--	ja ¹¹ (B)	ŋa ^{31~} (B12)	ŋa ^{45'} (B12)	ja ³³ (B12)	ja ⁵⁵ (B12)	'flesh, meat'
*ʔw-	*ʔwi ^B	ʔwi ⁵⁵ (B12)	ʔwi ³³ (B12)	ʔwi ¹¹ (B)	wi ¹¹ (B)	--	wi ¹¹ (B)	--	--	ʔwi ³³ (B12)	ʔwi ⁵⁵ (B12)	'delicious'
*ʔj-	*ʔjeN ^B	ʔen ⁵⁵ (B12)	ʔem ³³ (B12)	ʔjaŋ ¹¹ (B)	ʔi ¹¹ (B)	--	ʔi ¹¹ (B)	ʔi ^{31~} (B12)	ʔi ^{45'} (B12)	ʔāi ³³ (B12)	ʔāi ⁵⁵ (B12)	'narrow'
*ʔl-	*ʔla ^A	la ³¹ (A12)	la ³¹ (A12)	la ⁵³ (A12)	le ³³ (A12)	le ⁵⁵ (A12)	la ⁵⁵ (A12)	la ³³ (A)	la ⁵⁵ (A12)	la ⁵⁵ (A23)	la ³¹ (A23)	'moon, month'
*b-	*bi ^{ʔD}	pe ^{ʔ21} (D12)	pi ^{ʔ21} (D12)	pi ^{ʔ21} (D3)	pi ³³ (D3)	br ¹¹ (D3)	pi ³³ (D)	phi ^{ʔ21} (D3)	pai ¹¹ (D3)	phai ^{ʔ21} (D3)	phai ^{ʔ45} (D3)	'to extinguish'
*d-	*dow ^B	thu ⁵³ (B3)	tu ⁵⁵ (B3)	tu ¹¹ (B)	to ¹¹ (B)	du ¹¹ (B)	tu ¹¹ (B)	ti ¹¹ (B3)	ti ³¹ (B3)	thou ¹¹ (B3)	thou ³³ (B3)	'to thread (needles)'
*J-	*Ja ^B	cha ⁵³ (B3)	ca ⁵⁵ (B3)	ca ¹¹ (B)	ce ¹¹ (B)	je ³³ (B)	ca ¹¹ (B)	--	ca ³¹ (B3)	--	--	'young, soft'
*g-	*go ^B	kho ⁵³ (B3)	ko ⁵⁵ (B3)	kau ¹¹ (B)	ku ¹¹ (B)	--	ku ¹¹ (B)	ko ¹¹ (B3)	ku ³¹ (B3)	khu ¹¹ (B3)	khu ³³ (B3)	'sunlight, hot'
*m-	*ma ^A	ma ³³ (A3)	ma ⁵³ (A3)	ma ³³ (A3)	me ¹¹ (A3)	me ³³ (A3)	ma ³³ (A3)	ma ³³ (A)	ma ³³ (A3)	me ⁵⁵ (A3)	ma ³¹ (A3)	'to do, to make'
*n-	*na ^B	na ⁵³ (B3)	na ⁵⁵ (B3)	na ¹¹ (B)	ne ¹¹ (B)	ne ³³ (B)	na ¹¹ (B)	na ¹¹ (B3)	na ³¹ (B3)	ne ¹¹ (B3)	na ³³ (B3)	'ear'
*ŋ-	*ŋa ^A	ja ³³ (A3)	ja ⁵³ (A3)	Ja ³³ (A3)	ja ¹¹ (A3)	--	--	ŋa ³³ (A)	--	ja ³⁵ (A1)	ja ⁵³ (A1)	'palm (of the hand)'
*w-	*wi ^A	wi ³³ (A3)	wi ⁵³ (A3)	--	wi ¹¹ (A3)	wi ³³ (A3)	wi ³³ (A3)	wi ³³ (A)	wi ³³ (A3)	wei ⁵⁵ (A23)	wei ³¹ (A23)	'mole (rodent)'
*j-	*jow ^B	ju ⁵³ (B3)	ju ⁵⁵ (B3)	Ju ¹¹ (B)	jo ¹¹ (B)	ju ¹¹ (D3?)	ju ¹¹ (B)	ji ¹¹ (B3)	ji ³¹ (B3)	jou ¹¹ (B3)	jou ³³ (B3)	'mouse, rat'
*r-	*re ^B	re ⁵³ (B3)	re ⁵⁵ (B3)	rai ¹¹ (B)	ri ¹¹ (B)	--	ri ¹¹ (B)	ye ¹¹ (B3)	ye ³¹ (B3)	yi ¹¹ (B3)	yi ³³ (B3)	'rattan'
*l-	*la ^{ʔD}	la ^{ʔ45} (D3)	la ^{ʔ45} (D3)	la ^{ʔ21} (D3)	le ³³ (D3)	le ¹¹ (D3)	lɔ ³³ (D3)	la ^{ʔ21} (D3)	la ¹¹ (D3)	la ^{ʔ21} (D3)	la ^{ʔ45} (D3)	'below, underneath'
*phr-	*phrɔ ^A	--	--	phɔ ⁵³ (A12)	pho ³³ (A12)	phrɔ ³³ (A3)	pho ⁵⁵ (A12)	phɔ ³³ (A)	phɔ ⁵⁵ (A12)	phɔ ³⁵ (A1)	pho ⁵³ (A1)	'to boil'
*khr-	*khref ^B	khri ⁵⁵ (B12)	khri ³³ (B12)	--	khra ¹¹ (B)	--	ci ¹¹ (B)	xi ^{31~} (B12)	xi ^{45'} (B12)	kei ³³ (B12)	kei ⁵⁵ (B12)	'body dirt'
*sr-	*sra ^A	sa ³¹ (A12)	sa ³¹ (A12)	θa ⁵³ (A12)	se ³³ (A12)	θre ⁵⁵ (A12)	sa ⁵⁵ (A12)	ɕya ³³ (A)	ɕya ⁵⁵ (A12)	sja ³⁵ (A1)	θa ⁵³ (A1)	'bamboo strip'
*t/kr-	*kre ^A	--	--	re ³³ (A3)	re ³³ (A12)	tre ⁵⁵ (A12)	re ⁵⁵ (A12)	kə ¹¹ re ³³ (A)	re ⁵⁵ (A12)	--	yei ³¹ (A23)	'monitor lizard (water ~)'
*br-	*s-bra ^B	phra ⁵³ (B3)	phra ⁵⁵ (B3)	pra ¹¹ (B)	phre ¹¹ (B)	(θa ³³) bwe ³³ (B)	pra ¹¹ (B)	(sa ^{ʔ45}) pɣa ¹¹ (B3)	pɣa ³¹ (B3)	sja ¹¹ (B3)	ɕha ³³ (B3)	'old (of people)'
*Jr-	*Jram ^A	sam ³³ (A3)	sam ⁵³ (A3)	caŋ ³³ (A3)	khre ¹¹ (A3)	--	cɔ ³³ (A3)	xɔ ³³ (A)	xɔ ³³ (A3)	--	--	'bedbug'

Table 1 Proto-Karen onsets (continued)

3Proto-Karen		N. Pa-O	S. Pa-O	Kayan	Kayah	Bwe	Kayaw	N. Sgaw	S. Sgaw	N. Pwo	S. Pwo	Gloss
*gr-	*gra ^B	sa ⁵³ (B3)	ɕa ⁵⁵ (B3)	ca ¹¹ (B)	khre ¹¹ (B)	--	ca ¹¹ (B)	xa ¹¹ (B3)	xa ³¹ (B3)	xa ¹¹ (B3)	xa ³³ (B3)	'louse, insect'
*phl-	*phloŋ ^B	phroŋ ⁵⁵ (B12)	plɔŋ ³³ (B12)	phləu ¹¹ (B)	phlɔ ¹¹ (B)	--	phlə ¹¹ (B)	phlə ^{31~} (B12)	phli ^{45'} (B12)	phāu ³³ (B12)	phlōu ⁵⁵ (B12)	'clf. [-human, + flat]'
*khl-	*khlɔ ^B	khau ⁵⁵ (B12)	klau ³³ (B12)	--	--	khlo ³³ (B)	--	khlo ^{31~} (B12)	khlo ^{45'} (B12)	khlo ³³ (B12)	khlo ⁵⁵ (B12)	'mat'
*pl-	*pla ^{A~B}	pla ³¹ (A12)	pla ³¹ (A12)	bla ¹¹ (B)	ple ¹¹ (B)	plɛ ¹¹ (D3?)	pla ¹¹ (B)	bla ³³ (A)	bla ⁵⁵ (A12)	phla ³³ (B12)	phla ⁵⁵ (B12)	'bat'
*kl-	*kla ^A	khra ³¹ (A12)	kla ³¹ (A12)	--	kle ³³ (A12)	--	ka ⁵⁵ (A12)	kla ²⁴⁵ (D12)	kla ⁵⁵ (A12)	kla ⁵⁵ (A23)	kla ³¹ (A23)	'forest, jungle'
*ʔbl-	*ʔbla ^A	pla ³¹ (A12)	--	bla ⁵³ (A12)	--	plɛ ⁵⁵ (A12)	--	bla ³³ (A)	bla ⁵⁵ (A12)	bla ⁵⁵ (A23)	bla ³¹ (A23)	'tasteless, pale'
*bl-	*bla ^B	phra ⁵³ (B3)	pla ⁵⁵ (B3)	pla ¹¹ (B)	ple ¹¹ (B)	bl(a) ³³ (B)	pla ¹¹ (B)	pla ¹¹ (B3)	pla ³¹ (B3)	phla ¹¹ (B3)	phla ³³ (B3)	'to wash (face)'
*gl-	*gle ^A	--	klai ⁵³ (A3)	khle ³³ (A3)	kle ³³ (A12)	kle ³³ (A3)	kle ³³ (A3)	kle ³³ (A)	kle ³³ (A3)	kle ⁵⁵ (A23)	--	'path, way'
*ml-	*k-mlɔN ^A	--	mɔ ⁵³ (A3)	mɔ ³³ (A3)	mo ¹¹ (A3)	-blɔ ¹¹ (D3?)	--	kə ¹¹ mlɔ ³³ (A)	mlu ³³ (A3)	mlɔ ⁵⁵ (A23)	mlō ³¹ (A23)	'trunk (of an elephant)'
*phr-	*phri ^A	phwi ³¹ (A12)	phwi ³¹ (A12)	phwi ⁵³ (A12)	phwi ³³ (A12)	phwi ⁵⁵ (A12)	phi ⁵⁵ (A12)	phyi ³³ (A)	phyi ⁵⁵ (A12)	khwi ³⁵ (A1)	khwi ⁵³ (A12)	'light (adj.)'
*thw-	*thwi ^B	thwi ⁵⁵ (B12)	thwi ³³ (B12)	thwi ¹¹ (B)	thwi ¹¹ (B)	thwi ³³ (B)	thi ¹¹ (B)	thwi ^{31~} (B12)	thwi ^{45'} (B12)	thwi ³³ (B12)	thwi ⁵⁵ (B12)	'dog'
*chw-	*chwe ^B	chwe ⁵⁵ (B12)	chwe ³³ (B12)	chwe ¹¹ (B)	chwa ¹¹ (B)	ʃwe ³³ (B)	che ¹¹ (B)	chwe ^{31~} (B12)	chwe ^{45'} (B12)	chwe ³³ (B12)	chwe ⁵⁵ (B12)	'crab'
*khw-	*khwa ^A	kho ³¹ (A12)	kho ³¹ (A12)	khau ⁵³ (A12)	khu ³³ (A12)	~kho ⁵⁵ (A12)	khu ⁵⁵ (A12)	khwa ³³ (A)	khwa ⁵⁵ (A12)	khwa ³⁵ (A1)	khwa ⁵³ (A1)	'man'
*hn/ʔnw-	*hn/ʔnwe ^B	nwe ⁵⁵ (B12)	nwe ³³ (B12)	nwe ¹¹ (B)	--	nwe ³³ (B)	ne ¹¹ (B)	nwe ¹¹ (B3?)	nwe ^{45'} (B12)	ne ³³ (B12)	ne ⁵⁵ (B12)	'yam'
*sw-	*swi ^B	swi ⁵⁵ (B12)	swi ³³ (B12)	θwi ¹¹ (B)	swi ¹¹ (B)	θwi ³³ (B)	su ¹¹ (B)	swi ^{31~} (B12)	swi ^{45'} (B12)	swi ³³ (B12)	θwi ⁵⁵ (B12)	'blood'
*cw-	*cwik ^D	cok ²¹ (D12)	cu ²¹ (D12)	cwi ²⁴⁵ (D12)	cwi ⁵⁵ (D12)	--	ci ³³ (D)	(sə ¹¹) wi ²⁴⁵ (D12)	--	--	(θə ¹¹) wai ²³¹ (D12)	'to suck'
*kw-	*~ki ^B	~ki ⁵⁵ (B12)	--	~khi ¹¹ (B)	~khwi ¹¹ (B)	~k(h)i ³³ (B)	~ki ¹¹ (B)	~ki ²¹ (D3?)	~ki ^{45'} (B12)	~kei ³³ (B12)	~kei ⁵⁵ (B12)	'parrot'
*ʔbw-	*ʔbwa ^A	bwa ³¹ (A12)	bwa ³¹ (A12)	bau ⁵³ (A12)	bu ³³ (A12)	bu ⁵⁵ (A12)	bu ⁵⁵ (A12)	wa ³³ (A)	wa ⁵⁵ (A12)	ʔwe ⁴² (A23)	kwa ³¹ (A2-3)	'white'
*ʔdw-	*ʔdwe ^B	dwe ⁵⁵ (B12)	dwe ³³ (B12)	dwe ¹¹ (B)	--	dɛ ³³ (B)	dɛ ¹¹ (B)	dwe ^{31~} (B12)	dwe ^{45'} (B12)	thwe ¹¹ (B3)	thwe ³³ (B3)	'grasshopper'
*dw-	*dwe ^{2D}	the ²⁴⁵ (D3)	tɛ ²⁴⁵ (D3)	tu ²²¹ (D3)	tɯ ³³ (D3)	the ³³ (D12)	tu ³³ (D3)	the ²²¹ (D3)	tɛ ¹¹ (D3)	the ²²¹ (D3)	the ²⁴⁵ (D3)	'torn'
*gw-	*gwa ^A	wa ³³ (A3)	wa ⁵³ (A3)	gwa ³³ (A3)	we ¹¹ (A3)	wa ³³ (A3)	wu ³³ (A3)	wa ³³ (A)	wa ³³ (A3)	wa ⁵⁵ (A23)	wa ³¹ (A23)	'husband'
*mw-	*mwe ^B	mwe ⁵³ (B3)	mwe ⁵⁵ (B3)	mwe ¹¹ (B)	ma ¹¹ (B)	--	mɛ ¹¹ (B)	me ¹¹ (B3)	mɛ ³¹ (B3)	mɛ ¹¹ (B3)	mwe ³³ (B3)	'yes'

Table 1 Proto-Karen onsets (continued)

3Proto-Karen	N. Pa-O	S. Pa-O	Kayan	Kayah	Bwe	Kayaw	N. Sgaw	S. Sgaw	N. Pwo	S. Pwo	Gloss	
*ɲw-	*s-ɲwi ^B	ɲwi ⁵⁵ (B12)	ɲwi ³³ (B12)	ɲwi ¹¹ (B)	--	(θə ⁵⁵) mi ³³ (B)	(si ¹¹) mi ¹¹ (B)	--	--	--	‘water snail’	
*rw-	*rwi ^B	rwi ⁵³ (B3)	rwi ⁵⁵ (B3)	rwi ¹¹ (B)	rwi ¹¹ (B)	(kha ³³) wi ³³ (B)	ri ¹¹ (B)	ɣi ¹¹ (B3)	ɣi ³¹ (B3)	ɣei ¹¹ (B3)	βei ³³ (B3)	‘root’
*lw-	*~lwi ^B	~lwi ⁵³ (B3)	~lwi ⁵⁵ (B3)	~lwi ¹¹ (B)	~lwi ¹¹ (B)	~lwi ³³ (B)	~li ¹¹ (B)	~lwi ¹¹ (B3)	~lwi ³¹ (B3)	~lei ¹¹ (B3)	~lwi ³³ (B3)	‘dove’
*chj-	*chja ^{N^A}	ɕhja ³¹ (A12)	ɕhja ³¹ (A12)	ɕhi ⁵³ (A12)	cha ³³ (A12)	ʃi ⁵⁵ (A12)	ɕhi ⁵⁵ (A12)	cho ³³ (A)	cho ⁵⁵ (A12)	chē ³⁵ (A1)	chō ⁵³ (A1)	‘chicken’
*kj-	*kja ^{7D}	khja ⁷²¹ (D12)	khja ⁷²¹ (D12)	khi ⁷⁴⁵ (D12)	khja ⁵⁵ (D12)	--	--	ki ⁷⁴⁵ (D12)	kai ⁷²¹ (D12)	kai ⁷⁴⁵ (D12)	kai ⁷³¹ (D12)	‘astringent’
*ʔbj-	*ʔbja ^B	pja ⁵³ (B12)	pja ³³ (B12)	bja ¹¹ (B)	--	(bē ³³) ʔa ³³ (B)	--	--	--	pa ³³ (B12)	bai ⁵⁵ (B12)	‘flat’
*ɲj-	*ɲja ^{7D}	ɲja ⁷⁴⁵ (D3)	ɲja ⁷⁴⁵ (D3)	ɲi ⁷²¹ (D3)	ɲja ³³ (D3)	(ɔ ³³ -) jɪ ¹¹ (D3)	ji ³³ (D)	ji ⁷²¹ (D3)	jai ¹¹ (D3)	jai ⁷²¹ (D3)	jai ⁷⁴⁵ (D3)	‘long (of time)’
*rj-	*rja ^A	rja ³³ (A3)	rja ⁵³ (A3)	ja ³³ (A3)	je ¹¹ (B)	(gə)-je ³³ (B)	ja ¹¹ (B)	ja ³³ (A)	ja ³³ (A3)	ja ⁵⁵ (A23)	ja ³¹ (A23)	‘hundred’
*khrw-	*khrwit ^D	chut ²¹ (D12)	chut ²¹ (D12)	chwi ⁷⁴⁵ (D12)	khrwi ⁵⁵ (D12)	khwi ³³ (D12)	chu ³³ (D)	xi ³³ (A)	(ta ¹¹) xi ⁵⁵ (A12)	xei ³³ (B12)	xwi ⁵⁵ (B12)	‘bone’

Table 2 Proto-Karen rhymes

Proto-Karen		N. Pa-O	S. Pa-O	Kayan	Kayah	Bwe	Kayaw	N. Sgaw	S. Sgaw	N. Pwo	S. Pwo	Gloss
*i	*mi ^A	mi ³³ (A3)	mi ⁵³ (A3)	mi ³³ (A3)	mi ¹¹ (A3)	--	mi ³³ (A3)	mi ³³ (A)	mi ³³ (A3)	mei ⁵⁵ (A23)	mei ³¹ (A23)	‘wild, e.g. ~ boar’
*e	*ce ^B	ce ⁵⁵ (B12)	ce ³³ (B12)	cai ³³ (B12)	ci ¹¹ (B)	ci ³³ (B)	ci ¹¹ (B)	ce ^{31~} (B12)	ce ^{45'} (B12)	ci ³³ (B12)	ci ⁵⁵ (B12)	‘left side’
*ɛ	*le ^B	lai ⁵³ (B3)	lai ⁵⁵ (B3)	le ¹¹ (B)	le ¹¹ (B)	le ³³ (B)	le ¹¹ (B)	le ¹¹ (B3)	le ³¹ (B3)	le ¹¹ (B3)	le ³³ (B3)	‘wide’
*i	*hm/?mi ^B	mi ⁵³ (B3)	mi ³³ (B12)	mi ¹¹ (B)	mɔ ¹¹ (B)	mo ³³ (B)	mi ¹¹ (B)	mi ^{31~} (B12)	mi ^{45'} (B12)	mi ³³ (B12)	mi ⁵⁵ (B12)	‘woman, female’
*ə	*phə ^B	phə ⁵⁵ (B12)	phə ³³ (B12)	phəi ¹¹ (B)	pho ¹¹ (B)	--	phə ¹¹ (B)	phi ^{31~} (B12)	phi ^{45'} (B12)	phəi ³³ (B12)	phi ⁵⁵ (B12)	‘short, low’
*a	*cha ^A	ca ³¹ (A12)	ca ³¹ (A12)	cha ⁵³ (A12)	che ³³ (A12)	ʃɛ ⁵⁵ (A12)	cha ⁵⁵ (A12)	cha ³³ (A)	cha ⁵⁵ (A12)	cha ³⁵ (A1)	cha ⁵³ (A1)	‘to sell’
*u	*ʔu ^A	ʔu ³¹ (A12)	ʔu ³¹ (A12)	ʔu ⁵³ (A12)	ʔu ³³ (A12)	u ³³ (B)	ʔu ⁵⁵ (A12)	ʔu ³³ (A)	ʔu ⁵⁵ (A12)	ʔu ⁵⁵ (A23)	ʔu ³¹ (A23)	‘to blow’
*o	*do ^B	tho ⁵³ (B3)	to ⁵⁵ (B3)	--	tu ¹¹ (B)	do ³³ (B)	tu ¹¹ (B)	to ¹¹ (B3)	tu ³¹ (B3)	thu ¹¹ (B3)	thu ³³ (B3)	‘handle (n.)’
*ɔ	*srɔ ^B	sau ⁵⁵ (B12)	ɛau ³³ (B12)	θau ¹¹ (B)	so ¹¹ (B)	θrɔ ³³ (B)	so ¹¹ (B)	ɕrɔ ^{31~} (B12)	ɕrɔ ^{45'} (B12)	ɕjo ³³ (B12)	θo ⁵⁵ (B12)	‘hemp’
*ej	*ʔdej ^B	di ⁵⁵ (B12)	di ³³ (B12)	ti ¹¹ (B)	də ¹¹ (B)	di ³³ (B)	di ¹¹ (B)	di ^{31~} (B12)	di ^{45'} (B12)	dei ³³ (B12)	dei ⁵⁵ (B12)	‘egg’
*aj	*hl/?laj ^B	--	lai ³³ (B12)	lai ¹¹ (B)	--	li ³³ (B)	li ¹¹ (B)	le ^{31~} (B12)	li ^{45'} (B12)	--	lai ⁵⁵ (B12)	‘to lick’
*aw	*thaw ^A	tho ³¹ (A12)	tho ³¹ (A12)	thau ⁵³ (A12)	thu ³³ (A12)	tho ⁵⁵ (A12)	thu ⁵⁵ (A12)	tho ³³ (A)	tho ⁵⁵ (A12)	tho ³⁵ (A1)	tho ⁵³ (A1)	‘long, tall’
*ow	*hl/?low ^B	lu ⁵⁵ (B12)	lu ³³ (B12)	lu ¹¹ (B)	lo ¹¹ (B)	lu ³³ (B)	lu ¹¹ (B)	li ^{31~} (B12)	li ^{45'} (B12)	lou ³³ (B12)	lou ⁵⁵ (B12)	‘cotton thread’
*im	*Jim ^B	cim ⁵⁵ (B12)	cim ³³ (B12)	ci ¹¹ (B)	ci ¹¹ (B)	ci ³³ (B)	ci ¹¹ (B)	ci ¹¹ (B3)	ci ³¹ (B3)	chāi ¹¹ (B3)	chēi ³³ (B3)	‘to squeeze, to ooze’
*in	*hmin ^A	min ³¹ (A12)	min ³¹ (A12)	mjəŋ ⁵³ (A12)	mi ³³ (A12)	mi ⁵⁵ (A12)	mi ⁵⁵ (A12)	mi ³³ (A)	mi ⁵⁵ (A12)	māi ³⁵ (A1)	mēi ⁵³ (A1)	‘ripe, cooked’
*iŋ	*~ khiŋ ^{A~B}	~ khiŋ ⁵⁵ (B12)	khiŋ ³³ (B12)	khi ⁵³ (A12)	khi ³³ (A12)	--	khi ⁵⁵ (A12)	~ khi ³³ (A)	--	khāi ³⁵ (A1)	~ khēi ⁵³ (A1)	‘tilted’
*eŋ	*ʔneŋ ^B	neŋ ⁵⁵ (B12)	neŋ ³³ (B12)	ne ¹¹ (B)	na ¹¹ (B)	dɛ ³³ (B)	de ¹¹ (B)	ni ^{31~} (B12)	ni ^{45'} (B12)	nāi ³³ (B12)	nēi ⁵⁵ (B12)	‘year’
*ɛm	*hl/?ljem ^B	lem ⁵⁵ (B12)	lɛm ³³ (B12)	ljan ¹¹ (B)	ja ¹¹ (B)	--	li ¹¹ (B)	le ^{31~} (B12)	li ^{45'} (B12)	lāi ³³ (B12)	lāi ⁵⁵ (B12)	‘to put out (~ the tongue)’
*ɛn	*ʔɛn ^B	ʔeŋ ⁵⁵ (B12)	ʔɛm/n ³³ (B12)	ʔi ¹¹ (B)	ʔa ¹¹ (B)	--	--	ʔe ^{31~} (B12)	ʔi ^{45'} (B12)	ʔāi ³³ (B12)	ʔāi ⁵⁵ (B12)	‘to bite’
*eŋ	*theŋ ^A	theŋ ³¹ (A12)	theŋ ³³ (A12)	thi ⁵³ (A12)	tha ³³ (A12)	the ⁵⁵ (A12)	thi ⁵⁵ (A12)	the ³³ (A)	thi ⁵⁵ (A12)	thāi ³⁵ (A1)	thāi ⁵³ (A1)	‘to weave (baskets)’
*im	*dim ^A	thom ³³ (A3)	təm ⁵³ (A3)	tɪ ³³ (A3)	tɪ ¹¹ (A3)	--	tɪ ³³ (A3)	tə ³³ (A)	tɪ ³³ (A3)	thā ⁵⁵ (A23)	thōi ³¹ (A23)	‘a linear measure (½ yard)’
*in	*phrim/n ^A	phrim ³¹ (A12)	phrin ³¹ (A12)	phri ⁵³ (A12)	phli ³³ (A12)	phlu ⁵⁵ (A12)	phri ⁵⁵ (A12)	phlɔ ³³ (A)	phli ⁵⁵ (A12)	phlɔ ³⁵ (A1)	phlōi ⁵³ (A1)	‘hornet’

Table 2 Proto-Karen rhymes (continued)

Proto-Karen		N. Pa-O	S. Pa-O	Kayan	Kayah	Bwe	Kayaw	N. Sgaw	S. Sgaw	N. Pwo	S. Pwo	Gloss
*iŋ	*niŋ ^A	nəŋ ³³ (A3)	nəŋ ⁵³ (A3)	ni ³³ (A3)	ni ¹¹ (A3)	--	--	nə ³³ (A)	ni ³³ (A)	nā ⁵⁵ (A23)	nāi ³¹ (A23)	‘to win’
*əm	*səm ^A	som ³¹ (A12)	səm ³¹ (A12)	θə ⁵³ (A12)	sɔ ³³ (A12)	θo ⁵⁵ (A12)	sə ⁵⁵ (A12)	sə ³³ (A)	sə ⁵⁵ (A12)	sā ³⁵ (A1)	sə ⁵³ (A1)	‘three’
*əŋ	*thəŋ ^B	thoŋ ⁵⁵ (B12)	thəŋ ³³ (B12)	thə ¹¹ (B)	tho ¹¹ (B)	~tho ³³ (B)	tə ¹¹ (B)	~thə ^{31~} (B12)	thə ^{45'} (B12)	thā ³³ (B12)	thə ⁵⁵ (B12)	‘to stand’
*am	*ʔam ^B	ʔam ⁵⁵ (B12)	ʔam ³³ (B12)	ʔaŋ ¹¹ (B)	ʔe ¹¹ (B)	ʔa ³³ (B)	ʔo ³³ (B)	ʔo ^{31~} (B12)	ʔo ^{45'} (B12)	ʔe ³³ (B12)	ʔə ⁵⁵ (B12)	‘to eat’
*an	*~khan ^A	~khan ³¹ (A12)	~khan ³¹ (A12)	~khaŋ ⁵³ (A12)	--	khə ⁵⁵ (A12)	~kho ⁵⁵ (A12)	khə ³³ (A)	khə ⁵⁵ (A12)	khə ³⁵ (A1)	khə ⁵³ (A1)	‘bamboo rat’
*aŋ	*laŋ ^A	laŋ ³³ (A3)	laŋ ⁵³ (A3)	laŋ ³³ (A3)	le ¹¹ (A3)	la ³³ (A3)	lo ³³ (A3)	lo ³³ (A)	lo ³³ (A3)	lē ⁵⁵ (A23)	lə ³¹ (A23)	‘to descend’
*um/n	*chum/n ^B	chən ⁵⁵ (B12)	chum ³³ (B12)	chwaŋ ¹¹ (B)	chi ¹¹ (B)	ʃo ³³ (B)	chu ¹¹ (B)	chu ^{31~} (B12)	chu ^{45'} (B12)	chā ³³ (B12)	chə ⁵⁵ (B12)	‘hair, fur, feather’
*uŋ	*ʔbluŋ ^B	pləŋ ⁵⁵ (B12)	pwəŋ ³³ (B12)	bwaŋ ¹¹ (B)	bi ¹¹ (B)	bu ³³ (B)	bu ¹¹ (B)	bɔ ^{31~} (B12)	bɔ ^{45'} (B12)	bā ³³ (B12)	bə ⁵⁵ (B12)	‘fat (adj.)’
*om	*plom ^B	pom ⁵⁵ (B12)	pom ³³ (B12)	blo ¹¹ (B)	plu ¹¹ (B)	plo ³³ (B)	plə ¹¹ (B)	pu ^{31~} (B12)	pu ^{45'} (B12)	pāu ³³ (B12)	pəu ⁵⁵ (B12)	‘pile (clf.)’
*oŋ	*loŋ ^B	loŋ ⁵³ (B3)	loŋ ⁵⁵ (B3)	ləu ¹¹ (B)	lo ¹¹ (B)	lo ³³ (B)	lə ¹¹ (B)	lə ¹¹ (B3)	li ³¹ (B3)	lāu ¹¹ (B3)	ləu ³³ (B3)	‘stone, rock’
*ɔŋ	*dɔŋ ^B	thɔŋ ⁵³ (B3)	tɔŋ ⁵⁵ (B3)	tɔ ¹¹ (B)	--	dɔ ³³ (B)	to ¹¹ (B)	to ¹¹ (B3)	tu ³¹ (B3)	--	thə ³³ (B3)	‘to pound’
*it	*khrwit ^D	chut ²¹ (D12)	chut ²¹ (D12)	chwɪ ⁷⁴⁵ (D12)	khrwi ⁵⁵ (D12)	khwi ³³ (D12)	chu ³³ (D)	xi ³³ (A)	xi ⁵⁵ (A12)	xei ³³ (B12)	xwi ⁵⁵ (B12)	‘bone’
*ik	*cwik ^D	cuk ²¹ (D12)	cu ⁷²¹ (D12)	cwi ⁷⁴⁵ (D12)	cwi ⁵⁵ (D12)	--	ci ³³ (D)	s-wi ⁷⁴⁵ (D12)	--	--	θ-wai ⁷³¹ (D12)	‘to suck’
*iʔ	*khi ^{7D}	khə ⁷²¹ (D12)	khi ⁷²¹ (D12)	khi ⁷⁴⁵ (D12)	khi ⁵⁵ (D12)	khi ³³ (D12)	khi ³³ (D)	khi ⁷⁴⁵ (D12)	khai ⁷²¹ (D12)	khai ⁷⁴⁵ (D12)	khai ⁷³¹ (D12)	‘dark’
*ek	*lek ^D	le ⁷⁴⁵ (D3)	lek ⁴⁵ (D3)	li ⁷²¹ (D3)	la ³³ (D3)	le ¹¹ (D3)	le ³³ (D)	li ⁷²¹ (D3)	lai ¹¹ (D3)	lai ⁷²¹ (D3)	lai ⁷⁴⁵ (D3)	‘hawk’
*eʔ	*ʔde ^{7D}	de ⁷²¹ (D12)	di ⁷²¹ (D12)	--	da ⁵⁵ (D12)	də ³³ (D12)	de ³³ (D)	di ⁷⁴⁵ (D12)	dai ⁷²¹ (D12)	dai ⁷⁴⁵ (D12)	dai ⁷³¹ (D12)	‘wing’
*eʔ	*dɛ ^{7D}	thə ⁷⁴⁵ (D3)	tɛ ⁷⁴⁵ (D3)	tɛ ⁷²¹ (D3)	ta ³³ (D3)	də ¹¹ (D3)	tɛ ³³ (D)	tɛ ⁷²¹ (D3)	tɛ ¹¹ (D3)	thə ⁷²¹ (D3)	thə ⁷⁴⁵ (D3)	‘to fall’
*əʔ	*rə ^{7D}	rə ⁷⁴⁵ (D3)	rə ⁷⁴⁵ (D3)	rə ⁷²¹ (D3)	rɔ ³³ (D3)	--	rə ³³ (D)	yu ⁷²¹ (D3)	ʔə ¹¹ (D3)	ʔaə ⁷²¹ (D3)	ʔaə ⁷⁴⁵ (D3)	‘flank (n.)’
*ap/t	*ŋjap/t ^D	ŋat ⁴⁵ (D3)	ŋap ⁴⁵ (D3)	ŋɛ ⁷²¹ (D3)	ŋɛ ³³ (D3)	jɛ ¹¹ (D3)	jɛ ³³ (D)	jɛ ¹¹ (B3)	jɛ ³¹ (B3)	jɛ ¹¹ (B3)	jɛ ³³ (B3)	‘five’
*ak	*~dak ^D	(ta ³³) dak ⁴⁵ (D3)	(ta ³³) da ⁷⁴⁵ (D3)	(ka ¹¹) da ⁷²¹ (D3)	(kə ⁵⁵) de ³³ (D3)	--	(kha ¹¹) dɔ ³³ (D)	(kɔ ⁷²¹) la ⁷²¹ (D3)	(tha ⁵⁵) la ¹¹ (D3)	(kha ³³) tha ⁷²¹ (D3)	(ka ⁷²¹) la ⁷⁴⁵ (D3)	‘palate, to click’
*aʔ	*sa ^{7D}	sa ⁷²¹ (D12)	sa ⁷²¹ (D12)	θa ⁷⁴⁵ (D12)	sə ⁵⁵ (D12)	θa ³³ (D12)	sɔ ³³ (D)	sa ⁷⁴⁵ (D12)	sa ⁷²¹ (D12)	sa ⁷⁴⁵ (D12)	θa ⁷²¹ (D12)	‘heart’
*uk	*kuk ^D	khuk ⁷²¹ (D12)	--	khu ⁷⁴⁵ (D12)	khi ⁵⁵ (D12)	θə ⁵⁵ khu ³³ (D12)	khi ³³ (D)	ku ⁷⁴⁵ (D12)	kəu ⁷²¹ (D12)	kau ⁷⁴⁵ (D12)	kəu ⁷³¹ (D12)	‘to cough’

Table 2 Proto-Karen rhymes (continued)

Proto-Karen	N. Pa-O	S. Pa-O	Kayan	Kayah	Bwe	Kayaw	N. Sgaw	S. Sgaw	N. Pwo	S. Pwo	Gloss	
*u [?]	*thu ^{2D}	--	--	--	thi ⁵⁵ (D12)	--	thi ³³ (D)	thu ²⁴⁵ (D12)	thɔu ²²¹ (D12)	thau ²⁴⁵ (D12)	thɔu ²³¹ (D12)	'wart'
*ok	*~nok ^D	~nok ⁴⁵ (D3)	~nu ²⁴⁵ (D3)	~nɔ ²²¹ (D3)	~nɔ ³³ (D3)	~no ¹¹ (D3)	~nə ³³ (D)	~nu ²²¹ (D3)	~nɔ ¹¹ (D3)	~nau ²²¹ (D3)	~nɔu ²⁴⁵ (D3)	'brain'
*o [?]	*ʔbo ^{2D}	bo ²²¹ (D12)	bu ²²¹ (D12)	bɔ ²⁴⁵ (D12)	bɔ ⁵⁵ (D12)	--	bə ³³ (D)	bi ²⁴⁵ (D12)	bɔu ²²¹ (D12)	bau ²⁴⁵ (D12)	bɔu ²³¹ (D12)	'to reach into'
*ɔt	*kh/grɔt ^D	sɔt ²¹ (D12)	sɔt ⁴⁵ (D3)	chau ²⁴⁵ (D12)	--	xɔ ¹¹ (D3)	--	xɔ ²⁴⁵ (D12)	xo ²²¹ (D12)	xo ²²¹ (D3)	xu ²⁴⁵ (D3)	'eight'
*ɔ [?]	*prɔ ^{2D}	phrɔ ²²¹ (D12)	phrɔ ²²¹ (D12)	phrau ²⁴⁵ (D12)	phrɛ ⁵⁵ (D12)	pɔ ³³ (D12)	pro ³³ (D)	bɣɔ ²⁴⁵ (D12)	bɣo ²²¹ (D12)	pjo ²⁴⁵ (D12)	pju ²²¹ (D12)	'to vomit'

APPENDIX

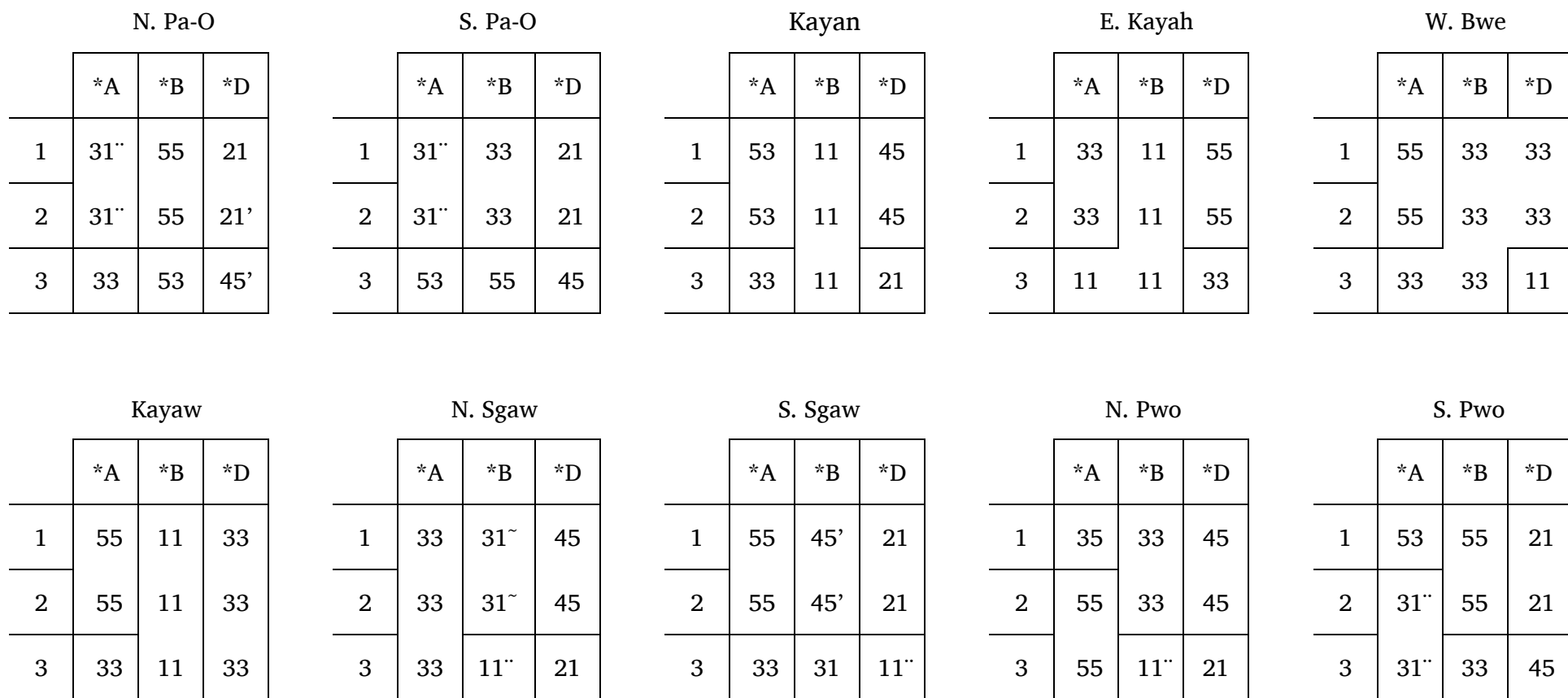


Figure 1 Proto-Karen tones and tonal development in Modern Karen